



Final Report

Chesapeake Bay Water Quality Monitoring Program

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

July 1984 – December 2024
(Volume 2)

Prepared for

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

Prepared by

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Columbia, MD 21045

October 2025

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**CHESAPEAKE BAY WATER QUALITY
MONITORING PROGRAM**

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

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DATA SUMMARY A

**BENTHIC ENVIRONMENT AND COMMUNITY
COMPOSITION AT FIXED SITES:
SUMMER 2024**

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 001		Rep: 01	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 21SEP24	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 9:46:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.0	Salinity (ppt): 12.87	Temperature (C): 24.11	
Dissolved Oxygen (mg/l): 7.6	Sediment Silt-Clay (%): 6.59	Total Carbon (%): 0.32	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
	Value	Score	Value Score
Shannon-Wiener Index	3.12	3	35.96 1
Abundance (#/m2)	3560	3	42.99
Biomass (g/m2)	3.05	5	10.11 3
Carnivore-Omnivore Abundance (%)	12.36	1	0.52
Deep Deposit Feeder Abundance (%)	50.56		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	120	0.06800	
Gemma gemma	200	0.10800	
Heteromastus filiformis	480	0.15200	
Laeonereis culveri	280	0.91600	
Leitoscoloplos fragilis	760	1.29600	
Macoma mitchelli	120	0.20000	
Mediomastus ambiseta	360	0.01600	
Micrura leidyi	40	0.23600	
Paraonis fulgens	480	0.03600	
Streblospio benedicti	520	0.01600	
Tubificoides spp.	200	0.00800	
Total Abundance w/ Epi.	3560		
Total Abundance w/o Epi.	3560		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.		3.05200	
Total Biomass w/o Epi.		3.05200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 001		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 21SEP24	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 9:46:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.0	Salinity (ppt): 12.87	Temperature (C): 24.11	
Dissolved Oxygen (mg/l): 7.6	Sediment Silt-Clay (%): 6.59	Total Carbon (%): 0.32	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	3.05	3	
Abundance (#/m2)	2000	5	Pollution Indicative Species Abundance (%) 36.00 1
Biomass (g/m2)	2.96	3	Pollution Indicative Species Biomass (%) 24.70
Carnivore-Omnivore Abundance (%)	30.00	3	Pollution Sensitive Species Abundance (%) 16.00 3
Deep Deposit Feeder Abundance (%)	46.00		Pollution Sensitive Species Biomass (%) 1.89
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.02800	
Eteone heteropoda	40	0.00400	
Heteromastus filiformis	160	0.05600	
Laeonereis culveri	400	1.03200	
Leitoscoloplos fragilis	480	0.70400	
Macoma mitchelli	120	0.06000	
Mediomastus ambiseta	280	0.00800	
Micrura leidyi	80	0.90400	
Neanthes succinea	40	0.08800	
Paraonis fulgens	120	0.00800	
Streblospio benedicti	200	0.02400	
Tagelus plebeius	40	0.04800	
Total Abundance w/ Epi.	2000		
Total Abundance w/o Epi.	2000		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	12		
Total Biomass w/ Epi.		2.96400	
Total Biomass w/o Epi.		2.96400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 001		Rep: 03
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 21SEP24
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 9:46:00
BOTTOM ENVIRONMENT		
Depth (m): 2.0	Salinity (ppt): 12.87	Temperature (C): 24.11
Dissolved Oxygen (mg/l): 7.6	Sediment Silt-Clay (%): 6.59	Total Carbon (%): 0.32
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6
	Value	Score
Shannon-Wiener Index	2.77	3
Abundance (#/m2)	2200	5
Biomass (g/m2)	1.63	3
Carnivore-Omnivore Abundance (%)	25.45	3
Deep Deposit Feeder Abundance (%)	54.55	
	Value	Score
Pollution Indicative Species Abundance (%)	40.00	1
Pollution Indicative Species Biomass (%)	36.36	
Pollution Sensitive Species Abundance (%)	18.18	3
Pollution Sensitive Species Biomass (%)	0.98	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Carinoma tremaphoros	40	0.03600
Eteone heteropoda	40	0.02000
Heteromastus filiformis	200	0.20800
Laeonereis culveri	440	0.58000
Leitoscoloplos fragilis	600	0.56400
Macoma mitchelli	80	0.02800
Mediomastus ambiseta	400	0.01600
Micrura leidyi	40	0.16000
Paraonis fulgens	120	0.00800
Streblospio benedicti	240	0.00800
Total Abundance w/ Epi.	2200	
Total Abundance w/o Epi.	2200	
Number of Taxa w/ Epi.	10	
Number of Taxa w/o Epi.	10	
Total Biomass w/ Epi.		1.62800
Total Biomass w/o Epi.		1.62800

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 21SEP24	
		Sampled Area: 0.025 sq.m		Time: 10:45:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.1		Salinity (ppt): 13.55		Temperature (C): 25.15	
Dissolved Oxygen (mg/l): 7.5		Sediment Silt-Clay (%): 2.29		Total Carbon (%): 0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.41	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	560	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	1.08	3	Pollution Sensitive Species Abundance (%)	7.14	1
Carnivore-Omnivore Abundance (%)	28.57	3	Pollution Sensitive Species Biomass (%)	24.91	
Deep Deposit Feeder Abundance (%)	21.43				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	160		0.00400		
Heteromastus filiformis	120		0.01600		
Laeonereis culveri	120		0.67600		
Macoma balthica	40		0.26800		
Macoma mitchelli	80		0.02800		
Micrura leidyi	40		0.08400		
Total Abundance w/ Epi.	560				
Total Abundance w/o Epi.	560				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			1.07600		
Total Biomass w/o Epi.			1.07600		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 21SEP24	
		Sampled Area: 0.025 sq.m		Time: 10:45:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.1		Salinity (ppt): 13.55		Temperature (C): 25.15	
Dissolved Oxygen (mg/l): 7.5		Sediment Silt-Clay (%): 2.29		Total Carbon (%): 0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.26	1	Pollution Indicative Species Abundance (%)	17.39	3
Abundance (#/m2)	920	1	Pollution Indicative Species Biomass (%)	1.98	
Biomass (g/m2)	2.12	3	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	39.13	5	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	13.04				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Eteone foliosa	40		0.10000		
Gemma gemma	320		0.00800		
Heteromastus filiformis	40		0.01200		
Laeonereis culveri	320		1.90800		
Leitoscoloplos fragilis	80		0.04000		
Macoma mitchelli	40		0.05200		
Streblospio benedicti	80		0.00200		
Total Abundance w/ Epi.	920				
Total Abundance w/o Epi.	920				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			2.12200		
Total Biomass w/o Epi.			2.12200		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 006		Rep: 03	
Watershed: Calvert Cliffs Discharge	Habitat: High Mesohaline Sand	Date: 21SEP24	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 10:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 13.55	Temperature (C): 25.15	
Dissolved Oxygen (mg/l): 7.5	Sediment Silt-Clay (%): 2.29	Total Carbon (%): 0.11	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.	# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	2.49	1	1
Abundance (#/m2)	1280	3	1
Biomass (g/m2)	2.32	3	1
Carnivore-Omnivore Abundance (%)	28.13	3	0.17
Deep Deposit Feeder Abundance (%)	18.75		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.00800	
Gemma gemma	400	0.06400	
Heteromastus filiformis	80	0.04400	
Laeonereis culveri	280	1.75600	
Leitoscoloplos fragilis	160	0.04800	
Macoma balthica	40	0.00400	
Micrura leidyi	40	0.39600	
Streblospio benedicti	240	0.00400	
Total Abundance w/ Epi.	1280		
Total Abundance w/o Epi.	1280		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		2.32400	
Total Biomass w/o Epi.		2.32400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 015		Rep: 01	
Watershed: Mainstem		Date: 21SEP24	
Habitat: High Mesohaline Sand		Time: 13:38:00	
Gear: Young Grab		Sampled Area: 0.044 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 2.1		Salinity (ppt): 12.92	
Dissolved Oxygen (mg/l): 6.6		Temperature (C): 23.89	
		Sediment Silt-Clay (%): 1.92	
		Total Carbon (%): 0.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67		Condition: Marginal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.66	3	7.69
Abundance (#/m2)	295	1	42.40
Biomass (g/m2)	0.25	1	7.69
Carnivore-Omnivore Abundance (%)	38.46	5	0.46
Deep Deposit Feeder Abundance (%)	38.46		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.03408	
Heteromastus filiformis	45	0.02272	
Laeoneis culveri	68	0.01818	
Leitoscoloplos robustus	23	0.10451	
Macoma mitchelli	68	0.06362	
Mediomastus ambiseta	23	0.00114	
Tubificoides spp.	23	0.00227	
Total Abundance w/ Epi.	295		
Total Abundance w/o Epi.	295		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.24651	
Total Biomass w/o Epi.		0.24651	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 015		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 21SEP24	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 13:38:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 12.92	Temperature (C): 23.89	
Dissolved Oxygen (mg/l): 6.6	Sediment Silt-Clay (%): 1.92	Total Carbon (%): 0.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.33	Condition: Severely Degr.		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.27	1	46.15
Abundance (#/m2)	591	1	43.45
Biomass (g/m2)	0.33	1	7.69
Carnivore-Omnivore Abundance (%)	23.08	3	0.69
Deep Deposit Feeder Abundance (%)	15.38		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Heteromastus filiformis	23	0.00454	
Laeonereis culveri	114	0.06589	
Leitoscoloplos fragilis	23	0.12950	
Macoma mitchelli	114	0.07725	
Mediomastus ambiseta	45	0.00227	
Micrura leidyi	23	0.03635	
Streblospio benedicti	250	0.01363	
Total Abundance w/ Epi.	591		
Total Abundance w/o Epi.	591		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.32944	
Total Biomass w/o Epi.		0.32944	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 015		Rep: 03	
Watershed: Mainstem	Habitat: High Mesohaline Sand	Date: 21SEP24	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 13:38:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.1	Salinity (ppt): 12.92	Temperature (C): 23.89	
Dissolved Oxygen (mg/l): 6.6	Sediment Silt-Clay (%): 1.92	Total Carbon (%): 0.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33	Condition: Degraded		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.62	3	21.62
Abundance (#/m2)	841	1	4.55
Biomass (g/m2)	0.30	1	10.81
Carnivore-Omnivore Abundance (%)	27.03	3	9.09
Deep Deposit Feeder Abundance (%)	32.43		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Gemma gemma	45	0.01818	
Heteromastus filiformis	204	0.11814	
Laeonereis culveri	204	0.09542	
Macoma mitchelli	91	0.00454	
Marenzelleria viridis	23	0.02272	
Mediomastus ambiseta	68	0.00454	
Micrura leidyi	23	0.02272	
Streblospio benedicti	182	0.01363	
Total Abundance w/ Epi.	841		
Total Abundance w/o Epi.	841		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		0.29990	
Total Biomass w/o Epi.		0.29990	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 13AUG24	
		Sampled Area: 0.022 sq.m		Time: 8:32:00	
BOTTOM ENVIRONMENT					
Depth (m): 5.2		Salinity (ppt): 6.39		Temperature (C): 27.60	
Dissolved Oxygen (mg/l): 2.7		Sediment Silt-Clay (%): 95.36		Total Carbon (%): 3.33	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.40		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.37	1	Pollution Indicative Species Abundance (%)	20.00	3
Abundance (#/m2)	227	1	Pollution Indicative Species Biomass (%)	50.00	
Biomass (g/m2)	0.02	1	Pollution Sensitive Species Abundance (%)	60.00	
Carnivore-Omnivore Abundance (%)	20.00		Pollution Sensitive Species Biomass (%)	25.00	1
Deep Deposit Feeder Abundance (%)	60.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00454		
Mediomastus ambiseta	136		0.00455		
Streblospio benedicti	45		0.00909		
Total Abundance w/ Epi.	227				
Total Abundance w/o Epi.	227				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.01818		
Total Biomass w/o Epi.			0.01818		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 13AUG24	
		Sampled Area: 0.022 sq.m		Time: 8:32:00	
BOTTOM ENVIRONMENT					
Depth (m): 5.2		Salinity (ppt): 6.39		Temperature (C): 27.60	
Dissolved Oxygen (mg/l): 2.7		Sediment Silt-Clay (%): 95.36		Total Carbon (%): 3.33	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.40		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.81	1	Pollution Indicative Species Abundance (%)	25.00	1
Abundance (#/m2)	182	1	Pollution Indicative Species Biomass (%)	50.00	
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	75.00	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	50.00	3
Deep Deposit Feeder Abundance (%)	75.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Mediomastus ambiseta	136		0.00227		
Streblospio benedicti	45		0.00227		
Total Abundance w/ Epi.	182				
Total Abundance w/o Epi.	182				
Number of Taxa w/ Epi.	2				
Number of Taxa w/o Epi.	2				
Total Biomass w/ Epi.			0.00455		
Total Biomass w/o Epi.			0.00455		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 022		Rep: 03	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 13AUG24	
		Time: 8:32:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.2		Salinity (ppt): 6.39	
Dissolved Oxygen (mg/l): 2.7		Sediment Silt-Clay (%): 95.36	
		Temperature (C): 27.60	
		Total Carbon (%): 3.33	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.80		Condition: Severely Degr.	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	0.81	1	5
Abundance (#/m2)	182	1	0.00
Biomass (g/m2)	0.15	1	75.00
Carnivore-Omnivore Abundance (%)	25.00	1	6.25
Deep Deposit Feeder Abundance (%)	75.00	1	1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Littoridinops tenuipes (Epi)	136	0.04545	
Mediomastus ambiseta	136	0.00909	
Neanthes succinea	45	0.13635	
Total Abundance w/ Epi.	318		
Total Abundance w/o Epi.	182		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.19089	
Total Biomass w/o Epi.		0.14544	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 023		Rep: 01	
Watershed: Patapsco & Back Rivers		Date: 13AUG24	
Gear: Wildco Box Corer		Time: 10:45:00	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 5.9	Salinity (ppt): 6.16	Temperature (C): 27.36	
Dissolved Oxygen (mg/l): 5.5	Sediment Silt-Clay (%): 89.86	Total Carbon (%): 3.56	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.40	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value Score
Shannon-Wiener Index	1.55	1	Pollution Indicative Species Abundance (%) 4.17 5
Abundance (#/m2)	1091	3	Pollution Indicative Species Biomass (%) 0.11
Biomass (g/m2)	12.04	3	Pollution Sensitive Species Abundance (%) 79.17
Carnivore-Omnivore Abundance (%)	16.67		Pollution Sensitive Species Biomass (%) 97.92 5
Deep Deposit Feeder Abundance (%)	12.50		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Edotea triloba (Epi)	45		0.00454
Hermundura americana	91		0.01364
Macoma balthica	727		11.77155
Mediomastus ambiseta	136		0.01364
Neanthes succinea	91		0.22270
Streblospio benedicti	45		0.01363
Total Abundance w/ Epi.	1136		
Total Abundance w/o Epi.	1091		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.			12.03971
Total Biomass w/o Epi.			12.03516

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 023		Rep: 02	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Date: 13AUG24		Time: 10:45:00	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 5.9		Salinity (ppt): 6.16	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 89.86	
		Temperature (C): 27.36	
		Total Carbon (%): 3.56	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	1.24	1	
Abundance (#/m2)	500	1	Pollution Indicative Species Abundance (%)
Biomass (g/m2)	5.36	5	Pollution Indicative Species Biomass (%)
Carnivore-Omnivore Abundance (%)	9.09		Pollution Sensitive Species Abundance (%)
Deep Deposit Feeder Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)
			63.64
			99.41
			3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00454	
Leptocheirus plumulosus	136	0.02727	
Macoma balthica	318	5.32674	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	500		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		5.35855	
Total Biomass w/o Epi.		5.35855	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 023		Rep: 03	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 13AUG24	
		Time: 10:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.9		Salinity (ppt): 6.16	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 89.86	
		Temperature (C): 27.36	
		Total Carbon (%): 3.56	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80		Condition: Meets Goal	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	1.49	1	
Abundance (#/m2)	591	3	
Biomass (g/m2)	5.98	5	
Carnivore-Omnivore Abundance (%)	30.77		
Deep Deposit Feeder Abundance (%)	7.69		
		Pollution Indicative Species Abundance (%)	7.69
		Pollution Indicative Species Biomass (%)	0.15
		Pollution Sensitive Species Abundance (%)	69.23
		Pollution Sensitive Species Biomass (%)	93.38
			5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	45	0.00909	
Macoma balthica	364	5.57672	
Mediomastus ambiseta	45	0.00454	
Neanthes succinea	136	0.38633	
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.		5.97668	
Total Biomass w/o Epi.		5.97668	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 024		Rep: 01	
Watershed: Mainstem	Habitat: High Mesohaline Mud	Date: 15AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:47:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.3	Salinity (ppt): 7.79	Temperature (C): 27.10	
Dissolved Oxygen (mg/l): 1.9	Sediment Silt-Clay (%): 99.37	Total Carbon (%): 2.75	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.33	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.04	3	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	1545	5	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	9.06	5	Pollution Sensitive Species Abundance (%) 52.94
Carnivore-Omnivore Abundance (%)	23.53	3	Pollution Sensitive Species Biomass (%) 96.09
Deep Deposit Feeder Abundance (%)	8.82		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hermundura americana	227	0.05000	
Leptocheirus plumulosus	364	0.07727	
Macoma balthica	682	8.68549	
Mediomastus ambiseta	136	0.01818	
Neanthes succinea	136	0.22725	
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.		9.05818	
Total Biomass w/o Epi.		9.05818	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 024		Rep: 02	
Watershed: Mainstem	Habitat: High Mesohaline Mud	Date: 15AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:47:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.3	Salinity (ppt): 7.79	Temperature (C): 27.10	
Dissolved Oxygen (mg/l): 1.9	Sediment Silt-Clay (%): 99.37	Total Carbon (%): 2.75	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.33	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.57	3	Pollution Indicative Species Abundance (%) 2.17
Abundance (#/m2)	2091	5	Pollution Indicative Species Biomass (%) 0.02
Biomass (g/m2)	9.63	5	Pollution Sensitive Species Abundance (%) 50.00
Carnivore-Omnivore Abundance (%)	19.57	3	Pollution Sensitive Species Biomass (%) 95.45
Deep Deposit Feeder Abundance (%)	32.61		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.02727	
Eteone heteropoda	45	0.00227	
Hermundura americana	182	0.02273	
Leptocheirus plumulosus	500	0.10908	
Macoma balthica	500	9.17181	
Mediomastus ambiseta	545	0.02273	
Neanthes succinea	91	0.27270	
Tubificoides spp.	136	0.00454	
Total Abundance w/ Epi.	2091		
Total Abundance w/o Epi.	2091		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		9.63313	
Total Biomass w/o Epi.		9.63313	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 024		Rep: 03	
Watershed: Mainstem	Habitat: High Mesohaline Mud	Date: 15AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:47:00	
BOTTOM ENVIRONMENT			
Depth (m): 6.3	Salinity (ppt): 7.79	Temperature (C): 27.10	
Dissolved Oxygen (mg/l): 1.9	Sediment Silt-Clay (%): 99.37	Total Carbon (%): 2.75	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.67	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.62	3	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	1954	5	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	6.54	5	Pollution Sensitive Species Abundance (%) 48.84
Carnivore-Omnivore Abundance (%)	25.58	5	Pollution Sensitive Species Biomass (%) 90.51
Deep Deposit Feeder Abundance (%)	37.21		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.03636	
Hermundura americana	182	0.02273	
Leptocheirus plumulosus	364	0.07272	
Macoma balthica	318	5.89941	
Macoma mitchelli	45	0.28634	
Mediomastus ambiseta	636	0.01818	
Neanthes succinea	227	0.19998	
Tubificoides spp.	91	0.00227	
Total Abundance w/ Epi.	1954		
Total Abundance w/o Epi.	1954		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		6.53798	
Total Biomass w/o Epi.		6.53798	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 026		Rep: 01	
Watershed: Upper Western Shore		Date: 22AUG24	
Gear: Wildco Box Corer		Time: 12:58:00	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 3.8		Salinity (ppt): 1.70	
Dissolved Oxygen (mg/l): 6.8		Sediment Silt-Clay (%): 91.51	
		Temperature (C): 23.88	
		Total Carbon (%): 3.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.66	5	5
Abundance (#/m2)	1364	3	0.00
Biomass (g/m2)	111.58	1	0.00
Carnivore-Omnivore Abundance (%)	36.67		66.67
Deep Deposit Feeder Abundance (%)	20.00		99.18
			5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Cyathura polita	273	0.54995	
Hermundura americana	227	0.42723	
Leptocheirus plumulosus	136	0.03181	
Macoma mitchelli	45	0.45450	
Marenzelleria viridis	45	0.00909	
Mediomastus ambiseta	227	0.01818	
Rangia cuneata	364	110.08899	
Tubificoides spp.	45	0.00454	
Total Abundance w/ Epi.	1364		
Total Abundance w/o Epi.	1364		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		111.58430	
Total Biomass w/o Epi.		111.58430	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 026		Rep: 02	
Watershed: Upper Western Shore		Date: 22AUG24	
Gear: Wildco Box Corer		Time: 12:58:00	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 3.8	Salinity (ppt): 1.70	Temperature (C): 23.88	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 91.51	Total Carbon (%): 3.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.60	Condition: Degraded		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	2.48	3	0.00
Abundance (#/m2)	864	3	0.00
Biomass (g/m2)	0.76	1	42.11
Carnivore-Omnivore Abundance (%)	21.05		13.17
Deep Deposit Feeder Abundance (%)	21.05		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Americamysis almyra (Epi)	45		0.00455
Cyathura polita	45		0.00909
Hermundura americana	136		0.11363
Leptocheirus plumulosus	182		0.02273
Macoma mitchelli	182		0.52268
Mediomastus ambiseta	182		0.00454
Rangia cuneata	136		0.08635
Total Abundance w/ Epi.	909		
Total Abundance w/o Epi.	864		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			0.76356
Total Biomass w/o Epi.			0.75902

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 026		Rep: 03	
Watershed: Upper Western Shore	Habitat: Low Mesohaline	Date: 22AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:58:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.8	Salinity (ppt): 1.70	Temperature (C): 23.88	
Dissolved Oxygen (mg/l): 6.8	Sediment Silt-Clay (%): 91.51	Total Carbon (%): 3.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.58	5	0.00
Abundance (#/m2)	1909	5	0.00
Biomass (g/m2)	2.02	3	38.10
Carnivore-Omnivore Abundance (%)	16.67		70.12
Deep Deposit Feeder Abundance (%)	14.29		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.03636	
Cyathura polita	45	0.00455	
Hermundura americana	227	0.02273	
Leptocheirus plumulosus	682	0.09545	
Macoma balthica	45	0.58176	
Macoma mitchelli	136	0.44541	
Mediomastus ambiseta	182	0.02273	
Rangia cuneata	455	0.80446	
Tubificoides spp.	91	0.00227	
Total Abundance w/ Epi.	1909		
Total Abundance w/o Epi.	1909		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.		2.01571	
Total Biomass w/o Epi.		2.01571	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 029		Rep: 01	
Watershed: Upper Eastern Shore		Habitat: Oligohaline	
Gear: Young Grab		Sampled Area: 0.044 sq.m	
		Date: 05SEP24	
		Time: 14:58:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.1		Salinity (ppt): 1.41	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 64.10	
		Temperature (C): 24.97	
		Total Carbon (%): 1.76	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	1.90	Oligohaline Pollution Indicative Spp. Abund.	84.62
Abundance (#/m2)	1477	Tolerance Score	8.70
Deep Deposit Feeder Abundance (%)	64.62	Oligohaline Pollution Sensitive Spp. Abund.	4.62
Carnivore-Omnivore Abundance (%)	23.08	Tanypodinae/Chironomidae Abundance Ratio	100.00
	3		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	295	0.05907	
Cyathura polita	45	0.03862	
Limnodrilus hoffmeisteri	136		
Marenzelleria viridis	68	0.02954	
Oligochaeta		0.04998	
Rangia cuneata	114	43.53606	
Tubificidae imm w/o cap chaetae *	818		
Total Abundance w/ Epi.	1477		
Total Abundance w/o Epi.	1477		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		43.71328	
Total Biomass w/o Epi.		43.71328	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 029		Rep: 02	
Watershed: Upper Eastern Shore		Habitat: Oligohaline	
Gear: Young Grab		Date: 05SEP24	
		Sampled Area: 0.044 sq.m	
		Time: 14:58:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.1		Salinity (ppt): 1.41	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 64.10	
		Temperature (C): 24.97	
		Total Carbon (%): 1.76	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67		Condition: Marginal	
		# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	2.10	Oligohaline Pollution Indicative Spp. Abund.	76.64
Abundance (#/m2)	2431	Tolerance Score	8.82
Deep Deposit Feeder Abundance (%)	68.22	Oligohaline Pollution Sensitive Spp. Abund.	6.54
Carnivore-Omnivore Abundance (%)	9.35	Tanypodinae/Chironomidae Abundance Ratio	100.00
	1		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	204	0.02726	
Cyathura polita	23	0.00227	
Limnodrilus hoffmeisteri	772		
Marenzelleria viridis	159	0.12269	
Oligochaeta		0.11360	
Rangia cuneata	386	290.70467	
Tubificidae imm w/o cap chaetae *	886		
Total Abundance w/ Epi.	2431		
Total Abundance w/o Epi.	2431		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.		290.97050	
Total Biomass w/o Epi.		290.97050	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 029		Rep: 03	
Watershed: Upper Eastern Shore	Habitat: Oligohaline	Date: 05SEP24	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 14:58:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.1	Salinity (ppt): 1.41	Temperature (C): 24.97	
Dissolved Oxygen (mg/l): 7.7	Sediment Silt-Clay (%): 64.10	Total Carbon (%): 1.76	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6	
	Value	Score	Value Score
Shannon-Wiener Index	2.37	5	Oligohaline Pollution Indicative Spp. Abund. 66.99 3
Abundance (#/m2)	2340	5	Tolerance Score 8.78 3
Deep Deposit Feeder Abundance (%)	57.28	3	Oligohaline Pollution Sensitive Spp. Abund. 7.77 3
Carnivore-Omnivore Abundance (%)	24.27	3	Tanypodinae/Chironomidae Abundance Ratio 76.92 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomidae		0.00114	
Coelotanypus spp.	227	0.02272	
Cryptochironomus spp.	23		
Cyathura polita	273	0.15450	
Harnischia spp.	45		
Limnodrilus hoffmeisteri	273		
Marenzelleria viridis	182	0.21357	
Oligochaeta		0.04771	
Rangia cuneata	250	107.42016	
Rhithropanopeus harrisi (Epi)	23	0.00682	
Tubificidae imm w/o cap chaetae *	1068		
Total Abundance w/ Epi.	2363		
Total Abundance w/o Epi.	2340		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		107.86661	
Total Biomass w/o Epi.		107.85979	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

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Watershed: Potomac River		Station: 036		Rep: 01	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 03SEP24	
		Sampled Area: 0.022 sq.m		Time: 12:02:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.2		Salinity (ppt): 0.18		Temperature (C): 25.60	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 98.23		Total Carbon (%): 3.28	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 4	
	Value	Score		Value	Score
Shannon-Wiener Index	1.72		T.F. Pollution Indicative Spp. Abund. (%)	57.89	3
Abundance (#/m2)	1727	5	Tolerance Score	8.71	3
Deep Deposit Feeder Abundance (%)	60.53	5	Limnodrilus Abundance (%)	57.89	
Carnivore-Omnivore Abundance (%)	26.32				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		

Branchiura sowerbyi	45		0.00454		
Chironomus spp.	136		0.16816		
Coelotanypus spp.	318		0.05908		
Hirudinea (Epi)	45		0.00454		
Oligochaeta			0.05000		
Pisidium spp.	227		0.02727		
Tubificidae imm w/o cap chaetae	1000		0.02727		

Total Abundance w/ Epi.	1773				
Total Abundance w/o Epi.	1727				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.34087		
Total Biomass w/o Epi.			0.33633		
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 036		Rep: 02	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 03SEP24	
		Sampled Area: 0.022 sq.m		Time: 12:02:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.2		Salinity (ppt): 0.18		Temperature (C): 25.60	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 98.23		Total Carbon (%): 3.28	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 4	
	Value	Score		Value	Score
Shannon-Wiener Index	1.91		T.F. Pollution Indicative Spp. Abund. (%)	56.00	3
Abundance (#/m2)	2273	5	Tolerance Score	8.71	3
Deep Deposit Feeder Abundance (%)	66.00	5	Limnodrilus Abundance (%)	56.00	
Carnivore-Omnivore Abundance (%)	16.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		

Branchiura sowerbyi	45		0.00909		
Coelotanypus spp.	273		0.01818		
Hermundura americana	45		0.00909		
Microchironomus spp.	45		0.00227		
Oligochaeta			0.08181		
Pisidium spp.	409		0.04090		
Tubificidae imm w cap chaetae	182				
Tubificidae imm w/o cap chaetae	1273				

Total Abundance w/ Epi.	2273				
Total Abundance w/o Epi.	2273				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			0.16135		
Total Biomass w/o Epi.			0.16135		
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 036		Rep: 03	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 03SEP24	
		Sampled Area: 0.022 sq.m		Time: 12:02:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.2		Salinity (ppt): 0.18		Temperature (C): 25.60	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 98.23		Total Carbon (%): 3.28	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 5.00		Condition: Meets Goal		# Attributes Scored: 4	
	Value	Score		Value	Score
Shannon-Wiener Index	1.86		T.F. Pollution Indicative Spp. Abund. (%)	31.43	5
Abundance (#/m2)	1591	5	Tolerance Score	7.60	5
Deep Deposit Feeder Abundance (%)	34.29	5	Limnodrilus Abundance (%)	31.43	
Carnivore-Omnivore Abundance (%)	31.43				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		

Branchiura sowerbyi	45		0.01364		
Coelotanypus spp.	500		0.03636		
Limnodrilus hoffmeisteri	45				
Oligochaeta			0.02500		
Pisidium spp.	545		0.09999		
Tubificidae imm w/o cap chaetae *	455				

Total Abundance w/ Epi.	1591				
Total Abundance w/o Epi.	1591				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.17498		
Total Biomass w/o Epi.			0.17498		
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 040		Rep: 01
Watershed: Potomac River	Habitat: Oligohaline	Date: 20SEP24
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:32:00
BOTTOM ENVIRONMENT		
Depth (m): 7.4	Salinity (ppt): 3.12	Temperature (C): 23.90
Dissolved Oxygen (mg/l): 7.4	Sediment Silt-Clay (%): 99.53	Total Carbon (%): 2.09
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6
	Value	Score
Shannon-Wiener Index	1.87	Oligohaline Pollution Indicative Spp. Abund. 63.64 3
Abundance (#/m2)	500	Tolerance Score 6.17 3
Deep Deposit Feeder Abundance (%)	0.00	Oligohaline Pollution Sensitive Spp. Abund. 0.00 1
Carnivore-Omnivore Abundance (%)	81.82	Tanypodinae/Chironomidae Abundance Ratio 100.00 1
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Coelotanypus spp.	273	0.09090
Cyathura polita	91	0.15908
Hermundura americana	45	0.00227
Leptocheirus plumulosus	45	0.00909
Littoridinops tenuipes (Epi)	136	0.02273
Rangia cuneata	45	32.98306
Total Abundance w/ Epi.	636	
Total Abundance w/o Epi.	500	
Number of Taxa w/ Epi.	6	
Number of Taxa w/o Epi.	5	
Total Biomass w/ Epi.		33.26713
Total Biomass w/o Epi.		33.24440

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Station: 040		Rep: 02			
Watershed: Potomac River		Habitat: Oligohaline		Date: 20SEP24	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 13:32:00	
BOTTOM ENVIRONMENT					
Depth (m): 7.4		Salinity (ppt): 3.12		Temperature (C): 23.90	
Dissolved Oxygen (mg/l): 7.4		Sediment Silt-Clay (%): 99.53		Total Carbon (%): 2.09	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.58		Oligohaline Pollution Indicative Spp. Abund.	66.67	3
Abundance (#/m2)	136	1	Tolerance Score	6.20	3
Deep Deposit Feeder Abundance (%)	0.00		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	66.67	5	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Balanus improvisus (Epi)	45		0.06818		
Coelotanypus spp.	45		0.01364		
Cyathura polita	45		0.00455		
Littoridinops tenuipes (Epi)	364		0.04090		
Polydora cornuta	45		0.00227		
Total Abundance w/ Epi.	545				
Total Abundance w/o Epi.	136				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.12953		
Total Biomass w/o Epi.			0.02045		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 040		Rep: 03
Watershed: Potomac River	Habitat: Oligohaline	Date: 20SEP24
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:32:00
BOTTOM ENVIRONMENT		
Depth (m): 7.4	Salinity (ppt): 3.12	Temperature (C): 23.90
Dissolved Oxygen (mg/l): 7.4	Sediment Silt-Clay (%): 99.53	Total Carbon (%): 2.09
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6
	Value	Score
Shannon-Wiener Index	2.16	5
Abundance (#/m2)	364	3
Deep Deposit Feeder Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	62.50	5
	Oligohaline Pollution Indicative Spp. Abund.	25.00
	Tolerance Score	6.20
	Oligohaline Pollution Sensitive Spp. Abund.	0.00
	Tanypodinae/Chironomidae Abundance Ratio	100.00
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Coelotanypus spp.	45	0.01363
Cyathura polita	45	0.00455
Hermundura americana	136	0.15907
Leptocheirus plumulosus	45	0.00454
Littoridinops tenuipes (Epi)	136	0.03181
Macoma mitchelli	91	0.01364
Total Abundance w/ Epi.	500	
Total Abundance w/o Epi.	364	
Number of Taxa w/ Epi.	6	
Number of Taxa w/o Epi.	5	
Total Biomass w/ Epi.		0.22725
Total Biomass w/o Epi.		0.19543

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Watershed: Potomac River		Station: 043		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 20SEP24	
		Sampled Area: 0.025 sq.m		Time: 11:21:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.3		Salinity (ppt): 7.62		Temperature (C): 24.00	
Dissolved Oxygen (mg/l): 6.3		Sediment Silt-Clay (%): 5.29		Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.50	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1560	5	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.29	1	Pollution Sensitive Species Abundance (%)	2.56	
Carnivore-Omnivore Abundance (%)	58.97		Pollution Sensitive Species Biomass (%)	0.68	1
Deep Deposit Feeder Abundance (%)	2.56				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Hermundura americana	920		0.20800		
Leptocheirus plumulosus	280		0.05200		
Macoma mitchelli	320		0.03200		
Mediomastus ambiseta	40		0.00200		
Mytilopsis leucophaeata (Epi)	40		0.00200		
Total Abundance w/ Epi.	1600				
Total Abundance w/o Epi.	1560				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.29600		
Total Biomass w/o Epi.			0.29400		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 043		Rep: 02	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 20SEP24	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 11:21:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.3	Salinity (ppt): 7.62	Temperature (C): 24.00	
Dissolved Oxygen (mg/l): 6.3	Sediment Silt-Clay (%): 5.29	Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.78	3	5
Abundance (#/m2)	1600	5	0.00
Biomass (g/m2)	0.13	1	7.50
Carnivore-Omnivore Abundance (%)	40.00		1.49
Deep Deposit Feeder Abundance (%)	7.50		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hermundura americana	640	0.06800	
Hydrobiidae (Epi)	40	0.01200	
Leptocheirus plumulosus	280	0.03200	
Macoma mitchelli	560	0.03200	
Mediomastus ambiseta	120	0.00200	
Total Abundance w/ Epi.	1640		
Total Abundance w/o Epi.	1600		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.14600	
Total Biomass w/o Epi.		0.13400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 043		Rep: 03	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 20SEP24	
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 11:21:00	
BOTTOM ENVIRONMENT			
Depth (m): 2.3	Salinity (ppt): 7.62	Temperature (C): 24.00	
Dissolved Oxygen (mg/l): 6.3	Sediment Silt-Clay (%): 5.29	Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	1.70	1	5
Abundance (#/m2)	1480	3	0.00
Biomass (g/m2)	0.23	1	5.41
Carnivore-Omnivore Abundance (%)	32.43		5.17
Deep Deposit Feeder Abundance (%)	5.41		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hermundura americana	480	0.06000	
Leptocheirus plumulosus	240	0.02400	
Macoma mitchelli	680	0.13600	
Mediomastus ambiseta	80	0.01200	
Total Abundance w/ Epi.	1480		
Total Abundance w/o Epi.	1480		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	4		
Total Biomass w/ Epi.		0.23200	
Total Biomass w/o Epi.		0.23200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 044		Rep: 01	
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 20SEP24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:19:00	
BOTTOM ENVIRONMENT			
Depth (m): 12.4	Salinity (ppt): 7.83	Temperature (C): 23.91	
Dissolved Oxygen (mg/l): 5.9	Sediment Silt-Clay (%): 93.29	Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	0.22	1	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	1318	3	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.20	1	Pollution Sensitive Species Abundance (%) 0.00
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%) 0.00
Deep Deposit Feeder Abundance (%)	0.00		0.00
			1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hydrobiidae (Epi)	45	0.00454	
Leptocheirus plumulosus	1273	0.14089	
Macoma mitchelli	45	0.06363	
Melita nitida (Epi)	182	0.00455	
Total Abundance w/ Epi.	1545		
Total Abundance w/o Epi.	1318		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.21361	
Total Biomass w/o Epi.		0.20452	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

STATION INFORMATION					
Station:	044	Rep:	02		
Watershed:	Potomac River	Habitat:	Low Mesohaline	Date:	20SEP24
Gear:	Wildco Box Corer	Sampled Area:	0.022 sq.m	Time:	12:19:00
BOTTOM ENVIRONMENT					
Depth (m):	12.4	Salinity (ppt):	7.83	Temperature (C):	23.91
Dissolved Oxygen (mg/l):	5.9	Sediment Silt-Clay (%):	93.29	Total Carbon (%):	2.18
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score:	2.60	Condition:	Degraded	# Attributes Scored:	5
		Value	Score	Value	Score
Shannon-Wiener Index		1.00	1	Pollution Indicative Species Abundance (%)	0.00
Abundance (#/m2)		2454	5	Pollution Indicative Species Biomass (%)	0.00
Biomass (g/m2)		0.25	1	Pollution Sensitive Species Abundance (%)	0.00
Carnivore-Omnivore Abundance (%)		31.48		Pollution Sensitive Species Biomass (%)	0.00
Deep Deposit Feeder Abundance (%)		0.00			1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)	Biomass (g/m2)			
Edwardsia elegans	45	0.00454			
Hermundura americana	727	0.08635			
Leptocheirus plumulosus	1682	0.16362			
Melita nitida (Epi)	136	0.01363			
Total Abundance w/ Epi.	2591				
Total Abundance w/o Epi.	2454				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.		0.26815			
Total Biomass w/o Epi.		0.25452			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 044		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 20SEP24	
		Sampled Area: 0.022 sq.m		Time: 12:19:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 12.4		Salinity (ppt): 7.83		Temperature (C): 23.91	
Dissolved Oxygen (mg/l): 5.9		Sediment Silt-Clay (%): 93.29		Total Carbon (%): 2.18	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.00	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1954	5	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.33	1	Pollution Sensitive Species Abundance (%)	2.33	
Carnivore-Omnivore Abundance (%)	30.23		Pollution Sensitive Species Biomass (%)	1.37	1
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		

Cyathura polita	45		0.00454		
Hermundura americana	545		0.14544		
Leptocheirus plumulosus	1364		0.18180		
Melita nitida (Epi)	182		0.00909		
Neomysis americana (Epi)	45		0.02727		

Total Abundance w/ Epi.	2182				
Total Abundance w/o Epi.	1954				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.36814		
Total Biomass w/o Epi.			0.33178		
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 20SEP24	
		Sampled Area: 0.025 sq.m		Time: 10:07:00	
BOTTOM ENVIRONMENT					
Depth (m): 1.9		Salinity (ppt): 7.81		Temperature (C): 23.90	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 13.48		Total Carbon (%): 0.38	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.39	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1240	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.12	1	Pollution Sensitive Species Abundance (%)	25.81	
Carnivore-Omnivore Abundance (%)	67.74		Pollution Sensitive Species Biomass (%)	3.39	1
Deep Deposit Feeder Abundance (%)	25.81				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Edwardsia elegans	40		0.00400		
Hermundura americana	800		0.10400		
Leptocheirus plumulosus	40		0.00400		
Macoma mitchelli	40		0.00200		
Mediomastus ambiseta	320		0.00400		
Total Abundance w/ Epi.	1240				
Total Abundance w/o Epi.	1240				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.11800		
Total Biomass w/o Epi.			0.11800		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 02	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 20SEP24	
		Sampled Area: 0.025 sq.m		Time: 10:07:00	
BOTTOM ENVIRONMENT					
Depth (m): 1.9		Salinity (ppt): 7.81		Temperature (C): 23.90	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 13.48		Total Carbon (%): 0.38	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.78	3	Pollution Indicative Species Abundance (%)	5.56	5
Abundance (#/m2)	2160	5	Pollution Indicative Species Biomass (%)	4.30	
Biomass (g/m2)	0.19	1	Pollution Sensitive Species Abundance (%)	25.93	
Carnivore-Omnivore Abundance (%)	53.70		Pollution Sensitive Species Biomass (%)	10.75	1
Deep Deposit Feeder Abundance (%)	25.93				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre (Epi)		40		0.00200	
Hermundura americana		1160		0.14000	
Leptocheirus plumulosus		40		0.00400	
Macoma mitchelli		240		0.01200	
Mediomastus ambiseta		560		0.02000	
Polydora cornuta		40		0.00200	
Streblospio benedicti		120		0.00800	
Total Abundance w/ Epi.		2200			
Total Abundance w/o Epi.		2160			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.18800	
Total Biomass w/o Epi.				0.18600	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 03	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 20SEP24	
		Sampled Area: 0.025 sq.m		Time: 10:07:00	
BOTTOM ENVIRONMENT					
Depth (m): 1.9		Salinity (ppt): 7.81		Temperature (C): 23.90	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 13.48		Total Carbon (%): 0.38	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.66	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	2320	5	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.34	1	Pollution Sensitive Species Abundance (%)	10.34	
Carnivore-Omnivore Abundance (%)	55.17		Pollution Sensitive Species Biomass (%)	22.09	1
Deep Deposit Feeder Abundance (%)	8.62				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre (Epi)		720		0.08000	
Geukensia demissa (Epi)		40		0.00400	
Hermundura americana		1280		0.23600	
Leptocheirus plumulosus		160		0.02800	
Macoma balthica		40		0.07200	
Macoma mitchelli		640		0.00400	
Mediomastus ambiseta		200		0.00400	
Total Abundance w/ Epi.		3080			
Total Abundance w/o Epi.		2320			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.42800	
Total Biomass w/o Epi.				0.34400	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

STATION INFORMATION					
Watershed: Potomac River	Station: 051	Rep: 01			
Gear: Modified Box Corer	Habitat: High Mesohaline Sand	Date: 19SEP24			
	Sampled Area: 0.025 sq.m	Time: 13:17:00			
BOTTOM ENVIRONMENT					
Depth (m): 2.3	Salinity (ppt): 11.54	Temperature (C): 23.58			
Dissolved Oxygen (mg/l): 6.5	Sediment Silt-Clay (%): 2.10	Total Carbon (%): 0.22			
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.67	Condition: Severely Degr.	# Attributes Scored: 6			
	Value	Score	Value	Score	
Shannon-Wiener Index	1.69	1	Pollution Indicative Species Abundance (%)	69.23	1
Abundance (#/m2)	1040	3	Pollution Indicative Species Biomass (%)	93.33	
Biomass (g/m2)	2.40	3	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	11.54	1	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	65.38				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)	Biomass (g/m2)			
Gemma gemma	120	0.00400			
Hermundura americana	80	0.09200			
Leitoscoloplos fragilis	680	2.23600			
Macoma mitchelli	80	0.06000			
Micrura leidyi	40	0.00400			
Streblospio benedicti	40	0.00200			
Total Abundance w/ Epi.	1040				
Total Abundance w/o Epi.	1040				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.		2.39800			
Total Biomass w/o Epi.		2.39800			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 051		Rep: 02	
Watershed: Potomac River		Date: 19SEP24	
Habitat: High Mesohaline Sand		Time: 13:17:00	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 2.3		Salinity (ppt): 11.54	
Dissolved Oxygen (mg/l): 6.5		Sediment Silt-Clay (%): 2.10	
		Temperature (C): 23.58	
		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.02	1	70.97
Abundance (#/m2)	1240	3	96.94
Biomass (g/m2)	3.53	5	0.00
Carnivore-Omnivore Abundance (%)	25.81	3	0.00
Deep Deposit Feeder Abundance (%)	70.97		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Gemma gemma	40	0.00400	
Hermundura americana	320	0.10400	
Hydrobiidae (Epi)	40	0.00800	
Leitoscoloplos fragilis	880	3.42000	
Total Abundance w/ Epi.	1280		
Total Abundance w/o Epi.	1240		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		3.53600	
Total Biomass w/o Epi.		3.52800	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Watershed: Potomac River		Station: 051		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 19SEP24	
		Sampled Area: 0.025 sq.m		Time: 13:17:00	
BOTTOM ENVIRONMENT					
Depth (m): 2.3		Salinity (ppt): 11.54		Temperature (C): 23.58	
Dissolved Oxygen (mg/l): 6.5		Sediment Silt-Clay (%): 2.10		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.33		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.72	1	Pollution Indicative Species Abundance (%)	52.63	1
Abundance (#/m2)	760	1	Pollution Indicative Species Biomass (%)	81.64	
Biomass (g/m2)	1.22	3	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	15.79	1	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	52.63				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	160		0.00400		
Hermundura americana	120		0.16800		
Leitoscoloplos fragilis	400		0.99600		
Macoma mitchelli	80		0.05200		
Total Abundance w/ Epi.	760				
Total Abundance w/o Epi.	760				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			1.22000		
Total Biomass w/o Epi.			1.22000		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 052		Rep: 01	
Watershed: Potomac River	Habitat: High Mesohaline Mud	Date: 19SEP24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 11.5	Salinity (ppt): 11.38	Temperature (C): 23.42	
Dissolved Oxygen (mg/l): 6.4	Sediment Silt-Clay (%): 97.85	Total Carbon (%): 3.03	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 100.00
Abundance (#/m2)	45	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)	
<i>Streblospio benedicti</i>	45	0.00227	
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.		0.00227	
Total Biomass w/o Epi.		0.00227	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

=====					
Watershed: Potomac River	Station: 052	Rep: 02			
Gear: Wildco Box Corer	Habitat: High Mesohaline Mud	Date: 19SEP24			
	Sampled Area: 0.022 sq.m	Time: 14:20:00			
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 11.5	Salinity (ppt): 11.38	Temperature (C): 23.42			
Dissolved Oxygen (mg/l): 6.4	Sediment Silt-Clay (%): 97.85	Total Carbon (%): 3.03			
=====					
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)			
Mysidae (Epi)	45	0.00909			
Total Abundance w/ Epi.	45				
Total Abundance w/o Epi.					
Number of Taxa w/ Epi.	1				
Number of Taxa w/o Epi.					
Total Biomass w/ Epi.		0.00909			
Total Biomass w/o Epi.					
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 052		Rep: 03	
Watershed: Potomac River	Habitat: High Mesohaline Mud	Date: 19SEP24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 14:20:00	
BOTTOM ENVIRONMENT			
Depth (m): 11.5	Salinity (ppt): 11.38	Temperature (C): 23.42	
Dissolved Oxygen (mg/l): 6.4	Sediment Silt-Clay (%): 97.85	Total Carbon (%): 3.03	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 100.00
Abundance (#/m2)	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	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 062		Rep: 01	
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 10SEP24	
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 8:46:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 7.88	Temperature (C): 22.91	
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 99.05	Total Carbon (%): 4.49	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.07	3	34.43
Abundance (#/m2)	2440	5	5.45
Biomass (g/m2)	0.22	1	21.31
Carnivore-Omnivore Abundance (%)	3.28		9.09
Deep Deposit Feeder Abundance (%)	52.46		1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	80	0.02800	
Edotea triloba (Epi)	480	0.01600	
Hydrobiidae (Epi)	40	0.00800	
Macoma mitchelli	200	0.15200	
Mediomastus ambiseta	480	0.00400	
Rangia cuneata	40	0.01600	
Streblospio benedicti	840	0.01200	
Tubificoides spp.	800	0.00800	
Total Abundance w/ Epi.	2960		
Total Abundance w/o Epi.	2440		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		0.24400	
Total Biomass w/o Epi.		0.22000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 062		Rep: 02	
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 10SEP24	
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 8:46:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 7.88	Temperature (C): 22.91	
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 99.05	Total Carbon (%): 4.49	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded		# Attributes Scored: 5
	Value	Score	Value Score
Shannon-Wiener Index	1.93	3	Pollution Indicative Species Abundance (%) 47.92 1
Abundance (#/m2)	1920	5	Pollution Indicative Species Biomass (%) 18.92
Biomass (g/m2)	0.15	1	Pollution Sensitive Species Abundance (%) 12.50
Carnivore-Omnivore Abundance (%)	2.08		Pollution Sensitive Species Biomass (%) 2.70 1
Deep Deposit Feeder Abundance (%)	39.58		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	40	0.02000	
Edotea triloba (Epi)	520	0.02000	
Gammarus daiberi (Epi)	40	0.02800	
Leptocheirus plumulosus	40	0.01200	
Macoma mitchelli	160	0.08000	
Mediomastus ambiseta	240	0.00400	
Streblospio benedicti	920	0.02800	
Tubificoides spp.	520	0.00400	
Total Abundance w/ Epi.	2480		
Total Abundance w/o Epi.	1920		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		0.19600	
Total Biomass w/o Epi.		0.14800	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 062		Rep: 03	
Watershed: Lower Eastern Shore	Habitat: Low Mesohaline	Date: 10SEP24	
Gear: Petite Ponar	Sampled Area: 0.025 sq.m	Time: 8:46:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.1	Salinity (ppt): 7.88	Temperature (C): 22.91	
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 99.05	Total Carbon (%): 4.49	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40	Condition: Severely Degr.	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.73	3	Pollution Indicative Species Abundance (%) 60.00
Abundance (#/m2)	7000	1	Pollution Indicative Species Biomass (%) 14.07
Biomass (g/m2)	0.53	1	Pollution Sensitive Species Abundance (%) 14.86
Carnivore-Omnivore Abundance (%)	4.57		Pollution Sensitive Species Biomass (%) 6.84
Deep Deposit Feeder Abundance (%)	32.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	280	0.06800	
Coelotanypus spp.	40	0.00200	
Edotea triloba (Epi)	120	0.00800	
Gammarus daiberi (Epi)	80	0.03200	
Leptocheirus plumulosus	40	0.00400	
Macoma mitchelli	240	0.32400	
Mediomastus ambiseta	1040	0.03600	
Streblospio benedicti	4160	0.07200	
Tubificoides spp.	1200	0.02000	
Total Abundance w/ Epi.	7200		
Total Abundance w/o Epi.	7000		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		0.56600	
Total Biomass w/o Epi.		0.52600	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 064		Rep: 01	
Watershed: Choptank River	Habitat: High Mesohaline Mud	Date: 09SEP24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:33:00	
BOTTOM ENVIRONMENT			
Depth (m): 9.3	Salinity (ppt): 12.21	Temperature (C): 24.16	
Dissolved Oxygen (mg/l): 2.2	Sediment Silt-Clay (%): 96.51	Total Carbon (%): 1.8	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00	Condition: Meets Goal	# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	2.28 3	Pollution Indicative Species Abundance (%)	2.04
Abundance (#/m2)	2227 5	Pollution Indicative Species Biomass (%)	0.76 5
Biomass (g/m2)	17.33 3	Pollution Sensitive Species Abundance (%)	28.57
Carnivore-Omnivore Abundance (%)	20.41 3	Pollution Sensitive Species Biomass (%)	96.97 5
Deep Deposit Feeder Abundance (%)	10.20		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.04091	
Cyathura polita	91	0.19544	
Hermundura americana	273	0.24089	
Leptocheirus plumulosus	1045	0.10908	
Macoma balthica	455	16.60289	
Mediomastus ambiseta	91	0.00454	
Mulinia lateralis	45	0.13181	
Tubificoides spp.	136	0.00227	
Total Abundance w/ Epi.	2227		
Total Abundance w/o Epi.	2227		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		17.32781	
Total Biomass w/o Epi.		17.32781	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 09SEP24	
		Sampled Area: 0.022 sq.m		Time: 10:33:00	
BOTTOM ENVIRONMENT					
Depth (m): 9.3		Salinity (ppt): 12.21		Temperature (C): 24.16	
Dissolved Oxygen (mg/l): 2.2		Sediment Silt-Clay (%): 96.51		Total Carbon (%): 1.8	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.62	3	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	2500	5	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	29.26	3	Pollution Sensitive Species Abundance (%)	54.55	
Carnivore-Omnivore Abundance (%)	21.82	3	Pollution Sensitive Species Biomass (%)	98.35	5
Deep Deposit Feeder Abundance (%)	25.45				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	136		0.02727		
Cyathura polita	91		0.06818		
Hermundura americana	273		0.36360		
Leptocheirus plumulosus	591		0.05000		
Macoma balthica	591		28.67440		
Macoma mitchelli	91		0.03636		
Marenzelleria viridis	45		0.01364		
Mediomastus ambiseta	636		0.02273		
Neanthes succinea	45		0.00455		
Total Abundance w/ Epi.	2500				
Total Abundance w/o Epi.	2500				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			29.26071		
Total Biomass w/o Epi.			29.26071		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 064		Rep: 03	
Watershed: Choptank River		Date: 09SEP24	
Gear: Wildco Box Corer		Time: 10:33:00	
Habitat: High Mesohaline Mud			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 9.3		Salinity (ppt): 12.21	
Dissolved Oxygen (mg/l): 2.2		Sediment Silt-Clay (%): 96.51	
		Temperature (C): 24.16	
		Total Carbon (%): 1.8	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.00		Condition: Meets Goal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.78	3	Pollution Indicative Species Abundance (%) 2.17
Abundance (#/m2)	2091	5	Pollution Indicative Species Biomass (%) 0.02
Biomass (g/m2)	19.05	3	Pollution Sensitive Species Abundance (%) 45.65
Carnivore-Omnivore Abundance (%)	21.74	3	Pollution Sensitive Species Biomass (%) 96.30
Deep Deposit Feeder Abundance (%)	21.74		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00455	
Cyathura polita	45	0.00455	
Eteone heteropoda	45	0.00454	
Hermundura americana	318	0.61812	
Heteromastus filiformis	45	0.00909	
Leptocheirus plumulosus	500	0.05909	
Macoma balthica	591	18.28454	
Macoma mitchelli	45	0.00455	
Marenzelleria viridis	45	0.05000	
Mediomastus ambiseta	273	0.00909	
Tubificoides spp.	136	0.00454	
Total Abundance w/ Epi.	2091		
Total Abundance w/o Epi.	2091		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	11		
Total Biomass w/ Epi.		19.05264	
Total Biomass w/o Epi.		19.05264	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Watershed: Choptank River		Station: 066		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 09SEP24	
		Sampled Area: 0.022 sq.m		Time: 15:00:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.7		Salinity (ppt): 2.15		Temperature (C): 24.00	
Dissolved Oxygen (mg/l): 7.3		Sediment Silt-Clay (%): 97.94		Total Carbon (%): 3.69	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.96		Oligohaline Pollution Indicative Spp. Abund.	84.62	3
Abundance (#/m2)	1182	5	Tolerance Score	8.63	3
Deep Deposit Feeder Abundance (%)	57.69		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	42.31	5	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Chaoborus punctipennis	182		0.02727		
Coelotanypus spp.	318		0.04091		
Limnodrilus hoffmeisteri	318				
Oligochaeta			0.06136		
Tubificidae imm w/o cap chaetae *	364				
Total Abundance w/ Epi.	1182				
Total Abundance w/o Epi.	1182				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.12953		
Total Biomass w/o Epi.			0.12953		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Watershed: Choptank River		Station: 066		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 09SEP24	
		Sampled Area: 0.022 sq.m		Time: 15:00:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.7		Salinity (ppt): 2.15		Temperature (C): 24.00	
Dissolved Oxygen (mg/l): 7.3		Sediment Silt-Clay (%): 97.94		Total Carbon (%): 3.69	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.30		Oligohaline Pollution Indicative Spp. Abund.	95.35	1
Abundance (#/m2)	1954	5	Tolerance Score	9.74	1
Deep Deposit Feeder Abundance (%)	93.02		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	4.65	1	Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Chaoborus punctipennis	91		0.00909		
Gammarus spp. (Epi)	45		0.00227		
Hydrobiidae (Epi)	45		0.00454		
Limnodrilus hoffmeisteri	636				
Oligochaeta			0.17726		
Streblospio benedicti	45		0.00227		
Tubificidae imm w/o cap chaetae *	1182				
Total Abundance w/ Epi.	2045				
Total Abundance w/o Epi.	1954				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.19544		
Total Biomass w/o Epi.			0.18862		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS					
Watershed: Choptank River		Station: 066		Rep: 03	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 09SEP24	
		Sampled Area: 0.022 sq.m		Time: 15:00:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.7		Salinity (ppt): 2.15		Temperature (C): 24.00	
Dissolved Oxygen (mg/l): 7.3		Sediment Silt-Clay (%): 97.94		Total Carbon (%): 3.69	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.90		Oligohaline Pollution Indicative Spp. Abund.	89.58	3
Abundance (#/m2)	2182	5	Tolerance Score	9.08	1
Deep Deposit Feeder Abundance (%)	72.92		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	25.00	3	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Chaoborus punctipennis	182		0.02273		
Coelotanypus spp.	364		0.04545		
Limnodrilus hoffmeisteri	727				
Macoma mitchelli	45		0.00909		
Oligochaeta			0.17271		
Tubificidae imm w/o cap chaetae *	864				
Total Abundance w/ Epi.	2182				
Total Abundance w/o Epi.	2182				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.24998		
Total Biomass w/o Epi.			0.24998		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 068		Rep: 01	
Watershed: Upper Eastern Shore		Habitat: Low Mesohaline	
Gear: Young Grab		Sampled Area: 0.044 sq.m	
		Date: 04SEP24	
		Time: 11:25:00	
BOTTOM ENVIRONMENT			
Depth (m): 4.5		Salinity (ppt): 7.60	
Dissolved Oxygen (mg/l): 4.5		Sediment Silt-Clay (%): 85.05	
		Temperature (C): 25.32	
		Total Carbon (%): 2.83	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.40		Condition: Meets Goal	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	2.12	3	
Abundance (#/m2)	4885	3	
Biomass (g/m2)	2.43	3	
Carnivore-Omnivore Abundance (%)	3.72		
Deep Deposit Feeder Abundance (%)	80.47		
		Pollution Indicative Species Abundance (%)	8.84
		Pollution Indicative Species Biomass (%)	0.56
		Pollution Sensitive Species Abundance (%)	50.23
		Pollution Sensitive Species Biomass (%)	74.93
			3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Cyathura polita	91	0.22947	
Eteone heteropoda	45	0.00682	
Heteromastus filiformis	159	0.02272	
Hydrobiidae (Epi)	182	0.00454	
Macoma balthica	114	1.20870	
Macoma mitchelli	227	0.54074	
Marenzelleria viridis	45	0.25674	
Mediomastus ambiseta	2204	0.12496	
Neanthes succinea	45	0.00454	
Streblospio benedicti	386	0.00682	
Tubificoides spp.	1568	0.02726	
Total Abundance w/ Epi.	5067		
Total Abundance w/o Epi.	4885		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	10		
Total Biomass w/ Epi.		2.43331	
Total Biomass w/o Epi.		2.42877	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 02	
Gear: Young Grab		Habitat: Low Mesohaline		Date: 04SEP24	
		Sampled Area: 0.044 sq.m		Time: 11:25:00	
BOTTOM ENVIRONMENT					
Depth (m): 4.5		Salinity (ppt): 7.60		Temperature (C): 25.32	
Dissolved Oxygen (mg/l): 4.5		Sediment Silt-Clay (%): 85.05		Total Carbon (%): 2.83	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.78	3	Pollution Indicative Species Abundance (%)	9.13	5
Abundance (#/m2)	5975	3	Pollution Indicative Species Biomass (%)	0.83	
Biomass (g/m2)	1.38	3	Pollution Sensitive Species Abundance (%)	53.23	
Carnivore-Omnivore Abundance (%)	1.14		Pollution Sensitive Species Biomass (%)	77.39	3
Deep Deposit Feeder Abundance (%)	86.69				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	23		0.00454		
Coelotanypus spp.	23		0.00227		
Eteone heteropoda	23		0.00227		
Heteromastus filiformis	159		0.14086		
Hydrobiidae (Epi)	91		0.00454		
Macoma balthica	91		0.72250		
Macoma mitchelli	114		0.12269		
Marenzelleria viridis	23		0.11814		
Mediomastus ambiseta	3067		0.22493		
Streblospio benedicti	500		0.00682		
Tubificoides spp.	1954		0.03181		
Total Abundance w/ Epi.	6066				
Total Abundance w/o Epi.	5975				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			1.38138		
Total Biomass w/o Epi.			1.37683		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 068		Rep: 03
Watershed: Upper Eastern Shore	Habitat: Low Mesohaline	Date: 04SEP24
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 11:25:00
BOTTOM ENVIRONMENT		
Depth (m): 4.5	Salinity (ppt): 7.60	Temperature (C): 25.32
Dissolved Oxygen (mg/l): 4.5	Sediment Silt-Clay (%): 85.05	Total Carbon (%): 2.83
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5
	Value	Score
Shannon-Wiener Index	2.08	3
Abundance (#/m2)	5248	3
Biomass (g/m2)	3.34	3
Carnivore-Omnivore Abundance (%)	4.76	5
Deep Deposit Feeder Abundance (%)	83.98	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Apocorophium lacustre (Epi)	136	0.00909
Carinoma tremaphoros	23	0.00682
Chiridotea almyra	45	0.00909
Cyathura polita	23	0.02726
Edotea triloba (Epi)	23	0.00454
Geukensia demissa (Epi)	159	4.93478
Heteromastus filiformis	318	0.10678
Hydrobiidae (Epi)	182	0.01363
Macoma balthica	250	2.54010
Macoma mitchelli	91	0.07725
Mediomastus ambiseta	2454	0.12723
Melita nitida (Epi)	23	0.00227
Mytilopsis leucophaeata (Epi)	68	0.66115
Neanthes succinea	159	0.41578
Rhithropanopeus harrisi (Epi)	114	2.14022
Streblospio benedicti	250	0.00682
Tubificoides spp.	1636	0.02726
Total Abundance w/ Epi.	5953	
Total Abundance w/o Epi.	5248	
Number of Taxa w/ Epi.	17	
Number of Taxa w/o Epi.	10	
Total Biomass w/ Epi.		11.11008
Total Biomass w/o Epi.		3.34438

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

=====					
Station: 071	Rep: 01				
Watershed: Patuxent River	Habitat: High Mesohaline Mud	Date: 27AUG24			
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:29:00			
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 12.5	Salinity (ppt): 11.66	Temperature (C): 25.99			
Dissolved Oxygen (mg/l): 5.3	Sediment Silt-Clay (%): 99.16	Total Carbon (%): 3.61			
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 6			
	Value	Score	Value	Score	
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA	Abundance (#/m2)		Biomass (g/m2)		

No Organisms Present			0.00000		

Total Abundance w/ Epi.					
Total Abundance w/o Epi.					
Number of Taxa w/ Epi.	0				
Number of Taxa w/o Epi.	0				
Total Biomass w/ Epi.			0.00000		
Total Biomass w/o Epi.			0.00000		
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 071		Rep: 02	
Watershed: Patuxent River	Habitat: High Mesohaline Mud	Date: 27AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 10:29:00	
BOTTOM ENVIRONMENT			
Depth (m): 12.5	Salinity (ppt): 11.66	Temperature (C): 25.99	
Dissolved Oxygen (mg/l): 5.3	Sediment Silt-Clay (%): 99.16	Total Carbon (%): 3.61	
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)	136	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)	
Streblospio benedicti	136	0.00454	
Total Abundance w/ Epi.	136		
Total Abundance w/o Epi.	136		
Number of Taxa w/ Epi.	1		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.00454	
Total Biomass w/o Epi.		0.00454	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 27AUG24	
		Sampled Area: 0.022 sq.m		Time: 10:29:00	
BOTTOM ENVIRONMENT					
Depth (m): 12.5		Salinity (ppt): 11.66		Temperature (C): 25.99	
Dissolved Oxygen (mg/l): 5.3		Sediment Silt-Clay (%): 99.16		Total Carbon (%): 3.61	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
No Organisms Present			0.00000		
Total Abundance w/ Epi.					
Total Abundance w/o Epi.					
Number of Taxa w/ Epi.	0				
Number of Taxa w/o Epi.	0				
Total Biomass w/ Epi.			0.00000		
Total Biomass w/o Epi.			0.00000		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 074		Rep: 01	
Watershed: Chalk Point Discharge		Date: 26AUG24	
Gear: Wildco Box Corer		Time: 13:59:00	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 1.2	Salinity (ppt): 6.85	Temperature (C): 26.50	
Dissolved Oxygen (mg/l): 7.3	Sediment Silt-Clay (%): 98.63	Total Carbon (%): 3.49	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.60	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value
Shannon-Wiener Index	2.14	3	2.70
Abundance (#/m2)	1682	5	0.03
Biomass (g/m2)	8.70	5	64.86
Carnivore-Omnivore Abundance (%)	16.22		80.79
Deep Deposit Feeder Abundance (%)	56.76		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	136		0.01364
Cyathura polita	45		0.13635
Hermundura americana	91		0.08181
Macoma balthica	136		6.87204
Macoma mitchelli	273		1.56803
Mediomastus ambiseta	909		0.01818
Streblospio benedicti	45		0.00227
Tubificoides spp.	45		0.00454
Total Abundance w/ Epi.	1682		
Total Abundance w/o Epi.	1682		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.			8.69686
Total Biomass w/o Epi.			8.69686

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 074		Rep: 02	
Watershed: Chalk Point Discharge		Date: 26AUG24	
Gear: Wildco Box Corer		Time: 13:59:00	
Habitat: Low Mesohaline		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 1.2	Salinity (ppt): 6.85	Temperature (C): 26.50	
Dissolved Oxygen (mg/l): 7.3	Sediment Silt-Clay (%): 98.63	Total Carbon (%): 3.49	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80	Condition: Meets Goal		# Attributes Scored: 5
	Value	Score	Value Score
Shannon-Wiener Index	2.44	3	18.87 3
Abundance (#/m2)	2409	5	Pollution Indicative Species Biomass (%) 0.05
Biomass (g/m2)	14.56	3	Pollution Sensitive Species Abundance (%) 43.40
Carnivore-Omnivore Abundance (%)	24.53		Pollution Sensitive Species Biomass (%) 91.03 5
Deep Deposit Feeder Abundance (%)	52.83		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Carinoma tremaphoros	45		0.01364
Edotea triloba (Epi)	45		0.01364
Eteone heteropoda	45		0.00454
Hermundura americana	455		0.32270
Macoma balthica	182		13.22140
Macoma mitchelli	364		0.84537
Mediomastus ambiseta	864		0.03181
Neanthes succinea	45		0.11817
Tubificidae imm w/o cap chaetae	409		0.00227
Total Abundance w/ Epi.	2454		
Total Abundance w/o Epi.	2409		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.			14.57354
Total Biomass w/o Epi.			14.55991

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 074		Rep: 03	
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 26AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 13:59:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.2	Salinity (ppt): 6.85	Temperature (C): 26.50	
Dissolved Oxygen (mg/l): 7.3	Sediment Silt-Clay (%): 98.63	Total Carbon (%): 3.49	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.37	3	5
Abundance (#/m2)	500	1	0.00
Biomass (g/m2)	13.70	3	54.55
Carnivore-Omnivore Abundance (%)	27.27		99.77
Deep Deposit Feeder Abundance (%)	27.27		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00454	
Hermundura americana	91	0.02273	
Heteromastus filiformis	45	0.00227	
Macoma balthica	182	13.66227	
Macoma mitchelli	45	0.00227	
Mediomastus ambiseta	91	0.00227	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	500		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.		13.69636	
Total Biomass w/o Epi.		13.69636	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 077		Rep: 01	
Watershed: Patuxent River		Date: 26AUG24	
Gear: Wildco Box Corer		Time: 12:02:00	
Habitat: Low Mesohaline			
Sampled Area: 0.022 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 3.3		Salinity (ppt): 5.63	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 98.42	
		Temperature (C): 25.57	
		Total Carbon (%): 2.7	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.40		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.29	3	15.00
Abundance (#/m2)	1818	5	0.12
Biomass (g/m2)	3.76	3	50.00
Carnivore-Omnivore Abundance (%)	15.00		78.50
Deep Deposit Feeder Abundance (%)	65.00		3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	91	0.00455	
Cyathura polita	45	0.16362	
Edotea triloba (Epi)	45	0.00454	
Hermundura americana	136	0.66357	
Macoma balthica	45	2.76336	
Macoma mitchelli	45	0.12726	
Mediomastus ambiseta	818	0.02727	
Streblospio benedicti	273	0.00454	
Tubificoides spp.	364	0.00909	
Total Abundance w/ Epi.	1863		
Total Abundance w/o Epi.	1818		
Number of Taxa w/ Epi.	9		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		3.76781	
Total Biomass w/o Epi.		3.76326	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Patuxent River		Station: 077		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 26AUG24	
		Sampled Area: 0.022 sq.m		Time: 12:02:00	
BOTTOM ENVIRONMENT					
Depth (m): 3.3		Salinity (ppt): 5.63		Temperature (C): 25.57	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 98.42		Total Carbon (%): 2.7	
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)	545	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	2.77	3	Pollution Sensitive Species Abundance (%)	33.33	
Carnivore-Omnivore Abundance (%)	66.67		Pollution Sensitive Species Biomass (%)	60.33	3
Deep Deposit Feeder Abundance (%)	25.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Americamysis almyra (Epi)	45		0.01818		
Carinoma tremaphoros	45		0.00909		
Edotea triloba (Epi)	91		0.00455		
Hermundura americana	318		1.09080		
Macoma balthica	45		1.65893		
Mediomastus ambiseta	136		0.01364		
Total Abundance w/ Epi.	682				
Total Abundance w/o Epi.	545				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			2.79518		
Total Biomass w/o Epi.			2.77245		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 077		Rep: 03	
Watershed: Patuxent River	Habitat: Low Mesohaline	Date: 26AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:02:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.3	Salinity (ppt): 5.63	Temperature (C): 25.57	
Dissolved Oxygen (mg/l): 5.4	Sediment Silt-Clay (%): 98.42	Total Carbon (%): 2.7	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 5	
Shannon-Wiener Index	Value 2.75	Score 5	
Abundance (#/m2)	364	1	Pollution Indicative Species Abundance (%) 12.50
Biomass (g/m2)	3.47	3	Pollution Indicative Species Biomass (%) 0.13
Carnivore-Omnivore Abundance (%)	25.00		Pollution Sensitive Species Abundance (%) 25.00
Deep Deposit Feeder Abundance (%)	37.50		Pollution Sensitive Species Biomass (%) 93.06
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00909	
Edotea triloba (Epi)	91	0.01364	
Hermundura americana	45	0.10908	
Macoma balthica	45	3.22695	
Macoma mitchelli	45	0.11363	
Mediomastus ambiseta	45	0.00227	
Streblospio benedicti	45	0.00454	
Tubificoides spp.	91	0.00454	
Total Abundance w/ Epi.	455		
Total Abundance w/o Epi.	364		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		3.48374	
Total Biomass w/o Epi.		3.47011	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

STATION INFORMATION					
Watershed: Patuxent River	Station: 079	Rep: 01			
Gear: Wildco Box Corer	Habitat: Tidal Freshwater	Date: 28AUG24			
	Sampled Area: 0.022 sq.m	Time: 9:46:00			
BOTTOM ENVIRONMENT					
Depth (m): 0.8	Salinity (ppt): 0.26	Temperature (C): 26.71			
Dissolved Oxygen (mg/l): 5.8	Sediment Silt-Clay (%): 91.33	Total Carbon (%): 3.75			
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.50	Condition: Meets Goal	# Attributes Scored: 4			
	Value	Score	Value	Score	
Shannon-Wiener Index	0.97		T.F. Pollution Indicative Spp. Abund. (%)	80.00	3
Abundance (#/m2)	2045	5	Tolerance Score	9.30	3
Deep Deposit Feeder Abundance (%)	84.44	3	Limnodrilus Abundance (%)	80.00	
Carnivore-Omnivore Abundance (%)	15.56				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)	Biomass (g/m2)			
Chironomus spp.	45	0.00455			
Coelotanypus spp.	273	0.02273			
Dero spp.	91				
Oligochaeta		0.07726			
Tubificidae imm w/o cap chaetae	1636				
Total Abundance w/ Epi.	2045				
Total Abundance w/o Epi.	2045				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.		0.10453			
Total Biomass w/o Epi.		0.10453			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

STATION INFORMATION					
Station:	079		Rep:	02	
Watershed:	Patuxent River		Habitat:	Tidal Freshwater	
Gear:	Wildco Box Corer		Sampled Area:	0.022 sq.m	
Date:	28AUG24		Time:	9:46:00	
BOTTOM ENVIRONMENT					
Depth (m):	0.8		Salinity (ppt):	0.26	
Dissolved Oxygen (mg/l):	5.8		Sediment Silt-Clay (%):	91.33	
			Temperature (C):	26.71	
			Total Carbon (%):	3.75	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score:	2.50		Condition:	Degraded	
			# Attributes Scored:	4	
BIOTIC INTEGRITY ATTRIBUTES					
	Value	Score		Value	Score
Shannon-Wiener Index	0.66		T.F. Pollution Indicative Spp. Abund. (%)	87.50	1
Abundance (#/m2)	1091	5	Tolerance Score	9.65	1
Deep Deposit Feeder Abundance (%)	87.50	3	Limnodrilus Abundance (%)	87.50	
Carnivore-Omnivore Abundance (%)	12.50				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Chironomus spp.	91		0.03181		
Coelotanypus spp.	45		0.00455		
Oligochaeta			0.01364		
Tubificidae imm w/o cap chaetae	954		0.02727		
Total Abundance w/ Epi.	1091				
Total Abundance w/o Epi.	1091				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.07727		
Total Biomass w/o Epi.			0.07727		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 079		Rep: 03
Watershed: Patuxent River	Habitat: Tidal Freshwater	Date: 28AUG24
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 9:46:00
BOTTOM ENVIRONMENT		
Depth (m): 0.8	Salinity (ppt): 0.26	Temperature (C): 26.71
Dissolved Oxygen (mg/l): 5.8	Sediment Silt-Clay (%): 91.33	Total Carbon (%): 3.75
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.50	Condition: Meets Goal	# Attributes Scored: 4
	Value	Score
Shannon-Wiener Index	1.16	3
Abundance (#/m2)	1727	5
Deep Deposit Feeder Abundance (%)	71.05	3
Carnivore-Omnivore Abundance (%)	28.95	3
	T.F. Pollution Indicative Spp. Abund. (%)	71.05
	Tolerance Score	9.23
	Limnodrilus Abundance (%)	71.05
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Chironomus spp.	227	0.01364
Coelotanypus spp.	273	0.00455
Oligochaeta		0.04090
Tubificidae imm w/o cap chaetae	1227	0.02727
Total Abundance w/ Epi.	1727	
Total Abundance w/o Epi.	1727	
Number of Taxa w/ Epi.	3	
Number of Taxa w/o Epi.	3	
Total Biomass w/ Epi.		0.08635
Total Biomass w/o Epi.		0.08635

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 201		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 13AUG24	
		Time: 12:25:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1		Salinity (ppt): 5.83	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 99.04	
		Temperature (C): 27.25	
		Total Carbon (%): 3.52	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.40		Condition: Severely Degr.	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	1.58	1	1
Abundance (#/m2)	136	1	1
Biomass (g/m2)	0.08	1	1
Carnivore-Omnivore Abundance (%)	33.33		
Deep Deposit Feeder Abundance (%)	33.33		
		Pollution Indicative Species Abundance (%)	66.67
		Pollution Indicative Species Biomass (%)	13.51
		Pollution Sensitive Species Abundance (%)	33.33
		Pollution Sensitive Species Biomass (%)	86.49
			3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	45	0.00909	
Hydrobiidae (Epi)	45	0.00909	
Rangia cuneata	45	0.07272	
Tubificidae imm w/o cap chaetae	45	0.00227	
Total Abundance w/ Epi.	182		
Total Abundance w/o Epi.	136		
Number of Taxa w/ Epi.	4		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.09317	
Total Biomass w/o Epi.		0.08408	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 201		Rep: 02	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Date: 13AUG24		Time: 12:25:00	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 3.1		Salinity (ppt): 5.83	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 99.04	
		Temperature (C): 27.25	
		Total Carbon (%): 3.52	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20		Condition: Degraded	
		# Attributes Scored: 5	
Value	Score	Value	Score
Shannon-Wiener Index	1.00	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	91	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.09	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	50.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Hydrobiidae (Epi)	409	0.03636	
Mediomastus ambiseta	45	0.00454	
Rangia cuneata	45	0.08635	
Total Abundance w/ Epi.	500		
Total Abundance w/o Epi.	91		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	2		
Total Biomass w/ Epi.		0.12726	
Total Biomass w/o Epi.		0.09090	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 201		Rep: 03	
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 13AUG24	
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 12:25:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.1	Salinity (ppt): 5.83	Temperature (C): 27.25	
Dissolved Oxygen (mg/l): 7.2	Sediment Silt-Clay (%): 99.04	Total Carbon (%): 3.52	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.20	Condition: Degraded		# Attributes Scored: 5
	Value	Score	Value Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%) 0.00 5
Abundance (#/m2)	91	1	Pollution Indicative Species Biomass (%) 0.00
Biomass (g/m2)	0.80	1	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)	136	0.00455	
Rangia cuneata	91	0.80447	
Total Abundance w/ Epi.	227		
Total Abundance w/o Epi.	91		
Number of Taxa w/ Epi.	2		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.80901	
Total Biomass w/o Epi.		0.80447	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 202		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 13AUG24	
		Time: 9:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.4		Salinity (ppt): 6.03	
Dissolved Oxygen (mg/l): 4.4		Sediment Silt-Clay (%): 98.47	
		Temperature (C): 27.50	
		Total Carbon (%): 4.41	
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	1
Abundance (#/m2)	0	1	1
Biomass (g/m2)	0.00	1	1
Carnivore-Omnivore Abundance (%)	0.00	1	1
Deep Deposit Feeder Abundance (%)	0.00	1	1
		Pollution Indicative Species Abundance (%)	100.00
		Pollution Indicative Species Biomass (%)	100.00
		Pollution Sensitive Species Abundance (%)	0.00
		Pollution Sensitive Species Biomass (%)	0.00
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
No Organisms Present		0.00000	
Total Abundance w/ Epi.			
Total Abundance w/o Epi.			
Number of Taxa w/ Epi.	0		
Number of Taxa w/o Epi.	0		
Total Biomass w/ Epi.		0.00000	
Total Biomass w/o Epi.		0.00000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 202		Rep: 02	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Date: 13AUG24		Time: 9:45:00	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 5.4	Salinity (ppt): 6.03	Temperature (C): 27.50	
Dissolved Oxygen (mg/l): 4.4	Sediment Silt-Clay (%): 98.47	Total Carbon (%): 4.41	
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	5
Abundance (#/m2)	45	1	0.00
Biomass (g/m2)	0.00	1	0.00
Carnivore-Omnivore Abundance (%)	100.00	1	0.00
Deep Deposit Feeder Abundance (%)	0.00	1	1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Carinoma tremaphoros	45	0.00454	
Total Abundance w/ Epi.	45		
Total Abundance w/o Epi.	45		
Number of Taxa w/ Epi.	1		
Number of Taxa w/o Epi.	1		
Total Biomass w/ Epi.		0.00454	
Total Biomass w/o Epi.		0.00454	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 202		Rep: 03	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m	
		Date: 13AUG24	
		Time: 9:45:00	
BOTTOM ENVIRONMENT			
Depth (m): 5.4		Salinity (ppt): 6.03	
Dissolved Oxygen (mg/l): 4.4		Sediment Silt-Clay (%): 98.47	
		Temperature (C): 27.50	
		Total Carbon (%): 4.41	
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	1
Abundance (#/m2)	45	Pollution Indicative Species Abundance (%)	100.00
Biomass (g/m2)	0.01	Pollution Indicative Species Biomass (%)	100.00
Carnivore-Omnivore Abundance (%)	100.00	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)	
Chironomus spp.	45	0.00909	
Hydrobiidae (Epi)	45	0.00454	
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.		0.01363	
Total Biomass w/o Epi.		0.00909	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 203		Rep: 01	
Watershed: Patapsco & Back Rivers	Habitat: Oligohaline	Date: 22AUG24	
Gear: Young Grab	Sampled Area: 0.044 sq.m	Time: 8:22:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.6	Salinity (ppt): 1.13	Temperature (C): 22.63	
Dissolved Oxygen (mg/l): 9.5	Sediment Silt-Clay (%): 99.01	Total Carbon (%): 4.21	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal	# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.41		Oligohaline Pollution Indicative Spp. Abund. 100.00
Abundance (#/m2)	568	5	Tolerance Score 9.22
Deep Deposit Feeder Abundance (%)	28.00		Oligohaline Pollution Sensitive Spp. Abund. 0.00
Carnivore-Omnivore Abundance (%)	72.00	5	Tanypodinae/Chironomidae Abundance Ratio 22.22
			3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	318	0.16813	
Coelotanypus spp.	91	0.00682	
Oligochaeta		0.00114	
Tubificidae imm w/o cap chaetae	159	0.00114	
Total Abundance w/ Epi.	568		
Total Abundance w/o Epi.	568		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.17722	
Total Biomass w/o Epi.		0.17722	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 203		Rep: 02	
Watershed: Patapsco & Back Rivers		Habitat: Oligohaline	
Gear: Young Grab		Sampled Area: 0.044 sq.m	
		Date: 22AUG24	
		Time: 8:22:00	
BOTTOM ENVIRONMENT			
Depth (m): 1.6		Salinity (ppt): 1.13	
Dissolved Oxygen (mg/l): 9.5		Sediment Silt-Clay (%): 99.01	
		Temperature (C): 22.63	
		Total Carbon (%): 4.21	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 6	
Value	Score	Value	Score
Shannon-Wiener Index	1.36	Oligohaline Pollution Indicative Spp. Abund.	100.00
Abundance (#/m2)	568	Tolerance Score	8.65
Deep Deposit Feeder Abundance (%)	12.00	Oligohaline Pollution Sensitive Spp. Abund.	0.00
Carnivore-Omnivore Abundance (%)	88.00	Tanypodinae/Chironomidae Abundance Ratio	36.36
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	318	0.18630	
Coelotanypus spp.	182	0.03635	
Oligochaeta		0.00114	
Tubificidae imm w/o cap chaetae	68	0.00114	
Total Abundance w/ Epi.	568		
Total Abundance w/o Epi.	568		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.		0.22493	
Total Biomass w/o Epi.		0.22493	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 203		Rep: 03	
Watershed: Patapsco & Back Rivers		Date: 22AUG24	
Gear: Young Grab		Time: 8:22:00	
Habitat: Oligohaline			
Sampled Area: 0.044 sq.m			
BOTTOM ENVIRONMENT			
Depth (m): 1.6	Salinity (ppt): 1.13	Temperature (C): 22.63	
Dissolved Oxygen (mg/l): 9.5	Sediment Silt-Clay (%): 99.01	Total Carbon (%): 4.21	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal		# Attributes Scored: 6
	Value	Score	Value Score
Shannon-Wiener Index	1.52		Oligohaline Pollution Indicative Spp. Abund. 100.00 1
Abundance (#/m2)	386	3	Tolerance Score 8.95 3
Deep Deposit Feeder Abundance (%)	29.41		Oligohaline Pollution Sensitive Spp. Abund. 0.00 1
Carnivore-Omnivore Abundance (%)	70.59	5	Tanypodinae/Chironomidae Abundance Ratio 33.33 3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chironomus spp.	182		0.12723
Coelotanypus spp.	91		0.01136
Oligochaeta			0.00227
Tubificidae imm w/o cap chaetae	114		0.00114
Total Abundance w/ Epi.	386		
Total Abundance w/o Epi.	386		
Number of Taxa w/ Epi.	3		
Number of Taxa w/o Epi.	3		
Total Biomass w/ Epi.			0.14200
Total Biomass w/o Epi.			0.14200

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Station: 204		Rep: 01	
Watershed: Lower Western Shore		Date: 19AUG24	
Habitat: High Mesohaline Mud		Time: 10:43:00	
Gear: Young Grab		Sampled Area: 0.044 sq.m	
BOTTOM ENVIRONMENT			
Depth (m): 6.8		Salinity (ppt): 7.98	
Dissolved Oxygen (mg/l): 0.7		Sediment Silt-Clay (%): 66.58	
		Temperature (C): 27.33	
		Total Carbon (%): 1.28	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.25	1	Pollution Indicative Species Abundance (%) 6.25
Abundance (#/m2)	364	1	Pollution Indicative Species Biomass (%) 1.43
Biomass (g/m2)	0.79	3	Pollution Sensitive Species Abundance (%) 93.75
Carnivore-Omnivore Abundance (%)	6.25	1	Pollution Sensitive Species Biomass (%) 98.57
Deep Deposit Feeder Abundance (%)	56.25		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Chironomus spp.	23	0.01136	
Macoma balthica	136	0.76566	
Mediomastus ambiseta	204	0.01590	
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.		0.79293	
Total Biomass w/o Epi.		0.79293	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 02	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 19AUG24	
		Sampled Area: 0.044 sq.m		Time: 10:43:00	
BOTTOM ENVIRONMENT					
Depth (m): 6.8		Salinity (ppt): 7.98		Temperature (C): 27.33	
Dissolved Oxygen (mg/l): 0.7		Sediment Silt-Clay (%): 66.58		Total Carbon (%): 1.28	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.92	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	659	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	4.41	5	Pollution Sensitive Species Abundance (%)	82.76	
Carnivore-Omnivore Abundance (%)	6.90	1	Pollution Sensitive Species Biomass (%)	94.15	3
Deep Deposit Feeder Abundance (%)	44.83				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Heteromastus filiformis	45		0.04090		
Macoma balthica	295		3.60566		
Mediomastus ambiseta	227		0.01590		
Neanthes succinea	45		0.21584		
Rangia cuneata	23		0.52938		
Tubificoides spp.	23		0.00114		
Total Abundance w/ Epi.	659				
Total Abundance w/o Epi.	659				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			4.40882		
Total Biomass w/o Epi.			4.40882		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 03	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 19AUG24	
		Sampled Area: 0.044 sq.m		Time: 10:43:00	
BOTTOM ENVIRONMENT					
Depth (m): 6.8		Salinity (ppt): 7.98		Temperature (C): 27.33	
Dissolved Oxygen (mg/l): 0.7		Sediment Silt-Clay (%): 66.58		Total Carbon (%): 1.28	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.49	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	795	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	2.95	5	Pollution Sensitive Species Abundance (%)	88.57	
Carnivore-Omnivore Abundance (%)	2.86	1	Pollution Sensitive Species Biomass (%)	81.62	3
Deep Deposit Feeder Abundance (%)	40.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Macoma balthica	386		2.39469		
Macoma mitchelli	68		0.48166		
Mediomastus ambiseta	318		0.01590		
Neanthes succinea	23		0.06134		
Total Abundance w/ Epi.	795				
Total Abundance w/o Epi.	795				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			2.95360		
Total Biomass w/o Epi.			2.95360		

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DATA SUMMARY B

**BENTHIC ENVIRONMENT AND COMMUNITY
COMPOSITION AT RANDOM SITES:
SUMMER 2024**

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

Site	31401	31402	31403	31404	31405
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	High Meso Sand	High Meso Sand	High Meso Sand	High Meso Sand	High Meso Mud
Date	09/11/24	09/11/24	09/11/24	09/10/24	09/10/24
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	1.7	1.9	1.0	0.8
Salinity (ppt)	16.80	16.35	15.99	13.06	12.51
Temperature (C)	23.36	24.71	23.64	22.61	22.68
Dissolved Oxygen (mg/L)	7.4	9.2	8.5	8.0	6.5
Sediment Silt-Clay (%)	6.37	3.73	6.00	3.59	87.73
Total Carbon (%)	0.11	0.03	0.18	0.66	5.06
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	2.67	2.33	2.67	2.33
Condition	Meets Goal	Marginal	Degraded	Marginal	Degraded
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.82 3	3.34 5	3.08 3	2.09 1	1.56 1
Abundance (#/m2)	4317 3	1795 5	863 1	386 1	6339 1
Biomass (g/m2)	0.86 1	0.48 1	1.10 3	0.09 1	0.79 3
Pollution Indicative Spp Abund (%)	7.89 5	25.32 1	26.32 1	5.88 5	3.94
Pollution Indicative Spp Biom (%)	4.99	52.86	72.58	2.60	1.44 5
Pollution Sensitive Spp Abund (%)	70.00 5	24.05 3	44.74 3	11.76 3	67.74
Pollution Sensitive Spp Biom (%)	74.11	26.19	3.30	7.79	18.10 1
Carnivore-Omnivore Abund (%)	10.53 1	16.46 1	31.58 3	52.94 5	17.92 3
Deep Deposit Feeder Abund (%)	57.89	12.66	28.95	11.76	66.67
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31401	31402	31403	31404	31405
Acteocina canaliculata	250	68	182		
Americamysis bigelowi (Epi.)	23				
Arcuatula papyria (Epi.)	23				
Clymenella torquata	182				
Cyathura polita					45
Edotea triloba (Epi.)			23		68
Eteone heteropoda					23
Gemma gemma		318	45	45	
Glycinde solitaria	114	159	68	23	23
Hermundura americana				182	977
Heteromastus filiformis	45		91		
Leitoscoloplos robustus		136			
Leitoscoloplos spp.				23	
Leptocheirus plumulosus					704
Macoma balthica	23				
Macoma mitchelli	91	432	68	91	45
Maldanidae		23	23		
Mediomastus ambiseta	1659	23	136	23	4226
Mulinia lateralis		182	114		
Neanthes succinea	45				68
Paraonis fulgens		23			
Paraprionospio pinnata	136	45			
Phoronis spp.	795	159			
Podarkeopsis levifuscina	45				
Rictaxis punctostriatus		68	23		
Saccoglossus kowalevskii	114				
Spiochaetopterus costarum			23		
Streblospio benedicti	204	91	114		227
Tubificoides spp.	613	45			
Total Abundance w/ Epifauna	4362	1795	886	386	6407
Total Abundance w/o Epifauna	4317	1795	863	386	6339
Number of Taxa w/ Epifauna	16	15	11	6	10
Number of Taxa w/o Epifauna	14	15	10	6	9

BENTHIC BIOMASS (Grams per sq. meter)					
Site	31401	31402	31403	31404	31405
Acteocina canaliculata	0.0136	0.0068	0.0295		
Americamysis bigelowi (Epi.)	0.0011				
Arcuatula papyria (Epi.)	0.0023				
Clymenella torquata	0.2454				
Cyathura polita					0.0909
Edotea triloba (Epi.)			0.0023		0.0045
Eteone heteropoda					0.0068
Gemma gemma		0.0409	0.0114	0.0068	
Glycinde solitaria	0.0091	0.0204	0.0023	0.0045	0.0023
Hermundura americana				0.0704	0.3590
Heteromastus filiformis	0.0477		0.1136		
Leitoscoloplos robustus		0.1204			
Leitoscoloplos spp.				0.0023	
Leptocheirus plumulosus					0.2408
Macoma balthica	0.0568				
Macoma mitchelli	0.0023	0.0114	0.0045	0.0011	0.0204
Maldanidae		0.0364	0.1318		
Mediomastus ambiseta	0.0386	0.0023	0.0045	0.0023	0.0500
Mulinia lateralis		0.1204	0.7929		
Neanthes succinea	0.0091				0.0159
Paraonis fulgens		0.0068			
Paraprionospio pinnata	0.0364	0.0068			
Phoronis spp.	0.2772	0.0273			
Podarkeopsis levifuscina	0.0011				
Rictaxis punctostriatus		0.0023	0.0045		
Saccoglossus kowalevskii	0.1091				
Spiochaetopterus costarum		0.0682			
Streblospio benedicti	0.0068	0.0045	0.0068		0.0045
Tubificoides spp.	0.0114	0.0023			
Total Biomass w/ Epifauna	0.8679	0.4771	1.1042	0.0875	0.7952
Total Biomass w/o Epifauna	0.8645	0.4771	1.1019	0.0875	0.7907

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31406		31407		31408		31409		31410	
Watershed	Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs	
Habitat	High Meso Mud		High Meso Mud		Low Mesohaline		Oligohaline		Low Mesohaline	
Date	09/10/24		09/10/24		09/10/24		09/10/24		09/10/24	
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		1.3		6.8		6.2		3.2	
Salinity (ppt)	14.09		12.98		7.12		3.79		10.93	
Temperature (C)	22.71		22.26		23.23		23.44		22.64	
Dissolved Oxygen (mg/L)	7.4		7.2		5.7		6.1		6.3	
Sediment Silt-Clay (%)	92.70		42.64		7.33		95.63		71.15	
Total Carbon (%)	1.91		1.90		0.37		6.50		3.46	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.33		2.33		2.60		3.40		2.60	
Condition	Degraded		Degraded		Degraded		Meets Goal		Degraded	
# Attributes Scored	6		6		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.34	1	1.40	1	1.80	3	2.26		1.88	3
Abundance (#/m2)	500	1	386	1	4158	3	1000	5	5385	3
Biomass (g/m2)	0.15	1	0.30	1	66.43	1	23.90		0.85	1
Pollution Indicative Spp Abund (%)	0.00		0.00		47.54	1	40.91		7.17	5
Pollution Indicative Spp Biom (%)	0.00	5	0.00	5	0.05		0.03		1.08	
Pollution Sensitive Spp Abund (%)	40.91		11.76		39.89		9.09		62.03	
Pollution Sensitive Spp Biom (%)	2.99	1	0.75	1	99.64	5	99.54		23.66	1
Carnivore-Omnivore Abund (%)	50.00	5	47.06	5	11.48		31.82	3	16.88	
Deep Deposit Feeder Abund (%)	40.91		11.76		36.07		25.00		58.65	
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		65.91	3	0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00	1	0.00	
Tolerance Score	0.00		0.00		6.00		6.00	5	6.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31406	31407	31408	31409	31410
Apocorophium lacustre (Epi.)			45		68
Balanus improvisus (Epi.)				23	
Carinoma tremaphoros			23	136	45
Cyathura polita			23	23	114
Edotea triloba (Epi.)				250	
Eteone heteropoda					23
Gammarus daiberi (Epi.)				1681	
Glycinde solitaria					23
Hermundura americana	250	182	386	159	704
Leptocheirus plumulosus		159	45		863
Macoma mitchelli	45				45
Mediomastus ambiseta	204	45	1477	45	3158
Mytilopsis leucophaeata (Epi.)			68	227	
Neanthes succinea			45		
Rangia cuneata			159	23	45
Streblospio benedicti			1977	409	364
Tubificoides spp.			23	204	
Total Abundance w/ Epifauna	500	386	4271	3181	5453
Total Abundance w/o Epifauna	500	386	4158	1000	5385
Number of Taxa w/ Epifauna	3	3	11	11	11
Number of Taxa w/o Epifauna	3	3	9	7	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31406	31407	31408	31409	31410
Apocorophium lacustre (Epi.)			0.0045		0.0045
Balanus improvisus (Epi.)				0.0159	
Carinoma tremaphoros			0.0091	0.0091	0.0204
Cyathura polita			0.0136	0.0091	0.1045
Edotea triloba (Epi.)				0.0204	
Eteone heteropoda					0.0068
Gammarus daiberi (Epi.)				0.4726	
Glycinde solitaria					0.0023
Hermundura americana	0.1181	0.2386	0.1772	0.0909	0.3044
Leptocheirus plumulosus		0.0613	0.0159		0.1977
Macoma mitchelli	0.0295				0.1136
Mediomastus ambiseta	0.0045	0.0023	0.0795	0.0045	0.0613
Mytilopsis leucophaeata (Epi.)			0.0659	0.1022	
Neanthes succinea			0.0011		
Rangia cuneata			66.0925	23.7765	0.0318
Streblospio benedicti			0.0364	0.0068	0.0023
Tubificoides spp.			0.0023	0.0023	
Total Biomass w/ Epifauna	0.1522	0.3022	66.4980	24.5103	0.8497
Total Biomass w/o Epifauna	0.1522	0.3022	66.4276	23.8992	0.8452

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31411		31412		31413		31414		31415	
Watershed	Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline		Oligohaline	
Date	09/10/24		09/09/24		09/09/24		09/09/24		09/09/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	1.4		1.9		0.7		7.7		5.2	
Salinity (ppt)	6.92		9.64		8.93		11.10		2.92	
Temperature (C)	22.63		22.95		22.90		23.32		23.85	
Dissolved Oxygen (mg/L)	6.8		7.4		6.8		6.0		6.9	
Sediment Silt-Clay (%)	95.36		2.70		4.66		75.60		77.12	
Total Carbon (%)	9.87		0.00		0.10		1.43		2.43	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.20		1.80		1.40		3.80		2.60	
Condition	Degraded		Severely Degr.		Severely Degr.		Meets Goal		Degraded	
# Attributes Scored	5		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.43	1	0.95	1	1.83	3	2.42	3	1.05	
Abundance (#/m2)	1295	3	250	1	295	1	1659	5	1272	5
Biomass (g/m2)	0.07	1	0.01	1	0.06	1	1.91	3	0.09	
Pollution Indicative Spp Abund (%)	3.51	5	0.00	5	23.08	1	0.00	5	17.86	
Pollution Indicative Spp Biom (%)	25.81		0.00		3.85		0.00		10.00	
Pollution Sensitive Spp Abund (%)	29.82		0.00		46.15		65.75		0.00	
Pollution Sensitive Spp Biom (%)	12.90	1	0.00	1	7.69	1	50.80	3	0.00	
Carnivore-Omnivore Abund (%)	5.26		36.36		15.38		16.44		3.57	1
Deep Deposit Feeder Abund (%)	91.23		0.00		46.15		49.32		76.79	
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		94.64	3
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	1
Tolerance Score	6.20		0.00		0.00		0.00		8.50	3
Tany./Chir. Abundance Ratio	100.00		0.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31411	31412	31413	31414	31415
Chaoborus punctipennis					23
Coelotanytus spp.	45				
Cyathura polita				159	
Gammarus spp. (Epi.)	23				
Hermundura americana	23	91	45	114	23
Hobsonia florida	23				
Leptocheirus plumulosus	23			159	
Macoma balthica				159	
Macoma mitchelli		159	45	227	23
Marenzelleria viridis				23	
Mediomastus ambiseta	386		136	750	
Odostomia engonia (Epi.)			23		
Streblospio benedicti			68		227
Tubificoides spp.	795			68	977
Total Abundance w/ Epifauna	1318	250	318	1659	1272
Total Abundance w/o Epifauna	1295	250	295	1659	1272
Number of Taxa w/ Epifauna	7	2	5	8	5
Number of Taxa w/o Epifauna	6	2	4	8	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31411	31412	31413	31414	31415
Chaoborus punctipennis					0.0023
Coelotanytus spp.	0.0182				
Cyathura polita				0.2249	
Gammarus spp. (Epi.)	0.0023				
Hermundura americana	0.0295	0.0068	0.0204	0.2499	0.0114
Hobsonia florida	0.0045				
Leptocheirus plumulosus	0.0023			0.0454	
Macoma balthica				0.6975	
Macoma mitchelli		0.0023	0.0318	0.6430	0.0477
Marenzelleria viridis				0.0204	
Mediomastus ambiseta	0.0091		0.0045	0.0273	
Odostomia engonia (Epi.)			0.0045		
Streblospio benedicti			0.0023		0.0091
Tubificoides spp.	0.0068			0.0011	0.0204
Total Biomass w/ Epifauna	0.0727	0.0091	0.0636	1.9096	0.0909
Total Biomass w/o Epifauna	0.0704	0.0091	0.0591	1.9096	0.0909

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31416		31418		31419		31420		31421	
Watershed	Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs	
Habitat	High Meso Mud		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	09/04/24		09/04/24		09/04/24		09/04/24		09/04/24	
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)	12.2		7.0		4.9		12.1		1.1	
Salinity (ppt)	17.11		9.04		8.24		8.17		5.94	
Temperature (C)	25.47		24.95		24.17		25.18		25.02	
Dissolved Oxygen (mg/L)	0.0		4.0		6.2		4.7		5.9	
Sediment Silt-Clay (%)	98.08		98.71		89.81		99.27		96.83	
Total Carbon (%)	2.76		2.75		2.31		2.95		2.95	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	1.67		3.40		3.80		4.20		3.00	
Condition	Severely Degr.		Meets Goal		Meets Goal		Meets Goal		Meets Goal	
# Attributes Scored	6		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.00	1	1.91	3	2.73	5	2.64	5	2.58	5
Abundance (#/m2)	23	1	1454	3	1363	3	1068	3	477	1
Biomass (g/m2)	0.00	1	3.74	3	3.65	3	3.75	3	0.29	1
Pollution Indicative Spp Abund (%)	0.00		1.56	5	1.67	5	8.51	5	4.76	5
Pollution Indicative Spp Biom (%)	0.00	5	0.06		0.03		0.42		1.57	
Pollution Sensitive Spp Abund (%)	0.00		75.00		56.67		53.19		47.62	
Pollution Sensitive Spp Biom (%)	0.00	1	77.95	3	79.69	3	91.76	5	41.73	3
Carnivore-Omnivore Abund (%)	0.00	1	0.00		6.67		8.51		23.81	
Deep Deposit Feeder Abund (%)	100.00		68.75		53.33		57.45		57.14	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Tolerance Score	0.00		0.00		0.00		6.20		6.20	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		100.00		100.00	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31416	31418	31419	31420	31421
Carinoma tremaphoros			23	23	23
Coelotanypus spp.				45	23
Cyathura polita			45		
Eteone heteropoda				23	45
Heteromastus filiformis		182	273	204	
Leptocheirus plumulosus			68	23	
Macoma balthica		341	295	295	23
Macoma mitchelli		91	136	23	68
Marenzelleria viridis			23		
Mediomastus ambiseta		750	409	273	159
Melita nitida (Epi.)		68	91	91	
Neanthes succinea			23		23
Streblospio benedicti		23	23	23	
Tubificoides spp.	23	68	45	136	114
Total Abundance w/ Epifauna	23	1522	1454	1159	477
Total Abundance w/o Epifauna	23	1454	1363	1068	477
Number of Taxa w/ Epifauna	1	7	12	11	8
Number of Taxa w/o Epifauna	1	6	11	10	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31416	31418	31419	31420	31421
Carinoma tremaphoros			0.0114	0.0500	0.0068
Coelotanypus spp.				0.0136	0.0045
Cyathura polita			0.0250		0.0364
Eteone heteropoda				0.0011	
Heteromastus filiformis		0.1409	0.1772	0.1454	
Leptocheirus plumulosus			0.0250	0.0045	
Macoma balthica		2.8877	2.8127	3.4262	0.0750
Macoma mitchelli		0.6793	0.5135	0.0909	0.1477
Marenzelleria viridis			0.0500		
Mediomastus ambiseta		0.0273	0.0227	0.0159	0.0091
Melita nitida (Epi.)		0.0023	0.0068	0.0023	
Neanthes succinea			0.0114		0.0045
Streblospio benedicti		0.0023	0.0011	0.0011	
Tubificoides spp.	0.0011	0.0023	0.0023	0.0023	0.0045
Total Biomass w/ Epifauna	0.0011	3.7420	3.6591	3.7533	0.2885
Total Biomass w/o Epifauna	0.0011	3.7397	3.6522	3.7511	0.2885

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31422		31423		31424		31425		31426	
Watershed	Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs		Eastern Tribs	
Habitat	Oligohaline		Oligohaline		Oligohaline		Oligohaline		Freshwater	
Date	09/05/24		09/05/24		09/05/24		09/05/24		09/10/24	
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)	3.6		1.6		1.2		0.3		2.5	
Salinity (ppt)	1.06		1.58		1.75		2.74		0.07	
Temperature (C)	24.27		25.28		25.57		25.41		22.94	
Dissolved Oxygen (mg/L)	6.5		10.0		7.8		15.1		5.8	
Sediment Silt-Clay (%)	85.21		93.80		98.37		98.96		91.90	
Total Carbon (%)	2.28		1.75		2.70		1.91		3.62	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	2.33		2.20		2.20		2.67		5.00	
Condition	Degraded		Degraded		Degraded		Marginal		Meets Goal	
# Attributes Scored	6		5		5		6		4	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.92		1.22		1.69		1.05		2.58	
Abundance (#/m2)	68	1	204	3	227	3	682	5	1204	5
Biomass (g/m2)	0.01		74.97		14.51		0.45		1.08	
Pollution Indicative Spp Abund (%)	66.67		77.78		40.00		100.00		33.96	
Pollution Indicative Spp Biom (%)	90.91		0.01		0.02		100.00		2.85	
Pollution Sensitive Spp Abund (%)	0.00		22.22		60.00		0.00		0.00	
Pollution Sensitive Spp Biom (%)	0.00		99.99		99.98		0.00		0.00	
Carnivore-Omnivore Abund (%)	100.00	5	0.00	1	10.00	1	93.33	5	69.81	
Deep Deposit Feeder Abund (%)	0.00		77.78		40.00		6.67		26.42	5
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		26.42	5
Limnodrilus Abundance (%)	0.00		77.78		40.00		6.67		26.42	
Oligo Poll. Indic. Spp Abund (%)	66.67	3	77.78	3	40.00	3	100.00	1	0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00	1	0.00	1	0.00	1	0.00	1	0.00	
Tolerance Score	6.57	3	8.96	3	7.69	3	9.20	1	7.53	5
Tany./Chir. Abundance Ratio	66.67	1	0.00		0.00		17.86	3	55.56	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31422	31423	31424	31425	31426
Ablabesmyia annulata					23
Chaoborus punctipennis					318
Chiridotea almyra					23
Chironomus spp.				523	
Coelotanypus spp.	45			114	91
Corbicula fluminea					45
Cryptochironomus spp.	23				
Cyathura polita			23		
Gammarus spp. (Epi.)					227
Harnischia spp.					23
Hexagenia spp.					295
Limnodrilus hoffmeisteri		23	23	23	
Polycentropus spp. (Epi.)					23
Polydora flava					45
Rangia cuneata		45	114		
Stenelmis spp. (Epi.)					23
Tanytarsus spp.					23
Tubificidae imm w/o cap chaetae					318
Tubificidae imm w/o cap chaetae *		136	68	23	
Total Abundance w/ Epifauna	68	204	227	682	1477
Total Abundance w/o Epifauna	68	204	227	682	1204
Number of Taxa w/ Epifauna	2	2	3	3	13
Number of Taxa w/o Epifauna	2	2	3	3	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31422	31423	31424	31425	31426
Chaoborus punctipennis					0.0386
Chiridotea almyra					0.0091
Chironomidae					0.0011
Chironomus spp.				0.4271	
Coelotanypus spp.	0.0114			0.0204	0.0068
Corbicula fluminea					0.0250
Cryptochironomus spp.	0.0011				
Cyathura polita			0.0023		
Gammarus spp. (Epi.)					0.0273
Hexagenia spp.					0.9724
Oligochaeta		0.0102	0.0023	0.0011	0.0227
Polycentropus spp. (Epi.)					0.0045
Rangia cuneata		74.9601	14.5067		
Stenelmis spp. (Epi.)					0.0114
Tubificidae imm w/o cap chaetae					0.0011
Total Biomass w/ Epifauna	0.0125	74.9703	14.5113	0.4487	1.1201
Total Biomass w/o Epifauna	0.0125	74.9703	14.5113	0.4487	1.0769

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31501		31502		31503		31504		31505	
Watershed	Mainstem		Mainstem		Mainstem		Mainstem		Mainstem	
Habitat	Polyhaline Mud		High Meso Sand		High Meso Sand		High Meso Sand		High Meso Sand	
Date	09/12/24		09/11/24		09/11/24		09/11/24		09/11/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	3.4		5.7		6.0		9.3		3.6	
Salinity (ppt)	18.46		17.20		15.77		17.60		15.43	
Temperature (C)	23.14		23.99		23.80		24.03		23.65	
Dissolved Oxygen (mg/L)	7.3		5.0		5.3		3.0		8.0	
Sediment Silt-Clay (%)	42.56		2.18		4.37		17.06		23.68	
Total Carbon (%)	0.58		0.00		0.00		0.17		0.30	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	2.00		4.00		3.33		3.67		3.33	
Condition	Severely Degr.		Meets Goal		Meets Goal		Meets Goal		Meets Goal	
# Attributes Scored	6		6		6		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.50	3	3.73	5	3.00	3	3.41	5	3.28	5
Abundance (#/m2)	318	1	1386	3	977	1	1272	3	1500	3
Biomass (g/m2)	0.13	1	0.63	1	1.07	3	0.45	1	0.73	1
Pollution Indicative Spp Abund (%)	35.71		6.56	5	0.00	5	14.29	3	12.12	3
Pollution Indicative Spp Biom (%)	1.71	5	70.56		0.00		5.29		4.38	
Pollution Sensitive Spp Abund (%)	42.86		50.82	5	67.44	3	64.29	5	54.55	5
Pollution Sensitive Spp Biom (%)	21.37	1	15.80		8.51		38.79		34.22	
Carnivore-Omnivore Abund (%)	14.29	1	45.90	5	44.19	5	53.57	5	25.76	3
Deep Deposit Feeder Abund (%)	28.57		14.75		2.33		8.93		13.64	
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31501	31502	31503	31504	31505
Acteocina canaliculata	23	341	295	318	68
Arcuatula papyria (Epi.)			45		23
Carinomella lactea				23	
Clymenella torquata				23	
Cyathura burbancki		45	45		23
Drilonereis longa		23			
Edwardsia elegans		23	23		
Eteone heteropoda				23	
Gemma gemma		23	23		
Glycera dibranchiata			23	23	45
Glycinde solitaria		114	23	182	136
Heteromastus filiformis	23	23			114
Leitoscoloplos spp.				23	
Listriella barnardi	23				
Loimia medusa	45			23	
Macoma mitchelli					182
Mediomastus ambiseta	68			68	68
Micrura leidy			23		
Molgula manhattensis (Epi.)		23			
Mulinia lateralis		45			45
Mytilidae (Epi.)		23			
Neanthes succinea		23		68	23
Odostomia engonia (Epi.)		136	136		23
Oxyurostylis smithi		23			
Parahesion luteola	23				
Paraonis fulgens		68			
Paraprionospio pinnata	114			136	136
Parvilucina crenella		45	114	91	
Pectinaria gouldii		23	23		23
Phoronis spp.		136	250	159	477
Rictaxis punctostriatus		68			91
Sigambra tentaculata				45	
Spiochaetopterus costarum			23	45	
Spiophanes bombyx		114	68		
Streblospio benedicti		45			
Stylochus ellipticus (Epi.)				23	
Tagelus plebeius					45
Tellinidae		23	23	23	
Tharyx spp.		23	23		
Tubificoides spp.		159			
Total Abundance w/ Epifauna	318	1568	1159	1295	1545
Total Abundance w/o Epifauna	318	1386	977	1272	1500
Number of Taxa w/ Epifauna	7	23	16	17	17
Number of Taxa w/o Epifauna	7	20	14	16	15

BENTHIC BIOMASS (Grams per sq. meter)					
Site	31501	31502	31503	31504	31505
Acteocina canaliculata	0.0011	0.0136	0.0204	0.0477	0.0068
Arcuatula papyria (Epi.)			0.0023		0.0023
Carinomella lactea				0.0023	
Clymenella torquata				0.0364	
Cyathura burbancki		0.0250	0.0318		0.0068
Drilonereis longa		0.0159			
Edwardsia elegans		0.0114	0.0159		
Eteone heteropoda				0.0011	
Gemma gemma		0.0011	0.0182		
Glycera dibranchiata			0.7588	0.0250	0.3249
Glycinde solitaria		0.0068	0.0023	0.0204	0.0068
Heteromastus filiformis	0.0977	0.0091			0.0341
Leitoscoloplos spp.				0.0023	
Listriella barnardi	0.0023				
Loimia medusa	0.0182			0.0023	0.0011
Macoma mitchelli					0.0045
Mediomastus ambiseta	0.0091			0.0023	0.0023
Micrura leidyi			0.0909		
Molgula manhattensis (Epi.)		0.0023			
Mulinia lateralis		0.4453			0.0068
Mytilidae (Epi.)		0.0011			
Neanthes succinea		0.0023		0.0091	0.0091
Odostomia engonia (Epi.)		0.0136	0.0114		0.0023
Oxyurostylis smithi		0.0068			
Parahesione luteola	0.0023				
Paraonis fulgens		0.0045			
Paraprionospio pinnata	0.0023			0.0204	0.0250
Parvilucina crenella		0.0023	0.0568	0.2022	
Pectinaria gouldii		0.0023	0.0011		0.0659
Phoronis spp.		0.0227	0.0432	0.0477	0.0591
Rictaxis punctostriatus		0.0011			0.0011
Sigambra tentaculata				0.0114	
Spiochaetopterus costarum			0.0045	0.0182	
Spiophanes bombyx		0.0568	0.0204		
Streblospio benedicti		0.0011			
Stylochus ellipticus (Epi.)				0.0045	
Tagelus plebeius					0.1727
Tellinidae		0.0011	0.0023	0.0023	
Tharyx spp.		0.0023	0.0011		
Tubificoides spp.		0.0011			
Total Biomass w/ Epifauna	0.1329	0.6498	1.0815	0.4555	0.7316
Total Biomass w/o Epifauna	0.1329	0.6328	1.0678	0.4510	0.7270

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31506		31507		31508		31509		31510	
Watershed	Mainstem		Mainstem		Mainstem		Mainstem		Mainstem	
Habitat	High Meso Sand		High Meso Sand		High Meso Sand		High Meso Sand		Polyhaline San	
Date	09/11/24		09/11/24		09/11/24		09/11/24		09/11/24	
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)	5.3		2.4		7.0		7.1		8.2	
Salinity (ppt)	14.27		16.45		16.54		15.99		19.05	
Temperature (C)	23.36		23.60		24.12		24.02		24.24	
Dissolved Oxygen (mg/L)	7.3		7.1		2.4		3.1		3.2	
Sediment Silt-Clay (%)	16.28		2.30		4.98		1.30		4.56	
Total Carbon (%)	0.61		0.00		0.00		0.00		0.02	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	3.33		3.67		3.00		3.33		1.33	
Condition	Meets Goal		Meets Goal		Meets Goal		Meets Goal		Severely Degr.	
# Attributes Scored	6		6		6		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.94	3	3.51	5	2.22	1	3.21	5	2.67	1
Abundance (#/m2)	1113	3	1204	3	1068	3	977	1	954	1
Biomass (g/m2)	0.40	1	0.44	1	0.68	1	0.25	1	0.86	1
Pollution Indicative Spp Abund (%)	6.12	5	3.77	5	4.26	5	0.00	5	2.38	
Pollution Indicative Spp Biom (%)	36.68		1.03		44.82		0.00		32.19	1
Pollution Sensitive Spp Abund (%)	77.55	5	33.96	3	78.72	5	55.81	3	45.24	3
Pollution Sensitive Spp Biom (%)	39.26		17.83		34.11		25.00		9.23	
Carnivore-Omnivore Abund (%)	34.69	3	43.40	5	29.79	3	51.16	5	33.33	
Deep Deposit Feeder Abund (%)	4.08		20.75		2.13		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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31506	31507	31508	31509	31510
Acteocina canaliculata	227	159	250	250	159
Americamysis almyra (Epi.)			23		
Ameroculodes species complex				23	
Arcuatula papyria (Epi.)			45		
Carinoma tremaphoros		23			
Cyathura burbancki				45	
Edotea triloba (Epi.)		23			
Gemma gemma		114			
Glycera dibranchiata				23	23
Glycinde solitaria	136	91	23	136	23
Haminoea solitaria		45			
Hermundura americana					23
Heteromastus filiformis	23				
Loimia medusa		45			
Macoma mitchelli	114	23		45	
Mediomastus ambiseta	23				
Micrura leidyi		68			
Molgula manhattensis (Epi.)			23		
Mulinia lateralis	45	45	45		23
Neanthes succinea	23	45			45
Odostomia engonia (Epi.)	45	23		23	
Paraonis fulgens		91		45	
Paraprionospio pinnata	23				
Parvilucina crenella	23		114	136	364
Pectinaria gouldii			23		
Phoronis spp.	341	91	500	114	182
Podarkeopsis levifuscina					23
Rictaxis punctostriatus		91	45	45	23
Spiochaetopterus costarum	91				
Spiophanes bombyx	45	23	68	45	68
Tharyx spp.				68	
Tubificoides spp.		250			
Total Abundance w/ Epifauna	1159	1250	1159	1000	954
Total Abundance w/o Epifauna	1113	1204	1068	977	954
Number of Taxa w/ Epifauna	13	17	11	13	11
Number of Taxa w/o Epifauna	12	15	8	12	11

BENTHIC BIOMASS (Grams per sq. meter)					
Site	31506	31507	31508	31509	31510
Acteocina canaliculata	0.0364	0.0273	0.0159	0.0204	0.0114
Americamysis almyra (Epi.)			0.0045		
Ameroculodes species complex				0.0045	
Arcuatula papyria (Epi.)			0.0159		
Carinoma tremaphoros		0.0068			
Cyathura burbancki				0.0204	
Edotea triloba (Epi.)		0.0023			
Gemma gemma		0.0386			
Glycera dibranchiata				0.0273	0.0159
Glycinde solitaria	0.0136	0.0068	0.0045	0.0068	0.0023
Haminoea solitaria		0.0011			
Hermundura americana					0.0114
Heteromastus filiformis	0.0068				
Loimia medusa		0.0011			
Macoma mitchelli	0.0227	0.0011		0.0182	
Mediomastus ambiseta	0.0011				
Micrura leidyi		0.2476			
Molgula manhattensis (Epi.)			0.0182		
Mulinia lateralis	0.1363	0.0045	0.3044		0.2772
Neanthes succinea	0.0114	0.0409			0.0068
Odostomia engonia (Epi.)	0.0023	0.0068		0.0045	
Paraonis fulgens		0.0068		0.0023	
Paraprionospio pinnata	0.0091				
Parvilucina crenella	0.0545		0.1386	0.0932	0.4658
Pectinaria gouldii			0.0023		
Phoronis spp.	0.0613	0.0273	0.1954	0.0250	0.0545
Podarkeopsis levifuscina					0.0023
Rictaxis punctostriatus		0.0068	0.0023	0.0023	0.0023
Spiochaetopterus costarum	0.0068				
Spiophanes bombyx	0.0364	0.0159	0.0159	0.0091	0.0114
Tharyx spp.				0.0159	
Tubificoides spp.		0.0068			
Total Biomass w/ Epifauna	0.3987	0.4487	0.7180	0.2499	0.8611
Total Biomass w/o Epifauna	0.3965	0.4396	0.6793	0.2454	0.8611

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31512		31513		31514		31515		31516	
Watershed	Mainstem		Mainstem		Mainstem		Mainstem		Mainstem	
Habitat	High Meso Sand		High Meso Sand		High Meso Sand		High Meso Mud		High Meso Sand	
Date	09/11/24		09/11/24		09/11/24		09/11/24		09/11/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	1.4		2.7		2.9		6.5		2.6	
Salinity (ppt)	15.01		14.69		14.24		14.58		14.18	
Temperature (C)	23.17		22.87		23.54		23.19		23.56	
Dissolved Oxygen (mg/L)	7.8		7.4		7.9		6.8		7.5	
Sediment Silt-Clay (%)	1.95		6.84		10.57		51.55		10.50	
Total Carbon (%)	0.04		0.09		0.18		0.68		0.17	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	2.67		3.00		3.67		2.33		2.33	
Condition	Marginal		Meets Goal		Meets Goal		Degraded		Degraded	
# Attributes Scored	6		6		6		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.96	3	3.08	3	2.74	3	2.64	3	2.27	1
Abundance (#/m2)	841	1	1022	3	2158	5	932	1	477	1
Biomass (g/m2)	0.24	1	0.46	1	0.23	1	0.36	1	0.14	1
Pollution Indicative Spp Abund (%)	13.51	3	20.00	3	1.05	5	12.20	3	23.81	3
Pollution Indicative Spp Biom (%)	38.32		33.33		4.93		22.47	3	55.00	
Pollution Sensitive Spp Abund (%)	32.43	3	46.67	5	68.42	5	63.41	3	52.38	3
Pollution Sensitive Spp Biom (%)	16.82		7.60		29.56		10.44	1	20.00	
Carnivore-Omnivore Abund (%)	54.05	5	31.11	3	27.37	3	51.22	5	47.62	5
Deep Deposit Feeder Abund (%)	2.70		13.33		45.26		29.27		9.52	
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31512	31513	31514	31515	31516
Acteocina canaliculata	45	204	318	23	23
Carinoma tremaphoros				45	
Edwardsia elegans			23		
Gemma gemma	45	45	182		
Glycera dibranchiata		45			
Glycinde solitaria	159	68	182	364	204
Hermundura americana	227		45		
Heteromastus filiformis			45	45	23
Leitoscoloplos robustus				23	23
Loimia medusa	23	45	23		
Macoma mitchelli	159	250	295	91	91
Mediomastus ambiseta	23	136	886	204	
Mulinia lateralis	68	114	23		91
Mytilidae (Epi.)	45				
Neanthes succinea			23	45	
Paraprionospio pinnata		45		68	
Rictaxis punctostriatus	23				
Spiochaetopterus costarum			23		23
Streblospio benedicti	45	45		23	
Stylochus ellipticus (Epi.)			68		
Tagelus plebeius	23	23	45		
Tubificoides spp.			45		
Total Abundance w/ Epifauna	886	1022	2227	932	477
Total Abundance w/o Epifauna	841	1022	2158	932	477
Number of Taxa w/ Epifauna	12	11	15	10	7
Number of Taxa w/o Epifauna	11	11	14	10	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31512	31513	31514	31515	31516
Acteocina canaliculata	0.0011	0.0114	0.0045	0.0011	0.0045
Carinoma tremaphoros				0.0204	
Edwardsia elegans			0.0023		
Gemma gemma	0.0011	0.0011	0.0295		
Glycera dibranchiata		0.2317			
Glycinde solitaria	0.0068	0.0091	0.0114	0.0341	0.0182
Hermundura americana	0.0454		0.0250		
Heteromastus filiformis			0.0704	0.1068	0.0227
Leitoscoloplos robustus				0.0659	0.0636
Loimia medusa	0.0295	0.0114	0.0023		
Macoma mitchelli	0.0613	0.0409	0.0068	0.0568	0.0114
Mediomastus ambiseta	0.0023	0.0011	0.0136	0.0023	
Mulinia lateralis	0.0909	0.1409	0.0114		0.0114
Mytilidae (Epi.)	0.0011				
Neanthes succinea			0.0159	0.0568	
Paraprionospio pinnata		0.0091		0.0136	
Rictaxis punctostriatus	0.0011				
Spiochaetopterus costarum			0.0341		0.0045
Streblospio benedicti	0.0023	0.0045		0.0011	
Stylochus ellipticus (Epi.)			0.0273		
Tagelus plebeius	0.0011	0.0023	0.0023		
Tubificoides spp.			0.0011		
Total Biomass w/ Epifauna	0.2442	0.4635	0.2579	0.3590	0.1363
Total Biomass w/o Epifauna	0.2431	0.4635	0.2306	0.3590	0.1363

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES						
Site	31517	31518	31519	31520	31521	
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem	
Habitat	High Meso Sand	High Meso Sand	High Meso Sand	Polyhaline Mud	Polyhaline Mud	
Date	09/10/24	09/11/24	09/11/24	09/21/24	09/21/24	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	1.2	2.3	1.6	9.6	10.0	
Salinity (ppt)	14.06	13.26	13.57	18.80	19.07	
Temperature (C)	22.25	23.02	22.70	23.83	23.83	
Dissolved Oxygen (mg/L)	8.0	8.2	7.7	1.2	0.5	
Sediment Silt-Clay (%)	3.21	7.82	35.60	97.10	93.52	
Total Carbon (%)	0.12	0.17	0.59	3.30	2.96	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.00	2.00	3.33	1.00	1.00	
Condition	Severely Degr.	Severely Degr.	Meets Goal	Severely Degr.	Severely Degr.	
# Attributes Scored	6	6	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.95	3	1.86	1	1.77	1
Abundance (#/m2)	909	1	409	1	1272	3
Biomass (g/m2)	0.11	1	0.25	1	0.70	1
Pollution Indicative Spp Abund (%)	27.50	1	44.44	1	7.14	5
Pollution Indicative Spp Biom (%)	12.50		81.25		27.74	3
Pollution Sensitive Spp Abund (%)	22.50	3	50.00	3	60.71	5
Pollution Sensitive Spp Biom (%)	19.79		7.14		5.48	1
Carnivore-Omnivore Abund (%)	25.00	3	50.00	5	41.07	5
Deep Deposit Feeder Abund (%)	5.00		16.67		53.57	3
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	0
Limnodrilus Abundance (%)	0.00		0.00		0.00	0
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	0
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	0
Tolerance Score	0.00		0.00		0.00	0
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	0

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31517	31518	31519	31520	31521
Acteocina canaliculata	23	23			
Cyathura polita			23		
Cyclaspis varians	23				
Eteone heteropoda	23				
Gemma gemma	23				
Glycinde solitaria	91	182	91		
Hermundura americana	91		409		
Heteromastus filiformis		23			
Leitoscoloplos robustus		45	23		
Loimia medusa	23				
Macoma mitchelli	318				
Mediomastus ambiseta	45		659		
Mulinia lateralis	91	136			
Paraprionospio pinnata			23		
Streblospio benedicti	136		45		
Tagelus plebeius	23				
Total Abundance w/ Epifauna	909	409	1272	0	0
Total Abundance w/o Epifauna	909	409	1272		
Number of Taxa w/ Epifauna	12	5	7	0	0
Number of Taxa w/o Epifauna	12	5	7	0	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31517	31518	31519	31520	31521
Acteocina canaliculata	0.0011	0.0023			
Cyathura polita			0.0068		
Cyclaspis varians	0.0011				
Eteone heteropoda	0.0023				
Gemma gemma	0.0023				
Glycinde solitaria	0.0091	0.0159	0.0114		
Hermundura americana	0.0204		0.4703		
Heteromastus filiformis		0.0295			
Leitoscoloplos robustus		0.0477	0.0636		
Loimia medusa	0.0045				
Macoma mitchelli	0.0500				
Mediomastus ambiseta	0.0045		0.0204		
Mulinia lateralis	0.0068	0.1590			
Paraprionospio pinnata			0.1295		
Streblospio benedicti	0.0045		0.0023		
Tagelus plebeius	0.0023				
Total Biomass w/ Epifauna	0.1091	0.2545	0.7043	0.0000	0.0000
Total Biomass w/o Epifauna	0.1091	0.2545	0.7043	0.0000	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31522		31523		31524		31525		31526	
Watershed	Mainstem		Mainstem		Mainstem		Mainstem		Mainstem	
Habitat	Low Mesohaline		Polyhaline Mud		High Meso Mud		Low Mesohaline		High Meso Mud	
Date	09/09/24		09/21/24		09/12/24		08/15/24		09/11/24	
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)	1.7		11.0		8.3		1.3		3.1	
Salinity (ppt)	11.38		18.61		16.61		6.63		14.74	
Temperature (C)	22.68		23.81		24.86		27.71		22.86	
Dissolved Oxygen (mg/L)	7.6		1.6		0.0		10.2		6.7	
Sediment Silt-Clay (%)	57.62		99.12		87.89		4.88		89.14	
Total Carbon (%)	0.18		3.25		2.63		0.16		0.91	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	1.40		1.33		1.00		2.60		2.67	
Condition	Severely Degr.		Severely Degr.		Severely Degr.		Degraded		Marginal	
# Attributes Scored	5		6		6		5		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.55	1	0.92	1	0.00	1	2.39	3	2.66	3
Abundance (#/m2)	4021	3	68	1	0	1	772	3	250	1
Biomass (g/m2)	0.39	1	0.01	1	0.00	1	0.51	1	0.34	1
Pollution Indicative Spp Abund (%)	25.99	1	66.67	1	100.00	1	2.94	5	9.09	1
Pollution Indicative Spp Biom (%)	15.16		66.67	1	100.00	1	0.22		4.00	5
Pollution Sensitive Spp Abund (%)	64.41		33.33		0.00		8.82		18.18	
Pollution Sensitive Spp Biom (%)	28.57	1	33.33	3	0.00	1	9.56	1	20.67	1
Carnivore-Omnivore Abund (%)	1.69		0.00	1	0.00	1	38.24		27.27	5
Deep Deposit Feeder Abund (%)	68.93		33.33		0.00		23.53		27.27	
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31522	31523	31524	31525	31526
Carinoma tremaphoros				23	
Eteone heteropoda	45				
Gemma gemma	23			250	
Glycinde solitaria					23
Hermundura americana					45
Heteromastus filiformis	159			114	45
Laeonereis culveri	23			250	
Leitoscoloplos robustus					23
Leitoscoloplos spp.				23	
Macoma mitchelli	114			23	68
Marenzelleria viridis				23	
Mediomastus ambiseta	2590	23		45	
Micrura leidyi				23	
Mulinia lateralis	23				
Polydora cornuta	45				
Saccoglossus kowalevskii					23
Spiochaetopterus costarum					23
Streblospio benedicti	977	45			
Tubificoides spp.	23				
Total Abundance w/ Epifauna	4021	68	0	772	250
Total Abundance w/o Epifauna	4021	68		772	250
Number of Taxa w/ Epifauna	10	2	0	9	7
Number of Taxa w/o Epifauna	10	2	0	9	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31522	31523	31524	31525	31526
Carinoma tremaphoros				0.0068	
Eteone heteropoda	0.0227				
Gemma gemma	0.0114			0.1227	
Glycinde solitaria					0.0023
Hermundura americana					0.1181
Heteromastus filiformis	0.0704			0.0500	0.0591
Laeonereis culveri	0.0136			0.1840	
Leitoscoloplos robustus					0.0136
Leitoscoloplos spp.				0.0011	
Macoma mitchelli	0.1181			0.0818	0.0750
Marenzelleria viridis				0.0477	
Mediomastus ambiseta	0.1113	0.0023		0.0011	
Micrura leidyi				0.0159	
Mulinia lateralis	0.0023				
Polydora cornuta	0.0045				
Saccoglossus kowalevskii					0.0045
Spiochaetopterus costarum					0.0682
Streblospio benedicti	0.0341	0.0045			
Tubificoides spp.	0.0011				
Total Biomass w/ Epifauna	0.3896	0.0068	0.0000	0.5112	0.3408
Total Biomass w/o Epifauna	0.3896	0.0068	0.0000	0.5112	0.3408

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31301		31302		31303		31304		31305	
Watershed	Western Tribs		Western Tribs		Western Tribs		Western Tribs		Western Tribs	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	08/19/24		08/19/24		08/19/24		08/19/24		08/14/24	
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)	1.5		1.2		1.1		6.5		3.5	
Salinity (ppt)	7.05		6.52		6.84		8.06		6.81	
Temperature (C)	27.40		27.73		27.15		27.19		27.50	
Dissolved Oxygen (mg/L)	6.8		1.6		4.6		1.4		8.6	
Sediment Silt-Clay (%)	96.98		97.16		3.61		97.79		5.28	
Total Carbon (%)	4.47		2.37		0.12		1.73		0.48	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	1.00		1.40		1.80		3.40		1.40	
Condition	Severely Degr.		Severely Degr.		Severely Degr.		Meets Goal		Severely Degr.	
# Attributes Scored	5		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.92	1	2.00	3	1.82	3	0.97	1	1.96	3
Abundance (#/m2)	68	1	91	1	432	1	545	3	227	1
Biomass (g/m2)	0.02	1	0.08	1	0.17	1	3.49	3	0.05	1
Pollution Indicative Spp Abund (%)	100.00	1	75.00	1	10.53	3	0.00	5	50.00	1
Pollution Indicative Spp Biom (%)	100.00		8.33		1.34		0.00		47.62	
Pollution Sensitive Spp Abund (%)	0.00		0.00		5.26		95.83		20.00	
Pollution Sensitive Spp Biom (%)	0.00	1	0.00	1	0.67	1	99.87	5	38.10	1
Carnivore-Omnivore Abund (%)	100.00		50.00		5.26		0.00		50.00	
Deep Deposit Feeder Abund (%)	0.00		0.00		47.37		25.00		10.00	
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	7.40		8.00		0.00		0.00		9.80	
Tany./Chir. Abundance Ratio	66.67		50.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31301	31302	31303	31304	31305
Americamysis almyra (Epi.)			23		
Chironomus spp.	23	23			114
Coelotanypus spp.	45	23			
Heteromastus filiformis			204	23	23
Laeonereis culveri			23		
Limulus polyphemus (Epi.)			23		
Littoridinops tenuipes (Epi.)		23			
Macoma balthica				409	23
Macoma mitchelli		23	136		
Marenzelleria viridis			23		23
Mediomastus ambiseta				114	
Polydora cornuta					45
Streblospio benedicti		23	45		
<hr/>					
Total Abundance w/ Epifauna	68	114	477	545	227
Total Abundance w/o Epifauna	68	91	432	545	227
Number of Taxa w/ Epifauna	2	5	7	3	5
Number of Taxa w/o Epifauna	2	4	5	3	5
<hr/>					
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31301	31302	31303	31304	31305
Americamysis almyra (Epi.)			0.0011		
Chironomus spp.	0.0114	0.0023			0.0227
Coelotanypus spp.	0.0068	0.0023			
Heteromastus filiformis			0.0772	0.0045	0.0023
Laeonereis culveri			0.0182		
Limulus polyphemus (Epi.)			0.0114		
Littoridinops tenuipes (Epi.)		0.0023			
Macoma balthica				3.4807	0.0114
Macoma mitchelli		0.0750	0.0704		
Marenzelleria viridis			0.0011		0.0068
Mediomastus ambiseta				0.0023	
Polydora cornuta					0.0045
Streblospio benedicti		0.0023	0.0023		
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Total Biomass w/ Epifauna	0.0182	0.0841	0.1818	3.4875	0.0477
Total Biomass w/o Epifauna	0.0182	0.0818	0.1693	3.4875	0.0477

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31306		31307		31308		31309		31310	
Watershed	Western Tribs		Western Tribs		Western Tribs		Western Tribs		Western Tribs	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	08/14/24		08/14/24		08/14/24		08/14/24		08/13/24	
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)	3.9		3.8		3.8		0.6		2.5	
Salinity (ppt)	7.17		7.23		7.20		6.52		5.63	
Temperature (C)	27.50		27.50		27.45		27.63		28.17	
Dissolved Oxygen (mg/L)	5.0		3.3		3.3		9.7		11.0	
Sediment Silt-Clay (%)	99.40		98.99		98.45		2.83		7.67	
Total Carbon (%)	3.77		2.99		2.71		0.21		0.27	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	1.00		3.00		3.00		1.00		3.80	
Condition	Severely Degr.		Meets Goal		Meets Goal		Severely Degr.		Meets Goal	
# Attributes Scored	5		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.00	1	1.97	3	2.52	5	1.49	1	2.53	5
Abundance (#/m2)	409	1	386	1	523	3	250	1	2181	5
Biomass (g/m2)	0.08	1	2.19	3	1.39	3	0.04	1	1.69	3
Pollution Indicative Spp Abund (%)	100.00	1	5.88	5	17.39	3	72.73	1	11.46	3
Pollution Indicative Spp Biom (%)	100.00		0.10		0.98		72.73		0.61	
Pollution Sensitive Spp Abund (%)	0.00		70.59		30.43		0.00		66.67	
Pollution Sensitive Spp Biom (%)	0.00	1	53.99	3	21.28	1	0.00	1	62.94	3
Carnivore-Omnivore Abund (%)	100.00		5.88		26.09		63.64		12.50	
Deep Deposit Feeder Abund (%)	0.00		29.41		52.17		18.18		18.75	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Tolerance Score	9.80		0.00		9.80		9.80		7.90	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31306	31307	31308	31309	31310
Chironomus spp.	409		91	159	114
Eteone heteropoda					23
Hermundura americana			23		91
Heteromastus filiformis					23
Hydrobiidae (Epi.)				23	45
Laeonereis culveri					45
Macoma balthica		159	45		
Macoma mitchelli		68	68	23	295
Marenzelleria viridis					954
Mediomastus ambiseta		114	114		386
Neanthes succinea		23	23		
Polydora cornuta					23
Rangia cuneata					114
Streblospio benedicti		23		23	114
Tubificoides spp.			159	45	
Total Abundance w/ Epifauna	409	386	523	273	2227
Total Abundance w/o Epifauna	409	386	523	250	2181
Number of Taxa w/ Epifauna	1	5	7	5	12
Number of Taxa w/o Epifauna	1	5	7	4	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31306	31307	31308	31309	31310
Chironomus spp.	0.0841		0.0136	0.0250	0.0011
Eteone heteropoda					0.0045
Hermundura americana			0.0727		0.0068
Heteromastus filiformis					0.0114
Hydrobiidae (Epi.)				0.0023	0.0011
Laeonereis culveri					0.0091
Macoma balthica		1.1724	0.2863		
Macoma mitchelli		0.8497	0.8293	0.0091	0.5862
Marenzelleria viridis					0.4953
Mediomastus ambiseta		0.0114	0.0091		0.0136
Neanthes succinea		0.1568	0.1749		
Polydora cornuta					0.0011
Rangia cuneata					0.5521
Streblospio benedicti		0.0023		0.0023	0.0045
Tubificoides spp.			0.0023	0.0011	
Total Biomass w/ Epifauna	0.0841	2.1925	1.3882	0.0398	1.6870
Total Biomass w/o Epifauna	0.0841	2.1925	1.3882	0.0375	1.6858

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31311		31312		31313		31314		31315	
Watershed	Western Tribs		Western Tribs		Western Tribs		Western Tribs		Western Tribs	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Oligohaline		Low Mesohaline	
Date	08/13/24		08/13/24		08/13/24		08/22/24		08/13/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	4.9		5.2		5.9		2.4		2.0	
Salinity (ppt)	6.12		6.15		6.26		2.82		5.68	
Temperature (C)	27.09		27.31		27.40		23.68		27.55	
Dissolved Oxygen (mg/L)	6.3		6.3		4.4		8.1		7.3	
Sediment Silt-Clay (%)	97.63		92.55		97.68		67.98		40.37	
Total Carbon (%)	2.22		2.02		3.41		3.39		1.54	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.60		3.80		2.60		3.33		3.00	
Condition	Degraded		Meets Goal		Degraded		Meets Goal		Meets Goal	
# Attributes Scored	5		5		5		6		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.32	3	2.81	5	1.49	1	2.56		2.96	5
Abundance (#/m2)	977	3	659	3	250	1	1136	5	341	1
Biomass (g/m2)	0.53	1	0.92	1	2.67	3	0.90		0.91	1
Pollution Indicative Spp Abund (%)	4.65	5	3.45	5	0.00	5	32.00		6.67	5
Pollution Indicative Spp Biom (%)	0.22		0.12		0.00		14.57		0.25	
Pollution Sensitive Spp Abund (%)	46.51		55.17		72.73		48.00		53.33	
Pollution Sensitive Spp Biom (%)	6.88	1	92.33	5	99.23	3	38.69		49.63	3
Carnivore-Omnivore Abund (%)	16.28		17.24		9.09		34.00	3	13.33	
Deep Deposit Feeder Abund (%)	46.51		34.48		0.00		54.00		26.67	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	4.65		0.00		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00		86.00	3	0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		8.00	3	0.00	
Tolerance Score	9.80		6.00		0.00		8.52	3	6.95	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		31.25	3	0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31311	31312	31313	31314	31315
Carinoma tremaphoros	23	45	23	23	
Chironomus spp.				250	23
Coelotanypus spp.				114	
Hermundura americana	114	45			
Heteromastus filiformis				91	23
Hydrobiidae (Epi.)		23			159
Leptocheirus plumulosus	250	91	45		
Macoma balthica		68	159		23
Macoma mitchelli	68	68			68
Marenzelleria viridis	45		23	23	23
Mediomastus ambiseta	409	227		432	68
Neanthes succinea	23	23			23
Polydora cornuta					23
Rangia cuneata		68		23	68
Streblospio benedicti		23			
Tubificidae imm w/o cap chaetae	45				
Tubificoides spp.				91	
Total Abundance w/ Epifauna	977	682	250	1136	500
Total Abundance w/o Epifauna	977	659	250	1136	341
Number of Taxa w/ Epifauna	8	10	4	9	10
Number of Taxa w/o Epifauna	8	9	4	9	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31311	31312	31313	31314	31315
Carinoma tremaphoros	0.0045	0.0159	0.0091	0.0136	
Chironomus spp.				0.1159	0.0023
Coelotanypus spp.				0.0159	
Hermundura americana	0.0136	0.0114			
Heteromastus filiformis				0.0795	0.0023
Hydrobiidae (Epi.)		0.0023			0.0045
Leptocheirus plumulosus	0.0500	0.0011	0.0114		
Macoma balthica		0.6316	2.6423		0.0886
Macoma mitchelli	0.3363	0.0250		0.3272	0.4021
Marenzelleria viridis	0.0114		0.0023	0.1818	0.0045
Mediomastus ambiseta	0.0250	0.0091		0.0454	0.0045
Neanthes succinea	0.0863	0.0159			0.0500
Polydora cornuta					0.0023
Rangia cuneata		0.2068		0.1227	0.3544
Streblospio benedicti		0.0011			
Tubificidae imm w/o cap chaetae	0.0011				
Tubificoides spp.				0.0023	
Total Biomass w/ Epifauna	0.5282	0.9202	2.6651	0.9043	0.9156
Total Biomass w/o Epifauna	0.5282	0.9179	2.6651	0.9043	0.9111

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31316		31317		31318		31319		31320	
Watershed	Western Tribs		Western Tribs		Western Tribs		Western Tribs		Western Tribs	
Habitat	Low Mesohaline		Oligohaline		Oligohaline		Oligohaline		Oligohaline	
Date	08/13/24		08/22/24		08/22/24		08/22/24		09/06/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	15.4		2.0		1.2		1.9		2.4	
Salinity (ppt)	8.66		1.60		1.00		2.09		0.93	
Temperature (C)	27.46		22.95		24.33		23.64		23.23	
Dissolved Oxygen (mg/L)	3.0		8.7		11.5		8.0		9.3	
Sediment Silt-Clay (%)	84.99		98.61		3.48		95.62		31.15	
Total Carbon (%)	2.08		4.34		0.12		2.48		0.69	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	1.40		3.00		3.33		3.33		4.00	
Condition	Severely Degr.		Meets Goal		Meets Goal		Meets Goal		Meets Goal	
# Attributes Scored	5		6		6		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.00	3	1.45		1.64		2.02		2.45	
Abundance (#/m2)	91	1	909	5	3113	5	454	5	1295	5
Biomass (g/m2)	0.01	1	0.11		0.55		0.40		0.36	
Pollution Indicative Spp Abund (%)	25.00	1	100.00		78.10		55.00		22.81	
Pollution Indicative Spp Biom (%)	20.00		100.00		87.24		16.09		21.94	
Pollution Sensitive Spp Abund (%)	25.00		0.00		0.73		35.00		33.33	
Pollution Sensitive Spp Biom (%)	20.00	1	0.00		2.47		77.59		72.73	
Carnivore-Omnivore Abund (%)	25.00		55.00	5	72.99	5	90.00	5	38.60	5
Deep Deposit Feeder Abund (%)	50.00		45.00		26.28		5.00		40.35	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		45.00		25.55		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		100.00	1	99.27	1	60.00	3	63.16	3
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00	1	0.73	3	0.00	1	5.26	3
Tolerance Score	0.00		9.53	1	9.80	1	8.88	3	8.25	3
Tany./Chir. Abundance Ratio	0.00		13.64	5	0.00	5	18.18	3	9.09	5

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31316	31317	31318	31319	31320
Boccardiella ligERICA					23
Carinoma tremaphoros					23
Chironomus spp.		432	1636	204	227
Coelotanypus spp.		68		45	23
Cyathura polita				136	227
Hermundura americana	23			23	
Heteromastus filiformis			23	23	
Limnodrilus hoffmeisteri		23	45		
Marenzelleria viridis			23		68
Mediomastus ambiseta	23				
Polypedilum halterale group			636		
Rangia cuneata				23	136
Streblospio benedicti	23				45
Tubificidae imm w/o cap chaetae *		386	750		
Tubificoides spp.	23				523
Total Abundance w/ Epifauna	91	909	3113	454	1295
Total Abundance w/o Epifauna	91	909	3113	454	1295
Number of Taxa w/ Epifauna	4	3	5	6	9
Number of Taxa w/o Epifauna	4	3	5	6	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31316	31317	31318	31319	31320
Boccardiella ligERICA					0.0011
Carinoma tremaphoros					0.0045
Chironomus spp.		0.1045	0.4658	0.0591	0.0682
Coelotanypus spp.		0.0068		0.0045	0.0091
Cyathura polita				0.1999	0.0750
Hermundura americana	0.0045			0.0204	
Heteromastus filiformis			0.0068	0.0045	
Marenzelleria viridis			0.0136		0.0863
Mediomastus ambiseta	0.0023				
Oligochaeta		0.0023	0.0159		
Polypedilum halterale group			0.0500		
Rangia cuneata				0.1068	0.1022
Streblospio benedicti	0.0023				0.0023
Tubificoides spp.	0.0023				0.0136
Total Biomass w/ Epifauna	0.0114	0.1136	0.5521	0.3953	0.3624
Total Biomass w/o Epifauna	0.0114	0.1136	0.5521	0.3953	0.3624

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31321		31322		31323		31324		31325	
Watershed	Western Tribs		Western Tribs		Western Tribs		Western Tribs		Western Tribs	
Habitat	Oligohaline		Oligohaline		Oligohaline		Freshwater		Freshwater	
Date	09/06/24		09/06/24		09/06/24		08/23/24		08/23/24	
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)	2.6		2.2		1.6		1.0		0.4	
Salinity (ppt)	0.84		0.78		0.83		0.49		0.43	
Temperature (C)	23.73		23.67		23.73		22.66		21.91	
Dissolved Oxygen (mg/L)	9.5		8.2		8.1		8.8		7.7	
Sediment Silt-Clay (%)	92.52		99.49		99.44		6.52		99.07	
Total Carbon (%)	2.72		3.44		3.02		0.33		2.84	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	3.00		2.67		3.00		2.50		1.50	
Condition	Meets Goal		Marginal		Meets Goal		Degraded		Severely Degr.	
# Attributes Scored	6		6		6		4		4	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.52		0.54		1.55		1.27		1.73	
Abundance (#/m2)	159	1	182	3	182	3	4476	3	318	1
Biomass (g/m2)	0.27		0.23		25.59		0.27		0.03	
Pollution Indicative Spp Abund (%)	57.14		100.00		87.50		93.40		78.57	
Pollution Indicative Spp Biom (%)	4.20		100.00		0.52		68.35		0.00	
Pollution Sensitive Spp Abund (%)	28.57		0.00		12.50		0.00		0.00	
Pollution Sensitive Spp Biom (%)	94.96		0.00		99.48		0.00		0.00	
Carnivore-Omnivore Abund (%)	42.86	5	100.00	5	62.50	5	18.78		14.29	
Deep Deposit Feeder Abund (%)	14.29		0.00		25.00		81.22	3	85.71	1
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		78.68	3	78.57	3
Limnodrilus Abundance (%)	0.00		0.00		25.00		78.68		78.57	
Oligo Poll. Indic. Spp Abund (%)	71.43	3	100.00	1	87.50	3	0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	14.29	3	0.00	1	0.00	1	0.00		0.00	
Tolerance Score	7.95	3	9.35	1	9.33	1	9.79	1	9.51	1
Tany./Chir. Abundance Ratio	33.33	3	12.50	5	0.00	5	0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31321	31322	31323	31324	31325
Apocorophium lacustre (Epi.)	23				
Chironomus spp.	45	159	114	659	
Coelotanypus spp.	23	23			
Limnodrilus hoffmeisteri			23	227	114
Lipiniella spp.				182	
Marenzelleria viridis	23				
Microchironomus spp.					45
Rangia cuneata	23		23		
Streblospio benedicti	23				
Tubificidae imm w cap chaetae				114	23
Tubificidae imm w/o cap chaetae *			23	3294	136
Tubificoides spp.	23				
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Total Abundance w/ Epifauna	182	182	182	4476	318
Total Abundance w/o Epifauna	159	182	182	4476	318
Number of Taxa w/ Epifauna	7	2	3	4	3
Number of Taxa w/o Epifauna	6	2	3	4	3
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BENTHIC BIOMASS (Grams per sq. meter)					
Site	31321	31322	31323	31324	31325
Apocorophium lacustre (Epi.)	0.0023				
Chironomus spp.	0.0045	0.2272	0.1204	0.1840	
Coelotanypus spp.	0.0023	0.0045			
Lipiniella spp.				0.0011	
Marenzelleria viridis	0.0886				
Microchironomus spp.					0.0011
Oligochaeta			0.0125	0.0841	0.0261
Rangia cuneata	0.1681		25.4600		
Streblospio benedicti	0.0045				
Tubificoides spp.	0.0023				
<hr/>					
Total Biomass w/ Epifauna	0.2726	0.2317	25.5929	0.2692	0.0273
Total Biomass w/o Epifauna	0.2704	0.2317	25.5929	0.2692	0.0273

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31101		31102		31103		31104		31105	
Watershed	Potomac R		Potomac R		Potomac R		Potomac R		Potomac R	
Habitat	High Meso Sand		High Meso Mud		High Meso Sand		High Meso Mud		High Meso Mud	
Date	09/19/24		09/19/24		09/19/24		09/19/24		09/19/24	
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)	9.4		11.8		5.7		14.4		6.0	
Salinity (ppt)	14.13		14.10		13.80		15.13		12.31	
Temperature (C)	23.52		23.57		23.62		23.88		23.49	
Dissolved Oxygen (mg/L)	6.7		6.6		6.7		2.9		6.7	
Sediment Silt-Clay (%)	2.23		96.16		1.94		94.28		97.99	
Total Carbon (%)	0.06		3.06		0.08		3.00		3.10	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.33		1.00		3.00		1.00		2.00	
Condition	Degraded		Severely Degr.		Meets Goal		Severely Degr.		Severely Degr.	
# Attributes Scored	6		6		6		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.96	3	0.00	1	3.07	3	0.00	1	0.00	1
Abundance (#/m2)	1477	3	0	1	863	1	0	1	23	1
Biomass (g/m2)	0.34	1	0.00	1	0.37	1	0.00	1	0.00	1
Pollution Indicative Spp Abund (%)	40.00	1	100.00		2.63	5	100.00		0.00	
Pollution Indicative Spp Biom (%)	68.47		100.00	1	40.49		100.00	1	0.00	5
Pollution Sensitive Spp Abund (%)	32.31	3	0.00		65.79	3	0.00		100.00	
Pollution Sensitive Spp Biom (%)	18.98		0.00	1	31.60		0.00	1	100.00	3
Carnivore-Omnivore Abund (%)	20.00	3	0.00	1	60.53	5	0.00	1	0.00	1
Deep Deposit Feeder Abund (%)	27.69		0.00		5.26		0.00		100.00	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Tolerance Score	0.00		0.00		0.00		0.00		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31101	31102	31103	31104	31105
Acteocina canaliculata	68		318		
Carinoma tremaphoros			23		
Cyclaspis varians			23		
Edotea triloba (Epi.)			23		
Epitonium rupicola (Epi.)			23		
Glycinde solitaria	45		91		
Haminoea solitaria			23		
Hermundura americana	23				
Leitoscoloplos robustus			23		
Macoma mitchelli			91		
Mediomastus ambiseta	227		23		23
Microphthalmus spp.	23				
Mulinia lateralis	23				
Neanthes succinea	136		23		
Odostomia engonia (Epi.)			23		
Paraprionospio pinnata	45				
Parvilucina crenella			45		
Phoronis spp.	114		68		
Rictaxis punctostriatus			45		
Spiochaetopterus costarum	23		68		
Streblospio benedicti	523				
Tharyx spp.	45				
Tubificoides spp.	182				
Total Abundance w/ Epifauna	1477	0	932	0	23
Total Abundance w/o Epifauna	1477		863		23
Number of Taxa w/ Epifauna	13	0	16	0	1
Number of Taxa w/o Epifauna	13	0	13	0	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31101	31102	31103	31104	31105
Acteocina canaliculata	0.0227		0.0318		
Carinoma tremaphoros			0.0045		
Cyclaspis varians			0.0023		
Edotea triloba (Epi.)			0.0023		
Epitonium rupicola (Epi.)			0.0045		
Glycinde solitaria	0.0045		0.0091		
Haminoea solitaria			0.0011		
Hermundura americana	0.0023				
Leitoscoloplos robustus			0.1500		
Macoma mitchelli			0.0091		
Mediomastus ambiseta	0.0023		0.0011		0.0023
Microphthalmus spp.	0.0011				
Mulinia lateralis	0.2136				
Neanthes succinea	0.0250		0.0023		
Odostomia engonia (Epi.)			0.0011		
Paraprionospio pinnata	0.0045				
Parvilucina crenella			0.0795		
Phoronis spp.	0.0273		0.0250		
Rictaxis punctostriatus			0.0045		
Spiochaetopterus costarum	0.0068		0.0500		
Streblospio benedicti	0.0114				
Tharyx spp.	0.0114				
Tubificoides spp.	0.0023				
Total Biomass w/ Epifauna	0.3351	0.0000	0.3783	0.0000	0.0023
Total Biomass w/o Epifauna	0.3351	0.0000	0.3703	0.0000	0.0023

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES						
Site	31106	31107	31108	31109	31110	
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R	
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud	
Date	09/19/24	09/19/24	09/19/24	09/19/24	09/19/24	
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)	18.9	2.1	8.0	6.8	6.4	
Salinity (ppt)	17.38	13.20	13.68	12.30	13.57	
Temperature (C)	24.21	23.96	23.87	23.45	23.96	
Dissolved Oxygen (mg/L)	0.9	6.8	5.8	6.8	6.3	
Sediment Silt-Clay (%)	93.21	98.21	94.52	99.15	98.49	
Total Carbon (%)	2.72	2.14	3.12	3.13	3.96	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	1.00	2.00	1.67	1.00	1.00	
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	
# Attributes Scored	6	6	6	6	6	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.00	1	0.00	1	0.00	1
Abundance (#/m2)	0	1	23	1	0	1
Biomass (g/m2)	0.00	1	0.00	1	0.00	1
Pollution Indicative Spp Abund (%)	100.00	0.00	0.00	0.00	100.00	100.00
Pollution Indicative Spp Biom (%)	100.00	1	0.00	5	0.00	1
Pollution Sensitive Spp Abund (%)	0.00	100.00	0.00	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	0.00	1	100.00	3	0.00	1
Carnivore-Omnivore Abund (%)	0.00	1	0.00	1	0.00	1
Deep Deposit Feeder Abund (%)	0.00	100.00	0.00	0.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00	0.00
BENTHIC ABUNDANCE (per sq. meter)						
Site	31106	31107	31108	31109	31110	
Macoma mitchelli			23			
Mediomastus ambiseta		23				
Total Abundance w/ Epifauna	0	23	23	0	0	
Total Abundance w/o Epifauna		23	23			
Number of Taxa w/ Epifauna	0	1	1	0	0	
Number of Taxa w/o Epifauna	0	1	1	0	0	
BENTHIC BIOMASS (Grams per sq. meter)						
Site	31106	31107	31108	31109	31110	
Macoma mitchelli			0.0011			
Mediomastus ambiseta		0.0045				
Total Biomass w/ Epifauna	0.0000	0.0045	0.0011	0.0000	0.0000	
Total Biomass w/o Epifauna	0.0000	0.0045	0.0011	0.0000	0.0000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31111		31112		31113		31114		31115	
Watershed	Potomac R		Potomac R		Potomac R		Potomac R		Potomac R	
Habitat	High Meso Sand		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	09/19/24		09/19/24		09/19/24		09/20/24		09/20/24	
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)	8.3		6.3		4.4		8.1		3.7	
Salinity (ppt)	13.48		11.77		11.52		10.30		7.97	
Temperature (C)	23.91		23.51		23.49		23.50		23.79	
Dissolved Oxygen (mg/L)	5.5		6.2		6.1		5.5		6.7	
Sediment Silt-Clay (%)	3.77		92.46		98.35		95.51		98.56	
Total Carbon (%)	0.20		2.91		3.72		2.08		2.09	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	1.33		1.00		1.00		1.00		1.80	
Condition	Severely Degr.		Severely Degr.		Severely Degr.		Severely Degr.		Severely Degr.	
# Attributes Scored	6		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.92	1	0.00	1	0.00	1	0.00	1	0.92	1
Abundance (#/m2)	68	1	23	1	45	1	0	1	68	1
Biomass (g/m2)	0.01	1	0.01	1	0.01	1	0.00	1	0.01	1
Pollution Indicative Spp Abund (%)	66.67	1	100.00	1	100.00	1	100.00	1	0.00	5
Pollution Indicative Spp Biom (%)	66.67		100.00		100.00		100.00		0.00	
Pollution Sensitive Spp Abund (%)	33.33	3	0.00		0.00		0.00		0.00	
Pollution Sensitive Spp Biom (%)	33.33		0.00	1	0.00	1	0.00	1	0.00	1
Carnivore-Omnivore Abund (%)	0.00	1	100.00		100.00		0.00		66.67	
Deep Deposit Feeder Abund (%)	33.33		0.00		0.00		0.00		0.00	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Tolerance Score	0.00		9.80		9.80		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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31111	31112	31113	31114	31115
Chironomus spp.		23	45		
Hermundura americana					45
Leptocheirus plumulosus					23
Mediomastus ambiseta	23				
Streblospio benedicti	45				
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Total Abundance w/ Epifauna	68	23	45	0	68
Total Abundance w/o Epifauna	68	23	45	0	68
Number of Taxa w/ Epifauna	2	1	1	0	2
Number of Taxa w/o Epifauna	2	1	1	0	2
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BENTHIC BIOMASS (Grams per sq. meter)					
Site	31111	31112	31113	31114	31115
Chironomus spp.		0.0136	0.0091		
Hermundura americana					0.0011
Leptocheirus plumulosus					0.0114
Mediomastus ambiseta	0.0023				
Streblospio benedicti	0.0045				
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Total Biomass w/ Epifauna	0.0068	0.0136	0.0091	0.0000	0.0125
Total Biomass w/o Epifauna	0.0068	0.0136	0.0091	0.0000	0.0125

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31116		31117		31118		31119		31120	
Watershed	Potomac R		Potomac R		Potomac R		Potomac R		Potomac R	
Habitat	Oligohaline		Oligohaline		Low Mesohaline		Oligohaline		Oligohaline	
Date	09/20/24		09/20/24		09/20/24		09/20/24		09/20/24	
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)	5.3		4.4		11.2		6.3		7.1	
Salinity (ppt)	2.45		1.65		6.70		1.84		0.91	
Temperature (C)	24.00		24.05		23.89		24.03		23.82	
Dissolved Oxygen (mg/L)	8.0		8.2		6.5		7.7		7.2	
Sediment Silt-Clay (%)	99.02		99.10		96.56		99.39		99.34	
Total Carbon (%)	2.66		2.65		2.39		2.78		2.85	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.67		2.33		1.80		2.00		3.00	
Condition	Marginal		Degraded		Severely Degr.		Severely Degr.		Meets Goal	
# Attributes Scored	6		6		5		6		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.50		1.37		0.00	1	0.00		1.00	
Abundance (#/m2)	295	3	114	1	159	1	45	1	45	1
Biomass (g/m2)	16.88		7.35		0.05	1	0.01		0.06	
Pollution Indicative Spp Abund (%)	46.15		80.00		0.00	5	100.00		0.00	
Pollution Indicative Spp Biom (%)	0.24		0.14		0.00		100.00		0.00	
Pollution Sensitive Spp Abund (%)	23.08		20.00		0.00		0.00		0.00	
Pollution Sensitive Spp Biom (%)	99.48		99.86		0.00	1	0.00		0.00	
Carnivore-Omnivore Abund (%)	53.85	5	60.00	5	100.00		100.00	5	100.00	5
Deep Deposit Feeder Abund (%)	15.38		20.00		0.00		0.00		0.00	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		20.00		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	76.92	3	80.00	3	0.00		100.00	1	0.00	5
Oligo Poll. Sens. Spp Abund (%)	0.00	1	0.00	1	0.00		0.00	1	0.00	1
Tolerance Score	6.17	3	6.88	3	0.00		6.20	3	8.50	3
Tany./Chir. Abundance Ratio	100.00	1	100.00	1	0.00		100.00	1	0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31116	31117	31118	31119	31120
Apocorophium lacustre (Epi.)	45				
Carinoma tremaphoros	23				
Chaoborus punctipennis					23
Coelotanypus spp.	114	68		45	
Hermundura americana	23		159		23
Leptocheirus plumulosus	45				
Mediomastus ambiseta	45				
Mytilopsis leucophaeata (Epi.)		23			
Rangia cuneata	23	23			
Streblospio benedicti	23				
Tubificidae imm w/o cap chaetae		23			
Total Abundance w/ Epifauna	341	136	159	45	45
Total Abundance w/o Epifauna	295	114	159	45	45
Number of Taxa w/ Epifauna	8	4	1	1	2
Number of Taxa w/o Epifauna	7	3	1	1	2

BENTHIC BIOMASS (Grams per sq. meter)					
Site	31116	31117	31118	31119	31120
Apocorophium lacustre (Epi.)	0.0159				
Carinoma tremaphoros	0.0364				
Chaoborus punctipennis					0.0023
Coelotanypus spp.	0.0386	0.0091		0.0091	
Hermundura americana	0.0068		0.0523		0.0591
Leptocheirus plumulosus	0.0045				
Mediomastus ambiseta	0.0045				
Mytilopsis leucophaeata (Epi.)		0.0023			
Rangia cuneata	16.7855	7.3431			
Streblospio benedicti	0.0023				
Tubificidae imm w/o cap chaetae		0.0011			
Total Biomass w/ Epifauna	16.8946	7.3556	0.0523	0.0091	0.0613
Total Biomass w/o Epifauna	16.8787	7.3533	0.0523	0.0091	0.0613

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31121		31122		31123		31124		31125	
Watershed	Potomac R		Potomac R		Potomac R		Potomac R		Potomac R	
Habitat	Oligohaline		Oligohaline		Freshwater		Freshwater		Freshwater	
Date	09/20/24		09/20/24		09/03/24		09/03/24		09/03/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	8.7		2.3		6.4		6.7		1.1	
Salinity (ppt)	0.73		0.53		0.16		0.17		0.16	
Temperature (C)	23.65		24.01		25.62		25.55		26.02	
Dissolved Oxygen (mg/L)	7.0		7.4		6.0		6.0		6.6	
Sediment Silt-Clay (%)	99.20		95.96		80.84		83.24		97.64	
Total Carbon (%)	3.00		2.72		2.15		3.28		3.22	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	3.40		2.33		2.00		3.00		2.00	
Condition	Meets Goal		Degraded		Severely Degr.		Meets Goal		Severely Degr.	
# Attributes Scored	5		6		4		4		4	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.92		2.37		1.46		1.89		1.69	
Abundance (#/m2)	114	1	341	3	2408	5	2249	5	727	1
Biomass (g/m2)	25.89		8.56		0.91		1.07		0.11	
Pollution Indicative Spp Abund (%)	20.00		66.67		89.62		82.83		100.00	
Pollution Indicative Spp Biom (%)	0.00		0.15		62.24		0.42		100.00	
Pollution Sensitive Spp Abund (%)	40.00		20.00		0.00		0.00		0.00	
Pollution Sensitive Spp Biom (%)	99.99		0.90		0.00		0.00		0.00	
Carnivore-Omnivore Abund (%)	40.00	5	13.33	1	0.00		1.01		31.25	
Deep Deposit Feeder Abund (%)	20.00		60.00		97.17	1	93.94	3	68.75	1
TF Poll. Indicative Spp Abund (%)	0.00		0.00		89.62	1	81.82	3	68.75	3
Limnodrilus Abundance (%)	20.00		53.33		89.62		84.85		68.75	
Oligo Poll. Indic. Spp Abund (%)	20.00	5	80.00	3	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	20.00	3	20.00	3	0.00		0.00		0.00	
Tolerance Score	8.20	3	8.79	3	9.61	1	9.52	1	8.79	3
Tany./Chir. Abundance Ratio	0.00		100.00	1	0.00		100.00		90.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31121	31122	31123	31124	31125
Branchiura sowerbyi		23	182	136	
Chaoborus punctipennis	45				
Chironomus spp.					23
Coelotanypus spp.		45		23	204
Corbicula fluminea		23			
Limnodrilus cervix				68	
Limnodrilus hoffmeisteri	23	114	1113	886	182
Marenzelleria viridis	23	68			
Pisidium spp.			68	114	
Rangia cuneata	23				
Tubificidae imm w cap chaetae				68	
Tubificidae imm w/o cap chaetae *		68	1045	954	318
Total Abundance w/ Epifauna	114	341	2408	2249	727
Total Abundance w/o Epifauna	114	341	2408	2249	727
Number of Taxa w/ Epifauna	4	5	3	6	3
Number of Taxa w/o Epifauna	4	5	3	6	3
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31121	31122	31123	31124	31125
Branchiura sowerbyi		0.0273	0.3340	0.3340	
Chaoborus punctipennis	0.0023				
Chironomus spp.					0.0045
Coelotanypus spp.		0.0045		0.0045	0.0295
Corbicula fluminea		8.4473			
Limnodrilus hoffmeisteri	0.0011				
Marenzelleria viridis	0.0454	0.0772			
Oligochaeta		0.0080	0.5693	0.7176	0.0750
Pisidium spp.			0.0114	0.0159	
Rangia cuneata	25.8395				
Total Biomass w/ Epifauna	25.8883	8.5643	0.9147	1.0720	0.1091
Total Biomass w/o Epifauna	25.8883	8.5643	0.9147	1.0720	0.1091

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31201		31202		31203		31205		31206	
Watershed	Patuxent R		Patuxent R		Patuxent R		Patuxent R		Patuxent R	
Habitat	High Meso Sand		High Meso Sand		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	08/27/24		08/27/24		08/27/24		08/27/24		08/27/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	5.7		11.6		4.4		1.7		2.1	
Salinity (ppt)	12.00		12.22		11.89		11.59		11.86	
Temperature (C)	26.33		25.94		26.01		26.32		26.26	
Dissolved Oxygen (mg/L)	6.9		4.9		5.5		5.7		6.3	
Sediment Silt-Clay (%)	3.19		18.75		70.11		1.30		3.16	
Total Carbon (%)	0.10		1.14		1.84		0.12		0.84	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	2.67		3.00		2.20		2.20		2.60	
Condition	Marginal		Meets Goal		Degraded		Degraded		Degraded	
# Attributes Scored	6		6		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.83	3	2.61	3	0.00	1	2.66	5	1.31	1
Abundance (#/m2)	364	1	432	1	23	1	1454	3	4362	3
Biomass (g/m2)	0.25	1	2.13	3	0.00	1	0.45	1	3.58	3
Pollution Indicative Spp Abund (%)	18.75	3	21.05	3	0.00	5	46.88	1	4.17	5
Pollution Indicative Spp Biom (%)	65.90		4.95		0.00		14.14		9.24	
Pollution Sensitive Spp Abund (%)	37.50	3	63.16	3	100.00		9.38		0.52	
Pollution Sensitive Spp Biom (%)	17.05		4.48		100.00	3	31.31	1	0.76	1
Carnivore-Omnivore Abund (%)	56.25	5	68.42	5	0.00		25.00		4.69	
Deep Deposit Feeder Abund (%)	6.25		26.32		100.00		7.81		4.69	
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31201	31202	31203	31205	31206
Acteocina canaliculata	91	159			23
Carinoma tremaphoros	23				
Edotea triloba (Epi.)		23		23	68
Edwardsia elegans				23	
Eteone heteropoda				68	23
Gemma gemma				159	3385
Glycera dibranchiata		23			
Glycinde solitaria	23	68			
Hargeria rapax				23	
Heteromastus filiformis				23	159
Hydrobiidae (Epi.)				114	
Laeonereis culveri				273	
Leitoscoloplos robustus		68			23
Littoridinops tenuipes (Epi.)					2817
Macoma balthica				23	
Macoma mitchelli	68			91	432
Marenzelleria viridis				23	
Mediomastus ambiseta	23	45	23	91	
Melita nitida (Epi.)		23			
Micrura leidy	23	23			
Mulinia lateralis	45	23			45
Mytilus edulis (Epi.)					45
Neanthes succinea	45				159
Polydora cornuta				45	
Sigambra tentaculata		23			
Streblospio benedicti	23			613	91
Tubificoides spp.					23
Total Abundance w/ Epifauna	364	477	23	1590	7293
Total Abundance w/o Epifauna	364	432	23	1454	4362
Number of Taxa w/ Epifauna	9	10	1	14	13
Number of Taxa w/o Epifauna	9	8	1	12	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31201	31202	31203	31205	31206
Acteocina canaliculata	0.0386	0.0841			0.0273
Carinoma tremaphoros	0.0091				
Edotea triloba (Epi.)		0.0045		0.0023	0.0045
Edwardsia elegans				0.0068	
Eteone heteropoda				0.0386	0.0011
Gemma gemma				0.0159	2.9377
Glycera dibranchiata		1.6108			
Glycinde solitaria	0.0011	0.0091			
Hargeria rapax				0.0045	
Heteromastus filiformis				0.0545	0.1181
Hydrobiidae (Epi.)				0.0182	
Laeonereis culveri				0.1545	
Leitoscoloplos robustus		0.1045			0.0977
Littoridinops tenuipes (Epi.)					0.1204
Macoma balthica				0.1204	
Macoma mitchelli	0.0011			0.0023	0.0523
Marenzelleria viridis				0.0159	
Mediomastus ambiseta	0.0023	0.0023	0.0011	0.0045	
Melita nitida (Epi.)		0.0023			
Micrura leidy	0.0023	0.3181			
Mulinia lateralis	0.1613	0.0011			0.2272
Mytilus edulis (Epi.)					0.0023
Neanthes succinea	0.0295				0.1091
Polydora cornuta				0.0068	
Sigambra tentaculata		0.0023			
Streblospio benedicti	0.0011			0.0250	0.0045
Tubificoides spp.					0.0023
Total Biomass w/ Epifauna	0.2465	2.1391	0.0011	0.4703	3.7045
Total Biomass w/o Epifauna	0.2465	2.1323	0.0011	0.4499	3.5773

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31207		31208		31209		31210		31211	
Watershed	Patuxent R		Patuxent R		Patuxent R		Patuxent R		Patuxent R	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	08/27/24		08/27/24		08/27/24		08/27/24		08/27/24	
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)	3.6		16.8		7.9		2.3		9.1	
Salinity (ppt)	11.25		11.85		11.78		11.75		11.59	
Temperature (C)	26.47		26.08		26.04		26.09		25.94	
Dissolved Oxygen (mg/L)	8.5		5.5		5.8		5.5		5.2	
Sediment Silt-Clay (%)	3.68		98.90		93.68		3.33		95.26	
Total Carbon (%)	0.15		3.24		2.83		0.10		2.79	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.20		1.00		1.80		2.20		1.00	
Condition	Degraded		Severely Degr.		Severely Degr.		Degraded		Severely Degr.	
# Attributes Scored	5		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.04	3	0.00	1	1.19	1	1.84	3	0.00	1
Abundance (#/m2)	613	3	0	1	273	1	159	1	23	1
Biomass (g/m2)	0.41	1	0.00	1	0.20	1	0.03	1	0.08	1
Pollution Indicative Spp Abund (%)	14.81	3	100.00	1	0.00	5	0.00	5	100.00	1
Pollution Indicative Spp Biom (%)	0.56		100.00		0.00		0.00		100.00	
Pollution Sensitive Spp Abund (%)	14.81		0.00		0.00		0.00		0.00	
Pollution Sensitive Spp Biom (%)	25.21	1	0.00	1	0.00	1	0.00	1	0.00	1
Carnivore-Omnivore Abund (%)	14.81		0.00		33.33		0.00		0.00	
Deep Deposit Feeder Abund (%)	3.70		0.00		0.00		42.86		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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31207	31208	31209	31210	31211
Acteocina canaliculata	23				
Carinoma tremaphoros	45		23		
Cyclaspis varians	23				
Gemma gemma				23	
Heteromastus filiformis				45	
Leptocheirus plumulosus			182		
Macoma balthica	45				
Macoma mitchelli	341			68	
Mediomastus ambiseta	23				
Micrura leidy	23				
Mulinia lateralis					23
Neanthes succinea			68		
Streblospio benedicti	91				
Tubificoides spp.				23	
Total Abundance w/ Epifauna	613	0	273	159	23
Total Abundance w/o Epifauna	613		273	159	23
Number of Taxa w/ Epifauna	8	0	3	4	1
Number of Taxa w/o Epifauna	8	0	3	4	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31207	31208	31209	31210	31211
Acteocina canaliculata	0.0068				
Carinoma tremaphoros	0.0204		0.0182		
Cyclaspis varians	0.0011				
Gemma gemma				0.0091	
Heteromastus filiformis				0.0091	
Leptocheirus plumulosus			0.0477		
Macoma balthica	0.0932				
Macoma mitchelli	0.1477			0.0068	
Mediomastus ambiseta	0.0023				
Micrura leidy	0.1318				
Mulinia lateralis					0.0841
Neanthes succinea			0.1295		
Streblospio benedicti	0.0023				
Tubificoides spp.				0.0011	
Total Biomass w/ Epifauna	0.4056	0.0000	0.1954	0.0261	0.0841
Total Biomass w/o Epifauna	0.4056	0.0000	0.1954	0.0261	0.0841

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31212		31213		31214		31215		31216	
Watershed	Patuxent R		Patuxent R		Patuxent R		Patuxent R		Patuxent R	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	08/27/24		08/27/24		08/27/24		08/26/24		08/26/24	
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)	2.7		6.1		2.6		0.5		0.3	
Salinity (ppt)	11.44		11.00		9.63		9.52		9.41	
Temperature (C)	26.25		25.84		25.85		28.17		29.00	
Dissolved Oxygen (mg/L)	4.5		4.9		5.7		7.2		7.2	
Sediment Silt-Clay (%)	95.81		99.05		61.94		98.29		96.20	
Total Carbon (%)	3.24		3.30		1.23		2.21		2.83	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	1.00		2.20		3.00		3.00		2.60	
Condition	Severely Degr.		Degraded		Meets Goal		Meets Goal		Degraded	
# Attributes Scored	5		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	0.00	1	0.00	1	2.01	3	1.98	3	1.68	1
Abundance (#/m2)	23	1	182	1	1772	5	954	3	1022	3
Biomass (g/m2)	0.00	1	0.01	1	0.82	1	3.05	3	1.81	3
Pollution Indicative Spp Abund (%)	100.00	1	0.00	5	5.13	5	0.00	5	0.00	5
Pollution Indicative Spp Biom (%)	100.00		0.00		0.28		0.00		0.00	
Pollution Sensitive Spp Abund (%)	0.00		100.00		57.69		54.76		51.11	
Pollution Sensitive Spp Biom (%)	0.00	1	100.00	3	30.30	1	32.59	1	13.53	1
Carnivore-Omnivore Abund (%)	0.00		0.00		8.97		4.76		4.44	
Deep Deposit Feeder Abund (%)	0.00		100.00		64.10		76.19		86.67	
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31212	31213	31214	31215	31216
Americamysis almyra (Epi.)			23		
Balanus improvisus (Epi.)			23		
Carinoma tremaphoros			23		
Cyathura polita				45	45
Hermundura americana			23		
Heteromastus filiformis			159	23	23
Macoma balthica			45	45	
Macoma mitchelli			341	136	91
Mediomastus ambiseta		182	977	432	477
Neanthes succinea			114		
Streblospio benedicti	23		91		
Tubificoides spp.				273	386
Total Abundance w/ Epifauna	23	182	1818	954	1022
Total Abundance w/o Epifauna	23	182	1772	954	1022
Number of Taxa w/ Epifauna	1	1	10	6	5
Number of Taxa w/o Epifauna	1	1	8	6	5

BENTHIC BIOMASS (Grams per sq. meter)					
Site	31212	31213	31214	31215	31216
Americamysis almyra (Epi.)			0.0023		
Balanus improvisus (Epi.)			0.1727		
Carinoma tremaphoros			0.0068		
Cyathura polita				0.2749	0.2204
Hermundura americana			0.0091		
Heteromastus filiformis			0.1363	0.0023	0.0318
Macoma balthica			0.2181	0.7066	
Macoma mitchelli			0.1772	2.0493	1.5313
Mediomastus ambiseta		0.0114	0.0318	0.0114	0.0250
Neanthes succinea			0.2431		
Streblospio benedicti	0.0011		0.0023		
Tubificoides spp.				0.0023	0.0045
Total Biomass w/ Epifauna	0.0011	0.0114	0.9997	3.0468	1.8131
Total Biomass w/o Epifauna	0.0011	0.0114	0.8247	3.0468	1.8131

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31217		31218		31219		31220		31221	
Watershed	Patuxent R		Patuxent R		Patuxent R		Patuxent R		Patuxent R	
Habitat	Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline		Low Mesohaline	
Date	08/26/24		08/26/24		08/26/24		08/26/24		08/26/24	
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)	6.1		1.4		1.0		3.1		1.7	
Salinity (ppt)	8.48		8.55		8.61		8.73		8.15	
Temperature (C)	26.10		26.61		26.63		26.06		26.46	
Dissolved Oxygen (mg/L)	6.4		7.5		7.6		6.3		7.3	
Sediment Silt-Clay (%)	84.11		96.89		93.18		89.57		4.83	
Total Carbon (%)	2.39		2.72		2.02		2.61		0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	3.80		3.80		3.00		3.80		2.60	
Condition	Meets Goal		Meets Goal		Meets Goal		Meets Goal		Degraded	
# Attributes Scored	5		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.07	3	2.22	3	2.16	3	2.03	3	1.98	3
Abundance (#/m2)	772	3	659	3	318	1	1863	5	2340	5
Biomass (g/m2)	2.34	3	1.38	3	2.44	3	2.63	3	0.42	1
Pollution Indicative Spp Abund (%)	0.00	5	0.00	5	0.00	5	1.22	5	12.62	3
Pollution Indicative Spp Biom (%)	0.00		0.00		0.00		0.09		3.27	
Pollution Sensitive Spp Abund (%)	70.59		65.52		57.14		65.85		65.05	
Pollution Sensitive Spp Biom (%)	87.80	5	86.37	5	94.40	3	72.22	3	21.80	1
Carnivore-Omnivore Abund (%)	17.65		6.90		64.29		7.32		3.88	
Deep Deposit Feeder Abund (%)	61.76		68.97		14.29		76.83		69.90	
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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31217	31218	31219	31220	31221
Carinoma tremaphoros	45	23		23	
Cyathura polita			68		23
Edotea triloba (Epi.)	23				
Eteone heteropoda				23	23
Hermundura americana	91		114	45	23
Heteromastus filiformis	23	23		23	91
Leptocheirus plumulosus		45		114	68
Macoma balthica	136	91	68	159	
Macoma mitchelli	23	23		23	227
Marenzelleria viridis					23
Mediomastus ambiseta	409	341	45	1068	1477
Melita nitida (Epi.)				45	
Micrura leidyi					23
Neanthes succinea		23	23	45	
Polydora cornuta					23
Streblospio benedicti					273
Tubificoides spp.	45	91		341	68
Total Abundance w/ Epifauna	795	659	318	1908	2340
Total Abundance w/o Epifauna	772	659	318	1863	2340
Number of Taxa w/ Epifauna	8	8	5	11	12
Number of Taxa w/o Epifauna	7	8	5	10	12
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31217	31218	31219	31220	31221
Carinoma tremaphoros	0.0114	0.0136		0.0023	
Cyathura polita			0.2045		0.0091
Edotea triloba (Epi.)	0.0045				
Eteone heteropoda				0.0023	0.0068
Hermundura americana	0.0841		0.1113	0.0727	0.0250
Heteromastus filiformis	0.0114	0.0364		0.0023	0.0136
Leptocheirus plumulosus		0.0341		0.0295	0.0023
Macoma balthica	2.0357	1.1814	2.0857	1.8380	
Macoma mitchelli	0.1772	0.0613		0.2454	0.0136
Marenzelleria viridis					0.0091
Mediomastus ambiseta	0.0159	0.0136	0.0091	0.0636	0.0727
Melita nitida (Epi.)				0.0023	
Micrura leidyi					0.2545
Neanthes succinea		0.0386	0.0250	0.3749	
Polydora cornuta					0.0023
Streblospio benedicti					0.0068
Tubificoides spp.	0.0011	0.0045		0.0023	0.0011
Total Biomass w/ Epifauna	2.3413	1.3836	2.4356	2.6355	0.4169
Total Biomass w/o Epifauna	2.3368	1.3836	2.4356	2.6332	0.4169

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31222		31223		31224		31225		31226	
Watershed	Patuxent R		Patuxent R		Patuxent R		Patuxent R		Patuxent R	
Habitat	Low Mesohaline		Low Mesohaline		Oligohaline		Freshwater		Low Mesohaline	
Date	08/26/24		08/26/24		08/26/24		08/28/24		08/26/24	
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)	0.7		3.8		0.8		0.2		0.6	
Salinity (ppt)	7.05		7.46		1.50		0.22		8.81	
Temperature (C)	26.55		25.48		25.71		27.00		27.27	
Dissolved Oxygen (mg/L)	7.0		5.2		7.1		6.0		7.8	
Sediment Silt-Clay (%)	98.11		97.85		94.72		61.80		63.74	
Total Carbon (%)	3.01		2.92		6.67		2.68		1.49	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.60		3.80		1.40		1.50		2.60	
Condition	Degraded		Meets Goal		Severely Degr.		Severely Degr.		Degraded	
# Attributes Scored	5		5		5		4		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.94	3	2.15	3	2.25		1.79		2.01	3
Abundance (#/m2)	545	3	909	3	182	3	136	1	9701	1
Biomass (g/m2)	0.16	1	1.73	3	0.01		0.01		1.03	3
Pollution Indicative Spp Abund (%)	0.00	5	0.00	5	75.00		50.00		9.84	5
Pollution Indicative Spp Biom (%)	0.00		0.00		81.82		0.00		1.21	
Pollution Sensitive Spp Abund (%)	54.17		42.50		0.00		0.00		52.93	
Pollution Sensitive Spp Biom (%)	37.50	1	96.72	5	0.00		0.00		39.25	1
Carnivore-Omnivore Abund (%)	25.00		20.00		0.00	1	0.00		4.45	
Deep Deposit Feeder Abund (%)	70.83		72.50		75.00		100.00	1	81.50	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		50.00	3	0.00	
Limnodrilus Abundance (%)	0.00		0.00		25.00		66.67		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		100.00	1	0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	1	0.00		0.00	
Tolerance Score	0.00		0.00		9.80	1	9.80	1	6.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31222	31223	31224	31225	31226
Carinoma tremaphoros		23			
Cyathura polita	45	23			
Edotea triloba (Epi.)					45
Eteone heteropoda					23
Hermundura americana	91	136			23
Heteromastus filiformis		23			318
Laeonereis culveri					45
Limnodrilus hoffmeisteri			23		
Limnodrilus spp.				23	
Macoma balthica		68			45
Macoma mitchelli	23				250
Marenzelleria viridis					68
Mediomastus ambiseta	250	295			4998
Neanthes succinea					341
Oligochaeta			45		
Paranais litoralis				23	
Polydora cornuta					45
Pristinella sima				23	
Rangia cuneata					23
Streblospio benedicti			45		932
Tubificidae imm w/o cap chaetae *			23	68	
Tubificoides spp.	136	341	45		2590
<hr/>					
Total Abundance w/ Epifauna	545	909	182	136	9747
Total Abundance w/o Epifauna	545	909	182	136	9701
Number of Taxa w/ Epifauna	5	7	4	3	14
Number of Taxa w/o Epifauna	5	7	4	3	13
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BENTHIC BIOMASS (Grams per sq. meter)					
Site	31222	31223	31224	31225	31226
Carinoma tremaphoros		0.0091			
Cyathura polita	0.0500	0.1204			
Edotea triloba (Epi.)					0.0023
Eteone heteropoda					0.0011
Hermundura americana	0.0704	0.0364			0.0182
Heteromastus filiformis		0.0045			0.1636
Laeonereis culveri					0.0500
Macoma balthica		1.5427			0.1022
Macoma mitchelli	0.0295				0.1272
Marenzelleria viridis					0.1113
Mediomastus ambiseta	0.0114	0.0136			0.1704
Neanthes succinea					0.2249
Oligochaeta			0.0080	0.0057	
Polydora cornuta					0.0045
Rangia cuneata					0.0204
Streblospio benedicti			0.0023		0.0114
Tubificoides spp.	0.0023	0.0068	0.0023		0.0250
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Total Biomass w/ Epifauna	0.1636	1.7335	0.0125	0.0057	1.0326
Total Biomass w/o Epifauna	0.1636	1.7335	0.0125	0.0057	1.0304

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31601		31602		31603		31604		31605	
Watershed	Upper Bay		Upper Bay		Upper Bay		Upper Bay		Upper Bay	
Habitat	High Meso Sand		Low Mesohaline		High Meso Mud		High Meso Mud		Low Mesohaline	
Date	08/15/24		08/15/24		08/15/24		08/15/24		08/15/24	
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)	16.8		0.6		8.8		7.8		5.8	
Salinity (ppt)	15.23		5.86		12.84		12.79		11.23	
Temperature (C)	26.70		26.78		27.18		27.22		27.30	
Dissolved Oxygen (mg/L)	0.1		9.3		1.2		1.6		1.5	
Sediment Silt-Clay (%)	30.23		2.20		98.37		98.66		61.43	
Total Carbon (%)	1.43		0.18		3.19		2.88		1.40	
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	1.33		2.20		2.33		2.00		2.60	
Condition	Severely Degr.		Degraded		Degraded		Severely Degr.		Degraded	
# Attributes Scored	6		5		6		6		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.30	1	2.66	5	1.66	1	0.99	1	0.85	1
Abundance (#/m2)	409	1	704	3	591	1	409	1	5725	3
Biomass (g/m2)	0.05	1	0.76	1	1.50	3	1.76	3	1.39	3
Pollution Indicative Spp Abund (%)	27.78	1	22.58	1	3.85		11.11		7.14	5
Pollution Indicative Spp Biom (%)	75.00		3.60		6.07	3	14.23	3	0.49	
Pollution Sensitive Spp Abund (%)	61.11	3	29.03		76.92		88.89		84.92	
Pollution Sensitive Spp Biom (%)	20.00		34.83	1	88.16	3	85.77	3	19.90	1
Carnivore-Omnivore Abund (%)	0.00	1	41.94		15.38	3	0.00	1	0.40	
Deep Deposit Feeder Abund (%)	72.22		12.90		76.92		88.89		90.08	
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 (%)	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 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31601	31602	31603	31604	31605
Carinoma tremaphoros		23	23		23
Eteone heteropoda		23			
Gemma gemma		23			
Hermundura americana		23			
Heteromastus filiformis		23			
Laeonereis culveri		227			
Leitoscoloplos fragilis		68			
Leitoscoloplos robustus			23	45	
Lepidactylus dytiscus		23			
Macoma balthica			45	45	
Macoma mitchelli					136
Marenzelleria viridis		204			
Mediomastus ambiseta	250		409	318	4862
Neanthes succinea			45		
Paraprionospio pinnata	114				
Podarkeopsis levifuscina			23		
Streblospio benedicti		68			409
Tubificoides spp.	45		23		295
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Total Abundance w/ Epifauna	409	704	591	409	5725
Total Abundance w/o Epifauna	409	704	591	409	5725
Number of Taxa w/ Epifauna	3	10	7	3	5
Number of Taxa w/o Epifauna	3	10	7	3	5
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BENTHIC BIOMASS (Grams per sq. meter)					
Site	31601	31602	31603	31604	31605
Carinoma tremaphoros		0.0409	0.0182		0.0523
Eteone heteropoda		0.0068			
Gemma gemma		0.0114			
Hermundura americana		0.0068			
Heteromastus filiformis		0.0182			
Laeonereis culveri		0.3840			
Leitoscoloplos fragilis		0.0159			
Leitoscoloplos robustus			0.0909	0.2499	
Lepidactylus dytiscus		0.0045			
Macoma balthica			1.3041	1.4904	
Macoma mitchelli					1.0428
Marenzelleria viridis		0.2636			
Mediomastus ambiseta	0.0091		0.0159	0.0159	0.2772
Neanthes succinea			0.0591		
Paraprionospio pinnata	0.0341				
Podarkeopsis levifuscina			0.0023		
Streblospio benedicti		0.0045			0.0068
Tubificoides spp.	0.0023		0.0068		0.0136
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Total Biomass w/ Epifauna	0.0454	0.7566	1.4972	1.7563	1.3927
Total Biomass w/o Epifauna	0.0454	0.7566	1.4972	1.7563	1.3927

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31606		31607		31608		31609		31610	
Watershed	Upper Bay		Upper Bay		Upper Bay		Upper Bay		Upper Bay	
Habitat	Low Mesohaline		Oligohaline		Low Mesohaline		High Meso Mud		Low Mesohaline	
Date	08/15/24		08/14/24		08/15/24		08/15/24		08/15/24	
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)	6.2		0.8		5.8		15.1		7.2	
Salinity (ppt)	9.57		4.40		8.05		12.89		10.04	
Temperature (C)	27.15		26.98		27.05		27.12		27.29	
Dissolved Oxygen (mg/L)	2.2		9.5		3.7		0.9		0.9	
Sediment Silt-Clay (%)	99.42		2.09		83.40		94.30		97.96	
Total Carbon (%)	3.33		0.08		2.86		2.88		1.69	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	3.80		3.80		3.80		1.33		3.40	
Condition	Meets Goal		Meets Goal		Meets Goal		Severely Degr.		Meets Goal	
# Attributes Scored	5		5		5		6		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.80	3	3.04		1.99	3	0.92	1	0.43	1
Abundance (#/m2)	1204	3	636	5	3544	3	68	1	1818	5
Biomass (g/m2)	3.09	3	0.53		3.70	3	0.00	1	1.00	1
Pollution Indicative Spp Abund (%)	0.00	5	7.14		0.00	5	66.67		0.00	5
Pollution Indicative Spp Biom (%)	0.00		0.43		0.00		50.00	1	0.00	
Pollution Sensitive Spp Abund (%)	77.36		46.43		58.33		33.33		96.25	
Pollution Sensitive Spp Biom (%)	90.19	5	71.37		89.99	5	50.00	3	94.65	5
Carnivore-Omnivore Abund (%)	13.21		32.14	3	8.97		0.00	1	2.50	
Deep Deposit Feeder Abund (%)	69.81		14.29		80.77		33.33		95.00	
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		28.57	3	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		14.29	3	0.00		0.00		0.00	
Tolerance Score	0.00		6.00	5	6.00		0.00		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31606	31607	31608	31609	31610
Americamysis almyra (Epi.)		23			
Carinoma tremaphoros	68	45	45		
Hermundura americana	23	91	204		
Heteromastus filiformis			23		
Laeonereis culveri		23			
Leptocheirus plumulosus	23		45		
Macoma balthica	182		250		45
Macoma mitchelli		91	23		
Marenzelleria viridis		91	23		
Mediomastus ambiseta	750	91	1772	23	1704
Neanthes succinea	68	45	68		45
Rangia cuneata		114	23		
Streblospio benedicti		45		45	
Tubificoides spp.	91		1068		23
Total Abundance w/ Epifauna	1204	659	3544	68	1818
Total Abundance w/o Epifauna	1204	636	3544	68	1818
Number of Taxa w/ Epifauna	7	10	11	2	4
Number of Taxa w/o Epifauna	7	9	11	2	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31606	31607	31608	31609	31610
Americamysis almyra (Epi.)		0.0045			
Carinoma tremaphoros	0.0386	0.0432	0.0136		
Hermundura americana	0.0023	0.0068	0.0182		
Heteromastus filiformis			0.0182		
Laeonereis culveri		0.0068			
Leptocheirus plumulosus	0.0023		0.0114		
Macoma balthica	2.7559		3.1240		0.8770
Macoma mitchelli		0.0114	0.0250		
Marenzelleria viridis		0.0932	0.0250		
Mediomastus ambiseta	0.0318	0.0045	0.0909	0.0011	0.0682
Neanthes succinea	0.2590	0.0818	0.2636		0.0523
Rangia cuneata		0.2817	0.0909		
Streblospio benedicti		0.0023		0.0011	
Tubificoides spp.	0.0011		0.0204		0.0011
Total Biomass w/ Epifauna	3.0911	0.5362	3.7011	0.0023	0.9985
Total Biomass w/o Epifauna	3.0911	0.5316	3.7011	0.0023	0.9985

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31611		31612		31613		31614		31615	
Watershed	Upper Bay		Upper Bay		Upper Bay		Upper Bay		Upper Bay	
Habitat	Oligohaline		Oligohaline		Oligohaline		Oligohaline		Low Mesohaline	
Date	08/22/24		08/22/24		08/22/24		08/22/24		08/22/24	
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)	4.7		4.8		0.8		2.8		8.5	
Salinity (ppt)	4.47		3.38		2.28		2.56		5.05	
Temperature (C)	24.92		24.39		23.70		23.67		25.12	
Dissolved Oxygen (mg/L)	6.2		6.8		8.4		8.8		3.7	
Sediment Silt-Clay (%)	82.09		95.04		3.35		3.62		91.02	
Total Carbon (%)	2.55		3.13		0.39		2.87		2.00	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	3.50		3.00		3.33		3.00		5.00	
Condition	Meets Goal		Meets Goal		Meets Goal		Meets Goal		Meets Goal	
# Attributes Scored	4		6		6		6		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.74		2.39		3.08		2.42		2.85	5
Abundance (#/m2)	2386	5	1590	5	1545	5	477	5	1772	5
Biomass (g/m2)	2.88		4.46		0.14		0.75		5.06	5
Pollution Indicative Spp Abund (%)	0.95		1.43		32.35		38.10		1.28	5
Pollution Indicative Spp Biom (%)	0.04		0.05		10.57		3.62		0.02	
Pollution Sensitive Spp Abund (%)	43.81		58.57		10.29		52.38		44.87	
Pollution Sensitive Spp Biom (%)	72.34		99.24		63.41		29.26		92.44	5
Carnivore-Omnivore Abund (%)	22.86	3	21.43	3	26.47	3	33.33	3	30.77	
Deep Deposit Feeder Abund (%)	61.90		65.71		35.29		42.86		42.31	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		10.29		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	69.52	3	68.57	3	86.76	3	80.95	3	0.00	
Oligo Poll. Sens. Spp Abund (%)	0.95	3	1.43	3	0.00	1	4.76	3	0.00	
Tolerance Score	0.00		6.07	3	7.54	3	6.20	3	0.00	
Tany./Chir. Abundance Ratio	0.00		100.00	1	0.00	5	100.00	1	0.00	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31611	31612	31613	31614	31615
Apocorophium lacustre (Epi.)			795		
Boccardiella ligERICA	23				
Carinoma tremaphoros	23				23
Chironomus spp.			23		
Cladotanytarsus spp. B Epler			45		
Coelotanypus spp.		23		136	
Cyathura polita	68	182		23	250
Dicrotendipes spp.			23		
Gammarus spp. (Epi.)			23		
Hermundura americana	409	136			273
Heteromastus filiformis	91		45		23
Hobsonia florida			23		
Leptocheirus plumulosus	91	23	23		114
Macoma balthica	91	114		23	273
Macoma mitchelli	91			23	45
Marenzelleria viridis	23	23		23	23
Mediomastus ambiseta	863	568		182	250
Mytilopsis leucophaeata (Epi.)			114		
Neanthes succinea	45		23		
Polydora cornuta	23		114		
Polypedilum halterale group			295		
Rangia cuneata		45	159		
Streblospio benedicti	23		273	45	23
Tubificidae imm w/o cap chaetae			159		
Tubificoides spp.	523	477	341	23	477
Total Abundance w/ Epifauna	2386	1590	2476	477	1772
Total Abundance w/o Epifauna	2386	1590	1545	477	1772
Number of Taxa w/ Epifauna	14	9	16	8	11
Number of Taxa w/o Epifauna	14	9	13	8	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31611	31612	31613	31614	31615
Apocorophium lacustre (Epi.)			0.0659		
Boccardiella ligERICA	0.0011				
Carinoma tremaphoros	0.0159				0.0045
Chironomidae			0.0011		
Chironomus spp.			0.0023		
Coelotanypus spp.		0.0023		0.0204	
Cyathura polita	0.0523	0.7248		0.0318	0.5725
Gammarus spp. (Epi.)			0.0023		
Hermundura americana	0.0454	0.0204			0.0591
Heteromastus filiformis	0.0454		0.0204		0.0091
Hobsonia florida			0.0023		
Leptocheirus plumulosus	0.0182	0.0045	0.0023		0.0159
Macoma balthica	1.9017	3.5739		0.1749	4.0601
Macoma mitchelli	0.3090			0.5044	0.2885
Marenzelleria viridis	0.1000	0.0613		0.0068	0.0409
Mediomastus ambiseta	0.0318	0.0273		0.0068	0.0068
Mytilopsis leucophaeata (Epi.)			0.1295		
Neanthes succinea	0.3544		0.0023		
Polydora cornuta	0.0023		0.0011		
Rangia cuneata		0.0386	0.0886		
Streblospio benedicti	0.0011		0.0114	0.0068	0.0011
Tubificidae imm w/o cap chaetae			0.0011		
Tubificoides spp.	0.0045	0.0068	0.0068	0.0011	0.0045
Total Biomass w/ Epifauna	2.8832	4.4599	0.3374	0.7532	5.0632
Total Biomass w/o Epifauna	2.8832	4.4599	0.1397	0.7532	5.0632

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31616		31617		31618		31619		31620	
Watershed	Upper Bay		Upper Bay		Upper Bay		Upper Bay		Upper Bay	
Habitat	Oligohaline		Oligohaline		Low Mesohaline		Oligohaline		Oligohaline	
Date	08/22/24		09/06/24		09/05/24		09/05/24		09/05/24	
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)	3.6		3.6		10.7		5.8		3.3	
Salinity (ppt)	1.61		1.89		9.38		4.90		1.70	
Temperature (C)	23.71		23.85		24.92		24.60		24.10	
Dissolved Oxygen (mg/L)	7.0		7.1		2.5		4.9		6.4	
Sediment Silt-Clay (%)	93.26		4.49		92.17		68.77		74.53	
Total Carbon (%)	3.09		1.00		3.52		2.15		3.30	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	3.80		3.00		1.40		2.67		3.00	
Condition	Meets Goal		Meets Goal		Severely Degr.		Marginal		Meets Goal	
# Attributes Scored	5		6		5		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.66		2.25		1.00	1	1.89		0.88	
Abundance (#/m2)	682	5	2158	5	45	1	204	3	3317	5
Biomass (g/m2)	5.28		57.62		0.09	1	30.65		99.89	
Pollution Indicative Spp Abund (%)	0.00		3.16		50.00	1	33.33		3.42	
Pollution Indicative Spp Biom (%)	0.00		0.02		2.44		0.04		0.06	
Pollution Sensitive Spp Abund (%)	53.33		44.21		50.00		44.44		95.21	
Pollution Sensitive Spp Biom (%)	85.46		99.92		97.56	3	99.95		99.93	
Carnivore-Omnivore Abund (%)	23.33	3	22.11	3	0.00		33.33	3	1.37	1
Deep Deposit Feeder Abund (%)	30.00		45.26		0.00		22.22		4.11	
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		2.74	
Oligo Poll. Indic. Spp Abund (%)	56.67	3	51.58	3	0.00		55.56	3	4.79	5
Oligo Poll. Sens. Spp Abund (%)	3.33	3	2.11	3	0.00		11.11	3	9.59	3
Tolerance Score	6.00	5	6.01	3	0.00		6.10	3	6.12	3
Tany./Chir. Abundance Ratio	0.00		100.00	1	0.00		100.00	1	100.00	1

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES					
BENTHIC ABUNDANCE (per sq. meter)					
Site	31616	31617	31618	31619	31620
Apocorophium lacustre (Epi.)		7929			
Balanus improvisus (Epi.)		68			
Boccardiella ligERICA		45			
Carinoma tremaphoros	23				
Coelotanypus spp.		23		68	23
Cyathura polita	91	432			23
Edotea triloba (Epi.)		23			
Gammarus spp. (Epi.)		23			
Hermundura americana	45	23			
Heteromastus filiformis		23			
Hobsonia florida		23			
Leptocheirus plumulosus	182				
Limnodrilus hoffmeisteri					45
Macoma balthica	23				
Macoma mitchelli	68				
Marenzelleria viridis	23	45	23	23	318
Mediomastus ambiseta	204				
Melita nitida (Epi.)	23	23			
Mytilopsis leucophaeata (Epi.)		2726			182
Polydora cornuta		68			
Rangia cuneata	23	477		68	2817
Rhithropanopeus harrisi (Epi.)		45			
Streblospio benedicti		45	23		
Tubificidae imm w/o cap chaetae *					45
Tubificoides spp.		954		45	45
Total Abundance w/ Epifauna	704	12996	45	204	3499
Total Abundance w/o Epifauna	682	2158	45	204	3317
Number of Taxa w/ Epifauna	10	18	2	4	7
Number of Taxa w/o Epifauna	9	11	2	4	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	31616	31617	31618	31619	31620
Apocorophium lacustre (Epi.)		0.8270			
Balanus improvisus (Epi.)		0.0795			
Boccardiella ligERICA		0.0023			
Carinoma tremaphoros	0.0386				
Coelotanypus spp.		0.0023		0.0136	0.0023
Cyathura polita	0.3181	0.1863			0.0295
Edotea triloba (Epi.)		0.0023			
Gammarus spp. (Epi.)		0.0011			
Hermundura americana	0.0091	0.0023			
Heteromastus filiformis		0.0136			
Hobsonia florida		0.0068			
Leptocheirus plumulosus	0.0386				
Macoma balthica	0.3363				
Macoma mitchelli	0.6816				
Marenzelleria viridis	0.0250	0.0295	0.0909	0.0114	0.2931
Mediomastus ambiseta	0.0068				
Melita nitida (Epi.)	0.0114	0.0011			
Mytilopsis leucophaeata (Epi.)		12.1370			0.1727
Oligochaeta					0.0625
Polydora cornuta		0.0011			
Rangia cuneata	3.8260	57.3544		30.6220	99.4932
Rhithropanopeus harrisi (Epi.)		0.3703			
Streblospio benedicti		0.0091	0.0023		
Tubificoides spp.		0.0091		0.0023	0.0068
Total Biomass w/ Epifauna	5.2915	71.0352	0.0932	30.6493	100.0600
Total Biomass w/o Epifauna	5.2801	57.6168	0.0932	30.6493	99.8873

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES										
Site	31621		31622		31623		31624		31625	
Watershed	Upper Bay		Upper Bay		Upper Bay		Upper Bay		Upper Bay	
Habitat	Freshwater		Freshwater		Freshwater		Freshwater		Freshwater	
Date	09/06/24		09/06/24		09/05/24		09/05/24		09/05/24	
Gear	Young Grab		Young Grab		Young Grab		Young Grab		Young Grab	
Sampled Area (sq.m)	0.044		0.044		0.044		0.044		0.044	
BOTTOM ENVIRONMENT										
Depth (m)	1.0		2.6		2.1		0.6		10.8	
Salinity (ppt)	0.12		0.12		0.09		0.10		0.11	
Temperature (C)	23.29		23.49		22.53		23.45		25.63	
Dissolved Oxygen (mg/L)	8.9		7.7		10.0		9.4		7.5	
Sediment Silt-Clay (%)	3.18		77.71		13.99		95.81		13.17	
Total Carbon (%)	0.12		4.52		1.48		3.13		0.79	
BENTHIC INDEX OF BIOTIC INTEGRITY										
E-IBI Score	2.50		1.50		4.00		4.00		3.00	
Condition	Degraded		Severely Degr.		Meets Goal		Meets Goal		Meets Goal	
# Attributes Scored	4		4		4		4		4	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.93		1.52		2.27		3.05		1.57	
Abundance (#/m2)	432	1	114	1	3113	5	4976	3	227	1
Biomass (g/m2)	0.26		0.03		54.63		0.16		27.32	
Pollution Indicative Spp Abund (%)	36.84		60.00		52.55		47.95		0.00	
Pollution Indicative Spp Biom (%)	4.35		4.00		0.02		23.68		0.00	
Pollution Sensitive Spp Abund (%)	15.79		40.00		5.11		0.00		0.00	
Pollution Sensitive Spp Biom (%)	92.17		96.00		68.11		0.00		0.00	
Carnivore-Omnivore Abund (%)	36.84		0.00		13.14		57.08		30.00	
Deep Deposit Feeder Abund (%)	42.11	1	60.00	1	52.55	5	42.47	5	0.00	1
TF Poll. Indicative Spp Abund (%)	31.58	5	60.00	3	51.09	3	30.14	5	0.00	5
Limnodrilus Abundance (%)	31.58		60.00		51.09		30.14		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	8.28	3	9.80	1	8.51	3	8.13	3	6.55	5
Tany./Chir. Abundance Ratio	0.00		0.00		66.67		12.50		33.33	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2024 (CRUISE 01:2024/2025) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	31621	31622	31623	31624	31625
Ablabesmyia mallochi			68	136	
Amnicola spp. (Epi.)			273	1091	
Caenis spp. (Epi.)				341	
Ceratopogonidae				45	
Chironomini				23	
Chironomus spp.			23		
Coelotanypus spp.			23	136	
Coenagrionidae (Epi.)				45	
Corbicula fluminea	68		886	23	136
Cricotopus bicinctus				68	
Cryptochironomus spp.	45		23	68	45
Cyathura polita	45		23		
Dero flabelliger				136	
Dicrotendipes neomodestus				68	
Ferrissia fragilis (Epi.)				136	
Gammarus daiberi (Epi.)			1681	2249	
Gammarus spp. (Epi.)	23				
Girardia tigrina (Epi.)			386	500	
Glyptotendipes spp.				750	
Goniobasis virginica (Epi.)			204		
Hirudinea (Epi.)			45	114	
Hydroptilidae (Epi.)				68	
Leitoscoloplos spp.	23				
Limnodrilus hoffmeisteri	23	23	45		
Marenzelleria viridis		45	114		
Musculium spp.					23
Nais variabilis				68	
Nanocladus spp.			45	68	
Nemertina			45	68	
Oecetis spp. (Epi.)			45		
Physa spp. (Epi.)				91	
Pisidium spp.			45		
Planorbidae (Epi.)				23	
Polypedilum flavum				68	
Polypedilum halterale group	68		23		
Procladius spp.			136	68	23
Rangia cuneata	23		23		
Stylaria lacustris				136	
Thienemanniella labapodema				1272	
Tubificidae imm w cap chaetae	23		45		
Tubificidae imm w cap chaetae *				273	
Tubificidae imm w/o cap chaetae				1500	
Tubificidae imm w/o cap chaetae *	114	45	1545		
Total Abundance w/ Epifauna	454	114	5748	9633	227
Total Abundance w/o Epifauna	432	114	3113	4976	227
Number of Taxa w/ Epifauna	9	2	21	28	4
Number of Taxa w/o Epifauna	8	2	15	18	4

Continued . . .

BENTHIC BIOMASS (Grams per sq. meter)					
Site	31621	31622	31623	31624	31625
Amnicola spp. (Epi.)			0.2045	1.5041	
Caenis spp. (Epi.)				0.0591	
Ceratopogonidae				0.0091	
Chironomidae	0.0011		0.0011	0.0339	0.0011
Chironomus spp.			0.0045		
Coelotanypus spp.			0.0045	0.0386	
Coenagrionidae (Epi.)				0.0023	
Corbicula fluminea	0.0023		17.3331	0.0023	27.3072
Cyathura polita	0.0023		0.0159		
Ferrissia fragilis (Epi.)				0.0091	
Gammarus daiberi (Epi.)			0.3976	0.2885	
Gammarus spp. (Epi.)	0.0068				
Girardia tigrina (Epi.)			0.0136	0.0227	
Goniobasis virginica (Epi.)			1.0792		
Hirudinea (Epi.)			0.0295	0.0568	
Hydroptilidae (Epi.)				0.0011	
Leitoscoloplos spp.	0.0114				
Marenzelleria viridis		0.0273	0.1204		
Musculium spp.					0.0136
Nemertina			0.0023	0.0011	
Oecetis spp. (Epi.)			0.0045		
Oligochaeta	0.0057	0.0011	0.0750	0.0781	
Physa spp. (Epi.)				0.0023	
Pisidium spp.			0.0023		
Planorbidae (Epi.)				0.0023	
Rangia cuneata	0.2386		37.0700		
Total Biomass w/ Epifauna	0.2681	0.0284	56.3581	2.1113	27.3219
Total Biomass w/o Epifauna	0.2613	0.0284	54.6291	0.1631	27.3219