



**VERSAR**

Final Report

# Chesapeake Bay Water Quality Monitoring Program

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

July 1984 – December 2012  
(Volume 2)

Prepared for

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

Prepared by

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Jodi Dew-Baxter  
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Columbia, MD 21045

December 2013



**CHESAPEAKE BAY WATER QUALITY  
MONITORING PROGRAM**

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

**JULY 1984 - DECEMBER 2012 (VOLUME 2)**

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**DATA SUMMARY A**

**BENTHIC ENVIRONMENT AND COMMUNITY  
COMPOSITION AT FIXED SITES:  
SUMMER 2012**







BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 001		Rep: 01	
Watershed: Mainstem		Date: 13SEP12	
Gear: Modified Box Corer		Time: 12:18:08	
Habitat: High Mesohaline Sand			
Sampled Area: 0.025 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	3.23	5	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	880	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.17	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	9.09	1	Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	27.27		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Americamysis almyra (Epi)	40		0.01200
Ameroculodes species complex	40		0.00200
Carinoma tremaphoros	40		0.02800
Gemma gemma	120		0.00400
Glycinde solitaria	40		0.01600
Heteromastus filiformis	120		0.04400
Macoma mitchelli	160		0.00800
Paraprionospio pinnata	120		0.05600
Phoronis spp.	40		0.00400
Spiochaetopterus costarum	40		0.00200
Streblospio benedicti	40		0.00400
Tubificoides spp.	120		0.00400
Total Abundance w/ Epi.	920		
Total Abundance w/o Epi.	880		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.			0.18400
Total Biomass w/o Epi.			0.17200



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 001		Rep: 02
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 13SEP12
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:18:08
BENTHIC INDEX OF BIOTIC INTEGRITY		
Depth (m): 2.2	Salinity (ppt): 16.43	Temperature (C): 25.48
Dissolved Oxygen (mg/l): 6.9	Sediment Silt-Clay (%): 0.92	Total Carbon (%): 0.15
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 2.33	Condition: Degraded	# Attributes Scored: 6
	Value Score	Value Score
Shannon-Wiener Index	2.77 3	Pollution Indicative Species Abundance (%) 15.00 3
Abundance (#/m2)	800 1	Pollution Indicative Species Biomass (%) 23.14
Biomass (g/m2)	0.48 1	Pollution Sensitive Species Abundance (%) 35.00 3
Carnivore-Omnivore Abundance (%)	30.00 3	Pollution Sensitive Species Biomass (%) 13.22
Deep Deposit Feeder Abundance (%)	35.00	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Americamysis almyra (Epi)	40	0.00800
Glycinde solitaria	160	0.01600
Heteromastus filiformis	200	0.03200
Macoma mitchelli	120	0.03600
Mediomastus ambiseta	80	0.00400
Micrura leidyi	40	0.22000
Neanthes succinea	40	0.02000
Paraprionospio pinnata	120	0.11200
Spiochaetopterus costarum	40	0.04400
Total Abundance w/ Epi.	840	
Total Abundance w/o Epi.	800	
Number of Taxa w/ Epi.	9	
Number of Taxa w/o Epi.	8	
Total Biomass w/ Epi.		0.49200
Total Biomass w/o Epi.		0.48400

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 001		Rep: 03	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 13SEP12	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:18:08	
BOTTOM ENVIRONMENT			
Depth (m): 2.2	Salinity (ppt): 16.43	Temperature (C): 25.48	
Dissolved Oxygen (mg/l): 6.9	Sediment Silt-Clay (%): 0.92	Total Carbon (%): 0.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
	Value Score	Value	Score
Shannon-Wiener Index	2.66 3	Pollution Indicative Species Abundance (%)	5.88 5
Abundance (#/m2)	680 1	Pollution Indicative Species Biomass (%)	8.91
Biomass (g/m2)	0.40 1	Pollution Sensitive Species Abundance (%)	23.53 3
Carnivore-Omnivore Abundance (%)	29.41 3	Pollution Sensitive Species Biomass (%)	21.78
Deep Deposit Feeder Abundance (%)	11.76		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Amphiporus bioculatus	40	0.00800	
Edwardsia elegans	40	0.22800	
Gemma gemma	80	0.01200	
Glycinde solitaria	120	0.02800	
Heteromastus filiformis	80	0.00800	
Macoma mitchelli	240	0.02400	
Paraprionospio pinnata	40	0.03600	
Phoronis spp.	40	0.06000	
Total Abundance w/ Epi.	680		
Total Abundance w/o Epi.	680		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		0.40400	
Total Biomass w/o Epi.		0.40400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 006			Rep: 01		
Watershed: Calvert Cliffs Discharge		Habitat: High Mesohaline Sand		Date: 13SEP12	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 11:08:59	
BOTTOM ENVIRONMENT					
Depth (m): 2.0		Salinity (ppt): 16.58		Temperature (C): 26.61	
Dissolved Oxygen (mg/l): 6.0		Sediment Silt-Clay (%): 0.26		Total Carbon (%): 0.02	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.55	3	Pollution Indicative Species Abundance (%)	8.00	5
Abundance (#/m2)	1000	3	Pollution Indicative Species Biomass (%)	13.22	
Biomass (g/m2)	0.24	1	Pollution Sensitive Species Abundance (%)	52.00	5
Carnivore-Omnivore Abundance (%)	44.00	5	Pollution Sensitive Species Biomass (%)	26.45	
Deep Deposit Feeder Abundance (%)	16.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	120		0.01600		
Glycinde solitaria	440		0.04800		
Heteromastus filiformis	120		0.04400		
Macoma mitchelli	120		0.08400		
Paraprionospio pinnata	40		0.02400		
Phoronis spp.	40		0.00800		
Spiochaetopterus costarum	40		0.00800		
Streblospio benedicti	40		0.00800		
Tubificoides spp.	40		0.00200		
Total Abundance w/ Epi.	1000				
Total Abundance w/o Epi.	1000				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.24200		
Total Biomass w/o Epi.			0.24200		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 13SEP12	
		Sampled Area: 0.025 sq.m		Time: 11:08:59	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.24	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	280	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.28	1	Pollution Sensitive Species Abundance (%)	42.86	3
Carnivore-Omnivore Abundance (%)	28.57	3	Pollution Sensitive Species Biomass (%)	11.27	
Deep Deposit Feeder Abundance (%)	28.57				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	40		0.02800		
Glycinde solitaria	80		0.02800		
Heteromastus filiformis	80		0.02000		
Macoma mitchelli	40		0.20400		
Phoronis spp.	40		0.00400		
Total Abundance w/ Epi.	280				
Total Abundance w/o Epi.	280				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.28400		
Total Biomass w/o Epi.			0.28400		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 13SEP12	
		Sampled Area: 0.025 sq.m		Time: 11:08:59	
BOTTOM ENVIRONMENT					
Depth (m): 2.0		Salinity (ppt): 16.58		Temperature (C): 26.61	
Dissolved Oxygen (mg/l): 6.0		Sediment Silt-Clay (%): 0.26		Total Carbon (%): 0.02	
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 (%)	20.00	3
Abundance (#/m2)	200	1	Pollution Indicative Species Biomass (%)	0.60	
Biomass (g/m2)	0.33	1	Pollution Sensitive Species Abundance (%)	40.00	3
Carnivore-Omnivore Abundance (%)	60.00	5	Pollution Sensitive Species Biomass (%)	2.40	
Deep Deposit Feeder Abundance (%)	20.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Glycinde solitaria	80		0.00800		
Heteromastus filiformis	40		0.03600		
Micrura leidyi	40		0.28800		
Paraprionospio pinnata	40		0.00200		
Total Abundance w/ Epi.	200				
Total Abundance w/o Epi.	200				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.33400		
Total Biomass w/o Epi.			0.33400		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 015		Rep: 01	
Watershed: Mainstem		Date: 13SEP12	
Gear: Modified Box Corer		Time: 9:45:28	
Habitat: High Mesohaline Sand			
Sampled Area: 0.025 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
Depth (m): 2.9		Salinity (ppt): 15.25	
Dissolved Oxygen (mg/l): 5.8		Temperature (C): 24.05	
		Sediment Silt-Clay (%): 1.75	
		Total Carbon (%): 0.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		1080	3
Biomass (g/m2)		0.80	1
Carnivore-Omnivore Abundance (%)		14.81	1
Deep Deposit Feeder Abundance (%)		62.96	1
		Pollution Indicative Species Abundance (%)	3.70
		Pollution Indicative Species Biomass (%)	35.68
		Pollution Sensitive Species Abundance (%)	22.22
		Pollution Sensitive Species Biomass (%)	27.14
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Glycinde solitaria	160	0.04000	
Heteromastus filiformis	360	0.17600	
Macoma mitchelli	120	0.11600	
Marenzelleria viridis	80	0.17600	
Mulinia lateralis	40	0.28400	
Tubificoides spp.	320	0.00400	
Total Abundance w/ Epi.	1080		
Total Abundance w/o Epi.	1080		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		0.79600	
Total Biomass w/o Epi.		0.79600	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 015                               Rep: 02  |
| Watershed: Mainstem           Habitat: High Mesohaline Sand          Date: 13SEP12 |
| Gear: Modified Box Corer      Sampled Area: 0.025 sq.m        Time: 9:45:28 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 2.9                Salinity (ppt): 15.25          Temperature (C): 24.05 |
| Dissolved Oxygen (mg/l): 5.8   Sediment Silt-Clay (%): 1.75    Total Carbon (%): 0.09 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.33             Condition: Degraded             # Attributes Scored: 6 |
|                               Value   Score                               Value   Score |
| Shannon-Wiener Index         2.41     1      Pollution Indicative Species Abundance (%)  14.29     3 |
| Abundance (#/m2)             560     1      Pollution Indicative Species Biomass (%)    74.87     |
| Biomass (g/m2)               0.38     1      Pollution Sensitive Species Abundance (%)  42.86     3 |
| Carnivore-Omnivore Abundance (%) 42.86     5      Pollution Sensitive Species Biomass (%)    8.38     |
| Deep Deposit Feeder Abundance (%) 28.57     |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                          Abundance (#/m2)              Biomass (g/m2)           |
=====
| Carinoma tremaphoros         40                            0.00400                 |
| Glycinde solitaria           200                           0.02800                 |
| Heteromastus filiformis      160                            0.05600                 |
| Macoma mitchelli             40                            0.00400                 |
| Marenzelleria viridis        40                            0.00400                 |
| Mulinia lateralis            40                            0.28400                 |
| Streblospio benedicti        40                            0.00200                 |
=====
| Total Abundance w/ Epi.      560                            |
| Total Abundance w/o Epi.     560                            |
| Number of Taxa w/ Epi.       7                              |
| Number of Taxa w/o Epi.      7                              |
| Total Biomass w/ Epi.        0.38200                       |
| Total Biomass w/o Epi.       0.38200                       |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 015		Rep: 03	
Watershed: Mainstem		Date: 13SEP12	
Gear: Modified Box Corer		Time: 9:45:28	
Habitat: High Mesohaline Sand			
Sampled Area: 0.025 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
Depth (m): 2.9		Salinity (ppt): 15.25	
Dissolved Oxygen (mg/l): 5.8		Temperature (C): 24.05	
		Sediment Silt-Clay (%): 1.75	
		Total Carbon (%): 0.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		600	1
Biomass (g/m2)		0.57	1
Carnivore-Omnivore Abundance (%)		20.00	3
Deep Deposit Feeder Abundance (%)		40.00	3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.02400	
Glycinde solitaria	80	0.01600	
Heteromastus filiformis	240	0.09600	
Macoma mitchelli	120	0.13600	
Marenzelleria viridis	120	0.30000	
Total Abundance w/ Epi.	600		
Total Abundance w/o Epi.	600		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		0.57200	
Total Biomass w/o Epi.		0.57200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 022		Rep: 01	
Watershed: Patapsco & Back Rivers		Date: 05SEP12	
Gear: Wildco Box Corer		Time: 8:00:58	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
Depth (m): 5.6		Salinity (ppt): 10.77	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 89.61	
		Temperature (C): 27.15	
		Total Carbon (%): 3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 5	
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		0.72	1
Biomass (g/m2)		225	1
Carnivore-Omnivore Abundance (%)		0.01	1
Deep Deposit Feeder Abundance (%)		0.00	1
		20.00	
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	180	0.00900	
Tubificoides spp.	45	0.00225	
Total Abundance w/ Epi.	225		
Total Abundance w/o Epi.	225		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.01125	
Total Biomass w/o Epi.		0.01125	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 022                               Rep: 02   |
| Watershed: Patapsco & Back Rivers   Habitat: Low Mesohaline   Date: 05SEP12 |
| Gear: Wildco Box Corer             Sampled Area: 0.022 sq.m   Time: 8:00:58 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 5.6                      Salinity (ppt): 10.77     Temperature (C): 27.15 |
| Dissolved Oxygen (mg/l): 7.2         Sediment Silt-Clay (%): 89.61   Total Carbon (%): 3.39 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 1.00                   Condition: Severely Degr.   # Attributes Scored: 5 |
|                                     Value   Score                                     Value   Score |
| Shannon-Wiener Index                0.00   1   Pollution Indicative Species Abundance (%) 100.00   1 |
| Abundance (#/m2)                    450   1   Pollution Indicative Species Biomass (%)   100.00   |
| Biomass (g/m2)                      0.02   1   Pollution Sensitive Species Abundance (%)   0.00   |
| Carnivore-Omnivore Abundance (%)    0.00   Pollution Sensitive Species Biomass (%)     0.00   1 |
| Deep Deposit Feeder Abundance (%)    0.00   |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)         Biomass (g/m2)         |
-----
| Streblospio benedicti              450                      0.01800               |
-----
| Total Abundance w/ Epi.            450                      |
| Total Abundance w/o Epi.           450                      |
| Number of Taxa w/ Epi.              1                        |
| Number of Taxa w/o Epi.             1                        |
| Total Biomass w/ Epi.                |                          0.01800               |
| Total Biomass w/o Epi.              |                          0.01800               |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 05SEP12	
		Sampled Area: 0.022 sq.m		Time: 8:00:58	
BOTTOM ENVIRONMENT					
Depth (m): 5.6		Salinity (ppt): 10.77		Temperature (C): 27.15	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 89.61		Total Carbon (%): 3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	1
Abundance (#/m2)	495	1	Pollution Indicative Species Biomass (%)	100.00	
Biomass (g/m2)	0.02	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Streblospio benedicti	495		0.01800		
Total Abundance w/ Epi.	495				
Total Abundance w/o Epi.	495				
Number of Taxa w/ Epi.	1				
Number of Taxa w/o Epi.	1				
Total Biomass w/ Epi.			0.01800		
Total Biomass w/o Epi.			0.01800		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 023		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 05SEP12	
		Sampled Area: 0.022 sq.m		Time: 9:05:38	
BOTTOM ENVIRONMENT					
Depth (m): 6.6		Salinity (ppt): 11.42		Temperature (C): 27.07	
Dissolved Oxygen (mg/l): 3.2		Sediment Silt-Clay (%): 52.91		Total Carbon (%): 1.7	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.40		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.87	3	Pollution Indicative Species Abundance (%)	27.27	1
Abundance (#/m2)	495	1	Pollution Indicative Species Biomass (%)	7.41	
Biomass (g/m2)	0.12	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	27.27		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	36.36				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Macoma mitchelli	45		0.00900		
Neanthes succinea	135		0.09000		
Streblospio benedicti	135		0.00900		
Tubificoides spp.	180		0.01350		
Total Abundance w/ Epi.	495				
Total Abundance w/o Epi.	495				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.12150		
Total Biomass w/o Epi.			0.12150		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 023		Rep: 02
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 05SEP12
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 9:05:38
BOTTOM ENVIRONMENT		
Depth (m): 6.6	Salinity (ppt): 11.42	Temperature (C): 27.07
Dissolved Oxygen (mg/l): 3.2	Sediment Silt-Clay (%): 52.91	Total Carbon (%): 1.7
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 1.40	Condition: Severely Degr.	# Attributes Scored: 5
	Value	Score
Shannon-Wiener Index	2.32	3
Abundance (#/m2)	225	1
Biomass (g/m2)	0.11	1
Carnivore-Omnivore Abundance (%)	40.00	
Deep Deposit Feeder Abundance (%)	20.00	
		Value
		Score
	Pollution Indicative Species Abundance (%)	40.00
	Pollution Indicative Species Biomass (%)	24.49
	Pollution Sensitive Species Abundance (%)	0.00
	Pollution Sensitive Species Biomass (%)	0.00
		1
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Carinoma tremaphoros	45	0.04050
Neanthes succinea	45	0.04050
Paraprionospio pinnata	45	0.01800
Streblospio benedicti	45	0.00900
Tubificoides spp.	45	0.00225
Total Abundance w/ Epi.	225	
Total Abundance w/o Epi.	225	
Number of Taxa w/ Epi.	5	
Number of Taxa w/o Epi.	5	
Total Biomass w/ Epi.		0.11025
Total Biomass w/o Epi.		0.11025



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 023		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 05SEP12	
		Sampled Area: 0.022 sq.m		Time: 9:05:38	
BOTTOM ENVIRONMENT					
Depth (m): 6.6		Salinity (ppt): 11.42		Temperature (C): 27.07	
Dissolved Oxygen (mg/l): 3.2		Sediment Silt-Clay (%): 52.91		Total Carbon (%): 1.7	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.45	1	Pollution Indicative Species Abundance (%)	42.86	1
Abundance (#/m2)	315	1	Pollution Indicative Species Biomass (%)	16.00	
Biomass (g/m2)	0.06	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	14.29		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	42.86				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Neanthes succinea	45		0.04500		
Streblospio benedicti	135		0.00900		
Tubificoides spp.	135		0.00225		
Total Abundance w/ Epi.	315				
Total Abundance w/o Epi.	315				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.05625		
Total Biomass w/o Epi.			0.05625		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 024                               Rep: 01                               |
| Watershed: Mainstem           Habitat: High Mesohaline Mud         Date: 14SEP12                          |
| Gear: Wildco Box Corer       Sampled Area: 0.022 sq.m       Time: 10:56:59                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 6.0                Salinity (ppt): 14.58         Temperature (C): 25.24                  |
| Dissolved Oxygen (mg/l): 2.0  Sediment Silt-Clay (%): 91.49  Total Carbon (%): 3.35                  |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.33             Condition: Degraded           # Attributes Scored: 6                  |
|                               Value   Score                               Value   Score |
| Shannon-Wiener Index          1.52   1   Pollution Indicative Species Abundance (%) 0.00   |
| Abundance (#/m2)              225   1   Pollution Indicative Species Biomass (%)   0.00   5 |
| Biomass (g/m2)                0.15   1   Pollution Sensitive Species Abundance (%) 0.00   |
| Carnivore-Omnivore Abundance (%) 40.00  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) |
-----
| Heteromastus filiformis      | 90                | 0.09450        |
| Leptocheirus plumulosus     | 45                | 0.00450        |
| Neanthes succinea           | 90                | 0.05400        |
-----
| Total Abundance w/ Epi.      | 225                |                 |
| Total Abundance w/o Epi.     | 225                |                 |
| Number of Taxa w/ Epi.       | 3                  |                 |
| Number of Taxa w/o Epi.      | 3                  |                 |
| Total Biomass w/ Epi.        |                   | 0.15300        |
| Total Biomass w/o Epi.       |                   | 0.15300        |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

=====					
Watershed: Mainstem		Station: 024		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 14SEP12	
		Sampled Area: 0.022 sq.m		Time: 10:56:59	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.81	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	180	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	0.04	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	75.00	5	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	25.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
-----					
Heteromastus filiformis	45		0.00900		
Neanthes succinea	135		0.02700		
-----					
Total Abundance w/ Epi.	180				
Total Abundance w/o Epi.	180				
Number of Taxa w/ Epi.	2				
Number of Taxa w/o Epi.	2				
Total Biomass w/ Epi.			0.03600		
Total Biomass w/o Epi.			0.03600		
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 024		Rep: 03	
Watershed: Mainstem		Date: 14SEP12	
Gear: Wildco Box Corer		Time: 10:56:59	
Habitat: High Mesohaline Mud			
Sampled Area: 0.022 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33			
Condition: Degraded			
# Attributes Scored: 6			
	Value	Score	
Shannon-Wiener Index	0.92	1	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	135	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.24	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	66.67	5	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	33.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Heteromastus filiformis	45	0.01350	
Neanthes succinea	90	0.22950	
Total Abundance w/ Epi.	135		
Total Abundance w/o Epi.	135		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.24300	
Total Biomass w/o Epi.		0.24300	



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 026		Rep: 01
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 12SEP12
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 8:48:15
BOTTOM ENVIRONMENT		
Depth (m): 4.0	Salinity (ppt): 7.68	Temperature (C): 23.95
Dissolved Oxygen (mg/l): 7.5	Sediment Silt-Clay (%): 94.69	Total Carbon (%): 1.69
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5
	Value Score	Value Score
Shannon-Wiener Index	2.10 3	Pollution Indicative Species Abundance (%) 4.26 5
Abundance (#/m2)	2115 5	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	49.54 1	Pollution Sensitive Species Abundance (%) 38.30
Carnivore-Omnivore Abundance (%)	6.38	Pollution Sensitive Species Biomass (%) 99.33 5
Deep Deposit Feeder Abundance (%)	8.51	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Cyathura polita	135	0.12150
Leptocheirus plumulosus	945	0.16200
Macoma mitchelli	90	0.16650
Marenzelleria viridis	630	5.22900
Melita nitida (Epi)	135	0.00450
Rangia cuneata	45	43.85700
Streblospio benedicti	90	0.00225
Tubificoides spp.	180	0.00225
Total Abundance w/ Epi.	2250	
Total Abundance w/o Epi.	2115	
Number of Taxa w/ Epi.	8	
Number of Taxa w/o Epi.	7	
Total Biomass w/ Epi.		49.54500
Total Biomass w/o Epi.		49.54050



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 026		Rep: 02
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 12SEP12
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 8:48:15
BOTTOM ENVIRONMENT		
Depth (m): 4.0	Salinity (ppt): 7.68	Temperature (C): 23.95
Dissolved Oxygen (mg/l): 7.5	Sediment Silt-Clay (%): 94.69	Total Carbon (%): 1.69
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 4.60	Condition: Meets Goal	# Attributes Scored: 5
	Value Score	Value Score
Shannon-Wiener Index	1.84 3	Pollution Indicative Species Abundance (%) 2.50 5
Abundance (#/m2)	1800 5	Pollution Indicative Species Biomass (%) 0.02
Biomass (g/m2)	9.52 5	Pollution Sensitive Species Abundance (%) 17.50
Carnivore-Omnivore Abundance (%)	2.50	Pollution Sensitive Species Biomass (%) 97.80 5
Deep Deposit Feeder Abundance (%)	25.00	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Cyathura polita	45	0.04950
Leptocheirus plumulosus	990	0.19800
Macoma balthica	45	0.18900
Marenzelleria viridis	180	0.90900
Melita nitida (Epi)	315	0.01350
Rangia cuneata	45	8.16300
Streblospio benedicti	45	0.00225
Tubificoides spp.	450	0.00900
Total Abundance w/ Epi.	2115	
Total Abundance w/o Epi.	1800	
Number of Taxa w/ Epi.	8	
Number of Taxa w/o Epi.	7	
Total Biomass w/ Epi.		9.53325
Total Biomass w/o Epi.		9.51975

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Upper Western Shore		Station: 026		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 12SEP12	
		Sampled Area: 0.022 sq.m		Time: 8:48:15	
BOTTOM ENVIRONMENT					
Depth (m): 4.0		Salinity (ppt): 7.68		Temperature (C): 23.95	
Dissolved Oxygen (mg/l): 7.5		Sediment Silt-Clay (%): 94.69		Total Carbon (%): 1.69	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.80	3	Pollution Indicative Species Abundance (%)	4.26	5
Abundance (#/m2)	2115	5	Pollution Indicative Species Biomass (%)	0.16	
Biomass (g/m2)	1.45	3	Pollution Sensitive Species Abundance (%)	8.51	
Carnivore-Omnivore Abundance (%)	8.51		Pollution Sensitive Species Biomass (%)	38.57	1
Deep Deposit Feeder Abundance (%)	17.02				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.55350		
Cyathura polita	135		0.13050		
Leptocheirus plumulosus	1305		0.28800		
Macoma mitchelli	135		0.04050		
Marenzelleria viridis	45		0.42750		
Melita nitida (Epi)	225		0.00450		
Streblospio benedicti	90		0.00225		
Tubificoides spp.	360		0.00450		
Total Abundance w/ Epi.	2340				
Total Abundance w/o Epi.	2115				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			1.45125		
Total Biomass w/o Epi.			1.44675		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 029                               Rep: 01                               |
| Watershed: Upper Eastern Shore      Habitat: Oligohaline                    Date: 20SEP12                          |
| Gear: Wildco Box Corer              Sampled Area: 0.022 sq.m                Time: 11:29:50                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 5.0                      Salinity (ppt): 2.15                    Temperature (C): 22.54                  |
| Dissolved Oxygen (mg/l): 7.0         Sediment Silt-Clay (%): 61.45          Total Carbon (%): 1.39                  |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.33                    Condition: Degraded                      # Attributes Scored: 6                  |
|                                     Value  Score                               Value  Score |
| Shannon-Wiener Index                 2.49    5      Oligohaline Pollution Indicative Spp. Abund. 81.08  3 |
| Abundance (#/m2)                     1665    5      Tolerance Score                               9.63    1 |
| Deep Deposit Feeder Abundance (%)    59.46   1      Oligohaline Pollution Sensitive Spp. Abund. 10.81  3 |
| Carnivore-Omnivore Abundance (%)    5.41    1      Tanypodinae/Chironomidae Abundance Ratio 100.00  1 |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                | Abundance (#/m2) | Biomass (g/m2) |
|-----|-----|-----|
| Carinoma tremaphoros                | 45                | 0.52650         |
| Gammarus daiberi (Epi)               | 45                | 0.00225         |
| Leptocheirus plumulosus              | 225               | 0.03150         |
| Limnodrilus hoffmeisteri            | 540               |                 |
| Marenzelleria viridis                | 180               | 1.74150         |
| Oligochaeta                          |                   | 0.12150         |
| Rangia cuneata                       | 45                | 26.68050        |
| Streblospio benedicti                | 135               | 0.00450         |
| Thienemannimyia group                | 45                | 0.00225         |
| Tubificidae imm w/o cap chaetae      * | 450               |                 |
|-----|-----|-----|
| Total Abundance w/ Epi.               | 1710              |                 |
| Total Abundance w/o Epi.              | 1665              |                 |
| Number of Taxa w/ Epi.                | 8                 |                 |
| Number of Taxa w/o Epi.               | 7                 |                 |
| Total Biomass w/ Epi.                  |                   | 29.11050        |
| Total Biomass w/o Epi.                  |                   | 29.10825        |
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\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 029                               Rep: 02   |
| Watershed: Upper Eastern Shore   Habitat: Oligohaline   Date: 20SEP12 |
| Gear: Wildco Box Corer          Sampled Area: 0.022 sq.m   Time: 11:29:50 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 5.0                   Salinity (ppt): 2.15           Temperature (C): 22.54 |
| Dissolved Oxygen (mg/l): 7.0     Sediment Silt-Clay (%): 61.45   Total Carbon (%): 1.39 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.60                Condition: Degraded                # Attributes Scored: 5 |
|                               Value   Score                               Value   Score |
| Shannon-Wiener Index              1.99     5           Oligohaline Pollution Indicative Spp. Abund. 76.92   3 |
| Abundance (#/m2)                   585     5           Tolerance Score                               9.80     1 |
| Deep Deposit Feeder Abundance (%)  53.85   1           Oligohaline Pollution Sensitive Spp. Abund. 15.38   3 |
| Carnivore-Omnivore Abundance (%)   7.69   1           Tanypodinae/Chironomidae Abundance Ratio  0.00 |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                               Abundance (#/m2)           Biomass (g/m2) |
|-----|-----|-----|
| Cyathura polita                     45                         0.07200 |
| Limnodrilus hoffmeisteri            45                         |
| Littoridinops tenuipes (Epi)         45                         0.00225 |
| Marenzelleria viridis                90                         0.88650 |
| Oligochaeta                          |                           0.01125 |
| Streblospio benedicti                135                        0.00900 |
| Tubificidae imm w/o cap chaetae *    270                        |
|-----|-----|-----|
| Total Abundance w/ Epi.              630                         |
| Total Abundance w/o Epi.            585                         |
| Number of Taxa w/ Epi.               5                           |
| Number of Taxa w/o Epi.              4                           |
| Total Biomass w/ Epi.                |                           0.98100 |
| Total Biomass w/o Epi.                |                           0.97875 |
=====

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\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 029                               Rep: 03                               |
| Watershed: Upper Eastern Shore      Habitat: Oligohaline                    Date: 20SEP12                          |
| Gear: Wildco Box Corer             Sampled Area: 0.022 sq.m                Time: 11:29:50                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 5.0                      Salinity (ppt): 2.15                    Temperature (C): 22.54                  |
| Dissolved Oxygen (mg/l): 7.0        Sediment Silt-Clay (%): 61.45          Total Carbon (%): 1.39                  |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.60                    Condition: Degraded                      # Attributes Scored: 5                  |
|                                     Value   Score                                     Value   Score |
| Shannon-Wiener Index                 1.96     5      Oligohaline Pollution Indicative Spp. Abund. 86.96  3 |
| Abundance (#/m2)                     1035     5      Tolerance Score                               9.60   1 |
| Deep Deposit Feeder Abundance (%)    78.26    1      Oligohaline Pollution Sensitive Spp. Abund. 4.35  3 |
| Carnivore-Omnivore Abundance (%)    4.35     1      Tanypodinae/Chironomidae Abundance Ratio 0.00   |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                | Abundance (#/m2) | Biomass (g/m2) |
=====
| Americamysis bigelowi (Epi)         | 45                | 0.00900        |
| Cyathura polita                      | 45                | 0.08550        |
| Limnodrilus hoffmeisteri            | 405               |                 |
| Marenzelleria viridis               | 45                | 0.24300        |
| Oligochaeta                          |                   | 0.02475        |
| Rangia cuneata                       | 45                | 47.46600       |
| Streblospio benedicti                | 90                | 0.00900        |
| Tubificidae imm w/o cap chaetae *    | 405               |                 |
=====
| Total Abundance w/ Epi.              | 1080              |                 |
| Total Abundance w/o Epi.             | 1035              |                 |
| Number of Taxa w/ Epi.               | 6                 |                 |
| Number of Taxa w/o Epi.              | 5                 |                 |
| Total Biomass w/ Epi.                 |                   | 47.83725       |
| Total Biomass w/o Epi.                 |                   | 47.82825       |
=====

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\*Indicates taxa is skipped in taxon counts





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 036		Rep: 01	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 25SEP12	
		Sampled Area: 0.022 sq.m		Time: 11:37:49	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.50		Condition: Severely Degr.		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	1.04		T.F. Pollution Indicative Spp. Abund. (%)	89.66	1
Abundance (#/m2)	6525	1	Tolerance Score	9.60	1
Deep Deposit Feeder Abundance (%)	91.72	3	Limnodrilus Abundance (%)	89.66	
Carnivore-Omnivore Abundance (%)	5.52				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Branchiura sowerbyi	135		0.13950		
Chironomidae			0.00225		
Chironomus spp.	45				
Coelotanypus spp.	270		0.05400		
Cryptochironomus spp.	45				
Gammarus spp. (Epi)	45		0.00225		
Hirudinea (Epi)	135		0.07650		
Limnodrilus hoffmeisteri	450				
Oligochaeta			0.31612		
Pisidium spp.	180		0.04950		
Tubificidae imm w/o cap chaetae *	5400				
Total Abundance w/ Epi.	6705				
Total Abundance w/o Epi.	6525				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			0.64012		
Total Biomass w/o Epi.			0.56137		

\*Indicates taxa is skipped in taxon counts



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 036		Rep: 02	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 25SEP12	
		Sampled Area: 0.022 sq.m		Time: 11:37:49	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
		Value	Score	Value	Score
Shannon-Wiener Index		1.38		81.08	3
Abundance (#/m2)		11655	1	Tolerance Score	9.59
Deep Deposit Feeder Abundance (%)		93.44	3	Limnodrilus Abundance (%)	81.08
Carnivore-Omnivore Abundance (%)		4.25			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Branchiura sowerbyi		225		0.25650	
Campeloma decisum (Epi)		45		15.95250	
Chironomidae				0.00225	
Chironomus spp.		45			
Coelotanypus spp.		405		0.06300	
Cryptochironomus spp.		45			
Gyraulus spp. (Epi)		45		0.02700	
Hirudinea (Epi)		45		0.00900	
Ilyodrilus templetoni		405			
Limnodrilus hoffmeisteri		405			
Musculium transversum		90		0.01800	
Oligochaeta				0.54951	
Pisidium spp.		180		0.03600	
Tubificidae imm w cap chaetae *		810			
Tubificidae imm w/o cap chaetae *		9045			
Total Abundance w/ Epi.		11790			
Total Abundance w/o Epi.		11655			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				16.91376	
Total Biomass w/o Epi.				0.92526	

\*Indicates taxa is skipped in taxon counts



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 036		Rep: 03	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 25SEP12	
		Sampled Area: 0.022 sq.m		Time: 11:37:49	
BOTTOM ENVIRONMENT					
Depth (m): 1.5		Salinity (ppt): 0.15		Temperature (C): 21.03	
Dissolved Oxygen (mg/l): 10.4		Sediment Silt-Clay (%): 85.23		Total Carbon (%): 2.96	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
		Value Score		Value Score	
Shannon-Wiener Index		1.89		T.F. Pollution Indicative Spp. Abund. (%) 71.78 3	
Abundance (#/m2)		10845 1		Tolerance Score 9.55 1	
Deep Deposit Feeder Abundance (%)		93.78 3		Limnodrilus Abundance (%) 71.78	
Carnivore-Omnivore Abundance (%)		4.98			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Branchiura sowerbyi		225		0.31500	
Campeloma decisum (Epi)		45		19.52100	
Coelotanypus spp.		360		0.05850	
Cryptochironomus spp.		135		0.00225	
Dero spp.		720			
Gyraulus spp. (Epi)		45		0.05850	
Hirudinea (Epi)		90		0.04950	
Ilyodrilus templetoni		360			
Limnodrilus hoffmeisteri		720			
Neanthes succinea		45		0.02700	
Oligochaeta				0.76684	
Pisidium spp.		135		0.03150	
Tubificidae imm w cap chaetae *		1080			
Tubificidae imm w/o cap chaetae *		7065			
Total Abundance w/ Epi.		11025			
Total Abundance w/o Epi.		10845			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				20.83009	
Total Biomass w/o Epi.				1.20109	

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 040		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 27SEP12	
		Sampled Area: 0.022 sq.m		Time: 8:34:01	
BOTTOM ENVIRONMENT					
Depth (m): 7.2		Salinity (ppt): 4.38		Temperature (C): 22.00	
Dissolved Oxygen (mg/l): 7.1		Sediment Silt-Clay (%): 93.92		Total Carbon (%): 1.73	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.50		Condition: Degraded		# Attributes Scored: 4	
		Value Score		Value Score	
Shannon-Wiener Index		1.68 3		Oligohaline Pollution Indicative Spp. Abund. 91.36 3	
Abundance (#/m2)		3645 3		Tolerance Score 0.00	
Deep Deposit Feeder Abundance (%)		16.05		Oligohaline Pollution Sensitive Spp. Abund. 4.94 3	
Carnivore-Omnivore Abundance (%)		3.70 1		Tanypodinae/Chironomidae Abundance Ratio 0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		135		0.04050	
Leptocheirus plumulosus		585		0.05850	
Marenzelleria viridis		180		0.83700	
Neomysis americana (Epi)		45		0.01800	
Streblospio benedicti		2160		0.07200	
Tubificoides spp.		585		0.01350	
Total Abundance w/ Epi.		3690			
Total Abundance w/o Epi.		3645			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				1.03950	
Total Biomass w/o Epi.				1.02150	



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 040		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 27SEP12	
		Sampled Area: 0.022 sq.m		Time: 8:34:01	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.96		Oligohaline Pollution Indicative Spp. Abund.	91.38	3
Abundance (#/m2)	5220	1	Tolerance Score	6.00	5
Deep Deposit Feeder Abundance (%)	14.66		Oligohaline Pollution Sensitive Spp. Abund.	4.31	3
Carnivore-Omnivore Abundance (%)	2.59	1	Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.01350		
Cyathura polita	45		0.01800		
Leptocheirus plumulosus	1440		0.13950		
Macoma mitchelli	90		0.15300		
Marenzelleria viridis	225		1.21500		
Melita nitida (Epi)	45		0.00225		
Neanthes succinea	45		0.01800		
Rangia cuneata	45		9.72000		
Streblospio benedicti	2520		0.08550		
Tubificoides spp.	765		0.00900		
Total Abundance w/ Epi.	5265				
Total Abundance w/o Epi.	5220				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			11.37375		
Total Biomass w/o Epi.			11.37150		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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|                               Station: 040                               Rep: 03                               |
| Watershed: Potomac River        Habitat: Oligohaline                    Date: 27SEP12                          |
| Gear: Wildco Box Corer         Sampled Area: 0.022 sq.m                Time: 8:34:01                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 7.2                  Salinity (ppt): 4.38                    Temperature (C): 22.00                  |
| Dissolved Oxygen (mg/l): 7.1    Sediment Silt-Clay (%): 93.92           Total Carbon (%): 1.73                  |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.50              Condition: Degraded                       # Attributes Scored: 4                  |
|                               Value      Score                               Value      Score                          |
| Shannon-Wiener Index           1.67      3      Oligohaline Pollution Indicative Spp. Abund. 93.02  3  |
| Abundance (#/m2)              3870      3      Tolerance Score                               0.00  |
| Deep Deposit Feeder Abundance (%) 9.30      Oligohaline Pollution Sensitive Spp. Abund. 3.49  3  |
| Carnivore-Omnivore Abundance (%) 3.49      1      Tanypodinae/Chironomidae Abundance Ratio 0.00  |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                            Abundance (#/m2)                            Biomass (g/m2)                            |
=====
| Cyathura polita                  135                                           0.10350                                    |
| Leptocheirus plumulosus         1215                                          0.17550                                    |
| Marenzelleria viridis           135                                           0.47250                                    |
| Streblospio benedicti           2025                                          0.06750                                    |
| Tubificoides spp.               360                                           0.00900                                    |
=====
| Total Abundance w/ Epi.         3870                                          |
| Total Abundance w/o Epi.        3870                                          |
| Number of Taxa w/ Epi.          5                                              |
| Number of Taxa w/o Epi.         5                                              |
| Total Biomass w/ Epi.           0.82800                                       |
| Total Biomass w/o Epi.         0.82800                                       |
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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 14:57:04	
BOTTOM ENVIRONMENT					
Depth (m): 2.4		Salinity (ppt): 10.22		Temperature (C): 25.74	
Dissolved Oxygen (mg/l): 7.9		Sediment Silt-Clay (%): 1.71		Total Carbon (%): 0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.20		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.27	3	Pollution Indicative Species Abundance (%)	4.92	5
Abundance (#/m2)	2440	5	Pollution Indicative Species Biomass (%)	0.24	
Biomass (g/m2)	3.38	3	Pollution Sensitive Species Abundance (%)	59.02	
Carnivore-Omnivore Abundance (%)	1.64		Pollution Sensitive Species Biomass (%)	82.39	5
Deep Deposit Feeder Abundance (%)	9.84				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Apocorophium lacustre (Epi)	40		0.00200		
Heteromastus filiformis	80		0.18000		
Leptocheirus plumulosus	320		0.02000		
Macoma mitchelli	280		0.02000		
Marenzelleria viridis	1280		1.84000		
Micrura leidyi	40		0.36400		
Rangia cuneata	120		0.92800		
Spiophanes bombyx	40		0.02000		
Streblospio benedicti	120		0.00800		
Tubificoides spp.	160		0.00400		
Total Abundance w/ Epi.	2480				
Total Abundance w/o Epi.	2440				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			3.38600		
Total Biomass w/o Epi.			3.38400		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 02	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 14:57:04	
BOTTOM ENVIRONMENT					
Depth (m): 2.4		Salinity (ppt): 10.22		Temperature (C): 25.74	
Dissolved Oxygen (mg/l): 7.9		Sediment Silt-Clay (%): 1.71		Total Carbon (%): 0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.20		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.55	5	Pollution Indicative Species Abundance (%)	6.82	5
Abundance (#/m2)	1760	5	Pollution Indicative Species Biomass (%)	0.01	
Biomass (g/m2)	40.35	1	Pollution Sensitive Species Abundance (%)	40.91	
Carnivore-Omnivore Abundance (%)	4.55		Pollution Sensitive Species Biomass (%)	99.07	5
Deep Deposit Feeder Abundance (%)	25.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Eteone heteropoda	40		0.00200		
Heteromastus filiformis	120		0.32400		
Leptocheirus plumulosus	160		0.02400		
Macoma mitchelli	280		0.00800		
Marenzelleria viridis	680		0.94400		
Neanthes succinea	40		0.01200		
Rangia cuneata	40		39.03200		
Streblospio benedicti	80		0.00200		
Tubificoides spp.	320		0.00400		
Total Abundance w/ Epi.	1760				
Total Abundance w/o Epi.	1760				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			40.35200		
Total Biomass w/o Epi.			40.35200		





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 03	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 14:57:04	
BOTTOM ENVIRONMENT					
Depth (m): 2.4		Salinity (ppt): 10.22		Temperature (C): 25.74	
Dissolved Oxygen (mg/l): 7.9		Sediment Silt-Clay (%): 1.71		Total Carbon (%): 0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.20		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.75	5	Pollution Indicative Species Abundance (%)	6.25	5
Abundance (#/m2)	1280	3	Pollution Indicative Species Biomass (%)	0.38	
Biomass (g/m2)	3.12	3	Pollution Sensitive Species Abundance (%)	53.13	
Carnivore-Omnivore Abundance (%)	12.50		Pollution Sensitive Species Biomass (%)	89.36	5
Deep Deposit Feeder Abundance (%)	9.38				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	40		0.00800		
Eteone heteropoda	40		0.00400		
Heteromastus filiformis	80		0.16400		
Leptocheirus plumulosus	120		0.01600		
Macoma balthica	40		1.70800		
Macoma mitchelli	160		0.09200		
Marenzelleria viridis	560		0.68000		
Neanthes succinea	80		0.02800		
Rangia cuneata	80		0.40000		
Streblospio benedicti	40		0.00800		
Tubificoides spp.	40		0.01200		
Total Abundance w/ Epi.	1280				
Total Abundance w/o Epi.	1280				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	11				
Total Biomass w/ Epi.			3.12000		
Total Biomass w/o Epi.			3.12000		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 044		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.022 sq.m		Time: 15:48:19	
BOTTOM ENVIRONMENT					
Depth (m): 12.4		Salinity (ppt): 13.03		Temperature (C): 26.05	
Dissolved Oxygen (mg/l): 2.4		Sediment Silt-Clay (%): 89.49		Total Carbon (%): 2.44	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.84	3	Pollution Indicative Species Abundance (%)	4.00	5
Abundance (#/m2)	1125	3	Pollution Indicative Species Biomass (%)	3.85	
Biomass (g/m2)	0.23	1	Pollution Sensitive Species Abundance (%)	8.00	
Carnivore-Omnivore Abundance (%)	8.00		Pollution Sensitive Species Biomass (%)	11.54	1
Deep Deposit Feeder Abundance (%)	24.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Americamysis almyra	(Epi)	45		0.01350	
Carinoma tremaphoros		45		0.01800	
Cyathura polita		45		0.00900	
Heteromastus filiformis		45		0.03600	
Leptocheirus plumulosus		675		0.13500	
Littoridinops tenuipes	(Epi)	45		0.01350	
Marenzelleria viridis		45		0.01800	
Streblospio benedicti		45		0.00900	
Tubificoides spp.		225		0.00900	
Total Abundance w/ Epi.		1215			
Total Abundance w/o Epi.		1125			
Number of Taxa w/ Epi.		9			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				0.26100	
Total Biomass w/o Epi.				0.23400	



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 044			Rep: 02		
Watershed: Potomac River			Date: 11SEP12		
Gear: Wildco Box Corer			Time: 15:48:19		
Habitat: Low Mesohaline			Sampled Area: 0.022 sq.m		
BENTHIC INDEX OF BIOTIC INTEGRITY					
Depth (m): 12.4		Salinity (ppt): 13.03		Temperature (C): 26.05	
Dissolved Oxygen (mg/l): 2.4		Sediment Silt-Clay (%): 89.49		Total Carbon (%): 2.44	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
		Value	Score	Value	Score
Shannon-Wiener Index		2.21	3	Pollution Indicative Species Abundance (%)	38.89 1
Abundance (#/m2)		810	3	Pollution Indicative Species Biomass (%)	2.13
Biomass (g/m2)		0.21	1	Pollution Sensitive Species Abundance (%)	5.56
Carnivore-Omnivore Abundance (%)		16.67		Pollution Sensitive Species Biomass (%)	8.51 1
Deep Deposit Feeder Abundance (%)		27.78			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Glycinde solitaria		45		0.01800	
Leptocheirus plumulosus		90		0.00225	
Macoma mitchelli		45		0.00225	
Neanthes succinea		90		0.18000	
Streblospio benedicti		315		0.00450	
Tubificoides spp.		225		0.00450	
Total Abundance w/ Epi.		810			
Total Abundance w/o Epi.		810			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.21150	
Total Biomass w/o Epi.				0.21150	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 044		Rep: 03
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 11SEP12
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:48:19
BOTTOM ENVIRONMENT		
Depth (m): 12.4	Salinity (ppt): 13.03	Temperature (C): 26.05
Dissolved Oxygen (mg/l): 2.4	Sediment Silt-Clay (%): 89.49	Total Carbon (%): 2.44
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 2.20	Condition: Degraded	# Attributes Scored: 5
	Value      Score	Value      Score
Shannon-Wiener Index	1.92      3	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	270      1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.13      1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	33.33	Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	33.33	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Leptocheirus plumulosus	45	0.00450
Marenzelleria viridis	45	0.02250
Neanthes succinea	90	0.09450
Tubificoides spp.	90	0.00900
Total Abundance w/ Epi.	270	
Total Abundance w/o Epi.	270	
Number of Taxa w/ Epi.	4	
Number of Taxa w/o Epi.	4	
Total Biomass w/ Epi.		0.13050
Total Biomass w/o Epi.		0.13050



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 14:27:07	
BOTTOM ENVIRONMENT					
Depth (m): 2.0		Salinity (ppt): 11.10		Temperature (C): 26.88	
Dissolved Oxygen (mg/l): 5.9		Sediment Silt-Clay (%): 4.77		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.94	3	Pollution Indicative Species Abundance (%)	11.43	3
Abundance (#/m2)	2800	3	Pollution Indicative Species Biomass (%)	0.50	
Biomass (g/m2)	11.14	3	Pollution Sensitive Species Abundance (%)	60.00	
Carnivore-Omnivore Abundance (%)	7.14		Pollution Sensitive Species Biomass (%)	93.34	5
Deep Deposit Feeder Abundance (%)	4.29				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Apocorophium lacustre (Epi)	40		0.01200		
Edotea triloba (Epi)	40		0.01200		
Heteromastus filiformis	120		0.45200		
Littoridinops tenuipes (Epi)	40		0.00400		
Macoma mitchelli	440		0.10800		
Marenzelleria viridis	1600		3.37200		
Neanthes succinea	200		0.12400		
Polydora cornuta	40		0.00200		
Rangia cuneata	80		7.02800		
Streblospio benedicti	320		0.05600		
Total Abundance w/ Epi.	2920				
Total Abundance w/o Epi.	2800				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			11.17000		
Total Biomass w/o Epi.			11.14200		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 02	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 14:27:07	
BOTTOM ENVIRONMENT					
Depth (m): 2.0		Salinity (ppt): 11.10		Temperature (C): 26.88	
Dissolved Oxygen (mg/l): 5.9		Sediment Silt-Clay (%): 4.77		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.70	1	Pollution Indicative Species Abundance (%)	5.19	5
Abundance (#/m2)	3080	3	Pollution Indicative Species Biomass (%)	0.56	
Biomass (g/m2)	4.64	3	Pollution Sensitive Species Abundance (%)	66.23	
Carnivore-Omnivore Abundance (%)	7.79		Pollution Sensitive Species Biomass (%)	69.17	3
Deep Deposit Feeder Abundance (%)	9.09				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Eteone heteropoda	80		0.02400		
Heteromastus filiformis	280		1.20400		
Macoma mitchelli	440		0.08000		
Marenzelleria viridis	2000		3.05200		
Neanthes succinea	160		0.12000		
Rangia cuneata	40		0.15600		
Streblospio benedicti	80		0.00200		
Total Abundance w/ Epi.	3080				
Total Abundance w/o Epi.	3080				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			4.63800		
Total Biomass w/o Epi.			4.63800		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 03	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 14:27:07	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.20		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.63	5	Pollution Indicative Species Abundance (%)	5.60	5
Abundance (#/m2)	5000	3	Pollution Indicative Species Biomass (%)	0.08	
Biomass (g/m2)	19.38	3	Pollution Sensitive Species Abundance (%)	48.80	
Carnivore-Omnivore Abundance (%)	16.00		Pollution Sensitive Species Biomass (%)	96.41	5
Deep Deposit Feeder Abundance (%)	11.20				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre (Epi)		3000		0.24400	
Cyathura polita		40		0.14800	
Eteone heteropoda		120		0.01200	
Heteromastus filiformis		160		0.26800	
Littoridinops tenuipes (Epi)		2200		0.22000	
Macoma balthica		40		3.07200	
Macoma mitchelli		480		0.07200	
Marenzelleria viridis		2160		6.12400	
Neanthes succinea		640		0.32000	
Polydora cornuta		600		0.01200	
Rangia cuneata		200		9.34000	
Rhithropanopeus harrisii (Epi)		120		0.48400	
Streblospio benedicti		160		0.00400	
Tubificoides spp.		400		0.00800	
Total Abundance w/ Epi.		10320			
Total Abundance w/o Epi.		5000			
Number of Taxa w/ Epi.		14			
Number of Taxa w/o Epi.		11			
Total Biomass w/ Epi.				20.32800	
Total Biomass w/o Epi.				19.38000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 10:54:28	
BOTTOM ENVIRONMENT					
Depth (m): 2.2		Salinity (ppt): 13.74		Temperature (C): 24.59	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 1.28		Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
		Value	Score	Value	Score
Shannon-Wiener Index		1.79	1	Pollution Indicative Species Abundance (%)	0.00
Abundance (#/m2)		920	1	Pollution Indicative Species Biomass (%)	0.00
Biomass (g/m2)		0.16	1	Pollution Sensitive Species Abundance (%)	8.70
Carnivore-Omnivore Abundance (%)		21.74	3	Pollution Sensitive Species Biomass (%)	9.76
Deep Deposit Feeder Abundance (%)		17.39			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		40		0.00400	
Gemma gemma		520		0.01600	
Glycinde solitaria		80		0.01600	
Heteromastus filiformis		160		0.02800	
Neanthes succinea		120		0.10000	
Total Abundance w/ Epi.		920			
Total Abundance w/o Epi.		920			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.16400	
Total Biomass w/o Epi.				0.16400	





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 10:54:28	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.40	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	800	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.90	1	Pollution Sensitive Species Abundance (%)	5.00	1
Carnivore-Omnivore Abundance (%)	55.00	5	Pollution Sensitive Species Biomass (%)	0.22	
Deep Deposit Feeder Abundance (%)	20.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	40		0.00800		
Gemma gemma	40		0.01600		
Glycinde solitaria	40		0.00200		
Heteromastus filiformis	160		0.14400		
Lepidactylus dytiscus	40		0.02000		
Macoma mitchelli	80		0.02400		
Micrura leidyi	40		0.20000		
Neanthes succinea	360		0.48800		
Total Abundance w/ Epi.	800				
Total Abundance w/o Epi.	800				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	8				
Total Biomass w/ Epi.			0.90200		
Total Biomass w/o Epi.			0.90200		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 11SEP12	
		Sampled Area: 0.025 sq.m		Time: 10:54:28	
BOTTOM ENVIRONMENT					
Depth (m): 2.2		Salinity (ppt): 13.74		Temperature (C): 24.59	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 1.28		Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.25	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1200	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	1.47	3	Pollution Sensitive Species Abundance (%)	13.33	3
Carnivore-Omnivore Abundance (%)	63.33	5	Pollution Sensitive Species Biomass (%)	1.09	
Deep Deposit Feeder Abundance (%)	16.67				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	40		0.00800		
Gemma gemma	120		0.02000		
Glycinde solitaria	160		0.01600		
Heteromastus filiformis	200		0.11600		
Macoma mitchelli	80		0.15200		
Micrura leidyi	40		0.60000		
Neanthes succinea	560		0.56000		
Total Abundance w/ Epi.	1200				
Total Abundance w/o Epi.	1200				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			1.47200		
Total Biomass w/o Epi.			1.47200		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Potomac River		Station: 052		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 21AUG12	
		Sampled Area: 0.022 sq.m		Time: 13:17:02	
BOTTOM ENVIRONMENT					
Depth (m): 11.6		Salinity (ppt): 21.57		Temperature (C): 27.41	
Dissolved Oxygen (mg/l): 0.3		Sediment Silt-Clay (%): 83.96		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 2012 FIXED STATIONS

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|                               Station: 052                               Rep: 02                               |
| Watershed: Potomac River        Habitat: High Mesohaline Mud        Date: 21AUG12                          |
| Gear: Wildco Box Corer         Sampled Area: 0.022 sq.m          Time: 13:17:02                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 11.6                Salinity (ppt): 21.57                Temperature (C): 27.41                  |
| Dissolved Oxygen (mg/l): 0.3    Sediment Silt-Clay (%): 83.96        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 |
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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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|                               Station: 052                               Rep: 03                               |
| Watershed: Potomac River        Habitat: High Mesohaline Mud        Date: 21AUG12                          |
| Gear: Wildco Box Corer         Sampled Area: 0.022 sq.m          Time: 13:17:02                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 11.6                 Salinity (ppt): 21.57                Temperature (C): 27.41                  |
| Dissolved Oxygen (mg/l): 0.3    Sediment Silt-Clay (%): 83.96       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 |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Lower Eastern Shore		Station: 062		Rep: 01	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 28AUG12	
		Sampled Area: 0.025 sq.m		Time: 15:12:22	
BOTTOM ENVIRONMENT					
Depth (m): 4.9		Salinity (ppt): 16.45		Temperature (C): 25.91	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 87.19		Total Carbon (%): 2.07	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.87	3	Pollution Indicative Species Abundance (%)	8.14	5
Abundance (#/m2)	6880	1	Pollution Indicative Species Biomass (%)	1.32	
Biomass (g/m2)	0.91	1	Pollution Sensitive Species Abundance (%)	3.49	
Carnivore-Omnivore Abundance (%)	1.74		Pollution Sensitive Species Biomass (%)	84.77	5
Deep Deposit Feeder Abundance (%)	73.26				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	240		0.00400		
Brachyuran zoea	40		0.00400		
Cyclaspis varians	320		0.00200		
Edotea triloba (Epi)	120		0.00200		
Glycinde solitaria	120		0.02400		
Leucon americanus	520		0.02800		
Macoma balthica	40		0.56800		
Macoma mitchelli	480		0.04400		
Marenzelleria viridis	80		0.17600		
Mulinia lateralis	40		0.00800		
Neomysis americana (Epi)	40		0.00800		
Oligochaeta			0.00200		
Tubificidae imm w/o cap chaetae	520		0.00200		
Tubificoides spp.	4520		0.04800		
Total Abundance w/ Epi.	7080				
Total Abundance w/o Epi.	6920				
Number of Taxa w/ Epi.	13				
Number of Taxa w/o Epi.	11				
Total Biomass w/ Epi.			0.92000		
Total Biomass w/o Epi.			0.91000		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Lower Eastern Shore		Station: 062		Rep: 02	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 28AUG12	
		Sampled Area: 0.025 sq.m		Time: 15:12:22	
BOTTOM ENVIRONMENT					
Depth (m): 4.9		Salinity (ppt): 16.45		Temperature (C): 25.91	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 87.19		Total Carbon (%): 2.07	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.90	1	Pollution Indicative Species Abundance (%)	4.93	5
Abundance (#/m2)	18680	1	Pollution Indicative Species Biomass (%)	2.61	
Biomass (g/m2)	1.46	3	Pollution Sensitive Species Abundance (%)	1.93	
Carnivore-Omnivore Abundance (%)	0.86		Pollution Sensitive Species Biomass (%)	65.57	3
Deep Deposit Feeder Abundance (%)	92.29				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	480		0.04800		
Brachyuran zoea	40		0.00200		
Cyathura polita	80		0.21600		
Cyclaspis varians	80		0.00400		
Edotea triloba (Epi)	200		0.00800		
Gammarus daiberi (Epi)	600		0.34800		
Glycinde solitaria	40		0.00400		
Heteromastus filiformis	40		0.01600		
Leucon americanus	160		0.00400		
Macoma balthica	40		0.46400		
Macoma mitchelli	240		0.23600		
Marenzelleria viridis	200		0.27200		
Mulinia lateralis	40		0.00800		
Neanthes succinea	40		0.01600		
Oligochaeta			0.00200		
Streblospio benedicti	40		0.00400		
Tubificidae imm w/o cap chaetae	840		0.02400		
Tubificoides spp.	16360		0.14000		
Total Abundance w/ Epi.	19520				
Total Abundance w/o Epi.	18720				
Number of Taxa w/ Epi.	17				
Number of Taxa w/o Epi.	15				
Total Biomass w/ Epi.			1.81600		
Total Biomass w/o Epi.			1.46000		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Lower Eastern Shore		Station: 062		Rep: 03	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 28AUG12	
		Sampled Area: 0.025 sq.m		Time: 15:12:22	
BOTTOM ENVIRONMENT					
Depth (m): 4.9		Salinity (ppt): 16.45		Temperature (C): 25.91	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 87.19		Total Carbon (%): 2.07	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.21	1	Pollution Indicative Species Abundance (%)	7.26	5
Abundance (#/m2)	12680	1	Pollution Indicative Species Biomass (%)	7.28	
Biomass (g/m2)	0.52	1	Pollution Sensitive Species Abundance (%)	1.58	
Carnivore-Omnivore Abundance (%)	3.15		Pollution Sensitive Species Biomass (%)	50.57	3
Deep Deposit Feeder Abundance (%)	88.01				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	240		0.03600		
Amphiporus bioculatus	80		0.00400		
Brachyuran zoea	80		0.00200		
Carinoma tremaphoros	40		0.02800		
Cyclaspis varians	40		0.00800		
Edotea triloba (Epi)	80		0.00200		
Eteone heteropoda	80		0.00400		
Glycinde solitaria	120		0.02000		
Leucon americanus	280		0.01200		
Macoma balthica	40		0.15600		
Macoma mitchelli	400		0.03200		
Marenzelleria viridis	40		0.08800		
Mulinia lateralis	80		0.03200		
Neomysis americana (Epi)	40		0.02400		
Rictaxis punctostriatus	80		0.00400		
Tubificidae imm w/o cap chaetae	760		0.00200		
Tubificoides spp.	10400		0.09600		
Total Abundance w/ Epi.	12880				
Total Abundance w/o Epi.	12760				
Number of Taxa w/ Epi.	17				
Number of Taxa w/o Epi.	15				
Total Biomass w/ Epi.			0.55000		
Total Biomass w/o Epi.			0.52400		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

=====					
Watershed: Choptank River		Station: 064		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 30AUG12	
		Sampled Area: 0.022 sq.m		Time: 7:18:21	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 9.2		Salinity (ppt): 12.55		Temperature (C): 26.42	
Dissolved Oxygen (mg/l): 6.6		Sediment Silt-Clay (%): 87.32		Total Carbon (%): 1.85	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.43	3	Pollution Indicative Species Abundance (%)	4.76	
Abundance (#/m2)	945	1	Pollution Indicative Species Biomass (%)	0.22	5
Biomass (g/m2)	4.05	5	Pollution Sensitive Species Abundance (%)	47.62	
Carnivore-Omnivore Abundance (%)	38.10	5	Pollution Sensitive Species Biomass (%)	95.67	3
Deep Deposit Feeder Abundance (%)	42.86				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
-----					
Carinoma tremaphoros	90		0.14850		
Cyathura polita	45		0.06300		
Glycinde solitaria	225		0.02700		
Heteromastus filiformis	45		0.00900		
Macoma balthica	180		3.78900		
Tubificidae imm w/o cap chaetae	45		0.00900		
Tubificoides spp.	315		0.00900		
-----					
Total Abundance w/ Epi.	945				
Total Abundance w/o Epi.	945				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			4.05450		
Total Biomass w/o Epi.			4.05450		
=====					



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 30AUG12	
		Sampled Area: 0.022 sq.m		Time: 7:18:21	
BOTTOM ENVIRONMENT					
Depth (m): 9.2		Salinity (ppt): 12.55		Temperature (C): 26.42	
Dissolved Oxygen (mg/l): 6.6		Sediment Silt-Clay (%): 87.32		Total Carbon (%): 1.85	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.85	3	Pollution Indicative Species Abundance (%)	26.67	
Abundance (#/m2)	1350	3	Pollution Indicative Species Biomass (%)	0.08	5
Biomass (g/m2)	8.30	5	Pollution Sensitive Species Abundance (%)	50.00	
Carnivore-Omnivore Abundance (%)	23.33	3	Pollution Sensitive Species Biomass (%)	98.92	5
Deep Deposit Feeder Abundance (%)	33.33				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Americamysis bigelowi (Epi)	45		0.01350		
Apocorophium lacustre (Epi)	45		0.00225		
Carinoma tremaphoros	45		0.07650		
Cyathura polita	135		0.23400		
Glycinde solitaria	135		0.09450		
Heteromastus filiiformis	45		0.00225		
Macoma balthica	405		7.88400		
Mulinia lateralis	90		0.00225		
Streblospio benedicti	90		0.00225		
Tubificidae imm w/o cap chaetae	180		0.00225		
Tubificoides spp.	225		0.00450		
Total Abundance w/ Epi.	1440				
Total Abundance w/o Epi.	1350				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			8.31825		
Total Biomass w/o Epi.			8.30250		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 30AUG12	
		Sampled Area: 0.022 sq.m		Time: 7:18:21	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.71	3	Pollution Indicative Species Abundance (%)	15.63	
Abundance (#/m2)	1440	3	Pollution Indicative Species Biomass (%)	0.44	5
Biomass (g/m2)	3.10	5	Pollution Sensitive Species Abundance (%)	25.00	
Carnivore-Omnivore Abundance (%)	18.75	3	Pollution Sensitive Species Biomass (%)	93.47	5
Deep Deposit Feeder Abundance (%)	56.25				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Brachyuran zoea	90		0.00225		
Carinoma tremaphoros	90		0.10350		
Cyathura polita	45		0.11250		
Glycinde solitaria	90		0.02700		
Heteromastus filiformis	45		0.01800		
Macoma balthica	135		2.49300		
Marenzelleria viridis	90		0.26550		
Mulinia lateralis	45		0.00450		
Neanthes succinea	45		0.06300		
Streblospio benedicti	90		0.00450		
Tubificidae imm w/o cap chaetae	90		0.00450		
Tubificoides spp.	675		0.00450		
Total Abundance w/ Epi.	1530				
Total Abundance w/o Epi.	1530				
Number of Taxa w/ Epi.	12				
Number of Taxa w/o Epi.	12				
Total Biomass w/ Epi.			3.10275		
Total Biomass w/o Epi.			3.10275		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 28AUG12	
		Sampled Area: 0.022 sq.m		Time: 10:36:14	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.39		Oligohaline Pollution Indicative Spp. Abund.	78.95	3
Abundance (#/m2)	855	5	Tolerance Score	9.80	1
Deep Deposit Feeder Abundance (%)	63.16		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	21.05	3	Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	90		0.01350		
Leptocheirus plumulosus	90		0.00450		
Macoma mitchelli	45		0.00450		
Neanthes succinea	45		0.00450		
Rictaxis punctostriatus	45		0.00450		
Tubificidae imm w/o cap chaetae	315		0.04500		
Tubificoides spp.	225		0.00900		
Total Abundance w/ Epi.	855				
Total Abundance w/o Epi.	855				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			0.08550		
Total Biomass w/o Epi.			0.08550		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 28AUG12	
		Sampled Area: 0.022 sq.m		Time: 10:36:14	
BOTTOM ENVIRONMENT					
Depth (m): 4.3		Salinity (ppt): 3.66		Temperature (C): 25.19	
Dissolved Oxygen (mg/l): 4.7		Sediment Silt-Clay (%): 74.62		Total Carbon (%): 4.65	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.56		Oligohaline Pollution Indicative Spp. Abund.	84.21	3
Abundance (#/m2)	855	5	Tolerance Score	9.80	1
Deep Deposit Feeder Abundance (%)	63.16		Oligohaline Pollution Sensitive Spp. Abund.	5.26	3
Carnivore-Omnivore Abundance (%)	5.26	1	Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	45		0.00900		
Carinoma tremaphoros	45		0.01800		
Leptocheirus plumulosus	90		0.00900		
Limnodrilus hoffmeisteri	90				
Marenzelleria viridis	45		0.24300		
Oligochaeta			0.00450		
Streblospio benedicti	90		0.00900		
Tubificidae imm w/o cap chaetae *	360				
Tubificoides spp.	90		0.00225		
Total Abundance w/ Epi.	855				
Total Abundance w/o Epi.	855				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			0.29475		
Total Biomass w/o Epi.			0.29475		

\*Indicates taxa is skipped in taxon counts



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 03	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 28AUG12	
		Sampled Area: 0.022 sq.m		Time: 10:36:14	
BOTTOM ENVIRONMENT					
Depth (m): 4.3		Salinity (ppt): 3.66		Temperature (C): 25.19	
Dissolved Oxygen (mg/l): 4.7		Sediment Silt-Clay (%): 74.62		Total Carbon (%): 4.65	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.31		Oligohaline Pollution Indicative Spp. Abund.	90.48	3
Abundance (#/m2)	945	5	Tolerance Score	9.80	1
Deep Deposit Feeder Abundance (%)	52.38		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	4.76	1	Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00900		
Leptocheirus plumulosus	180		0.01350		
Macoma mitchelli	45		0.00900		
Oligochaeta			0.00450		
Streblospio benedicti	180		0.00450		
Tubificidae imm w/o cap chaetae	315		0.00225		
Tubificoides spp.	180		0.00450		
Total Abundance w/ Epi.	945				
Total Abundance w/o Epi.	945				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			0.04725		
Total Biomass w/o Epi.			0.04725		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 07SEP12	
		Sampled Area: 0.022 sq.m		Time: 9:44:23	
BOTTOM ENVIRONMENT					
Depth (m): 4.7		Salinity (ppt): 10.57		Temperature (C): 27.17	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 86.55		Total Carbon (%): 2.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.86	5	Pollution Indicative Species Abundance (%)	36.36	1
Abundance (#/m2)	990	3	Pollution Indicative Species Biomass (%)	0.20	
Biomass (g/m2)	10.18	3	Pollution Sensitive Species Abundance (%)	27.27	
Carnivore-Omnivore Abundance (%)	22.73		Pollution Sensitive Species Biomass (%)	99.49	5
Deep Deposit Feeder Abundance (%)	45.45				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	90		0.01350		
Coelotanypus spp.	90		0.00900		
Cyathura polita	45		0.01350		
Leptocheirus plumulosus	45		0.01350		
Macoma balthica	180		9.91800		
Marenzelleria viridis	45		0.19350		
Streblospio benedicti	45		0.00900		
Tubificidae imm w/o cap chaetae	225		0.00225		
Tubificoides spp.	225		0.00450		
Total Abundance w/ Epi.	990				
Total Abundance w/o Epi.	990				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			10.17675		
Total Biomass w/o Epi.			10.17675		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 07SEP12	
		Sampled Area: 0.022 sq.m		Time: 9:44:23	
BOTTOM ENVIRONMENT					
Depth (m): 4.7		Salinity (ppt): 10.57		Temperature (C): 27.17	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 86.55		Total Carbon (%): 2.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.49	3	Pollution Indicative Species Abundance (%)	3.33	5
Abundance (#/m2)	1350	3	Pollution Indicative Species Biomass (%)	0.01	
Biomass (g/m2)	24.22	3	Pollution Sensitive Species Abundance (%)	33.33	
Carnivore-Omnivore Abundance (%)	16.67		Pollution Sensitive Species Biomass (%)	97.74	5
Deep Deposit Feeder Abundance (%)	40.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Amphiporus bioculatus	90		0.00900		
Carinoma tremaphoros	45		0.00450		
Cyathura polita	45		0.06300		
Leptocheirus plumulosus	180		0.03150		
Macoma balthica	315		23.04000		
Marenzelleria viridis	90		0.57150		
Neanthes succinea	45		0.49500		
Tubificidae imm w/o cap chaetae	45		0.00225		
Tubificoides spp.	495		0.00450		
Total Abundance w/ Epi.	1350				
Total Abundance w/o Epi.	1350				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			24.22125		
Total Biomass w/o Epi.			24.22125		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 07SEP12	
		Sampled Area: 0.022 sq.m		Time: 9:44:23	
BOTTOM ENVIRONMENT					
Depth (m): 4.7		Salinity (ppt): 10.57		Temperature (C): 27.17	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 86.55		Total Carbon (%): 2.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	3.12	5	Pollution Indicative Species Abundance (%)	24.14	1
Abundance (#/m2)	1305	3	Pollution Indicative Species Biomass (%)	0.04	
Biomass (g/m2)	11.61	3	Pollution Sensitive Species Abundance (%)	37.93	
Carnivore-Omnivore Abundance (%)	37.93		Pollution Sensitive Species Biomass (%)	98.22	5
Deep Deposit Feeder Abundance (%)	20.69				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	225		0.10350		
Chiridotea almyra	45		0.02250		
Cyathura polita	135		0.14400		
Heteromastus filiformis	45		0.00900		
Leptocheirus plumulosus	90		0.01350		
Macoma balthica	225		10.47600		
Marenzelleria viridis	135		0.78300		
Neanthes succinea	90		0.05400		
Streblospio benedicti	90		0.00225		
Tubificidae imm w/o cap chaetae	225		0.00225		
Total Abundance w/ Epi.	1305				
Total Abundance w/o Epi.	1305				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			11.61000		
Total Biomass w/o Epi.			11.61000		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 23AUG12	
		Sampled Area: 0.022 sq.m		Time: 9:26:38	
BOTTOM ENVIRONMENT					
Depth (m): 12.7		Salinity (ppt): 21.39		Temperature (C): 27.30	
Dissolved Oxygen (mg/l): 3.4		Sediment Silt-Clay (%): 68.18		Total Carbon (%): 3.68	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.46	1	Pollution Indicative Species Abundance (%)	50.00	
Abundance (#/m2)	270	1	Pollution Indicative Species Biomass (%)	3.57	5
Biomass (g/m2)	0.06	1	Pollution Sensitive Species Abundance (%)	33.33	
Carnivore-Omnivore Abundance (%)	33.33	5	Pollution Sensitive Species Biomass (%)	3.57	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Brachyuran zoea	45		0.00450		
Glycinde solitaria	90		0.00225		
Macoma mitchelli	45		0.05850		
Paraprionospio pinnata	135		0.00225		
Total Abundance w/ Epi.	315				
Total Abundance w/o Epi.	315				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.06750		
Total Biomass w/o Epi.			0.06750		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 23AUG12	
		Sampled Area: 0.022 sq.m		Time: 9:26:38	
BOTTOM ENVIRONMENT					
Depth (m): 12.7		Salinity (ppt): 21.39		Temperature (C): 27.30	
Dissolved Oxygen (mg/l): 3.4		Sediment Silt-Clay (%): 68.18		Total Carbon (%): 3.68	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.33		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.84	1	Pollution Indicative Species Abundance (%)	85.71	
Abundance (#/m2)	315	1	Pollution Indicative Species Biomass (%)	75.76	1
Biomass (g/m2)	0.07	1	Pollution Sensitive Species Abundance (%)	14.29	
Carnivore-Omnivore Abundance (%)	14.29	3	Pollution Sensitive Species Biomass (%)	24.24	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Glycinde solitaria	45		0.01800		
Mulinia lateralis	45		0.03150		
Paraprionospio pinnata	135		0.02250		
Streblospio benedicti	90		0.00225		
Total Abundance w/ Epi.	315				
Total Abundance w/o Epi.	315				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.07425		
Total Biomass w/o Epi.			0.07425		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 23AUG12	
		Sampled Area: 0.022 sq.m		Time: 9:26:38	
BOTTOM ENVIRONMENT					
Depth (m): 12.7		Salinity (ppt): 21.39		Temperature (C): 27.30	
Dissolved Oxygen (mg/l): 3.4		Sediment Silt-Clay (%): 68.18		Total Carbon (%): 3.68	
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)	45	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.01	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)		
Paraprionospio pinnata	45		0.00900		
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.			0.00900		
Total Biomass w/o Epi.			0.00900		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Chalk Point Discharge		Station: 074		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 23AUG12	
		Sampled Area: 0.022 sq.m		Time: 13:11:04	
BOTTOM ENVIRONMENT					
Depth (m): 2.1		Salinity (ppt): 14.43		Temperature (C): 27.57	
Dissolved Oxygen (mg/l): 6.3		Sediment Silt-Clay (%): 77.54		Total Carbon (%): 2.97	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.72	5	Pollution Indicative Species Abundance (%)	10.00	5
Abundance (#/m2)	450	1	Pollution Indicative Species Biomass (%)	0.16	
Biomass (g/m2)	2.82	3	Pollution Sensitive Species Abundance (%)	30.00	
Carnivore-Omnivore Abundance (%)	30.00		Pollution Sensitive Species Biomass (%)	84.44	3
Deep Deposit Feeder Abundance (%)	20.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	90		0.08100		
Heteromastus filiformis	45		0.17550		
Macoma balthica	90		2.25900		
Macoma mitchelli	90		0.17550		
Marenzelleria viridis	45		0.12150		
Neanthes succinea	45		0.00225		
Tubificidae imm w/o cap chaetae	45		0.00450		
Total Abundance w/ Epi.	450				
Total Abundance w/o Epi.	450				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			2.81925		
Total Biomass w/o Epi.			2.81925		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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|                               Station: 074                               Rep: 02                               |
| Watershed: Chalk Point Discharge      Habitat: Low Mesohaline      Date: 23AUG12                          |
| Gear: Wildco Box Corer                Sampled Area: 0.022 sq.m    Time: 13:11:04                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 2.1                        Salinity (ppt): 14.43      Temperature (C): 27.57                  |
| Dissolved Oxygen (mg/l): 6.3          Sediment Silt-Clay (%): 77.54  Total Carbon (%): 2.97                  |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.20                    Condition: Degraded        # Attributes Scored: 5                  |
|                                     Value   Score                                     Value   Score |
| Shannon-Wiener Index                 2.13     3      Pollution Indicative Species Abundance (%) 28.57     1 |
| Abundance (#/m2)                     315      1      Pollution Indicative Species Biomass (%)   4.15      |
| Biomass (g/m2)                       2.00     3      Pollution Sensitive Species Abundance (%) 14.29      |
| Carnivore-Omnivore Abundance (%)    42.86                                         Pollution Sensitive Species Biomass (%) 89.11     3 |
| Deep Deposit Feeder Abundance (%)   14.29                                         |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)          Biomass (g/m2)                          |
-----
| Carinoma tremaphoros                 135                       0.12150                                  |
| Heteromastus filiformis              45                         0.01350                                  |
| Macoma balthica                      45                         1.78650                                  |
| Mulinia lateralis                    45                         0.08100                                  |
| Streblospio benedicti                45                         0.00225                                  |
-----
| Total Abundance w/ Epi.              315                       |
| Total Abundance w/o Epi.            315                       |
| Number of Taxa w/ Epi.               5                         |
| Number of Taxa w/o Epi.              5                         |
| Total Biomass w/ Epi.                2.00475                   |
| Total Biomass w/o Epi.               2.00475                   |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 074		Rep: 03	
Watershed: Chalk Point Discharge		Date: 23AUG12	
Gear: Wildco Box Corer		Time: 13:11:04	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.79	5	0.00
Abundance (#/m2)	540	3	0.00
Biomass (g/m2)	4.88	3	41.67
Carnivore-Omnivore Abundance (%)	25.00		95.57
Deep Deposit Feeder Abundance (%)	33.33		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.04050	
Glycinde solitaria	45	0.00900	
Heteromastus filiformis	45	0.15300	
Macoma balthica	135	4.63500	
Macoma mitchelli	45	0.00900	
Neanthes succinea	45	0.00900	
Rangia cuneata	45	0.01800	
Tubificoides spp.	135	0.00450	
Total Abundance w/ Epi.	540		
Total Abundance w/o Epi.	540		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		4.87800	
Total Biomass w/o Epi.		4.87800	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 077		Rep: 01	
Watershed: Patuxent River		Date: 23AUG12	
Gear: Wildco Box Corer		Time: 13:40:32	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
Depth (m): 2.6		Salinity (ppt): 10.23	
Dissolved Oxygen (mg/l): 5.5		Temperature (C): 27.55	
		Sediment Silt-Clay (%): 69.97	
		Total Carbon (%): 3.01	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20		Condition: Degraded	
		# Attributes Scored: 5	
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		1.79	3
Biomass (g/m2)		2970	3
Carnivore-Omnivore Abundance (%)		0.47	1
Deep Deposit Feeder Abundance (%)		22.73	3
		10.61	
BENTHIC ABUNDANCE (per sq. meter)			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Apocorophium lacustre (Epi)		45	0.00900
Carinoma tremaphoros		45	0.00900
Edotea triloba (Epi)		45	0.01350
Eteone heteropoda		180	0.01350
Macoma mitchelli		45	0.00450
Marenzelleria viridis		45	0.23850
Neanthes succinea		450	0.15750
Rangia cuneata		45	0.00225
Streblospio benedicti		1845	0.04500
Tubificoides spp.		315	0.00225
Total Abundance w/ Epi.		3060	
Total Abundance w/o Epi.		2970	
Number of Taxa w/ Epi.		10	
Number of Taxa w/o Epi.		8	
Total Biomass w/ Epi.			0.49500
Total Biomass w/o Epi.			0.47250





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patuxent River		Station: 077		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 23AUG12	
		Sampled Area: 0.022 sq.m		Time: 13:40:32	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 10.23		Temperature (C): 27.55	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 69.97		Total Carbon (%): 3.01	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.95	3	Pollution Indicative Species Abundance (%)	65.85	1
Abundance (#/m2)	1845	5	Pollution Indicative Species Biomass (%)	8.79	
Biomass (g/m2)	0.41	1	Pollution Sensitive Species Abundance (%)	4.88	
Carnivore-Omnivore Abundance (%)	19.51		Pollution Sensitive Species Biomass (%)	54.95	3
Deep Deposit Feeder Abundance (%)	9.76				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Cyathura polita	45		0.01350		
Edotea triloba (Epi)	45		0.00225		
Eteone heteropoda	90		0.00900		
Hobsonia florida	45		0.00225		
Macoma mitchelli	90		0.02250		
Marenzelleria viridis	45		0.21150		
Neanthes succinea	225		0.12150		
Streblospio benedicti	1125		0.02700		
Tubificoides spp.	180		0.00225		
Total Abundance w/ Epi.	1890				
Total Abundance w/o Epi.	1845				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	8				
Total Biomass w/ Epi.			0.41175		
Total Biomass w/o Epi.			0.40950		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patuxent River		Station: 077		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 23AUG12	
		Sampled Area: 0.022 sq.m		Time: 13:40:32	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 10.23		Temperature (C): 27.55	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 69.97		Total Carbon (%): 3.01	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.88	3	Pollution Indicative Species Abundance (%)	67.74	1
Abundance (#/m2)	1395	3	Pollution Indicative Species Biomass (%)	34.78	
Biomass (g/m2)	0.10	1	Pollution Sensitive Species Abundance (%)	3.23	
Carnivore-Omnivore Abundance (%)	16.13		Pollution Sensitive Species Biomass (%)	21.74	1
Deep Deposit Feeder Abundance (%)	6.45				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Edotea triloba (Epi)	45		0.00450		
Eteone heteropoda	135		0.00900		
Macoma mitchelli	225		0.00450		
Neanthes succinea	90		0.03600		
Rangia cuneata	45		0.02250		
Streblospio benedicti	810		0.02700		
Tubificoides spp.	90		0.00450		
Total Abundance w/ Epi.	1440				
Total Abundance w/o Epi.	1395				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			0.10800		
Total Biomass w/o Epi.			0.10350		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 01	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 04SEP12	
		Sampled Area: 0.022 sq.m		Time: 10:01:38	
BOTTOM ENVIRONMENT					
Depth (m): 0.5		Salinity (ppt): 0.86		Temperature (C): 27.58	
Dissolved Oxygen (mg/l): 6.6		Sediment Silt-Clay (%): 75.79		Total Carbon (%): 4.38	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 3	
		Value Score		Value Score	
Shannon-Wiener Index		1.71		73.91 3	
Abundance (#/m2)		2070 5		T.F. Pollution Indicative Spp. Abund. (%) 9.57 1	
Deep Deposit Feeder Abundance (%)		93.48 3		Limnodrilus Abundance (%) 73.91	
Carnivore-Omnivore Abundance (%)		4.35			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Branchiura sowerbyi		135		0.00450	
Coelotanypus spp.		45		0.00900	
Cyathura polita		45		0.00900	
Ilyodrilus templetoni		270			
Limnodrilus hoffmeisteri		180			
Oligochaeta				0.45900	
Streblospio benedicti		45		0.00225	
Tubificidae imm w/o cap chaetae *		1350			
Total Abundance w/ Epi.		2070			
Total Abundance w/o Epi.		2070			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.48375	
Total Biomass w/o Epi.				0.48375	

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 079                               Rep: 02   |
| Watershed: Patuxent River      Habitat: Tidal Freshwater      Date: 04SEP12 |
| Gear: Wildco Box Corer       Sampled Area: 0.022 sq.m      Time: 10:01:38 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 0.5                Salinity (ppt): 0.86          Temperature (C): 27.58 |
| Dissolved Oxygen (mg/l): 6.6  Sediment Silt-Clay (%): 75.79  Total Carbon (%): 4.38 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.50             Condition: Degraded             # Attributes Scored: 3 |
|                               Value   Score                               Value   Score |
| Shannon-Wiener Index          1.80     5           T.F. Pollution Indicative Spp. Abund. (%) 71.62   3 |
| Abundance (#/m2)              3330    5           Tolerance Score                          9.46    1 |
| Deep Deposit Feeder Abundance (%) 100.00  1           Limnodrilus Abundance (%)                71.62 |
| Carnivore-Omnivore Abundance (%) 0.00 |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                          | Abundance (#/m2) | Biomass (g/m2) |
|-----|-----|-----|
| Aulodrilus pigueti            | 135               |                 |
| Branchiura sowerbyi           | 135               | 0.16200         |
| Ilyodrilus templetoni         | 540               |                 |
| Limnodrilus hoffmeisteri     | 405               |                 |
| Oligochaeta                   |                   | 0.55551         |
| Tubificidae imm w cap chaetae * | 135               |                 |
| Tubificidae imm w/o cap chaetae * | 1980             |                 |
|-----|-----|-----|
| Total Abundance w/ Epi.       | 3330              |                 |
| Total Abundance w/o Epi.     | 3330              |                 |
| Number of Taxa w/ Epi.        | 4                 |                 |
| Number of Taxa w/o Epi.      | 4                 |                 |
| Total Biomass w/ Epi.         |                   | 0.71751         |
| Total Biomass w/o Epi.       |                   | 0.71751         |
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\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 079                               Rep: 03                               |
| Watershed: Patuxent River       Habitat: Tidal Freshwater           Date: 04SEP12                          |
| Gear: Wildco Box Corer        Sampled Area: 0.022 sq.m           Time: 10:01:38                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 0.5                 Salinity (ppt): 0.86                 Temperature (C): 27.58                 |
| Dissolved Oxygen (mg/l): 6.6   Sediment Silt-Clay (%): 75.79       Total Carbon (%): 4.38                 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.50              Condition: Degraded                  # Attributes Scored: 3                 |
|                               Value   Score                               Value   Score                           |
| Shannon-Wiener Index           1.42   5           T.F. Pollution Indicative Spp. Abund. (%) 86.96  3 |
| Abundance (#/m2)              3105   5           Tolerance Score                          9.66   1 |
| Deep Deposit Feeder Abundance (%) 97.10  1           Limnodrilus Abundance (%)                86.96  |
| Carnivore-Omnivore Abundance (%) 2.90   |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                            Abundance (#/m2)                    Biomass (g/m2)                         |
=====
| Branchiura sowerbyi            180                                  0.06750                                 |
| Cryptochironomus spp.          45                                   0.00225                                 |
| Limnodrilus hoffmeisteri      540                                  |
| Oligochaeta                    |                                       0.50192                                 |
| Tanypus neopunctipennis       45                                   0.00225                                 |
| Tubificidae imm w cap chaetae  135                                  |
| Tubificidae imm w/o cap chaetae * 2160                                  |
=====
| Total Abundance w/ Epi.        3105                                  |
| Total Abundance w/o Epi.       3105                                  |
| Number of Taxa w/ Epi.         5                                       |
| Number of Taxa w/o Epi.        5                                       |
| Total Biomass w/ Epi.          0.57392                               |
| Total Biomass w/o Epi.        0.57392                               |
=====

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\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 201                               Rep: 01                               |
| Watershed: Patapsco & Back Rivers   Habitat: Low Mesohaline   Date: 05SEP12   |
| Gear: Wildco Box Corer             Sampled Area: 0.022 sq.m   Time: 9:56:34   |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 4.0                      Salinity (ppt): 9.63      Temperature (C): 27.12   |
| Dissolved Oxygen (mg/l): 4.9        Sediment Silt-Clay (%): 79.05   Total Carbon (%): 3.75   |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 1.00                   Condition: Severely Degr.      # Attributes Scored: 5   |
|                                     Value   Score                               Value   Score |
| Shannon-Wiener Index                 0.00   1      Pollution Indicative Species Abundance (%) 100.00   1 |
| Abundance (#/m2)                     135    1      Pollution Indicative Species Biomass (%)   100.00   |
| Biomass (g/m2)                       0.02   1      Pollution Sensitive Species Abundance (%)  0.00     |
| Carnivore-Omnivore Abundance (%)     0.00   |      Pollution Sensitive Species Biomass (%)  0.00     1 |
| Deep Deposit Feeder Abundance (%)    0.00   |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)          Biomass (g/m2)          |
=====
| Streblospio benedicti                135                       0.01800                |
=====
| Total Abundance w/ Epi.              135                       |                          |
| Total Abundance w/o Epi.             135                       |                          |
| Number of Taxa w/ Epi.               1                          |                          |
| Number of Taxa w/o Epi.             1                          |                          |
| Total Biomass w/ Epi.                0.01800                   |                          |
| Total Biomass w/o Epi.              0.01800                   |                          |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 201		Rep: 02	
Watershed: Patapsco & Back Rivers		Date: 05SEP12	
Gear: Wildco Box Corer		Time: 9:56:34	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
Depth (m): 4.0		Salinity (ppt): 9.63	
Dissolved Oxygen (mg/l): 4.9		Sediment Silt-Clay (%): 79.05	
		Temperature (C): 27.12	
		Total Carbon (%): 3.75	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 5	
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		0.00	1
Biomass (g/m2)		315	1
Carnivore-Omnivore Abundance (%)		0.00	1
Deep Deposit Feeder Abundance (%)		0.00	1
		Pollution Indicative Species Abundance (%)	100.00
		Pollution Indicative Species Biomass (%)	100.00
		Pollution Sensitive Species Abundance (%)	0.00
		Pollution Sensitive Species Biomass (%)	0.00
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	315	0.00225	
Total Abundance w/ Epi.	315		
Total Abundance w/o Epi.	315		
Number of Taxa w/ Epi.	1		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.00225	
Total Biomass w/o Epi.		0.00225	
=====			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 201                               Rep: 03                               |
| Watershed: Patapsco & Back Rivers   Habitat: Low Mesohaline   Date: 05SEP12                               |
| Gear: Wildco Box Corer             Sampled Area: 0.022 sq.m   Time: 9:56:34                               |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 4.0                      Salinity (ppt): 9.63      Temperature (C): 27.12                       |
| Dissolved Oxygen (mg/l): 4.9        Sediment Silt-Clay (%): 79.05  Total Carbon (%): 3.75                       |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 1.00                  Condition: Severely Degr.      # Attributes Scored: 5                       |
|                                     Value   Score                               Value   Score |
| Shannon-Wiener Index                0.00    1      Pollution Indicative Species Abundance (%) 100.00    1 |
| Abundance (#/m2)                    360     1      Pollution Indicative Species Biomass (%)   100.00    |
| Biomass (g/m2)                      0.02    1      Pollution Sensitive Species Abundance (%)  0.00      |
| Carnivore-Omnivore Abundance (%)   0.00    |      Pollution Sensitive Species Biomass (%)  0.00     1 |
| Deep Deposit Feeder Abundance (%)   0.00    |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)           Biomass (g/m2)                               |
-----
| Streblospio benedicti              360                        0.01800                                     |
-----
| Total Abundance w/ Epi.             360                        |
| Total Abundance w/o Epi.           360                        |
| Number of Taxa w/ Epi.              1                          |
| Number of Taxa w/o Epi.             1                          |
| Total Biomass w/ Epi.                |                          0.01800 |
| Total Biomass w/o Epi.                |                          0.01800 |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 202		Rep: 01	
Watershed: Patapsco & Back Rivers		Date: 05SEP12	
Gear: Wildco Box Corer		Time: 8:34:39	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 6.0	Salinity (ppt): 11.41	Temperature (C): 27.02	
Dissolved Oxygen (mg/l): 5.9	Sediment Silt-Clay (%): 74.16	Total Carbon (%): 4.32	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	0.00	1	100.00
Abundance (#/m2)	270	1	100.00
Biomass (g/m2)	0.03	1	0.00
Carnivore-Omnivore Abundance (%)	0.00		0.00
Deep Deposit Feeder Abundance (%)	0.00		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	270	0.02700	
Total Abundance w/ Epi.	270		
Total Abundance w/o Epi.	270		
Number of Taxa w/ Epi.	1		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.02700	
Total Biomass w/o Epi.		0.02700	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 202                               Rep: 02                               |
| Watershed: Patapsco & Back Rivers   Habitat: Low Mesohaline   Date: 05SEP12   |
| Gear: Wildco Box Corer             Sampled Area: 0.022 sq.m   Time: 8:34:39   |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 6.0                      Salinity (ppt): 11.41           Temperature (C): 27.02   |
| Dissolved Oxygen (mg/l): 5.9         Sediment Silt-Clay (%): 74.16   Total Carbon (%): 4.32   |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 1.40                    Condition: Severely Degr.           # Attributes Scored: 5   |
|                                     Value   Score                               Value   Score   |
| Shannon-Wiener Index                 0.00   1           Pollution Indicative Species Abundance (%) 100.00   1   |
| Abundance (#/m2)                     630    3           Pollution Indicative Species Biomass (%)    100.00   |
| Biomass (g/m2)                       0.04   1           Pollution Sensitive Species Abundance (%)   0.00     |
| Carnivore-Omnivore Abundance (%)     0.00   |           Pollution Sensitive Species Biomass (%)   0.00     1   |
| Deep Deposit Feeder Abundance (%)     0.00   |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)                Biomass (g/m2)           |
-----
| Streblospio benedicti                630                             0.03600                 |
-----
| Total Abundance w/ Epi.              630                             |
| Total Abundance w/o Epi.             630                             |
| Number of Taxa w/ Epi.               1                               |
| Number of Taxa w/o Epi.              1                               |
| Total Biomass w/ Epi.                0.03600                       |
| Total Biomass w/o Epi.               0.03600                       |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 202		Rep: 03	
Watershed: Patapsco & Back Rivers		Date: 05SEP12	
Gear: Wildco Box Corer		Time: 8:34:39	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BENTHIC INDEX OF BIOTIC INTEGRITY			
Depth (m): 6.0		Salinity (ppt): 11.41	
Dissolved Oxygen (mg/l): 5.9		Temperature (C): 27.02	
		Sediment Silt-Clay (%): 74.16	
		Total Carbon (%): 4.32	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 5	
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		0.50	1
Biomass (g/m2)		405	1
Carnivore-Omnivore Abundance (%)		0.02	1
Deep Deposit Feeder Abundance (%)		0.00	1
		11.11	
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	360	0.01800	
Tubificoides spp.	45	0.00225	
Total Abundance w/ Epi.	405		
Total Abundance w/o Epi.	405		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.02025	
Total Biomass w/o Epi.		0.02025	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 203                               Rep: 01                               |
| Watershed: Patapsco & Back Rivers   Habitat: Oligohaline   Date: 12SEP12                               |
| Gear: Young Grab                     Sampled Area: 0.044 sq.m   Time: 11:50:44                               |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 1.8                       Salinity (ppt): 5.17           Temperature (C): 23.50                       |
| Dissolved Oxygen (mg/l): 7.3          Sediment Silt-Clay (%): 92.07   Total Carbon (%): 4.7                       |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.67                    Condition: Marginal                    # Attributes Scored: 6                       |
|                               Value Score                               Value Score                               |
| Shannon-Wiener Index                 1.23      5           Oligohaline Pollution Indicative Spp. Abund. 100.00  1 |
| Abundance (#/m2)                     636      5           Tolerance Score                               9.80      1 |
| Deep Deposit Feeder Abundance (%)    78.57    3           Oligohaline Pollution Sensitive Spp. Abund.  0.00    1 |
| Carnivore-Omnivore Abundance (%)    17.86    3           Tanypodinae/Chironomidae Abundance Ratio    0.00    5 |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)                Biomass (g/m2)                               |
=====
| Chironomus spp.                      114                              0.10451                                       |
| Limnodrilus hoffmeisteri             45                               |                                               |
| Oligochaeta                          |                               0.06134                                       |
| Streblospio benedicti                23                               |                                               |
| Tubificidae imm w/o cap chaetae      * 454                             0.00227                                       |
=====
| Total Abundance w/ Epi.              636                              |                                               |
| Total Abundance w/o Epi.             636                              |                                               |
| Number of Taxa w/ Epi.               3                                |                                               |
| Number of Taxa w/o Epi.              3                                |                                               |
| Total Biomass w/ Epi.                 |                               0.16813                                       |
| Total Biomass w/o Epi.                |                               0.16813                                       |
=====

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\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

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=====
|                               Station: 203                               Rep: 02                               |
| Watershed: Patapsco & Back Rivers   Habitat: Oligohaline   Date: 12SEP12                               |
| Gear: Young Grab                     Sampled Area: 0.044 sq.m   Time: 11:50:44                               |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 1.8                       Salinity (ppt): 5.17                       Temperature (C): 23.50                       |
| Dissolved Oxygen (mg/l): 7.3          Sediment Silt-Clay (%): 92.07               Total Carbon (%): 4.7                       |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 1.67                    Condition: Severely Degr.                    # Attributes Scored: 6                       |
|                                     Value   Score                                     Value   Score |
| Shannon-Wiener Index                 0.68     5     Oligohaline Pollution Indicative Spp. Abund. 100.00  1 |
| Abundance (#/m2)                     523     5     Tolerance Score                               9.47    1 |
| Deep Deposit Feeder Abundance (%)    86.96   1     Oligohaline Pollution Sensitive Spp. Abund.  0.00    1 |
| Carnivore-Omnivore Abundance (%)    13.04   1     Tanypodinae/Chironomidae Abundance Ratio  100.00  1 |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                     Abundance (#/m2)                               Biomass (g/m2)                               |
-----
| Coelotanypus spp.                       45                                               0.00909                                       |
| Neanthes succinea                       23                                               0.01818                                       |
| Oligochaeta                               |                                               0.00227                                       |
| Tubificidae imm w/o cap chaetae         454                                             0.00114                                       |
-----
| Total Abundance w/ Epi.                 523                                               |
| Total Abundance w/o Epi.                523                                               |
| Number of Taxa w/ Epi.                   3                                                 |
| Number of Taxa w/o Epi.                  3                                                 |
| Total Biomass w/ Epi.                    |                                               0.03067                                       |
| Total Biomass w/o Epi.                    |                                               0.03067                                       |
=====

```

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Station: 203		Rep: 03
Watershed: Patapsco & Back Rivers	Habitat: Oligohaline	Date: 12SEP12
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 11:50:44
BOTTOM ENVIRONMENT		
Depth (m): 1.8	Salinity (ppt): 5.17	Temperature (C): 23.50
Dissolved Oxygen (mg/l): 7.3	Sediment Silt-Clay (%): 92.07	Total Carbon (%): 4.7
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 1.80	Condition: Severely Degr.	# Attributes Scored: 5
	Value	Score
Shannon-Wiener Index	0.00	5
Abundance (#/m2)	682	5
Deep Deposit Feeder Abundance (%)	100.00	1
Carnivore-Omnivore Abundance (%)	0.00	1
	Value	Score
Oligohaline Pollution Indicative Spp. Abund.	100.00	1
Tolerance Score	9.80	1
Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Oligochaeta		0.00227
Tubificidae imm w/o cap chaetae	682	0.07725
Total Abundance w/ Epi.	682	
Total Abundance w/o Epi.	682	
Number of Taxa w/ Epi.	1	
Number of Taxa w/o Epi.	1	
Total Biomass w/ Epi.		0.07952
Total Biomass w/o Epi.		0.07952

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

```

=====
|                               Station: 204                               Rep: 01                               |
| Watershed: Lower Western Shore      Habitat: High Mesohaline Mud      Date: 17SEP12                          |
| Gear: Young Grab                    Sampled Area: 0.044 sq.m          Time: 11:27:19                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 7.3                      Salinity (ppt): 13.17           Temperature (C): 24.47                  |
| Dissolved Oxygen (mg/l): 5.1        Sediment Silt-Clay (%): 74.50  Total Carbon (%): 1.73                  |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 2.00                   Condition: Severely Degr.       # Attributes Scored: 6                  |
|                                     Value   Score                               Value   Score |
| Shannon-Wiener Index                2.25   3       Pollution Indicative Species Abundance (%) 50.00   |
| Abundance (#/m2)                    182    1       Pollution Indicative Species Biomass (%)   5.62    3 |
| Biomass (g/m2)                      0.10   1       Pollution Sensitive Species Abundance (%)  0.00    |
| Carnivore-Omnivore Abundance (%)    12.50  3       Pollution Sensitive Species Biomass (%)   0.00    1 |
| Deep Deposit Feeder Abundance (%)    62.50  |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                                Abundance (#/m2)                Biomass (g/m2)                          |
-----
| Heteromastus filiformis              45                               0.03408                                  |
| Neanthes succinea                   23                               0.05680                                  |
| Streblospio benedicti               45                               0.00454                                  |
| Tubificidae imm w/o cap chaetae     45                               0.00114                                  |
| Tubificoides spp.                   23                               0.00454                                  |
-----
| Total Abundance w/ Epi.              182                               |
| Total Abundance w/o Epi.            182                               |
| Number of Taxa w/ Epi.               5                                 |
| Number of Taxa w/o Epi.              5                                 |
| Total Biomass w/ Epi.                | 0.10110                          |
| Total Biomass w/o Epi.                | 0.10110                          |
=====

```



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 02	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 17SEP12	
		Sampled Area: 0.044 sq.m		Time: 11:27:19	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.35	1	Pollution Indicative Species Abundance (%)	55.56	
Abundance (#/m2)	204	1	Pollution Indicative Species Biomass (%)	16.67	3
Biomass (g/m2)	0.07	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	11.11	3	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	33.33				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Neanthes succinea	23		0.05453		
Streblospio benedicti	114		0.01136		
Tubificoides spp.	68		0.00227		
Total Abundance w/ Epi.	204				
Total Abundance w/o Epi.	204				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.06816		
Total Biomass w/o Epi.			0.06816		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 03	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 17SEP12	
		Sampled Area: 0.044 sq.m		Time: 11:27:19	
BOTTOM ENVIRONMENT					
Depth (m): 7.3		Salinity (ppt): 13.17		Temperature (C): 24.47	
Dissolved Oxygen (mg/l): 5.1		Sediment Silt-Clay (%): 74.50		Total Carbon (%): 1.73	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.79	1	Pollution Indicative Species Abundance (%)	45.45	
Abundance (#/m2)	250	1	Pollution Indicative Species Biomass (%)	6.45	3
Biomass (g/m2)	0.11	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	27.27	5	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	27.27				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	23		0.04317		
Heteromastus filiformis	45		0.02045		
Micrura leidyi	45		0.03408		
Streblospio benedicti	114		0.00682		
Tubificoides spp.	23		0.00114		
Total Abundance w/ Epi.	250				
Total Abundance w/o Epi.	250				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.10565		
Total Biomass w/o Epi.			0.10565		



**DATA SUMMARY B**

**BENTHIC ENVIRONMENT AND COMMUNITY  
COMPOSITION AT RANDOM SITES:  
SUMMER 2012**





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19401	19402	19403	19404	19405
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	High Meso Sand	Low Mesohaline
Date	08/29/12	08/29/12	08/29/12	08/29/12	08/28/12
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	2.5	1.5	1.6	3.0
Salinity (ppt)	17.43	17.91	16.32	13.60	6.69
Temperature (C)	26.44	26.73	27.02	26.30	26.02
Dissolved Oxygen (mg/L)	8.2	8.0	7.7	8.0	6.1
Sediment Silt-Clay (%)	75.99	2.13	83.93	15.82	79.42
Total Carbon (%)	1.94	0.14	3.29	0.57	5.28
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.33	4.33	2.00	2.00	1.80
Condition	Meets Goal	Meets Goal	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.15 3	3.30 5	1.84 1	2.61 3	1.79 3
Abundance (#/m2)	364 1	3567 3	159 1	659 1	2885 3
Biomass (g/m2)	0.64 3	1.53 3	0.04 1	0.13 1	0.23 1
Pollution Indicative Spp Abund (%)	25.00	1.91 5	42.86	27.59 1	78.74 1
Pollution Indicative Spp Biom (%)	2.84 5	0.37	10.53 3	8.11	28.16
Pollution Sensitive Spp Abund (%)	25.00	63.06 5	14.29	24.14 3	1.57
Pollution Sensitive Spp Biom (%)	42.20 3	37.90	2.63 1	23.42	6.80 1
Carnivore-Omnivore Abund (%)	62.50 5	57.32 5	28.57 5	34.48 3	7.87
Deep Deposit Feeder Abund (%)	6.25	14.65	28.57	6.90	38.58
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	38.58
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	9.80
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19401	19402	19403	19404	19405
Acteocina canaliculata	45	1295	23		
Amerocolodes species complex		45			
Carinoma tremaphoros		23		23	182
Cyathura polita					45
Edotea triloba (Epi.)		23			23
Eteone heteropoda		23			
Gammarus daiberi (Epi.)					500
Gemma gemma		45			
Glycera dibranchiata		45			
Glycinde solitaria	23	250		159	
Haminoea solitaria		227			
Heteromastus filiformis	23	386	45	45	
Leitoscoloplos spp.		23			
Leptocheirus plumulosus					386
Leptosynapta tenuis		204			
Leucon americanus				23	
Macoma balthica	23				
Macoma mitchelli		45		182	
Marenzelleria viridis		45			
Mediomastus ambiseta		114			
Micrura leidyi		23			
Mulinia lateralis		23		136	
Neanthes succinea	159		23	45	
Odostomia engonia (Epi.)		23			
Paraonis fulgens		23			
Paraprionospio pinnata	91		68		
Parvilucina crenella		23			
Phoronis spp.		341			
Podarkeopsis levifuscina		159			
Spiochaetopterus costarum		182			
Streblospio benedicti				45	1159
Tagelus plebeius		23			
Tubificidae imm w/o cap chaetae					1113
Total Abundance w/ Epifauna	364	3612	159	659	3408
Total Abundance w/o Epifauna	364	3567	159	659	2885
Number of Taxa w/ Epifauna	6	24	4	8	7
Number of Taxa w/o Epifauna	6	22	4	8	5

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19401	19402	19403	19404	19405
Acteocina canaliculata	0.0045	0.1409	0.0011		
Amerocolodes species complex		0.0091			
Carinoma tremaphoros		0.0045		0.0045	0.0682
Cyathura polita					0.0159
Edotea triloba (Epi.)		0.0091			0.0011
Eteone heteropoda		0.0011			
Gammarus daiberi (Epi.)					0.0136
Gemma gemma		0.0159			
Glycera dibranchiata		0.6430			
Glycinde solitaria	0.0091	0.0386		0.0295	
Haminoea solitaria		0.0341			
Heteromastus filiformis	0.0136	0.1159	0.0011	0.0454	
Leitoscoloplos spp.		0.0023			
Leptocheirus plumulosus					0.0841
Leptosynapta tenuis		0.0250			
Leucon americanus				0.0023	
Macoma balthica	0.2567				
Macoma mitchelli		0.0704		0.0068	
Marenzelleria viridis		0.0659			
Mediomastus ambiseta		0.0091			
Micrura leidyi		0.0136			
Mulinia lateralis		0.0023		0.0091	
Neanthes succinea	0.3385		0.0364	0.0273	
Odostomia engonia (Epi.)		0.0091			
Oligochaeta					0.0068
Paraonis fulgens		0.0023			
Paraprionospio pinnata	0.0182		0.0045		
Parvilucina crenella		0.0045			
Phoronis spp.		0.0704			
Podarkeopsis levifuscina		0.0091			
Spiochaetopterus costarum		0.0954			
Streblospio benedicti				0.0011	0.0182
Tagelus plebeius		0.1613			
Tubificidae imm w/o cap chaetae					0.0409
Total Biomass w/ Epifauna	0.6407	1.5529	0.0432	0.1261	0.2488
Total Biomass w/o Epifauna	0.6407	1.5347	0.0432	0.1261	0.2340

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19406	19407	19408	19409	19410	
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Sand	High Meso Mud	
Date	08/30/12	08/30/12	08/30/12	08/30/12	08/30/12	
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	2.0	1.5	2.9	6.8	
Salinity (ppt)	10.65	11.98	11.74	13.05	13.54	
Temperature (C)	26.13	26.21	26.36	26.30	26.45	
Dissolved Oxygen (mg/L)	8.4	8.6	8.4	7.0	6.2	
Sediment Silt-Clay (%)	55.03	87.32	1.78	15.28	77.23	
Total Carbon (%)	0.82	1.29	0.05	0.42	1.38	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.80	3.00	3.00	2.33	3.67	
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Meets Goal	
# Attributes Scored	5	5	5	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.32	3	2.37	3	2.45	1
Abundance (#/m2)	5180	3	432	1	1999	5
Biomass (g/m2)	5.94	5	2.39	3	0.52	1
Pollution Indicative Spp Abund (%)	17.54	3	0.00	5	48.86	1
Pollution Indicative Spp Biom (%)	0.36		0.00		8.53	1
Pollution Sensitive Spp Abund (%)	10.09		47.37		12.50	3
Pollution Sensitive Spp Biom (%)	84.62	5	80.67	3	53.39	3
Carnivore-Omnivore Abund (%)	10.09		21.05		17.05	5
Deep Deposit Feeder Abund (%)	76.32		31.58		20.45	28.00
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	0.00
Limnodrilus Abundance (%)	10.53		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	9.80		0.00		0.00	0.00
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	0.00
BENTHIC ABUNDANCE (per sq. meter)						
Site	19406	19407	19408	19409	19410	
Carinoma tremaphoros		23		23	136	
Cyathura polita	182					
Eteone heteropoda	23		23			
Glycinde solitaria	45		45	364	23	
Heteromastus filiformis	591	45	204	318	91	
Hirudinea (Epi.)			23			
Laeonereis culveri			23			
Leitoscoloplos spp.			68			
Macoma balthica	227	159		45	159	
Macoma mitchelli	68		159	23		
Marenzelleria viridis	68	45	204			
Micrura leidyi		23				
Mulinia lateralis				114		
Neanthes succinea	273	45	227	68	295	
Paraprionospio pinnata					23	
Pectinaria gouldii	23					
Rictaxis punctostriatus			23			
Streblospio benedicti	341		886	182		
Tubificidae imm w/o cap chaetae	545					
Tubificoides spp.	2795	91	136			
Total Abundance w/ Epifauna	5180	432	2022	1136	727	
Total Abundance w/o Epifauna	5180	432	1999	1136	727	
Number of Taxa w/ Epifauna	12	7	12	8	6	
Number of Taxa w/o Epifauna	12	7	11	8	6	

Continued . . .



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19406	19407	19408	19409	19410
Carinoma tremaphoros		0.0136		0.0068	0.0500
Cyathura polita	0.2954				
Eteone heteropoda	0.0011		0.0045		
Glycinde solitaria	0.0011		0.0045	0.0704	0.0023
Heteromastus filiformis	0.2158	0.0068	0.0932	0.0795	0.0318
Hirudinea (Epi.)			0.0023		
Laeonereis culveri			0.0068		
Leitoscoloplos spp.			0.0011		
Macoma balthica	4.6440	1.7949		0.0932	1.8880
Macoma mitchelli	0.0250		0.0568	0.0523	
Marenzelleria viridis	0.0863	0.1340	0.2726		
Micrura leidyi		0.3544			
Mulinia lateralis				0.1113	
Neanthes succinea	0.4203	0.0863	0.0386	0.0704	0.7134
Paraprionospio pinnata					0.0045
Pectinaria gouldii	0.0011				
Rictaxis punctostriatus			0.0011		
Streblospio benedicti	0.0114		0.0386	0.0011	
Tubificidae imm w/o cap chaetae	0.0091				
Tubificoides spp.	0.2295	0.0011	0.0011		
Total Biomass w/ Epifauna	5.9401	2.3913	0.5214	0.4851	2.6900
Total Biomass w/o Epifauna	5.9401	2.3913	0.5192	0.4851	2.6900

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19411	19412	19413	19414	19415	
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	
Habitat	High Meso Mud	High Meso Mud	High Meso Sand	Low Mesohaline	Low Mesohaline	
Date	08/28/12	09/07/12	09/07/12	09/07/12	09/07/12	
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	
<b>BOTTOM ENVIRONMENT</b>						
Depth (m)	7.5	6.0	3.0	3.7	3.4	
Salinity (ppt)	15.35	13.07	12.44	11.41	11.59	
Temperature (C)	26.00	26.69	26.36	26.79	26.72	
Dissolved Oxygen (mg/L)	5.5	5.4	6.0	5.7	6.0	
Sediment Silt-Clay (%)	74.79	54.04	5.41	54.38	4.56	
Total Carbon (%)	2.21	0.57	0.22	1.03	0.32	
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>						
B-IBI Score	3.00	4.00	1.67	3.40	3.00	
Condition	Meets Goal	Meets Goal	Severely Degr.	Meets Goal	Meets Goal	
# Attributes Scored	6	6	6	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.73	3	2.49	3	2.37	1
Abundance (#/m2)	841	1	2181	5	1999	5
Biomass (g/m2)	1.76	3	2.02	5	0.64	1
Pollution Indicative Spp Abund (%)	32.43		12.50		26.14	1
Pollution Indicative Spp Biom (%)	0.90	5	3.25	5	7.79	
Pollution Sensitive Spp Abund (%)	27.03		5.21		4.55	1
Pollution Sensitive Spp Biom (%)	97.94	3	25.36	1	19.47	5
Carnivore-Omnivore Abund (%)	16.22	3	30.21	5	11.36	1
Deep Deposit Feeder Abund (%)	54.05		46.88		17.05	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	16.22		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	9.29		6.00		0.00	
Tany./Chir. Abundance Ratio	100.00		0.00		0.00	
<b>BENTHIC ABUNDANCE (per sq. meter)</b>						
Site	19411	19412	19413	19414	19415	
Amphiporus bioculatus			23			
Carinoma tremaphoros	23	45	23	23		
Coelotanypus spp.	23					
Cyathura polita	68			68	45	
Eteone heteropoda			68		45	
Glycinde solitaria	23	68			23	
Heteromastus filiformis	23	863	341	114	204	
Leptocheirus plumulosus				23	23	
Macoma balthica	136	23	23	91	136	
Macoma mitchelli		182	886	159		
Marenzelleria viridis			23		250	
Mulinia lateralis	23	23	23			
Neanthes succinea		545	91	45	364	
Paraprionospio pinnata		23				
Polydora cornuta			23			
Rangia cuneata		23			23	
Spiochaetopterus costarum			23			
Streblospio benedicti	91	227	432	114	932	
Tubificidae imm w/o cap chaetae	136			91		
Tubificoides spp.	295	159		91	364	
Total Abundance w/ Epifauna	841	2181	1999	818	2408	
Total Abundance w/o Epifauna	841	2181	1999	818	2408	
Number of Taxa w/ Epifauna	10	11	13	10	11	
Number of Taxa w/o Epifauna	10	11	13	10	11	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19411	19412	19413	19414	19415
<i>Amphiporus bioculatus</i>			0.0011		
<i>Carinoma tremaphoros</i>	0.0045	0.0295	0.0023	0.0182	
<i>Coelotanypus</i> spp.	0.0023				
<i>Cyathura polita</i>	0.0204		0.0136	0.1068	0.0364
<i>Eteone heteropoda</i>			0.0023		
<i>Glycinde solitaria</i>	0.1136	0.0204			0.0023
<i>Heteromastus filiformis</i>	0.0091	0.6612	0.2681	0.1227	0.0772
<i>Leptocheirus plumulosus</i>				0.0045	0.0011
<i>Macoma balthica</i>	1.5904	0.3794	0.0568	1.1973	0.0364
<i>Macoma mitchelli</i>		0.3044	0.1454	0.1022	
<i>Marenzelleria viridis</i>			0.0364		0.2022
<i>Mulinia lateralis</i>	0.0011	0.0273	0.0045		
<i>Neanthes succinea</i>		0.4476	0.0454	0.0341	0.1749
<i>Paraprionospio pinnata</i>		0.0273			
<i>Polydora cornuta</i>			0.0045		
<i>Rangia cuneata</i>		0.1136			0.3522
<i>Spiochaetopterus costarum</i>			0.0182		
<i>Streblospio benedicti</i>	0.0114	0.0114	0.0432	0.0068	0.0545
<i>Tubificidae</i> imm w/o cap chaetae	0.0011			0.0011	
<i>Tubificoides</i> spp.	0.0068	0.0023		0.0011	0.0011
Total Biomass w/ Epifauna	1.7608	2.0244	0.6418	1.5949	0.9395
Total Biomass w/o Epifauna	1.7608	2.0244	0.6418	1.5949	0.9395



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19416	19417	19418	19419	19420
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Oligohaline	Oligohaline
Date	09/07/12	09/07/12	09/07/12	09/16/12	09/16/12
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)	3.3	2.5	5.0	1.1	3.2
Salinity (ppt)	11.11	10.70	10.84	1.47	2.31
Temperature (C)	26.63	26.95	27.07	23.48	23.94
Dissolved Oxygen (mg/L)	5.9	5.7	5.4	7.5	6.4
Sediment Silt-Clay (%)	67.60	94.72	83.12	79.79	4.17
Total Carbon (%)	1.10	2.43	2.08	4.01	0.48
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	4.20	2.20	2.20	2.33	3.00
Condition	Meets Goal	Degraded	Degraded	Degraded	Meets Goal
# Attributes Scored	5	5	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.72 5	0.00 1	2.05 3	2.27 3	2.68 3
Abundance (#/m2)	682 3	23 1	250 1	432 3	3544 3
Biomass (g/m2)	2.66 3	0.82 1	0.19 1	0.05 1	39.83 3
Pollution Indicative Spp Abund (%)	6.67 5	0.00 5	18.18 3	89.47 3	63.46 3
Pollution Indicative Spp Biom (%)	0.13 3	0.00 1	5.39 1	95.65 3	0.29 1
Pollution Sensitive Spp Abund (%)	70.00 3	100.00 1	18.18 1	0.00 1	1.28 1
Pollution Sensitive Spp Biom (%)	95.48 5	100.00 3	76.65 3	0.00 1	99.60 3
Carnivore-Omnivore Abund (%)	36.67 3	0.00 1	18.18 1	52.63 5	25.64 3
Deep Deposit Feeder Abund (%)	3.33 1	0.00 1	63.64 3	36.84 3	69.23 3
TF Poll. Indicative Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
Limnodrilus Abundance (%)	0.00 1	0.00 1	9.09 1	36.84 3	57.05 3
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 1	0.00 1	100.00 1	85.90 3
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	0.64 3
Tolerance Score	6.20 3	0.00 1	8.00 3	7.99 3	9.27 1
Tany./Chir. Abundance Ratio	100.00 3	0.00 1	100.00 3	88.89 1	0.00 5
BENTHIC ABUNDANCE (per sq. meter)					
Site	19416	19417	19418	19419	19420
Axarus spp.					45
Carinoma tremaphoros	45				
Chironomus spp.				23	
Cladotanytarsus spp. A Epler					45
Cladotanytarsus spp. B Epler					45
Coelotanypus spp.	23		23	182	
Cyathura polita	136		23		
Dero nivea					
Limnodrilus hoffmeisteri				23	682
Limnodrilus udekemianus				23	
Macoma balthica	204	23			
Macoma mitchelli	45		23		
Marenzelleria viridis	136		23		23
Neanthes succinea	45			23	
Oecetis spp. (Epi.)					23
Polypedilum halterale group					591
Polypedilum scalaenum group					45
Polypedilum spp. *					91
Rangia cuneata					23
Streblospio benedicti	23			45	136
Tanytarsus spp. G Epler					45
Tubificidae imm w cap chaetae					68
Tubificidae imm w/o cap chaetae			23		
Tubificidae imm w/o cap chaetae *				114	1340
Tubificoides spp.	23		136		
Total Abundance w/ Epifauna	682	23	250	432	3567
Total Abundance w/o Epifauna	682	23	250	432	3544
Number of Taxa w/ Epifauna	9	1	6	6	13
Number of Taxa w/o Epifauna	9	1	6	6	12

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19416	19417	19418	19419	19420
Carinoma tremaphoros	0.0341				
Chironomidae					0.0454
Chironomus spp.				0.0011	
Coelotanypus spp.	0.0023		0.0091	0.0409	
Cyathura polita	0.0932		0.0023		
Macoma balthica	1.9198	0.8247			
Macoma mitchelli	0.0204		0.0295		
Marenzelleria viridis	0.5294		0.1431		0.0273
Neanthes succinea	0.0613			0.0023	
Oecetis spp. (Epi.)					0.0011
Oligochaeta				0.0057	0.1030
Rangia cuneata					39.6441
Streblospio benedicti	0.0011			0.0023	0.0114
Tubificidae imm w/o cap chaetae			0.0011		
Tubificoides spp.	0.0011		0.0045		
Total Biomass w/ Epifauna	2.6628	0.8247	0.1897	0.0523	39.8323
Total Biomass w/o Epifauna	2.6628	0.8247	0.1897	0.0523	39.8311

\*Indicates taxa is skipped in taxon counts

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19421	19422	19423	19424	19425
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Oligohaline	Oligohaline	Oligohaline	Oligohaline	Oligohaline
Date	09/20/12	09/20/12	09/20/12	09/20/12	09/20/12
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	4.5	2.2	4.0	2.2
Salinity (ppt)	1.82	1.67	1.83	2.19	2.05
Temperature (C)	22.21	22.14	21.61	22.62	22.05
Dissolved Oxygen (mg/L)	6.7	6.5	8.2	7.1	9.0
Sediment Silt-Clay (%)	79.17	83.47	78.42	93.69	88.39
Total Carbon (%)	2.01	3.17	2.31	2.20	3.02
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	2.33	1.33	3.00	2.00
Condition	Degraded	Degraded	Severely Degr.	Meets Goal	Severely Degr.
# Attributes Scored	6	6	6	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.39	2.24	1.66	1.68	1.09
Abundance (#/m2)	2363 5	1954 5	204 3	3476 3	2068 5
Biomass (g/m2)	113.12	117.06	0.00	0.72	0.27
Pollution Indicative Spp Abund (%)	83.65	87.21	100.00	18.30	100.00
Pollution Indicative Spp Biom (%)	0.24	0.18	100.00	3.00	100.00
Pollution Sensitive Spp Abund (%)	8.65	8.14	0.00	21.57	0.00
Pollution Sensitive Spp Biom (%)	99.74	99.81	0.00	82.18	0.00
Carnivore-Omnivore Abund (%)	2.88 1	3.49 1	11.11 1	20.26 3	2.20 1
Deep Deposit Feeder Abund (%)	66.35	60.47	77.78	11.76	95.60
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	66.35	60.47	77.78	11.11	95.60
Oligo Poll. Indic. Spp Abund (%)	87.50 3	89.53 3	100.00 1	18.95 5	100.00 1
Oligo Poll. Sens. Spp Abund (%)	2.88 3	1.16 3	0.00 1	0.65 3	0.00 1
Tolerance Score	9.46 1	9.36 1	9.35 1	9.58 1	9.76 1
Tany./Chir. Abundance Ratio	100.00 1	100.00 1	100.00 1	0.00	50.00 3
BENTHIC ABUNDANCE (per sq. meter)					
Site	19421	19422	19423	19424	19425
Apocorophium lacustre (Epi.)	23			23	
Balanus improvisus (Epi.)				273	
Boccardiella ligERICA	91	45		2068	
Chironomus spp.					23
Coelotanypus spp.	45	45	23		23
Cyathura polita	23	23		704	
Leptocheirus plumulosus	23				
Limnodrilus hoffmeisteri	886	818	114		1500
Marenzelleria viridis	68	23		23	
Mytilopsis leucophaeata (Epi.)	23			364	
Paraprionospio pinnata			23		
Polydora cornuta	68	45			
Rangia cuneata	114	114		23	
Rhithropanopeus harrisi (Epi.)				23	
Streblospio benedicti	364	477		250	45
Tubificidae imm w cap chaetae				23	
Tubificidae imm w/o cap chaetae				386	
Tubificidae imm w/o cap chaetae *	682	364	45		477
Total Abundance w/ Epifauna	2408	1954	204	4158	2068
Total Abundance w/o Epifauna	2363	1954	204	3476	2068
Number of Taxa w/ Epifauna	11	8	3	11	4
Number of Taxa w/o Epifauna	9	8	3	7	4

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19421	19422	19423	19424	19425
Apocorophium lacustre (Epi.)	0.0023			0.0091	
Balanus improvisus (Epi.)				0.4930	
Boccardiella ligERICA	0.0023	0.0023		0.1068	
Chironomus spp.					0.0011
Coelotanypus spp.	0.0045	0.0023	0.0023		0.0091
Cyathura polita	0.0182	0.0909		0.5453	
Leptocheirus plumulosus	0.0045				
Marenzelleria viridis	0.1931	0.0932		0.0454	
Mytilopsis leucophaeata (Epi.)	0.0011			0.1272	
Oligochaeta	0.2457	0.1954	0.0011	0.0080	0.2567
Paraprionospio pinnata			0.0011		
Polydora cornuta	0.0114	0.0045			
Rangia cuneata	112.6185	116.6604		0.0011	
Rhithropanopeus harrisi (Epi.)				0.1500	
Streblospio benedicti	0.0250	0.0159		0.0136	0.0045
Total Biomass w/ Epifauna	113.1266	117.0648	0.0045	1.4995	0.2715
Total Biomass w/o Epifauna	113.1232	117.0648	0.0045	0.7202	0.2715

\*Indicates taxa is skipped in taxon counts



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19501	19502	19504	19505	19506	
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem	
Habitat	Polyhaline Sand	Polyhaline Mud	Polyhaline Sand	Polyhaline Sand	High Meso Sand	
Date	08/21/12	08/29/12	08/22/12	08/22/12	08/29/12	
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)	2.8	2.8	7.0	6.3	2.7	
Salinity (ppt)	23.52	25.08	26.89	23.80	17.92	
Temperature (C)	26.07	27.02	27.11	26.42	26.41	
Dissolved Oxygen (mg/L)	5.8	5.9	4.2	6.1	7.6	
Sediment Silt-Clay (%)	1.37	62.20	0.74	0.74	1.39	
Total Carbon (%)	0.08	1.77	0.06	0.05	0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.00	3.67	2.67	2.67	4.00	
Condition	Severely Degr.	Meets Goal	Marginal	Marginal	Meets Goal	
# Attributes Scored	6	6	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.90	3	2.91	3	2.67	1
Abundance (#/m2)	704	1	3317	3	4203	5
Biomass (g/m2)	0.23	1	3.15	5	0.84	1
Pollution Indicative Spp Abund (%)	3.23	1	4.11	5	0.00	0
Pollution Indicative Spp Biom (%)	2.93	5	7.13	3	0.00	5
Pollution Sensitive Spp Abund (%)	12.90	1	44.52	3	48.65	3
Pollution Sensitive Spp Biom (%)	4.39	1	53.17	3	27.64	3
Carnivore-Omnivore Abund (%)	61.29	1	47.95	5	24.86	5
Deep Deposit Feeder Abund (%)	6.45	1	24.66	1	0.54	1
TF Poll. Indicative Spp Abund (%)	0.00	0	0.00	0	0.00	0
Limnodrilus Abundance (%)	0.00	0	0.00	0	0.00	0
Oligo Poll. Indic. Spp Abund (%)	0.00	0	0.00	0	0.00	0
Oligo Poll. Sens. Spp Abund (%)	0.00	0	0.00	0	0.00	0
Tolerance Score	0.00	0	0.00	0	0.00	0
Tany./Chir. Abundance Ratio	0.00	0	0.00	0	0.00	0

Continued . . .



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19501	19502	19504	19505	19506
Acteocina canaliculata	23	409	591	818	909
Amerocolodes species complex				114	
Ampelisca abdita				23	
Apocorophium lacustre (Epi.)		45			
Balanus improvisus (Epi.)		409			
Branchiostoma caribaeum			45	23	
Carinoma tremaphoros		23		23	
Chiridotea caeca			45		
Crassostrea virginica (Epi.)		45			
Cyathura polita				114	
Diadumene leucolena (Epi.)		227			
Edotea triloba (Epi.)		23			
Edwardsia elegans				68	
Epitonium rupicola (Epi.)		23		23	
Eteone foliosa					23
Gemma gemma	68		341	273	136
Geukensia demissa (Epi.)		45			
Glycera dibranchiata		23			
Glycinde solitaria	68	159	136	136	250
Haminoea solitaria	204		68	68	273
Heteromastus filiformis	45	23			227
Leitoscoloplos robustus		23			
Leitoscoloplos spp.					23
Lepidactylus dytiscus			1363		
Leptocheirus plumulosus				613	
Leptosynapta tenuis			23		45
Loimia medusa		182			
Macoma mitchelli	136	23		45	23
Marenzelleria viridis				23	23
Mediomastus ambiseta		727			91
Melita nitida (Epi.)		23			
Micrura leidyi	23				
Molgula manhattensis (Epi.)		841	45		
Mulinia lateralis	23	68			91
Mytilus edulis (Epi.)					23
Neanthes succinea	91	932	182	23	45
Odostomia engonia (Epi.)			91	23	
Oxyurostylis smithi				68	23
Paraprionospio pinnata		45			
Parvilucina crenella			23	45	
Pectinaria gouldii		45			
Petricola pholadiformis		23			
Phoronis spp.			1227	68	68
Pilargidae			23		
Podarkeopsis levifuscina		45			45
Polydora cornuta		568			
Polydora websteri (Epi.)		977			
Rictaxis punctostriatus	23				
Scoloplos rubra			23		
Spiochaetopterus costarum			23	45	
Spiophanes bombyx			68		
Stylochus ellipticus (Epi.)		23			
Tharyx sp. A Morris			23		
Total Abundance w/ Epifauna	704	5998	4340	2636	2317
Total Abundance w/o Epifauna	704	3317	4203	2590	2295
Number of Taxa w/ Epifauna	10	27	18	20	17
Number of Taxa w/o Epifauna	10	16	16	18	16

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19501	19502	19504	19505	19506
Acteocina canaliculata	0.0011	0.0318	0.0409	0.0795	0.1113
Ameroculodes species complex				0.0091	
Ampelisca abdita				0.0045	
Apocorophium lacustre (Epi.)		0.0068			
Balanus improvisus (Epi.)		0.7816			
Branchiostoma caribaeum			0.0204	0.1022	
Carinoma tremaphoros		0.0091		0.0023	
Chiridotea caeca			0.0068		
Crassostrea virginica (Epi.)		25.9258			
Cyathura polita				0.0545	
Diadumene leucolela (Epi.)		0.2545			
Edotea triloba (Epi.)		0.0011			
Edwardsia elegans				0.0114	
Epitonium rupicola (Epi.)		0.0011		0.0204	
Eteone foliosa					0.0159
Gemma gemma	0.0091		0.2545	0.0477	0.0068
Geukensia demissa (Epi.)		0.6566			
Glycera dibranchiata		0.0364			
Glycinde solitaria	0.0091	0.0250	0.0250	0.0136	0.0182
Haminoea solitaria	0.0477		0.0068	0.0011	0.0341
Heteromastus filiformis	0.0432	0.0023			0.1590
Leitoscoloplos robustus		0.0545			
Leitoscoloplos spp.					0.0011
Lepidactylus dytiscus			0.1636		
Leptocheirus plumulosus				0.1340	
Leptosynapta tenuis			0.0227		0.0136
Loimia medusa		1.6063			
Macoma mitchelli	0.0114	0.0011		0.0011	0.0250
Marenzelleria viridis				0.0227	0.0704
Mediomastus ambiseta		0.0136			0.0045
Melita nitida (Epi.)		0.0068			
Micrura leidyi	0.0863				
Molgula manhattensis (Epi.)		0.0818	0.0011		
Mulinia lateralis	0.0068	0.1409			0.2885
Mytilus edulis (Epi.)					0.0011
Neanthes succinea	0.0114	1.1860	0.0727	0.0045	0.0091
Odostomia engonia (Epi.)			0.0159	0.0011	
Oxyurostylis smithi				0.0023	0.0023
Paraprionospio pinnata		0.0295			
Parvilucina crenella			0.0364	0.1522	
Pectinaria gouldii		0.0023			
Petricola pholadiformis		0.0011			
Phoronis spp.			0.1068	0.0091	0.0204
Pilargidae			0.0023		
Podarkeopsis levifuscina		0.0023			0.0011
Polydora cornuta		0.0114			
Polydora websteri (Epi.)		0.1022			
Rictaxis punctostriatus	0.0068				
Scoloplos rubra			0.0159		
Spiochaetopterus costarum			0.0045	0.0250	
Spiophanes bombyx			0.0545		
Stylochus ellipticus (Epi.)		0.0500			
Tharyx sp. A Morris			0.0045		
Total Biomass w/ Epifauna	0.2329	31.0219	0.8554	0.6986	0.7827
Total Biomass w/o Epifauna	0.2329	3.1535	0.8384	0.6771	0.7816

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19507	19508	19509	19510	19511
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Polyhaline Sand	Polyhaline Mud	Polyhaline Sand	Polyhaline Sand	High Meso Sand
Date	08/22/12	08/22/12	08/22/12	08/22/12	08/29/12
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)	6.6	11.5	8.5	6.7	2.8
Salinity (ppt)	23.68	23.58	24.94	24.03	16.78
Temperature (C)	26.40	26.67	27.02	26.67	26.72
Dissolved Oxygen (mg/L)	6.4	4.3	4.0	6.1	6.9
Sediment Silt-Clay (%)	1.07	80.36	0.76	1.97	5.44
Total Carbon (%)	0.10	3.10	0.04	0.09	0.15
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	1.33	3.00	2.67	3.67
Condition	Marginal	Severely Degr.	Meets Goal	Marginal	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.16 1	1.16 1	2.98 3	1.87 1	2.64 3
Abundance (#/m2)	1818 3	568 1	2476 3	2885 3	3431 3
Biomass (g/m2)	0.47 1	0.06 1	0.95 1	0.68 1	0.35 1
Pollution Indicative Spp Abund (%)	1.25	60.00	0.92	0.79	3.97 5
Pollution Indicative Spp Biom (%)	0.24 5	31.58 1	0.12 5	3.00 5	34.10
Pollution Sensitive Spp Abund (%)	75.00 5	4.00	71.56 5	84.25 5	58.94 5
Pollution Sensitive Spp Biom (%)	51.92	1.75 1	73.99	68.89	43.93
Carnivore-Omnivore Abund (%)	73.75	36.00 3	44.04	82.68	48.34 5
Deep Deposit Feeder Abund (%)	1.25 1	0.00	2.75 1	5.51 1	12.58
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 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19507	19508	19509	19510	19511
Acteocina canaliculata	1181		432	2068	1204
Americamysis bigelowi (Epi.)					23
Ameroculodes species complex				23	
Ampelisca abdita	23			23	
Ampelisca vadorum				23	
Amphiporus bioculatus	23				
Branchiostoma caribaeum			23		
Cyathura polita	23				
Edotea triloba (Epi.)					23
Epitonium rupicola (Epi.)					23
Gemma gemma	23				
Glycinde solitaria	68		204	204	227
Haminoea solitaria	45			68	204
Heteromastus filiformis	23		23	68	204
Lepidactylus dytiscus	68				
Loimia medusa	23		68	45	
Macoma mitchelli	136			45	841
Marenzelleria viridis				23	
Mediomastus ambiseta					227
Micrura leidyi			23		
Molgula manhattensis (Epi.)			295		
Mulinia lateralis					136
Neanthes succinea		204	182	45	
Odostomia engonia (Epi.)			91	23	45
Paraonis fulgens	23				
Paraprionospio pinnata	23	341		23	
Parvilucina crenella	68		136	45	
Pectinaria gouldii				45	
Phoronis spp.		23	750		341
Podarkeopsis levifuscina			250		
Rictaxis punctostriatus					23
Spiochaetopterus costarum	68		318	91	23
Streblospio benedicti			23		
Tubificoides spp.			45	45	
Total Abundance w/ Epifauna	1818	568	2863	2908	3544
Total Abundance w/o Epifauna	1818	568	2476	2885	3431
Number of Taxa w/ Epifauna	15	3	15	17	14
Number of Taxa w/o Epifauna	15	3	13	16	10

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19507	19508	19509	19510	19511
Acteocina canaliculata	0.0977		0.0182	0.1977	0.0523
Americamysis bigelowi (Epi.)					0.0045
Ameroculodes species complex				0.0011	
Ampelisca abdita	0.0068			0.0023	
Ampelisca vadorum				0.0114	
Amphiporus bioculatus	0.0091				
Branchiostoma caribaeum			0.0023		
Cyathura polita	0.0364				
Edotea triloba (Epi.)					0.0011
Epitonium rupicola (Epi.)					0.0011
Gemma gemma	0.0045				
Glycinde solitaria	0.0091		0.0341	0.0341	0.0545
Haminoea solitaria	0.0114			0.0045	0.0114
Heteromastus filiformis	0.0159		0.0068	0.0091	0.0454
Lepidactylus dytiscus	0.0159				
Loimia medusa	0.0682		0.3181	0.1000	
Macoma mitchelli	0.0068			0.0011	0.0182
Marenzelleria viridis				0.0863	
Mediomastus ambiseta					0.0091
Micrura leidyi			0.0136		
Molgula manhattensis (Epi.)			0.3022		
Mulinia lateralis					0.1181
Neanthes succinea		0.0432	0.0591	0.0227	
Odostomia engonia (Epi.)			0.0136	0.0023	0.0011
Paraonis fulgens	0.0011				
Paraprionospio pinnata	0.0011	0.0204		0.0204	
Parvilucina crenella	0.1545		0.1590	0.1340	
Pectinaria gouldii				0.0045	
Phoronis spp.		0.0011	0.1386		0.0341
Podarkeopsis levifuscina			0.0045		
Rictaxis punctostriatus					0.0011
Spiochaetopterus costarum	0.0341		0.1954	0.0523	0.0023
Streblospio benedicti			0.0011		
Tubificoides spp.			0.0011	0.0011	
Total Biomass w/ Epifauna	0.4726	0.0648	1.2678	0.6850	0.3544
Total Biomass w/o Epifauna	0.4726	0.0648	0.9520	0.6827	0.3465

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19512	19513	19514	19515	19516
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	High Meso Mud	Polyhaline Sand	Polyhaline Sand	High Meso Sand
Date	08/29/12	08/29/12	08/22/12	08/22/12	08/22/12
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	4.3	7.5	8.6	7.4
Salinity (ppt)	15.41	15.78	24.24	22.33	14.74
Temperature (C)	26.34	26.42	27.30	27.04	27.32
Dissolved Oxygen (mg/L)	7.3	7.6	4.2	4.9	7.6
Sediment Silt-Clay (%)	2.88	94.19	1.53	25.97	4.34
Total Carbon (%)	0.13	2.28	0.06	0.95	0.36
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.67	2.33	3.33	2.00	2.00
Condition	Meets Goal	Degraded	Meets Goal	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value	Score	Value	Score	Value
Shannon-Wiener Index	3.38	5	1.79	1	3.15
Abundance (#/m2)	1227	3	136	1	1545
Biomass (g/m2)	0.62	1	0.04	1	1.03
Pollution Indicative Spp Abund (%)	11.11	3	16.67		4.41
Pollution Indicative Spp Biom (%)	17.09		11.11	3	1.98
Pollution Sensitive Spp Abund (%)	59.26	5	16.67		61.76
Pollution Sensitive Spp Biom (%)	75.27		72.22	3	43.01
Carnivore-Omnivore Abund (%)	38.89	5	33.33	5	61.76
Deep Deposit Feeder Abund (%)	7.41		0.00		2.94
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		0.00		0.00
Tany./Chir. Abundance Ratio	0.00		0.00		0.00

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19512	19513	19514	19515	19516
Acteocina canaliculata	182		477	45	
Branchiostoma caribaeum			23		
Carinoma tremaphoros		23			
Gemma gemma	91				
Glycinde solitaria	250	23	318	159	68
Haminoea solitaria	45				
Heteromastus filiformis	91		45	114	114
Leucon americanus		68			
Loimia medusa	68		23	23	
Lyonsia hyalina	23				
Macoma mitchelli	114		136	227	23
Marenzelleria viridis	68				
Micrura leidyi			68		
Mulinia lateralis	136	23	23		
Neanthes succinea			45	182	204
Odostomia engonia (Epi.)			68		
Paraprionospio pinnata			45	568	136
Parvilucina crenella			159		
Pectinaria gouldii				68	
Phoronis spp.	23		91		
Podarke obscura			23		
Rictaxis punctostriatus			23		
Spiochaetopterus costarum	114		23		
Streblospio benedicti				159	114
Tagelus plebeius	23		23		
Tubificoides spp.				45	45
Total Abundance w/ Epifauna	1227	136	1613	1590	704
Total Abundance w/o Epifauna	1227	136	1545	1590	704
Number of Taxa w/ Epifauna	13	4	17	10	7
Number of Taxa w/o Epifauna	13	4	16	10	7

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19512	19513	19514	19515	19516
Acteocina canaliculata	0.0182		0.0932	0.0091	
Branchiostoma caribaeum			0.0772		
Carinoma tremaphoros		0.0045			
Gemma gemma	0.0068				
Glycinde solitaria	0.0204	0.0295	0.0204	0.0682	0.0091
Haminoea solitaria	0.0011				
Heteromastus filiformis	0.0364		0.0114	0.0091	0.1295
Leucon americanus		0.0023			
Loimia medusa	0.0068		0.2772	0.0091	
Lyonsia hyalina	0.0011				
Macoma mitchelli	0.0023		0.0011	0.0068	0.0182
Marenzelleria viridis	0.1431				
Micrura leidyi			0.1386		
Mulinia lateralis	0.1068	0.0045	0.0091		
Neanthes succinea			0.0011	0.1022	0.0500
Odostomia engonia (Epi.)			0.0023		
Paraprionospio pinnata			0.0114	0.1363	0.0227
Parvilucina crenella			0.3363		
Pectinaria gouldii				0.0091	
Phoronis spp.	0.0227		0.0477		
Podarke obscura			0.0011		
Rictaxis punctostriatus			0.0011		
Spiochaetopterus costarum	0.1318		0.0011		
Streblospio benedicti				0.0068	0.0045
Tagelus plebeius	0.1272		0.0045		
Tubificoides spp.				0.0023	0.0023
Total Biomass w/ Epifauna	0.6248	0.0409	1.0349	0.3590	0.2363
Total Biomass w/o Epifauna	0.6248	0.0409	1.0326	0.3590	0.2363





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19517	19518	19519	19520	19521					
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem					
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Sand	High Meso Sand					
Date	08/22/12	08/22/12	08/30/12	08/22/12	08/22/12					
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)	10.6	10.3	0.6	4.4	2.8					
Salinity (ppt)	14.71	14.31	13.77	13.84	14.00					
Temperature (C)	26.96	26.93	26.44	27.63	27.00					
Dissolved Oxygen (mg/L)	5.2	5.4	8.5	9.8	6.5					
Sediment Silt-Clay (%)	80.95	87.53	90.16	7.40	18.36					
Total Carbon (%)	3.55	3.77	0.46	0.30	0.27					
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	2.00	2.33	3.33	2.67	1.67					
Condition	Severely Degr.	Degraded	Meets Goal	Marginal	Severely Degr.					
# Attributes Scored	6	6	6	6	6					
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.62	1	0.92	1	2.70	3	1.69	1	2.35	1
Abundance (#/m2)	295	1	204	1	5725	1	2590	5	1999	5
Biomass (g/m2)	0.12	1	0.20	1	2.64	5	1.97	3	0.66	1
Pollution Indicative Spp Abund (%)	15.38		66.67		34.92		8.77	5	40.91	1
Pollution Indicative Spp Biom (%)	5.66	3	4.55	5	3.58	5	5.75		13.45	
Pollution Sensitive Spp Abund (%)	0.00		0.00		18.65		6.14	1	9.09	1
Pollution Sensitive Spp Biom (%)	0.00	1	0.00	1	56.53	3	19.33		26.21	
Carnivore-Omnivore Abund (%)	84.62	5	33.33	5	14.29	3	12.28	1	11.36	1
Deep Deposit Feeder Abund (%)	0.00		0.00		37.70		67.54		37.50	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.40		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		9.80		0.00		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19517	19518	19519	19520	19521
Amphiporus bioculatus			23		
Carinoma tremaphoros			23	23	
Cyathura polita			182		
Doridella obscura (Epi.)			23		
Edotea triloba (Epi.)					23
Edwardsia elegans			68		
Eteone heteropoda			45		23
Glycinde solitaria			136	114	114
Heteromastus filiformis			1431	1749	750
Laeonereis culveri			136		
Macoma balthica			23	45	23
Macoma mitchelli			45	250	159
Marenzelleria viridis			727		45
Mulinia lateralis				23	159
Neanthes succinea	250	68	204	182	91
Paraprionospio pinnata	45	136			
Polydora cornuta			23		
Streblospio benedicti			1931	204	636
Stylochus ellipticus (Epi.)				23	
Tubificidae imm w/o cap chaetae			23		
Tubificoides spp.			704		
Total Abundance w/ Epifauna	295	204	5748	2613	2022
Total Abundance w/o Epifauna	295	204	5725	2590	1999
Number of Taxa w/ Epifauna	2	2	17	9	10
Number of Taxa w/o Epifauna	2	2	16	8	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	19517	19518	19519	19520	19521
Amphiporus bioculatus			0.0045		
Carinoma tremaphoros			0.0136	0.0136	
Cyathura polita			0.3135		
Doridella obscura (Epi.)			0.0136		
Edotea triloba (Epi.)					0.0011
Edwardsia elegans			0.0273		
Eteone heteropoda			0.0136		0.0023
Glycinde solitaria			0.0545	0.0295	0.0136
Heteromastus filiformis			0.4044	1.1678	0.3658
Laeonereis culveri			0.0909		
Macoma balthica			0.3840	0.3522	0.1159
Macoma mitchelli			0.0795	0.1318	0.0091
Marenzelleria viridis			0.7384		0.0432
Mulinia lateralis				0.0954	0.0386
Neanthes succinea	0.1136	0.1908	0.4203	0.1659	0.0227
Paraprionospio pinnata	0.0068	0.0091			
Polydora cornuta			0.0023		
Streblospio benedicti			0.0795	0.0182	0.0477
Stylochus ellipticus (Epi.)				0.0023	
Tubificidae imm w/o cap chaetae			0.0011		
Tubificoides spp.			0.0091		
Total Biomass w/ Epifauna	0.1204	0.1999	2.6503	1.9766	0.6600
Total Biomass w/o Epifauna	0.1204	0.1999	2.6367	1.9744	0.6589



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19522	19523	19524	19525	19526	
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem	
Habitat	High Meso Mud	High Meso Mud	High Meso Sand	High Meso Sand	Polyhaline San	
Date	08/22/12	08/22/12	09/07/12	09/17/12	08/22/12	
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)	8.4	5.6	1.0	3.5	5.7	
Salinity (ppt)	14.36	13.80	13.62	13.77	22.63	
Temperature (C)	26.96	26.26	27.09	23.28	26.80	
Dissolved Oxygen (mg/L)	3.1	4.6	7.5	7.0	6.5	
Sediment Silt-Clay (%)	80.45	90.17	2.11	38.82	4.72	
Total Carbon (%)	3.31	1.75	0.11	0.31	0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.00	1.00	1.67	2.33	2.33	
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Degraded	Degraded	
# Attributes Scored	6	6	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.92	1	0.00	1	2.91	3
Abundance (#/m2)	364	1	23	1	523	1
Biomass (g/m2)	0.16	1	0.01	1	0.16	1
Pollution Indicative Spp Abund (%)	56.25		100.00		47.83	1
Pollution Indicative Spp Biom (%)	22.54	3	100.00	1	55.24	3
Pollution Sensitive Spp Abund (%)	12.50		0.00		21.74	3
Pollution Sensitive Spp Biom (%)	8.45	1	0.00	1	30.77	3
Carnivore-Omnivore Abund (%)	43.75	5	0.00	1	17.39	1
Deep Deposit Feeder Abund (%)	0.00		0.00		17.39	3
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		8.70	
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		9.80	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	
BENTHIC ABUNDANCE (per sq. meter)						
Site	19522	19523	19524	19525	19526	
Acteocina canaliculata					114	
Carinoma tremaphoros			45			
Eteone heteropoda				45		
Glycinde solitaria	45		45		250	
Heteromastus filiformis			45	568	250	
Lepidactylus dytiscus			68			
Macoma balthica				68		
Macoma mitchelli				182	273	
Marenzelleria viridis			68		68	
Micrura leidyi				23		
Mulinia lateralis			114	45	23	
Neanthes succinea	114			114	68	
Paraprionospio pinnata	114	23			45	
Phoronis spp.					45	
Spiochaetopterus costarum					23	
Streblospio benedicti	91		91	250		
Tubificidae imm w/o cap chaetae			45	91		
Tubificoides spp.				159		
Total Abundance w/ Epifauna	364	23	523	1545	1159	
Total Abundance w/o Epifauna	364	23	523	1545	1159	
Number of Taxa w/ Epifauna	4	1	8	10	10	
Number of Taxa w/o Epifauna	4	1	8	10	10	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19522	19523	19524	19525	19526
Acteocina canaliculata					0.0011
Carinoma tremaphoros			0.0023		
Eteone heteropoda				0.0068	
Glycinde solitaria	0.0136		0.0068		0.0204
Heteromastus filiformis			0.0091	0.4930	0.1000
Lepidactylus dytiscus			0.0114		
Macoma balthica				0.5953	
Macoma mitchelli				0.0818	0.0045
Marenzelleria viridis			0.0432		0.0795
Micrura leidyi				0.0841	
Mulinia lateralis			0.0795	0.0023	0.0250
Neanthes succinea	0.1113			0.0591	0.0114
Paraprionospio pinnata	0.0273	0.0091			0.0136
Phoronis spp.					0.0011
Spiochaetopterus costarum					0.0250
Streblospio benedicti	0.0091		0.0091	0.0114	
Tubificidae imm w/o cap chaetae			0.0011	0.0011	
Tubificoides spp.				0.0045	
Total Biomass w/ Epifauna	0.1613	0.0091	0.1624	1.3393	0.2817
Total Biomass w/o Epifauna	0.1613	0.0091	0.1624	1.3393	0.2817



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19301	19302	19303	19304	19305
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	High Meso Sand	High Meso Mud
Date	09/17/12	09/17/12	09/17/12	08/22/12	08/22/12
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)	1.4	2.2	3.8	3.4	5.1
Salinity (ppt)	13.66	14.16	14.17	13.03	12.97
Temperature (C)	22.70	23.70	23.41	27.22	26.50
Dissolved Oxygen (mg/L)	6.2	7.3	6.5	9.7	5.7
Sediment Silt-Clay (%)	64.10	28.77	59.63	3.28	79.31
Total Carbon (%)	1.72	0.43	1.24	0.20	1.95
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	3.00	4.33	2.00	4.00
Condition	Degraded	Meets Goal	Meets Goal	Severely Degr.	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value	Score	Value	Score	Value
Shannon-Wiener Index	1.95	1	2.86	3	2.84
Abundance (#/m2)	273	1	2976	5	1749
Biomass (g/m2)	0.48	1	1.47	3	1.90
Pollution Indicative Spp Abund (%)	33.33	1	22.90	3	9.09
Pollution Indicative Spp Biom (%)	0.24	5	9.81	3	0.30
Pollution Sensitive Spp Abund (%)	8.33	1	14.50	3	22.08
Pollution Sensitive Spp Biom (%)	1.42	1	54.56	5	77.44
Carnivore-Omnivore Abund (%)	25.00	5	12.21	1	25.97
Deep Deposit Feeder Abund (%)	75.00	1	60.31	3	57.14
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	33.33	0.00	9.16	0.00	3.90
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	0.00	9.80
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	19301	19302	19303	19304	19305
Amphiporus bioculatus		23			
Carinoma tremaphoros	23	91	182	23	23
Cyathura polita	23	136	159	23	
Eteone heteropoda					45
Glycinde solitaria		45	23	23	23
Heteromastus filiformis	114	1068	432	432	932
Macoma balthica		23	114	68	136
Macoma mitchelli		159		23	45
Marenzelleria viridis		227	91	114	
Micrura leidy			23	23	
Mulinia lateralis		23			
Neanthes succinea	23	68	68	91	454
Streblospio benedicti		386	91	114	182
Tubificidae imm w/o cap chaetae	91	273	68		
Tubificoides spp.		454	500		68
Total Abundance w/ Epifauna	273	2976	1749	932	1908
Total Abundance w/o Epifauna	273	2976	1749	932	1908
Number of Taxa w/ Epifauna	5	13	11	10	9
Number of Taxa w/o Epifauna	5	13	11	10	9

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19301	19302	19303	19304	19305
Amphiporus bioculatus		0.0011			
Carinoma tremaphoros	0.0011	0.0772	0.0977	0.0011	0.0091
Cyathura polita	0.0068	0.1091	0.3431	0.0011	
Eteone heteropoda					0.0023
Glycinde solitaria		0.0273	0.0136	0.0011	0.0011
Heteromastus filiformis	0.1113	0.3385	0.1181	0.2954	0.3658
Macoma balthica		0.0659	0.7929	0.2704	0.6930
Macoma mitchelli		0.0409		0.0136	0.0659
Marenzelleria viridis		0.5998	0.3204	0.0386	
Micrura leidyi			0.0909	0.4885	
Mulinia lateralis		0.1295			
Neanthes succinea	0.3590	0.0545	0.1068	0.0591	0.5226
Streblospio benedicti		0.0136	0.0045	0.0091	0.0136
Tubificidae imm w/o cap chaetae	0.0011	0.0011	0.0011		
Tubificoides spp.		0.0114	0.0091		0.0023
Total Biomass w/ Epifauna	0.4794	1.4700	1.8983	1.1780	1.6756
Total Biomass w/o Epifauna	0.4794	1.4700	1.8983	1.1780	1.6756



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19306	19307	19308	19309	19310
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	High Meso Sand	High Meso Sand	High Meso Mud	High Meso Sand	High Meso Sand
Date	09/17/12	09/17/12	09/17/12	09/17/12	09/17/12
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)	0.9	4.8	2.7	0.6	2.9
Salinity (ppt)	13.46	14.07	12.99	12.78	13.23
Temperature (C)	23.70	24.01	23.26	24.31	24.42
Dissolved Oxygen (mg/L)	7.7	5.3	4.9	7.5	5.0
Sediment Silt-Clay (%)	5.44	38.17	81.49	1.55	11.81
Total Carbon (%)	0.59	1.64	2.98	0.39	0.58
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.33	2.00	1.00	1.33	2.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.23 1	2.70 3	0.00 1	1.68 1	2.66 3
Abundance (#/m2)	3340 3	4544 3	0 1	818 1	1681 5
Biomass (g/m2)	0.61 1	1.72 3	0.00 1	0.33 1	0.71 1
Pollution Indicative Spp Abund (%)	44.22 1	33.00 1	100.00 1	13.89 3	31.08 1
Pollution Indicative Spp Biom (%)	16.85 3	3.03 3	100.00 1	0.68 3	4.67 1
Pollution Sensitive Spp Abund (%)	7.48 1	1.50 1	0.00 1	8.33 1	9.46 1
Pollution Sensitive Spp Biom (%)	51.69 1	8.04 1	0.00 1	28.08 1	39.94 1
Carnivore-Omnivore Abund (%)	15.65 1	14.50 1	0.00 1	5.56 1	12.16 1
Deep Deposit Feeder Abund (%)	3.40 1	56.00 1	0.00 1	2.78 1	45.95 1
TF Poll. Indicative Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
Limnodrilus Abundance (%)	0.00 1	14.00 1	0.00 1	0.00 1	1.35 1
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
Tolerance Score	0.00 1	9.80 1	0.00 1	6.00 1	9.80 1
Tany./Chir. Abundance Ratio	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1
BENTHIC ABUNDANCE (per sq. meter)					
Site	19306	19307	19308	19309	19310
Apocorophium lacustre (Epi.)		23			
Carinoma tremaphoros		68			23
Cyathura polita	23	23			
Doridella obscura (Epi.)		23		23	
Edotea triloba (Epi.)	159				
Eteone heteropoda	204				23
Gemma gemma	23				
Geukensia demissa (Epi.)		45			
Glycinde solitaria		45			23
Hargeria rapax	23				
Heteromastus filiformis	68	341		23	523
Leptocheirus plumulosus		23		545	
Macoma balthica					45
Macoma mitchelli	1159	114		23	91
Marenzelleria viridis	227			45	91
Melita nitida (Epi.)		23			
Mulinia lateralis		23			
Neanthes succinea	295	523		45	136
Polydora cornuta		341			
Rangia cuneata				23	
Streblospio benedicti	1272	841		114	477
Tubificidae imm w/o cap chaetae		636			23
Tubificoides spp.	45	1568			227
Total Abundance w/ Epifauna	3499	4658	0	841	1681
Total Abundance w/o Epifauna	3340	4544		818	1681
Number of Taxa w/ Epifauna	11	16	0	8	11
Number of Taxa w/o Epifauna	10	12	0	7	11

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19306	19307	19308	19309	19310
Apocorophium lacustre (Epi.)		0.0011			
Carinoma tremaphoros		0.0318			0.0023
Cyathura polita	0.0068	0.1272			
Doridella obscura (Epi.)		0.0023		0.0011	
Edotea triloba (Epi.)	0.0136				
Eteone heteropoda	0.0136				0.0023
Gemma gemma	0.0023				
Geukensia demissa (Epi.)		0.0023			
Glycinde solitaria		0.0114			0.0159
Hargeria rapax	0.0023				
Heteromastus filiformis	0.0227	0.1000		0.0318	0.2068
Leptocheirus plumulosus		0.0011		0.1227	
Macoma balthica					0.2090
Macoma mitchelli	0.0591	0.0568		0.0045	0.0273
Marenzelleria viridis	0.3067			0.0341	0.0568
Melita nitida (Epi.)		0.0011			
Mulinia lateralis		0.0023			
Neanthes succinea	0.0977	1.3087		0.0772	0.1522
Polydora cornuta		0.0091			
Rangia cuneata				0.0591	
Streblospio benedicti	0.0886	0.0318		0.0023	0.0295
Tubificidae imm w/o cap chaetae		0.0182			0.0011
Tubificoides spp.	0.0068	0.0250			0.0023
Total Biomass w/ Epifauna	0.6203	1.7301	0.0000	0.3328	0.7055
Total Biomass w/o Epifauna	0.6066	1.7233	0.0000	0.3317	0.7055



**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19311	19312	19314	19315	19316
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	High Meso Mud	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	09/17/12	08/17/12	08/17/12	08/17/12	09/05/12
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
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	7.1	1.1	4.4	1.9	5.5
Salinity (ppt)	12.68	10.85	10.64	10.71	11.42
Temperature (C)	24.76	27.69	28.23	27.76	27.12
Dissolved Oxygen (mg/L)	2.7	7.1	2.9	7.4	3.5
Sediment Silt-Clay (%)	66.57	2.21	71.51	3.89	85.90
Total Carbon (%)	5.56	0.15	5.26	0.25	1.82
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	1.00	1.80	1.80	1.80	1.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	2.10 3	1.00 1	2.32 3	1.00 1
Abundance (#/m2)	0 1	932 3	45 1	613 3	45 1
Biomass (g/m2)	0.00 1	0.76 1	0.04 1	0.11 1	0.02 1
Pollution Indicative Spp Abund (%)	100.00	21.95 1	0.00 5	59.26 1	50.00 1
Pollution Indicative Spp Biom (%)	100.00 1	5.06	0.00	12.12	18.18
Pollution Sensitive Spp Abund (%)	0.00	12.20	0.00	3.70	0.00
Pollution Sensitive Spp Biom (%)	0.00 1	12.20 1	0.00 1	1.01 1	0.00 1
Carnivore-Omnivore Abund (%)	0.00 1	19.51	0.00	22.22	50.00
Deep Deposit Feeder Abund (%)	0.00	2.44	100.00	18.52	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	6.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	19311	19312	19314	19315	19316
Carinoma tremaphoros					23
Eteone heteropoda		159		114	
Heteromastus filiformis		23	23	91	
Laeonereis culveri		23			
Lepidactylus dytiscus		91			
Macoma mitchelli		477		91	
Marenzelleria viridis		114			
Neanthes succinea				23	
Rangia cuneata				23	
Streblospio benedicti		45		250	23
Tubificoides spp.			23	23	
Total Abundance w/ Epifauna	0	932	45	613	45
Total Abundance w/o Epifauna		932	45	613	45
Number of Taxa w/ Epifauna	0	7	2	7	2
Number of Taxa w/o Epifauna	0	7	2	7	2

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19311	19312	19314	19315	19316
Carinoma tremaphoros					0.0204
Eteone heteropoda		0.0364		0.0114	
Heteromastus filiformis		0.0227	0.0386	0.0886	
Laeonereis culveri		0.0591			
Lepidactylus dytiscus		0.0250			
Macoma mitchelli		0.5248		0.0045	
Marenzelleria viridis		0.0932			
Neanthes succinea				0.0023	
Rangia cuneata				0.0011	
Streblospio benedicti		0.0023		0.0023	0.0045
Tubificoides spp.			0.0023	0.0023	
Total Biomass w/ Epifauna	0.0000	0.7634	0.0409	0.1125	0.0250
Total Biomass w/o Epifauna	0.0000	0.7634	0.0409	0.1125	0.0250

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19317	19318	19319	19320	19321
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	Low Mesohaline	High Meso Mud
Date	09/05/12	09/05/12	09/05/12	09/05/12	09/05/12
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)	8.2	11.4	10.2	2.9	8.6
Salinity (ppt)	13.09	13.02	13.51	9.53	12.28
Temperature (C)	26.52	26.93	26.74	27.37	26.87
Dissolved Oxygen (mg/L)	0.4	1.2	0.4	8.4	1.5
Sediment Silt-Clay (%)	91.42	92.84	95.11	57.90	83.87
Total Carbon (%)	2.78	2.60	1.83	2.84	5.37
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	1.00	1.00	1.00	1.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	5	6
	Value	Score	Value	Score	Value
Shannon-Wiener Index	0.00	1	0.00	1	0.00
Abundance (#/m2)	0	1	23	1	0
Biomass (g/m2)	0.00	1	0.00	1	0.00
Pollution Indicative Spp Abund (%)	100.00	1	100.00	1	100.00
Pollution Indicative Spp Biom (%)	100.00	1	100.00	1	100.00
Pollution Sensitive Spp Abund (%)	0.00	1	0.00	1	0.00
Pollution Sensitive Spp Biom (%)	0.00	1	0.00	1	0.00
Carnivore-Omnivore Abund (%)	0.00	1	0.00	1	0.00
Deep Deposit Feeder Abund (%)	0.00	1	100.00	1	0.00
TF Poll. Indicative Spp Abund (%)	0.00	1	0.00	1	0.00
Limnodrilus Abundance (%)	0.00	1	100.00	1	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	1	0.00	1	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	1	0.00	1	0.00
Tolerance Score	0.00	1	9.80	1	0.00
Tany./Chir. Abundance Ratio	0.00	1	0.00	1	0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	19317	19318	19319	19320	19321
<i>Streblospio benedicti</i>				91	
Tubificidae imm w/o cap chaetae		23			
Total Abundance w/ Epifauna	0	23	0	91	0
Total Abundance w/o Epifauna		23		91	
Number of Taxa w/ Epifauna	0	1	0	1	0
Number of Taxa w/o Epifauna	0	1	0	1	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	19317	19318	19319	19320	19321
<i>Streblospio benedicti</i>				0.0045	
Tubificidae imm w/o cap chaetae		0.0011			
Total Biomass w/ Epifauna	0.0000	0.0011	0.0000	0.0045	0.0000
Total Biomass w/o Epifauna	0.0000	0.0011	0.0000	0.0045	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19322	19323	19324	19325	19326	
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs	
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Oligohaline	Oligohaline	
Date	09/12/12	09/12/12	08/23/12	08/23/12	08/23/12	
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	3.0	3.8	1.8	2.1	
Salinity (ppt)	6.80	7.20	2.05	1.84	1.61	
Temperature (C)	23.03	23.55	25.67	26.05	25.48	
Dissolved Oxygen (mg/L)	7.1	8.2	7.6	8.2	8.2	
Sediment Silt-Clay (%)	2.86	85.12	63.84	94.21	97.39	
Total Carbon (%)	0.19	3.29	4.35	2.55	3.23	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	1.80	2.60	2.67	2.67	3.00	
Condition	Severely Degr.	Degraded	Marginal	Marginal	Meets Goal	
# Attributes Scored	5	5	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.10	3	2.23	3	1.23	1.66
Abundance (#/m2)	659	3	1045	3	2431	5
Biomass (g/m2)	0.07	1	0.53	1	0.26	1.00
Pollution Indicative Spp Abund (%)	65.52	1	71.74	1	84.11	100.00
Pollution Indicative Spp Biom (%)	16.95		8.35		51.97	100.00
Pollution Sensitive Spp Abund (%)	3.45		13.04		0.93	0.00
Pollution Sensitive Spp Biom (%)	13.56	1	82.23	5	48.03	0.00
Carnivore-Omnivore Abund (%)	41.38		39.13		0.93	1
Deep Deposit Feeder Abund (%)	10.34		10.87		93.46	48.28
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	0.00
Limnodrilus Abundance (%)	0.00		0.00		93.46	48.28
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		99.07	1
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.93	3
Tolerance Score	0.00		6.20		9.83	1
Tany./Chir. Abundance Ratio	0.00		100.00		0.00	5
BENTHIC ABUNDANCE (per sq. meter)						
Site	19322	19323	19324	19325	19326	
Carinoma tremaphoros		23				
Chaoborus punctipennis					23	
Chironomus spp.			23	818	886	
Coelotanypus spp.		341		204	45	
Cyathura polita	23	23				
Eteone heteropoda	136	23				
Leptocheirus plumulosus		23				
Limnodrilus cervix			364			
Limnodrilus hoffmeisteri			91	136		
Macoma mitchelli	23					
Marenzelleria viridis		114	23			
Neanthes succinea	114					
Streblospio benedicti	295	386	114			
Tubificidae imm w/o cap chaetae					23	
Tubificidae imm w/o cap chaetae *			1818	818		
Tubificoides spp.	68	114				
Total Abundance w/ Epifauna	659	1045	2431	1977	977	
Total Abundance w/o Epifauna	659	1045	2431	1977	977	
Number of Taxa w/ Epifauna	6	8	5	3	4	
Number of Taxa w/o Epifauna	6	8	5	3	4	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19322	19323	19324	19325	19326
Carinoma tremaphoros		0.0409			
Chaoborus punctipennis					0.0045
Chironomus spp.			0.0011	0.8475	0.8342
Coelotanypus spp.		0.0318		0.0318	0.0023
Cyathura polita	0.0091	0.0386			
Eteone heteropoda	0.0045	0.0011			
Leptocheirus plumulosus		0.0068			
Macoma mitchelli	0.0386				
Marenzelleria viridis		0.3976	0.1250		
Neanthes succinea	0.0068				
Oligochaeta			0.1272	0.1204	
Streblospio benedicti	0.0068	0.0114	0.0068		
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.	0.0011	0.0023			
Total Biomass w/ Epifauna	0.0670	0.5305	0.2601	0.9997	0.8421
Total Biomass w/o Epifauna	0.0670	0.5305	0.2601	0.9997	0.8421

\*Indicates taxa is skipped in taxon counts



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19101	19102	19103	19104	19105
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Polyhaline Mud	Polyhaline Sand	Polyhaline Mud	Polyhaline Mud	Polyhaline Sand
Date	08/21/12	08/21/12	08/21/12	08/21/12	08/21/12
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)	13.5	7.2	18.0	14.5	5.1
Salinity (ppt)	24.38	22.80	25.01	24.82	20.89
Temperature (C)	27.00	26.78	27.40	27.41	26.43
Dissolved Oxygen (mg/L)	3.4	3.7	0.3	0.2	5.3
Sediment Silt-Clay (%)	79.61	3.84	56.06	87.78	2.70
Total Carbon (%)	2.64	0.17	1.82	3.95	0.24
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	2.33	2.00	1.00	2.33
Condition	Severely Degr.	Degraded	Severely Degr.	Severely Degr.	Degraded
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	2.27 1	0.00 1	0.00 1	2.39 1
Abundance (#/m2)	0 1	318 1	23 1	0 1	909 1
Biomass (g/m2)	0.00 1	0.09 1	0.00 1	0.00 1	0.42 1
Pollution Indicative Spp Abund (%)	100.00	42.86	0.00	100.00	12.50
Pollution Indicative Spp Biom (%)	100.00 1	2.60 5	0.00 5	100.00 1	2.19 5
Pollution Sensitive Spp Abund (%)	0.00	21.43 1	100.00	0.00	20.00 1
Pollution Sensitive Spp Biom (%)	0.00 1	1.30	100.00 3	0.00 1	7.65
Carnivore-Omnivore Abund (%)	0.00 1	14.29	0.00 1	0.00 1	37.50
Deep Deposit Feeder Abund (%)	0.00	50.00 5	0.00	0.00	35.00 5
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	28.57	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	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	19101	19102	19103	19104	19105
Gemma gemma					45
Glycinde solitaria					91
Heteromastus filiformis		68			318
Neanthes succinea		45			250
Paraprionospio pinnata		45			23
Phoronis spp.		68	23		91
Streblospio benedicti					91
Tubificidae imm w/o cap chaetae		91			
Total Abundance w/ Epifauna	0	318	23	0	909
Total Abundance w/o Epifauna		318	23		909
Number of Taxa w/ Epifauna	0	5	1	0	7
Number of Taxa w/o Epifauna	0	5	1	0	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	19101	19102	19103	19104	19105
Gemma gemma					0.0045
Glycinde solitaria					0.0250
Heteromastus filiformis		0.0795			0.2636
Neanthes succinea		0.0045			0.1068
Paraprionospio pinnata		0.0011			0.0023
Phoronis spp.		0.0011	0.0023		0.0068
Streblospio benedicti					0.0068
Tubificidae imm w/o cap chaetae		0.0011			
Total Biomass w/ Epifauna	0.0000	0.0875	0.0023	0.0000	0.4158
Total Biomass w/o Epifauna	0.0000	0.0875	0.0023	0.0000	0.4158



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19106	19107	19108	19109	19110	
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R	
Habitat	Polyhaline Sand	High Meso Mud	High Meso Sand	Low Mesohaline	Polyhaline Mud	
Date	08/21/12	08/21/12	08/21/12	09/11/12	08/21/12	
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)	2.8	5.4	4.3	4.1	9.1	
Salinity (ppt)	21.24	15.80	15.99	10.51	22.19	
Temperature (C)	26.70	26.28	26.17	24.52	27.30	
Dissolved Oxygen (mg/L)	5.3	5.0	6.6	6.6	1.4	
Sediment Silt-Clay (%)	1.85	44.56	1.68	1.79	88.35	
Total Carbon (%)	0.13	1.52	0.13	0.18	2.49	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.67	2.33	2.67	1.00	1.00	
Condition	Marginal	Degraded	Marginal	Severely Degr.	Severely Degr.	
# Attributes Scored	6	6	6	5	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.78	3	0.00	1	2.13	1
Abundance (#/m2)	704	1	23	1	386	1
Biomass (g/m2)	0.29	1	0.00	1	0.29	1
Pollution Indicative Spp Abund (%)	9.68		0.00		5.88	5
Pollution Indicative Spp Biom (%)	3.15	5	0.00	5	2.34	
Pollution Sensitive Spp Abund (%)	38.71	3	0.00		23.53	3
Pollution Sensitive Spp Biom (%)	14.17		0.00	1	53.13	
Carnivore-Omnivore Abund (%)	48.39		100.00	5	41.18	5
Deep Deposit Feeder Abund (%)	12.90	3	0.00		41.18	
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	
BENTHIC ABUNDANCE (per sq. meter)						
Site	19106	19107	19108	19109	19110	
Acteocina canaliculata	136					
Carinoma tremaphoros	23					
Eteone foliosa	23					
Eteone heteropoda			23			
Gemma gemma	45					
Glycinde solitaria	136		23	23		
Heteromastus filiformis	91		159	91		
Macoma balthica			23			
Macoma mitchelli	159					
Marenzelleria viridis			45			
Micrura leidyi	23					
Neanthes succinea		23	114	23		
Paraprionospio pinnata	68					
Streblospio benedicti				114		
Total Abundance w/ Epifauna	704	23	386	250	0	
Total Abundance w/o Epifauna	704	23	386	250		
Number of Taxa w/ Epifauna	9	1	6	4	0	
Number of Taxa w/o Epifauna	9	1	6	4	0	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19106	19107	19108	19109	19110
<i>Acteocina canaliculata</i>	0.0204				
<i>Carinoma tremaphoros</i>	0.0114				
<i>Eteone foliosa</i>	0.0682				
<i>Eteone heteropoda</i>			0.0068		
<i>Gemma gemma</i>	0.0227				
<i>Glycinde solitaria</i>	0.0204		0.0023	0.0114	
<i>Heteromastus filiformis</i>	0.0273		0.1113	0.1363	
<i>Macoma balthica</i>			0.1431		
<i>Macoma mitchelli</i>	0.0068				
<i>Marenzelleria viridis</i>			0.0091		
<i>Micrura leidyi</i>	0.1022				
<i>Neanthes succinea</i>		0.0045	0.0182	0.0136	
<i>Paraprionospio pinnata</i>	0.0091				
<i>Streblospio benedicti</i>				0.0068	
Total Biomass w/ Epifauna	0.2885	0.0045	0.2908	0.1681	0.0000
Total Biomass w/o Epifauna	0.2885	0.0045	0.2908	0.1681	0.0000





BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19111	19112	19113	19114	19116	
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R	
Habitat	Polyhaline Mud	Polyhaline Sand	Low Mesohaline	Polyhaline Mud	Low Mesohaline	
Date	08/21/12	08/21/12	09/11/12	08/21/12	09/11/12	
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)	8.5	3.3	5.3	7.7	4.9	
Salinity (ppt)	20.96	18.80	11.81	19.26	10.11	
Temperature (C)	27.31	26.14	25.53	27.00	25.28	
Dissolved Oxygen (mg/L)	0.4	6.4	5.2	2.2	5.5	
Sediment Silt-Clay (%)	81.03	2.46	96.20	88.33	95.82	
Total Carbon (%)	2.63	0.18	2.51	2.83	1.67	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.33	2.67	1.00	1.00	2.60	
Condition	Degraded	Marginal	Severely Degr.	Severely Degr.	Degraded	
# Attributes Scored	6	6	5	6	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.00	1	2.82	3	0.00	1
Abundance (#/m2)	23	1	454	1	0	1
Biomass (g/m2)	0.00	1	0.18	1	0.00	1
Pollution Indicative Spp Abund (%)	0.00	1	15.00	1	100.00	1
Pollution Indicative Spp Biom (%)	0.00	5	3.18	5	100.00	1
Pollution Sensitive Spp Abund (%)	0.00	1	25.00	1	0.00	1
Pollution Sensitive Spp Biom (%)	0.00	1	18.47	1	0.00	1
Carnivore-Omnivore Abund (%)	100.00	5	30.00	1	0.00	1
Deep Deposit Feeder Abund (%)	0.00	1	40.00	5	0.00	1
TF Poll. Indicative Spp Abund (%)	0.00	1	0.00	1	0.00	1
Limnodrilus Abundance (%)	0.00	1	0.00	1	0.00	1
Oligo Poll. Indic. Spp Abund (%)	0.00	1	0.00	1	0.00	1
Oligo Poll. Sens. Spp Abund (%)	0.00	1	0.00	1	0.00	1
Tolerance Score	0.00	1	0.00	1	0.00	1
Tany./Chir. Abundance Ratio	0.00	1	0.00	1	0.00	1
BENTHIC ABUNDANCE (per sq. meter)						
Site	19111	19112	19113	19114	19116	
Acteocina canaliculata		23				
Eteone heteropoda		23				
Glycinde solitaria		45				
Heteromastus filiformis		182			91	
Leptocheirus plumulosus					1068	
Macoma mitchelli		45				
Marenzelleria viridis		45				
Melita nitida (Epi.)					23	
Mulinia lateralis		23				
Neanthes succinea	23	23			204	
Rictaxis punctostriatus		23				
Streblospio benedicti		23			136	
Tubificoides spp.					68	
Total Abundance w/ Epifauna	23	454	0	0	1590	
Total Abundance w/o Epifauna	23	454			1568	
Number of Taxa w/ Epifauna	1	10	0	0	6	
Number of Taxa w/o Epifauna	1	10	0	0	5	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19111	19112	19113	19114	19116
Acteocina canaliculata		0.0011			
Eteone heteropoda		0.0023			
Glycinde solitaria		0.0068			
Heteromastus filiformis		0.1250			0.0886
Leptocheirus plumulosus					0.1340
Macoma mitchelli		0.0045			
Marenzelleria viridis		0.0250			
Melita nitida (Epi.)					0.0045
Mulinia lateralis		0.0011			
Neanthes succinea	0.0011	0.0091			0.1681
Rictaxis punctostriatus		0.0011			
Streblospio benedicti		0.0023			0.0011
Tubificoides spp.					0.0011
Total Biomass w/ Epifauna	0.0011	0.1784	0.0000	0.0000	0.3976
Total Biomass w/o Epifauna	0.0011	0.1784	0.0000	0.0000	0.3931



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19117	19118	19119	19120	19121
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	High Meso Mud	Polyhaline Sand	High Meso Mud	Low Mesohaline	Low Mesohaline
Date	09/11/12	08/21/12	09/11/12	09/27/12	09/27/12
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)	6.4	3.4	6.7	1.2	0.9
Salinity (ppt)	12.54	18.05	12.52	7.56	7.50
Temperature (C)	25.46	27.18	25.39	21.63	22.12
Dissolved Oxygen (mg/L)	4.5	6.1	5.0	8.4	8.3
Sediment Silt-Clay (%)	86.71	26.54	86.17	97.35	96.52
Total Carbon (%)	1.82	0.83	2.43	1.90	1.92
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	3.00	3.00	2.60	1.00
Condition	Marginal	Meets Goal	Meets Goal	Degraded	Severely Degr.
# Attributes Scored	6	6	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.79 1	2.74 3	1.90 1	2.52 5	1.00 1
Abundance (#/m2)	364 1	2567 3	1431 3	227 1	45 1
Biomass (g/m2)	0.60 3	1.14 3	1.41 3	34.00 1	0.00 1
Pollution Indicative Spp Abund (%)	0.00	21.24	14.29	20.00 3	100.00 1
Pollution Indicative Spp Biom (%)	0.00 5	9.36 3	1.05 5	0.01	100.00
Pollution Sensitive Spp Abund (%)	0.00	5.31 1	1.59	20.00	0.00
Pollution Sensitive Spp Biom (%)	0.00 1	17.73	6.14 1	99.86 3	0.00 1
Carnivore-Omnivore Abund (%)	62.50 5	22.12	58.73 5	20.00	50.00
Deep Deposit Feeder Abund (%)	31.25	44.25 5	26.98	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	3.17	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	9.80	6.10	6.20
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	100.00	100.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	19117	19118	19119	19120	19121
Apocorophium lacustre (Epi.)			4476		
Carinoma tremaphoros	23				
Coelotanypus spp.				23	23
Doridella obscura (Epi.)			136		
Eteone heteropoda		91	23		
Heteromastus filiformis	68	454	23		
Leptocheirus plumulosus			23	91	
Macoma balthica		23			
Macoma mitchelli	23	250			
Marenzelleria viridis		91	23	23	
Mulinia lateralis		23			
Neanthes succinea	204	477	818	23	
Polydora cornuta		23	23	23	
Rangia cuneata		23		23	
Rhithropanopeus harrisi (Epi.)			23		
Streblospio benedicti		432	136	23	23
Stylochus ellipticus (Epi.)			23		
Tubificidae imm w/o cap chaetae			45		
Tubificoides spp.	45	682	318		
Total Abundance w/ Epifauna	364	2567	6089	227	45
Total Abundance w/o Epifauna	364	2567	1431	227	45
Number of Taxa w/ Epifauna	5	11	13	7	2
Number of Taxa w/o Epifauna	5	11	9	7	2

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19117	19118	19119	19120	19121
Apocorophium lacustre (Epi.)			0.2908		
Carinoma tremaphoros	0.0386				
Coelotanypus spp.				0.0023	0.0023
Doridella obscura (Epi.)			0.0114		
Eteone heteropoda		0.0068	0.0091		
Heteromastus filiformis	0.0613	0.1840	0.0011		
Leptocheirus plumulosus			0.0023	0.0386	
Macoma balthica		0.1091			
Macoma mitchelli	0.0136	0.2840			
Marenzelleria viridis		0.0682	0.0863	0.1340	
Mulinia lateralis		0.0909			
Neanthes succinea	0.4817	0.3544	1.2928	0.0011	
Polydora cornuta		0.0023	0.0011	0.0023	
Rangia cuneata		0.0250		33.8164	
Rhithropanopeus harrisii (Epi.)			0.0068		
Streblospio benedicti		0.0091	0.0045	0.0023	0.0023
Stylochus ellipticus (Epi.)			0.0068		
Tubificidae imm w/o cap chaetae			0.0011		
Tubificoides spp.	0.0011	0.0068	0.0068		
Total Biomass w/ Epifauna	0.5964	1.1405	1.7210	33.9971	0.0045
Total Biomass w/o Epifauna	0.5964	1.1405	1.4052	33.9971	0.0045



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19123	19124	19125	19126	19127	
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R	
Habitat	Freshwater	Freshwater	Freshwater	Polyhaline Sand	Polyhaline Mud	
Date	09/25/12	09/25/12	09/25/12	08/21/12	09/11/12	
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)	4.8	2.6	0.7	5.7	7.0	
Salinity (ppt)	0.43	0.46	0.19	23.19	19.26	
Temperature (C)	21.40	19.24	21.31	26.58	26.17	
Dissolved Oxygen (mg/L)	7.9	5.0	10.2	4.9	0.3	
Sediment Silt-Clay (%)	96.26	52.82	12.21	0.94	96.62	
Total Carbon (%)	2.26	4.01	0.67	0.05	2.67	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	1.50	2.50	3.00	2.33	1.00	
Condition	Severely Degr.	Degraded	Meets Goal	Degraded	Severely Degr.	
# Attributes Scored	4	4	4	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.93		2.74		3.12	3
Abundance (#/m2)	386	1	477	1	1136	1
Biomass (g/m2)	0.18		0.10		4.95	1
Pollution Indicative Spp Abund (%)	70.59		66.67		57.25	4
Pollution Indicative Spp Biom (%)	15.92		23.26		11.05	5
Pollution Sensitive Spp Abund (%)	0.00		9.52		0.74	3
Pollution Sensitive Spp Biom (%)	0.00		76.74		0.50	13.69
Carnivore-Omnivore Abund (%)	5.88		52.38		21.62	60.00
Deep Deposit Feeder Abund (%)	88.24	1	47.62	1	44.47	5
TF Poll. Indicative Spp Abund (%)	70.59	3	28.57	5	40.05	3
Limnodrilus Abundance (%)	70.59		28.57		40.05	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	9.46	1	8.65	3	8.45	3
Tany./Chir. Abundance Ratio	0.00		55.56		82.67	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19123	19124	19125	19126	19127
Acteocina canaliculata				227	
Amnicola spp. (Epi.)			45		
Aulodrilus pigueti			159		
Branchiostoma caribaeum				23	
Branchiura sowerbyi	68		68		
Campeloma decisum (Epi.)			45		
Chaoborus punctipennis	23				
Chironomus spp.		68			
Coelotanypus spp.		114	1409		
Coenagrionidae (Epi.)			23		
Corbicula fluminea			159		
Cyathura polita		45	68		
Dicrotendipes neomodestus			23		
Dicrotendipes nervosus			45		
Dicrotendipes spp.			23		
Dugesia spp. (Epi.)			114		
Eteone heteropoda				23	
Gammarus fasciatus (Epi.)			159		
Gemma gemma				182	
Geukensia demissa (Epi.)				23	
Glycinde solitaria				250	
Glyptotendipes spp.			23		
Goniobasis virginica (Epi.)			68		
Haminoea solitaria				68	
Harnischia spp.		23			
Heteromastus filiformis				68	
Hexagenia spp.			91		
Ilyodrilus templetoni		23			
Limnodrilus hoffmeisteri	182	23			
Macoma mitchelli				114	
Micrura leidyi				23	
Musculium transversum	23		2954		
Nanocladius crassicornus			68		
Parachironomus monochromus/tenuicaudatus			45		
Paraprionospio pinnata				23	
Phoronis spp.				45	
Polypedilum halterale group			23		
Probetzia spp.			136		
Rictaxis punctostriatus				91	
Stictochironomus caffarius			23		
Stylaria lacustris			182		
Stylochus ellipticus (Epi.)				23	
Tanytarsus spp. G Epler			23		
Tubificidae imm w cap chaetae *		68			
Tubificidae imm w/o cap chaetae			3703		
Tubificidae imm w/o cap chaetae *	91	114			
Unionidae			23		
Total Abundance w/ Epifauna	386	477	9701	1181	0
Total Abundance w/o Epifauna	386	477	9247	1136	
Number of Taxa w/ Epifauna	4	6	26	14	0
Number of Taxa w/o Epifauna	4	6	20	12	0

\*Indicates taxa is skipped in taxon counts

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19123	19124	19125	19126	19127
Acteocina canaliculata				0.0159	
Amnicola spp. (Epi.)			0.0023		
Branchiostoma caribaeum				0.0250	
Branchiura sowerbyi	0.1386		0.1681		
Campeloma decisum (Epi.)			33.7119		
Chaoborus punctipennis	0.0023				
Chironomidae		0.0011	0.0011		
Coelotanypus spp.		0.0136	0.2136		
Coenagrionidae (Epi.)			0.0045		
Corbicula fluminea			3.1853		
Cyathura polita		0.0750	0.0250		
Dugesia spp. (Epi.)			0.0114		
Eteone heteropoda				0.0023	
Gammarus fasciatus (Epi.)			0.0318		
Gemma gemma				0.0364	
Geukensia demissa (Epi.)				0.0068	
Glycinde solitaria				0.0318	
Goniobasis virginica (Epi.)			5.1302		
Haminoea solitaria				0.0068	
Heteromastus filiformis				0.0182	
Hexagenia spp.			0.3294		
Macoma mitchelli				0.0068	
Micrura leidyi				0.2317	
Musculium transversum	0.0091		0.6861		
Oligochaeta	0.0284	0.0080	0.3333		
Paraprionospio pinnata				0.0011	
Phoronis spp.				0.0045	
Probetzia spp.			0.0068		
Rictaxis punctostriatus				0.0011	
Stylochus ellipticus (Epi.)				0.0136	
Unionidae			0.0011		
Total Biomass w/ Epifauna	0.1784	0.0977	43.8421	0.4021	0.0000
Total Biomass w/o Epifauna	0.1784	0.0977	4.9501	0.3817	0.0000



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19201	19202	19204	19205	19206
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Polyhaline Mud	High Meso Mud	Polyhaline Sand	Polyhaline Sand	Polyhaline Sand
Date	08/21/12	08/22/12	08/23/12	08/23/12	08/23/12
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)	8.5	4.1	5.3	3.7	3.7
Salinity (ppt)	21.88	15.27	21.51	21.50	20.65
Temperature (C)	27.05	27.89	27.20	27.15	26.92
Dissolved Oxygen (mg/L)	4.7	7.9	5.0	5.4	5.5
Sediment Silt-Clay (%)	45.36	68.10	4.13	1.28	3.01
Total Carbon (%)	1.67	3.70	0.24	0.05	0.16
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	2.33	2.00	1.67	1.67
Condition	Marginal	Degraded	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.11 3	1.58 1	2.86 3	2.89 3	2.61 1
Abundance (#/m2)	954 1	68 1	1159 1	409 1	1227 1
Biomass (g/m2)	0.44 1	0.14 1	0.27 1	0.15 1	0.42 1
Pollution Indicative Spp Abund (%)	28.57	0.00	27.45	16.67	33.33
Pollution Indicative Spp Biom (%)	3.13 5	0.00 5	25.21 1	56.92 1	19.67 1
Pollution Sensitive Spp Abund (%)	19.05	33.33	29.41 3	22.22 1	22.22 1
Pollution Sensitive Spp Biom (%)	52.08 3	0.80 1	15.97	6.15	39.89
Carnivore-Omnivore Abund (%)	38.10 3	33.33 5	43.14	38.89	16.67
Deep Deposit Feeder Abund (%)	9.52	33.33	21.57 3	16.67 3	38.89 5
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
BENTHIC ABUNDANCE (per sq. meter)					
Site	19201	19202	19204	19205	19206
Acteocina canaliculata			45	45	
Apocorophium lacustre (Epi.)				23	
Branchiostoma caribaeum				23	
Carinoma tremaphoros	23		45		
Edotea triloba (Epi.)			23		
Gemma gemma				23	
Glycinde solitaria	136		204	45	182
Haminoea solitaria				68	
Heteromastus filiformis		23	250	68	477
Leucon americanus	45				
Loimia medusa					23
Macoma balthica	45				45
Macoma mitchelli	136			68	45
Marenzelleria viridis		23			23
Mulinia lateralis	91		136	68	114
Neanthes succinea	204	23	204		23
Paraprionospio pinnata	114		182		68
Phoronis spp.			68		
Spiochaetopterus costarum			23		
Streblospio benedicti	68				227
Tubificoides spp.	91				
Total Abundance w/ Epifauna	954	68	1181	432	1227
Total Abundance w/o Epifauna	954	68	1159	409	1227
Number of Taxa w/ Epifauna	10	3	10	9	10
Number of Taxa w/o Epifauna	10	3	9	8	10

Continued . . .



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19201	19202	19204	19205	19206
Acteocina canaliculata			0.0114	0.0068	
Apocorophium lacustre (Epi.)				0.0023	
Branchiostoma caribaeum				0.0136	
Carinoma tremaphoros	0.0182		0.0114		
Edotea triloba (Epi.)			0.0045		
Gemma gemma				0.0068	
Glycinde solitaria	0.0295		0.0227	0.0023	0.0318
Haminea solitaria				0.0045	
Heteromastus filiformis		0.0613	0.0772	0.0273	0.1386
Leucon americanus	0.0011				
Loimia medusa					0.0068
Macoma balthica	0.1977				0.1227
Macoma mitchelli	0.0250			0.0023	0.0091
Marenzelleria viridis		0.0011			0.0045
Mulinia lateralis	0.0011		0.0204	0.0841	0.0636
Neanthes succinea	0.1500	0.0795	0.0704		0.0204
Paraprionospio pinnata	0.0114		0.0477		0.0114
Phoronis spp.			0.0068		
Spiochaetopterus costarum			0.0023		
Streblospio benedicti	0.0011				0.0068
Tubificoides spp.	0.0011				
Total Biomass w/ Epifauna	0.4362	0.1420	0.2749	0.1500	0.4158
Total Biomass w/o Epifauna	0.4362	0.1420	0.2704	0.1477	0.4158

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19207	19208	19210	19211	19212	
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R	
Habitat	Polyhaline Mud	Polyhaline Mud	Polyhaline Sand	Polyhaline Sand	Polyhaline Sand	
Date	08/23/12	08/23/12	08/23/12	08/23/12	08/23/12	
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	
<b>BOTTOM ENVIRONMENT</b>						
Depth (m)	5.4	10.0	4.7	3.9	3.0	
Salinity (ppt)	21.05	21.09	20.59	20.30	20.21	
Temperature (C)	27.22	27.24	27.07	26.95	26.87	
Dissolved Oxygen (mg/L)	4.0	3.7	6.0	5.8	5.8	
Sediment Silt-Clay (%)	55.64	96.28	26.79	31.43	13.31	
Total Carbon (%)	1.72	3.36	0.67	0.78	0.34	
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>						
B-IBI Score	3.33	1.00	2.33	2.33	2.67	
Condition	Meets Goal	Severely Degr.	Degraded	Degraded	Marginal	
# Attributes Scored	6	6	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.41	3	0.65	1	2.40	1
Abundance (#/m2)	295	1	273	1	2022	3
Biomass (g/m2)	0.54	3	0.04	1	0.75	1
Pollution Indicative Spp Abund (%)	7.69		83.33		26.97	
Pollution Indicative Spp Biom (%)	0.21	5	62.50	1	11.08	3
Pollution Sensitive Spp Abund (%)	23.08		0.00		4.49	1
Pollution Sensitive Spp Biom (%)	55.70	3	0.00	1	4.86	23.42
Carnivore-Omnivore Abund (%)	46.15	5	16.67	1	33.71	31.82
Deep Deposit Feeder Abund (%)	7.69		0.00		46.07	5
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		1.12	
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		9.80	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	
<b>BENTHIC ABUNDANCE (per sq. meter)</b>						
Site	19207	19208	19210	19211	19212	
Carinoma tremaphoros	45		23	23	23	
Chironomus spp.			250			
Glycinde solitaria			91	91	68	
Heteromastus filiformis	23		909	636	1022	
Macoma balthica	68			68	23	
Macoma mitchelli	45		136		45	
Micrura leidyi				23		
Mulinia lateralis			45		23	
Neanthes succinea	91	45	318	341	45	
Paraprionospio pinnata		227				
Streblospio benedicti	23		227	227	250	
Tubificidae imm w/o cap chaetae			23			
Tubificoides spp.				91	114	
Total Abundance w/ Epifauna	295	273	2022	1500	1613	
Total Abundance w/o Epifauna	295	273	2022	1500	1613	
Number of Taxa w/ Epifauna	6	2	9	8	9	
Number of Taxa w/o Epifauna	6	2	9	8	9	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19207	19208	19210	19211	19212
Carinoma tremaphoros	0.0364		0.0114	0.0182	0.0204
Chironomus spp.			0.0011		
Glycinde solitaria			0.0364	0.0023	0.0227
Heteromastus filiformis	0.0011		0.2590	0.1818	0.4885
Macoma balthica	0.2999			0.1454	0.1113
Macoma mitchelli	0.1091		0.1068		0.0204
Micrura leidyi				0.0886	
Mulinia lateralis			0.0636		0.0045
Neanthes succinea	0.0909	0.0136	0.2522	0.1863	0.0250
Paraprionospio pinnata		0.0227			
Streblospio benedicti	0.0011		0.0159	0.0068	0.0114
Tubificidae imm w/o cap chaetae			0.0023		
Tubificoides spp.				0.0011	0.0011
Total Biomass w/ Epifauna	0.5385	0.0364	0.7486	0.6305	0.7055
Total Biomass w/o Epifauna	0.5385	0.0364	0.7486	0.6305	0.7055

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES**

Site	19213	19216	19217	19218	19219
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Polyhaline Mud	Polyhaline Sand	Polyhaline Sand	Polyhaline Mud	High Meso Mud
Date	08/23/12	08/23/12	08/23/12	08/23/12	08/23/12
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
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	4.9	3.1	3.3	2.9	6.5
Salinity (ppt)	19.45	18.61	19.66	18.44	16.73
Temperature (C)	27.01	27.01	26.97	27.18	27.09
Dissolved Oxygen (mg/L)	4.7	5.3	3.9	5.7	5.2
Sediment Silt-Clay (%)	93.55	25.07	9.13	68.60	93.76
Total Carbon (%)	3.02	1.00	0.60	1.80	2.89
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	2.00	3.00	2.00	2.33	2.33
Condition	Severely Degr.	Meets Goal	Severely Degr.	Degraded	Degraded
# Attributes Scored	6	6	6	6	6
	Value	Score	Value	Score	Value
Shannon-Wiener Index	1.58	1	2.40	1	2.02
Abundance (#/m2)	68	1	3522	5	863
Biomass (g/m2)	0.09	1	1.01	3	0.30
Pollution Indicative Spp Abund (%)	33.33	1	23.87	1	21.05
Pollution Indicative Spp Biom (%)	5.26	3	13.13	3	6.87
Pollution Sensitive Spp Abund (%)	33.33	1	3.87	1	10.53
Pollution Sensitive Spp Biom (%)	60.53	3	14.81	3	6.87
Carnivore-Omnivore Abund (%)	33.33	3	38.06	3	31.58
Deep Deposit Feeder Abund (%)	33.33	5	30.97	5	55.26
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.65	0.00	5.26	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	0.00	8.60	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	100.00	0.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	19213	19216	19217	19218	19219
Apocorophium lacustre (Epi.)		91			
Coelotanypus spp.			23		
Edotea triloba (Epi.)		23			
Glycinde solitaria		91	91	23	
Heteromastus filiformis	23	227	432	114	
Macoma balthica		23			
Macoma mitchelli		227		68	
Marenzelleria viridis		23			
Micrura leidyi			23		
Mulinia lateralis		68	23		
Neanthes succinea		1250	136	182	23
Paraprionospio pinnata	23				
Streblospio benedicti		750	91		
Tubificidae imm w/o cap chaetae		23	45		
Tubificoides spp.		841		45	
Total Abundance w/ Epifauna	68	3635	863	432	23
Total Abundance w/o Epifauna	68	3522	863	432	23
Number of Taxa w/ Epifauna	3	12	8	5	1
Number of Taxa w/o Epifauna	3	10	8	5	1

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19213	19216	19217	19218	19219
Apocorophium lacustre (Epi.)		0.0182			
Coelotanypus spp.			0.0011		
Edotea triloba (Epi.)		0.0045			
Glycinde solitaria	0.0523	0.0045	0.0204	0.0023	
Heteromastus filiformis	0.0295	0.0659	0.1227	0.0477	
Macoma balthica		0.1022			
Macoma mitchelli		0.0023		0.1068	
Marenzelleria viridis		0.0432			
Micrura leidyi			0.0818		
Mulinia lateralis		0.0932	0.0068		
Neanthes succinea		0.6452	0.0523	0.0613	0.0045
Paraprionospio pinnata	0.0045				
Streblospio benedicti		0.0386	0.0114		
Tubificidae imm w/o cap chaetae		0.0011	0.0011		
Tubificoides spp.		0.0159		0.0023	
Total Biomass w/ Epifauna	0.0863	1.0349	0.2976	0.2204	0.0045
Total Biomass w/o Epifauna	0.0863	1.0122	0.2976	0.2204	0.0045

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19220	19221	19222	19223	19224
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Sand	High Meso Sand	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/23/12	08/23/12	08/23/12	09/04/12	09/04/12
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	1.6	5.2	6.8	9.1
Salinity (ppt)	16.54	16.20	8.38	6.88	5.06
Temperature (C)	27.12	27.68	26.97	27.77	27.65
Dissolved Oxygen (mg/L)	5.4	6.3	4.7	7.6	4.9
Sediment Silt-Clay (%)	6.26	21.95	82.15	76.76	81.86
Total Carbon (%)	2.84	0.66	2.88	2.19	3.87
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	2.67	1.80	1.40	1.00
Condition	Degraded	Marginal	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.00 1	2.97 3	2.19 3	1.50 1	1.37 1
Abundance (#/m2)	91 1	523 1	954 3	91 1	114 1
Biomass (g/m2)	0.04 1	0.37 1	0.52 1	0.12 1	0.00 1
Pollution Indicative Spp Abund (%)	0.00 5	8.70 5	33.33 1	25.00 1	100.00 1
Pollution Indicative Spp Biom (%)	0.00	1.22	1.73	0.95	100.00
Pollution Sensitive Spp Abund (%)	0.00 1	26.09 3	2.38	50.00	0.00
Pollution Sensitive Spp Biom (%)	0.00	12.20	19.91 1	97.14 3	0.00 1
Carnivore-Omnivore Abund (%)	100.00 5	34.78 3	9.52	25.00	0.00
Deep Deposit Feeder Abund (%)	0.00	34.78	42.86	0.00	80.00
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	80.00
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	0.00	6.20	9.80
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	100.00	0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	19220	19221	19222	19223	19224
Apocorophium lacustre (Epi.)			114		
Carinoma tremaphoros	45	23	68		
Coelotanypus spp.				23	
Cyathura polita		23			
Glycinde solitaria		45			
Heteromastus filiformis		159			
Leptocheirus plumulosus			45	23	
Limnodrilus hoffmeisteri					23
Macoma mitchelli		45	68		
Marenzelleria viridis		23	23	45	
Neanthes succinea	45	91	23		
Pectinaria gouldii			23		
Rangia cuneata		45			
Streblospio benedicti		45	318		23
Tubificidae imm w/o cap chaetae *					68
Tubificoides spp.		23	386		
Total Abundance w/ Epifauna	91	523	1068	91	114
Total Abundance w/o Epifauna	91	523	954	91	114
Number of Taxa w/ Epifauna	2	10	9	3	2
Number of Taxa w/o Epifauna	2	10	8	3	2

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19220	19221	19222	19223	19224
Apocorophium lacustre (Epi.)			0.0114		
Carinoma tremaphoros	0.0227	0.0011	0.0295		
Coelotanypus spp.				0.0011	
Cyathura polita		0.0045			
Glycinde solitaria		0.0091			
Heteromastus filiformis		0.2522			
Leptocheirus plumulosus			0.0091	0.0023	
Macoma mitchelli		0.0068	0.3476		
Marenzelleria viridis		0.0273	0.1045	0.1159	
Neanthes succinea	0.0182	0.0613	0.0204		
Pectinaria gouldii			0.0023		
Rangia cuneata		0.0045			
Streblospio benedicti		0.0045	0.0091		0.0023
Tubificidae imm w/o cap chaetae *					0.0011
Tubificoides spp.		0.0011	0.0023		
Total Biomass w/ Epifauna	0.0409	0.3726	0.5362	0.1193	0.0034
Total Biomass w/o Epifauna	0.0409	0.3726	0.5248	0.1193	0.0034

\*Indicates taxa is skipped in taxon counts



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19225	19227	19228	19229	19230	
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R	
Habitat	Oligohaline	Low Mesohaline	Polyhaline Mud	High Meso Mud	Polyhaline Mud	
Date	09/04/12	08/23/12	08/23/12	08/23/12	08/23/12	
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	3.7	4.1	3.6	7.0	
Salinity (ppt)	1.66	8.15	19.17	14.58	20.81	
Temperature (C)	27.50	26.99	26.99	27.20	27.17	
Dissolved Oxygen (mg/L)	5.5	4.7	5.0	5.9	3.5	
Sediment Silt-Clay (%)	1.67	61.34	85.77	83.63	91.58	
Total Carbon (%)	0.17	3.38	2.81	3.92	3.33	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.00	1.80	2.33	1.00	1.00	
Condition	Meets Goal	Severely Degr.	Degraded	Severely Degr.	Severely Degr.	
# Attributes Scored	6	5	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	3.14	2.34	3	1.52	1	0.76
Abundance (#/m2)	2908	5	750	3	114	1
Biomass (g/m2)	0.40	0.40	1	0.08	1	0.02
Pollution Indicative Spp Abund (%)	43.75	21.21	1	20.00	100.00	77.78
Pollution Indicative Spp Biom (%)	19.48	4.02	1	2.94	5	54.55
Pollution Sensitive Spp Abund (%)	9.38	9.09	0.00	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	72.21	36.21	1	0.00	1	0.00
Carnivore-Omnivore Abund (%)	8.59	1	9.09	40.00	5	0.00
Deep Deposit Feeder Abund (%)	55.47	48.48	0.00	40.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	34.38	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	69.53	3	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	3.91	3	0.00	0.00	0.00	0.00
Tolerance Score	9.35	1	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	5	0.00	0.00	0.00	0.00

Continued . . .



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19225	19227	19228	19229	19230
Apocorophium lacustre (Epi.)	818				
Boccardiella ligERICA	545				
Branchiura sowerbyi	23				
Carinoma tremaphoros		45	45		
Chironomus spp.	68				
Cryptochironomus spp.	23				
Cyathura polita	45				
Eteone heteropoda		23			
Gammarus daiberi (Epi.)	45				
Heteromastus filiformis		45	45		
Hobsonia florida	23				
Limnodrilus hoffmeisteri	273				
Littoridinops tenuipes (Epi.)	23				
Macoma mitchelli		114			
Marenzelleria viridis	114	68			
Mytilopsis leucophaeata (Epi.)	159				
Neanthes succinea					45
Paraprionospio pinnata					159
Polydora cornuta	45				
Polypedilum halterale group	91				
Rangia cuneata	114				
Stictochironomus spp. group	23				
Streblospio benedicti	204	136	23		
Tubificidae imm w cap chaetae	545				
Tubificidae imm w/o cap chaetae *	727				
Tubificoides spp.	45	318			
Total Abundance w/ Epifauna	3953	750	114	0	204
Total Abundance w/o Epifauna	2908	750	114		204
Number of Taxa w/ Epifauna	19	7	3	0	2
Number of Taxa w/o Epifauna	15	7	3	0	2
BENTHIC BIOMASS (Grams per sq. meter)					
Site	19225	19227	19228	19229	19230
Apocorophium lacustre (Epi.)	0.0591				
Boccardiella ligERICA	0.0182				
Branchiura sowerbyi	0.0091				
Carinoma tremaphoros		0.0091	0.0136		
Chironomidae	0.0011				
Cyathura polita	0.0023				
Eteone heteropoda		0.0091			
Gammarus daiberi (Epi.)	0.0068				
Heteromastus filiformis		0.0023	0.0613		
Hobsonia florida	0.0023				
Littoridinops tenuipes (Epi.)	0.0011				
Macoma mitchelli		0.2181			
Marenzelleria viridis	0.2749	0.1431			
Mytilopsis leucophaeata (Epi.)	0.0068				
Neanthes succinea					0.0114
Oligochaeta	0.0750				
Paraprionospio pinnata					0.0136
Polydora cornuta	0.0011				
Rangia cuneata	0.0091				
Streblospio benedicti	0.0023	0.0068	0.0023		
Tubificoides spp.	0.0011	0.0068			
Total Biomass w/ Epifauna	0.4703	0.3953	0.0772	0.0000	0.0250
Total Biomass w/o Epifauna	0.3965	0.3953	0.0772	0.0000	0.0250

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19601	19602	19603	19604	19605	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	Low Mesohaline	High Meso Mud	
Date	08/17/12	09/14/12	08/17/12	08/17/12	09/14/12	
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)	9.9	1.7	6.2	1.4	7.0	
Salinity (ppt)	15.00	12.87	14.59	10.21	15.29	
Temperature (C)	27.19	24.03	27.26	28.14	25.34	
Dissolved Oxygen (mg/L)	9.8	7.5	1.2	9.2	1.7	
Sediment Silt-Clay (%)	92.13	1.57	52.97	2.09	93.52	
Total Carbon (%)	3.75	0.08	2.54	0.17	3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	1.33	2.00	3.00	4.20	2.33	
Condition	Severely Degr.	Severely Degr.	Meets Goal	Meets Goal	Degraded	
# Attributes Scored	6	6	6	5	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.00	1	2.06	1	2.57	3
Abundance (#/m2)	45	1	204	1	841	1
Biomass (g/m2)	0.01	1	0.11	1	1.18	3
Pollution Indicative Spp Abund (%)	50.00	1	11.11	3	35.14	3
Pollution Indicative Spp Biom (%)	9.09	3	1.06	5	0.77	5
Pollution Sensitive Spp Abund (%)	0.00	3	22.22	3	16.22	3
Pollution Sensitive Spp Biom (%)	0.00	1	41.49	3	81.16	3
Carnivore-Omnivore Abund (%)	0.00	1	22.22	3	16.22	3
Deep Deposit Feeder Abund (%)	50.00	3	22.22	3	29.73	3
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	1.43	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	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	0.00
Tolerance Score	0.00	0.00	0.00	0.00	7.70	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00	0.00
BENTHIC ABUNDANCE (per sq. meter)						
Site	19601	19602	19603	19604	19605	
Apocorophium lacustre (Epi.)				23		
Carinoma tremaphoros			23	23	23	
Cryptochironomus spp.				23		
Cyathura polita		23				
Eteone heteropoda			23	114		
Geukensia demissa (Epi.)				23		
Glycinde solitaria		23				
Heteromastus filiformis	23	45	45	68	23	
Leptocheirus plumulosus			45	23		
Macoma balthica			136			
Macoma mitchelli		91		250		
Marenzelleria viridis				295		
Micrura leidy			45			
Mulinia lateralis		23				
Neanthes succinea			45	114	159	
Rangia cuneata				23		
Streblospio benedicti	23		273	159		
Tubificidae imm w/o cap chaetae				23		
Tubificoides spp.			204	477	45	
Total Abundance w/ Epifauna	45	204	841	1636	250	
Total Abundance w/o Epifauna	45	204	841	1590	250	
Number of Taxa w/ Epifauna	2	5	9	14	4	
Number of Taxa w/o Epifauna	2	5	9	12	4	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19601	19602	19603	19604	19605
Apocorophium lacustre (Epi.)				0.0023	
Carinoma tremaphoros			0.0045	0.0011	0.0295
Cryptochironomus spp.				0.0011	
Cyathura polita		0.0432			
Eteone heteropoda			0.0045	0.0091	
Geukensia demissa (Epi.)				0.0045	
Glycinde solitaria		0.0011			
Heteromastus filiformis	0.0114	0.0273	0.0841	0.0613	0.0045
Leptocheirus plumulosus			0.0091	0.0068	
Macoma balthica			0.9542		
Macoma mitchelli		0.0341		0.1477	
Marenzelleria viridis				1.0497	
Micrura leidyi			0.1068		
Mulinia lateralis		0.0011			
Neanthes succinea			0.0068	0.0341	0.3067
Rangia cuneata				0.6566	
Streblospio benedicti	0.0011		0.0045	0.0068	
Tubificidae imm w/o cap chaetae				0.0011	
Tubificoides spp.			0.0011	0.0091	0.0023
Total Biomass w/ Epifauna	0.0125	0.1068	1.1758	1.9914	0.3431
Total Biomass w/o Epifauna	0.0125	0.1068	1.1758	1.9846	0.3431

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19606	19607	19608	19609	19610	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	High Meso Mud	Low Mesohaline	High Meso Mud	High Meso Mud	High Meso Mud	
Date	09/14/12	09/14/12	09/14/12	09/12/12	09/14/12	
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)	7.4	1.8	6.6	6.1	7.0	
Salinity (ppt)	15.59	11.87	13.75	13.54	16.00	
Temperature (C)	25.42	24.31	25.06	25.05	25.51	
Dissolved Oxygen (mg/L)	1.3	7.3	2.4	4.3	1.7	
Sediment Silt-Clay (%)	91.21	1.94	83.99	58.09	92.37	
Total Carbon (%)	3.43	0.14	1.89	2.00	3.44	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.67	3.00	3.33	3.00	2.33	
Condition	Marginal	Meets Goal	Meets Goal	Meets Goal	Degraded	
# Attributes Scored	6	5	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.36	1	2.16	3	2.16	3
Abundance (#/m2)	227	1	545	3	341	1
Biomass (g/m2)	0.51	3	0.46	1	0.90	3
Pollution Indicative Spp Abund (%)	10.00		8.33	5	0.00	
Pollution Indicative Spp Biom (%)	4.46	5	4.41		0.00	5
Pollution Sensitive Spp Abund (%)	0.00		20.83		13.33	
Pollution Sensitive Spp Biom (%)	0.00	1	42.65	3	54.59	3
Carnivore-Omnivore Abund (%)	70.00	5	8.33		53.33	5
Deep Deposit Feeder Abund (%)	20.00		8.33		33.33	
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	
BENTHIC ABUNDANCE (per sq. meter)						
Site	19606	19607	19608	19609	19610	
Carinoma tremaphoros			45			
Cyathura polita		23				
Heteromastus filiformis	23	45	68	45		
Lepidactylus dytiscus		23				
Limnodrilus hoffmeisteri					23	
Macoma balthica			45			
Macoma mitchelli		295				
Marenzelleria viridis		91				
Mulinia lateralis		23				
Neanthes succinea	159	23	136	159	114	
Paraprionospio pinnata	23			23		
Streblospio benedicti		23		23		
Tubificidae imm w/o cap chaetae				136		
Tubificoides spp.	23		45	182		
Total Abundance w/ Epifauna	227	545	341	568	136	
Total Abundance w/o Epifauna	227	545	341	568	136	
Number of Taxa w/ Epifauna	4	8	5	6	2	
Number of Taxa w/o Epifauna	4	8	5	6	2	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19606	19607	19608	19609	19610
Carinoma tremaphoros			0.0204		
Cyathura polita		0.0613			
Heteromastus filiformis	0.0386	0.0023	0.0204	0.0432	
Lepidactylus dytiscus		0.0045			
Limnodrilus hoffmeisteri					0.0011
Macoma balthica			0.4930		
Macoma mitchelli		0.1886			
Marenzelleria viridis		0.1363			
Mulinia lateralis		0.0182			
Neanthes succinea	0.4430	0.0500	0.3681	0.6316	0.1159
Paraprionospio pinnata	0.0227			0.0023	
Streblospio benedicti		0.0023		0.0023	
Tubificidae imm w/o cap chaetae				0.0011	
Tubificoides spp.	0.0045		0.0011	0.0023	
Total Biomass w/ Epifauna	0.5089	0.4635	0.9031	0.6827	0.1170
Total Biomass w/o Epifauna	0.5089	0.4635	0.9031	0.6827	0.1170

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19611	19612	19613	19614	19615	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	High Meso Mud	High Meso Mud	Low Mesohaline	Low Mesohaline	Low Mesohaline	
Date	09/12/12	09/12/12	09/12/12	09/12/12	09/12/12	
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)	7.1	6.0	5.0	5.0	5.0	
Salinity (ppt)	13.40	16.34	10.31	10.12	8.50	
Temperature (C)	25.25	25.76	24.21	24.55	23.95	
Dissolved Oxygen (mg/L)	3.4	1.3	6.8	6.5	7.0	
Sediment Silt-Clay (%)	78.47	91.24	79.74	83.32	89.79	
Total Carbon (%)	2.30	3.49	2.17	1.69	2.04	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.00	3.33	3.80	2.20	3.00	
Condition	Severely Degr.	Meets Goal	Meets Goal	Degraded	Meets Goal	
# Attributes Scored	6	6	5	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.73	3	2.20	3	2.20	3
Abundance (#/m2)	204	1	841	1	523	3
Biomass (g/m2)	0.21	1	1.68	3	1.88	3
Pollution Indicative Spp Abund (%)	44.44		16.22		0.00	5
Pollution Indicative Spp Biom (%)	15.30	3	0.07	5	0.00	
Pollution Sensitive Spp Abund (%)	11.11		8.11		43.48	
Pollution Sensitive Spp Biom (%)	26.23	1	42.38	3	86.09	5
Carnivore-Omnivore Abund (%)	11.11	3	43.24	5	39.13	
Deep Deposit Feeder Abund (%)	44.44		48.65		21.74	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	22.22		16.22		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		9.80		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	
BENTHIC ABUNDANCE (per sq. meter)						
Site	19611	19612	19613	19614	19615	
Carinoma tremaphoros	23	68	136		23	
Cyathura polita			68		68	
Heteromastus filiformis	45	250			45	
Leptocheirus plumulosus	23				91	
Macoma balthica		68				
Macoma mitchelli			45		45	
Marenzelleria viridis	23		159	45	68	
Neanthes succinea		295				
Paraprionospio pinnata	23					
Rangia cuneata					23	
Streblospio benedicti	23				45	
Tubificidae imm w/o cap chaetae	45	136				
Tubificoides spp.		23	114		91	
Total Abundance w/ Epifauna	204	841	523	45	500	
Total Abundance w/o Epifauna	204	841	523	45	500	
Number of Taxa w/ Epifauna	7	6	5	1	9	
Number of Taxa w/o Epifauna	7	6	5	1	9	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19611	19612	19613	19614	19615
Carinoma tremaphoros	0.0591	0.0273	0.2136		0.0114
Cyathura polita			0.1772		0.0068
Heteromastus filiformis	0.0613	0.1204			0.0364
Leptocheirus plumulosus	0.0011				0.0273
Macoma balthica		0.7111			
Macoma mitchelli			0.0341		0.1659
Marenzelleria viridis	0.0545		1.4404	0.4158	0.3158
Neanthes succinea		0.8111			
Paraprionospio pinnata	0.0295				
Rangia cuneata					39.2306
Streblospio benedicti	0.0011				0.0091
Tubificidae imm w/o cap chaetae	0.0011	0.0011			
Tubificoides spp.		0.0068	0.0136		0.0045
Total Biomass w/ Epifauna	0.2079	1.6779	1.8789	0.4158	39.8077
Total Biomass w/o Epifauna	0.2079	1.6779	1.8789	0.4158	39.8077



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19616	19618	19619	19620	19621	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Oligohaline	Freshwater	
Date	09/16/12	09/16/12	09/16/12	09/20/12	09/20/12	
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	3.6	2.2	1.5	4.0	
Salinity (ppt)	7.31	6.82	2.65	1.62	0.45	
Temperature (C)	22.79	23.44	23.38	21.93	21.85	
Dissolved Oxygen (mg/L)	7.4	6.6	8.0	7.4	7.5	
Sediment Silt-Clay (%)	1.38	79.77	3.73	0.51	49.12	
Total Carbon (%)	0.12	2.26	0.12	0.08	1.30	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.40	3.00	3.33	2.20	3.00	
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Meets Goal	
# Attributes Scored	5	5	6	5	4	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.64	1	2.81	5	2.94	2.13
Abundance (#/m2)	886	3	1181	3	1727	5
Biomass (g/m2)	1.22	3	61.81	1	32.75	0.08
Pollution Indicative Spp Abund (%)	2.56	5	23.08	1	50.00	36.36
Pollution Indicative Spp Biom (%)	0.19		0.05		0.12	22.97
Pollution Sensitive Spp Abund (%)	56.41		40.38		3.95	0.00
Pollution Sensitive Spp Biom (%)	95.42	5	99.68	5	99.82	0.00
Carnivore-Omnivore Abund (%)	2.56		25.00		30.26	3
Deep Deposit Feeder Abund (%)	2.56		9.62		47.37	20.00
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	0.00
Limnodrilus Abundance (%)	0.00		0.00		36.84	20.00
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		94.74	3
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		1.32	3
Tolerance Score	7.70		6.14		9.30	1
Tany./Chir. Abundance Ratio	0.00		100.00		9.09	5

Continued . . .



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19616	19618	19619	19620	19621
Apocorophium lacustre (Epi.)		295	23		
Boccardiella ligERICA			23		
Branchiura sowerbyi					159
Carinoma tremaphoros		45			
Chaoborus punctipennis					23
Cladotanytarsus spp. B Epler			45		
Coelotanypus spp.		227			
Cyathura polita		23	23		
Eteone heteropoda	23				
Heteromastus filiformis		23			
Lepidactylus dytiscus	45			364	
Leptocheirus plumulosus	295	227	136	409	91
Limnodrilus hoffmeisteri			45	23	909
Macoma mitchelli		23			
Marenzelleria viridis	477	364	23		136
Melita nitida (Epi.)		23			
Neanthes succinea					23
Polydora cornuta		23		23	
Polypedilum halterale group			364		
Polypedilum scalaenum group			45		
Procladius spp.			45		
Rangia cuneata	23	91	23		23
Streblospio benedicti		45	182	204	91
Tubificidae imm w cap chaetae	23		136		45
Tubificidae imm w/o cap chaetae *			591	227	545
Tubificoides spp.		91	45		
Total Abundance w/ Epifauna	886	1500	1749	1250	2045
Total Abundance w/o Epifauna	886	1181	1727	1250	2045
Number of Taxa w/ Epifauna	6	13	14	5	9
Number of Taxa w/o Epifauna	6	11	13	5	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	19616	19618	19619	19620	19621
Apocorophium lacustre (Epi.)		0.0409	0.0011		
Boccardiella ligERICA			0.0023		
Branchiura sowerbyi					0.0364
Carinoma tremaphoros		0.0704			
Chaoborus punctipennis					0.0045
Chironomidae			0.0091		
Coelotanypus spp.		0.0250			
Cyathura polita		0.0477	0.0318		
Eteone heteropoda	0.0023				
Heteromastus filiformis		0.0023			
Lepidactylus dytiscus	0.0091			0.0318	
Leptocheirus plumulosus	0.0432	0.0500	0.0068	0.0318	0.0432
Macoma mitchelli		0.0409			
Marenzelleria viridis	1.1292	1.3450	0.0613		0.7134
Melita nitida (Epi.)		0.0011			
Neanthes succinea					0.0659
Oligochaeta			0.0341	0.0102	0.3340
Polydora cornuta		0.0011		0.0011	
Rangia cuneata	0.0318	60.2171	32.5941		46.5669
Streblospio benedicti		0.0045	0.0068	0.0091	0.0023
Tubificidae imm w cap chaetae	0.0011				
Tubificoides spp.		0.0011	0.0011		
Total Biomass w/ Epifauna	1.2167	61.8472	32.7486	0.0841	47.7665
Total Biomass w/o Epifauna	1.2167	61.8052	32.7475	0.0841	47.7665

\*Indicates taxa is skipped in taxon counts



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

Site	19622	19623	19624	19625	19626	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	Freshwater	Freshwater	Freshwater	Freshwater	Low Mesohaline	
Date	09/20/12	09/20/12	09/20/12	09/20/12	09/12/12	
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	0.9	0.4	2.4	4.0	
Salinity (ppt)	0.16	0.17	0.16	0.16	9.46	
Temperature (C)	21.86	21.63	21.57	21.47	24.28	
Dissolved Oxygen (mg/L)	7.7	10.3	7.4	9.7	5.9	
Sediment Silt-Clay (%)	40.86	19.51	21.99	90.36	6.12	
Total Carbon (%)	1.75	1.18	2.84	2.67	0.43	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	3.00	3.00	3.00	2.00	2.60	
Condition	Meets Goal	Meets Goal	Meets Goal	Severely Degr.	Degraded	
# Attributes Scored	4	4	4	4	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.98		1.90		2.29	3
Abundance (#/m2)	1340	5	2227	5	1340	3
Biomass (g/m2)	0.84		0.34		0.26	1
Pollution Indicative Spp Abund (%)	72.88		81.63		18.64	3
Pollution Indicative Spp Biom (%)	7.44		45.59		1.72	
Pollution Sensitive Spp Abund (%)	1.69		0.00		11.86	
Pollution Sensitive Spp Biom (%)	2.44		0.00		61.80	3
Carnivore-Omnivore Abund (%)	16.95		13.27		6.78	
Deep Deposit Feeder Abund (%)	83.05	3	86.73	3	32.20	
TF Poll. Indicative Spp Abund (%)	57.63	3	79.59	3	0.00	
Limnodrilus Abundance (%)	57.63		79.59		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	9.44	1	9.45	1	6.00	
Tany./Chir. Abundance Ratio	0.00		23.08		0.00	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	19622	19623	19624	19625	19626
Acentria ephemerella (Epi.)			23		
Branchiura sowerbyi	341	159	568		
Chaoborus punctipennis				45	
Chironomus spp.	204				
Cladotanytarsus spp. B Epler		23			
Coelotanypus spp.		23	45	23	
Corbicula fluminea			136		
Cryptochironomus spp.		114	91		
Cyathura polita	23				
Dubiraphia spp. (Epi.)			23		
Dugesia spp. (Epi.)			91		
Gammarus fasciatus (Epi.)			91		
Glyptotendipes spp.			91		
Heteromastus filiformis					432
Laevapex fuscus			23		
Leptocheirus plumulosus					23
Limnodrilus hoffmeisteri	227	545	841		
Limnodrilus udekemianus			136		
Macoma mitchelli					386
Marenzelleria viridis					136
Nais pardalis			136		
Nais variabilis			136		
Nanocladius crassicornus			45		
Neanthes succinea			23		91
Orthotrichia spp. (Epi.)			23		
Parachironomus monochromus/tenuicad tus			45		
Parachironomus spp.			45		
Polypedilum flavum			45		
Polypedilum halterale group		91			
Procladius spp.		45	136		
Rangia cuneata					23
Streblospio benedicti					250
Tubificidae imm w cap chaetae			273		
Tubificidae imm w/o cap chaetae				45	
Tubificidae imm w/o cap chaetae *	545	1227	1977		
Total Abundance w/ Epifauna	1340	2227	5044	114	1340
Total Abundance w/o Epifauna	1340	2227	4794	114	1340
Number of Taxa w/ Epifauna	4	7	22	3	7
Number of Taxa w/o Epifauna	4	7	17	3	7

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2012 BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	19622	19623	19624	19625	19626
Acentria ephemerella (Epi.)			0.0011		
Branchiura sowerbyi	0.7566	0.1840	0.3522		
Chaoborus punctipennis				0.0023	
Chironomidae		0.0011	0.0318		
Chironomus spp.	0.0011				
Coelotanypus spp.		0.0114	0.0114	0.0091	
Corbicula fluminea			0.0454		
Cyathura polita	0.0204				
Dubiraphia spp. (Epi.)			0.0023		
Dugesia spp. (Epi.)			0.0023		
Gammarus fasciatus (Epi.)			0.0182		
Heteromastus filiformis					0.0432
Laevapex fuscus			0.0045		
Leptocheirus plumulosus					0.0011
Macoma mitchelli					0.0454
Marenzelleria viridis					0.1318
Neanthes succinea			0.0091		0.0068
Oligochaeta	0.0613	0.1438	0.2871		
Orthotrichia spp. (Epi.)			0.0011		
Rangia cuneata					0.0318
Streblospio benedicti					0.0045
Tubificidae imm w/o cap chaetae				0.0011	
Total Biomass w/ Epifauna	0.8395	0.3403	0.7665	0.0125	0.2647
Total Biomass w/o Epifauna	0.8395	0.3403	0.7415	0.0125	0.2647