

# Chesapeake Bay Water Quality Monitoring Program

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

July 1984 – December 2022  
(Volume 2)

Prepared for

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

Prepared by

Versar, Inc.  
9200 Rumsey Road, Suite 1  
Columbia, MD 21045

June 2023

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**CHESAPEAKE BAY WATER QUALITY  
MONITORING PROGRAM**

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

**JULY 1984 - DECEMBER 2022 (VOLUME 2)**

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Draft  
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**DATA SUMMARY A**

**BENTHIC ENVIRONMENT AND COMMUNITY  
COMPOSITION AT FIXED SITES:  
SUMMER 2022**

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 001		Rep: 01
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 06OCT22
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:32:00
BOTTOM ENVIRONMENT		
Depth (m): 2.3	Salinity (ppt): 17.39	Temperature (C): 18.82
Dissolved Oxygen (mg/l): 8.7	Sediment Silt-Clay (%): 1.89	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)	560	1
Biomass (g/m2)	24.17	3
Carnivore-Omnivore Abundance (%)	0.00	1
Deep Deposit Feeder Abundance (%)	28.57	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Heteromastus filiformis	120	0.03600
Lepidactylus dytiscus	40	0.01600
Loimia medusa	40	0.00200
Macoma mitchelli	40	0.00400
Paraonis fulgens	200	0.01600
Tagelus plebeius	80	24.09600
Tubificoides spp.	40	0.00400
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.		24.17400
Total Biomass w/o Epi.		24.17400

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 001		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 06OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:32:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.3	Salinity (ppt): 17.39	Temperature (C): 18.82	
Dissolved Oxygen (mg/l): 8.7	Sediment Silt-Clay (%): 1.89	Total Carbon (%): 0.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.67	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.63	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	480	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.27	1	Pollution Sensitive Species Abundance (%) 8.33 1
Carnivore-Omnivore Abundance (%)	16.67	1	Pollution Sensitive Species Biomass (%) 0.75
Deep Deposit Feeder Abundance (%)	33.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Apocorophium lacustre (Epi)	40	0.00200	
Glycinde solitaria	40	0.00200	
Heteromastus filiformis	160	0.04800	
Micrura leidyi	40	0.19200	
Paraonis fulgens	240	0.02400	
Total Abundance w/ Epi.	520		
Total Abundance w/o Epi.	480		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.26800	
Total Biomass w/o Epi.		0.26600	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 001		Rep: 03	
Watershed: Mainstem		Habitat: High Mesohaline Sand	
Gear: Modified Box Corer		Date: 06OCT22	
		Sampled Area: 0.025 sq.m	
		Time: 12:32:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.3		Salinity (ppt): 17.39	
Dissolved Oxygen (mg/l): 8.7		Sediment Silt-Clay (%): 1.89	
		Temperature (C): 18.82	
		Total Carbon (%): 0.09	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.23	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	440	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	27.32	3	Pollution Sensitive Species Abundance (%) 45.45 3
Carnivore-Omnivore Abundance (%)	18.18	1	Pollution Sensitive Species Biomass (%) 99.08
Deep Deposit Feeder Abundance (%)	54.55		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Heteromastus filiformis	120		0.06000
Mediomastus ambiseta	80		0.00400
Micrura leidyi	80		0.18800
Tagelus plebeius	120		27.06400
Tubificoides spp.	40		0.00400
Total Abundance w/ Epi.	440		
Total Abundance w/o Epi.	440		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.			27.32000
Total Biomass w/o Epi.			27.32000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 006		Rep: 01	
Watershed: Calvert Cliffs Discharge	Habitat: High Mesohaline Sand	Date: 06OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 13:33:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 17.26	Temperature (C): 19.66	
Dissolved Oxygen (mg/l): 8.9	Sediment Silt-Clay (%): 1.60	Total Carbon (%): 0.06	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.32	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	800	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	2.67	3	Pollution Sensitive Species Abundance (%) 10.00 3
Carnivore-Omnivore Abundance (%)	20.00	3	Pollution Sensitive Species Biomass (%) 48.80
Deep Deposit Feeder Abundance (%)	25.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Ameroculodes species complex	80	0.00400	
Carinoma tremaphoros	40	0.01200	
Gemma gemma	280	0.01200	
Heteromastus filiformis	200	0.12000	
Micrura leidyi	80	1.18800	
Neanthes succinea	40	0.03200	
Tagelus plebeius	80	1.30400	
Total Abundance w/ Epi.	800		
Total Abundance w/o Epi.	800		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		2.67200	
Total Biomass w/o Epi.		2.67200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 006		Rep: 02	
Watershed: Calvert Cliffs Discharge	Habitat: High Mesohaline Sand	Date: 06OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 13:33:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 17.26	Temperature (C): 19.66	
Dissolved Oxygen (mg/l): 8.9	Sediment Silt-Clay (%): 1.60	Total Carbon (%): 0.06	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.61	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	560	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.71	1	Pollution Sensitive Species Abundance (%) 0.00 1
Carnivore-Omnivore Abundance (%)	21.43	3	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	21.43		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.04000	
Gemma gemma	320	0.03200	
Heteromastus filiformis	120	0.11200	
Laeonereis culveri	40	0.18400	
Micrura leidyi	40	0.34400	
Total Abundance w/ Epi.	560		
Total Abundance w/o Epi.	560		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		0.71200	
Total Biomass w/o Epi.		0.71200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 006		Rep: 03	
Watershed: Calvert Cliffs Discharge	Habitat: High Mesohaline Sand	Date: 06OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 13:33:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 17.26	Temperature (C): 19.66	
Dissolved Oxygen (mg/l): 8.9	Sediment Silt-Clay (%): 1.60	Total Carbon (%): 0.06	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.67	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.25	1	
Abundance (#/m2)	840	1	Pollution Indicative Species Abundance (%) 0.00 5
Biomass (g/m2)	0.50	1	Pollution Indicative Species Biomass (%) 0.00
Carnivore-Omnivore Abundance (%)	14.29	1	Pollution Sensitive Species Abundance (%) 0.00 1
Deep Deposit Feeder Abundance (%)	19.05		Pollution Sensitive Species Biomass (%) 0.00
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	80	0.02000	
Gemma gemma	560	0.04400	
Heteromastus filiformis	160	0.19200	
Micrura leidyi	40	0.24800	
Total Abundance w/ Epi.	840		
Total Abundance w/o Epi.	840		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.50400	
Total Biomass w/o Epi.		0.50400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 015		Rep: 01	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 06OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 10:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.6	Salinity (ppt): 14.31	Temperature (C): 15.33	
Dissolved Oxygen (mg/l): 9.5	Sediment Silt-Clay (%): 2.24	Total Carbon (%): 0.08	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.40	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	840	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	1.44	3	Pollution Sensitive Species Abundance (%) 28.57 3
Carnivore-Omnivore Abundance (%)	28.57	3	Pollution Sensitive Species Biomass (%) 1.67
Deep Deposit Feeder Abundance (%)	28.57		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.01200	
Glycinde solitaria	40	0.02000	
Heteromastus filiformis	240	0.16000	
Laeonereis culveri	80	0.08400	
Macoma mitchelli	160	0.16800	
Micrura leidyi	80	0.99200	
Tagelus plebeius	200	0.00400	
Total Abundance w/ Epi.	840		
Total Abundance w/o Epi.	840		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		1.44000	
Total Biomass w/o Epi.		1.44000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 015		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 06OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 10:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.6	Salinity (ppt): 14.31	Temperature (C): 15.33	
Dissolved Oxygen (mg/l): 9.5	Sediment Silt-Clay (%): 2.24	Total Carbon (%): 0.08	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.75	3	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	880	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	1.33	3	Pollution Sensitive Species Abundance (%) 13.64 3
Carnivore-Omnivore Abundance (%)	22.73	3	Pollution Sensitive Species Biomass (%) 0.45
Deep Deposit Feeder Abundance (%)	31.82		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.05200	
Eteone foliosa	40	0.04400	
Gemma gemma	160	0.00400	
Heteromastus filiformis	240	0.16000	
Laeonereis culveri	80	0.13600	
Macoma mitchelli	160	0.13600	
Mediomastus ambiseta	40	0.00400	
Micrura leidyi	40	0.79600	
Tagelus plebeius	80	0.00200	
Total Abundance w/ Epi.	880		
Total Abundance w/o Epi.	880		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		1.33400	
Total Biomass w/o Epi.		1.33400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 015		Rep: 03	
Watershed: Mainstem		Habitat: High Mesohaline Sand	
Gear: Modified Box Corer		Date: 06OCT22	
		Time: 10:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.6		Salinity (ppt): 14.31	
Dissolved Oxygen (mg/l): 9.5		Sediment Silt-Clay (%): 2.24	
		Temperature (C): 15.33	
		Total Carbon (%): 0.08	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00		Condition: Severely Degr.	
		# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.78	1	Pollution Indicative Species Abundance (%) 16.67 3
Abundance (#/m2)	480	1	Pollution Indicative Species Biomass (%) 2.50
Biomass (g/m2)	0.16	1	Pollution Sensitive Species Abundance (%) 0.00 1
Carnivore-Omnivore Abundance (%)	41.67	5	Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	33.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	200		0.06400
Heteromastus filiformis	160		0.06400
Macoma mitchelli	40		0.02800
Streblospio benedicti	80		0.00400
Total Abundance w/ Epi.	480		
Total Abundance w/o Epi.	480		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.			0.16000
Total Biomass w/o Epi.			0.16000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 022		Rep: 01	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:29:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.0	Salinity (ppt): 11.34	Temperature (C): 27.05	
Dissolved Oxygen (mg/l): 1.2	Sediment Silt-Clay (%): 91.61	Total Carbon (%): 3.38	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.72	1	Pollution Indicative Species Abundance (%) 80.00
Abundance (#/m2)	227	1	Pollution Indicative Species Biomass (%) 33.33
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	20.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	182	0.00227	
Tubificoides spp.	45	0.00455	
Total Abundance w/ Epi.	227		
Total Abundance w/o Epi.	227		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.00682	
Total Biomass w/o Epi.		0.00682	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 022		Rep: 02	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:29:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.0	Salinity (ppt): 11.34	Temperature (C): 27.05	
Dissolved Oxygen (mg/l): 1.2	Sediment Silt-Clay (%): 91.61	Total Carbon (%): 3.38	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.06	1	
Abundance (#/m2)	364	1	
Biomass (g/m2)	0.11	1	
Carnivore-Omnivore Abundance (%)	12.50		
Deep Deposit Feeder Abundance (%)	12.50		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Mediomastus ambiseta	45	0.00455	
Micrura leidyi	45	0.09544	
Streblospio benedicti	273	0.00909	
Total Abundance w/ Epi.	364		
Total Abundance w/o Epi.	364		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.10908	
Total Biomass w/o Epi.		0.10908	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 022		Rep: 03	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:29:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.0	Salinity (ppt): 11.34	Temperature (C): 27.05	
Dissolved Oxygen (mg/l): 1.2	Sediment Silt-Clay (%): 91.61	Total Carbon (%): 3.38	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.92	1	Pollution Indicative Species Abundance (%) 66.67 1
Abundance (#/m2)	136	1	Pollution Indicative Species Biomass (%) 80.00
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 0.00 1
Deep Deposit Feeder Abundance (%)	33.33		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	91	0.00909	
Tubificoides spp.	45	0.00227	
Total Abundance w/ Epi.	136		
Total Abundance w/o Epi.	136		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.01136	
Total Biomass w/o Epi.		0.01136	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 023		Rep: 01	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.1	Salinity (ppt): 11.43	Temperature (C): 26.74	
Dissolved Oxygen (mg/l): 0.6	Sediment Silt-Clay (%): 83.31	Total Carbon (%): 2.46	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.50	1	
Abundance (#/m2)	182	1	
Biomass (g/m2)	0.23	1	
Carnivore-Omnivore Abundance (%)	25.00		
Deep Deposit Feeder Abundance (%)	25.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Neanthes succinea	45	0.21816	
Streblospio benedicti	91	0.00909	
Tubificoides spp.	45	0.00227	
Total Abundance w/ Epi.	182		
Total Abundance w/o Epi.	182		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.22952	
Total Biomass w/o Epi.		0.22952	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

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|                               Station: 023                               Rep: 02 |
| Watershed: Patapsco & Back Rivers      Habitat: Low Mesohaline      Date: 24AUG22 |
| Gear: Wildco Box Corer                 Sampled Area: 0.022 sq.m    Time: 14:20:00 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 6.1                          Salinity (ppt): 11.43      Temperature (C): 26.74 |
| Dissolved Oxygen (mg/l): 0.6             Sediment Silt-Clay (%): 83.31  Total Carbon (%): 2.46 |
=====
|                               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)                    0         1      Pollution Indicative Species Biomass (%) 100.00      |
| Biomass (g/m2)                      0.00     1      Pollution Sensitive Species Abundance (%) 0.00      |
| Carnivore-Omnivore Abundance (%)    0.00     1      Pollution Sensitive Species Biomass (%) 0.00      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 2022 (CRUISE 01:2022/2023) FIXED STATIONS

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=====
|                               Station: 023                               Rep: 03 |
| Watershed: Patapsco & Back Rivers   Habitat: Low Mesohaline   Date: 24AUG22 |
| Gear: Wildco Box Corer              Sampled Area: 0.022 sq.m   Time: 14:20:00 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 6.1                      Salinity (ppt): 11.43    Temperature (C): 26.74 |
| Dissolved Oxygen (mg/l): 0.6         Sediment Silt-Clay (%): 83.31  Total Carbon (%): 2.46 |
=====
|                               BENTHIC INDEX OF BIOTIC INTEGRITY                               |
=====
| B-IBI Score: 1.80                    Condition: Severely Degr.          # Attributes Scored: 5 |
|                               Value      Score                               Value      Score |
| Shannon-Wiener Index                0.00      1      Pollution Indicative Species Abundance (%) 0.00      5 |
| Abundance (#/m2)                    45        1      Pollution Indicative Species Biomass (%) 0.00      |
| Biomass (g/m2)                      0.02      1      Pollution Sensitive Species Abundance (%) 0.00      |
| Carnivore-Omnivore Abundance (%)    100.00    |      Pollution Sensitive Species Biomass (%) 0.00      1 |
| Deep Deposit Feeder Abundance (%)    0.00      |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
|                               TAXA                               Abundance (#/m2) | Biomass (g/m2) |
=====
| Neanthes succinea |                               45 | 0.01818 |
=====
| 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. |                               | 0.01818 |
| Total Biomass w/o Epi. |                               | 0.01818 |
=====

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 024		Rep: 01	
Watershed: Mainstem	Habitat: High Mesohaline Mud	Date: 30AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 9:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.8	Salinity (ppt): 12.07	Temperature (C): 27.68	
Dissolved Oxygen (mg/l): 6.0	Sediment Silt-Clay (%): 98.76	Total Carbon (%): 3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.19	1	Pollution Indicative Species Abundance (%) 3.23
Abundance (#/m2)	1409	3	Pollution Indicative Species Biomass (%) 1.09 5
Biomass (g/m2)	20.94	3	Pollution Sensitive Species Abundance (%) 80.65
Carnivore-Omnivore Abundance (%)	9.68	1	Pollution Sensitive Species Biomass (%) 95.42 5
Deep Deposit Feeder Abundance (%)	9.68		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Macoma balthica	1091	19.97982	
Mediomastus ambiseta	45	0.00227	
Mulinia lateralis	45	0.22725	
Neanthes succinea	136	0.72720	
Tubificoides spp.	91	0.00455	
Total Abundance w/ Epi.	1409		
Total Abundance w/o Epi.	1409		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		20.94109	
Total Biomass w/o Epi.		20.94109	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 024		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Mud	Date: 30AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 9:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.8	Salinity (ppt): 12.07	Temperature (C): 27.68	
Dissolved Oxygen (mg/l): 6.0	Sediment Silt-Clay (%): 98.76	Total Carbon (%): 3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.12	3	Pollution Indicative Species Abundance (%) 4.17
Abundance (#/m2)	1091	3	Pollution Indicative Species Biomass (%) 0.04 5
Biomass (g/m2)	10.24	3	Pollution Sensitive Species Abundance (%) 45.83
Carnivore-Omnivore Abundance (%)	37.50	5	Pollution Sensitive Species Biomass (%) 94.14 5
Deep Deposit Feeder Abundance (%)	4.17		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.01364	
Eteone heteropoda	45	0.00454	
Heteromastus filiformis	45	0.02273	
Macoma balthica	500	9.63540	
Macoma mitchelli	136	0.18634	
Micrura leidyi	91	0.04545	
Neanthes succinea	227	0.32724	
Total Abundance w/ Epi.	1091		
Total Abundance w/o Epi.	1091		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		10.23534	
Total Biomass w/o Epi.		10.23534	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS					
Watershed: Mainstem		Station: 024		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 30AUG22	
		Sampled Area: 0.022 sq.m		Time: 9:00:00	
BOTTOM ENVIRONMENT					
Depth (m): 6.8		Salinity (ppt): 12.07		Temperature (C): 27.68	
Dissolved Oxygen (mg/l): 6.0		Sediment Silt-Clay (%): 98.76		Total Carbon (%): 3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.57	1	Pollution Indicative Species Abundance (%)	11.76	
Abundance (#/m2)	773	1	Pollution Indicative Species Biomass (%)	0.41	5
Biomass (g/m2)	13.87	3	Pollution Sensitive Species Abundance (%)	64.71	
Carnivore-Omnivore Abundance (%)	17.65	3	Pollution Sensitive Species Biomass (%)	95.15	3
Deep Deposit Feeder Abundance (%)	11.76				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Leitoscoloplos robustus	45		0.05454		
Macoma balthica	500		13.19414		
Neanthes succinea	136		0.61358		
Streblospio benedicti	45		0.00227		
Tubificoides spp.	45		0.00227		
Total Abundance w/ Epi.	773				
Total Abundance w/o Epi.	773				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			13.86680		
Total Biomass w/o Epi.			13.86680		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 026		Rep: 01	
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 01SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1	Salinity (ppt): 7.82	Temperature (C): 27.07	
Dissolved Oxygen (mg/l): 6.9	Sediment Silt-Clay (%): 90.72	Total Carbon (%): 2.17	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.40	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.94	3	Pollution Indicative Species Abundance (%) 4.00 5
Abundance (#/m2)	1136	3	Pollution Indicative Species Biomass (%) 0.25
Biomass (g/m2)	0.91	1	Pollution Sensitive Species Abundance (%) 36.00
Carnivore-Omnivore Abundance (%)	20.00		Pollution Sensitive Species Biomass (%) 83.08 5
Deep Deposit Feeder Abundance (%)	4.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Cyathura polita	227	0.24998	
Leptocheirus plumulosus	591	0.09090	
Macoma mitchelli	45	0.05908	
Marenzelleria viridis	182	0.50904	
Melita nitida (Epi)	45	0.00454	
Mytilopsis leucophaeata (Epi)	45	0.00455	
Streblospio benedicti	45	0.00227	
Tubificoides spp.	45	0.00227	
Total Abundance w/ Epi.	1227		
Total Abundance w/o Epi.	1136		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		0.92264	
Total Biomass w/o Epi.		0.91355	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 026		Rep: 02	
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 01SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1	Salinity (ppt): 7.82	Temperature (C): 27.07	
Dissolved Oxygen (mg/l): 6.9	Sediment Silt-Clay (%): 90.72	Total Carbon (%): 2.17	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.25	3	
Abundance (#/m2)	1318	3	
Biomass (g/m2)	1.37	3	
Carnivore-Omnivore Abundance (%)	6.90		
Deep Deposit Feeder Abundance (%)	20.69		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	45	0.00909	
Cyathura polita	45	0.00227	
Leptocheirus plumulosus	636	0.09545	
Macoma mitchelli	136	0.73629	
Marenzelleria viridis	91	0.34088	
Mulinia lateralis	45	0.18180	
Streblospio benedicti	45	0.00455	
Tubificoides spp.	273	0.00455	
Total Abundance w/ Epi.	1318		
Total Abundance w/o Epi.	1318		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		1.37486	
Total Biomass w/o Epi.		1.37486	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 026		Rep: 03	
Watershed: Upper Western Shore		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Date: 01SEP22	
		Time: 15:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1		Salinity (ppt): 7.82	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 90.72	
		Temperature (C): 27.07	
		Total Carbon (%): 2.17	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.97	3	0.00
Abundance (#/m2)	1091	3	0.00
Biomass (g/m2)	0.93	1	25.00
Carnivore-Omnivore Abundance (%)	8.33		77.94
Deep Deposit Feeder Abundance (%)	4.17		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Cyathura polita	91		0.01364
Heteromastus filiformis	45		0.04545
Leptocheirus plumulosus	591		0.10908
Macoma mitchelli	182		0.05000
Marenzelleria viridis	136		0.65903
Rangia cuneata	45		0.05000
Total Abundance w/ Epi.	1091		
Total Abundance w/o Epi.	1091		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			0.92718
Total Biomass w/o Epi.			0.92718

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 029		Rep: 01
Watershed: Upper Eastern Shore	Habitat: Oligohaline	Date: 31AUG22
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:30:00
BOTTOM ENVIRONMENT		
Depth (m): 5.2	Salinity (ppt): 2.13	Temperature (C): 28.08
Dissolved Oxygen (mg/l): 6.1	Sediment Silt-Clay (%): 67.56	Total Carbon (%): 1.53
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6
Shannon-Wiener Index	Value	Score
Abundance (#/m2)	2.51	3
Deep Deposit Feeder Abundance (%)	1682	5
Carnivore-Omnivore Abundance (%)	51.35	3
	27.03	3
		1
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Apocorophium lacustre (Epi)	45	0.00454
Coelotanypus spp.	227	0.03636
Cryptochironomus spp.	45	0.00227
Cyathura polita	182	0.25906
Gammarus spp. (Epi)	45	0.00455
Leptocheirus plumulosus	45	0.00227
Limnodrilus hoffmeisteri	182	
Marenzelleria viridis	227	0.35905
Oligochaeta		0.03409
Rangia cuneata	91	0.76810
Tubificidae imm w/o cap chaetae *	682	
Total Abundance w/ Epi.	1773	
Total Abundance w/o Epi.	1682	
Number of Taxa w/ Epi.	9	
Number of Taxa w/o Epi.	7	
Total Biomass w/ Epi.		1.47031
Total Biomass w/o Epi.		1.46122

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 31AUG22	
		Sampled Area: 0.022 sq.m		Time: 11:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 5.2		Salinity (ppt): 2.13		Temperature (C): 28.08	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 67.56		Total Carbon (%): 1.53	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
		Value Score		Value Score	
Shannon-Wiener Index		2.24		Oligohaline Pollution Indicative Spp. Abund. 74.00 3	
Abundance (#/m2)		2273 5		Tolerance Score 9.17 1	
Deep Deposit Feeder Abundance (%)		62.00		Oligohaline Pollution Sensitive Spp. Abund. 16.00 3	
Carnivore-Omnivore Abundance (%)		22.00 3		Tanypodinae/Chironomidae Abundance Ratio 85.71 1	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre (Epi)		91		0.00454	
Balanus improvisus (Epi)		45		0.00455	
Coelotanypus spp.		273		0.02273	
Cryptochironomus spp.		45		0.00227	
Cyathura polita		182		0.15908	
Limnodrilus hoffmeisteri		727			
Marenzelleria viridis		364		1.17261	
Oligochaeta				0.11817	
Rhithropanopeus harrisii (Epi)		45		0.01818	
Tubificidae imm w/o cap chaetae *		682			
Total Abundance w/ Epi.		2454			
Total Abundance w/o Epi.		2273			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				1.50212	
Total Biomass w/o Epi.				1.47485	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 029		Rep: 03	
Watershed: Upper Eastern Shore		Habitat: Oligohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 31AUG22	
		Time: 11:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.2		Salinity (ppt): 2.13	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 67.56	
		Temperature (C): 28.08	
		Total Carbon (%): 1.53	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67		Condition: Marginal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.04		85.29
Abundance (#/m2)	1545	5	9.07
Deep Deposit Feeder Abundance (%)	70.59		5.88
Carnivore-Omnivore Abundance (%)	20.59	3	100.00
			1
			3
			1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Coelotanypus spp.		227	0.03636
Cyathura polita		91	0.00227
Limnodrilus hoffmeisteri		364	
Marenzelleria viridis		91	0.23180
Oligochaeta			0.09544
Rangia cuneata		45	0.29543
Tubificidae imm w/o cap chaetae *		727	
Total Abundance w/ Epi.		1545	
Total Abundance w/o Epi.		1545	
Number of Taxa w/ Epi.		5	
Number of Taxa w/o Epi.		5	
Total Biomass w/ Epi.			0.66130
Total Biomass w/o Epi.			0.66130

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 036		Rep: 01	
Watershed: Potomac River		Habitat: Tidal Freshwater	
Gear: Wildco Box Corer		Date: 14SEP22	
		Time: 15:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.0		Salinity (ppt): 0.18	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 95.38	
		Temperature (C): 25.12	
		Total Carbon (%): 2.54	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.50		Condition: Meets Goal	
		# Attributes Scored: 4	
Shannon-Wiener Index		Value	Score
		1.85	
Abundance (#/m2)		2409	5
Deep Deposit Feeder Abundance (%)		77.36	3
Carnivore-Omnivore Abundance (%)		11.32	
		T.F. Pollution Indicative Spp. Abund. (%)	66.04
		Tolerance Score	8.81
		Limnodrilus Abundance (%)	66.04
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Aulodrilus pigueti	91		
Coelotanypus spp.	273	0.03181	
Limnodrilus hoffmeisteri	91		
Nais variabilis	91		
Oligochaeta		0.15453	
Pisidium spp.	273	0.05908	
Tubificidae imm w cap chaetae *	91		
Tubificidae imm w/o cap chaetae *	1500		
Total Abundance w/ Epi.	2409		
Total Abundance w/o Epi.	2409		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		0.24543	
Total Biomass w/o Epi.		0.24543	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 036		Rep: 02
Watershed: Potomac River	Habitat: Tidal Freshwater	Date: 14SEP22
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 15:30:00
BOTTOM ENVIRONMENT		
Depth (m): 1.0	Salinity (ppt): 0.18	Temperature (C): 25.12
Dissolved Oxygen (mg/l): 6.4	Sediment Silt-Clay (%): 95.38	Total Carbon (%): 2.54
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.50	Condition: Meets Goal	# Attributes Scored: 4
Shannon-Wiener Index	Value Score	Value Score
Abundance (#/m2)	1.33 5	T.F. Pollution Indicative Spp. Abund. (%) 79.71 3
Deep Deposit Feeder Abundance (%)	3136 5	Tolerance Score 9.32 3
Carnivore-Omnivore Abundance (%)	85.51 3	Limnodrilus Abundance (%) 79.71
	4.35	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Coelotanypus spp.	136	0.05000
Limnodrilus hoffmeisteri	182	
Oligochaeta		0.13181
Pisidium spp.	318	0.09999
Tubificidae imm w cap chaetae	182	
Tubificidae imm w/o cap chaetae *	2318	
Total Abundance w/ Epi.	3136	
Total Abundance w/o Epi.	3136	
Number of Taxa w/ Epi.	4	
Number of Taxa w/o Epi.	4	
Total Biomass w/ Epi.		0.28179
Total Biomass w/o Epi.		0.28179

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Watershed: Potomac River		Station: 036		Rep: 03	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 14SEP22	
		Sampled Area: 0.022 sq.m		Time: 15:30:00	
BOTTOM ENVIRONMENT					
Depth (m): 1.0		Salinity (ppt): 0.18		Temperature (C): 25.12	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 95.38		Total Carbon (%): 2.54	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 4	
		Value Score		Value Score	
Shannon-Wiener Index		1.29		T.F. Pollution Indicative Spp. Abund. (%) 79.65 3	
Abundance (#/m2)		5136 3		Tolerance Score 9.08 3	
Deep Deposit Feeder Abundance (%)		79.65 3		Limnodrilus Abundance (%) 79.65	
Carnivore-Omnivore Abundance (%)		17.70			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Coelotanypus spp.		909		0.15453	
Gammarus spp. (Epi)		45		0.00227	
Limnodrilus hoffmeisteri		545			
Oligochaeta				0.29882	
Pisidium spp.		136		0.04090	
Tubificidae imm w/o cap chaetae *		3545			
Total Abundance w/ Epi.		5181			
Total Abundance w/o Epi.		5136			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		3			
Total Biomass w/ Epi.				0.49652	
Total Biomass w/o Epi.				0.49425	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 040		Rep: 01
Watershed: Potomac River	Habitat: Oligohaline	Date: 14SEP22
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:20:00
BOTTOM ENVIRONMENT		
Depth (m): 7.0	Salinity (ppt): 4.67	Temperature (C): 26.09
Dissolved Oxygen (mg/l): 5.8	Sediment Silt-Clay (%): 98.71	Total Carbon (%): 2.7
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.33	Condition: Meets Goal	# Attributes Scored: 6
Shannon-Wiener Index	Value	Score
Abundance (#/m2)	2.20	3
Deep Deposit Feeder Abundance (%)	1682	5
Carnivore-Omnivore Abundance (%)	2.70	3
	51.35	5
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Coelotanypus spp.	45	0.01364
Cyathura polita	136	0.15907
Hermundura americana	682	0.27270
Leptocheirus plumulosus	500	0.07272
Littoridinops tenuipes (Epi)	91	0.00455
Marenzelleria viridis	91	0.06817
Mediomastus ambiseta	45	0.00455
Streblospio benedicti	182	0.00227
Total Abundance w/ Epi.	1773	
Total Abundance w/o Epi.	1682	
Number of Taxa w/ Epi.	8	
Number of Taxa w/o Epi.	7	
Total Biomass w/ Epi.		0.59767
Total Biomass w/o Epi.		0.59312

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Watershed: Potomac River		Station: 040		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 14SEP22	
		Sampled Area: 0.022 sq.m		Time: 12:20:00	
BOTTOM ENVIRONMENT					
Depth (m): 7.0		Salinity (ppt): 4.67		Temperature (C): 26.09	
Dissolved Oxygen (mg/l): 5.8		Sediment Silt-Clay (%): 98.71		Total Carbon (%): 2.7	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
Shannon-Wiener Index		Value	Score	Value	Score
Abundance (#/m2)		2.11	5	Oligohaline Pollution Indicative Spp. Abund.	54.84 3
Deep Deposit Feeder Abundance (%)		1409		Tolerance Score	6.20 3
Carnivore-Omnivore Abundance (%)		0.00		Oligohaline Pollution Sensitive Spp. Abund.	6.45 3
		41.94	5	Tanypodinae/Chironomidae Abundance Ratio	100.00 1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Americamysis bigelowi	(Epi)	91		0.01364	
Coelotanypus spp.		45		0.01364	
Cyathura polita		45		0.04545	
Hermundura americana		500		0.04090	
Leptocheirus plumulosus		409		0.05909	
Littoridinops tenuipes	(Epi)	409		0.00909	
Marenzelleria viridis		91		0.03181	
Streblospio benedicti		318		0.00909	
Total Abundance w/ Epi.		1909			
Total Abundance w/o Epi.		1409			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.22271	
Total Biomass w/o Epi.				0.19998	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 040		Rep: 03
Watershed: Potomac River	Habitat: Oligohaline	Date: 14SEP22
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:20:00
BOTTOM ENVIRONMENT		
Depth (m): 7.0	Salinity (ppt): 4.67	Temperature (C): 26.09
Dissolved Oxygen (mg/l): 5.8	Sediment Silt-Clay (%): 98.71	Total Carbon (%): 2.7
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.33	Condition: Meets Goal	# Attributes Scored: 6
Shannon-Wiener Index	Value	Score
Abundance (#/m2)	2.56	5
Deep Deposit Feeder Abundance (%)	1636	5
Carnivore-Omnivore Abundance (%)	0.00	5
	41.67	5
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Ameroculodes species complex	182	0.02727
Apocorophium lacustre (Epi)	45	0.00909
Carinoma tremaphoros	45	0.00909
Coelotanyus spp.	91	0.03181
Cyathura polita	45	0.07272
Gammarus daiberi (Epi)	91	0.01818
Hermundura americana	500	0.04999
Leptocheirus plumulosus	409	0.01818
Littoridinops tenuipes (Epi)	364	0.01364
Marenzelleria viridis	91	0.05909
Streblospio benedicti	273	0.00909
Total Abundance w/ Epi.	2136	
Total Abundance w/o Epi.	1636	
Number of Taxa w/ Epi.	11	
Number of Taxa w/o Epi.	8	
Total Biomass w/ Epi.		0.31815
Total Biomass w/o Epi.		0.27724



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 043		Rep: 02	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 07OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 15:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.3	Salinity (ppt): 12.95	Temperature (C): 17.91	
Dissolved Oxygen (mg/l): 8.5	Sediment Silt-Clay (%): 4.56	Total Carbon (%): 0.17	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.64	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	680	3	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.20	1	Pollution Sensitive Species Abundance (%) 5.88
Carnivore-Omnivore Abundance (%)	94.12		Pollution Sensitive Species Biomass (%) 42.00 3
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Cyathura polita	40	0.08400	
Hermundura americana	600	0.10800	
Leptocheirus plumulosus	40	0.00800	
Total Abundance w/ Epi.	680		
Total Abundance w/o Epi.	680		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.20000	
Total Biomass w/o Epi.		0.20000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 043		Rep: 03
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 07OCT22
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 15:30:00
BOTTOM ENVIRONMENT		
Depth (m): 2.3	Salinity (ppt): 12.95	Temperature (C): 17.91
Dissolved Oxygen (mg/l): 8.5	Sediment Silt-Clay (%): 4.56	Total Carbon (%): 0.17
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5
	Value Score	Value Score
Shannon-Wiener Index	1.55 1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	1720 5	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.62 1	Pollution Sensitive Species Abundance (%) 4.65
Carnivore-Omnivore Abundance (%)	51.16	Pollution Sensitive Species Biomass (%) 53.21 3
Deep Deposit Feeder Abundance (%)	2.33	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Hermundura americana	880	0.14400
Leptocheirus plumulosus	640	0.05600
Macoma mitchelli	120	0.09200
Mediomastus ambiseta	40	0.00800
Rangia cuneata	40	0.32400
Total Abundance w/ Epi.	1720	
Total Abundance w/o Epi.	1720	
Number of Taxa w/ Epi.	5	
Number of Taxa w/o Epi.	5	
Total Biomass w/ Epi.		0.62400
Total Biomass w/o Epi.		0.62400

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 044		Rep: 01	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 20SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 12.1	Salinity (ppt): 14.09	Temperature (C): 25.59	
Dissolved Oxygen (mg/l): 0.9	Sediment Silt-Clay (%): 94.94	Total Carbon (%): 2.36	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.72	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	1500	3	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.08	1	Pollution Sensitive Species Abundance (%) 87.88
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 97.30 5
Deep Deposit Feeder Abundance (%)	96.97		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Marenzelleria viridis	45	0.00455	
Mediomastus ambiseta	1273	0.07727	
Tubificoides spp.	182	0.00227	
Total Abundance w/ Epi.	1500		
Total Abundance w/o Epi.	1500		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.08408	
Total Biomass w/o Epi.		0.08408	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 044		Rep: 02	
Watershed: Potomac River		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 20SEP22	
		Time: 11:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 12.1		Salinity (ppt): 14.09	
Dissolved Oxygen (mg/l): 0.9		Sediment Silt-Clay (%): 94.94	
		Temperature (C): 25.59	
		Total Carbon (%): 2.36	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	0.86	1	Pollution Indicative Species Abundance (%) 3.23
Abundance (#/m2)	1409	3	Pollution Indicative Species Biomass (%) 3.57
Biomass (g/m2)	0.06	1	Pollution Sensitive Species Abundance (%) 87.10
Carnivore-Omnivore Abundance (%)	3.23		Pollution Sensitive Species Biomass (%) 92.86
Deep Deposit Feeder Abundance (%)	93.55		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Eteone heteropoda	45	0.00227	
Marenzelleria viridis	45	0.00455	
Mediomastus ambiseta	1182	0.05454	
Tubificoides spp.	136	0.00227	
Total Abundance w/ Epi.	1409		
Total Abundance w/o Epi.	1409		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.06363	
Total Biomass w/o Epi.		0.06363	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 044		Rep: 03	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 20SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 12.1	Salinity (ppt): 14.09	Temperature (C): 25.59	
Dissolved Oxygen (mg/l): 0.9	Sediment Silt-Clay (%): 94.94	Total Carbon (%): 2.36	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.31	1	Pollution Indicative Species Abundance (%) 3.92 5
Abundance (#/m2)	2318	5	Pollution Indicative Species Biomass (%) 7.32
Biomass (g/m2)	0.09	1	Pollution Sensitive Species Abundance (%) 58.82
Carnivore-Omnivore Abundance (%)	3.92		Pollution Sensitive Species Biomass (%) 78.05 3
Deep Deposit Feeder Abundance (%)	94.12		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Eteone heteropoda	45	0.00454	
Hermundura americana	45	0.00909	
Mediomastus ambiseta	1364	0.07272	
Streblospio benedicti	45	0.00227	
Tubificoides spp.	818	0.00455	
Total Abundance w/ Epi.	2318		
Total Abundance w/o Epi.	2318		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		0.09317	
Total Biomass w/o Epi.		0.09317	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 047		Rep: 01	
Watershed: Morgantown Discharge	Habitat: Low Mesohaline	Date: 07OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 14:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.4	Salinity (ppt): 12.27	Temperature (C): 17.96	
Dissolved Oxygen (mg/l): 8.6	Sediment Silt-Clay (%): 6.58	Total Carbon (%): 0.2	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.21	1	Pollution Indicative Species Abundance (%) 1.61 5
Abundance (#/m2)	2480	5	Pollution Indicative Species Biomass (%) 45.16
Biomass (g/m2)	0.87	1	Pollution Sensitive Species Abundance (%) 3.23
Carnivore-Omnivore Abundance (%)	79.03		Pollution Sensitive Species Biomass (%) 1.38 1
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Cyathura polita	80	0.01200	
Hermundura americana	1880	0.43200	
Leptocheirus plumulosus	240	0.02800	
Macoma mitchelli	240	0.00400	
Mulinia lateralis	40	0.39200	
Total Abundance w/ Epi.	2480		
Total Abundance w/o Epi.	2480		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.			
Total Biomass w/ Epi.		0.86800	
Total Biomass w/o Epi.		0.86800	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 047		Rep: 02	
Watershed: Morgantown Discharge	Habitat: Low Mesohaline	Date: 07OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 14:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.4	Salinity (ppt): 12.27	Temperature (C): 17.96	
Dissolved Oxygen (mg/l): 8.6	Sediment Silt-Clay (%): 6.58	Total Carbon (%): 0.2	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.16	1	
Abundance (#/m2)	2720	3	Pollution Indicative Species Abundance (%) 0.00 5
Biomass (g/m2)	0.34	1	Pollution Indicative Species Biomass (%) 0.00
Carnivore-Omnivore Abundance (%)	73.53		Pollution Sensitive Species Abundance (%) 2.94
Deep Deposit Feeder Abundance (%)	2.94		Pollution Sensitive Species Biomass (%) 1.16 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hermundura americana	2000	0.27600	
Leptocheirus plumulosus	480	0.05600	
Macoma mitchelli	160	0.00800	
Mediomastus ambiseta	80	0.00400	
Total Abundance w/ Epi.	2720		
Total Abundance w/o Epi.	2720		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.34400	
Total Biomass w/o Epi.		0.34400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 047		Rep: 03	
Watershed: Morgantown Discharge	Habitat: Low Mesohaline	Date: 07OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 14:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.4	Salinity (ppt): 12.27	Temperature (C): 17.96	
Dissolved Oxygen (mg/l): 8.6	Sediment Silt-Clay (%): 6.58	Total Carbon (%): 0.2	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.99	1	
Abundance (#/m2)	2320	5	Pollution Indicative Species Abundance (%) 0.00 5
Biomass (g/m2)	0.32	1	Pollution Indicative Species Biomass (%) 0.00
Carnivore-Omnivore Abundance (%)	77.59		Pollution Sensitive Species Abundance (%) 0.00
Deep Deposit Feeder Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 0.00 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hermundura americana	1800	0.31200	
Leptocheirus plumulosus	280	0.00800	
Macoma mitchelli	240	0.00400	
Total Abundance w/ Epi.	2320		
Total Abundance w/o Epi.	2320		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.32400	
Total Biomass w/o Epi.		0.32400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 07OCT22	
		Sampled Area: 0.025 sq.m		Time: 12:40:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 17.78		Temperature (C): 18.76	
Dissolved Oxygen (mg/l): 8.6		Sediment Silt-Clay (%): 4.95		Total Carbon (%): 0.28	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.15	1	Pollution Indicative Species Abundance (%)	6.90	5
Abundance (#/m2)	2320	5	Pollution Indicative Species Biomass (%)	1.06	
Biomass (g/m2)	1.14	3	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	25.86	3	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	40		0.02000		
Eteone heteropoda	40		0.00400		
Hermundura americana	520		0.54400		
Lepidactylus dytiscus	560		0.32400		
Leptocheirus plumulosus	920		0.21200		
Macoma mitchelli	120		0.02400		
Streblospio benedicti	120		0.00800		
Total Abundance w/ Epi.	2320				
Total Abundance w/o Epi.	2320				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			1.13600		
Total Biomass w/o Epi.			1.13600		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 051		Rep: 02	
Watershed: Potomac River	Habitat: High Mesohaline Sand	Date: 07OCT22	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:40:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.6	Salinity (ppt): 17.78	Temperature (C): 18.76	
Dissolved Oxygen (mg/l): 8.6	Sediment Silt-Clay (%): 4.95	Total Carbon (%): 0.28	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33	Condition: Degraded	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.30	1	Pollution Indicative Species Abundance (%) 3.23 5
Abundance (#/m2)	1240	3	Pollution Indicative Species Biomass (%) 0.21
Biomass (g/m2)	0.94	1	Pollution Sensitive Species Abundance (%) 3.23 1
Carnivore-Omnivore Abundance (%)	22.58	3	Pollution Sensitive Species Biomass (%) 0.85
Deep Deposit Feeder Abundance (%)	6.45		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Edwardsia elegans	40	0.00800	
Hermundura americana	200	0.14400	
Hydrobiidae (Epi)	40	0.00200	
Leitoscoloplos spp.	40	0.00200	
Lepidactylus dytiscus	80	0.03200	
Leptocheirus plumulosus	560	0.10400	
Macoma mitchelli	240	0.10000	
Mediomastus ambiseta	40	0.00800	
Micrura leidy	40	0.54400	
Total Abundance w/ Epi.	1280		
Total Abundance w/o Epi.	1240		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		0.94400	
Total Biomass w/o Epi.		0.94200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 051		Rep: 03
Watershed: Potomac River	Habitat: High Mesohaline Sand	Date: 07OCT22
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:40:00
BOTTOM ENVIRONMENT		
Depth (m): 2.6	Salinity (ppt): 17.78	Temperature (C): 18.76
Dissolved Oxygen (mg/l): 8.6	Sediment Silt-Clay (%): 4.95	Total Carbon (%): 0.28
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 2.33	Condition: Degraded	# Attributes Scored: 6
Shannon-Wiener Index	Value Score	Value Score
Abundance (#/m2)	2.13 1	Pollution Indicative Species Abundance (%) 6.25 5
Biomass (g/m2)	1920 5	Pollution Indicative Species Biomass (%) 11.01
Carnivore-Omnivore Abundance (%)	0.89 1	Pollution Sensitive Species Abundance (%) 0.00 1
Deep Deposit Feeder Abundance (%)	12.50 1	Pollution Sensitive Species Biomass (%) 0.00
	4.17	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Hermundura americana	200	0.42400
Hydrobiidae (Epi)	40	0.00200
Leitoscoloplos fragilis	40	0.07600
Leitoscoloplos robustus	40	0.02000
Lepidactylus dytiscus	360	0.09200
Leptocheirus plumulosus	960	0.22400
Littoridinops tenuipes (Epi)	40	0.00400
Macoma mitchelli	240	0.00800
Micrura leidyi	40	0.04400
Streblospio benedicti	40	0.00200
Total Abundance w/ Epi.	2000	
Total Abundance w/o Epi.	1920	
Number of Taxa w/ Epi.	10	
Number of Taxa w/o Epi.	8	
Total Biomass w/ Epi.		0.89600
Total Biomass w/o Epi.		0.89000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

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=====
|                               Station: 052                               Rep: 01   |
| Watershed: Potomac River       Habitat: High Mesohaline Mud       Date: 20SEP22 |
| Gear: Wildco Box Corer        Sampled Area: 0.022 sq.m         Time: 13:45:00 |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 11.5                Salinity (ppt): 17.42           Temperature (C): 25.63 |
| Dissolved Oxygen (mg/l): 0.5    Sediment Silt-Clay (%): 96.01   Total Carbon (%): 3.35 |
=====
|                               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 2022 (CRUISE 01:2022/2023) FIXED STATIONS

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|                               Station: 052                               Rep: 02                               |
| Watershed: Potomac River        Habitat: High Mesohaline Mud        Date: 20SEP22                          |
| Gear: Wildco Box Corer         Sampled Area: 0.022 sq.m          Time: 13:45:00                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 11.5                 Salinity (ppt): 17.42             Temperature (C): 25.63                  |
| Dissolved Oxygen (mg/l): 0.5    Sediment Silt-Clay (%): 96.01    Total Carbon (%): 3.35                  |
=====
|                               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 |
| Biomass (g/m2)                0.00   1   Pollution Sensitive Species Abundance (%)  0.00   |
| Carnivore-Omnivore Abundance (%) 0.00   1   Pollution Sensitive Species Biomass (%)   0.00   |
| Deep Deposit Feeder Abundance (%) 0.00   |
=====
|                               BENTHIC ABUNDANCE (per sq. meter)                               |
=====
| TAXA                           Abundance (#/m2)                   Biomass (g/m2)                           |
=====
| 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 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 052		Rep: 03	
Watershed: Potomac River	Habitat: High Mesohaline Mud	Date: 20SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 11.5	Salinity (ppt): 17.42	Temperature (C): 25.63	
Dissolved Oxygen (mg/l): 0.5	Sediment Silt-Clay (%): 96.01	Total Carbon (%): 3.35	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	1.00	1	Pollution Indicative Species Abundance (%) 50.00
Abundance (#/m2)	91	1	Pollution Indicative Species Biomass (%) 20.00 3
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	50.00	5	Pollution Sensitive Species Biomass (%) 0.00 1
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Neanthes succinea	45	0.00909	
Streblospio benedicti	45	0.00227	
Total Abundance w/ Epi.	91		
Total Abundance w/o Epi.	91		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.01136	
Total Biomass w/o Epi.		0.01136	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 062		Rep: 01	
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 28SEP22	
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 11:40:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 9.01	Temperature (C): 21.37	
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 97.10	Total Carbon (%): 2.36	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
Shannon-Wiener Index	Value 2.64	Score 5	
Abundance (#/m2)	4880	3	
Biomass (g/m2)	1.42	3	
Carnivore-Omnivore Abundance (%)	3.28		
Deep Deposit Feeder Abundance (%)	46.72		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.01200	
Cyclaspis varians	40	0.00400	
Hermundura americana	120	0.05200	
Leptocheirus plumulosus	280	0.02400	
Leucon americanus	520	0.02000	
Macoma mitchelli	920	1.07200	
Mediomastus ambiseta	560	0.03200	
Mulinia lateralis	600	0.16800	
Streblospio benedicti	80	0.00400	
Tubificoides spp.	1720	0.03200	
Total Abundance w/ Epi.	4880		
Total Abundance w/o Epi.	4880		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		1.42000	
Total Biomass w/o Epi.		1.42000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 062		Rep: 02
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 28SEP22
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 11:40:00
BOTTOM ENVIRONMENT		
Depth (m): 4.1	Salinity (ppt): 9.01	Temperature (C): 21.37
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 97.10	Total Carbon (%): 2.36
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5
	Value	Score
Shannon-Wiener Index	2.89	5
Abundance (#/m2)	6240	1
Biomass (g/m2)	1.30	3
Carnivore-Omnivore Abundance (%)	9.62	
Deep Deposit Feeder Abundance (%)	29.49	
	Value	Score
Pollution Indicative Species Abundance (%)	17.95	3
Pollution Indicative Species Biomass (%)	12.96	
Pollution Sensitive Species Abundance (%)	6.41	
Pollution Sensitive Species Biomass (%)	6.79	1
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Carinoma tremaphoros	40	0.00400
Edotea triloba (Epi)	40	0.00400
Gammarus spp. (Epi)	40	0.00400
Glycinde solitaria	80	0.03200
Hermundura americana	160	0.07200
Leptocheirus plumulosus	800	0.09600
Leucon americanus	760	0.02000
Macoma mitchelli	1080	0.78000
Marenzelleria viridis	40	0.04000
Mediomastus ambiseta	280	0.01600
Mulinia lateralis	1120	0.16800
Mytilidae (Epi)	40	0.00200
Neanthes succinea	40	0.03200
Rictaxis punctostriatus	280	0.01600
Tubificoides spp.	1560	0.02000
Total Abundance w/ Epi.	6360	
Total Abundance w/o Epi.	6240	
Number of Taxa w/ Epi.	15	
Number of Taxa w/o Epi.	12	
Total Biomass w/ Epi.		1.30600
Total Biomass w/o Epi.		1.29600

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 062		Rep: 03
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 28SEP22
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 11:40:00
BOTTOM ENVIRONMENT		
Depth (m): 4.1	Salinity (ppt): 9.01	Temperature (C): 21.37
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 97.10	Total Carbon (%): 2.36
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.40	Condition: Meets Goal	# Attributes Scored: 5
	Value Score	Value Score
Shannon-Wiener Index	2.58 5	Pollution Indicative Species Abundance (%) 8.96 5
Abundance (#/m2)	5360 3	Pollution Indicative Species Biomass (%) 8.29
Biomass (g/m2)	1.04 3	Pollution Sensitive Species Abundance (%) 6.72
Carnivore-Omnivore Abundance (%)	8.21	Pollution Sensitive Species Biomass (%) 6.17 1
Deep Deposit Feeder Abundance (%)	48.51	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Cyathura polita	40	0.03600
Edotea triloba (Epi)	40	0.00400
Eteone heteropoda	40	0.01600
Glycinde solitaria	40	0.01600
Hermundura americana	120	0.11200
Leptocheirus plumulosus	440	0.02800
Leucon americanus	440	0.01200
Macoma mitchelli	1000	0.69200
Mediomastus ambiseta	280	0.01200
Mulinia lateralis	400	0.06800
Rictaxis punctostriatus	200	0.00800
Streblospio benedicti	40	0.00200
Tubificoides spp.	2320	0.03600
Total Abundance w/ Epi.	5400	
Total Abundance w/o Epi.	5360	
Number of Taxa w/ Epi.	13	
Number of Taxa w/o Epi.	12	
Total Biomass w/ Epi.		1.04200
Total Biomass w/o Epi.		1.03800

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 064		Rep: 01	
Watershed: Choptank River	Habitat: High Mesohaline Mud	Date: 24SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 9.3	Salinity (ppt): 14.04	Temperature (C): 21.89	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 92.63	Total Carbon (%): 1.96	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.82	3	
Abundance (#/m2)	1273	3	Pollution Indicative Species Abundance (%) 10.71
Biomass (g/m2)	6.08	5	Pollution Indicative Species Biomass (%) 0.67 5
Carnivore-Omnivore Abundance (%)	21.43	3	Pollution Sensitive Species Abundance (%) 53.57
Deep Deposit Feeder Abundance (%)	46.43		Pollution Sensitive Species Biomass (%) 87.19 5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.06363	
Eteone heteropoda	91	0.00909	
Heteromastus filiformis	45	0.15908	
Macoma balthica	318	5.28583	
Macoma mitchelli	45	0.09999	
Mediomastus ambiseta	364	0.01818	
Mulinia lateralis	45	0.03182	
Neanthes succinea	91	0.40905	
Parahesionia luteola	45	0.00455	
Tubificoides spp.	182	0.00227	
Total Abundance w/ Epi.	1273		
Total Abundance w/o Epi.	1273		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		6.08348	
Total Biomass w/o Epi.		6.08348	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 064		Rep: 02	
Watershed: Choptank River	Habitat: High Mesohaline Mud	Date: 24SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 9.3	Salinity (ppt): 14.04	Temperature (C): 21.89	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 92.63	Total Carbon (%): 1.96	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.79	3	
Abundance (#/m2)	1682	5	Pollution Indicative Species Abundance (%) 5.41
Biomass (g/m2)	13.06	3	Pollution Indicative Species Biomass (%) 0.97 5
Carnivore-Omnivore Abundance (%)	10.81	3	Pollution Sensitive Species Abundance (%) 59.46
Deep Deposit Feeder Abundance (%)	54.05		Pollution Sensitive Species Biomass (%) 93.58 5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.06363	
Heteromastus filiformis	227	0.09090	
Macoma balthica	364	11.93517	
Macoma mitchelli	45	0.06818	
Marenzelleria viridis	91	0.23634	
Mediomastus ambiseta	545	0.04999	
Mulinia lateralis	91	0.12726	
Neanthes succinea	45	0.48177	
Parahesion luteola	45	0.00454	
Tubificoides spp.	136	0.00227	
Total Abundance w/ Epi.	1682		
Total Abundance w/o Epi.	1682		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		13.06006	
Total Biomass w/o Epi.		13.06006	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 064		Rep: 03	
Watershed: Choptank River		Habitat: High Mesohaline Mud	
Gear: Wildco Box Corer		Date: 24SEP22	
		Time: 12:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 9.3		Salinity (ppt): 14.04	
Dissolved Oxygen (mg/l): 6.8		Sediment Silt-Clay (%): 92.63	
		Temperature (C): 21.89	
		Total Carbon (%): 1.96	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.67		Condition: Meets Goal	
		# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.13	3	Pollution Indicative Species Abundance (%) 9.76
Abundance (#/m2)	1863	5	Pollution Indicative Species Biomass (%) 1.74 5
Biomass (g/m2)	2.10	5	Pollution Sensitive Species Abundance (%) 56.10
Carnivore-Omnivore Abundance (%)	4.88	1	Pollution Sensitive Species Biomass (%) 42.73 3
Deep Deposit Feeder Abundance (%)	75.61		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Heteromastus filiformis	91		0.18635
Macoma balthica	91		0.80901
Macoma mitchelli	91		0.03181
Mediomastus ambiseta	954		0.08636
Mulinia lateralis	182		0.03636
Neanthes succinea	91		0.93627
Tubificoides spp.	364		0.00909
Total Abundance w/ Epi.	1863		
Total Abundance w/o Epi.	1863		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.			2.09525
Total Biomass w/o Epi.			2.09525

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 24SEP22	
		Sampled Area: 0.022 sq.m		Time: 16:00:00	
BOTTOM ENVIRONMENT					
Depth (m): 4.6		Salinity (ppt): 2.15		Temperature (C): 22.98	
Dissolved Oxygen (mg/l): 0.6		Sediment Silt-Clay (%): 98.75		Total Carbon (%): 3.42	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
Shannon-Wiener Index		Value	Score	Value	Score
Abundance (#/m2)		2.18	5	92.65	3
Deep Deposit Feeder Abundance (%)		3091	5	9.09	1
Carnivore-Omnivore Abundance (%)		69.12	3	0.00	1
		20.59	3	91.67	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Coelotanypus spp.		500		0.08181	
Cryptochironomus spp.		45		0.00227	
Cyathura polita		91		0.02273	
Gammarus spp. (Epi)		91		0.00454	
Leptocheirus plumulosus		182		0.03636	
Limnodrilus hoffmeisteri		1318			
Macoma mitchelli		91		0.01818	
Oligochaeta				0.25452	
Streblospio benedicti		45		0.00227	
Tubificidae imm w/o cap chaetae *		818			
Total Abundance w/ Epi.		3182			
Total Abundance w/o Epi.		3091			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				0.42268	
Total Biomass w/o Epi.				0.41814	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 066		Rep: 02	
Watershed: Choptank River	Habitat: Oligohaline	Date: 24SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 16:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.6	Salinity (ppt): 2.15	Temperature (C): 22.98	
Dissolved Oxygen (mg/l): 0.6	Sediment Silt-Clay (%): 98.75	Total Carbon (%): 3.42	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
Shannon-Wiener Index	Value: 2.70	Score	
Abundance (#/m2)	2091	5	
Deep Deposit Feeder Abundance (%)	32.61		
Carnivore-Omnivore Abundance (%)	26.09	3	
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chaoborus punctipennis	45	0.00455	
Coelotanypus spp.	455	0.06363	
Cyathura polita	45	0.01364	
Gammarus spp. (Epi)	182	0.02727	
Leptocheirus plumulosus	545	0.17271	
Limnodrilus hoffmeisteri	364		
Macoma mitchelli	182	0.08181	
Melita nitida (Epi)	45	0.00909	
Oligochaeta		0.07954	
Rangia cuneata	45	0.04999	
Streblospio benedicti	91	0.00227	
Tubificidae imm w/o cap chaetae *	318		
Total Abundance w/ Epi.	2318		
Total Abundance w/o Epi.	2091		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		0.50450	
Total Biomass w/o Epi.		0.46814	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 066		Rep: 03	
Watershed: Choptank River	Habitat: Oligohaline	Date: 24SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 16:00:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.6	Salinity (ppt): 2.15	Temperature (C): 22.98	
Dissolved Oxygen (mg/l): 0.6	Sediment Silt-Clay (%): 98.75	Total Carbon (%): 3.42	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33	Condition: Degraded	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.23	5	Oligohaline Pollution Indicative Spp. Abund. 93.15 3
Abundance (#/m2)	3318	5	Tolerance Score 9.47 1
Deep Deposit Feeder Abundance (%)	72.60	1	Oligohaline Pollution Sensitive Spp. Abund. 1.37 3
Carnivore-Omnivore Abundance (%)	8.22	1	Tanypodinae/Chironomidae Abundance Ratio 100.00 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	227	0.05000	
Cyathura polita	45	0.08635	
Leptocheirus plumulosus	273	0.07726	
Limnodrilus hoffmeisteri	500		
Macoma mitchelli	136	0.10908	
Marenzelleria viridis	45	0.18635	
Oligochaeta		0.31361	
Streblospio benedicti	182	0.00454	
Tubificidae imm w/o cap chaetae *	1773		
Tubificoides spp.	136	0.00227	
Total Abundance w/ Epi.	3318		
Total Abundance w/o Epi.	3318		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		0.82946	
Total Biomass w/o Epi.		0.82946	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 068		Rep: 01	
Watershed: Upper Eastern Shore	Habitat: Low Mesohaline	Date: 13SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 10.36	Temperature (C): 26.10	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 89.81	Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20	Condition: Meets Goal	# Attributes Scored: 5	
Shannon-Wiener Index	Value	Score	Value
Abundance (#/m2)	2.54	5	3.90
Biomass (g/m2)	3500	3	0.13
Carnivore-Omnivore Abundance (%)	24.18	3	29.87
Deep Deposit Feeder Abundance (%)	10.39		94.78
	44.16		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanytus spp.	136	0.03182	
Cyathura polita	45	0.01363	
Heteromastus filiformis	227	0.05908	
Leptocheirus plumulosus	273	0.05000	
Macoma balthica	909	22.42049	
Macoma mitchelli	318	1.06808	
Marenzelleria viridis	45	0.10453	
Neanthes succinea	182	0.03636	
Rangia cuneata	45	0.38178	
Tubificoides spp.	1318	0.01818	
Total Abundance w/ Epi.	3500		
Total Abundance w/o Epi.	3500		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		24.18395	
Total Biomass w/o Epi.		24.18395	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 068		Rep: 02	
Watershed: Upper Eastern Shore	Habitat: Low Mesohaline	Date: 13SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 10.36	Temperature (C): 26.10	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 89.81	Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5	
Shannon-Wiener Index	Value: 2.71	Score: 5	
Abundance (#/m2)	2863	3	Pollution Indicative Species Abundance (%) 3.17
Biomass (g/m2)	42.32	1	Pollution Indicative Species Biomass (%) 0.09
Carnivore-Omnivore Abundance (%)	7.94		Pollution Sensitive Species Abundance (%) 44.44
Deep Deposit Feeder Abundance (%)	36.51		Pollution Sensitive Species Biomass (%) 98.43
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	45	0.00909	
Edotea triloba (Epi)	45	0.01364	
Eteone heteropoda	45	0.02727	
Heteromastus filiformis	227	0.02272	
Leptocheirus plumulosus	136	0.01818	
Macoma balthica	636	21.12971	
Macoma mitchelli	182	0.44541	
Marenzelleria viridis	591	1.60439	
Neanthes succinea	136	0.12272	
Rangia cuneata	45	18.91765	
Tubificoides spp.	818	0.01818	
Total Abundance w/ Epi.	2909		
Total Abundance w/o Epi.	2863		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		42.32895	
Total Biomass w/o Epi.		42.31531	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 068		Rep: 03	
Watershed: Upper Eastern Shore	Habitat: Low Mesohaline	Date: 13SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:35:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 10.36	Temperature (C): 26.10	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 89.81	Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.72	3	
Abundance (#/m2)	4227	3	Pollution Indicative Species Abundance (%) 1.08 5
Biomass (g/m2)	24.05	3	Pollution Indicative Species Biomass (%) 0.04
Carnivore-Omnivore Abundance (%)	6.45		Pollution Sensitive Species Abundance (%) 13.98
Deep Deposit Feeder Abundance (%)	72.04		Pollution Sensitive Species Biomass (%) 97.03 5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	45	0.00909	
Cyathura polita	45	0.00455	
Heteromastus filiformis	182	0.04091	
Leptocheirus plumulosus	273	0.03181	
Macoma balthica	500	23.13859	
Macoma mitchelli	91	0.15453	
Neanthes succinea	182	0.43632	
Rangia cuneata	45	0.19544	
Tubificoides spp.	2863	0.04090	
Total Abundance w/ Epi.	4227		
Total Abundance w/o Epi.	4227		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		24.05214	
Total Biomass w/o Epi.		24.05214	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

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|                               Station: 071                               Rep: 01                               |
| Watershed: Patuxent River        Habitat: High Mesohaline Mud        Date: 07SEP22                          |
| Gear: Wildco Box Corer          Sampled Area: 0.022 sq.m          Time: 15:05:00                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 12.4                  Salinity (ppt): 17.71              Temperature (C): 26.91                  |
| Dissolved Oxygen (mg/l): 1.2     Sediment Silt-Clay (%): 95.79     Total Carbon (%): 3.46                  |
=====
|                               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 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 071		Rep: 02	
Watershed: Patuxent River		Habitat: High Mesohaline Mud	
Gear: Wildco Box Corer		Date: 07SEP22	
		Time: 15:05:00	
BOTTOM ENVIRONMENT			
Depth (m): 12.4		Salinity (ppt): 17.71	
Dissolved Oxygen (mg/l): 1.2		Sediment Silt-Clay (%): 95.79	
		Temperature (C): 26.91	
		Total Carbon (%): 3.46	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00		Condition: Severely Degr.	
		# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%) 100.00
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%) 100.00
Deep Deposit Feeder Abundance (%)	100.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Mediomastus ambiseta	45	0.00909	
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.		0.00909	
Total Biomass w/o Epi.		0.00909	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

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=====
|                               Station: 071                               Rep: 03                               |
| Watershed: Patuxent River       Habitat: High Mesohaline Mud       Date: 07SEP22                          |
| Gear: Wildco Box Corer         Sampled Area: 0.022 sq.m         Time: 15:05:00                          |
=====
|                               BOTTOM ENVIRONMENT                               |
=====
| Depth (m): 12.4                Salinity (ppt): 17.71            Temperature (C): 26.91                 |
| Dissolved Oxygen (mg/l): 1.2    Sediment Silt-Clay (%): 95.79   Total Carbon (%): 3.46                 |
=====
|                               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 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 074		Rep: 01	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 07SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:19:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.5	Salinity (ppt): 10.28	Temperature (C): 26.87	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 98.97	Total Carbon (%): 2.1	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	1.82	3	
Abundance (#/m2)	10090	1	Pollution Indicative Species Abundance (%) 11.71 3
Biomass (g/m2)	43.56	1	Pollution Indicative Species Biomass (%) 0.04
Carnivore-Omnivore Abundance (%)	1.35		Pollution Sensitive Species Abundance (%) 23.42
Deep Deposit Feeder Abundance (%)	90.99		Pollution Sensitive Species Biomass (%) 99.21 5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00454	
Coelotanypus spp.	45	0.00454	
Eteone heteropoda	45	0.00227	
Heteromastus filiformis	227	0.25452	
Leptocheirus plumulosus	136	0.01818	
Macoma balthica	409	43.10024	
Mediomastus ambiseta	1954	0.11817	
Oligochaeta		0.00455	
Streblospio benedicti	227	0.00227	
Tubificidae imm w/o cap chaetae	864	0.00227	
Tubificoides spp.	6136	0.04999	
Total Abundance w/ Epi.	10090		
Total Abundance w/o Epi.	10090		
Number of Taxa w/ Epi.	10		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		43.56155	
Total Biomass w/o Epi.		43.56155	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 074		Rep: 02	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 07SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:19:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.5	Salinity (ppt): 10.28	Temperature (C): 26.87	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 98.97	Total Carbon (%): 2.1	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20	Condition: Meets Goal	# Attributes Scored: 5	
Shannon-Wiener Index	Value	Score	
Abundance (#/m2)	2.62	5	
Biomass (g/m2)	1591	5	
Carnivore-Omnivore Abundance (%)	31.54	1	
Deep Deposit Feeder Abundance (%)	11.43		
	60.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.02273	
Eteone heteropoda	45	0.00227	
Heteromastus filiformis	45	0.05454	
Leptocheirus plumulosus	91	0.03181	
Macoma balthica	364	31.11507	
Mediomastus ambiseta	500	0.01818	
Neanthes succinea	91	0.28633	
Oligochaeta		0.00455	
Tubificidae imm w/o cap chaetae	91	0.00227	
Tubificoides spp.	318	0.00454	
Total Abundance w/ Epi.	1591		
Total Abundance w/o Epi.	1591		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		31.54230	
Total Biomass w/o Epi.		31.54230	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 074		Rep: 03	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 07SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:19:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.5	Salinity (ppt): 10.28	Temperature (C): 26.87	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 98.97	Total Carbon (%): 2.1	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5	
Shannon-Wiener Index	Value: 2.23	Score: 3	
Abundance (#/m2)	3818	3	Pollution Indicative Species Abundance (%) 7.14 5
Biomass (g/m2)	16.89	3	Pollution Indicative Species Biomass (%) 0.03
Carnivore-Omnivore Abundance (%)	2.38		Pollution Sensitive Species Abundance (%) 57.14
Deep Deposit Feeder Abundance (%)	80.95		Pollution Sensitive Species Biomass (%) 98.51 5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.03636	
Eteone heteropoda	45	0.00227	
Heteromastus filiformis	45	0.05909	
Leptocheirus plumulosus	227	0.09090	
Macoma balthica	273	16.54835	
Macoma mitchelli	91	0.04545	
Mediomastus ambiseta	1909	0.09090	
Oligochaeta		0.00227	
Streblospio benedicti	45	0.00227	
Tubificidae imm w cap chaetae	45		
Tubificidae imm w/o cap chaetae	182		
Tubificoides spp.	909	0.01364	
Total Abundance w/ Epi.	3818		
Total Abundance w/o Epi.	3818		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.		16.89149	
Total Biomass w/o Epi.		16.89149	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 077		Rep: 01	
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 08SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:40:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.0	Salinity (ppt): 6.44	Temperature (C): 26.18	
Dissolved Oxygen (mg/l): 4.9	Sediment Silt-Clay (%): 94.08	Total Carbon (%): 2.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.58	1	33.33
Abundance (#/m2)	136	1	25.00
Biomass (g/m2)	0.04	1	0.00
Carnivore-Omnivore Abundance (%)	66.67		0.00
Deep Deposit Feeder Abundance (%)	0.00		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.02273	
Coelotanypus spp.	45	0.00909	
Leptocheirus plumulosus	45	0.00455	
Total Abundance w/ Epi.	136		
Total Abundance w/o Epi.	136		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.03636	
Total Biomass w/o Epi.		0.03636	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 077		Rep: 02
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 08SEP22
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:40:00
BOTTOM ENVIRONMENT		
Depth (m): 3.0	Salinity (ppt): 6.44	Temperature (C): 26.18
Dissolved Oxygen (mg/l): 4.9	Sediment Silt-Clay (%): 94.08	Total Carbon (%): 2.15
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 1.40	Condition: Severely Degr.	# Attributes Scored: 5
	Value	Score
Shannon-Wiener Index	0.92	1
Abundance (#/m2)	136	1
Biomass (g/m2)	0.02	1
Carnivore-Omnivore Abundance (%)	66.67	
Deep Deposit Feeder Abundance (%)	33.33	
		3
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Cyathura polita	91	0.01363
Edotea triloba (Epi)	45	0.00227
Limnodrilus hoffmeisteri	45	0.00227
Total Abundance w/ Epi.	182	
Total Abundance w/o Epi.	136	
Number of Taxa w/ Epi.	3	
Number of Taxa w/o Epi.	2	
Total Biomass w/ Epi.		0.01818
Total Biomass w/o Epi.		0.01591

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 077		Rep: 03	
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 08SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:40:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.0	Salinity (ppt): 6.44	Temperature (C): 26.18	
Dissolved Oxygen (mg/l): 4.9	Sediment Silt-Clay (%): 94.08	Total Carbon (%): 2.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	2.73	5	
Abundance (#/m2)	500	1	Pollution Indicative Species Abundance (%) 27.27
Biomass (g/m2)	0.07	1	Pollution Indicative Species Biomass (%) 16.67
Carnivore-Omnivore Abundance (%)	45.45		Pollution Sensitive Species Abundance (%) 27.27
Deep Deposit Feeder Abundance (%)	18.18		Pollution Sensitive Species Biomass (%) 23.33
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.03181	
Coelotanypus spp.	45	0.00909	
Cyathura polita	91	0.01364	
Mediomastus ambiseta	45	0.00227	
Polydora cornuta	91	0.00454	
Streblospio benedicti	91	0.00227	
Tubificoides spp.	45	0.00455	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	500		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.06817	
Total Biomass w/o Epi.		0.06817	



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 02	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 08SEP22	
		Sampled Area: 0.022 sq.m		Time: 13:07:00	
BOTTOM ENVIRONMENT					
Depth (m): 0.6		Salinity (ppt): 0.43		Temperature (C): 25.48	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 91.63		Total Carbon (%): 2.55	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 4	
	Value	Score		Value	Score
Shannon-Wiener Index	1.51		T.F. Pollution Indicative Spp. Abund. (%)	65.48	3
Abundance (#/m2)	3818	5	Tolerance Score	9.23	3
Deep Deposit Feeder Abundance (%)	97.62	1	Limnodrilus Abundance (%)	83.33	
Carnivore-Omnivore Abundance (%)	2.38				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Aulodrilus pigueti		409			
Coelotanypus spp.		45		0.00455	
Limnodrilus cervix		682			
Oligochaeta				0.36245	
Procladius spp.		45		0.00227	
Tubificidae imm w cap chaetae *		136			
Tubificidae imm w/o cap chaetae *		2500			
Total Abundance w/ Epi.		3863			
Total Abundance w/o Epi.		3863			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.37154	
Total Biomass w/o Epi.				0.37154	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 079		Rep: 03	
Watershed: Patuxent River	Habitat: Tidal Freshwater	Date: 08SEP22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:07:00	
BOTTOM ENVIRONMENT			
Depth (m): 0.6	Salinity (ppt): 0.43	Temperature (C): 25.48	
Dissolved Oxygen (mg/l): 5.4	Sediment Silt-Clay (%): 91.63	Total Carbon (%): 2.55	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.	# Attributes Scored: 4	
Shannon-Wiener Index	Value	Score	
Abundance (#/m2)	4500	3	
Deep Deposit Feeder Abundance (%)	97.98	1	
Carnivore-Omnivore Abundance (%)	2.02		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Aulodrilus pigueti	45		
Chironomidae	273		
Cryptochironomus spp.	45	0.00227	
Limnodrilus cervix	727		
Limnodrilus hoffmeisteri	273		
Oligochaeta		0.43707	
Tubificidae imm w cap chaetae *	136		
Tubificidae imm w/o cap chaetae *	3000		
Total Abundance w/ Epi.	4500		
Total Abundance w/o Epi.	4500		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		0.43934	
Total Biomass w/o Epi.		0.43934	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 201		Rep: 01	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:50:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1	Salinity (ppt): 10.43	Temperature (C): 27.04	
Dissolved Oxygen (mg/l): 0.5	Sediment Silt-Clay (%): 98.60	Total Carbon (%): 2.93	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.65	1	Pollution Indicative Species Abundance (%) 16.67 3
Abundance (#/m2)	273	1	Pollution Indicative Species Biomass (%) 0.10
Biomass (g/m2)	2.28	3	Pollution Sensitive Species Abundance (%) 83.33
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 99.90 3
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Macoma balthica	227	2.27705	
Streblospio benedicti	45	0.00227	
Total Abundance w/ Epi.	273		
Total Abundance w/o Epi.	273		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		2.27932	
Total Biomass w/o Epi.		2.27932	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 201		Rep: 02	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Date: 24AUG22	
		Time: 11:50:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1		Salinity (ppt): 10.43	
Dissolved Oxygen (mg/l): 0.5		Sediment Silt-Clay (%): 98.60	
		Temperature (C): 27.04	
		Total Carbon (%): 2.93	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80		Condition: Severely Degr.	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.30	1	25.00
Abundance (#/m2)	364	1	0.19
Biomass (g/m2)	2.34	3	62.50
Carnivore-Omnivore Abundance (%)	0.00		99.71
Deep Deposit Feeder Abundance (%)	12.50		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Macoma balthica	227	2.33613	
Streblospio benedicti	91	0.00455	
Tubificoides spp.	45	0.00227	
Total Abundance w/ Epi.	364		
Total Abundance w/o Epi.	364		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		2.34295	
Total Biomass w/o Epi.		2.34295	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 201		Rep: 03	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:50:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1	Salinity (ppt): 10.43	Temperature (C): 27.04	
Dissolved Oxygen (mg/l): 0.5	Sediment Silt-Clay (%): 98.60	Total Carbon (%): 2.93	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	182	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	1.85	3	Pollution Sensitive Species Abundance (%) 100.00
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 100.00 3
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hydrobiidae (Epi)	45	0.01364	
Macoma balthica	182	1.84982	
Total Abundance w/ Epi.	227		
Total Abundance w/o Epi.	182		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		1.86345	
Total Biomass w/o Epi.		1.84982	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 202		Rep: 01	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:48:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.4	Salinity (ppt): 10.78	Temperature (C): 26.98	
Dissolved Oxygen (mg/l): 0.2	Sediment Silt-Clay (%): 98.57	Total Carbon (%): 4.36	
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)	500	1	100.00
Biomass (g/m2)	0.00	1	0.00
Carnivore-Omnivore Abundance (%)	0.00		0.00
Deep Deposit Feeder Abundance (%)	0.00		0.00
			1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Streblospio benedicti	500	0.00227	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	500		
Number of Taxa w/ Epi.	1		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.00227	
Total Biomass w/o Epi.		0.00227	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 202		Rep: 02	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:48:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.4	Salinity (ppt): 10.78	Temperature (C): 26.98	
Dissolved Oxygen (mg/l): 0.2	Sediment Silt-Clay (%): 98.57	Total Carbon (%): 4.36	
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)	45	1	100.00
Biomass (g/m2)	0.00	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)	
Mytilopsis leucophaeata (Epi)	45	0.27724	
Streblospio benedicti	45	0.00227	
Total Abundance w/ Epi.	91		
Total Abundance w/o Epi.	45		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.27952	
Total Biomass w/o Epi.		0.00227	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 202		Rep: 03	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 24AUG22	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:48:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.4	Salinity (ppt): 10.78	Temperature (C): 26.98	
Dissolved Oxygen (mg/l): 0.2	Sediment Silt-Clay (%): 98.57	Total Carbon (%): 4.36	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	
Shannon-Wiener Index	0.41	1	Pollution Indicative Species Abundance (%) 100.00 1
Abundance (#/m2)	545	3	Pollution Indicative Species Biomass (%) 100.00
Biomass (g/m2)	0.05	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	8.33		Pollution Sensitive Species Biomass (%) 0.00 1
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	45	0.04545	
Streblospio benedicti	500	0.00227	
Total Abundance w/ Epi.	545		
Total Abundance w/o Epi.	545		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.04772	
Total Biomass w/o Epi.		0.04772	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 203		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Oligohaline	
Gear: Young Grab		Date: 23AUG22	
		Time: 10:30:00	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67		Condition: Marginal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.61	5	100.00
Abundance (#/m2)	591	5	7.78
Deep Deposit Feeder Abundance (%)	19.23	5	0.00
Carnivore-Omnivore Abundance (%)	76.92	5	70.00
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	136	0.18630	
Coelotanypus spp.	318	0.04544	
Oligochaeta		0.00454	
Streblospio benedicti	23	0.00227	
Tubificidae imm w/o cap chaetae	114	0.00114	
Total Abundance w/ Epi.	591		
Total Abundance w/o Epi.	591		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.23970	
Total Biomass w/o Epi.		0.23970	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 203		Rep: 02	
Watershed: Patapsco & Back Rivers	Habitat: Oligohaline	Date: 23AUG22	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 10:30:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.3	Salinity (ppt): 3.41	Temperature (C): 27.45	
Dissolved Oxygen (mg/l): 5.2	Sediment Silt-Clay (%): 98.07	Total Carbon (%): 4.29	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.74	5	Oligohaline Pollution Indicative Spp. Abund. 100.00
Abundance (#/m2)	613	5	Tolerance Score
Deep Deposit Feeder Abundance (%)	48.15	5	Oligohaline Pollution Sensitive Spp. Abund.
Carnivore-Omnivore Abundance (%)	44.44	5	Tanypodinae/Chironomidae Abundance Ratio
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	114	0.12042	
Coelotanypus spp.	159	0.02726	
Oligochaeta		0.01136	
Streblospio benedicti	45	0.00227	
Tubificidae imm w/o cap chaetae	295	0.00114	
Total Abundance w/ Epi.	613		
Total Abundance w/o Epi.	613		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.16245	
Total Biomass w/o Epi.		0.16245	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 203		Rep: 03
Watershed: Patapsco & Back Rivers	Habitat: Oligohaline	Date: 23AUG22
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 10:30:00
BOTTOM ENVIRONMENT		
Depth (m): 1.3	Salinity (ppt): 3.41	Temperature (C): 27.45
Dissolved Oxygen (mg/l): 5.2	Sediment Silt-Clay (%): 98.07	Total Carbon (%): 4.29
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6
	Value	Score
Shannon-Wiener Index	1.33	Oligohaline Pollution Indicative Spp. Abund. 100.00
Abundance (#/m2)	545	Tolerance Score
Deep Deposit Feeder Abundance (%)	62.50	Oligohaline Pollution Sensitive Spp. Abund.
Carnivore-Omnivore Abundance (%)	37.50	Tanypodinae/Chironomidae Abundance Ratio
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Chironomus spp.	114	0.13405
Coelotanypus spp.	91	0.01136
Oligochaeta		0.01136
Tubificidae imm w/o cap chaetae	341	0.00114
Total Abundance w/ Epi.	545	
Total Abundance w/o Epi.	545	
Number of Taxa w/ Epi.	3	
Number of Taxa w/o Epi.	3	
Total Biomass w/ Epi.		0.15790
Total Biomass w/o Epi.		0.15790

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 204		Rep: 01	
Watershed: Lower Western Shore	Habitat: High Mesohaline Mud	Date: 26AUG22	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 12:05:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.9	Salinity (ppt): 12.24	Temperature (C): 26.97	
Dissolved Oxygen (mg/l): 1.0	Sediment Silt-Clay (%): 79.39	Total Carbon (%): 1.9	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.33	Condition: Meets Goal	# Attributes Scored: 6	
Shannon-Wiener Index	Value	Score	Value
Abundance (#/m2)	2.03	3	5.56
Biomass (g/m2)	1227	3	0.12
Carnivore-Omnivore Abundance (%)	1.94	3	70.37
Deep Deposit Feeder Abundance (%)	5.56	1	82.46
	62.96		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Heteromastus filiformis	23	0.00682	
Macoma balthica	318	1.57450	
Mediomastus ambiseta	545	0.02726	
Neanthes succinea	68	0.32944	
Streblospio benedicti	68	0.00227	
Tubificoides spp.	204	0.00227	
Total Abundance w/ Epi.	1227		
Total Abundance w/o Epi.	1227		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		1.94256	
Total Biomass w/o Epi.		1.94256	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 204		Rep: 02	
Watershed: Lower Western Shore	Habitat: High Mesohaline Mud	Date: 26AUG22	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 12:05:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.9	Salinity (ppt): 12.24	Temperature (C): 26.97	
Dissolved Oxygen (mg/l): 1.0	Sediment Silt-Clay (%): 79.39	Total Carbon (%): 1.9	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.49	3	
Abundance (#/m2)	1113	3	Pollution Indicative Species Abundance (%) 10.20
Biomass (g/m2)	2.70	5	Pollution Indicative Species Biomass (%) 0.17 5
Carnivore-Omnivore Abundance (%)	14.29	3	Pollution Sensitive Species Abundance (%) 63.27
Deep Deposit Feeder Abundance (%)	46.94		Pollution Sensitive Species Biomass (%) 66.89 5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Diadumene leucolena (Epi)	45	0.14086	
Heteromastus filiformis	68	0.14768	
Leptocheirus plumulosus	23	0.00682	
Macoma balthica	250	1.61994	
Marenzelleria viridis	45	0.14768	
Mediomastus ambiseta	409	0.03635	
Neanthes succinea	159	0.73158	
Streblospio benedicti	114	0.00454	
Tubificoides spp.	45	0.00227	
Total Abundance w/ Epi.	1159		
Total Abundance w/o Epi.	1113		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		2.83773	
Total Biomass w/o Epi.		2.69686	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) FIXED STATIONS

Station: 204		Rep: 03	
Watershed: Lower Western Shore	Habitat: High Mesohaline Mud	Date: 26AUG22	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 12:05:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.9	Salinity (ppt): 12.24	Temperature (C): 26.97	
Dissolved Oxygen (mg/l): 1.0	Sediment Silt-Clay (%): 79.39	Total Carbon (%): 1.9	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	
Shannon-Wiener Index	2.62	3	
Abundance (#/m2)	1227	3	Pollution Indicative Species Abundance (%) 20.37
Biomass (g/m2)	2.45	5	Pollution Indicative Species Biomass (%) 0.65
Carnivore-Omnivore Abundance (%)	12.96	3	Pollution Sensitive Species Abundance (%) 55.56
Deep Deposit Feeder Abundance (%)	35.19		Pollution Sensitive Species Biomass (%) 83.17
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Eteone heteropoda	23	0.00227	
Heteromastus filiformis	91	0.06134	
Macoma balthica	386	1.96528	
Marenzelleria viridis	23	0.04317	
Mediomastus ambiseta	273	0.02954	
Mulinia lateralis	23	0.00227	
Neanthes succinea	136	0.33398	
Streblospio benedicti	204	0.01136	
Tubificoides spp.	68	0.00114	
Total Abundance w/ Epi.	1227		
Total Abundance w/o Epi.	1227		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		2.45035	
Total Biomass w/o Epi.		2.45035	

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**DATA SUMMARY B**

**BENTHIC ENVIRONMENT AND COMMUNITY  
COMPOSITION AT RANDOM SITES:  
SUMMER 2022**

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29401	29402	29403	29404	29405
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Polyhaline Sand	High Meso Sand	High Meso Mud	High Meso Mud	High Meso Sand
Date	09/27/22	09/27/22	09/27/22	09/27/22	09/27/22
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)	0.4	1.8	2.4	1.6	0.3
Salinity (ppt)	18.15	17.33	15.03	16.25	15.68
Temperature (C)	21.54	21.18	20.97	21.94	22.06
Dissolved Oxygen (mg/L)	8.6	8.1	8.1	9.4	9.7
Sediment Silt-Clay (%)	3.77	2.97	81.26	44.69	12.35
Total Carbon (%)	0.07	0.09	1.91	1.00	0.61
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.33	3.67	2.00	3.33	3.67
Condition	Meets Goal	Meets Goal	Severely Degr.	Meets Goal	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.03 3	3.04 3	1.67 1	2.76 3	2.77 3
Abundance (#/m2)	2931 3	1386 3	364 1	2431 5	1522 5
Biomass (g/m2)	0.74 1	1.33 3	0.11 1	1.01 3	0.30 1
Pollution Indicative Spp Abund (%)	6.20	3.28 5	12.50	9.35	1.49 5
Pollution Indicative Spp Biom (%)	1.53 5	27.16	14.89 3	8.06 3	0.38
Pollution Sensitive Spp Abund (%)	44.96 3	67.21 5	25.00	18.69	26.87 3
Pollution Sensitive Spp Biom (%)	47.01	57.90	8.51 1	2.02 1	5.34
Carnivore-Omnivore Abund (%)	19.38	22.95 3	75.00 5	59.81 5	38.81 5
Deep Deposit Feeder Abund (%)	63.57 5	37.70	12.50	7.48	19.40
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29401	29402	29403	29404	29405
Acteocina canaliculata	364	159	23	114	
Ampelisca abdita				23	
Arcuatula papyria (Epi.)		136			
Ascidacea (Epi.)	45			45	
Balanus improvisus (Epi.)		45		341	23
Diadumene leucolela (Epi.)				23	
Epitonium rupicola (Epi.)		23			
Gemma gemma					91
Geukensia demissa (Epi.)				23	
Glycinde solitaria	91	114	23	136	114
Hermundura americana			227	977	364
Heteromastus filiformis	91	91			
Leucon americanus				136	227
Listriella barnardi	23				
Macoma mitchelli	45	23			295
Maldanidae	159				
Marenzelleria viridis		23			
Mediomastus ambiseta	613	204	45	182	295
Micrura leidy		23			
Molgula manhattensis (Epi.)		227			
Mulinia lateralis		23			
Mytilidae (Epi.)					45
Neanthes succinea	91			227	23
Paraprionospio pinnata	68	23	45	136	
Phoronis spp.	45	23			
Phyllodoce arenae	23				
Podarkeopsis levifuscina		23			
Polydora cornuta				386	
Rictaxis punctostriatus					91
Scolecopsis texana		23			
Sphaeroma quadridentatum (Epi.)	23				
Spiochaetopterus costarum	68	409		23	
Streblospio benedicti	114			91	23
Stylochus ellipticus (Epi.)			23		
Tagelus plebeius	23				
Tubificoides spp.	1000	227			
Total Abundance w/ Epifauna	2999	1818	386	2863	1590
Total Abundance w/o Epifauna	2931	1386	364	2431	1522
Number of Taxa w/ Epifauna	18	18	6	15	11
Number of Taxa w/o Epifauna	16	14	5	11	9

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	29401	29402	29403	29404	29405
Acteocina canaliculata	0.0364	0.0068	0.0011	0.0091	
Ampelisca abdita				0.0011	
Arcuatula papyria (Epi.)		0.0273			
Ascidacea (Epi.)	0.0011			0.0011	
Balanus improvisus (Epi.)		0.0136		1.5313	0.0045
Diadumene leucolela (Epi.)				0.0136	
Epitonium rupicola (Epi.)		0.0432			
Gemma gemma					0.0068
Geukensia demissa (Epi.)				0.0091	
Glycinde solitaria	0.0045	0.0204	0.0068	0.0023	0.0091
Hermundura americana			0.0818	0.7134	0.2363
Heteromastus filiformis	0.1363	0.0841			
Leucon americanus				0.0045	0.0045
Listriella barnardi	0.0023				
Macoma mitchelli	0.0045	0.0023			0.0295
Maldanidae	0.1863				
Marenzelleria viridis		0.0068			
Mediomastus ambiseta	0.0182	0.0068			
Micrura leidy		0.1068			
Molgula manhattensis (Epi.)		0.3817			
Mulinia lateralis		0.3522			
Mytilidae (Epi.)					0.0011
Neanthes succinea	0.0409			0.1545	0.0011
Paraprionospio pinnata	0.0068	0.0091	0.0159	0.0772	
Phoronis spp.	0.0114	0.0023			
Phyllodoce arenae	0.0023				
Podarkeopsis levifuscina		0.0011			
Polydora cornuta				0.0386	
Rictaxis punctostriatus					0.0023
Scolecopsis texana		0.0023			
Sphaeroma quadridentatum (Epi.)	0.0045				
Spiochaetopterus costarum	0.0136	0.7270		0.0023	
Streblospio benedicti	0.0045			0.0045	0.0011
Stylochus ellipticus (Epi.)			0.0011		
Tagelus plebeius	0.0011				
Tubificoides spp.	0.0091	0.0023			
Total Biomass w/ Epifauna	0.7475	1.7960	0.1079	2.5696	0.3033
Total Biomass w/o Epifauna	0.7418	1.3303	0.1068	1.0144	0.2976

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29406	29407	29408	29409	29410
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Oligohaline	Low Mesohaline	Low Mesohaline	High Meso Sand	High Meso Sand
Date	09/28/22	09/28/22	09/28/22	09/24/22	09/24/22
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.4	2.0	10.0	3.5	3.5
Salinity (ppt)	1.99	10.50	6.28	13.41	13.42
Temperature (C)	22.11	21.27	21.48	22.38	21.96
Dissolved Oxygen (mg/L)	0.3	7.4	2.9	6.4	6.5
Sediment Silt-Clay (%)	96.25	94.43	91.35	20.15	33.23
Total Carbon (%)	5.94	3.18	3.59	0.49	0.50
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.67	2.20	3.00	2.67	2.00
Condition	Severely Degr.	Degraded	Meets Goal	Marginal	Severely Degr.
# Attributes Scored	6	5	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.27	2.10	0.69	2.70	3.11
Abundance (#/m2)	364	795	1477	591	4203
Biomass (g/m2)	0.02	0.61	0.23	1.27	0.92
Pollution Indicative Spp Abund (%)	56.25	14.29	0.00	7.69	18.92
Pollution Indicative Spp Biom (%)	71.43	33.89	0.00	11.79	14.64
Pollution Sensitive Spp Abund (%)	0.00	20.00	3.08	50.00	5.95
Pollution Sensitive Spp Biom (%)	0.00	29.24	87.00	32.32	0.74
Carnivore-Omnivore Abund (%)	6.25	71.43	4.62	15.38	16.76
Deep Deposit Feeder Abund (%)	43.75	5.71	89.23	53.85	21.08
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 (%)	100.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.20	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	100.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29406	29407	29408	29409	29410
Apocorophium lacustre (Epi.)					704
Carinoma tremaphoros			68	23	91
Coelotanypus spp.	23				
Cyathura polita		114			
Diadumene leucolela (Epi.)					23
Eteone heteropoda					136
Gemma gemma				23	1318
Geukensia demissa (Epi.)		23			
Glycinde solitaria		23		23	
Hermundura americana		432			
Heteromastus filiformis				91	477
Ischadium recurvum (Epi.)					23
Leptocheirus plumulosus		23	23		
Littoridinops tenuipes (Epi.)	23				
Macoma balthica				45	
Macoma mitchelli		45	23	68	364
Marenzelleria viridis			45		
Mediomastus ambiseta		23		227	182
Melita nitida (Epi.)					23
Micrura leidyi				23	
Molgula manhattensis (Epi.)					45
Mulinia lateralis		114		45	182
Mytilopsis leucophaeata (Epi.)					23
Neanthes succinea				23	477
Odostomia engonia (Epi.)					23
Polydora cornuta					204
Streblospio benedicti	182				477
Tagelus plebeius					68
Tubificoides spp.	159	23	1318		227
Total Abundance w/ Epifauna	386	818	1477	591	5067
Total Abundance w/o Epifauna	364	795	1477	591	4203
Number of Taxa w/ Epifauna	4	9	5	10	19
Number of Taxa w/o Epifauna	3	8	5	10	12

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	29406	29407	29408	29409	29410
Apocorophium lacustre (Epi.)					0.0318
Carinoma tremaphoros			0.0045	0.0114	0.0250
Coelotanypus spp.	0.0045				
Cyathura polita		0.1749			
Diadumene leucolena (Epi.)					0.0454
Eteone heteropoda					0.0023
Gemma gemma				0.0136	0.2545
Geukensia demissa (Epi.)		0.0023			
Glycinde solitaria		0.0023		0.0318	
Hermundura americana		0.1954			
Heteromastus filiformis				0.0454	0.1386
Ischadium recurvum (Epi.)					1.0474
Leptocheirus plumulosus		0.0045	0.0114		
Littoridinops tenuipes (Epi.)	0.0011				
Macoma balthica				0.3749	
Macoma mitchelli		0.0204	0.0023	0.0318	0.1272
Marenzelleria viridis			0.1977		
Mediomastus ambiseta		0.0011		0.0045	0.0023
Melita nitida (Epi.)					0.0023
Micrura leidyi				0.5907	
Molgula manhattensis (Epi.)					0.0136
Mulinia lateralis		0.2068		0.1500	0.1227
Mytilopsis leucophaeata (Epi.)					0.0523
Neanthes succinea				0.0182	0.2204
Odostomia engonia (Epi.)					0.0011
Polydora cornuta					0.0023
Streblospio benedicti	0.0068				0.0091
Tagelus plebeius					0.0045
Tubificoides spp.	0.0045	0.0045	0.0114		0.0068
Total Biomass w/ Epifauna	0.0170	0.6123	0.2272	1.2723	2.1096
Total Biomass w/o Epifauna	0.0159	0.6100	0.2272	1.2723	0.9156

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29411	29412	29413	29414	29415
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	High Meso Mud	High Meso Sand
Date	09/24/22	09/24/22	09/13/22	09/13/22	09/13/22
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)	0.6	3.5	13.6	4.4	2.6
Salinity (ppt)	10.47	9.54	14.55	12.85	12.58
Temperature (C)	22.60	22.75	25.66	26.23	25.90
Dissolved Oxygen (mg/L)	7.5	6.8	2.2	6.1	5.8
Sediment Silt-Clay (%)	10.44	50.90	97.33	44.22	12.99
Total Carbon (%)	0.15	2.68	2.68	0.50	0.29
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.60	3.40	1.67	2.67	2.33
Condition	Degraded	Meets Goal	Severely Degr.	Marginal	Degraded
# Attributes Scored	5	5	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.49 3	2.84 5	1.00 1	2.45 3	2.54 3
Abundance (#/m2)	2795 3	886 3	45 1	3635 3	2522 5
Biomass (g/m2)	0.27 1	1.16 3	0.00 1	0.57 3	1.29 3
Pollution Indicative Spp Abund (%)	12.20 3	0.00 5	0.00	10.63	27.03 1
Pollution Indicative Spp Biom (%)	11.97	0.00	0.00 5	2.39 5	2.64
Pollution Sensitive Spp Abund (%)	55.28	35.90	0.00	10.00	0.90 1
Pollution Sensitive Spp Biom (%)	45.30 3	30.62 1	0.00 1	22.71 1	11.07
Carnivore-Omnivore Abund (%)	6.50	41.03	0.00 1	6.25 1	2.70 1
Deep Deposit Feeder Abund (%)	64.23	15.38	50.00	72.50	45.95
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	3.60
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	9.04
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29411	29412	29413	29414	29415
Carinoma tremaphoros				23	
Cyathura polita		136			
Cyclaspis varians					114
Edotea triloba (Epi.)	23				45
Eteone heteropoda	91			68	23
Hermundura americana	23	136			
Heteromastus filiformis	91		23	1045	977
Leptocheirus plumulosus	114	68			91
Macoma balthica	432	45		23	
Macoma mitchelli		250	23	318	500
Marenzelleria viridis	23	23		114	
Mediomastus ambiseta	1091	114		227	
Mulinia lateralis					68
Neanthes succinea	68	91		136	45
Rangia cuneata					23
Streblospio benedicti	250			318	500
Tubificidae imm w/o cap chaetae					91
Tubificoides spp.	613	23		1363	91
Total Abundance w/ Epifauna	2817	886	45	3635	2567
Total Abundance w/o Epifauna	2795	886	45	3635	2522
Number of Taxa w/ Epifauna	11	9	2	10	12
Number of Taxa w/o Epifauna	10	9	2	10	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29411	29412	29413	29414	29415
Carinoma tremaphoros				0.0023	
Cyathura polita		0.1386			
Cyclaspis varians					0.0023
Edotea triloba (Epi.)	0.0023				0.0023
Eteone heteropoda	0.0273			0.0023	0.0011
Hermundura americana	0.0182	0.1363			
Heteromastus filiformis	0.0091		0.0023	0.2295	0.2863
Leptocheirus plumulosus	0.0159	0.0318			0.0045
Macoma balthica	0.0682	0.2022		0.0045	
Macoma mitchelli		0.0977	0.0023	0.0454	0.8156
Marenzelleria viridis	0.0182	0.0114		0.1204	
Mediomastus ambiseta	0.0341	0.0023		0.0045	
Mulinia lateralis					0.0136
Neanthes succinea	0.0636	0.5362		0.1340	0.0045
Rangia cuneata					0.1431
Streblospio benedicti	0.0045			0.0114	0.0182
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.	0.0068	0.0011		0.0159	0.0023
Total Biomass w/ Epifauna	0.2681	1.1576	0.0045	0.5703	1.2950
Total Biomass w/o Epifauna	0.2658	1.1576	0.0045	0.5703	1.2928

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29416	29417	29418	29419	29420
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	09/13/22	09/13/22	09/13/22	09/13/22	09/13/22
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)	0.4	4.8	0.3	2.6	1.5
Salinity (ppt)	11.17	11.73	11.21	9.45	8.53
Temperature (C)	26.37	26.13	26.29	26.24	26.27
Dissolved Oxygen (mg/L)	6.9	4.7	5.6	2.9	4.6
Sediment Silt-Clay (%)	3.13	63.91	3.79	97.86	97.66
Total Carbon (%)	0.74	2.05	0.62	2.98	2.43
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.20	4.20	4.60	1.00	2.60
Condition	Degraded	Meets Goal	Meets Goal	Severely Degr.	Degraded
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.95 5	2.95 5	2.58 5	0.00 1	1.29 1
Abundance (#/m2)	477 1	1704 5	1522 5	0 1	318 1
Biomass (g/m2)	0.42 1	1.63 3	3.86 3	0.00 1	1.03 3
Pollution Indicative Spp Abund (%)	28.57 1	9.33 5	7.46 5	100.00 1	7.14 5
Pollution Indicative Spp Biom (%)	2.71	0.28	0.15	100.00	0.44
Pollution Sensitive Spp Abund (%)	19.05	18.67	17.91	0.00	21.43
Pollution Sensitive Spp Biom (%)	74.80 3	77.68 3	81.19 5	0.00 1	99.45 3
Carnivore-Omnivore Abund (%)	28.57	12.00	11.94	0.00	21.43
Deep Deposit Feeder Abund (%)	14.29	29.33	10.45	0.00	71.43
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	6.00	6.00	0.00	6.20
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29416	29417	29418	29419	29420
Coelotanypus spp.					23
Cyathura polita					45
Cyclaspis varians			68		
Edotea triloba (Epi.)			45		
Eteone heteropoda	23	91	45		
Heteromastus filiformis	68	159	159		
Laeonereis culveri	23				
Leptocheirus plumulosus	45	477	91		
Macoma balthica	45	114			23
Macoma mitchelli	23	136	682		
Marenzelleria viridis	45	182	182		
Melita nitida (Epi.)		114			
Neanthes succinea	91	114	136		
Rangia cuneata		23	91		
Streblospio benedicti	114	68	68		
Tubificoides spp.		341			227
Total Abundance w/ Epifauna	477	1818	1568	0	318
Total Abundance w/o Epifauna	477	1704	1522		318
Number of Taxa w/ Epifauna	9	11	10	0	4
Number of Taxa w/o Epifauna	9	10	9	0	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29416	29417	29418	29419	29420
Coelotanypus spp.					0.0045
Cyathura polita					0.2681
Cyclaspis varians			0.0023		
Edotea triloba (Epi.)			0.0045		
Eteone heteropoda	0.0045	0.0023	0.0045		
Heteromastus filiformis	0.0091	0.0250	0.0295		
Laeonereis culveri	0.0523				
Leptocheirus plumulosus	0.0068	0.0591	0.0136		
Macoma balthica	0.2613	0.8270			0.7566
Macoma mitchelli	0.0011	0.2227	0.5453		
Marenzelleria viridis	0.0523	0.2499	0.1840		
Melita nitida (Epi.)		0.0023			
Neanthes succinea	0.0250	0.0477	0.1295		
Rangia cuneata		0.1886	2.9491		
Streblospio benedicti	0.0068	0.0023	0.0011		
Tubificoides spp.		0.0045			0.0011
Total Biomass w/ Epifauna	0.4192	1.6313	3.8635	0.0000	1.0304
Total Biomass w/o Epifauna	0.4192	1.6290	3.8590	0.0000	1.0304

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29421	29422	29423	29425	29426
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Oligohaline	Oligohaline	Oligohaline	Oligohaline	High Meso Mud
Date	09/13/22	09/01/22	09/01/22	08/31/22	09/27/22
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)	2.2	3.8	0.6	0.5	3.3
Salinity (ppt)	4.56	1.56	2.95	2.21	17.38
Temperature (C)	26.07	27.88	26.81	28.03	21.18
Dissolved Oxygen (mg/L)	4.8	6.3	8.1	8.8	8.0
Sediment Silt-Clay (%)	94.54	97.67	3.74	98.70	68.66
Total Carbon (%)	2.56	2.93	0.16	2.23	2.14
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	2.33	3.67	3.00	3.33
Condition	Degraded	Degraded	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	6	6	6	6	6
Shannon-Wiener Index	Value Score	Value Score	Value Score	Value Score	Value Score
Abundance (#/m2)	2.36 1	0.57 3	1.99 5	1.69 5	2.81 3
Biomass (g/m2)	5362 1	341 3	1977 5	2272 5	1863 5
Pollution Indicative Spp Abund (%)	10.78	0.10	79.68	0.80	1.34 3
Pollution Indicative Spp Biom (%)	30.51	100.00	52.87	99.00	20.73
Pollution Sensitive Spp Abund (%)	0.63	100.00	0.42	99.15	34.10 1
Pollution Sensitive Spp Biom (%)	8.05	0.00	6.90	0.00	67.07
Carnivore-Omnivore Abund (%)	98.48	0.00	99.54	0.00	58.35 3
Deep Deposit Feeder Abund (%)	5.08 1	86.67 5	49.43 5	41.00 5	42.68 5
TF Poll. Indicative Spp Abund (%)	14.41	13.33	22.99	59.00	32.93
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	9.32	13.33	0.00	59.00	0.00
Oligo Poll. Sens. Spp Abund (%)	84.75 3	100.00 1	93.10 3	100.00 1	0.00
Tolerance Score	1.69 3	0.00 1	3.45 3	0.00 1	0.00
Tany./Chir. Abundance Ratio	8.93 3	6.68 3	9.55 1	9.62 1	0.00
	50.00 3	100.00 1	0.00 5	12.50 5	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29421	29422	29423	29425	29426
Acteocina canaliculata					545
Apocorophium lacustre (Epi.)	795				
Arcuatula papyria (Epi.)					23
Balanus improvisus (Epi.)	45				
Boccardiella ligERICA	341				
Chironomus spp.			977	795	
Coelotanypus spp.	23	295		114	
Cryptochironomus spp.	23				
Cyathura polita	227				
Diadumene leuCOLena (Epi.)					23
Glycinde solitaria					159
Leptocheirus plumulosus			23		
Leucon americanus					45
Limnodrilus hoffmeisteri	182			273	
Littoridinops tenuipes (Epi.)			23		
Loimia medusa					23
Macoma mitchelli	23				
Marenzelleria viridis	91		68		
Mediomastus ambiseta					523
Mulinia lateralis					23
Mytilopsis leucophaeata (Epi.)	863		45		
Neanthes succinea				23	23
Ogyrides alphaerostris					23
Paraprionospio pinnata					227
Pectinaria gouldii					68
Polydora cornuta	2636		318		
Rangia cuneata	114		68		
Rhithropanopeus harrisii (Epi.)	114				
Rictaxis punctostriatus					
Streblospio benedicti	1113		68		136
Stylochus ellipticus (Epi.)	23				
Tubificidae imm w/o cap chaetae		45			
Tubificidae imm w/o cap chaetae *	318			1068	
Tubificoides spp.	273		454		23
Total Abundance w/ Epifauna	7202	341	2045	2272	1908
Total Abundance w/o Epifauna	5362	341	1977	2272	1863
Number of Taxa w/ Epifauna	16	2	9	4	15
Number of Taxa w/o Epifauna	11	2	7	4	13

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	29421	29422	29423	29425	29426
Acteocina canaliculata					0.0250
Apocorophium lacustre (Epi.)	0.0523				
Arcuatula papyria (Epi.)					0.0182
Balanus improvisus (Epi.)	0.0795				
Boccardiella ligERICA	0.0136				
Chironomus spp.			0.3294	0.6021	
Coelotanypus spp.	0.0023	0.0932		0.0568	
Cryptochironomus spp.	0.0011				
Cyathura polita	0.0273				
Diadumene leuCOLena (Epi.)					0.1386
Glycinde solitaria					0.0091
Leptocheirus plumulosus			0.0045		
Leucon americanus					0.0011
Littoridinops tenuipes (Epi.)			0.0011		
Loimia medusa					0.7316
Macoma mitchelli	0.0011				
Marenzelleria viridis	0.1840		0.0863		
Mediomastus ambiseta					0.0159
Mulinia lateralis					0.2636
Mytilopsis leucophaeata (Epi.)	3.9033		0.0011		
Neanthes succinea				0.0068	0.0250
Ogyrides alphaerostris					0.0659
Oligochaeta	0.0386	0.0011		0.1386	
Paraprionospio pinnata					0.1908
Pectinaria gouldii					0.0068
Polydora cornuta	0.0727		0.0182		
Rangia cuneata	10.4080		79.2292		
Rhithropanopeus harrisii (Epi.)	0.1181				
Rictaxis punctostriatus					0.0011
Streblospio benedicti	0.0273		0.0023		0.0023
Stylochus ellipticus (Epi.)	0.0045				
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.	0.0068		0.0091		0.0011
Total Biomass w/ Epifauna	14.9407	0.0954	79.6813	0.8043	1.4961
Total Biomass w/o Epifauna	10.7829	0.0954	79.6790	0.8043	1.3393

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29501	29503	29504	29505	29506
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Polyhaline Sand	Polyhaline Sand	Polyhaline Mud	Polyhaline Sand	Polyhaline Sand
Date	09/27/22	09/27/22	09/27/22	09/27/22	09/27/22
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)	7.7	0.6	1.9	8.5	5.7
Salinity (ppt)	19.16	18.43	18.45	18.82	18.27
Temperature (C)	22.80	21.65	21.59	22.20	21.60
Dissolved Oxygen (mg/L)	7.2	8.7	7.9	7.3	7.5
Sediment Silt-Clay (%)	2.27	4.10	44.47	4.16	5.85
Total Carbon (%)	0.13	0.09	0.27	0.14	0.10
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.33	1.67	2.33	3.67	1.67
Condition	Meets Goal	Severely Degr.	Degraded	Meets Goal	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.66 5	3.30 3	2.19 1	3.55 5	3.23 3
Abundance (#/m2)	1704 3	932 1	2772 5	1613 3	1272 1
Biomass (g/m2)	1.78 3	0.36 1	1.09 3	1.02 3	0.19 1
Pollution Indicative Spp Abund (%)	4.00	21.95	5.74	5.63	35.71
Pollution Indicative Spp Biom (%)	2.56 5	34.48 1	25.26 1	2.89 5	57.31 1
Pollution Sensitive Spp Abund (%)	49.33 3	48.78 3	68.85	52.11 5	44.64 3
Pollution Sensitive Spp Biom (%)	21.31	48.90	53.24 3	57.06	24.56
Carnivore-Omnivore Abund (%)	32.00	41.46	7.38 1	29.58	37.50
Deep Deposit Feeder Abund (%)	1.33 1	4.88 1	80.33	9.86 1	8.93 1
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29501	29503	29504	29505	29506
Acteocina canaliculata	45	227		227	295
Ameroculodes species complex		45		23	
Ampelisca abdita	45				
Amphiporus bioculatus				45	
Asciidiacea (Epi.)		477			
Branchiostoma caribaeum	23				
Cyathura polita	159				
Edwardsia elegans	23	91			
Epitonium rupicola (Epi.)	45				
Gemma gemma					23
Glycinde solitaria	159	45	159		136
Heteromastus filiformis		45	545		23
Lepidactylus dytiscus	23				
Listriella barnardi				23	
Loimia medusa	45		23	114	
Lyonsia hyalina		23			
Macoma balthica			45		
Macoma mitchelli		45			91
Maldanidae				23	
Marenzelleria viridis		23	23		
Mediomastus ambiseta	23		1568	68	45
Micrura leidyi	68			23	
Mulinia lateralis		114	45		227
Mytilidae (Epi.)	23				
Mytilus edulis (Epi.)				45	
Nassarius trivittatus				23	
Neanthes succinea					45
Nemertina		23			
Odostomia engonia (Epi.)					23
Ogyrides alphaerostris			23		
Paraprionospio pinnata	68	91	45	91	204
Parvilucina crenella	273			273	23
Phoronis spp.	250	23	68	159	68
Phyllodoce arenae				23	
Podarkeopsis levifuscina	91		23	114	
Polynoidea (Epi.)	23				
Rictaxis punctostriatus				23	
Saccoglossus kowalevskii	227				
Spiochaetopterus costarum	136	136		273	23
Spiophanes bombyx	23				
Streblospio benedicti			68		23
Stylochus ellipticus (Epi.)			45	45	23
Tagelus plebeius			23		
Tharyx spp.	23			23	
Tubificoides spp.			114	68	45
Total Abundance w/ Epifauna	1795	1409	2817	1704	1318
Total Abundance w/o Epifauna	1704	932	2772	1613	1272
Number of Taxa w/ Epifauna	21	14	15	20	16
Number of Taxa w/o Epifauna	18	13	14	18	14

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	29501	29503	29504	29505	29506
Acteocina canaliculata	0.0091	0.0204		0.0318	0.0250
Ameroculodes species complex		0.0068		0.0011	
Ampelisca abdita	0.0068				
Amphiporus bioculatus				0.0011	
Asciodiacea (Epi.)		0.0068			
Branchiostoma caribaeum	0.0682				
Cyathura polita	0.0977				
Edwardsia elegans	0.0023	0.0136			
Epitonium rupicola (Epi.)	0.0682				
Gemma gemma					0.0136
Glycinde solitaria	0.0136	0.0023	0.0636		0.0091
Heteromastus filiformis		0.0273	0.1590		0.0068
Lepidactylus dytiscus	0.0091				
Listriella barnardi				0.0011	
Loimia medusa	0.0682		0.0023	0.4567	
Lyonsia hyalina		0.0011			
Macoma balthica			0.2090		
Macoma mitchelli		0.0045			0.0011
Maldanidae				0.0273	
Marenzelleria viridis		0.0182	0.0318		
Mediomastus ambiseta	0.0011		0.0727	0.0011	0.0023
Micrura leidyi	0.5725			0.0227	
Mulinia lateralis		0.0727	0.2272		0.0727
Mytilidae (Epi.)	0.0011				
Mytilus edulis (Epi.)				0.0023	
Nassarius trivittatus				0.0023	
Neanthes succinea					0.0045
Nemertina		0.0068			
Odostomia engonia (Epi.)					0.0023
Ogyrides alphaerostris			0.0704		
Paraprionospio pinnata	0.0454	0.0523	0.0454	0.0295	0.0341
Parvilucina crenella	0.6271			0.3317	0.0068
Phoronis spp.	0.0886	0.0023	0.0318	0.0613	0.0091
Phyllodoce arenae				0.0091	
Podarkeopsis levifuscina	0.0114		0.0023	0.0068	
Polynoidea (Epi.)	0.0011				
Rictaxis punctostriatus				0.0011	
Saccoglossus kowalevskii	0.0523				
Spiochaetopterus costarum	0.0682	0.1340		0.0318	0.0023
Spiophanes bombyx	0.0318				
Streblospio benedicti			0.0023		0.0045
Stylochus ellipticus (Epi.)			0.0409	0.0023	0.0023
Tagelus plebeius			0.1681		
Tharyx spp.	0.0023			0.0023	
Tubificoides spp.			0.0023	0.0023	0.0023
Total Biomass w/ Epifauna	1.8460	0.3692	1.1292	1.0258	0.1988
Total Biomass w/o Epifauna	1.7756	0.3624	1.0883	1.0213	0.1943

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29507	29508	29509	29510	29511
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	Polyhaline Mud	Polyhaline Mud	Polyhaline Sand	Polyhaline Sand
Date	09/27/22	09/27/22	09/27/22	09/27/22	09/27/22
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)	8.8	10.5	10.5	2.9	2.4
Salinity (ppt)	11.81	18.33	18.80	18.01	18.31
Temperature (C)	21.66	22.90	23.30	21.00	21.40
Dissolved Oxygen (mg/L)	1.6	7.5	6.0	7.4	7.3
Sediment Silt-Clay (%)	99.07	89.28	86.36	6.37	11.23
Total Carbon (%)	2.12	2.84	2.69	0.16	0.29
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.20	1.00	1.00	1.33	2.00
Condition	Degraded	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	5	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.51 1	0.00 1	0.00 1	2.26 1	2.83 3
Abundance (#/m2)	1181 3	0 1	0 1	591 1	682 1
Biomass (g/m2)	2.07 3	0.00 1	0.00 1	0.41 1	1.03 3
Pollution Indicative Spp Abund (%)	75.00 1	100.00	100.00	19.23	33.33
Pollution Indicative Spp Biom (%)	12.43	100.00 1	100.00 1	77.90 1	71.08 1
Pollution Sensitive Spp Abund (%)	5.77	0.00	0.00	69.23 3	33.33 3
Pollution Sensitive Spp Biom (%)	64.25 3	0.00 1	0.00 1	16.57	1.43
Carnivore-Omnivore Abund (%)	21.15	0.00 1	0.00 1	69.23	36.67
Deep Deposit Feeder Abund (%)	0.00	0.00	0.00	0.00 1	3.33 1
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29507	29508	29509	29510	29511
Acteocina canaliculata				250	45
Amerocolodes species complex					23
Amphiporus bioculatus					23
Eteone heteropoda	23				
Glycinde solitaria				136	136
Haminoea solitaria					23
Hermundura americana	23				
Lepidametria commensalis	23				
Leptosynapta tenuis					68
Loimia medusa	68				
Macoma mitchelli				45	68
Mediomastus ambiseta					23
Mulinia lateralis				23	227
Neanthes succinea	23			23	
Nemertina					23
Ogyrides alphaerostris	114				
Paraprionospio pinnata	863			91	
Phoronis spp.					23
Sigambra tentaculata	45				
Spiochaetopterus costarum				23	
Total Abundance w/ Epifauna	1181	0	0	591	682
Total Abundance w/o Epifauna	1181			591	682
Number of Taxa w/ Epifauna	8	0	0	7	11
Number of Taxa w/o Epifauna	8	0	0	7	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29507	29508	29509	29510	29511
Acteocina canaliculata				0.0432	0.0023
Amerocolodes species complex					0.0091
Amphiporus bioculatus					0.0011
Eteone heteropoda	0.0045				
Glycinde solitaria				0.0091	0.0091
Haminoea solitaria					0.0068
Hermundura americana	0.1704				
Lepidametria commensalis	0.0500				
Leptosynapta tenuis					0.0068
Loimia medusa	1.3268				
Macoma mitchelli				0.0182	0.2476
Mediomastus ambiseta					0.0011
Mulinia lateralis				0.2454	0.7316
Neanthes succinea	0.0023			0.0045	
Nemertina					0.0114
Ogyrides alphaerostris	0.2545				
Paraprionospio pinnata	0.2522			0.0750	
Phoronis spp.					0.0023
Sigambra tentaculata	0.0045				
Spiochaetopterus costarum				0.0159	
Total Biomass w/ Epifauna	2.0652	0.0000	0.0000	0.4112	1.0292
Total Biomass w/o Epifauna	2.0652	0.0000	0.0000	0.4112	1.0292

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29512	29513	29514	29515	29516
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	High Meso Mud	High Meso Mud	Polyhaline Mud	High Meso Sand
Date	09/16/22	09/16/22	09/16/22	09/16/22	09/16/22
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)	3.7	2.6	0.6	11.3	0.5
Salinity (ppt)	16.75	15.05	14.41	18.18	15.84
Temperature (C)	24.62	24.85	25.00	25.14	24.74
Dissolved Oxygen (mg/L)	6.7	5.8	7.7	1.6	8.1
Sediment Silt-Clay (%)	15.14	68.70	98.64	99.30	17.40
Total Carbon (%)	0.33	1.71	0.82	3.13	0.09
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	2.00	2.33	1.00	1.67
Condition	Meets Goal	Severely Degr.	Degraded	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.63 3	1.53 1	1.84 1	0.00 1	2.39 1
Abundance (#/m2)	750 1	477 1	5612 1	0 1	1091 3
Biomass (g/m2)	0.29 1	0.19 1	0.59 3	0.00 1	0.37 1
Pollution Indicative Spp Abund (%)	3.03 5	9.52 1	15.38 3	100.00 1	20.83 3
Pollution Indicative Spp Biom (%)	0.79 1	28.05 3	14.23 3	100.00 1	11.52 3
Pollution Sensitive Spp Abund (%)	45.45 3	85.71 3	70.85 3	0.00 1	8.33 1
Pollution Sensitive Spp Biom (%)	9.88 1	63.41 3	64.62 5	0.00 1	51.52 3
Carnivore-Omnivore Abund (%)	48.48 5	14.29 3	5.26 1	0.00 1	10.42 1
Deep Deposit Feeder Abund (%)	12.12 1	76.19 3	74.90 3	0.00 1	8.33 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	0.00 1	0.00 1	0.00 1	0.00 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	0.00 1	0.00 1	0.00 1	0.00 1
Tany./Chir. Abundance Ratio	0.00 1	0.00 1	0.00 1	0.00 1	0.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29512	29513	29514	29515	29516
Acteocina canaliculata	91				
Cyathura polita		68	250		45
Eteone heteropoda			23		
Gemma gemma	23				500
Glycinde solitaria	182				
Haminoea solitaria					23
Heteromastus filiformis	23		227		91
Leitoscoloplos robustus		45	23		
Lepidactylus dytiscus					91
Leptocheirus plumulosus			114		23
Macoma mitchelli	250	23	91		
Marenzelleria viridis		23	91		
Mediomastus ambiseta	68	318	3635		
Micrura leidy	23				
Mulinia lateralis	23				227
Neanthes succinea	68		23		45
Streblospio benedicti			818		
Tagelus plebeius					45
Tubificoides spp.			318		
Total Abundance w/ Epifauna	750	477	5612	0	1091
Total Abundance w/o Epifauna	750	477	5612		1091
Number of Taxa w/ Epifauna	9	5	11	0	9
Number of Taxa w/o Epifauna	9	5	11	0	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29512	29513	29514	29515	29516
Acteocina canaliculata	0.0045				
Cyathura polita		0.0636	0.0750		0.1908
Eteone heteropoda			0.0045		
Gemma gemma	0.0068				0.0182
Glycinde solitaria	0.0227				
Haminoea solitaria					0.0023
Heteromastus filiformis	0.0159		0.0727		0.0318
Leitoscoloplos robustus		0.0523	0.0545		
Lepidactylus dytiscus					0.0227
Leptocheirus plumulosus			0.0023		0.0091
Macoma mitchelli	0.0409	0.0159	0.0182		
Marenzelleria viridis		0.0364	0.1181		
Mediomastus ambiseta	0.0011	0.0182	0.1886		
Micrura leidy	0.1659				
Mulinia lateralis	0.0023				0.0432
Neanthes succinea	0.0273		0.0273		0.0545
Streblospio benedicti			0.0250		
Tagelus plebeius					0.0023
Tubificoides spp.			0.0045		
Total Biomass w/ Epifauna	0.2874	0.1863	0.5907	0.0000	0.3749
Total Biomass w/o Epifauna	0.2874	0.1863	0.5907	0.0000	0.3749

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29517	29518	29519	29520	29521
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Mud	High Meso Sand	Polyhaline Mud	Polyhaline Mud	High Meso Sand
Date	09/16/22	09/12/22	09/12/22	09/12/22	08/25/22
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)	10.8	0.4	8.7	10.0	1.9
Salinity (ppt)	16.08	12.96	18.97	18.98	12.66
Temperature (C)	25.19	25.24	25.52	25.77	27.23
Dissolved Oxygen (mg/L)	5.7	6.1	1.3	0.2	6.6
Sediment Silt-Clay (%)	98.90	15.79	83.71	93.33	3.85
Total Carbon (%)	3.45	0.19	1.83	3.13	0.10
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	2.33	1.00	1.00	1.33
Condition	Severely Degr.	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	0.00 1	2.77 3	0.00 1	0.00 1	1.90 1
Abundance (#/m2)	0 1	1272 3	0 1	0 1	727 1
Biomass (g/m2)	0.00 1	0.39 1	0.00 1	0.00 1	0.26 1
Pollution Indicative Spp Abund (%)	100.00	16.07 3	100.00	100.00	18.75 3
Pollution Indicative Spp Biom (%)	100.00 1	1.76	100.00 1	100.00 1	24.02
Pollution Sensitive Spp Abund (%)	0.00	12.50 3	0.00	0.00	6.25 1
Pollution Sensitive Spp Biom (%)	0.00 1	15.88	0.00 1	0.00 1	13.97
Carnivore-Omnivore Abund (%)	0.00 1	19.64 1	0.00 1	0.00 1	0.00 1
Deep Deposit Feeder Abund (%)	0.00	14.29	0.00	0.00	3.13
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 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29517	29518	29519	29520	29521
Ameroculodes species complex					23
Cyathura polita		45			
Edotea triloba (Epi.)		45			
Eteone heteropoda		45			
Gemma gemma		68			
Glycinde solitaria		23			
Heteromastus filiformis		182			23
Laeonereis culveri		68			
Lepidactylus dytiscus					432
Macoma mitchelli		523			68
Marenzelleria viridis		45			45
Mulinia lateralis					114
Neanthes succinea		68			
Sayella chesapeakea (Epi.)		23			
Streblospio benedicti		159			23
Tagelus plebeius		45			
Total Abundance w/ Epifauna	0	1340	0	0	727
Total Abundance w/o Epifauna		1272			727
Number of Taxa w/ Epifauna	0	13	0	0	7
Number of Taxa w/o Epifauna	0	11	0	0	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29517	29518	29519	29520	29521
Ameroculodes species complex					0.0114
Cyathura polita		0.0045			
Edotea triloba (Epi.)		0.0011			
Eteone heteropoda		0.0023			
Gemma gemma		0.0545			
Glycinde solitaria		0.0045			
Heteromastus filiformis		0.0227			0.0045
Laeonereis culveri		0.0204			
Lepidactylus dytiscus					0.1318
Macoma mitchelli		0.1840			0.0136
Marenzelleria viridis		0.0295			0.0364
Mulinia lateralis					0.0613
Neanthes succinea		0.0364			
Sayella chesapeakea (Epi.)		0.0023			
Streblospio benedicti		0.0045			0.0011
Tagelus plebeius		0.0227			
Total Biomass w/ Epifauna	0.0000	0.3896	0.0000	0.0000	0.2601
Total Biomass w/o Epifauna	0.0000	0.3862	0.0000	0.0000	0.2601

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29522	29523	29524	29525	29526
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Polyhaline Mud	High Meso Sand	High Meso Sand	High Meso Sand	High Meso Sand
Date	08/25/22	09/12/22	09/12/22	08/26/22	09/27/22
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)	9.6	1.9	4.4	4.6	1.2
Salinity (ppt)	18.48	14.80	14.65	12.78	17.66
Temperature (C)	26.25	25.69	25.50	27.02	20.40
Dissolved Oxygen (mg/L)	0.3	7.5	5.9	4.0	7.5
Sediment Silt-Clay (%)	98.48	3.00	4.24	13.73	13.92
Total Carbon (%)	3.38	0.17	0.13	0.48	0.30
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.67	2.33	2.67	3.00	2.33
Condition	Severely Degr.	Degraded	Marginal	Meets Goal	Degraded
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	2.56 3	2.78 3	2.84 3	2.86 3
Abundance (#/m2)	23 1	659 1	704 1	1954 5	1068 3
Biomass (g/m2)	0.00 1	0.63 1	0.99 1	1.39 3	0.14 1
Pollution Indicative Spp Abund (%)	0.00	0.00 5	12.90 3	12.79 3	10.64 3
Pollution Indicative Spp Biom (%)	0.00 5	0.00	30.63	17.70	2.46
Pollution Sensitive Spp Abund (%)	0.00	0.00 1	32.26 3	36.05 3	29.79 3
Pollution Sensitive Spp Biom (%)	0.00 1	0.00	16.57	16.07	20.49
Carnivore-Omnivore Abund (%)	0.00 1	27.59 3	38.71 5	10.47 1	14.89 1
Deep Deposit Feeder Abund (%)	0.00	6.90	9.68	58.14	8.51
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29522	29523	29524	29525	29526
Acteocina canaliculata			23		23
Carinoma tremaphoros		23	23	23	
Cyathura polita					45
Edotea triloba (Epi.)					23
Gemma gemma		159	45		68
Glycinde solitaria			182	23	23
Hargeria rapax					23
Hermundura americana					23
Heteromastus filiformis		45	68	500	
Laeonereis culveri		159			
Lepidactylus dytiscus	23	114	23		
Leptocheirus plumulosus		45			
Macoma balthica			23		
Macoma mitchelli		114	182	136	477
Marenzelleria viridis				227	
Mediomastus ambiseta				454	91
Micrura leidyi			45	23	
Mulinia lateralis			91	23	23
Mytilidae (Epi.)					45
Neanthes succinea				136	23
Phoronis spp.					23
Rictaxis punctostriatus					23
Streblospio benedicti				227	91
Tagelus plebeius					114
Tubificoides spp.				182	
Total Abundance w/ Epifauna	23	659	704	1954	1136
Total Abundance w/o Epifauna	23	659	704	1954	1068
Number of Taxa w/ Epifauna	1	7	10	11	16
Number of Taxa w/o Epifauna	1	7	10	11	14
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29522	29523	29524	29525	29526
Acteocina canaliculata			0.0136		0.0023
Carinoma tremaphoros		0.0045	0.0023	0.0477	
Cyathura polita					0.0136
Edotea triloba (Epi.)					0.0023
Gemma gemma		0.3499	0.1159		0.0023
Glycinde solitaria			0.0011	0.0023	0.0045
Hargeria rapax					0.0023
Hermundura americana					0.0886
Heteromastus filiformis		0.0045	0.0159	0.4112	
Laeonereis culveri		0.0295			
Lepidactylus dytiscus	0.0045	0.0386	0.0114		
Leptocheirus plumulosus		0.0114			
Macoma balthica			0.1500		
Macoma mitchelli		0.1954	0.3522	0.1295	0.0068
Marenzelleria viridis				0.1999	
Mediomastus ambiseta				0.0204	0.0045
Micrura leidyi			0.0273	0.1000	
Mulinia lateralis			0.3044	0.2317	0.0023
Mytilidae (Epi.)					0.0011
Neanthes succinea				0.2227	0.0023
Phoronis spp.					0.0023
Rictaxis punctostriatus					0.0045
Streblospio benedicti				0.0136	0.0011
Tagelus plebeius					0.0011
Tubificoides spp.				0.0068	
Total Biomass w/ Epifauna	0.0045	0.6339	0.9940	1.3859	0.1420
Total Biomass w/o Epifauna	0.0045	0.6339	0.9940	1.3859	0.1386

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29301	29302	29303	29304	29305
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	High Meso Sand	High Meso Mud	Low Mesohaline	Low Mesohaline	High Meso Mud
Date	08/25/22	08/25/22	08/25/22	08/25/22	08/25/22
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	5.1	1.9	2.8	2.6
Salinity (ppt)	12.43	12.75	11.32	11.86	12.27
Temperature (C)	27.91	27.18	27.29	27.11	27.36
Dissolved Oxygen (mg/L)	7.7	4.0	3.3	2.1	0.8
Sediment Silt-Clay (%)	5.77	92.46	98.14	97.84	97.15
Total Carbon (%)	0.19	1.45	2.69	3.66	5.39
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.33	4.33	2.60	1.80	1.00
Condition	Severely Degr.	Meets Goal	Degraded	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.88 3	3.04 5	1.66 1	0.54 1	0.00 1
Abundance (#/m2)	977 1	1045 3	204 1	182 1	0 1
Biomass (g/m2)	0.62 1	2.15 5	2.07 3	0.01 1	0.00 1
Pollution Indicative Spp Abund (%)	34.88 1	4.35 5	0.00 5	0.00 5	100.00 1
Pollution Indicative Spp Biom (%)	67.77 1	0.11 5	0.00 5	0.00 5	100.00 1
Pollution Sensitive Spp Abund (%)	6.98 1	41.30 5	77.78 3	12.50 1	0.00 1
Pollution Sensitive Spp Biom (%)	13.92 1	92.28 5	99.89 3	25.00 1	0.00 1
Carnivore-Omnivore Abund (%)	6.98 1	10.87 3	0.00 5	0.00 5	0.00 1
Deep Deposit Feeder Abund (%)	25.58 1	41.30 5	66.67 3	100.00 1	0.00 1
TF Poll. Indicative Spp Abund (%)	0.00 1	0.00 5	0.00 5	0.00 5	0.00 1
Limnodrilus Abundance (%)	2.33 1	0.00 5	0.00 5	0.00 5	0.00 1
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 5	0.00 5	0.00 5	0.00 1
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 5	0.00 5	0.00 5	0.00 1
Tolerance Score	9.80 1	0.00 5	0.00 5	0.00 5	0.00 1
Tany./Chir. Abundance Ratio	0.00 1	0.00 5	0.00 5	0.00 5	0.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29301	29302	29303	29304	29305
Carinoma tremaphoros		23			
Edotea triloba (Epi.)	23				
Eteone heteropoda	23	23			
Heteromastus filiformis	114	227			
Laeonereis culveri	23				
Leitoscoloplos spp.	114				
Leptocheirus plumulosus	23	159			
Macoma balthica		204	45		
Macoma mitchelli	364	23	23		
Marenzelleria viridis	68	91			
Mediomastus ambiseta		136	114	23	
Mulinia lateralis	45				
Neanthes succinea	23	68			
Paraonis fulgens	23				
Streblospio benedicti	136	23			
Tubificidae imm w/o cap chaetae	23				
Tubificoides spp.		68	23	159	
Total Abundance w/ Epifauna	1000	1045	204	182	0
Total Abundance w/o Epifauna	977	1045	204	182	
Number of Taxa w/ Epifauna	13	11	4	2	0
Number of Taxa w/o Epifauna	12	11	4	2	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29301	29302	29303	29304	29305
Carinoma tremaphoros		0.0114			
Edotea triloba (Epi.)	0.0023				
Eteone heteropoda	0.0068	0.0011			
Heteromastus filiformis	0.0182	0.0727			
Laeonereis culveri	0.0250				
Leitoscoloplos spp.	0.0250				
Leptocheirus plumulosus	0.0045	0.0454			
Macoma balthica		1.8789	2.0584		
Macoma mitchelli	0.0591	0.0068	0.0011		
Marenzelleria viridis	0.0863	0.0932			
Mediomastus ambiseta		0.0091	0.0045	0.0023	
Mulinia lateralis	0.3862				
Neanthes succinea	0.0023	0.0227			
Paraonis fulgens	0.0045				
Streblospio benedicti	0.0011	0.0011			
Tubificidae imm w/o cap chaetae	0.0011				
Tubificoides spp.		0.0045	0.0011	0.0068	
Total Biomass w/ Epifauna	0.6225	2.1470	2.0652	0.0091	0.0000
Total Biomass w/o Epifauna	0.6203	2.1470	2.0652	0.0091	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29306	29307	29308	29310	29311
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	High Meso Mud	Low Mesohaline
Date	08/25/22	08/26/22	08/26/22	08/30/22	08/24/22
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)	2.0	1.7	9.7	4.5	0.8
Salinity (ppt)	11.24	10.24	12.34	12.02	9.24
Temperature (C)	27.35	27.79	26.89	27.70	26.88
Dissolved Oxygen (mg/L)	0.2	2.7	1.1	4.2	6.5
Sediment Silt-Clay (%)	97.78	96.98	99.28	74.50	4.60
Total Carbon (%)	4.88	5.86	2.11	2.02	0.22
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	1.00	2.00	3.00	3.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Meets Goal	Meets Goal
# Attributes Scored	5	5	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	0.00 1	0.00 1	2.03 3	2.74 5
Abundance (#/m2)	0 1	23 1	23 1	682 1	1749 5
Biomass (g/m2)	0.00 1	0.00 1	0.00 1	2.69 5	1.45 3
Pollution Indicative Spp Abund (%)	100.00 1	100.00 1	0.00 0	0.00 5	28.57 1
Pollution Indicative Spp Biom (%)	100.00 0	100.00 0	0.00 5	0.00 5	1.10 0
Pollution Sensitive Spp Abund (%)	0.00 0	0.00 0	100.00 0	46.67 1	23.38 0
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	100.00 3	89.00 3	21.37 1
Carnivore-Omnivore Abund (%)	0.00 0	0.00 0	0.00 1	6.67 1	14.29 0
Deep Deposit Feeder Abund (%)	0.00 0	0.00 0	100.00 0	46.67 1	7.79 0
TF Poll. Indicative Spp Abund (%)	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
Limnodrilus Abundance (%)	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
Oligo Poll. Indic. Spp Abund (%)	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
Oligo Poll. Sens. Spp Abund (%)	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0
Tolerance Score	0.00 0	0.00 0	0.00 0	0.00 0	6.00 0
Tany./Chir. Abundance Ratio	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29306	29307	29308	29310	29311
Cyathura polita				23	
Edotea triloba (Epi.)					45
Eteone heteropoda					227
Hydrobiidae (Epi.)					591
Laeonereis culveri					23
Lepidactylus dytiscus					23
Leptocheirus plumulosus				23	500
Macoma balthica				250	
Macoma mitchelli				23	136
Marenzelleria viridis				23	364
Mediomastus ambiseta			23	23	
Neanthes succinea				23	
Polydora cornuta					23
Rangia cuneata					45
Streblospio benedicti		23			273
Tubificoides spp.				295	136
Total Abundance w/ Epifauna	0	23	23	682	2386
Total Abundance w/o Epifauna		23	23	682	1749
Number of Taxa w/ Epifauna	0	1	1	8	12
Number of Taxa w/o Epifauna	0	1	1	8	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29306	29307	29308	29310	29311
Cyathura polita				0.0636	
Edotea triloba (Epi.)					0.0114
Eteone heteropoda					0.0114
Hydrobiidae (Epi.)					0.0477
Laeonereis culveri					0.0068
Lepidactylus dytiscus					0.0364
Leptocheirus plumulosus				0.0045	0.0750
Macoma balthica				2.3106	
Macoma mitchelli				0.1613	0.9997
Marenzelleria viridis				0.0091	0.2136
Mediomastus ambiseta			0.0011	0.0068	
Neanthes succinea				0.1250	
Polydora cornuta					0.0011
Rangia cuneata					0.0954
Streblospio benedicti		0.0011			0.0045
Tubificoides spp.				0.0045	0.0023
Total Biomass w/ Epifauna	0.0000	0.0011	0.0011	2.6855	1.5052
Total Biomass w/o Epifauna	0.0000	0.0011	0.0011	2.6855	1.4461

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29312	29313	29314	29315	29317
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	Low Mesohaline	Oligohaline
Date	08/24/22	08/24/22	08/23/22	08/23/22	08/23/22
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	4.7	15.3	2.4	1.7
Salinity (ppt)	9.58	9.87	15.15	9.59	4.92
Temperature (C)	27.18	26.97	26.25	26.90	28.06
Dissolved Oxygen (mg/L)	4.9	4.8	0.2	3.0	7.8
Sediment Silt-Clay (%)	3.34	80.19	97.06	10.91	96.42
Total Carbon (%)	0.15	1.96	2.17	0.43	3.36
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.40	3.00	1.00	2.60	2.33
Condition	Meets Goal	Meets Goal	Severely Degr.	Degraded	Degraded
# Attributes Scored	5	5	6	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.29 1	2.41 3	0.00 1	2.01 3	1.55 3
Abundance (#/m2)	1931 5	318 1	0 1	341 1	341 3
Biomass (g/m2)	1.03 3	2.53 3	0.00 1	0.27 1	0.09 3
Pollution Indicative Spp Abund (%)	3.53 5	7.14 5	100.00 1	0.00 5	26.67 3
Pollution Indicative Spp Biom (%)	0.11 3	0.04 3	100.00 1	0.00 3	3.61 3
Pollution Sensitive Spp Abund (%)	71.76 3	42.86 3	0.00 1	60.00 3	13.33 3
Pollution Sensitive Spp Biom (%)	59.85 3	93.25 3	0.00 1	41.03 3	93.98 3
Carnivore-Omnivore Abund (%)	0.00 3	0.00 3	0.00 1	6.67 3	6.67 1
Deep Deposit Feeder Abund (%)	4.71 3	50.00 3	0.00 3	0.00 3	80.00 3
TF Poll. Indicative Spp Abund (%)	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
Limnodrilus Abundance (%)	0.00 3	0.00 3	0.00 3	0.00 3	20.00 3
Oligo Poll. Indic. Spp Abund (%)	0.00 3	0.00 3	0.00 3	0.00 3	86.67 3
Oligo Poll. Sens. Spp Abund (%)	0.00 3	0.00 3	0.00 3	0.00 3	13.33 3
Tolerance Score	0.00 3	0.00 3	0.00 3	6.00 3	8.90 3
Tany./Chir. Abundance Ratio	0.00 3	0.00 3	0.00 3	0.00 3	100.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29312	29313	29314	29315	29317
Coelotanypus spp.					23
Heteromastus filiformis	68	23			
Hydrobiidae (Epi.)				45	
Leptocheirus plumulosus	364			45	
Macoma balthica		91			
Macoma mitchelli	23	23		68	
Marenzelleria viridis	1386	23		159	45
Mediomastus ambiseta		23			
Neanthes succinea				23	
Rangia cuneata				45	
Streblospio benedicti	68	23			
Tubificidae imm w/o cap chaetae					68
Tubificoides spp.	23	114			204
Total Abundance w/ Epifauna	1931	318	0	386	341
Total Abundance w/o Epifauna	1931	318		341	341
Number of Taxa w/ Epifauna	6	7	0	6	4
Number of Taxa w/o Epifauna	6	7	0	5	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29312	29313	29314	29315	29317
Coelotanypus spp.					0.0023
Heteromastus filiformis	0.1091	0.0341			
Hydrobiidae (Epi.)				0.0045	
Leptocheirus plumulosus	0.0364			0.0114	
Macoma balthica		2.3515			
Macoma mitchelli	0.2613	0.1340		0.1409	
Marenzelleria viridis	0.6180	0.0023		0.0318	0.0886
Mediomastus ambiseta		0.0011			
Neanthes succinea				0.0045	
Rangia cuneata				0.0772	
Streblospio benedicti	0.0011	0.0011			
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.	0.0068	0.0011			0.0023
Total Biomass w/ Epifauna	1.0326	2.5253	0.0000	0.2704	0.0943
Total Biomass w/o Epifauna	1.0326	2.5253	0.0000	0.2658	0.0943

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29318	29319	29320	29321	29322
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Oligohaline	Low Mesohaline	Low Mesohaline	Oligohaline
Date	08/24/22	08/23/22	08/23/22	09/16/22	08/23/22
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	0.5	2.8	2.8	1.1
Salinity (ppt)	8.45	2.92	5.16	6.20	4.50
Temperature (C)	27.47	28.15	27.17	23.50	28.12
Dissolved Oxygen (mg/L)	2.7	7.4	6.9	7.4	7.0
Sediment Silt-Clay (%)	82.25	56.07	89.47	81.10	41.91
Total Carbon (%)	6.17	2.55	1.63	2.48	1.59
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	3.00	3.40	3.40	3.67
Condition	Severely Degr.	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	6	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.37 1	1.86 3	2.38 3	2.68 5	2.60 5
Abundance (#/m2)	114 1	932 5	750 3	1204 3	886 5
Biomass (g/m2)	0.01 1	0.24 1	2.54 3	18.20 3	0.70 1
Pollution Indicative Spp Abund (%)	60.00 1	95.12 3	15.15 3	49.06 1	30.77 1
Pollution Indicative Spp Biom (%)	50.00 1	98.08 3	0.27 3	0.25 1	6.00 1
Pollution Sensitive Spp Abund (%)	0.00 1	0.00 1	39.39 3	16.98 1	48.72 1
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	98.12 5	99.31 5	90.11 1
Carnivore-Omnivore Abund (%)	0.00 1	70.73 5	9.09 3	32.08 1	38.46 5
Deep Deposit Feeder Abund (%)	40.00 1	24.39 1	15.15 3	15.09 1	7.69 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	21.95 1	0.00 1	0.00 1	0.00 1
Oligo Poll. Indic. Spp Abund (%)	0.00 1	100.00 1	0.00 1	0.00 1	51.28 3
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	33.33 5
Tolerance Score	0.00 1	8.95 3	6.10 3	6.18 1	6.51 3
Tany./Chir. Abundance Ratio	0.00 1	31.03 3	100.00 3	100.00 1	90.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29318	29319	29320	29321	29322
Carinoma tremaphoros				23	
Chironomus spp.		454			23
Coelotanypus spp.		204	23	273	204
Cyathura polita			45	91	114
Edotea triloba (Epi.)				23	
Heteromastus filiformis	23				
Leptocheirus plumulosus		23	227	204	114
Macoma balthica				23	
Marenzelleria viridis			227	68	295
Melita nitida (Epi.)			45	91	
Paraprionospio pinnata					23
Rangia cuneata			23	23	23
Streblospio benedicti	68		91	318	23
Tubificidae imm w/o cap chaetae		204			
Tubificoides spp.	23	23	114	182	68
Total Abundance w/ Epifauna	114	932	795	1318	886
Total Abundance w/o Epifauna	114	932	750	1204	886
Number of Taxa w/ Epifauna	3	6	8	11	9
Number of Taxa w/o Epifauna	3	6	7	9	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29318	29319	29320	29321	29322
Carinoma tremaphoros				0.0011	
Chironomus spp.		0.2113			0.0227
Coelotanypus spp.		0.0114	0.0045	0.0386	0.0159
Cyathura polita			0.0432	0.1590	0.1795
Edotea triloba (Epi.)				0.0011	
Heteromastus filiformis	0.0023				
Leptocheirus plumulosus		0.0023	0.0386	0.0750	0.0250
Macoma balthica				0.0068	
Marenzelleria viridis			0.3612	0.3567	0.3181
Melita nitida (Epi.)			0.0023	0.0091	
Oligochaeta		0.0068			
Paraprionospio pinnata					0.0023
Rangia cuneata			2.0834	17.5467	0.1340
Streblospio benedicti	0.0045	0.0011	0.0023	0.0068	0.0011
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.	0.0023	0.0023	0.0023	0.0045	0.0023
Total Biomass w/ Epifauna	0.0091	0.2363	2.5378	18.2055	0.7009
Total Biomass w/o Epifauna	0.0091	0.2363	2.5356	18.1953	0.7009

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29323	29324	29325	29326	29327
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Oligohaline	Oligohaline	Low Mesohaline	Low Mesohaline
Date	09/16/22	09/16/22	09/16/22	08/25/22	08/26/22
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)	2.2	2.1	1.4	0.5	3.4
Salinity (ppt)	5.69	4.59	3.26	11.67	11.58
Temperature (C)	23.40	23.30	23.50	28.53	27.45
Dissolved Oxygen (mg/L)	7.6	7.5	8.0	8.6	5.2
Sediment Silt-Clay (%)	96.89	97.82	7.21	3.70	9.07
Total Carbon (%)	2.27	2.33	0.29	0.13	0.23
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	3.33	3.33	1.80	3.40
Condition	Meets Goal	Meets Goal	Meets Goal	Severely Degr.	Meets Goal
# Attributes Scored	5	6	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.14 3	1.57 3	3.09 5	2.48 3	2.87 5
Abundance (#/m2)	613 3	409 3	1068 5	704 3	1409 3
Biomass (g/m2)	25.41 3	0.17 3	0.43 3	0.24 1	1.01 3
Pollution Indicative Spp Abund (%)	44.44 1	55.56 3	40.43 3	22.58 1	11.29 3
Pollution Indicative Spp Biom (%)	0.08 3	22.67 3	12.20 3	36.19 3	0.67 3
Pollution Sensitive Spp Abund (%)	44.44 3	33.33 3	23.40 3	6.45 3	38.71 3
Pollution Sensitive Spp Biom (%)	99.86 5	73.33 3	83.29 3	24.76 1	54.48 3
Carnivore-Omnivore Abund (%)	48.15 3	61.11 5	25.53 3	3.23 3	4.84 3
Deep Deposit Feeder Abund (%)	3.70 3	0.00 3	36.17 3	16.13 3	53.23 3
TF Poll. Indicative Spp Abund (%)	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
Limnodrilus Abundance (%)	0.00 3	0.00 3	8.51 3	0.00 3	0.00 3
Oligo Poll. Indic. Spp Abund (%)	0.00 3	66.67 3	74.47 3	0.00 3	0.00 3
Oligo Poll. Sens. Spp Abund (%)	0.00 3	27.78 5	14.89 3	0.00 3	0.00 3
Tolerance Score	6.18 3	6.20 3	9.47 1	0.00 3	6.00 3
Tany./Chir. Abundance Ratio	100.00 3	100.00 1	0.00 5	0.00 3	0.00 3

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29323	29324	29325	29326	29327
Americamysis bigelowi (Epi.)					23
Carinoma tremaphoros			23		45
Chironomus spp.			159		
Coelotanypus spp.	250	227			
Cyathura polita	45	23	68		
Edotea triloba (Epi.)			23		
Eteone heteropoda				23	
Heteromastus filiformis	23			23	432
Leitoscoloplos robustus				91	
Lepidactylus dytiscus				250	
Leptocheirus plumulosus	45	45		23	114
Macoma balthica					68
Macoma mitchelli				204	91
Marenzelleria viridis	204	114	159	45	136
Mediomastus ambiseta					318
Mulinia lateralis				23	23
Mytilopsis leucophaeata (Epi.)			23		
Neanthes succinea					23
Polydora cornuta			45		
Polypedilum halterale group			23		
Rangia cuneata	23		23		23
Streblospio benedicti	23		182	23	136
Tubificidae imm w cap chaetae					68
Tubificidae imm w/o cap chaetae					91
Tubificoides spp.			227		
Total Abundance w/ Epifauna	613	409	1113	704	1431
Total Abundance w/o Epifauna	613	409	1068	704	1409
Number of Taxa w/ Epifauna	7	4	13	9	12
Number of Taxa w/o Epifauna	7	4	11	9	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29323	29324	29325	29326	29327
Americamysis bigelowi (Epi.)					0.0045
Carinoma tremaphoros			0.0068		0.0364
Chironomus spp.			0.0454		
Coelotanypus spp.	0.0204	0.0386			
Cyathura polita	0.1568	0.0114	0.0091		
Edotea triloba (Epi.)			0.0023		
Eteone heteropoda				0.0159	
Heteromastus filiformis	0.0068			0.0023	0.2976
Leitoscoloplos robustus				0.0636	
Lepidactylus dytiscus				0.0659	
Leptocheirus plumulosus	0.0068	0.0068		0.0045	0.0204
Macoma balthica					0.4294
Macoma mitchelli				0.0204	0.0636
Marenzelleria viridis	0.5203	0.1136	0.2204	0.0591	0.0727
Mediomastus ambiseta					0.0068
Mulinia lateralis				0.0023	0.0023
Mytilopsis leucophaeata (Epi.)			0.0023		
Neanthes succinea					0.0364
Oligochaeta			0.0080		
Polydora cornuta			0.0011		
Polypedilum halterale group			0.0011		
Rangia cuneata	24.6944		0.1272		0.0432
Streblospio benedicti	0.0011		0.0068	0.0045	0.0045
Tubificoides spp.			0.0023		
Total Biomass w/ Epifauna	25.4066	0.1704	0.4328	0.2386	1.0179
Total Biomass w/o Epifauna	25.4066	0.1704	0.4283	0.2386	1.0133

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29101	29102	29103	29104	29105
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Polyhaline Sand	High Meso Sand	Polyhaline Mud	Polyhaline Mud	Polyhaline Sand
Date	09/27/22	09/27/22	09/27/22	09/27/22	09/27/22
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	8.5	10.5	10.5	10.5
Salinity (ppt)	19.59	17.43	20.25	18.40	19.97
Temperature (C)	23.50	22.90	23.80	23.50	23.70
Dissolved Oxygen (mg/L)	3.5	5.5	4.3	4.9	5.0
Sediment Silt-Clay (%)	6.88	14.35	97.49	98.86	38.17
Total Carbon (%)	0.37	0.60	3.26	3.53	1.31
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.00	2.67	1.00	2.00	1.00
Condition	Severely Degr.	Marginal	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	2.60 1	2.59 3	1.37 1	0.00 1	0.00 1
Abundance (#/m2)	523 1	1068 3	114 1	23 1	0 1
Biomass (g/m2)	0.22 1	0.15 1	0.01 1	0.00 1	0.00 1
Pollution Indicative Spp Abund (%)	13.04	40.43 1	60.00	0.00	100.00
Pollution Indicative Spp Biom (%)	3.08 5	46.88	44.44 1	0.00 5	100.00 1
Pollution Sensitive Spp Abund (%)	52.17 3	46.81 5	0.00	100.00	0.00 1
Pollution Sensitive Spp Biom (%)	55.90	29.69	0.00 1	100.00 3	0.00
Carnivore-Omnivore Abund (%)	69.57	31.91 3	20.00 1	0.00 1	0.00
Deep Deposit Feeder Abund (%)	8.70 1	21.28	0.00	0.00	0.00 1
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29101	29102	29103	29104	29105
Acteocina canaliculata	182	182			
Cyathura polita	23				
Glycinde solitaria		23			
Hermundura americana	23				
Heteromastus filiformis	23				
Leptosynapta tenuis			23		
Loimia medusa	23	68		23	
Mediomastus ambiseta	23	227			
Neanthes succinea	136	136	23		
Paraprionospio pinnata		227	68		
Spiochaetopterus costarum	23				
Streblospio benedicti	68	204			
Total Abundance w/ Epifauna	523	1068	114	23	0
Total Abundance w/o Epifauna	523	1068	114	23	
Number of Taxa w/ Epifauna	9	7	3	1	0
Number of Taxa w/o Epifauna	9	7	3	1	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29101	29102	29103	29104	29105
Acteocina canaliculata	0.0068	0.0023			
Cyathura polita	0.0568				
Glycinde solitaria		0.0182			
Hermundura americana	0.0114				
Heteromastus filiformis	0.0523				
Leptosynapta tenuis			0.0045		
Loimia medusa	0.0477	0.0182		0.0045	
Mediomastus ambiseta	0.0011	0.0045			
Neanthes succinea	0.0273	0.0341	0.0011		
Paraprionospio pinnata		0.0613	0.0045		
Spiochaetopterus costarum	0.0114				
Streblospio benedicti	0.0068	0.0068			
Total Biomass w/ Epifauna	0.2215	0.1454	0.0102	0.0045	0.0000
Total Biomass w/o Epifauna	0.2215	0.1454	0.0102	0.0045	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29106	29107	29109	29112	29113
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Polyhaline Sand	Polyhaline Mud	High Meso Mud	High Meso Mud	High Meso Sand
Date	09/27/22	09/27/22	09/21/22	09/20/22	09/20/22
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.6	10.5	1.5	4.9	0.3
Salinity (ppt)	18.14	20.19	16.77	12.78	12.06
Temperature (C)	23.70	23.90	25.73	25.47	26.62
Dissolved Oxygen (mg/L)	4.0	4.7	5.0	0.9	8.7
Sediment Silt-Clay (%)	5.09	97.78	97.45	95.41	8.23
Total Carbon (%)	0.35	3.75	2.18	2.32	0.30
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.33	2.00	1.00	1.00	2.67
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Marginal
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.12 1	0.00 1	0.00 1	0.00 1	2.54 3
Abundance (#/m2)	250 1	23 1	0 1	0 1	386 1
Biomass (g/m2)	0.06 1	0.00 1	0.00 1	0.00 1	0.52 1
Pollution Indicative Spp Abund (%)	36.36	0.00	100.00	100.00	11.76 3
Pollution Indicative Spp Biom (%)	16.33 1	0.00 5	100.00 1	100.00 1	1.98
Pollution Sensitive Spp Abund (%)	27.27 3	100.00	0.00	0.00	11.76 3
Pollution Sensitive Spp Biom (%)	6.12	100.00 3	0.00 1	0.00 1	0.44
Carnivore-Omnivore Abund (%)	54.55	0.00 1	0.00 1	0.00 1	47.06 5
Deep Deposit Feeder Abund (%)	9.09 1	100.00	0.00	0.00	17.65
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 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29106	29107	29109	29112	29113
Acteocina canaliculata	45				
Edotea triloba (Epi.)					23
Hargeria rapax					23
Hermundura americana					114
Hydrobiidae (Epi.)					68
Leitoscoloplos spp.					23
Macoma mitchelli					91
Mediomastus ambiseta	23	23			45
Neanthes succinea	91				68
Paraprionospio pinnata	68				
Streblospio benedicti	23				23
Total Abundance w/ Epifauna	250	23	0	0	477
Total Abundance w/o Epifauna	250	23			386
Number of Taxa w/ Epifauna	5	1	0	0	9
Number of Taxa w/o Epifauna	5	1	0	0	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29106	29107	29109	29112	29113
Acteocina canaliculata	0.0023				
Edotea triloba (Epi.)					0.0023
Hargeria rapax					0.0023
Hermundura americana					0.3249
Hydrobiidae (Epi.)					0.0091
Leitoscoloplos spp.					0.0011
Macoma mitchelli					0.1250
Mediomastus ambiseta	0.0011	0.0011			0.0023
Neanthes succinea	0.0432				0.0523
Paraprionospio pinnata	0.0068				
Streblospio benedicti	0.0023				0.0091
Total Biomass w/ Epifauna	0.0557	0.0011	0.0000	0.0000	0.5282
Total Biomass w/o Epifauna	0.0557	0.0011	0.0000	0.0000	0.5169

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29114	29115	29117	29118	29119
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	High Meso Sand	High Meso Mud	Oligohaline	Low Mesohaline	Low Mesohaline
Date	09/20/22	09/20/22	09/14/22	09/20/22	09/14/22
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)	0.4	4.3	3.1	1.5	6.4
Salinity (ppt)	12.87	14.94	3.32	9.06	6.12
Temperature (C)	26.30	25.84	25.83	25.75	25.90
Dissolved Oxygen (mg/L)	8.4	0.4	6.3	7.8	5.9
Sediment Silt-Clay (%)	4.67	93.93	93.28	4.16	33.50
Total Carbon (%)	0.19	3.13	2.21	0.15	0.85
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.33	1.00	2.67	2.60	1.80
Condition	Severely Degr.	Severely Degr.	Marginal	Degraded	Severely Degr.
# Attributes Scored	6	6	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.37 1	0.00 1	2.32 1	2.40 3	1.98 3
Abundance (#/m2)	250 1	0 1	114 1	886 3	500 1
Biomass (g/m2)	0.24 1	0.00 1	0.06 1	0.56 1	0.32 1
Pollution Indicative Spp Abund (%)	18.18 3	100.00 3	60.00 3	10.26 3	18.18 3
Pollution Indicative Spp Biom (%)	51.92 3	100.00 1	9.43 3	2.85 3	4.27 3
Pollution Sensitive Spp Abund (%)	9.09 1	0.00 1	40.00 3	5.13 3	22.73 3
Pollution Sensitive Spp Biom (%)	2.88 1	0.00 1	90.57 3	52.44 3	17.08 1
Carnivore-Omnivore Abund (%)	9.09 1	0.00 1	40.00 5	38.46 3	81.82 3
Deep Deposit Feeder Abund (%)	18.18 3	0.00 1	0.00 1	10.26 3	13.64 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	0.00 1	0.00 1	0.00 1
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 1	60.00 3	0.00 1	0.00 1
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 1	20.00 3	0.00 1	0.00 1
Tolerance Score	6.00 3	0.00 1	6.20 3	6.00 3	6.20 3
Tany./Chir. Abundance Ratio	0.00 1	0.00 1	100.00 1	0.00 1	100.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29114	29115	29117	29118	29119
Coelotanypus spp.			23		68
Cyathura polita			23	23	68
Hermundura americana	23			318	273
Hydrobiidae (Epi.)	114			68	
Leitoscoloplos fragilis	45				
Leitoscoloplos spp.				91	
Lepidactylus dytiscus	91			114	
Leptocheirus plumulosus	23			182	
Macoma mitchelli	45			136	
Marenzelleria viridis			23		
Mediomastus ambiseta					45
Paraprionospio pinnata			23		
Rangia cuneata	23			23	
Streblospio benedicti			23		23
Tubificoides spp.					23
Total Abundance w/ Epifauna	364	0	114	954	500
Total Abundance w/o Epifauna	250		114	886	500
Number of Taxa w/ Epifauna	7	0	5	8	6
Number of Taxa w/o Epifauna	6	0	5	7	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29114	29115	29117	29118	29119
Coelotanypus spp.			0.0023		0.0114
Cyathura polita			0.0523	0.0045	0.0523
Hermundura americana	0.0068			0.0818	0.2499
Hydrobiidae (Epi.)	0.0204			0.0068	
Leitoscoloplos fragilis	0.1227				
Leitoscoloplos spp.				0.0159	
Lepidactylus dytiscus	0.0114			0.1386	
Leptocheirus plumulosus	0.0818			0.0250	
Macoma mitchelli	0.0068			0.0045	
Marenzelleria viridis			0.0023		
Mediomastus ambiseta					0.0023
Paraprionospio pinnata			0.0023		
Rangia cuneata	0.0068			0.2885	
Streblospio benedicti			0.0011		0.0023
Tubificoides spp.					0.0011
Total Biomass w/ Epifauna	0.2567	0.0000	0.0602	0.5657	0.3192
Total Biomass w/o Epifauna	0.2363	0.0000	0.0602	0.5589	0.3192

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29120	29121	29122	29123	29124
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	High Meso Mud	Oligohaline	Low Mesohaline	Freshwater
Date	09/20/22	10/07/22	09/14/22	10/07/22	09/14/22
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)	0.5	6.1	5.0	1.6	2.6
Salinity (ppt)	10.61	12.41	3.14	11.53	0.41
Temperature (C)	26.53	17.58	26.08	17.44	25.98
Dissolved Oxygen (mg/L)	7.9	7.8	5.7	8.1	7.2
Sediment Silt-Clay (%)	91.58	94.83	98.99	47.14	93.81
Total Carbon (%)	2.00	2.00	1.44	1.01	3.00
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	2.67	2.67	2.20	4.00
Condition	Severely Degr.	Marginal	Marginal	Degraded	Meets Goal
# Attributes Scored	5	6	6	5	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.58 1	1.16 1	2.29 3	2.26 3	2.68 5
Abundance (#/m2)	68 1	227 1	295 3	1772 5	1363 5
Biomass (g/m2)	0.01 1	0.12 1	0.03 1	0.45 1	6.73 1
Pollution Indicative Spp Abund (%)	33.33 1	0.00 1	69.23 3	20.51 1	65.00 1
Pollution Indicative Spp Biom (%)	15.38 1	0.00 5	62.07 3	2.51 1	0.81 1
Pollution Sensitive Spp Abund (%)	33.33 1	10.00 1	0.00 1	34.62 1	0.00 1
Pollution Sensitive Spp Biom (%)	7.69 1	46.15 3	0.00 1	18.59 1	0.00 1
Carnivore-Omnivore Abund (%)	66.67 1	80.00 5	38.46 5	23.08 1	30.00 1
Deep Deposit Feeder Abund (%)	33.33 1	0.00 1	46.15 3	42.31 1	60.00 5
TF Poll. Indicative Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	40.00 3
Limnodrilus Abundance (%)	0.00 1	0.00 1	46.15 3	0.00 1	40.00 1
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 1	76.92 3	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	6.20 1	0.00 1	8.90 3	6.00 1	8.20 3
Tany./Chir. Abundance Ratio	100.00 1	0.00 1	100.00 1	0.00 1	94.44 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29120	29121	29122	29123	29124
Apocorophium lacustre (Epi.)					68
Branchiura sowerbyi					227
Coelotanypus spp.	23		45		341
Corbicula fluminea					114
Cyathura polita		23			
Edotea triloba (Epi.)				23	
Gammarus spp. (Epi.)					23
Hermundura americana	23	159	68	409	
Leptocheirus plumulosus		45		227	
Limnodrilus hoffmeisteri			23		182
Mediomastus ambiseta	23			591	
Melita nitida (Epi.)				23	
Mytilopsis leucophaeata (Epi.)				23	
Polydora cornuta			23		
Polypedilum halterale group					23
Procladius spp.					45
Rangia cuneata				23	
Streblospio benedicti			23	364	
Tubificidae imm w cap chaetae					45
Tubificidae imm w/o cap chaetae *			114		364
Tubificoides spp.				159	
Unionidae					23
Total Abundance w/ Epifauna	68	227	295	1840	1454
Total Abundance w/o Epifauna	68	227	295	1772	1363
Number of Taxa w/ Epifauna	3	3	5	9	11
Number of Taxa w/o Epifauna	3	3	5	6	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29120	29121	29122	29123	29124
Apocorophium lacustre (Epi.)					0.0091
Branchiura sowerbyi					0.4976
Chironomidae					0.0011
Coelotanypus spp.	0.0023		0.0182		0.0545
Corbicula fluminea					6.0776
Cyathura polita		0.0545			
Edotea triloba (Epi.)				0.0023	
Gammarus spp. (Epi.)					0.0023
Hermundura americana	0.0114	0.0523	0.0114	0.3090	
Leptocheirus plumulosus		0.0114		0.0454	
Mediomastus ambiseta	0.0011			0.0477	
Melita nitida (Epi.)				0.0011	
Mytilopsis leucophaeata (Epi.)				0.0011	
Oligochaeta			0.0011		0.0909
Polydora cornuta			0.0011		
Rangia cuneata				0.0364	
Streblospio benedicti			0.0011	0.0114	
Tubificoides spp.				0.0023	
Unionidae					0.0091
Total Biomass w/ Epifauna	0.0148	0.1181	0.0329	0.4567	6.7422
Total Biomass w/o Epifauna	0.0148	0.1181	0.0329	0.4521	6.7308

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29125	29126	29127	29128	29129
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Freshwater	Polyhaline	Low Mesohaline	High Meso Mud	Polyhaline San
Date	09/14/22	09/02/22	09/20/22	09/20/22	09/27/22
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	13.8	1.6	8.6	10.5
Salinity (ppt)	0.18	20.98	11.43	17.86	18.06
Temperature (C)	25.85	25.64	26.04	25.56	23.20
Dissolved Oxygen (mg/L)	5.6	3.3	8.9	3.9	6.4
Sediment Silt-Clay (%)	81.83	94.69	2.08	96.00	23.89
Total Carbon (%)	2.11	2.65	0.04	3.11	0.91
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	1.67	1.80	1.00	1.00
Condition	Meets Goal	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	4	6	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.82	0.00	2.48	0.00	0.00
Abundance (#/m2)	954	23	818	0	0
Biomass (g/m2)	0.73	0.00	0.42	0.00	0.00
Pollution Indicative Spp Abund (%)	73.81	0.00	36.11	100.00	100.00
Pollution Indicative Spp Biom (%)	36.45	0.00	2.70	100.00	100.00
Pollution Sensitive Spp Abund (%)	2.38	0.00	16.67	0.00	0.00
Pollution Sensitive Spp Biom (%)	6.23	0.00	20.54	0.00	0.00
Carnivore-Omnivore Abund (%)	0.00	0.00	13.89	0.00	0.00
Deep Deposit Feeder Abund (%)	90.48	0.00	13.89	0.00	0.00
TF Poll. Indicative Spp Abund (%)	73.81	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	73.81	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	9.34	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29125	29126	29127	29128	29129
Branchiura sowerbyi	159				
Eteone heteropoda			45		
Heteromastus filiformis			91		
Leitoscoloplos spp.			23		
Limnodrilus hoffmeisteri	227				
Macoma mitchelli		23	227		
Marenzelleria viridis	23		136		
Neanthes succinea			68		
Pisidium spp.	68				
Streblospio benedicti			227		
Tubificidae imm w/o cap chaetae *	477				
Total Abundance w/ Epifauna	954	23	818	0	0
Total Abundance w/o Epifauna	954	23	818		
Number of Taxa w/ Epifauna	4	1	7	0	0
Number of Taxa w/o Epifauna	4	1	7	0	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29125	29126	29127	29128	29129
Branchiura sowerbyi	0.4158				
Eteone heteropoda			0.0045		
Heteromastus filiformis			0.0045		
Leitoscoloplos spp.			0.0045		
Macoma mitchelli		0.0011	0.2908		
Marenzelleria viridis	0.0454		0.0863		
Neanthes succinea			0.0273		
Oligochaeta	0.2658				
Pisidium spp.	0.0023				
Streblospio benedicti			0.0023		
Total Biomass w/ Epifauna	0.7293	0.0011	0.4203	0.0000	0.0000
Total Biomass w/o Epifauna	0.7293	0.0011	0.4203	0.0000	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29201	29202	29203	29204	29206
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	High Meso Sand	High Meso Mud
Date	09/08/22	09/08/22	09/08/22	09/08/22	09/07/22
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)	14.9	7.9	15.1	4.5	10.5
Salinity (ppt)	17.27	16.61	17.24	16.40	16.56
Temperature (C)	26.80	26.60	26.81	26.48	27.00
Dissolved Oxygen (mg/L)	2.5	4.9	2.8	4.8	3.5
Sediment Silt-Clay (%)	95.54	3.97	97.02	6.31	62.06
Total Carbon (%)	3.36	0.20	3.58	0.27	1.68
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.67	1.67	1.33	2.67	3.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Marginal	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.92 1	1.37 1	1.07 1	2.83 3	2.93 3
Abundance (#/m2)	68 1	114 1	772 1	1818 5	863 1
Biomass (g/m2)	0.01 1	0.01 1	0.06 1	0.40 1	0.51 3
Pollution Indicative Spp Abund (%)	66.67	60.00 1	85.29	35.00 1	23.68
Pollution Indicative Spp Biom (%)	50.00 1	33.33	50.91 1	7.91	1.11 5
Pollution Sensitive Spp Abund (%)	0.00	20.00 3	8.82	22.50 3	26.32
Pollution Sensitive Spp Biom (%)	0.00 1	33.33	18.18 1	12.99	7.52 1
Carnivore-Omnivore Abund (%)	33.33 5	20.00 3	11.76 3	28.75 3	34.21 5
Deep Deposit Feeder Abund (%)	0.00	0.00	5.88	20.00	42.11
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29201	29202	29203	29204	29206
Acteocina canaliculata				45	
Balanus improvisus (Epi.)				23	
Carinoma tremaphoros			23	23	
Diadumene leucolena (Epi.)				45	
Eteone heteropoda			23		
Gemma gemma				45	
Glycinde solitaria		23	23	91	68
Heteromastus filiformis				91	68
Macoma mitchelli		23		159	
Mediomastus ambiseta			45	273	159
Micrura leidy				23	
Molgula manhattensis (Epi.)				91	
Neanthes succinea	23		23	341	159
Parahesion luteola					45
Paraprionospio pinnata				23	159
Podarkeopsis levifuscina					23
Polydora cornuta				91	
Streblospio benedicti	45	68	636	613	45
Tubificoides spp.					136
Total Abundance w/ Epifauna	68	114	772	1977	863
Total Abundance w/o Epifauna	68	114	772	1818	863
Number of Taxa w/ Epifauna	2	3	6	15	9
Number of Taxa w/o Epifauna	2	3	6	12	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29201	29202	29203	29204	29206
Acteocina canaliculata				0.0068	
Balanus improvisus (Epi.)				0.1727	
Carinoma tremaphoros			0.0011	0.0023	
Diadumene leucolena (Epi.)				0.1795	
Eteone heteropoda			0.0045		
Gemma gemma				0.0159	
Glycinde solitaria		0.0023	0.0045	0.0318	0.0318
Heteromastus filiformis				0.0204	0.0250
Macoma mitchelli		0.0023		0.0091	
Mediomastus ambiseta			0.0068	0.0136	0.0068
Micrura leidy				0.1431	
Molgula manhattensis (Epi.)				0.1386	
Neanthes succinea	0.0068		0.0182	0.1204	0.4385
Parahesion luteola					0.0023
Paraprionospio pinnata				0.0159	0.0045
Podarkeopsis levifuscina					0.0023
Polydora cornuta				0.0068	
Streblospio benedicti	0.0068	0.0023	0.0273	0.0159	0.0011
Tubificoides spp.					0.0011
Total Biomass w/ Epifauna	0.0136	0.0068	0.0625	0.8929	0.5135
Total Biomass w/o Epifauna	0.0136	0.0068	0.0625	0.4021	0.5135

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29207	29208	29209	29210	29211
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	High Meso Mud	High Meso Mud
Date	09/07/22	09/07/22	09/07/22	09/07/22	09/07/22
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	4.6	1.8	8.9	12.7	7.3
Salinity (ppt)	15.62	14.44	16.54	17.89	16.37
Temperature (C)	27.52	27.22	27.03	26.80	27.20
Dissolved Oxygen (mg/L)	2.1	5.9	0.4	1.8	2.3
Sediment Silt-Clay (%)	64.70	3.25	64.99	97.85	55.94
Total Carbon (%)	1.73	0.35	2.07	3.89	3.48
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	3.33	2.00	1.00	1.33
Condition	Degraded	Meets Goal	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	1.38 1	3.01 3	1.87 1	0.00 1	1.49 1
Abundance (#/m2)	159 1	1659 5	454 1	0 1	250 1
Biomass (g/m2)	0.13 1	0.71 1	0.52 3	0.00 1	0.03 1
Pollution Indicative Spp Abund (%)	14.29	8.22 5	15.00	100.00	18.18
Pollution Indicative Spp Biom (%)	1.75 5	23.29	38.70 1	100.00 1	8.33 3
Pollution Sensitive Spp Abund (%)	57.14	32.88 3	60.00	0.00	72.73
Pollution Sensitive Spp Biom (%)	1.75 1	33.81	0.87 1	0.00 1	16.67 1
Carnivore-Omnivore Abund (%)	28.57 5	23.29 3	25.00 5	0.00 1	0.00 1
Deep Deposit Feeder Abund (%)	57.14	53.42	65.00	0.00	72.73
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29207	29208	29209	29210	29211
Carinoma tremaphoros		45	45		
Gemma gemma		45			
Geukensia demissa (Epi.)		23			
Glycinde solitaria		227			
Heteromastus filiformis		568			23
Leitoscoloplos robustus			23		
Macoma balthica		23			
Macoma mitchelli		136			
Marenzelleria viridis		45			23
Mediomastus ambiseta	91	250	273		159
Mulinia lateralis		23			
Neanthes succinea	45	91	45		
Nemertina		23			
Paraprionospio pinnata		23	45		
Podarkeopsis levifuscina			23		
Streblospio benedicti	23	91			45
Tubificoides spp.		68			
Total Abundance w/ Epifauna	159	1681	454	0	250
Total Abundance w/o Epifauna	159	1659	454		250
Number of Taxa w/ Epifauna	3	15	6	0	4
Number of Taxa w/o Epifauna	3	14	6	0	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29207	29208	29209	29210	29211
Carinoma tremaphoros		0.0204	0.0364		
Gemma gemma		0.0432			
Geukensia demissa (Epi.)		0.0591			
Glycinde solitaria		0.0204			
Heteromastus filiformis		0.1886			0.0204
Leitoscoloplos robustus			0.1999		
Macoma balthica		0.1727			
Macoma mitchelli		0.0023			
Marenzelleria viridis		0.0409			0.0023
Mediomastus ambiseta	0.0023	0.0068	0.0045		0.0023
Mulinia lateralis		0.1568			
Neanthes succinea	0.1250	0.0295	0.2772		
Nemertina		0.0204			
Paraprionospio pinnata		0.0045	0.0023		
Podarkeopsis levifuscina			0.0023		
Streblospio benedicti	0.0023	0.0045			0.0023
Tubificoides spp.		0.0011			
Total Biomass w/ Epifauna	0.1295	0.7713	0.5226	0.0000	0.0273
Total Biomass w/o Epifauna	0.1295	0.7123	0.5226	0.0000	0.0273

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29212	29214	29215	29216	29217
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	High Meso Mud	High Meso Sand
Date	09/07/22	09/07/22	09/07/22	09/07/22	09/07/22
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)	6.9	3.7	6.1	6.2	2.9
Salinity (ppt)	16.42	15.74	15.16	15.23	14.94
Temperature (C)	27.26	27.46	27.48	27.58	27.38
Dissolved Oxygen (mg/L)	1.7	1.7	1.1	0.9	2.5
Sediment Silt-Clay (%)	94.62	4.46	97.21	97.01	13.35
Total Carbon (%)	3.43	0.23	3.28	3.12	0.46
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.67	1.67	2.00	2.00	2.33
Condition	Severely Degr.	Severely Degr.	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	1.22 1	2.32 1	0.00 1	0.00 1	2.92 3
Abundance (#/m2)	591 1	318 1	68 1	295 1	1318 3
Biomass (g/m2)	0.05 1	0.30 1	0.01 1	0.01 1	0.60 1
Pollution Indicative Spp Abund (%)	11.54	28.57 1	0.00	0.00	20.69 3
Pollution Indicative Spp Biom (%)	9.09 3	2.29	0.00 5	0.00 5	28.05
Pollution Sensitive Spp Abund (%)	76.92	7.14 1	100.00	100.00	31.03 3
Pollution Sensitive Spp Biom (%)	45.45 3	7.63	100.00 3	100.00 3	6.11
Carnivore-Omnivore Abund (%)	0.00 1	42.86 5	0.00 1	0.00 1	13.79 1
Deep Deposit Feeder Abund (%)	84.62	35.71	100.00	100.00	60.34
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29212	29214	29215	29216	29217
Carinoma tremaphoros		23			
Eteone heteropoda					23
Glycinde solitaria		23			68
Heteromastus filiformis	45	91			364
Leitoscoloplos robustus					23
Leitoscoloplos spp.		23			
Leptocheirus plumulosus					23
Macoma mitchelli	23				91
Mediomastus ambiseta	454		68	295	341
Micrura leidyi		68			45
Mulinia lateralis					45
Neanthes succinea		23			45
Paraprionospio pinnata	23				
Streblospio benedicti	45	68			182
Tubificoides spp.					68
Total Abundance w/ Epifauna	591	318	68	295	1318
Total Abundance w/o Epifauna	591	318	68	295	1318
Number of Taxa w/ Epifauna	5	7	1	1	12
Number of Taxa w/o Epifauna	5	7	1	1	12
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29212	29214	29215	29216	29217
Carinoma tremaphoros		0.0091			
Eteone heteropoda					0.0011
Glycinde solitaria		0.0227			0.0295
Heteromastus filiformis	0.0136	0.0477			0.1295
Leitoscoloplos robustus					0.1545
Leitoscoloplos spp.		0.0045			
Leptocheirus plumulosus					0.0023
Macoma mitchelli	0.0091				0.0091
Mediomastus ambiseta	0.0227		0.0068	0.0136	0.0068
Micrura leidyi		0.2090			0.2476
Mulinia lateralis					0.0023
Neanthes succinea		0.0023			0.0023
Paraprionospio pinnata	0.0023				
Streblospio benedicti	0.0023	0.0023			0.0091
Tubificoides spp.					0.0011
Total Biomass w/ Epifauna	0.0500	0.2976	0.0068	0.0136	0.5953
Total Biomass w/o Epifauna	0.0500	0.2976	0.0068	0.0136	0.5953

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29218	29219	29220	29221	29222
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Sand	High Meso Mud	Low Mesohaline	Low Mesohaline	High Meso Mud
Date	09/07/22	09/07/22	09/07/22	09/07/22	09/07/22
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)	1.6	7.2	0.2	4.5	7.4
Salinity (ppt)	13.33	16.29	11.91	8.16	13.39
Temperature (C)	27.04	27.39	27.23	27.44	27.54
Dissolved Oxygen (mg/L)	5.3	0.3	4.8	1.3	2.5
Sediment Silt-Clay (%)	3.13	85.57	64.58	77.68	97.52
Total Carbon (%)	0.11	2.79	4.82	1.91	2.71
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.33	2.00	3.00	2.60	1.67
Condition	Severely Degr.	Severely Degr.	Meets Goal	Degraded	Severely Degr.
# Attributes Scored	6	6	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.35 1	0.00 1	1.31 1	2.04 3	1.52 1
Abundance (#/m2)	613 1	114 1	4544 3	341 1	409 1
Biomass (g/m2)	0.21 1	0.01 1	2.76 3	0.57 1	0.01 1
Pollution Indicative Spp Abund (%)	14.81 3	0.00 0.00	8.00 5	0.00 5	11.11 1
Pollution Indicative Spp Biom (%)	5.49 1	0.00 5	0.08 0.00	0.00 0.00	23.08 3
Pollution Sensitive Spp Abund (%)	7.41 1	100.00 0.00	4.50 0.00	73.33 0.00	66.67 0.00
Pollution Sensitive Spp Biom (%)	1.10 1	100.00 3	49.09 3	95.65 3	30.77 3
Carnivore-Omnivore Abund (%)	11.11 1	0.00 1	3.50 0.00	13.33 0.00	5.56 1
Deep Deposit Feeder Abund (%)	55.56 0.00	100.00 0.00	83.50 0.00	66.67 0.00	83.33 0.00
TF Poll. Indicative Spp Abund (%)	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
Limnodrilus Abundance (%)	0.00 0.00	0.00 0.00	0.00 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 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	0.00 0.00	0.00 0.00
Tolerance Score	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
Tany./Chir. Abundance Ratio	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29218	29219	29220	29221	29222
Ascidacea (Epi.)	454				
Eteone heteropoda					23
Glycinde solitaria				23	
Heteromastus filiformis	295		273		
Laeonereis culveri	23		114		
Leptocheirus plumulosus	68			23	
Macoma balthica			136	45	
Macoma mitchelli	45		23		23
Marenzelleria viridis			68		
Mediomastus ambiseta	45	114		182	273
Micrura leidy	23		23	23	
Neanthes succinea	23		23		
Streblospio benedicti	91		364		23
Tubificoides spp.			3522	45	68
Total Abundance w/ Epifauna	1068	114	4544	341	409
Total Abundance w/o Epifauna	613	114	4544	341	409
Number of Taxa w/ Epifauna	9	1	9	6	5
Number of Taxa w/o Epifauna	8	1	9	6	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29218	29219	29220	29221	29222
Ascidacea (Epi.)	0.0045				
Eteone heteropoda					0.0023
Glycinde solitaria				0.0045	
Heteromastus filiformis	0.1136		0.0636		
Laeonereis culveri	0.0091		0.1091		
Leptocheirus plumulosus	0.0068			0.0068	
Macoma balthica			1.2042	0.5407	
Macoma mitchelli	0.0114		0.9452		0.0045
Marenzelleria viridis			0.1500		
Mediomastus ambiseta	0.0023	0.0091		0.0045	0.0045
Micrura leidy	0.0477		0.0477	0.0159	
Neanthes succinea	0.0045		0.1954		
Streblospio benedicti	0.0114		0.0023		0.0011
Tubificoides spp.			0.0409	0.0023	0.0023
Total Biomass w/ Epifauna	0.2113	0.0091	2.7582	0.5748	0.0148
Total Biomass w/o Epifauna	0.2068	0.0091	2.7582	0.5748	0.0148

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29223	29224	29225	29226	29227
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Mud	High Meso Sand
Date	09/07/22	09/07/22	09/07/22	09/07/22	09/07/22
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.3	2.5	1.1	6.0	3.1
Salinity (ppt)	11.62	10.92	6.82	14.34	15.70
Temperature (C)	26.72	27.08	27.01	27.44	27.33
Dissolved Oxygen (mg/L)	5.1	4.1	4.8	1.2	2.6
Sediment Silt-Clay (%)	97.99	96.85	94.99	83.85	4.13
Total Carbon (%)	2.78	3.05	3.21	2.98	0.22
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	3.40	2.60	1.67	2.00
Condition	Meets Goal	Meets Goal	Degraded	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.75 3	2.18 3	2.45 3	1.09 1	3.03 3
Abundance (#/m2)	204 1	841 3	273 1	318 1	977 1
Biomass (g/m2)	1.25 3	1.23 3	0.31 1	0.01 1	0.51 1
Pollution Indicative Spp Abund (%)	0.00 5	2.70 5	8.33 5	28.57	13.95 3
Pollution Indicative Spp Biom (%)	0.00	0.09	2.17	27.27 3	12.39
Pollution Sensitive Spp Abund (%)	77.78	24.32	66.67	71.43	27.91 3
Pollution Sensitive Spp Biom (%)	99.55 3	71.18 3	90.97 3	72.73 3	54.87
Carnivore-Omnivore Abund (%)	11.11	8.11	33.33	0.00 1	9.30 1
Deep Deposit Feeder Abund (%)	55.56	27.03	50.00	71.43	46.51
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	6.20	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	100.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29223	29224	29225	29226	29227
Ascidacea (Epi.)					818
Carinoma tremaphoros		45	23		68
Coelotanypus spp.			23		
Cyathura polita			45		
Gemma gemma					91
Glycinde solitaria					23
Heteromastus filiformis		23			227
Leitoscoloplos fragilis					23
Leptocheirus plumulosus		454	23		
Macoma balthica	68	45	23		45
Macoma mitchelli		23			159
Marenzelleria viridis					23
Mediomastus ambiseta	91	159	114	227	182
Melita nitida (Epi.)		136			
Neanthes succinea	23	23			
Paraprionospio pinnata				23	
Streblospio benedicti		23		68	114
Tubificoides spp.	23	45	23		23
Total Abundance w/ Epifauna	204	977	273	318	1795
Total Abundance w/o Epifauna	204	841	273	318	977
Number of Taxa w/ Epifauna	4	10	7	3	12
Number of Taxa w/o Epifauna	4	9	7	3	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29223	29224	29225	29226	29227
Ascidacea (Epi.)					0.0045
Carinoma tremaphoros		0.0159	0.0159		0.0273
Coelotanypus spp.			0.0068		
Cyathura polita			0.0932		
Gemma gemma					0.0204
Glycinde solitaria					0.0068
Heteromastus filiformis		0.0068			0.1159
Leitoscoloplos fragilis					0.0613
Leptocheirus plumulosus		0.1795	0.0045		
Macoma balthica	1.2360	0.8634	0.1749		0.2636
Macoma mitchelli		0.0636			0.0023
Marenzelleria viridis					0.0091
Mediomastus ambiseta	0.0068	0.0091	0.0182	0.0091	0.0023
Melita nitida (Epi.)		0.0091			
Neanthes succinea	0.0045	0.0841			
Paraprionospio pinnata				0.0011	
Streblospio benedicti		0.0011		0.0023	0.0023
Tubificoides spp.	0.0011	0.0023	0.0011		0.0023
Total Biomass w/ Epifauna	1.2485	1.2348	0.3147	0.0125	0.5180
Total Biomass w/o Epifauna	1.2485	1.2257	0.3147	0.0125	0.5135

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29601	29602	29603	29604	29605
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	High Meso Sand	High Meso Sand	High Meso Mud	Low Mesohaline	High Meso Mud
Date	08/30/22	08/30/22	08/30/22	08/30/22	08/30/22
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)	0.6	5.7	11.1	6.5	8.3
Salinity (ppt)	12.40	12.17	12.98	11.76	16.01
Temperature (C)	28.23	27.48	26.09	28.00	26.94
Dissolved Oxygen (mg/L)	6.7	4.8	0.1	6.6	0.5
Sediment Silt-Clay (%)	3.43	2.34	99.17	36.34	98.50
Total Carbon (%)	0.18	0.21	3.41	0.99	1.83
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	2.33	1.00	2.60	2.67
Condition	Marginal	Degraded	Severely Degr.	Degraded	Marginal
# Attributes Scored	6	6	6	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.18 1	2.01 1	0.00 1	2.45 3	0.00 1
Abundance (#/m2)	1863 5	2908 5	0 1	227 1	182 1
Biomass (g/m2)	1.22 3	0.83 1	0.00 1	0.31 1	2.48 5
Pollution Indicative Spp Abund (%)	8.54 5	1.56 5	100.00 1	10.00 5	0.00 1
Pollution Indicative Spp Biom (%)	16.03	1.23	100.00 1	0.37	0.00 5
Pollution Sensitive Spp Abund (%)	2.44 1	1.56 1	0.00	30.00	100.00
Pollution Sensitive Spp Biom (%)	0.47	8.73	0.00 1	60.37 3	100.00 3
Carnivore-Omnivore Abund (%)	12.20 1	7.03 1	0.00 1	30.00	0.00 1
Deep Deposit Feeder Abund (%)	8.54	10.16	0.00	40.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29601	29602	29603	29604	29605
Carinoma tremaphoros		136			
Gemma gemma		1659			
Heteromastus filiformis	136	295		45	
Laeonereis culveri	227	23			
Lepidactylus dytiscus	1022	45			
Leptocheirus plumulosus	68	68			
Littoridinops tenuipes (Epi.)	23				
Macoma balthica				23	182
Macoma mitchelli	204	545		23	
Marenzelleria viridis	23	45			
Mediomastus ambiseta	23			45	
Micrura leidyi		23			
Mulinia lateralis	114	23			
Neanthes succinea		23		68	
Streblospio benedicti	45	23		23	
Total Abundance w/ Epifauna	1886	2908	0	227	182
Total Abundance w/o Epifauna	1863	2908		227	182
Number of Taxa w/ Epifauna	10	12	0	6	1
Number of Taxa w/o Epifauna	9	12	0	6	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29601	29602	29603	29604	29605
Carinoma tremaphoros		0.0182			
Gemma gemma		0.3363			
Heteromastus filiformis	0.0750	0.1613		0.0273	
Laeonereis culveri	0.1250	0.0023			
Lepidactylus dytiscus	0.3567	0.0204			
Leptocheirus plumulosus	0.0068	0.0091			
Littoridinops tenuipes (Epi.)	0.0011				
Macoma balthica				0.1840	2.4833
Macoma mitchelli	0.4544	0.0568		0.0091	
Marenzelleria viridis	0.0045	0.0727			
Mediomastus ambiseta	0.0011			0.0011	
Micrura leidyi		0.1363			
Mulinia lateralis	0.1931	0.0091			
Neanthes succinea		0.0091		0.0841	
Streblospio benedicti	0.0023	0.0011		0.0011	
Total Biomass w/ Epifauna	1.2201	0.8327	0.0000	0.3067	2.4833
Total Biomass w/o Epifauna	1.2189	0.8327	0.0000	0.3067	2.4833

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29606	29607	29608	29609	29610
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	Low Mesohaline	Low Mesohaline
Date	08/30/22	08/30/22	08/30/22	08/30/22	08/30/22
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.8	2.0	7.6	5.4	4.8
Salinity (ppt)	11.60	11.36	12.13	9.98	9.69
Temperature (C)	28.21	28.64	27.38	27.60	27.64
Dissolved Oxygen (mg/L)	6.3	7.6	3.4	4.9	5.8
Sediment Silt-Clay (%)	58.41	2.20	98.26	97.37	98.33
Total Carbon (%)	1.27	0.10	2.33	1.80	1.49
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.80	3.00	3.33	4.60	5.00
Condition	Severely Degr.	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.06 1	2.51 5	2.53 3	2.53 5	2.69 5
Abundance (#/m2)	432 1	1681 5	704 1	1818 5	1863 5
Biomass (g/m2)	0.21 1	0.79 1	5.16 5	4.24 3	6.77 5
Pollution Indicative Spp Abund (%)	0.00 5	18.92 3	3.23 3	1.25 5	0.00 5
Pollution Indicative Spp Biom (%)	0.00	30.79	0.53 5	0.03	0.00
Pollution Sensitive Spp Abund (%)	78.95	24.32	48.39	25.00	31.71
Pollution Sensitive Spp Biom (%)	5.32 1	28.78 1	86.83 3	85.85 5	87.00 5
Carnivore-Omnivore Abund (%)	5.26	2.70	16.13 3	17.50	7.32
Deep Deposit Feeder Abund (%)	94.74	4.05	38.71	32.50	42.68
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29606	29607	29608	29609	29610
Ameroculodes species complex		23			
Carinoma tremaphoros			23		23
Heteromastus filiformis	23	23	45	318	386
Laonereis culveri		45			
Leitoscoloplos fragilis		45			
Leitoscoloplos robustus			23		
Lepidactylus dytiscus		659	45		
Leptocheirus plumulosus		45		454	318
Macoma balthica			273	409	477
Macoma mitchelli		159		23	68
Marenzelleria viridis		409			68
Mediomastus ambiseta	341		68	45	45
Melita nitida (Epi.)				23	
Micrura leidy					23
Mulinia lateralis		182			
Neanthes succinea	23		91	318	91
Streblospio benedicti		91		23	
Tubificoides spp.	45		136	227	364
Total Abundance w/ Epifauna	432	1681	704	1840	1863
Total Abundance w/o Epifauna	432	1681	704	1818	1863
Number of Taxa w/ Epifauna	4	10	8	9	10
Number of Taxa w/o Epifauna	4	10	8	8	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29606	29607	29608	29609	29610
Ameroculodes species complex		0.0023			
Carinoma tremaphoros			0.0045		0.0068
Heteromastus filiformis	0.0045	0.0011	0.0386	0.1954	0.1908
Laonereis culveri		0.0136			
Leitoscoloplos fragilis		0.0023			
Leitoscoloplos robustus			0.0273		
Lepidactylus dytiscus		0.2636	0.0114		
Leptocheirus plumulosus		0.0068		0.1295	0.1022
Macoma balthica			4.4713	3.6375	5.8300
Macoma mitchelli		0.0318		0.0091	0.1431
Marenzelleria viridis		0.2272			0.0523
Mediomastus ambiseta	0.0114		0.0068	0.0023	0.0045
Melita nitida (Epi.)				0.0023	
Micrura leidy					0.0204
Mulinia lateralis		0.2363			
Neanthes succinea	0.1954		0.5930	0.2636	0.4112
Streblospio benedicti		0.0045		0.0011	
Tubificoides spp.	0.0023		0.0045	0.0011	0.0045
Total Biomass w/ Epifauna	0.2136	0.7895	5.1574	4.2418	6.7660
Total Biomass w/o Epifauna	0.2136	0.7895	5.1574	4.2396	6.7660

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29611	29612	29613	29614	29615
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/23/22	08/30/22	08/23/22	08/23/22	09/01/22
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)	4.3	4.9	4.6	2.3	7.1
Salinity (ppt)	9.36	9.75	7.33	6.22	7.75
Temperature (C)	26.95	27.80	26.91	27.30	27.09
Dissolved Oxygen (mg/L)	5.0	5.9	6.1	6.1	5.2
Sediment Silt-Clay (%)	86.11	96.75	96.91	68.12	98.07
Total Carbon (%)	2.88	3.67	3.01	1.71	2.18
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	4.60	3.80	3.00	4.20	4.20
Condition	Meets Goal	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.72 5	2.35 3	2.48 3	2.87 5	2.49 3
Abundance (#/m2)	1181 3	2795 3	682 3	1954 5	3135 3
Biomass (g/m2)	5.06 5	4.95 3	2.08 3	2.79 3	5.25 5
Pollution Indicative Spp Abund (%)	1.92 5	1.63 5	43.33 1	17.44 3	0.00 5
Pollution Indicative Spp Biom (%)	0.09	0.64	0.22	0.73	0.00
Pollution Sensitive Spp Abund (%)	42.31	14.63	20.00	12.79	35.51
Pollution Sensitive Spp Biom (%)	88.14 5	81.38 5	98.80 5	95.77 5	88.28 5
Carnivore-Omnivore Abund (%)	13.46	6.50	10.00	10.47	13.77
Deep Deposit Feeder Abund (%)	32.69	62.60	23.33	11.63	50.72
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	6.00	6.10	6.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	100.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29611	29612	29613	29614	29615
Ameroculodes species complex				341	
Balanus improvisus (Epi.)			68	45	
Boccardiella ligERICA				523	
Carinoma tremaphoros		45			136
Coelotanypus spp.				23	
Cyathura polita		91	23	182	295
Eteone heteropoda		23	23		
Heteromastus filiformis	68	204			91
Leptocheirus plumulosus	136	273	45	136	227
Macoma balthica	386	182			545
Macoma mitchelli	23	295			114
Marenzelleria viridis	68	91	23	45	68
Mediomastus ambiseta	45	45			45
Micrura leidy	23	23			
Mulinia lateralis		23			
Mytilopsis leucophaeata (Epi.)			23		
Neanthes succinea	136		23		
Polydora cornuta			23	136	
Rangia cuneata			91	23	159
Rhithropanopeus harrisi (Epi.)			23	23	
Streblospio benedicti	23		273	318	
Tubificoides spp.	273	1500	159	227	1454
Total Abundance w/ Epifauna	1181	2795	795	2022	3135
Total Abundance w/o Epifauna	1181	2795	682	1954	3135
Number of Taxa w/ Epifauna	10	12	12	12	10
Number of Taxa w/o Epifauna	10	12	9	10	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29611	29612	29613	29614	29615
Ameroculodes species complex				0.0295	
Balanus improvisus (Epi.)			0.7157	0.0795	
Boccardiella ligERICA				0.0295	
Carinoma tremaphoros		0.0159			0.0818
Coelotanypus spp.				0.0068	
Cyathura polita		0.0568	0.0023	0.0932	0.3658
Eteone heteropoda		0.0114	0.0023		
Heteromastus filiformis	0.0477	0.1113			0.1000
Leptocheirus plumulosus	0.0318	0.0386	0.0023	0.0204	0.0204
Macoma balthica	4.3213	3.7352			2.7673
Macoma mitchelli	0.0159	0.6975			0.3999
Marenzelleria viridis	0.1340	0.2386	0.0682	0.0591	0.1431
Mediomastus ambiseta	0.0011	0.0011			0.0045
Micrura leidy	0.0045	0.0159			
Mulinia lateralis		0.0204			
Mytilopsis leucophaeata (Epi.)			0.2840		
Neanthes succinea	0.4930		0.0091		
Polydora cornuta			0.0068	0.0114	
Rangia cuneata			1.9880	2.5196	1.3564
Rhithropanopeus harrisi (Epi.)			0.1068	0.0136	
Streblospio benedicti	0.0045		0.0023	0.0136	
Tubificoides spp.	0.0023	0.0114	0.0023	0.0068	0.0136
Total Biomass w/ Epifauna	5.0563	4.9541	3.1899	2.8832	5.2529
Total Biomass w/o Epifauna	5.0563	4.9541	2.0834	2.7900	5.2529

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29616	29617	29618	29619	29620
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Oligohaline	Oligohaline
Date	09/16/22	09/16/22	09/01/22	09/16/22	09/16/22
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)	1.1	3.5	6.5	3.2	3.0
Salinity (ppt)	6.16	6.44	7.97	4.66	4.67
Temperature (C)	23.30	23.50	27.27	24.20	24.50
Dissolved Oxygen (mg/L)	7.5	7.3	5.1	6.4	5.7
Sediment Silt-Clay (%)	2.89	93.99	39.29	79.44	92.90
Total Carbon (%)	0.12	3.15	0.91	2.47	1.81
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	3.40	3.80	3.80	3.00
Condition	Meets Goal	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.42 1	2.76 5	2.34 3	2.59 3	3.23 3
Abundance (#/m2)	750 3	818 3	2863 3	1863 5	1500 5
Biomass (g/m2)	1.20 3	35.90 1	25.41 3	65.97 3	30.48 3
Pollution Indicative Spp Abund (%)	0.00 5	16.67 3	0.00 5	10.98 2	25.76 3
Pollution Indicative Spp Biom (%)	0.00	0.06	0.00	0.01	0.06
Pollution Sensitive Spp Abund (%)	6.06	41.67	76.98	60.98	24.24
Pollution Sensitive Spp Biom (%)	79.25 3	99.74 5	99.12 5	99.87 5	99.75 3
Carnivore-Omnivore Abund (%)	0.00	27.78	12.70	9.76 1	18.18 3
Deep Deposit Feeder Abund (%)	0.00	11.11	12.70	9.76	19.70
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	31.71 3	65.15 3
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	42.68 5	10.61 3
Tolerance Score	6.15	6.14	6.00	6.00 5	6.13 3
Tany./Chir. Abundance Ratio	0.00	100.00	0.00	0.00	100.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29616	29617	29618	29619	29620
Apocorophium lacustre (Epi.)					45
Balanus improvisus (Epi.)				273	454
Boccardiella ligERICA					45
Carinoma tremaphoros		23	91		
Chiridotea almyra			23	23	
Coelotanypus spp.		114			159
Corbicula fluminea	23				
Cyathura polita		91	227	159	114
Edotea triloba (Epi.)			23	23	
Heteromastus filiformis			250		
Hobsonia florida			23	45	91
Lepidactylus dytiscus	523				
Leptocheirus plumulosus	23	204	91	204	182
Macoma balthica			91		
Macoma mitchelli	136		45	68	23
Marenzelleria viridis	23	204	1568	772	159
Melita nitida (Epi.)		91			
Mytilopsis leucophaeata (Epi.)				23	45
Neanthes succinea			23		
Polydora cornuta		23			114
Rangia cuneata	23	45	318	204	91
Rhithropanopeus harrisi (Epi.)				23	
Streblospio benedicti		23		204	227
Stylochus ellipticus (Epi.)				23	
Tubificoides spp.		91	114	182	295
Total Abundance w/ Epifauna	750	909	2885	2227	2045
Total Abundance w/o Epifauna	750	818	2863	1863	1500
Number of Taxa w/ Epifauna	6	10	13	14	14
Number of Taxa w/o Epifauna	6	9	12	9	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29616	29617	29618	29619	29620
Apocorophium lacustre (Epi.)					0.0045
Balanus improvisus (Epi.)				0.8497	1.7472
Boccardiella ligERICA					0.0045
Carinoma tremaphoros		0.0045	0.0159		
Chiridotea almyra			0.0045	0.0023	
Coelotanypus spp.		0.0204			0.0136
Corbicula fluminea	0.1136				
Cyathura polita		0.2136	0.2590	0.1545	0.0772
Edotea triloba (Epi.)			0.0068	0.0045	
Heteromastus filiformis			0.1840		
Hobsonia florida			0.0023	0.0091	0.0045
Lepidactylus dytiscus	0.0750				
Leptocheirus plumulosus	0.0023	0.0613	0.0114	0.0182	0.0068
Macoma balthica			0.3363		
Macoma mitchelli	0.0591		0.0023	0.0432	0.0318
Marenzelleria viridis	0.0068	0.9452	4.8962	1.5518	0.3908
Melita nitida (Epi.)		0.0045			
Mytilopsis leucophaeata (Epi.)				0.3749	0.1727
Neanthes succinea			0.0023		
Polydora cornuta		0.0011			0.0045
Rangia cuneata	0.9474	34.6435	19.6914	64.1749	29.9404
Rhithropanopeus harrisi (Epi.)				0.1204	
Streblospio benedicti		0.0011		0.0091	0.0045
Stylochus ellipticus (Epi.)				0.0750	
Tubificoides spp.		0.0045	0.0011	0.0023	0.0045
Total Biomass w/ Epifauna	1.2042	35.8999	25.4135	67.3898	32.4078
Total Biomass w/o Epifauna	1.2042	35.8953	25.4066	65.9652	30.4834

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

Site	29621	29623	29624	29625	29626
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Oligohaline	Freshwater	Freshwater	High Meso Mud
Date	09/01/22	09/01/22	08/31/22	08/31/22	08/30/22
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)	7.2	9.3	1.6	1.4	6.5
Salinity (ppt)	6.02	4.55	0.46	0.18	12.19
Temperature (C)	27.05	27.34	28.08	28.57	27.31
Dissolved Oxygen (mg/L)	6.1	6.0	8.3	8.7	3.3
Sediment Silt-Clay (%)	61.93	51.99	11.45	22.16	98.91
Total Carbon (%)	1.99	2.07	1.36	1.64	3.33
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	2.60	4.50	4.00	3.00
Condition	Meets Goal	Degraded	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	4	4	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.46 3	2.04	2.71	2.71	1.05 1
Abundance (#/m2)	2636 3	2317 5	1113 5	3067 5	341 1
Biomass (g/m2)	30.32 1	57.59	0.24	0.94	3.48 5
Pollution Indicative Spp Abund (%)	11.21 3	59.80	32.65	62.96	0.00
Pollution Indicative Spp Biom (%)	0.03	0.16	5.63	15.20	0.00 5
Pollution Sensitive Spp Abund (%)	51.72	17.65	36.73	4.44	73.33
Pollution Sensitive Spp Biom (%)	99.79 5	99.45	38.50	6.27	93.15 3
Carnivore-Omnivore Abund (%)	5.17	0.98 1	63.27	14.81	20.00 3
Deep Deposit Feeder Abund (%)	28.45	78.43	20.41 5	68.89 5	6.67
TF Poll. Indicative Spp Abund (%)	0.00	0.00	20.41 5	57.04 3	0.00
Limnodrilus Abundance (%)	0.00	58.82	20.41	57.04	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	82.35 3	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	11.76 3	0.00	0.00	0.00
Tolerance Score	6.00	9.37 1	8.11 3	8.87 3	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	35.71	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2022 (CRUISE 01:2022/2023) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	29621	29623	29624	29625	29626
Almyracuma proximoculi			45		
Branchiura sowerbyi				318	
Chironomus spp.			91	68	
Cladotanytarsus spp. B Epler			45		
Coelotanypus spp.				114	
Corbicula fluminea		68	136	45	
Cryptochironomus spp.			114	91	
Cyathura polita	136	23	409	136	
Harnischia spp.				23	
Heteromastus filiformis	23				23
Hobsonia florida	159				
Leptocheirus plumulosus	68				
Limnodrilus hoffmeisteri		136	45	772	
Macoma balthica					250
Marenzelleria viridis	841	273			
Melita nitida (Epi.)	23		23		
Mytilopsis leucophaeata (Epi.)	23				
Neanthes succinea					68
Pisidium spp.				454	
Polypedilum halterale group			45	23	
Rangia cuneata	386	114			
Streblospio benedicti	295	23			
Tubificidae imm w/o cap chaetae *		1227	182	977	
Tubificoides spp.	727	454		45	
Total Abundance w/ Epifauna	2681	2317	1136	3067	341
Total Abundance w/o Epifauna	2636	2317	1113	3067	341
Number of Taxa w/ Epifauna	10	7	9	11	3
Number of Taxa w/o Epifauna	8	7	8	11	3
BENTHIC BIOMASS (Grams per sq. meter)					
Site	29621	29623	29624	29625	29626
Almyracuma proximoculi			0.0023		
Branchiura sowerbyi				0.2090	
Chironomidae			0.0011	0.0011	
Chironomus spp.			0.0011	0.0204	
Coelotanypus spp.				0.0068	
Corbicula fluminea		0.2158	0.1318	0.5135	
Cyathura polita	0.1159	0.0523	0.0932	0.0591	
Heteromastus filiformis	0.0182				0.1136
Hobsonia florida	0.0159				
Leptocheirus plumulosus	0.0136				
Macoma balthica					3.2421
Marenzelleria viridis	2.4265	0.3931			
Melita nitida (Epi.)	0.0023		0.0023		
Mytilopsis leucophaeata (Epi.)	0.0204				
Neanthes succinea					0.1250
Oligochaeta		0.0905	0.0125	0.1159	
Pisidium spp.				0.0114	
Rangia cuneata	27.7161	56.8318			
Streblospio benedicti	0.0091	0.0023			
Tubificoides spp.	0.0068	0.0091		0.0045	
Total Biomass w/ Epifauna	30.3448	57.5948	0.2442	0.9417	3.4807
Total Biomass w/o Epifauna	30.3221	57.5948	0.2420	0.9417	3.4807