

Chesapeake Bay Water Quality Monitoring Program

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

July 1984 – December 2021
(Volume 2)

Prepared for

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

Prepared by

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9200 Rumsey Road, Suite 1
Columbia, MD 21045

July 2022

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**CHESAPEAKE BAY WATER QUALITY
MONITORING PROGRAM
LONG-TERM BENTHIC MONITORING
AND ASSESSMENT COMPONENT
LEVEL I COMPREHENSIVE REPORT
JULY 1984 - DECEMBER 2021 (VOLUME 2)**

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Final
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TABLE OF CONTENTS

VOLUME 2

	Page
DATA SUMMARIES	
A BENTHIC ENVIRONMENT AND COMMUNITY COMPOSITION AT FIXED SITES: SUMMER 2021	A-1
B BENTHIC ENVIRONMENT AND COMMUNITY COMPOSITION AT THE MARYLAND BAY RANDOM SITES: SUMMER 2021	B-1

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DATA SUMMARY A

**BENTHIC ENVIRONMENT AND COMMUNITY
COMPOSITION AT FIXED SITES:
SUMMER 2021**

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Mainstem		Station: 001		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 27SEP21	
		Sampled Area: 0.025 sq.m		Time: 10:22:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.7		Salinity (ppt): 12.27		Temperature (C): 24.10	
Dissolved Oxygen (mg/l): 8.9		Sediment Silt-Clay (%): 1.84		Total Carbon (%): 0.09	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.53	3	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1400	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	1.67	3	Pollution Sensitive Species Abundance (%)	34.29	3
Carnivore-Omnivore Abundance (%)	17.14	1	Pollution Sensitive Species Biomass (%)	0.60	
Deep Deposit Feeder Abundance (%)	8.57				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Apocorophium lacustre (Epi)		40		0.00200	
Carinoma tremaphoros		160		0.06000	
Gemma gemma		280		0.00800	
Heteromastus filiformis		80		0.07600	
Laonereis culveri		40		1.14400	
Macoma mitchelli		280		0.00400	
Mediomastus ambiseta		40		0.00200	
Micrura leidyi		40		0.36800	
Paraonis fulgens		40		0.00400	
Tagelus plebeius		440		0.00800	

Total Abundance w/ Epi.		1440			
Total Abundance w/o Epi.		1400			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				1.67600	
Total Biomass w/o Epi.				1.67400	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 001		Rep: 02	
Watershed: Mainstem		Date: 27SEP21	
Gear: Modified Box Corer		Time: 10:22:00	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 1.7		Salinity (ppt): 12.27	
Dissolved Oxygen (mg/l): 8.9		Temperature (C): 24.10	
		Sediment Silt-Clay (%): 1.84	
		Total Carbon (%): 0.09	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.84	3	12.50
Abundance (#/m2)	1600	5	15.15
Biomass (g/m2)	0.13	1	40.00
Carnivore-Omnivore Abundance (%)	10.00	1	21.21
Deep Deposit Feeder Abundance (%)	17.50		
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	Biomass (g/m2)

Apocorophium lacustre (Epi)		40	0.02000
Carinoma tremaphoros		80	0.03200
Eteone heteropoda		40	0.00800
Gemma gemma		400	0.00800
lepidactylus dytiscus		40	0.01600
Macoma mitchelli		160	0.02000
Mediomastus ambiseta		280	0.01600
Neanthes succinea		40	0.00400
Paraonis fulgens		40	0.00400
Streblospio benedicti		160	0.01200
Tagelus plebeius		360	0.01200

Total Abundance w/ Epi.		1640	
Total Abundance w/o Epi.		1600	
Number of Taxa w/ Epi.		11	
Number of Taxa w/o Epi.		10	
Total Biomass w/ Epi.			0.15200
Total Biomass w/o Epi.			0.13200
=====			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====			
Watershed: Mainstem	Station: 001	Rep: 03	
Gear: Modified Box Corer	Habitat: High Mesohaline Sand	Date: 27SEP21	
	Sampled Area: 0.025 sq.m	Time: 10:22:00	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 1.7	Salinity (ppt): 12.27	Temperature (C): 24.10	
Dissolved Oxygen (mg/l): 8.9	Sediment Silt-Clay (%): 1.84	Total Carbon (%): 0.09	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 3.33	Condition: Meets Goal	# Attributes Scored: 6	
	Value Score	Value Score	
Shannon-Wiener Index	2.66 3	Pollution Indicative Species Abundance (%)	0.00 5
Abundance (#/m2)	1440 3	Pollution Indicative Species Biomass (%)	0.00
Biomass (g/m2)	23.16 3	Pollution Sensitive Species Abundance (%)	22.22 3
Carnivore-Omnivore Abundance (%)	25.00 3	Pollution Sensitive Species Biomass (%)	94.97
Deep Deposit Feeder Abundance (%)	30.56		
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA	Abundance (#/m2)	Biomass (g/m2)	

Carinoma tremaphoros	40	0.01200	
Gemma gemma	120	0.00400	
Heteromastus filiformis	360	0.14000	
Macoma mitchelli	200	0.21600	
Micrura leidy	160	0.67200	
Neanthes succinea	160	0.11600	
Tagelus plebeius	320	21.99600	
Tubificoides spp.	80	0.00400	

Total Abundance w/ Epi.	1440		
Total Abundance w/o Epi.	1440		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.		23.16000	
Total Biomass w/o Epi.		23.16000	
=====			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 006		Rep: 01	
Watershed: Calvert Cliffs Discharge		Habitat: High Mesohaline Sand	
Gear: Modified Box Corer		Date: 27SEP21	
Sampled Area: 0.025 sq.m		Time: 12:11:00	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 1.3		Salinity (ppt): 12.14	
Dissolved Oxygen (mg/l): 8.3		Sediment Silt-Clay (%): 1.46	
		Temperature (C): 24.90	
		Total Carbon (%): 0.07	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 2.33		Condition: Degraded	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.84	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	280	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.07	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	28.57	3	Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Gemma gemma		120	0.00400
Macoma mitchelli		40	0.00800
Micrura leidy		80	0.05200
Tagelus plebeius		40	0.00200
=====			
Total Abundance w/ Epi.		280	
Total Abundance w/o Epi.		280	
Number of Taxa w/ Epi.		4	
Number of Taxa w/o Epi.		4	
Total Biomass w/ Epi.			0.06600
Total Biomass w/o Epi.			0.06600

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 006		Rep: 02	
Watershed: Calvert Cliffs Discharge		Habitat: High Mesohaline Sand	
Gear: Modified Box Corer		Date: 27SEP21	
Sampled Area: 0.025 sq.m		Time: 12:11:00	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 1.3		Salinity (ppt): 12.14	
Dissolved Oxygen (mg/l): 8.3		Temperature (C): 24.90	
		Sediment Silt-Clay (%): 1.46	
		Total Carbon (%): 0.07	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 2.00		Condition: Severely Degr.	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	1.38	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	280	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.02	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	14.29	1	Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	
		Biomass (g/m2)	
Gemma gemma		80	
Glycinde solitaria		40	
Macoma mitchelli		160	
		0.00400	
		0.00800	
		0.00400	
=====			
Total Abundance w/ Epi.		280	
Total Abundance w/o Epi.		280	
Number of Taxa w/ Epi.		3	
Number of Taxa w/o Epi.		3	
Total Biomass w/ Epi.			
Total Biomass w/o Epi.		0.01600	
		0.01600	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 006		Rep: 03	
Watershed: Calvert Cliffs Discharge		Habitat: High Mesohaline Sand	
Gear: Modified Box Corer		Date: 27SEP21	
Sampled Area: 0.025 sq.m		Time: 12:11:00	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 1.3		Salinity (ppt): 12.14	
Dissolved Oxygen (mg/l): 8.3		Sediment Silt-Clay (%): 1.46	
		Temperature (C): 24.90	
		Total Carbon (%): 0.07	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 1.67		Condition: Severely Degr.	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.42	1	22.22
Abundance (#/m2)	360	1	26.94
Biomass (g/m2)	0.59	1	11.11
Carnivore-Omnivore Abundance (%)	11.11	1	0.34
Deep Deposit Feeder Abundance (%)	44.44		
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Heteromastus filiformis	120		0.00800
Leitoscoloplos fragilis	40		0.15200
Macoma mitchelli	80		0.00800
Micrura leidyi	40		0.41600
Streblospio benedicti	40		0.00800
Tagelus plebeius	40		0.00200
=====			
Total Abundance w/ Epi.	360		
Total Abundance w/o Epi.	360		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			0.59400
Total Biomass w/o Epi.			0.59400

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 015		Rep: 01			
Watershed: Mainstem		Habitat: High Mesohaline Sand		Date: 27SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 14:25:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.1		Salinity (ppt): 9.22		Temperature (C): 23.40	
Dissolved Oxygen (mg/l): 10.4		Sediment Silt-Clay (%): 2.37		Total Carbon (%): 0.09	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.33		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.11	1	Pollution Indicative Species Abundance (%)	18.75	3
Abundance (#/m2)	640	1	Pollution Indicative Species Biomass (%)	37.62	
Biomass (g/m2)	0.40	1	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	12.50	1	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	25.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Carinoma tremaphoros		80		0.00400	
Gemma gemma		40		0.00400	
Heteromastus filiformis		160		0.04800	
Macoma mitchelli		240		0.19600	
Mulinia lateralis		120		0.15200	

Total Abundance w/ Epi.		640			
Total Abundance w/o Epi.		640			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.40400	
Total Biomass w/o Epi.				0.40400	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Mainstem		Station: 015		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 27SEP21	
		Sampled Area: 0.025 sq.m		Time: 14:25:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.1		Salinity (ppt): 9.22		Temperature (C): 23.40	
Dissolved Oxygen (mg/l): 10.4		Sediment Silt-Clay (%): 2.37		Total Carbon (%): 0.09	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.88	1	Pollution Indicative Species Abundance (%)	14.29	3
Abundance (#/m2)	840	1	Pollution Indicative Species Biomass (%)	2.27	
Biomass (g/m2)	1.06	3	Pollution Sensitive Species Abundance (%)	9.52	1
Carnivore-Omnivore Abundance (%)	9.52	1	Pollution Sensitive Species Biomass (%)	5.86	
Deep Deposit Feeder Abundance (%)	4.76				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Heteromastus filiformis		40		0.01200	
Laonereis culveri		40		0.00400	
Macoma mitchelli		520		0.43200	
Marenzelleria viridis		40		0.06000	
Micrura leidy		40		0.52400	
Mulinia lateralis		120		0.02400	
Tagelus plebeius		40		0.00200	
=====					
Total Abundance w/ Epi.		840			
Total Abundance w/o Epi.		840			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				1.05800	
Total Biomass w/o Epi.				1.05800	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Mainstem		Station: 015		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 27SEP21	
		Sampled Area: 0.025 sq.m		Time: 14:25:00	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.1		Salinity (ppt): 9.22		Temperature (C): 23.40	
Dissolved Oxygen (mg/l): 10.4		Sediment Silt-Clay (%): 2.37		Total Carbon (%): 0.09	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.35	1	Pollution Indicative Species Abundance (%)	7.69	5
Abundance (#/m2)	520	1	Pollution Indicative Species Biomass (%)	3.89	
Biomass (g/m2)	1.13	3	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	15.38	1	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	7.69				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Carinoma tremaphoros		40		0.00400	
Heteromastus filiformis		40		0.00400	
Macoma mitchelli		360		0.40400	
Micrura leidyi		40		0.67600	
Mulinia lateralis		40		0.04400	

Total Abundance w/ Epi.		520			
Total Abundance w/o Epi.		520			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				1.13200	
Total Biomass w/o Epi.				1.13200	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

		Station: 022		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline		Date: 23AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 9:50:35	
BOTTOM ENVIRONMENT					
Depth (m): 5.1		Salinity (ppt): 9.52		Temperature (C): 27.11	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 91.71		Total Carbon (%): 3.03	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.44	1	Pollution Indicative Species Abundance (%)	9.09	5
Abundance (#/m2)	500	1	Pollution Indicative Species Biomass (%)	0.12	
Biomass (g/m2)	3.70	3	Pollution Sensitive Species Abundance (%)	90.91	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	99.88	3
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Macoma balthica		455		3.69508	
Streblospio benedicti		45		0.00454	
Total Abundance w/ Epi.		500			
Total Abundance w/o Epi.		500			
Number of Taxa w/ Epi.		2			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				3.69963	
Total Biomass w/o Epi.				3.69963	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 022		Rep: 02			
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline		Date: 23AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 9:50:35	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 5.1		Salinity (ppt): 9.52		Temperature (C): 27.11	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 91.71		Total Carbon (%): 3.03	
=====					
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	Pollution Indicative Species Abundance (%)	25.00	1
Abundance (#/m2)	364	1	Pollution Indicative Species Biomass (%)	0.19	
Biomass (g/m2)	2.38	3	Pollution Sensitive Species Abundance (%)	75.00	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	99.81	3
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Macoma balthica		273		2.37703	
Streblospio benedicti		91		0.00454	
=====					
Total Abundance w/ Epi.		364			
Total Abundance w/o Epi.		364			
Number of Taxa w/ Epi.		2			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				2.38158	
Total Biomass w/o Epi.				2.38158	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 022		Rep: 03			
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline		Date: 23AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 9:50:35	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 5.1		Salinity (ppt): 9.52		Temperature (C): 27.11	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 91.71		Total Carbon (%): 3.03	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.34	1	Pollution Indicative Species Abundance (%)	6.25	5
Abundance (#/m2)	727	3	Pollution Indicative Species Biomass (%)	0.04	
Biomass (g/m2)	5.58	5	Pollution Sensitive Species Abundance (%)	93.75	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	99.96	5
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Macoma balthica		682		5.57672	
Streblospio benedicti		45		0.00227	

Total Abundance w/ Epi.		727			
Total Abundance w/o Epi.		727			
Number of Taxa w/ Epi.		2			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				5.57899	
Total Biomass w/o Epi.				5.57899	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 023		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Date: 30AUG21		Gear: Wildco Box Corer	
Sampled Area: 0.022 sq.m		Time: 12:55:41	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 6.1		Salinity (ppt): 10.16	
Dissolved Oxygen (mg/l): 0.8		Temperature (C): 27.97	
Sediment Silt-Clay (%): 78.93		Total Carbon (%): 2.58	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 2.60		Condition: Degraded	
# Attributes Scored: 5			
Value		Score	
Shannon-Wiener Index		0.00 1	
Abundance (#/m2)		182 1	
Biomass (g/m2)		2.30 3	
Pollution Indicative Species Abundance (%)		0.00 5	
Pollution Indicative Species Biomass (%)		0.00	
Pollution Sensitive Species Abundance (%)		100.00	
Pollution Sensitive Species Biomass (%)		100.00 3	
Carnivore-Omnivore Abundance (%)		0.00	
Deep Deposit Feeder Abundance (%)		0.00	
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	
Biomass (g/m2)			
Macoma balthica		182	
2.30431			
=====			
Total Abundance w/ Epi.		182	
Total Abundance w/o Epi.		182	
Number of Taxa w/ Epi.		1	
Number of Taxa w/o Epi.		1	
Total Biomass w/ Epi.		2.30431	
Total Biomass w/o Epi.		2.30431	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 023		Rep: 02			
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline		Date: 30AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 12:55:41	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.1		Salinity (ppt): 10.16		Temperature (C): 27.97	
Dissolved Oxygen (mg/l): 0.8		Sediment Silt-Clay (%): 78.93		Total Carbon (%): 2.58	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.44	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	500	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	6.18	5	Pollution Sensitive Species Abundance (%)	90.91	
Carnivore-Omnivore Abundance (%)	9.09		Pollution Sensitive Species Biomass (%)	95.22	3
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Macoma balthica		455		5.88123	
Neanthes succinea		45		0.29543	
=====					
Total Abundance w/ Epi.		500			
Total Abundance w/o Epi.		500			
Number of Taxa w/ Epi.		2			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				6.17666	
Total Biomass w/o Epi.				6.17666	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 023		Rep: 03	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Date: 30AUG21	
Sampled Area: 0.022 sq.m		Time: 12:55:41	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 6.1		Salinity (ppt): 10.16	
Dissolved Oxygen (mg/l): 0.8		Sediment Silt-Clay (%): 78.93	
		Temperature (C): 27.97	
		Total Carbon (%): 2.58	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 2.60		Condition: Degraded	
		# Attributes Scored: 5	
Value		Score	
Shannon-Wiener Index		0.00 1	
Abundance (#/m2)		409 1	
Biomass (g/m2)		4.91 3	
Carnivore-Omnivore Abundance (%)		0.00	
Deep Deposit Feeder Abundance (%)		0.00	
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	
		Biomass (g/m2)	
Macoma balthica		409	
		4.90860	
=====			
Total Abundance w/ Epi.		409	
Total Abundance w/o Epi.		409	
Number of Taxa w/ Epi.		1	
Number of Taxa w/o Epi.		1	
Total Biomass w/ Epi.			
Total Biomass w/o Epi.		4.90860	
=====			

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 024		Rep: 01			
Watershed: Mainstem		Habitat: High Mesohaline Mud		Date: 18AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 17:08:06	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.1		Salinity (ppt): 9.37		Temperature (C): 27.73	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 90.93		Total Carbon (%): 3.07	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.58	1	Pollution Indicative Species Abundance (%)	4.55	
Abundance (#/m2)	1000	1	Pollution Indicative Species Biomass (%)	0.05	5
Biomass (g/m2)	4.69	5	Pollution Sensitive Species Abundance (%)	68.18	
Carnivore-Omnivore Abundance (%)	22.73	3	Pollution Sensitive Species Biomass (%)	97.09	3
Deep Deposit Feeder Abundance (%)	9.09				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		45		0.05908	
Eteone heteropoda		45		0.00227	
Heteromastus filliformis		45		0.01818	
Macoma balthica		682		4.55409	
Neanthes succinea		136		0.05454	
Tubificoides spp.		45		0.00227	
=====					
Total Abundance w/ Epi.		1000			
Total Abundance w/o Epi.		1000			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				4.69044	
Total Biomass w/o Epi.				4.69044	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 024		Rep: 02			
Watershed: Mainstem		Habitat: High Mesohaline Mud		Date: 18AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 17:08:06	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.1		Salinity (ppt): 9.37		Temperature (C): 27.73	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 90.93		Total Carbon (%): 3.07	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.50	3	Pollution Indicative Species Abundance (%)	14.29	
Abundance (#/m2)	954	1	Pollution Indicative Species Biomass (%)	0.10	5
Biomass (g/m2)	2.21	5	Pollution Sensitive Species Abundance (%)	28.57	
Carnivore-Omnivore Abundance (%)	38.10	5	Pollution Sensitive Species Biomass (%)	80.08	3
Deep Deposit Feeder Abundance (%)	14.29				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		91		0.02727	
Heteromastus filiformis		45		0.00454	
Macoma balthica		273		1.77255	
Macoma mitchelli		45		0.01364	
Neanthes succinea		273		0.39087	
Streblospio benedicti		136		0.00227	
Tubificoides spp.		91		0.00227	
=====					
Total Abundance w/ Epi.		954			
Total Abundance w/o Epi.		954			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				2.21342	
Total Biomass w/o Epi.				2.21342	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 024		Rep: 03			
Watershed: Mainstem		Habitat: High Mesohaline Mud		Date: 18AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 17:08:06	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.1		Salinity (ppt): 9.37		Temperature (C): 27.73	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 90.93		Total Carbon (%): 3.07	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.75	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	636	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	3.04	5	Pollution Sensitive Species Abundance (%)	57.14	
Carnivore-Omnivore Abundance (%)	28.57	5	Pollution Sensitive Species Biomass (%)	89.24	3
Deep Deposit Feeder Abundance (%)	14.29				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		45		0.02273	
Heteromastus filiformis		45		0.01818	
Macoma balthica		364		2.71337	
Neanthes succinea		136		0.28179	
Tubificoides spp.		45		0.00455	
=====					
Total Abundance w/ Epi.		636			
Total Abundance w/o Epi.		636			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				3.04061	
Total Biomass w/o Epi.				3.04061	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 026		Rep: 01	
Watershed: Upper Western Shore		Date: 26AUG21	
Gear: Wildco Box Corer		Time: 11:34:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.5		Salinity (ppt): 2.61	
Dissolved Oxygen (mg/l): 5.9		Temperature (C): 28.33	
		Sediment Silt-Clay (%): 82.97	
		Total Carbon (%): 2.03	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.80		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.22	3	8.33
Abundance (#/m2)	1091	3	0.02
Biomass (g/m2)	27.76	3	25.00
Carnivore-Omnivore Abundance (%)	12.50		99.71
Deep Deposit Feeder Abundance (%)	33.33		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Cyathura polita		136	0.06818
Leptocheirus plumulosus		364	0.06363
Marenzelleria viridis		45	0.37723
Mytilopsis leucophaeata	(Epi)	91	0.00227
Rangia cuneata		91	27.23364
Streblospio benedicti		91	0.00455
Tubificoides spp.		364	0.01364
Total Abundance w/ Epi.		1182	
Total Abundance w/o Epi.		1091	
Number of Taxa w/ Epi.		7	
Number of Taxa w/o Epi.		6	
Total Biomass w/ Epi.			27.76313
Total Biomass w/o Epi.			27.76086

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 026		Rep: 02	
Watershed: Upper Western Shore		Habitat: Low Mesohaline	
Date: 26AUG21		Gear: Wildco Box Corer	
Sampled Area: 0.022 sq.m		Time: 11:34:00	
BOTTOM ENVIRONMENT			
Depth (m): 3.5		Salinity (ppt): 2.61	
Dissolved Oxygen (mg/l): 5.9		Temperature (C): 28.33	
		Sediment Silt-Clay (%): 82.97	
		Total Carbon (%): 2.03	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 4.20		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	2.53	5	4.76
Abundance (#/m2)	954	3	0.15
Biomass (g/m2)	3.06	3	57.14
Carnivore-Omnivore Abundance (%)	28.57		97.25
Deep Deposit Feeder Abundance (%)	9.52		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Cyathura polita	273		0.29088
Heteromastus filiformis	45		0.00227
Leptocheirus plumulosus	273		0.07272
Macoma balthica	45		2.19978
Marenzelleria viridis	182		0.47723
Rangia cuneata	45		0.00909
Streblospio benedicti	45		0.00455
Tubificoides spp.	45		0.00454
Total Abundance w/ Epi.	954		
Total Abundance w/o Epi.	954		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	8		
Total Biomass w/ Epi.			3.06106
Total Biomass w/o Epi.			3.06106

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 026		Rep: 03	
Watershed: Upper Western Shore		Habitat: Low Mesohaline	
Date: 26AUG21		Gear: Wildco Box Corer	
Sampled Area: 0.022 sq.m		Time: 11:34:00	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 3.5		Salinity (ppt): 2.61	
Dissolved Oxygen (mg/l): 5.9		Temperature (C): 28.33	
Sediment Silt-Clay (%): 82.97		Total Carbon (%): 2.03	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 3.00		Condition: Meets Goal	
# Attributes Scored: 5			
Shannon-Wiener Index		Value	Score
Abundance (#/m2)		2.41	3
Biomass (g/m2)		1182	3
Pollution Indicative Species Abundance (%)		0.94	1
Pollution Indicative Species Biomass (%)		26.92	
Pollution Sensitive Species Abundance (%)		43.86	3
Pollution Sensitive Species Biomass (%)		15.38	
Carnivore-Omnivore Abundance (%)			
Deep Deposit Feeder Abundance (%)			
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	
Biomass (g/m2)			
Cyathura polita		227	
Heteromastus filiformis		45	
Leptocheirus plumulosus		455	
Macoma mitchelli		45	
Marenzelleria viridis		182	
Neanthes succinea		91	
Tubificoides spp.		136	
Total Abundance w/ Epi.		1182	
Total Abundance w/o Epi.		1182	
Number of Taxa w/ Epi.		7	
Number of Taxa w/o Epi.		7	
Total Biomass w/ Epi.		0.94309	
Total Biomass w/o Epi.		0.94309	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 029		Rep: 01			
Watershed: Upper Eastern Shore		Habitat: Oligohaline		Date: 09SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:06:46	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 4.6		Salinity (ppt): 0.15		Temperature (C): 23.57	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 67.18		Total Carbon (%): 1.56	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.33		Oligohaline Pollution Indicative Spp. Abund.	65.45	3
Abundance (#/m2)	2500	5	Tolerance Score	8.68	3
Deep Deposit Feeder Abundance (%)	47.27		Oligohaline Pollution Sensitive Spp. Abund.	12.73	3
Carnivore-Omnivore Abundance (%)	32.73	3	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Coelotanypus spp.		364		0.04999	
Cyathura polita		364		0.05454	
Gammarus spp. (Epi)		45		18.45270	
Limnodrilus hoffmeisteri		91			
Marenzelleria viridis		318		0.19998	
Oecetis spp. (Epi)		45		0.00227	
Oligochaeta				0.05908	
Procladius spp.		91		0.00227	
Rangia cuneata		182		120.83337	
Rhithropanopeus harrisii (Epi)		45		0.37269	
Tubificidae imm w/o cap chaetae *		1091			
=====					
Total Abundance w/ Epi.		2636			
Total Abundance w/o Epi.		2500			
Number of Taxa w/ Epi.		9			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				140.02690	
Total Biomass w/o Epi.				121.19924	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 029		Rep: 02	
Watershed: Upper Eastern Shore		Habitat: Oligohaline	
Gear: Wildco Box Corer		Date: 09SEP21	
Sampled Area: 0.022 sq.m		Time: 14:06:46	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 4.6		Salinity (ppt): 0.15	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 67.18	
		Temperature (C): 23.57	
		Total Carbon (%): 1.56	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.47		Score
Abundance (#/m2)	1682	5	Oligohaline Pollution Indicative Spp. Abund.
Deep Deposit Feeder Abundance (%)	27.03		Tolerance Score
Carnivore-Omnivore Abundance (%)	32.43	3	Oligohaline Pollution Sensitive Spp. Abund.
			Tanypodinae/Chironomidae Abundance Ratio
			100.00
			1
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Coelotanypus spp.		364	0.04545
Cyathura polita		136	0.18180
Gammarus spp. (Epi)		91	0.00455
Limnodrilus hoffmeisteri		45	
Marenzelleria viridis		409	0.52268
Mytilopsis leucophaeata (Epi)		45	0.18635
Oligochaeta			0.01136
Procladius spp.		45	0.00227
Rangia cuneata		273	94.81325
Tubificidae imm w/o cap chaetae *		409	
=====			
Total Abundance w/ Epi.		1818	
Total Abundance w/o Epi.		1682	
Number of Taxa w/ Epi.		8	
Number of Taxa w/o Epi.		6	
Total Biomass w/ Epi.			95.76770
Total Biomass w/o Epi.			95.57681

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Upper Eastern Shore		Station: 029		Rep: 03	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 09SEP21	
		Sampled Area: 0.022 sq.m		Time: 14:06:46	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 4.6		Salinity (ppt): 0.15		Temperature (C): 23.57	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 67.18		Total Carbon (%): 1.56	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.29		Oligohaline Pollution Indicative Spp. Abund.	51.22	3
Abundance (#/m2)	1863	5	Tolerance Score	8.28	3
Deep Deposit Feeder Abundance (%)	34.15		Oligohaline Pollution Sensitive Spp. Abund.	21.95	3
Carnivore-Omnivore Abundance (%)	36.59	5	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Apocorophium lacustre (Epi)		45		0.00909	
Carinoma tremaphoros		45		0.15453	
Coelotanypus spp.		318		0.04999	
Cyathura polita		318		0.16816	
Marenzelleria viridis		409		0.43632	
Oligochaeta				0.01818	
Rangia cuneata		136		125.01023	
Tubificidae imm w/o cap chaetae		636		0.00227	

Total Abundance w/ Epi.		1909			
Total Abundance w/o Epi.		1863			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				125.84878	
Total Biomass w/o Epi.				125.83969	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 036		Rep: 01	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 13SEP21	
		Sampled Area: 0.022 sq.m		Time: 16:21	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 0.7		Salinity (ppt): 0.15		Temperature (C): 24.18	
Dissolved Oxygen (mg/l): 7.6		Sediment Silt-Clay (%): 88.61		Total Carbon (%): 3.24	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
		Value	Score	Value	Score
Shannon-Wiener Index		1.51		Oligohaline Pollution Indicative Spp. Abund.	96.02
Abundance (#/m2)		9135	1	Tolerance Score	9.43
Deep Deposit Feeder Abundance (%)		94.03	3	Oligohaline Pollution Sensitive Spp. Abund.	0.00
Carnivore-Omnivore Abundance (%)		3.98		Tanypodinae/Chironomidae Abundance Ratio	50.00
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Aulodrilus pigueti		227			
Branchiura sowerbyi		136		0.12272	
Coelotanypus spp.		182		0.02727	
Cryptochironomus spp.		182		0.00227	
Hirudinea (Epi)		91		0.01818	
Limnodrilus hoffmeisteri		227			
Oligochaeta				0.77492	
Pisidium spp.		91		0.03636	
Sphaerium spp.		91		0.12271	
Tubificidae imm w cap chaetae *		1591			
Tubificidae imm w/o cap chaetae *		6408			
=====					
Total Abundance w/ Epi.		9226			
Total Abundance w/o Epi.		9135			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				1.10444	
Total Biomass w/o Epi.				1.08626	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 036		Rep: 02	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 13SEP21	
		Sampled Area: 0.022 sq.m		Time: 16:21	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 0.7		Salinity (ppt): 0.15		Temperature (C): 24.18	
Dissolved Oxygen (mg/l): 7.6		Sediment Silt-Clay (%): 88.61		Total Carbon (%): 3.24	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	1.60		Oligohaline Pollution Indicative Spp. Abund.	98.23	
Abundance (#/m2)	5136	3	Tolerance Score	9.64	1
Deep Deposit Feeder Abundance (%)	96.46	1	Oligohaline Pollution Sensitive Spp. Abund.	0.00	
Carnivore-Omnivore Abundance (%)	2.65		Tanypodinae/Chironomidae Abundance Ratio	33.33	
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Branchiura sowerbyi		136		0.38633	
Chironomus spp.		45		0.02727	
Coelotanypus spp.		45		0.00455	
Cryptochironomus spp.		45		0.00227	
Limnodrilus hoffmeisteri		682			
Oligochaeta				0.36218	
Sphaerium spp.		45		0.00909	
Tubificidae imm w cap chaetae		818			
Tubificidae imm w/o cap chaetae		3318			

Total Abundance w/ Epi.		5136			
Total Abundance w/o Epi.		5136			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				0.79168	
Total Biomass w/o Epi.				0.79168	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 036		Rep: 03			
Watershed: Potomac River		Habitat: Tidal Freshwater		Date: 13SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 16:21	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 0.7		Salinity (ppt): 0.15		Temperature (C): 24.18	
Dissolved Oxygen (mg/l): 7.6		Sediment Silt-Clay (%): 88.61		Total Carbon (%): 3.24	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	1.64		Oligohaline Pollution Indicative Spp. Abund.	96.55	
Abundance (#/m2)	9226	1	Tolerance Score	9.63	1
Deep Deposit Feeder Abundance (%)	94.09	3	Oligohaline Pollution Sensitive Spp. Abund.	0.00	
Carnivore-Omnivore Abundance (%)	2.96		Tanypodinae/Chironomidae Abundance Ratio	33.33	
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Branchiura sowerbyi		136		0.27270	
Chironomus spp.		136		0.11817	
Coelotanypus spp.		91		0.00909	
Cryptochironomus spp.		45		0.00227	
Gammarus spp. (Epi)		45		0.00454	
Limnodrilus hoffmeisteri		1636			
Oligochaeta				0.66130	
Pisidium spp.		182		0.02727	
Sphaerium spp.		91		0.00909	
Tubificidae imm w cap chaetae		909			
Tubificidae imm w/o cap chaetae *		5999			

Total Abundance w/ Epi.		9272			
Total Abundance w/o Epi.		9226			
Number of Taxa w/ Epi.		9			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				1.10444	
Total Biomass w/o Epi.				1.09989	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 040		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 13SEP21	
		Sampled Area: 0.022 sq.m		Time: 11:21:07	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.6		Salinity (ppt): 0.81		Temperature (C): 24.89	
Dissolved Oxygen (mg/l): 6.6		Sediment Silt-Clay (%): 98.48		Total Carbon (%): 2.37	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.59		Oligohaline Pollution Indicative Spp. Abund.	28.13	3
Abundance (#/m2)	1454	5	Tolerance Score	6.95	3
Deep Deposit Feeder Abundance (%)	9.38		Oligohaline Pollution Sensitive Spp. Abund.	9.38	3
Carnivore-Omnivore Abundance (%)	46.87	5	Tanypodinae/Chironomidae Abundance Ratio	0.00	
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		45		0.02273	
Cyathura polita		91		0.01364	
Gammarus spp. (Epi)		45		0.01818	
Hermundura americana		591		0.46814	
Hydrobiidae (Epi)		591		0.02273	
Leptocheirus plumulosus		273		0.03636	
Macoma mitchelli		45		0.04091	
Marenzelleria viridis		136		0.19998	
Rangia cuneata		136		25.50200	
Tubificidae imm w/o cap chaetae		45		0.00227	
Tubificoides spp.		91		0.00227	
=====					
Total Abundance w/ Epi.		2091			
Total Abundance w/o Epi.		1454			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				26.32919	
Total Biomass w/o Epi.				26.28828	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 040		Rep: 02			
Watershed: Potomac River		Habitat: Oligohaline		Date: 13SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 11:21:07	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.6		Salinity (ppt): 0.81		Temperature (C): 24.89	
Dissolved Oxygen (mg/l): 6.6		Sediment Silt-Clay (%): 98.48		Total Carbon (%): 2.37	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.35		Oligohaline Pollution Indicative Spp. Abund.	45.24	3
Abundance (#/m2)	1909	5	Tolerance Score	6.07	3
Deep Deposit Feeder Abundance (%)	16.67		Oligohaline Pollution Sensitive Spp. Abund.	7.14	3
Carnivore-Omnivore Abundance (%)	45.24	5	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
=====					
Coelotanytus spp.		45		0.01364	
Cyathura polita		136		0.06818	
Hermundura americana		682		0.07272	
Hydrobiidae (Epi)		591		0.03182	
Leptocheirus plumulosus		500		0.03636	
Marenzelleria viridis		136		0.09545	
Rangia cuneata		91		101.06716	
Tubificoides spp.		318		0.00909	
=====					
Total Abundance w/ Epi.		2500			
Total Abundance w/o Epi.		1909			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				101.39440	
Total Biomass w/o Epi.				101.36259	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 040		Rep: 03	
Watershed: Potomac River		Habitat: Oligohaline	
Gear: Wildco Box Corer		Date: 13SEP21	
Sampled Area: 0.022 sq.m		Time: 11:21:07	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 6.6		Salinity (ppt): 0.81	
Dissolved Oxygen (mg/l): 6.6		Temperature (C): 24.89	
		Sediment Silt-Clay (%): 98.48	
		Total Carbon (%): 2.37	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 4.00		Condition: Meets Goal	
		# Attributes Scored: 6	
	Value	Score	Value
Shannon-Wiener Index	2.63		Oligohaline Pollution Indicative Spp. Abund. 40.74
Abundance (#/m2)	1227	5	Tolerance Score 7.27
Deep Deposit Feeder Abundance (%)	3.70		Oligohaline Pollution Sensitive Spp. Abund. 3.70
Carnivore-Omnivore Abundance (%)	51.85	5	Tanypodinae/Chironomidae Abundance Ratio 0.00
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chaoborus punctipennis	45		0.00909
Cryptochironomus spp.	45		0.00227
Cyathura polita	318		0.36815
Gammarus spp. (Epi)	227		0.05909
Hermundura americana	227		0.03181
Heteromastus filiformis	45		0.00455
Hydrobiidae (Epi)	1045		0.07272
Leptocheirus plumulosus	364		0.05908
Marenzelleria viridis	45		0.06363
Oligochaeta			0.00227
Rangia cuneata	45		42.65482
Streblospio benedicti	91		0.00227
=====			
Total Abundance w/ Epi.	2500		
Total Abundance w/o Epi.	1227		
Number of Taxa w/ Epi.	11		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.			43.32976
Total Biomass w/o Epi.			43.19795

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 043		Rep: 01	
Watershed: Potomac River		Habitat: Low Mesohaline	
Gear: Modified Box Corer		Date: 30SEP21	
Sampled Area: 0.025 sq.m		Time: 14:10:50	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 2.1		Salinity (ppt): 5.13	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 4.76	
		Temperature (C): 23.24	
		Total Carbon (%): 0.14	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 2.60		Condition: Degraded	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.69	1	2.08
Abundance (#/m2)	1920	5	0.82
Biomass (g/m2)	0.24	1	6.25
Carnivore-Omnivore Abundance (%)	56.25		9.02
Deep Deposit Feeder Abundance (%)	2.08		1
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Cyathura polita		80	0.02000
Hermundura americana		1000	0.14400
Leptocheirus plumulosus		640	0.07200
Macoma mitchelli		120	0.00400
Mediomastus ambiseta		40	0.00200
Mytilopsis leucophaeata (Epi)		40	0.00200
Streblospio benedicti		40	0.00200
=====			
Total Abundance w/ Epi.		1960	
Total Abundance w/o Epi.		1920	
Number of Taxa w/ Epi.		7	
Number of Taxa w/o Epi.		6	
Total Biomass w/ Epi.			0.24600
Total Biomass w/o Epi.			0.24400

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 043		Rep: 02	
Watershed: Potomac River		Habitat: Low Mesohaline	
Gear: Modified Box Corer		Date: 30SEP21	
Sampled Area: 0.025 sq.m		Time: 14:10:50	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 2.1		Salinity (ppt): 5.13	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 4.76	
		Temperature (C): 23.24	
		Total Carbon (%): 0.14	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 2.60		Condition: Degraded	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	1.72	3	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	2520	3	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.32	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	47.62		Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		
=====			
BENTHIC ABUNDANCE (per sq. meter)			
=====			
TAXA		Abundance (#/m2)	Biomass (g/m2)
-----		-----	-----
Cyathura polita		40	0.00400
Hermundura americana		1160	0.15200
Leptocheirus plumulosus		1000	0.14800
Macoma mitchelli		120	0.01200
Mytilopsis leucophaeata (Epi)		40	0.00200
Polydora cornuta		80	0.00400
Streblospio benedicti		120	0.00400
=====			
Total Abundance w/ Epi.		2560	
Total Abundance w/o Epi.		2520	
Number of Taxa w/ Epi.		7	
Number of Taxa w/o Epi.		6	
Total Biomass w/ Epi.			0.32600
Total Biomass w/o Epi.			0.32400

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 043		Rep: 03			
Watershed: Potomac River		Habitat: Low Mesohaline		Date: 30SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 14:10:50	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 2.1		Salinity (ppt): 5.13		Temperature (C): 23.24	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 4.76		Total Carbon (%): 0.14	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.84	3	Pollution Indicative Species Abundance (%)	8.82	5
Abundance (#/m2)	2720	3	Pollution Indicative Species Biomass (%)	4.32	
Biomass (g/m2)	0.28	1	Pollution Sensitive Species Abundance (%)	13.24	
Carnivore-Omnivore Abundance (%)	52.94		Pollution Sensitive Species Biomass (%)	20.14	1
Deep Deposit Feeder Abundance (%)	13.24				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
-----		-----		-----	
Cyathura polita		40		0.04800	
Hermundura americana		1400		0.14400	
Leptocheirus plumulosus		680		0.06400	
Mediomastus ambiseta		320		0.00800	
Streblospio benedicti		240		0.01200	
Tubificoides spp.		40		0.00200	
=====					
Total Abundance w/ Epi.		2720			
Total Abundance w/o Epi.		2720			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.27800	
Total Biomass w/o Epi.				0.27800	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 044		Rep: 01			
Watershed: Potomac River		Habitat: Low Mesohaline		Date: 07SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 11:47:33	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 11.9		Salinity (ppt): 9.31		Temperature (C): 26.85	
Dissolved Oxygen (mg/l): 2.8		Sediment Silt-Clay (%): 94.04		Total Carbon (%): 2.46	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.33	1	Pollution Indicative Species Abundance (%)	11.76	3
Abundance (#/m2)	773	3	Pollution Indicative Species Biomass (%)	3.23	
Biomass (g/m2)	0.14	1	Pollution Sensitive Species Abundance (%)	29.41	
Carnivore-Omnivore Abundance (%)	58.82		Pollution Sensitive Species Biomass (%)	3.23	1
Deep Deposit Feeder Abundance (%)	29.41				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Hermundura americana		455		0.13181	
Mediomastus ambiseta		227		0.00455	
Streblospio benedicti		91		0.00454	
=====					
Total Abundance w/ Epi.		773			
Total Abundance w/o Epi.		773			
Number of Taxa w/ Epi.		3			
Number of Taxa w/o Epi.		3			
Total Biomass w/ Epi.				0.14089	
Total Biomass w/o Epi.				0.14089	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 044		Rep: 02			
Watershed: Potomac River		Habitat: Low Mesohaline		Date: 07SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 11:47:33	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 11.9		Salinity (ppt): 9.31		Temperature (C): 26.85	
Dissolved Oxygen (mg/l): 2.8		Sediment Silt-Clay (%): 94.04		Total Carbon (%): 2.46	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.97	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	227	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.04	1	Pollution Sensitive Species Abundance (%)	40.00	
Carnivore-Omnivore Abundance (%)	60.00		Pollution Sensitive Species Biomass (%)	22.22	1
Deep Deposit Feeder Abundance (%)	40.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Americamysis almyra	(Epi)	45		0.00455	
Hermundura americana		136		0.03182	
Mediomastus ambiseta		91		0.00909	
=====					
Total Abundance w/ Epi.		273			
Total Abundance w/o Epi.		227			
Number of Taxa w/ Epi.		3			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				0.04545	
Total Biomass w/o Epi.				0.04091	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 044		Rep: 03			
Watershed: Potomac River		Habitat: Low Mesohaline		Date: 07SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 11:47:33	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 11.9		Salinity (ppt): 9.31		Temperature (C): 26.85	
Dissolved Oxygen (mg/l): 2.8		Sediment Silt-Clay (%): 94.04		Total Carbon (%): 2.46	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.38	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	818	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.18	1	Pollution Sensitive Species Abundance (%)	38.89	
Carnivore-Omnivore Abundance (%)	50.00		Pollution Sensitive Species Biomass (%)	7.41	1
Deep Deposit Feeder Abundance (%)	50.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Hermundura americana		409		0.16816	
Hydrobiidae (Epi)		45		0.01364	
Mediomastus ambiseta		318		0.01364	
Tubificoides spp.		91		0.00227	

Total Abundance w/ Epi.		864			
Total Abundance w/o Epi.		818			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		3			
Total Biomass w/ Epi.				0.19771	
Total Biomass w/o Epi.				0.18407	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 047		Rep: 01			
Watershed: Morgantown Discharge		Habitat: Low Mesohaline		Date: 30SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 13:16:16	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.8		Salinity (ppt): 4.88		Temperature (C): 22.83	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 4.23		Total Carbon (%): 0.12	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.47	1	Pollution Indicative Species Abundance (%)	4.35	5
Abundance (#/m2)	1840	5	Pollution Indicative Species Biomass (%)	1.98	
Biomass (g/m2)	0.20	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	52.17		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Apocorophium lacustre (Epi)		40		0.00200	
Hermundura americana		960		0.12400	
Leptocheirus plumulosus		680		0.07200	
Macoma mitchelli		120		0.00200	
Mytilopsis leucophaeata (Epi)		40		0.00200	
Streblospio benedicti		80		0.00400	

Total Abundance w/ Epi.		1920			
Total Abundance w/o Epi.		1840			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.20600	
Total Biomass w/o Epi.				0.20200	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 047		Rep: 02			
Watershed: Morgantown Discharge		Habitat: Low Mesohaline		Date: 30SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 13:16:16	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.8		Salinity (ppt): 4.88		Temperature (C): 22.83	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 4.23		Total Carbon (%): 0.12	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.20	1	Pollution Indicative Species Abundance (%)	3.39	5
Abundance (#/m2)	2360	5	Pollution Indicative Species Biomass (%)	1.03	
Biomass (g/m2)	0.19	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	72.88		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Hermundura americana		1720		0.14800	
Leptocheirus plumulosus		400		0.04000	
Macoma mitchelli		160		0.00400	
Mytilopsis leucophaeata	(Epi)	80		0.00400	
Streblospio benedicti		80		0.00200	

Total Abundance w/ Epi.		2440			
Total Abundance w/o Epi.		2360			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.19800	
Total Biomass w/o Epi.				0.19400	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 047		Rep: 03			
Watershed: Morgantown Discharge		Habitat: Low Mesohaline		Date: 30SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 13:16:16	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.8		Salinity (ppt): 4.88		Temperature (C): 22.83	
Dissolved Oxygen (mg/l): 6.2		Sediment Silt-Clay (%): 4.23		Total Carbon (%): 0.12	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.81	3	Pollution Indicative Species Abundance (%)	9.64	5
Abundance (#/m2)	3320	3	Pollution Indicative Species Biomass (%)	6.00	
Biomass (g/m2)	0.20	1	Pollution Sensitive Species Abundance (%)	9.64	
Carnivore-Omnivore Abundance (%)	56.63		Pollution Sensitive Species Biomass (%)	4.00	1
Deep Deposit Feeder Abundance (%)	9.64				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Edotea triloba (Epi)		40		0.00200	
Hermundura americana		1880		0.12000	
Leptocheirus plumulosus		600		0.05200	
Macoma mitchelli		200		0.00800	
Mediomastus ambiseta		320		0.00800	
Mytilopsis leucophaeata (Epi)		40		0.00400	
Streblospio benedicti		320		0.01200	

Total Abundance w/ Epi.		3400			
Total Abundance w/o Epi.		3320			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.20600	
Total Biomass w/o Epi.				0.20000	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 051		Rep: 01			
Watershed: Potomac River		Habitat: High Mesohaline Sand		Date: 30SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 10:19:52	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.6		Salinity (ppt): 9.99		Temperature (C): 22.58	
Dissolved Oxygen (mg/l): 8.1		Sediment Silt-Clay (%): 3.22		Total Carbon (%): 0.24	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.24	1	Pollution Indicative Species Abundance (%)	6.67	5
Abundance (#/m2)	600	1	Pollution Indicative Species Biomass (%)	58.08	
Biomass (g/m2)	0.79	1	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	20.00	3	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Carinoma tremaphoros		40		0.03200	
Hermundura americana		80		0.21200	
Macoma mitchelli		440		0.08800	
Mulinia lateralis		40		0.46000	
Sayella chesapeakea (Epi)		40		0.00400	

Total Abundance w/ Epi.		640			
Total Abundance w/o Epi.		600			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.79600	
Total Biomass w/o Epi.				0.79200	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 051		Rep: 02			
Watershed: Potomac River		Habitat: High Mesohaline Sand		Date: 30SEP21	
Gear: Modified Box Corer		Sampled Area: 0.025 sq.m		Time: 10:19:52	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.6		Salinity (ppt): 9.99		Temperature (C): 22.58	
Dissolved Oxygen (mg/l): 8.1		Sediment Silt-Clay (%): 3.22		Total Carbon (%): 0.24	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.42	1	Pollution Indicative Species Abundance (%)	22.22	3
Abundance (#/m2)	360	1	Pollution Indicative Species Biomass (%)	24.49	
Biomass (g/m2)	0.20	1	Pollution Sensitive Species Abundance (%)	11.11	3
Carnivore-Omnivore Abundance (%)	33.33	3	Pollution Sensitive Species Biomass (%)	4.08	
Deep Deposit Feeder Abundance (%)	11.11				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Glycinde solitaria		40		0.00800	
Hermundura americana		80		0.11200	
Leitoscoloplos fragilis		40		0.04400	
Lepidactylus dytiscus		40		0.01200	
Macoma mitchelli		120		0.01600	
Streblospio benedicti		40		0.00400	

Total Abundance w/ Epi.		360			
Total Abundance w/o Epi.		360			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.19600	
Total Biomass w/o Epi.				0.19600	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Potomac River		Station: 051		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 30SEP21	
		Sampled Area: 0.025 sq.m		Time: 10:19:52	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.6		Salinity (ppt): 9.99		Temperature (C): 22.58	
Dissolved Oxygen (mg/l): 8.1		Sediment Silt-Clay (%): 3.22		Total Carbon (%): 0.24	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.16	1	Pollution Indicative Species Abundance (%)	14.29	3
Abundance (#/m2)	840	1	Pollution Indicative Species Biomass (%)	5.38	
Biomass (g/m2)	0.19	1	Pollution Sensitive Species Abundance (%)	14.29	3
Carnivore-Omnivore Abundance (%)	38.10	5	Pollution Sensitive Species Biomass (%)	8.60	
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Edwardsia elegans		80		0.00800	
Eteone heteropoda		40		0.00200	
Glycinde solitaria		120		0.01600	
Hermundura americana		80		0.12000	
Macoma mitchelli		440		0.03200	
Mulinia lateralis		40		0.00400	
Streblospio benedicti		40		0.00400	

Total Abundance w/ Epi.		840			
Total Abundance w/o Epi.		840			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				0.18600	
Total Biomass w/o Epi.				0.18600	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 052		Rep: 01			
Watershed: Potomac River		Habitat: High Mesohaline Mud		Date: 17AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:13:03	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 10.7		Salinity (ppt): 15.61		Temperature (C): 26.67	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 95.99		Total Carbon (%): 3.36	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	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		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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 052		Rep: 02			
Watershed: Potomac River		Habitat: High Mesohaline Mud		Date: 17AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:13:03	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 10.7		Salinity (ppt): 15.61		Temperature (C): 26.67	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 95.99		Total Carbon (%): 3.36	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	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		45		0.00455	
=====					
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.				0.00455	
Total Biomass w/o Epi.				0.00455	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 052		Rep: 03			
Watershed: Potomac River		Habitat: High Mesohaline Mud		Date: 17AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:13:03	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 10.7		Salinity (ppt): 15.61		Temperature (C): 26.67	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 95.99		Total Carbon (%): 3.36	
=====					
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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 062		Rep: 01			
Watershed: Lower Eastern Shore		Habitat: Low Mesohaline		Date: 27SEP21	
Gear: Petite Ponar		Sampled Area: 0.025 sq.m		Time: 11:49:56	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 3.8		Salinity (ppt): 5.62		Temperature (C): 22.99	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 97.28		Total Carbon (%): 2.41	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.23	3	Pollution Indicative Species Abundance (%)	27.27	1
Abundance (#/m2)	3960	3	Pollution Indicative Species Biomass (%)	5.58	
Biomass (g/m2)	0.43	1	Pollution Sensitive Species Abundance (%)	10.10	
Carnivore-Omnivore Abundance (%)	3.03		Pollution Sensitive Species Biomass (%)	16.74	1
Deep Deposit Feeder Abundance (%)	49.49				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Ameroculodes species complex		40		0.00200	
Carinoma tremaphoros		80		0.02000	
Cyathura polita		40		0.05200	
Edotea triloba (Epi)		160		0.01200	
Gammarus daiberi (Epi)		440		0.08400	
Leptocheirus plumulosus		520		0.02800	
Macoma mitchelli		240		0.25600	
Mediomastus ambiseta		360		0.02000	
Streblospio benedicti		1080		0.02400	
Tubificoides spp.		1600		0.02800	

Total Abundance w/ Epi.		4560			
Total Abundance w/o Epi.		3960			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				0.52600	
Total Biomass w/o Epi.				0.43000	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Lower Eastern Shore		Station: 062		Rep: 02	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 27SEP21	
		Sampled Area: 0.025 sq.m		Time: 11:49:56	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 3.8		Salinity (ppt): 5.62		Temperature (C): 22.99	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 97.28		Total Carbon (%): 2.41	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.17	3	Pollution Indicative Species Abundance (%)	24.66	1
Abundance (#/m2)	5840	3	Pollution Indicative Species Biomass (%)	8.25	
Biomass (g/m2)	0.39	1	Pollution Sensitive Species Abundance (%)	10.96	
Carnivore-Omnivore Abundance (%)	2.74		Pollution Sensitive Species Biomass (%)	19.59	1
Deep Deposit Feeder Abundance (%)	52.74				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Ameroculodes species complex		80		0.00800	
Carinoma tremaphoros		120		0.01200	
Edotea triloba (Epi)		40		0.00200	
Gammarus daiberi (Epi)		40		0.02000	
Hermundura americana		40		0.00400	
Leptocheirus plumulosus		960		0.06800	
Macoma mitchelli		120		0.14400	
Mediomastus ambiseta		640		0.07600	
Streblospio benedicti		1440		0.03200	
Tubificoides spp.		2440		0.04400	

Total Abundance w/ Epi.		5920			
Total Abundance w/o Epi.		5840			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				0.41000	
Total Biomass w/o Epi.				0.38800	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Lower Eastern Shore		Station: 062		Rep: 03	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 27SEP21	
		Sampled Area: 0.025 sq.m		Time: 11:49:56	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 3.8		Salinity (ppt): 5.62		Temperature (C): 22.99	
Dissolved Oxygen (mg/l): 6.4		Sediment Silt-Clay (%): 97.28		Total Carbon (%): 2.41	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.14	3	Pollution Indicative Species Abundance (%)	33.33	1
Abundance (#/m2)	2760	3	Pollution Indicative Species Biomass (%)	10.39	
Biomass (g/m2)	0.31	1	Pollution Sensitive Species Abundance (%)	13.04	
Carnivore-Omnivore Abundance (%)	8.70		Pollution Sensitive Species Biomass (%)	15.58	1
Deep Deposit Feeder Abundance (%)	52.17				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Americamysis bigelowi (Epi)		40		0.01200	
Apocorophium lacustre (Epi)		80		0.00800	
Carinoma tremaphoros		120		0.01200	
Cyathura polita		40		0.00400	
Gammarus daiberi (Epi)		120		0.04000	
Geukensia demissa (Epi)		40		0.00200	
Hermundura americana		80		0.03200	
Leptocheirus plumulosus		120		0.02000	
Macoma mitchelli		40		0.14400	
Mediomastus ambiseta		320		0.04400	
Streblospio benedicti		920		0.03200	
Tubificoides spp.		1120		0.02000	

Total Abundance w/ Epi.		3040			
Total Abundance w/o Epi.		2760			
Number of Taxa w/ Epi.		12			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				0.37000	
Total Biomass w/o Epi.				0.30800	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

		Station: 064		Rep: 01	
Watershed: Choptank River		Habitat: High Mesohaline Mud		Date: 15SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:36:09	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 8.9		Salinity (ppt): 11.31		Temperature (C): 25.28	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 93.63		Total Carbon (%): 2.11	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.38	3	Pollution Indicative Species Abundance (%)	3.33	
Abundance (#/m2)	1364	3	Pollution Indicative Species Biomass (%)	2.72	5
Biomass (g/m2)	5.34	5	Pollution Sensitive Species Abundance (%)	43.33	
Carnivore-Omnivore Abundance (%)	16.67	3	Pollution Sensitive Species Biomass (%)	85.79	5
Deep Deposit Feeder Abundance (%)	50.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Heteromastus filiformis		318		0.17271	
Macoma balthica		409		4.56318	
Mediomastus ambiseta		182		0.01818	
Mulinia lateralis		45		0.14544	
Neanthes succinea		227		0.43632	
Tubificoides spp.		182		0.00454	
=====					
Total Abundance w/ Epi.		1364			
Total Abundance w/o Epi.		1364			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				5.34038	
Total Biomass w/o Epi.				5.34038	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Choptank River		Station: 064		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 15SEP21	
		Sampled Area: 0.022 sq.m		Time: 14:36:09	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 8.9		Salinity (ppt): 11.31		Temperature (C): 25.28	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 93.63		Total Carbon (%): 2.11	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.80	3	Pollution Indicative Species Abundance (%)	9.38	
Abundance (#/m2)	1454	3	Pollution Indicative Species Biomass (%)	4.99	5
Biomass (g/m2)	6.92	5	Pollution Sensitive Species Abundance (%)	53.13	
Carnivore-Omnivore Abundance (%)	18.75	3	Pollution Sensitive Species Biomass (%)	83.84	5
Deep Deposit Feeder Abundance (%)	25.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		45		0.01818	
Cyathura polita		91		0.67721	
Heteromastus filiformis		136		0.09545	
Macoma balthica		500		5.10858	
Macoma mitchelli		182		0.11817	
Mediomastus ambiseta		182		0.01363	
Mulinia lateralis		136		0.34542	
Neanthes succinea		136		0.53631	
Tubificoides spp.		45		0.00455	
=====					
Total Abundance w/ Epi.		1454			
Total Abundance w/o Epi.		1454			
Number of Taxa w/ Epi.		9			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				6.91749	
Total Biomass w/o Epi.				6.91749	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Choptank River		Station: 064		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 15SEP21	
		Sampled Area: 0.022 sq.m		Time: 14:36:09	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 8.9		Salinity (ppt): 11.31		Temperature (C): 25.28	
Dissolved Oxygen (mg/l): 5.5		Sediment Silt-Clay (%): 93.63		Total Carbon (%): 2.11	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.06	3	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	1545	5	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	7.83	5	Pollution Sensitive Species Abundance (%)	64.71	
Carnivore-Omnivore Abundance (%)	17.65	3	Pollution Sensitive Species Biomass (%)	85.98	5
Deep Deposit Feeder Abundance (%)	41.18				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Heteromastus filiformis		91		0.07727	
Macoma balthica		636		6.70842	
Mediomastus ambiseta		364		0.02273	
Neanthes succinea		273		1.01808	
Tubificoides spp.		182		0.00227	
=====					
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.				7.82876	
Total Biomass w/o Epi.				7.82876	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Choptank River		Station: 066		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 10SEP21	
		Sampled Area: 0.022 sq.m		Time: 13:10:24	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 3.6		Salinity (ppt): 0.45		Temperature (C): 25.21	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 96.10		Total Carbon (%): 5.31	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.33		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.83		Oligohaline Pollution Indicative Spp. Abund.	94.57	3
Abundance (#/m2)	4181	1	Tolerance Score	9.45	1
Deep Deposit Feeder Abundance (%)	73.91		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	11.96	1	Tanypodinae/Chironomidae Abundance Ratio	85.71	1
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Chaoborus punctipennis		91		0.01364	
Coelotanypus spp.		273		0.03636	
Cryptochironomus spp.		45		0.00227	
Cyathura polita		91		0.02273	
Gammarus spp. (Epi)		136		0.00909	
Hydrobiidae (Epi)		273		0.05909	
Leptocheirus plumulosus		591		0.18180	
Limnodrilus hoffmeisteri		636			
Oligochaeta				0.36360	
Tubificidae imm w/o cap chaetae *		2454			
=====					
Total Abundance w/ Epi.		4590			
Total Abundance w/o Epi.		4181			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.68857	
Total Biomass w/o Epi.				0.62039	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Choptank River		Station: 066		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 10SEP21	
		Sampled Area: 0.022 sq.m		Time: 13:10:24	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 3.6		Salinity (ppt): 0.45		Temperature (C): 25.21	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 96.10		Total Carbon (%): 5.31	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
		Value	Score	Value	Score
Shannon-Wiener Index		2.09		95.45	1
Abundance (#/m2)		4000	3	9.33	1
Deep Deposit Feeder Abundance (%)		70.45		1.14	3
Carnivore-Omnivore Abundance (%)		12.50	1	Tanypodinae/Chironomidae Abundance Ratio	100.00 1
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Americamysis almyra (Epi)		45		0.01364	
Ameroculodes species complex		45		0.00455	
Chaoborus punctipennis		45		0.01364	
Coelotanytus spp.		409		0.04090	
Cyathura polita		45		0.00227	
Gammarus spp. (Epi)		227		0.01364	
Hydrobiidae (Epi)		136		0.02273	
Leptocheirus plumulosus		591		0.08635	
Limnodrilus hoffmeisteri		1227			
Marenzelleria viridis		45		0.01818	
Oligochaeta				0.40451	
Tubificidae imm w/o cap chaetae *		1591			

Total Abundance w/ Epi.		4409			
Total Abundance w/o Epi.		4000			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				0.62039	
Total Biomass w/o Epi.				0.57040	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Choptank River		Station: 066		Rep: 03	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 10SEP21	
		Sampled Area: 0.022 sq.m		Time: 13:10:24	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 3.6		Salinity (ppt): 0.45		Temperature (C): 25.21	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 96.10		Total Carbon (%): 5.31	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.98		Oligohaline Pollution Indicative Spp. Abund.	94.74	3
Abundance (#/m2)	4318	1	Tolerance Score	9.09	1
Deep Deposit Feeder Abundance (%)	70.53		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	22.11	3	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Chaoborus punctipennis		91		0.01364	
Coelotanypus spp.		727		0.08635	
Cyathura polita		136		0.08635	
Gammarus spp. (Epi)		182		0.01364	
Hydrobiidae (Epi)		45		0.00454	
Leptocheirus plumulosus		318		0.06363	
Limnodrilus hoffmeisteri		1000			
Oligochaeta				0.24543	
Tubificidae imm w/o cap chaetae *		2045			
Total Abundance w/ Epi.		4545			
Total Abundance w/o Epi.		4318			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.51359	
Total Biomass w/o Epi.				0.49541	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Upper Eastern Shore		Station: 068		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 21SEP21	
		Sampled Area: 0.022 sq.m		Time: 13:11:58	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 4.0		Salinity (ppt): 7.37		Temperature (C): 25.17	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 85.41		Total Carbon (%): 3.39	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.46	1	Pollution Indicative Species Abundance (%)	12.86	3
Abundance (#/m2)	3182	3	Pollution Indicative Species Biomass (%)	0.18	
Biomass (g/m2)	19.72	3	Pollution Sensitive Species Abundance (%)	10.00	
Carnivore-Omnivore Abundance (%)	8.57		Pollution Sensitive Species Biomass (%)	96.61	5
Deep Deposit Feeder Abundance (%)	75.71				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Coelotanyus spp.		91		0.01364	
Cyathura polita		45		0.00454	
Eteone heteropoda		136		0.01364	
Heteromastus filiformis		45		0.00455	
Macoma balthica		273		19.04355	
Macoma mitchelli		45		0.59994	
Streblospio benedicti		182		0.00909	
Tubificoides spp.		2363		0.02727	

Total Abundance w/ Epi.		3182			
Total Abundance w/o Epi.		3182			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				19.71621	
Total Biomass w/o Epi.				19.71621	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 068		Rep: 02	
Watershed: Upper Eastern Shore		Date: 21SEP21	
Gear: Wildco Box Corer		Time: 13:11:58	
BOTTOM ENVIRONMENT			
Depth (m): 4.0		Salinity (ppt): 7.37	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 85.41	
		Temperature (C): 25.17	
		Total Carbon (%): 3.39	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00		Condition: Meets Goal	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	0.77	1	5.19
Abundance (#/m2)	17498	1	0.25
Biomass (g/m2)	16.41	3	2.86
Carnivore-Omnivore Abundance (%)	2.34		97.00
Deep Deposit Feeder Abundance (%)	89.87		5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Coelotanypus spp.	91		0.01818
Cyathura polita	45		0.01818
Edotea triloba (Epi)	45		0.00455
Eteone heteropoda	91		0.01364
Heteromastus filiformis	45		0.05000
Leptocheirus plumulosus	45		0.00227
Macoma balthica	273		15.51209
Macoma mitchelli	136		0.19089
Marenzelleria viridis	91		0.21362
Neanthes succinea	182		0.04090
Rangia cuneata	91		0.17726
Streblospio benedicti	727		0.00909
Tubificoides spp.	15680		0.16816
Total Abundance w/ Epi.	17544		
Total Abundance w/o Epi.	17498		
Number of Taxa w/ Epi.	13		
Number of Taxa w/o Epi.	12		
Total Biomass w/ Epi.			16.41881
Total Biomass w/o Epi.			16.41427

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 068		Rep: 03			
Watershed: Upper Eastern Shore		Habitat: Low Mesohaline		Date: 21SEP21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 13:11:58	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 4.0		Salinity (ppt): 7.37		Temperature (C): 25.17	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 85.41		Total Carbon (%): 3.39	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.42	1	Pollution Indicative Species Abundance (%)	8.00	5
Abundance (#/m2)	5681	3	Pollution Indicative Species Biomass (%)	0.57	
Biomass (g/m2)	8.78	5	Pollution Sensitive Species Abundance (%)	6.40	
Carnivore-Omnivore Abundance (%)	6.40		Pollution Sensitive Species Biomass (%)	92.18	5
Deep Deposit Feeder Abundance (%)	78.40				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Coelotanyus spp.		182		0.04545	
Heteromastus filiformis		45		0.00455	
Leptocheirus plumulosus		136		0.02727	
Macoma balthica		273		7.82195	
Macoma mitchelli		91		0.19089	
Marenzelleria viridis		91		0.27270	
Micrura leidyi		45		0.02727	
Neanthes succinea		136		0.34542	
Streblospio benedicti		273		0.00455	
Tubificoides spp.		4409		0.04090	
=====					
Total Abundance w/ Epi.		5681			
Total Abundance w/o Epi.		5681			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		10			
Total Biomass w/ Epi.				8.78094	
Total Biomass w/o Epi.				8.78094	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 071		Rep: 01			
Watershed: Patuxent River		Habitat: High Mesohaline Mud		Date: 24AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:19:33	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 12.4		Salinity (ppt): 13.20		Temperature (C): 28.21	
Dissolved Oxygen (mg/l): 2.5		Sediment Silt-Clay (%): 94.32		Total Carbon (%): 3.58	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Macoma mitchelli		45		0.00909	
=====					
Total Abundance w/ Epi.		45			
Total Abundance w/o Epi.		45			
Number of Taxa w/ Epi.		1			
Number of Taxa w/o Epi.		1			
Total Biomass w/ Epi.				0.00909	
Total Biomass w/o Epi.				0.00909	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 071		Rep: 02			
Watershed: Patuxent River		Habitat: High Mesohaline Mud		Date: 24AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:19:33	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 12.4		Salinity (ppt): 13.20		Temperature (C): 28.21	
Dissolved Oxygen (mg/l): 2.5		Sediment Silt-Clay (%): 94.32		Total Carbon (%): 3.58	
=====					
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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 071		Rep: 03			
Watershed: Patuxent River		Habitat: High Mesohaline Mud		Date: 24AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:19:33	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 12.4		Salinity (ppt): 13.20		Temperature (C): 28.21	
Dissolved Oxygen (mg/l): 2.5		Sediment Silt-Clay (%): 94.32		Total Carbon (%): 3.58	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.00	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		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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 074		Rep: 01			
Watershed: Chalk Point Discharge		Habitat: Low Mesohaline		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 10:57:43	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.0		Salinity (ppt): 8.19		Temperature (C): 29.76	
Dissolved Oxygen (mg/l): 3.3		Sediment Silt-Clay (%): 98.19		Total Carbon (%): 1.92	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.46	3	Pollution Indicative Species Abundance (%)	7.53	5
Abundance (#/m2)	4227	3	Pollution Indicative Species Biomass (%)	0.08	
Biomass (g/m2)	28.32	3	Pollution Sensitive Species Abundance (%)	41.94	
Carnivore-Omnivore Abundance (%)	8.60		Pollution Sensitive Species Biomass (%)	95.06	5
Deep Deposit Feeder Abundance (%)	73.12				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Americamysis almyra (Epi)		45		0.01364	
Carinoma tremaphoros		91		0.05454	
Coelotanypus spp.		91		0.01364	
Eteone heteropoda		136		0.00454	
Heteromastus filiformis		136		0.00635	
Leptocheirus plumulosus		273		0.03181	
Macoma balthica		318		26.80187	
Macoma mitchelli		91		0.66812	
Mediomastus ambiseta		1454		0.11817	
Neanthes succinea		45		0.52268	
Streblospio benedicti		91		0.00454	
Tubificoides spp.		1500		0.01364	

Total Abundance w/ Epi.		4272			
Total Abundance w/o Epi.		4227			
Number of Taxa w/ Epi.		12			
Number of Taxa w/o Epi.		11			
Total Biomass w/ Epi.				28.33353	
Total Biomass w/o Epi.				28.31990	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 074		Rep: 02			
Watershed: Chalk Point Discharge		Habitat: Low Mesohaline		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 10:57:43	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.0		Salinity (ppt): 8.19		Temperature (C): 29.76	
Dissolved Oxygen (mg/l): 3.3		Sediment Silt-Clay (%): 98.19		Total Carbon (%): 1.92	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.20		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.55	5	Pollution Indicative Species Abundance (%)	6.35	5
Abundance (#/m2)	2863	3	Pollution Indicative Species Biomass (%)	0.16	
Biomass (g/m2)	11.27	3	Pollution Sensitive Species Abundance (%)	42.86	
Carnivore-Omnivore Abundance (%)	9.52		Pollution Sensitive Species Biomass (%)	95.16	5
Deep Deposit Feeder Abundance (%)	66.67				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Carinoma tremaphoros		91		0.02273	
Coelotanypus spp.		45		0.00909	
Eteone heteropoda		136		0.00909	
Heteromastus filiformis		136		0.20452	
Leptocheirus plumulosus		409		0.05454	
Macoma balthica		182		10.63984	
Macoma mitchelli		45		0.23634	
Marenzelleria viridis		45		0.04090	
Mediomastus ambiseta		1000		0.04091	
Mysidae (Epi)		45		0.00454	
Tubificoides spp.		773		0.00909	

Total Abundance w/ Epi.		2909			
Total Abundance w/o Epi.		2863			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		10			
Total Biomass w/ Epi.				11.27160	
Total Biomass w/o Epi.				11.26705	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 074		Rep: 03			
Watershed: Chalk Point Discharge		Habitat: Low Mesohaline		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 10:57:43	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.0		Salinity (ppt): 8.19		Temperature (C): 29.76	
Dissolved Oxygen (mg/l): 3.3		Sediment Silt-Clay (%): 98.19		Total Carbon (%): 1.92	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 4.20		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.64	5	Pollution Indicative Species Abundance (%)	3.13	5
Abundance (#/m2)	2909	3	Pollution Indicative Species Biomass (%)	0.07	
Biomass (g/m2)	18.62	3	Pollution Sensitive Species Abundance (%)	32.81	
Carnivore-Omnivore Abundance (%)	10.94		Pollution Sensitive Species Biomass (%)	98.34	5
Deep Deposit Feeder Abundance (%)	54.69				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Americamysis bigelowi (Epi)	45		0.01363		
Carinoma tremaphoros	273		0.12271		
Eteone heteropoda	45		0.00909		
Heteromastus filiformis	91		0.03181		
Leptocheirus plumulosus	591		0.06818		
Macoma balthica	273		18.27999		
Macoma mitchelli	45		0.05909		
Marenzelleria viridis	45		0.00455		
Mediomastus ambiseta	636		0.02727		
Streblospio benedicti	45		0.00454		
Tubificoides spp.	864		0.01364		

Total Abundance w/ Epi.		2954			
Total Abundance w/o Epi.		2909			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		10			
Total Biomass w/ Epi.				18.63450	
Total Biomass w/o Epi.				18.62087	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 077		Rep: 01			
Watershed: Patuxent River		Habitat: Low Mesohaline		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 12:14:58	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 2.0		Salinity (ppt): 2.95		Temperature (C): 29.91	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 98.58		Total Carbon (%): 2.93	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.37	3	Pollution Indicative Species Abundance (%)	20.00	1
Abundance (#/m2)	682	3	Pollution Indicative Species Biomass (%)	3.70	
Biomass (g/m2)	0.12	1	Pollution Sensitive Species Abundance (%)	40.00	
Carnivore-Omnivore Abundance (%)	46.67		Pollution Sensitive Species Biomass (%)	68.52	3
Deep Deposit Feeder Abundance (%)	0.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Boccardiella ligerica		45		0.00227	
Carinoma tremaphoros		227		0.03181	
Cyathura polita		91		0.00227	
Edotea triloba (Epi)		45		0.00227	
Marenzelleria viridis		45		0.07272	
Rangia cuneata		136		0.00909	
Streblospio benedicti		136		0.00455	

Total Abundance w/ Epi.		727			
Total Abundance w/o Epi.		682			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.12499	
Total Biomass w/o Epi.				0.12272	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 077		Rep: 02			
Watershed: Patuxent River		Habitat: Low Mesohaline		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 12:14:58	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 2.0		Salinity (ppt): 2.95		Temperature (C): 29.91	
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 98.58		Total Carbon (%): 2.93	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.65	5	Pollution Indicative Species Abundance (%)	15.79	3
Abundance (#/m2)	864	3	Pollution Indicative Species Biomass (%)	9.55	
Biomass (g/m2)	0.36	1	Pollution Sensitive Species Abundance (%)	57.89	
Carnivore-Omnivore Abundance (%)	36.84		Pollution Sensitive Species Biomass (%)	87.90	5
Deep Deposit Feeder Abundance (%)	5.26				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Apocorophium lacustre (Epi)		227		0.02727	
Boccardiella ligERICA		91		0.00227	
Cyathura polita		318		0.24998	
Edotea triloba (Epi)		182		0.01364	
Macoma mitchelli		91		0.00455	
Marenzelleria viridis		45		0.03636	
Mulinia lateralis		45		0.03182	
Mysidae (Epi)		45		0.00454	
Rangia cuneata		136		0.02727	
Streblospio benedicti		91		0.00227	
Tubificoides spp.		45		0.00227	

Total Abundance w/ Epi.		1318			
Total Abundance w/o Epi.		864			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				0.40223	
Total Biomass w/o Epi.				0.35678	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 077						Rep: 03	
Watershed: Patuxent River			Habitat: Low Mesohaline			Date: 27AUG21	
Gear: Wildco Box Corer			Sampled Area: 0.022 sq.m			Time: 12:14:58	
=====							
BOTTOM ENVIRONMENT							
=====							
Depth (m): 2.0		Salinity (ppt): 2.95			Temperature (C): 29.91		
Dissolved Oxygen (mg/l): 5.0		Sediment Silt-Clay (%): 98.58			Total Carbon (%): 2.93		
=====							
BENTHIC INDEX OF BIOTIC INTEGRITY							
=====							
B-IBI Score: 2.20		Condition: Degraded			# Attributes Scored: 5		
	Value	Score			Value	Score	
Shannon-Wiener Index		0.87	1	Pollution Indicative Species Abundance (%)	9.09	5	
Abundance (#/m2)		500	1	Pollution Indicative Species Biomass (%)	0.46		
Biomass (g/m2)		0.50	1	Pollution Sensitive Species Abundance (%)	81.82		
Carnivore-Omnivore Abundance (%)		90.91		Pollution Sensitive Species Biomass (%)	96.80	3	
Deep Deposit Feeder Abundance (%)		0.00					
=====							
BENTHIC ABUNDANCE (per sq. meter)							
=====							
TAXA			Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros			45		0.01364		
Cyathura polita			409		0.48177		
Streblospio benedicti			45		0.00227		
=====							
Total Abundance w/ Epi.			500				
Total Abundance w/o Epi.			500				
Number of Taxa w/ Epi.			3				
Number of Taxa w/o Epi.			3				
Total Biomass w/ Epi.					0.49768		
Total Biomass w/o Epi.					0.49768		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 079		Rep: 01			
Watershed: Patuxent River		Habitat: Tidal Freshwater		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:13	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 0.2		Salinity (ppt): 0.17		Temperature (C): 31.50	
Dissolved Oxygen (mg/l): 9.5		Sediment Silt-Clay (%): 92.90		Total Carbon (%): 2.76	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.50		Condition: Degraded		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	1.79		Oligohaline Pollution Indicative Spp. Abund.	99.33	
Abundance (#/m2)	6772	1	Tolerance Score	7.22	5
Deep Deposit Feeder Abundance (%)	95.97	1	Oligohaline Pollution Sensitive Spp. Abund.	0.00	
Carnivore-Omnivore Abundance (%)	4.03		Tanypodinae/Chironomidae Abundance Ratio	83.33	
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
=====		=====		=====	
Aulodrilus limnobius		909			
Aulodrilus pigueti		2409			
Coelotanypus spp.		227		0.02273	
Cryptochironomus spp.		45		0.00227	
Oligochaeta				0.38481	
Tubificidae imm w cap chaetae *		182			
Tubificidae imm w/o cap chaetae		3000			
=====		=====		=====	
Total Abundance w/ Epi.		6772			
Total Abundance w/o Epi.		6772			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.40981	
Total Biomass w/o Epi.				0.40981	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 079		Rep: 02			
Watershed: Patuxent River		Habitat: Tidal Freshwater		Date: 27AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 14:13	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 0.2		Salinity (ppt): 0.17		Temperature (C): 31.50	
Dissolved Oxygen (mg/l): 9.5		Sediment Silt-Clay (%): 92.90		Total Carbon (%): 2.76	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.50		Condition: Meets Goal		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	1.51		Oligohaline Pollution Indicative Spp. Abund.	96.00	
Abundance (#/m2)	3409	5	Tolerance Score	8.98	3
Deep Deposit Feeder Abundance (%)	93.33	3	Oligohaline Pollution Sensitive Spp. Abund.	0.00	
Carnivore-Omnivore Abundance (%)	6.67		Tanypodinae/Chironomidae Abundance Ratio	50.00	
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Aulodrilus pigueti		455			
Chironomus spp.		91		0.03636	
Coelotanypus spp.		91		0.01364	
Dero flabelliger		91			
Diptera		45		0.00227	
Limnodrilus hoffmeisteri		91			
Oligochaeta				0.22271	
Tubificidae imm w cap chaetae *		91			
Tubificidae imm w/o cap chaetae *		2454			

Total Abundance w/ Epi.		3409			
Total Abundance w/o Epi.		3409			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.27497	
Total Biomass w/o Epi.				0.27497	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Patuxent River		Station: 079		Rep: 03	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 27AUG21	
		Sampled Area: 0.022 sq.m		Time: 14:13	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 0.2		Salinity (ppt): 0.17		Temperature (C): 31.50	
Dissolved Oxygen (mg/l): 9.5		Sediment Silt-Clay (%): 92.90		Total Carbon (%): 2.76	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	2.27		Oligohaline Pollution Indicative Spp. Abund.	97.03	
Abundance (#/m2)	4590	3	Tolerance Score	8.40	3
Deep Deposit Feeder Abundance (%)	94.06	3	Oligohaline Pollution Sensitive Spp. Abund.	0.00	
Carnivore-Omnivore Abundance (%)	5.94		Tanypodinae/Chironomidae Abundance Ratio	100.00	
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Aulodrilus limnobius		545			
Aulodrilus pigueti		545			
Coelotanypus spp.		227		0.07272	
Dero flabelliger		136			
Limnodrilus hoffmeisteri		545			
Oligochaeta				0.26531	
Tanypus neopunctipennis		45		0.00227	
Tubificidae imm w cap chaetae *		273			
Tubificidae imm w/o cap chaetae *		2273			

Total Abundance w/ Epi.		4590			
Total Abundance w/o Epi.		4590			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				0.34030	
Total Biomass w/o Epi.				0.34030	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 201		Rep: 01	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Date: 30AUG21		Gear: Wildco Box Corer	
Sampled Area: 0.022 sq.m		Time: 13:51:41	
=====			
BOTTOM ENVIRONMENT			
=====			
Depth (m): 3.3		Salinity (ppt): 6.56	
Dissolved Oxygen (mg/l): 6.5		Temperature (C): 28.91	
Sediment Silt-Clay (%): 96.61		Total Carbon (%): 2.79	
=====			
BENTHIC INDEX OF BIOTIC INTEGRITY			
=====			
B-IBI Score: 1.00		Condition: Severely Degr.	
# Attributes Scored: 5			
Value		Score	
Shannon-Wiener Index		0.00 1	
Pollution Indicative Species Abundance (%)		100.00 1	
Abundance (#/m2)		0 1	
Pollution Indicative Species Biomass (%)		100.00	
Biomass (g/m2)		0.00 1	
Pollution Sensitive Species Abundance (%)		0.00	
Carnivore-Omnivore Abundance (%)		0.00	
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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 201		Rep: 02	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Date: 30AUG21		Gear: Wildco Box Corer	
Sampled Area: 0.022 sq.m		Time: 13:51:41	
BOTTOM ENVIRONMENT			
Depth (m): 3.3		Salinity (ppt): 6.56	
Dissolved Oxygen (mg/l): 6.5		Temperature (C): 28.91	
		Sediment Silt-Clay (%): 96.61	
		Total Carbon (%): 2.79	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 5	
Value		Score	
Shannon-Wiener Index		0.00 1	
Abundance (#/m2)		45 1	
Biomass (g/m2)		0.00 1	
Carnivore-Omnivore Abundance (%)		0.00	
Deep Deposit Feeder Abundance (%)		0.00	
BENTHIC ABUNDANCE (per sq. meter)			
TAXA		Abundance (#/m2)	
		Biomass (g/m2)	
Streblospio benedicti		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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 201		Rep: 03	
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline	
Gear: Wildco Box Corer		Date: 30AUG21	
Sampled Area: 0.022 sq.m		Time: 13:51:41	
BOTTOM ENVIRONMENT			
Depth (m): 3.3		Salinity (ppt): 6.56	
Dissolved Oxygen (mg/l): 6.5		Temperature (C): 28.91	
		Sediment Silt-Clay (%): 96.61	
		Total Carbon (%): 2.79	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 1.00		Condition: Severely Degr.	
		# Attributes Scored: 5	
	Value	Score	Value
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%)
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)
Deep Deposit Feeder Abundance (%)	0.00		
BENTHIC ABUNDANCE (per sq. meter)			
TAXA		Abundance (#/m2)	Biomass (g/m2)
Streblospio benedicti		45	0.00909
Total Abundance w/ Epi.		45	
Total Abundance w/o Epi.		45	
Number of Taxa w/ Epi.		1	
Number of Taxa w/o Epi.		1	
Total Biomass w/ Epi.			0.00909
Total Biomass w/o Epi.			0.00909

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

Station: 202		Rep: 01
Watershed: Patapsco & Back Rivers	Habitat: Low Mesohaline	Date: 30AUG21
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 11:15:22
=====		
BOTTOM ENVIRONMENT		
=====		
Depth (m): 5.4	Salinity (ppt): 9.43	Temperature (C): 28.16
Dissolved Oxygen (mg/l): 1.0	Sediment Silt-Clay (%): 95.58	Total Carbon (%): 4.43
=====		
BENTHIC INDEX OF BIOTIC INTEGRITY		
=====		
B-IBI Score: 1.00	Condition: Severely Degr.	# Attributes Scored: 5
	Value	Score
Shannon-Wiener Index	0.00	1
Abundance (#/m2)	0	1
Biomass (g/m2)	0.00	1
Carnivore-Omnivore Abundance (%)	0.00	0.00
Deep Deposit Feeder Abundance (%)	0.00	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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 202		Rep: 02			
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline		Date: 30AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 11:15:22	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 5.4		Salinity (ppt): 9.43		Temperature (C): 28.16	
Dissolved Oxygen (mg/l): 1.0		Sediment Silt-Clay (%): 95.58		Total Carbon (%): 4.43	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	1
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)	100.00	
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00		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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 202		Rep: 03			
Watershed: Patapsco & Back Rivers		Habitat: Low Mesohaline		Date: 30AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 11:15:22	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 5.4		Salinity (ppt): 9.43		Temperature (C): 28.16	
Dissolved Oxygen (mg/l): 1.0		Sediment Silt-Clay (%): 95.58		Total Carbon (%): 4.43	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	1
Abundance (#/m2)	0	1	Pollution Indicative Species Biomass (%)	100.00	
Biomass (g/m2)	0.00	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00		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 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Patapsco & Back Rivers		Station: 203		Rep: 01	
Gear: Young Grab		Habitat: Oligohaline		Date: 12AUG21	
		Sampled Area: 0.044 sq.m		Time: 8:36:51	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.4		Salinity (ppt): 0.93		Temperature (C): 28.37	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 96.91		Total Carbon (%): 4.25	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.51		Oligohaline Pollution Indicative Spp. Abund.	100.00	1
Abundance (#/m2)	750	5	Tolerance Score	9.46	1
Deep Deposit Feeder Abundance (%)	42.42		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	54.55	5	Tanypodinae/Chironomidae Abundance Ratio	16.67	5
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Chironomus spp.		341		0.38397	
Coelotanypus spp.		68		0.02045	
Leptocheirus plumulosus		23		0.00682	
Oligochaeta				0.00227	
Tubificidae imm w/o cap chaetae		318		0.00114	
Total Abundance w/ Epi.		750			
Total Abundance w/o Epi.		750			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.41464	
Total Biomass w/o Epi.				0.41464	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 203		Rep: 02			
Watershed: Patapsco & Back Rivers		Habitat: Oligohaline		Date: 12AUG21	
Gear: Young Grab		Sampled Area: 0.044 sq.m		Time: 8:36:51	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.4		Salinity (ppt): 0.93		Temperature (C): 28.37	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 96.91		Total Carbon (%): 4.25	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.45		Oligohaline Pollution Indicative Spp. Abund.	98.00	1
Abundance (#/m2)	1136	5	Tolerance Score	9.50	1
Deep Deposit Feeder Abundance (%)	62.00		Oligohaline Pollution Sensitive Spp. Abund.	2.00	3
Carnivore-Omnivore Abundance (%)	34.00	3	Tanypodinae/Chironomidae Abundance Ratio	23.53	3
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Chironomus spp.		295		0.43395	
Coelotanypus spp.		91		0.03408	
Marenzelleria viridis		23		0.02726	
Oligochaeta				0.03862	
Streblospio benedicti		23		0.00227	
Tubificidae imm w/o cap chaetae		704		0.04090	

Total Abundance w/ Epi.		1136			
Total Abundance w/o Epi.		1136			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.57709	
Total Biomass w/o Epi.				0.57709	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Patapsco & Back Rivers		Station: 203		Rep: 03	
Gear: Young Grab		Habitat: Oligohaline		Date: 12AUG21	
		Sampled Area: 0.044 sq.m		Time: 8:36:51	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 1.4		Salinity (ppt): 0.93		Temperature (C): 28.37	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 96.91		Total Carbon (%): 4.25	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.39		Oligohaline Pollution Indicative Spp. Abund.	100.00	1
Abundance (#/m2)	818	5	Tolerance Score	9.80	1
Deep Deposit Feeder Abundance (%)	69.44		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	27.78	3	Tanypodinae/Chironomidae Abundance Ratio	0.00	5
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Chironomus spp.		227		0.18858	
Leptocheirus plumulosus		23		0.00909	
Oligochaeta				0.02726	
Tubificidae imm w/o cap chaetae		500		0.04090	
Tubificoides spp.		68		0.00114	

Total Abundance w/ Epi.		818			
Total Abundance w/o Epi.		818			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.26696	
Total Biomass w/o Epi.				0.26696	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Lower Western Shore		Station: 204		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 31AUG21	
		Sampled Area: 0.022 sq.m		Time: 15:32:48	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.4		Salinity (ppt): 10.37		Temperature (C): 28.11	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 68.46		Total Carbon (%): 1.52	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.90	1	Pollution Indicative Species Abundance (%)	16.67	
Abundance (#/m2)	545	1	Pollution Indicative Species Biomass (%)	0.20	5
Biomass (g/m2)	3.48	5	Pollution Sensitive Species Abundance (%)	50.00	
Carnivore-Omnivore Abundance (%)	8.33	1	Pollution Sensitive Species Biomass (%)	95.50	3
Deep Deposit Feeder Abundance (%)	25.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	

Chironomus spp.		45		0.00455	
Heteromastus filiformis		136		0.05454	
Macoma balthica		273		3.32694	
Macoma mitchelli		45		0.09544	
Streblospio benedicti		45		0.00227	

Total Abundance w/ Epi.		545			
Total Abundance w/o Epi.		545			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				3.48374	
Total Biomass w/o Epi.				3.48374	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Watershed: Lower Western Shore		Station: 204		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 31AUG21	
		Sampled Area: 0.022 sq.m		Time: 15:32:48	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.4		Salinity (ppt): 10.37		Temperature (C): 28.11	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 68.46		Total Carbon (%): 1.52	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.21	1	Pollution Indicative Species Abundance (%)	4.55	
Abundance (#/m2)	1000	1	Pollution Indicative Species Biomass (%)	0.05	5
Biomass (g/m2)	8.97	5	Pollution Sensitive Species Abundance (%)	54.55	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	97.11	3
Deep Deposit Feeder Abundance (%)	40.91				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Heteromastus filiformis		409		0.25452	
Macoma balthica		545		8.71277	
Streblospio benedicti		45		0.00455	
=====					
Total Abundance w/ Epi.		1000			
Total Abundance w/o Epi.		1000			
Number of Taxa w/ Epi.		3			
Number of Taxa w/o Epi.		3			
Total Biomass w/ Epi.				8.97183	
Total Biomass w/o Epi.				8.97183	
=====					

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) FIXED STATIONS

=====					
Station: 204		Rep: 03			
Watershed: Lower Western Shore		Habitat: High Mesohaline Mud		Date: 31AUG21	
Gear: Wildco Box Corer		Sampled Area: 0.022 sq.m		Time: 15:32:48	
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m): 6.4		Salinity (ppt): 10.37		Temperature (C): 28.11	
Dissolved Oxygen (mg/l): 0.0		Sediment Silt-Clay (%): 68.46		Total Carbon (%): 1.52	
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.28	3	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	909	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	4.69	5	Pollution Sensitive Species Abundance (%)	45.00	
Carnivore-Omnivore Abundance (%)	20.00	3	Pollution Sensitive Species Biomass (%)	95.35	3
Deep Deposit Feeder Abundance (%)	40.00				
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Balanus improvisus (Epi)		45		1.11807	
Carinoma tremaphoros		91		0.01364	
Heteromastus filiformis		182		0.14999	
Macoma balthica		364		4.47228	
Mediomastus ambiseta		45		0.00455	
Neanthes succinea		91		0.04545	
Tubificoides spp.		136		0.00909	
=====					
Total Abundance w/ Epi.		954			
Total Abundance w/o Epi.		909			
Number of Taxa w/ Epi.		7			
Number of Taxa w/o Epi.		6			
Total Biomass w/ Epi.				5.81305	
Total Biomass w/o Epi.				4.69498	
=====					

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DATA SUMMARY B

**BENTHIC ENVIRONMENT AND COMMUNITY
COMPOSITION AT RANDOM SITES:
SUMMER 2021**

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28402	28404	28406	28407	28408
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	High Meso Sand	High Meso Mud	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	09/28/21	09/28/21	09/28/21	09/27/21	09/27/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.1	2.3	0.8	3.4	7.1
Salinity (ppt)	15.63	12.38	8.70	6.53	5.75
Temperature (C)	22.09	22.45	23.20	22.88	22.98
Dissolved Oxygen (mg/L)	8.1	8.0	8.0	5.9	6.4
Sediment Silt-Clay (%)	7.53	67.52	97.76	97.56	97.44
Total Carbon (%)	0.16	1.63	3.27	5.17	4.96
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	3.00	2.20	2.60	2.20
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	2.91 3	1.94 1	0.36 1	2.08 3	0.71 1
Abundance (#/m2)	772 1	1840 5	2999 3	5157 3	909 3
Biomass (g/m2)	0.20 1	0.33 1	0.40 1	0.67 1	0.08 1
Pollution Indicative Spp Abund (%)	14.71 3	3.70 3	0.00 5	8.37 5	2.50 5
Pollution Indicative Spp Biom (%)	6.98	4.14 5	0.00	1.37	1.49
Pollution Sensitive Spp Abund (%)	38.24 3	41.98	4.55	6.61	7.50
Pollution Sensitive Spp Biom (%)	19.77	6.90 1	2.84 1	20.48 1	2.99 1
Carnivore-Omnivore Abund (%)	35.29 5	61.73 5	95.45	7.49	0.00
Deep Deposit Feeder Abund (%)	35.29	34.57	3.79	55.07	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	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28402	28404	28406	28407	28408
Acteocina canaliculata	136	91			
Arcuatula papyria (Epi.)	91				
Carinoma tremaphoros	23	45		45	
Cyathura polita			23	23	
Edotea triloba (Epi.)	23				
Edwardsia elegans				23	
Gammarus daiberi (Epi.)				91	
Glycera dibranchiata		23			
Glycinde solitaria	114	45			
Hermundura americana		886	2840	295	
Heteromastus filiformis	204				
Leptocheirus plumulosus				1363	
Leucon americanus				23	
Littoridinops tenuipes (Epi.)				23	
Macoma mitchelli	114		23	91	23
Marenzelleria viridis				23	
Mediomastus ambiseta	45	636	114	295	68
Mulinia lateralis	23	45			
Ogyrides alphaerostris		45			
Paraprionospio pinnata	68	23			
Streblospio benedicti	23			432	23
Tubificoides spp.	23			2545	795
Total Abundance w/ Epifauna	886	1840	2999	5271	909
Total Abundance w/o Epifauna	772	1840	2999	5157	909
Number of Taxa w/ Epifauna	12	9	4	13	4
Number of Taxa w/o Epifauna	10	9	4	11	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28402	28404	28406	28407	28408
Acteocina canaliculata	0.0136	0.0023			
Arcuatula papyria (Epi.)	0.0045				
Carinoma tremaphoros	0.0182	0.0295		0.0114	
Cyathura polita			0.0068	0.0364	
Edotea triloba (Epi.)	0.0011				
Edwardsia elegans				0.0159	
Gammarus daiberi (Epi.)				0.0136	
Glycera dibranchiata		0.0977			
Glycinde solitaria	0.0136	0.0023			
Hermundura americana		0.0477	0.3658	0.1681	
Heteromastus filiformis	0.1159				
Leptocheirus plumulosus				0.2386	
Leucon americanus				0.0023	
Littoridinops tenuipes (Epi.)				0.0023	
Macoma mitchelli	0.0068		0.0227	0.0477	0.0613
Marenzelleria viridis				0.0863	
Mediomastus ambiseta	0.0114	0.0182	0.0045	0.0136	0.0023
Mulinia lateralis	0.0023	0.0045			
Ogyrides alphaerostris		0.1181			
Paraprionospio pinnata	0.0091	0.0091			
Streblospio benedicti	0.0023			0.0091	0.0011
Tubificoides spp.	0.0023			0.0364	0.0114
Total Biomass w/ Epifauna	0.2011	0.3294	0.3999	0.6816	0.0761
Total Biomass w/o Epifauna	0.1954	0.3294	0.3999	0.6657	0.0761

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28409	28410	28411	28412	28413
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Oligohaline	Oligohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	09/27/21	09/27/21	09/15/21	09/15/21	09/15/21
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	6.8	2.9	0.8	6.2
Salinity (ppt)	4.05	2.90	9.88	9.86	11.69
Temperature (C)	22.77	22.83	25.51	26.41	25.10
Dissolved Oxygen (mg/L)	6.0	6.0	6.8	8.5	6.1
Sediment Silt-Clay (%)	97.88	85.40	12.08	3.91	85.51
Total Carbon (%)	5.49	4.75	0.34	0.13	1.51
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.50	3.00	2.20	1.40	4.20
Condition	Severely Degr.	Meets Goal	Degraded	Severely Degr.	Meets Goal
# Attributes Scored	4	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.41	1.32	1.37	2.00	2.66
Abundance (#/m2)	273	750	841	432	727
Biomass (g/m2)	0.01	0.08	0.53	0.31	2.86
Pollution Indicative Spp Abund (%)	8.33	12.12	2.70	21.05	0.00
Pollution Indicative Spp Biom (%)	11.11	6.85	1.72	78.99	0.00
Pollution Sensitive Spp Abund (%)	0.00	3.03	0.00	0.00	65.63
Pollution Sensitive Spp Biom (%)	0.00	57.53	0.00	0.00	95.95
Carnivore-Omnivore Abund (%)	0.00	9.09	5.41	21.05	12.50
Deep Deposit Feeder Abund (%)	91.67	78.79	29.73	10.53	37.50
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	3.03	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	100.00	87.88	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	3.03	0.00	0.00	0.00
Tolerance Score	0.00	8.20	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28409	28410	28411	28412	28413
Carinoma tremaphoros				23	
Chaoborus punctipennis		45			
Chiridotea almyra		23			
Cyathura polita					45
Edotea triloba (Epi.)	45				
Glycinde solitaria					23
Heteromastus filiformis			250	23	114
Laeonereis culveri				68	
Leitoscoloplos spp.				23	
Macoma balthica					273
Macoma mitchelli			523	227	68
Marenzelleria viridis					23
Mediomastus ambiseta					114
Micrura leidy			23		
Mulinia lateralis			23	68	
Neanthes succinea			23		23
Rangia cuneata		23			
Sayella chesapeakea (Epi.)			114	68	
Streblospio benedicti	23	68			
Tubificidae imm w/o cap chaetae		23			
Tubificoides spp.	250	568			45
Total Abundance w/ Epifauna	318	750	954	500	727
Total Abundance w/o Epifauna	273	750	841	432	727
Number of Taxa w/ Epifauna	3	6	6	7	9
Number of Taxa w/o Epifauna	2	6	5	6	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28409	28410	28411	28412	28413
Carinoma tremaphoros				0.0114	
Chaoborus punctipennis		0.0114			
Chiridotea almyra		0.0114			
Cyathura polita					0.2181
Edotea triloba (Epi.)	0.0023				
Glycinde solitaria					0.0250
Heteromastus filiformis			0.1318	0.0068	0.0159
Laeonereis culveri				0.0182	
Leitoscoloplos spp.				0.0750	
Macoma balthica					2.4788
Macoma mitchelli			0.0954	0.0295	0.0750
Marenzelleria viridis					0.0159
Mediomastus ambiseta					0.0045
Micrura leidy			0.1840		
Mulinia lateralis			0.0091	0.1727	
Neanthes succinea			0.1068		0.0227
Rangia cuneata		0.0477			
Sayella chesapeakea (Epi.)			0.0023	0.0068	
Streblospio benedicti	0.0011	0.0045			
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.	0.0091	0.0068			0.0023
Total Biomass w/ Epifauna	0.0125	0.0829	0.5294	0.3204	2.8582
Total Biomass w/o Epifauna	0.0102	0.0829	0.5271	0.3135	2.8582

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28414	28415	28416	28417	28418
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Oligohaline	Low Mesohaline
Date	09/15/21	09/15/21	09/10/21	09/10/21	09/21/21
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)	3.8	2.5	0.1	6.3	12.1
Salinity (ppt)	11.73	11.51	2.36	0.87	10.74
Temperature (C)	25.12	25.32	25.51	25.39	25.25
Dissolved Oxygen (mg/L)	6.3	7.3	5.8	5.8	0.6
Sediment Silt-Clay (%)	32.02	2.83	93.78	57.81	97.08
Total Carbon (%)	0.34	0.06	6.45	4.56	3.13
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.80	2.60	2.67	4.50	1.00
Condition	Meets Goal	Degraded	Marginal	Meets Goal	Severely Degr.
# Attributes Scored	5	5	6	4	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.79 5	2.17 3	2.20 5	1.53 3	0.00 1
Abundance (#/m2)	1704 5	1136 3	1204 5	204 3	0 1
Biomass (g/m2)	1.33 3	0.31 1	7.14 5	0.40 3	0.00 1
Pollution Indicative Spp Abund (%)	5.33 5	2.00 5	24.53 5	0.00 3	100.00 1
Pollution Indicative Spp Biom (%)	4.09 5	8.89 5	0.67 3	0.00 3	100.00 1
Pollution Sensitive Spp Abund (%)	20.00 5	12.00 5	1.89 3	66.67 5	0.00 1
Pollution Sensitive Spp Biom (%)	40.00 1	13.33 1	96.94 3	96.02 5	0.00 1
Carnivore-Omnivore Abund (%)	17.33 5	6.00 3	22.64 3	55.56 5	0.00 1
Deep Deposit Feeder Abund (%)	40.00 5	12.00 3	49.06 3	0.00 3	0.00 1
TF Poll. Indicative Spp Abund (%)	0.00 5	0.00 3	0.00 3	0.00 3	0.00 1
Limnodrilus Abundance (%)	0.00 5	0.00 3	0.00 3	0.00 3	0.00 1
Oligo Poll. Indic. Spp Abund (%)	0.00 5	0.00 3	84.91 3	0.00 5	0.00 1
Oligo Poll. Sens. Spp Abund (%)	0.00 5	0.00 3	0.00 1	77.78 5	0.00 1
Tolerance Score	0.00 5	0.00 3	6.18 3	0.00 3	0.00 1
Tany./Chir. Abundance Ratio	0.00 5	0.00 3	100.00 3	0.00 3	0.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28414	28415	28416	28417	28418
Carinoma tremaphoros		23	68		
Chiridotea almyra				68	
Coelotanypus spp.			204		
Cyathura polita	45			45	
Gammarus spp. (Epi.)				341	
Gemma gemma		182			
Glycinde solitaria	45				
Heteromastus filiformis	500	136			
Hydrobiidae (Epi.)				91	
Leptocheirus plumulosus			136		
Macoma balthica	91				
Macoma mitchelli	523	591	91		
Marenzelleria viridis	23	45		91	
Mediomastus ambiseta	136				
Melita nitida (Epi.)			23		
Micrura leidy	45	23			
Molgula manhattensis (Epi.)	23	91			
Mulinia lateralis	68	23			
Mytilopsis leucophaeata (Epi.)			23		
Neanthes succinea	159	23			
Oecetis inconspicua (Epi.)				23	
Rangia cuneata			23		
Sayella chesapeakea (Epi.)	91				
Streblospio benedicti	23		91		
Tagelus plebeius		91			
Tubificoides spp.	45		591		
Total Abundance w/ Epifauna	1818	1227	1250	659	0
Total Abundance w/o Epifauna	1704	1136	1204	204	
Number of Taxa w/ Epifauna	14	10	9	6	0
Number of Taxa w/o Epifauna	12	9	7	3	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28414	28415	28416	28417	28418
Carinoma tremaphoros		0.0011	0.0091		
Chiridotea almyra				0.0159	
Coelotanypus spp.			0.0454		
Cyathura polita	0.0250			0.0795	
Gammarus spp. (Epi.)				0.0591	
Gemma gemma		0.0011			
Glycinde solitaria	0.0273				
Heteromastus filiformis	0.1295	0.0364			
Hydrobiidae (Epi.)				0.0045	
Leptocheirus plumulosus			0.0477		
Macoma balthica	0.4408				
Macoma mitchelli	0.2908	0.0795	0.1068		
Marenzelleria viridis	0.0318	0.0386		0.3044	
Mediomastus ambiseta	0.0091				
Melita nitida (Epi.)			0.0045		
Micrura leidy	0.2158	0.0977			
Molgula manhattensis (Epi.)	0.0273	0.0045			
Mulinia lateralis	0.0523	0.0273			
Mytilopsis leucophaeata (Epi.)			0.0045		
Neanthes succinea	0.1091	0.0227			
Oecetis inconspicua (Epi.)				0.0159	
Rangia cuneata			6.9205		
Sayella chesapeakea (Epi.)	0.0045				
Streblospio benedicti	0.0023		0.0023		
Tagelus plebeius		0.0023			
Tubificoides spp.	0.0011		0.0068		
Total Biomass w/ Epifauna	1.3666	0.3113	7.1477	0.4794	0.0000
Total Biomass w/o Epifauna	1.3348	0.3067	7.1386	0.3999	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28419	28420	28422	28423	28424
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Oligohaline	Freshwater
Date	08/26/21	09/21/21	09/21/21	08/26/21	09/09/21
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	6.1	3.6	3.3	12.2
Salinity (ppt)	10.19	8.64	6.11	0.51	0.10
Temperature (C)	27.66	25.05	24.98	28.59	23.13
Dissolved Oxygen (mg/L)	2.7	4.0	5.1	8.0	7.0
Sediment Silt-Clay (%)	7.45	83.79	97.55	71.38	46.95
Total Carbon (%)	0.44	2.51	3.23	1.57	1.30
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.20	1.40	2.20	3.33	3.00
Condition	Degraded	Severely Degr.	Degraded	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	6	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.95 1	2.37 3	1.69 1	1.70 1	1.83 1
Abundance (#/m2)	704 3	250 1	1227 3	613 5	3749 5
Biomass (g/m2)	0.93 1	0.07 1	83.59 1	7.23 1	56.65 1
Pollution Indicative Spp Abund (%)	9.68 5	27.27 1	44.44 1	29.63 1	76.97 1
Pollution Indicative Spp Biom (%)	50.31 1	4.55 1	0.14 1	0.30 1	0.42 1
Pollution Sensitive Spp Abund (%)	3.23 1	0.00 1	11.11 1	66.67 1	21.82 1
Pollution Sensitive Spp Biom (%)	19.09 1	0.00 1	99.85 5	99.64 1	99.57 1
Carnivore-Omnivore Abund (%)	0.00 1	9.09 1	42.59 1	18.52 3	4.85 1
Deep Deposit Feeder Abund (%)	83.87 1	54.55 1	42.59 1	11.11 1	75.15 3
TF Poll. Indicative Spp Abund (%)	0.00 1	0.00 1	0.00 1	0.00 1	75.15 3
Limnodrilus Abundance (%)	0.00 1	9.09 1	0.00 1	11.11 1	75.15 1
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 1	0.00 1	33.33 3	0.00 1
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 1	0.00 1	59.26 5	0.00 1
Tolerance Score	0.00 1	9.80 1	6.16 1	7.24 3	9.53 1
Tany./Chir. Abundance Ratio	0.00 1	0.00 1	100.00 1	100.00 1	75.00 1

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28419	28420	28422	28423	28424
Callinectes sapidus (Epi.)					23
Carinoma tremaphoros		23	23		
Coelotanypus spp.			500	114	68
Corbicula fluminea					23
Cryptochironomus spp.					23
Cyathura polita					91
Heteromastus filiformis	591	91			
Leptocheirus plumulosus				23	
Limnodrilus hoffmeisteri					727
Macoma balthica	23				
Macoma mitchelli	23	45			
Marenzelleria viridis				364	613
Mulinia lateralis	45				
Mytilopsis leucophaeata (Epi.)			23		
Rangia cuneata			136	45	114
Streblospio benedicti	23	45	45		
Tubificidae imm w/o cap chaetae		23		68	
Tubificidae imm w/o cap chaetae *					2090
Tubificoides spp.		23	523		
Total Abundance w/ Epifauna	704	250	1250	613	3772
Total Abundance w/o Epifauna	704	250	1227	613	3749
Number of Taxa w/ Epifauna	5	6	6	5	8
Number of Taxa w/o Epifauna	5	6	5	5	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28419	28420	28422	28423	28424
Callinectes sapidus (Epi.)					0.0932
Carinoma tremaphoros		0.0182	0.0068		
Coelotanypus spp.			0.1113	0.0204	0.0068
Corbicula fluminea					0.0023
Cryptochironomus spp.					0.0011
Cyathura polita					0.1931
Heteromastus filiformis	0.2817	0.0114			
Leptocheirus plumulosus				0.0045	
Macoma balthica	0.1772				
Macoma mitchelli	0.0023	0.0409			
Marenzelleria viridis				0.4430	0.9133
Mulinia lateralis	0.4658				
Mytilopsis leucophaeata (Epi.)			0.0613		
Oligochaeta					0.2310
Rangia cuneata			83.4665	6.7637	55.3005
Streblospio benedicti	0.0011	0.0023	0.0023		
Tubificidae imm w/o cap chaetae		0.0011		0.0011	
Tubificoides spp.		0.0011	0.0068		
Total Biomass w/ Epifauna	0.9281	0.0750	83.6550	7.2329	56.7413
Total Biomass w/o Epifauna	0.9281	0.0750	83.5937	7.2329	56.6482

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28425	28426	28427	28428	28429
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Freshwater	Low Mesohaline	High Meso Sand	Low Mesohaline	Low Mesohaline
Date	09/09/21	09/15/21	09/27/21	09/21/21	09/21/21
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	2.2	1.1	1.8	1.5
Salinity (ppt)	0.23	9.70	12.48	8.32	7.15
Temperature (C)	23.79	25.76	22.54	24.35	25.25
Dissolved Oxygen (mg/L)	6.8	7.4	8.1	7.7	5.9
Sediment Silt-Clay (%)	17.70	6.61	6.39	5.23	29.88
Total Carbon (%)	0.44	0.15	0.28	0.17	0.79
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	5.00	2.20	2.67	2.20	3.00
Condition	Meets Goal	Degraded	Marginal	Degraded	Meets Goal
# Attributes Scored	4	5	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.06	1.76	1.91	2.13	2.34
Abundance (#/m2)	1204	954	863	613	1113
Biomass (g/m2)	106.27	0.48	0.31	0.39	0.45
Pollution Indicative Spp Abund (%)	0.00	11.90	5.26	11.11	14.29
Pollution Indicative Spp Biom (%)	0.00	80.28	1.11	1.75	2.02
Pollution Sensitive Spp Abund (%)	37.74	2.38	13.16	18.52	28.57
Pollution Sensitive Spp Biom (%)	99.99	1.41	3.33	16.37	81.82
Carnivore-Omnivore Abund (%)	18.87	4.76	63.16	3.70	18.37
Deep Deposit Feeder Abund (%)	52.83	38.10	2.63	29.63	55.10
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	6.12
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.22	0.00	0.00	0.00	9.80
Tany./Chir. Abundance Ratio	50.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28425	28426	28427	28428	28429
Apocorophium lacustre (Epi.)	23		45		
Arcuatula papyria (Epi.)					
Balanus improvisus (Epi.)	295				
Carinoma tremaphoros		45			
Cryptochironomus spp.	23				
Cyathura polita	182				136
Edotea triloba (Epi.)					23
Eteone heteropoda				23	45
Gammarus spp. (Epi.)	23				
Glycinde solitaria			91		
Hermundura americana			432		
Heteromastus filiformis		364		182	
Hobsonia florida	68				
Leptocheirus plumulosus				23	23
Macoma mitchelli		409	250	227	45
Marenzelleria viridis	159	23		114	182
Mediomastus ambiseta			23		
Melita nitida (Epi.)	45				
Mulinia lateralis		114	23		
Mytilopsis leucophaea (Epi.)	68				
Neanthes succinea			23		23
Procladius spp.	23				
Rangia cuneata	114				
Rhithropanopeus harrisii (Epi.)	114				
Sayella chesapeakea (Epi.)		23			
Streblospio benedicti			23	45	45
Tubificidae imm w/o cap chaetae					68
Tubificoides spp.	636				545
Total Abundance w/ Epifauna	1772	977	909	613	1136
Total Abundance w/o Epifauna	1204	954	863	613	1113
Number of Taxa w/ Epifauna	13	6	8	6	10
Number of Taxa w/o Epifauna	7	5	7	6	9

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BENTHIC BIOMASS (Grams per sq. meter)					
Site	28425	28426	28427	28428	28429
Apocorophium lacustre (Epi.)	0.0023		0.0023		
Arcuatula papyria (Epi.)					
Balanus improvisus (Epi.)	1.1337				
Carinoma tremaphoros		0.0091			
Chironomidae	0.0011				
Cyathura polita	0.0523				0.0977
Edotea triloba (Epi.)					0.0011
Eteone heteropoda				0.0045	0.0068
Gammarus spp. (Epi.)	0.0068				
Glycinde solitaria			0.0091		
Hermundura americana			0.2726		
Heteromastus filiformis		0.0545		0.0977	
Hobsonia florida	0.0045				
Leptocheirus plumulosus				0.0045	0.0011
Macoma mitchelli		0.0250	0.0114	0.2158	0.0659
Marenzelleria viridis	0.0636	0.0068		0.0636	0.2704
Mediomastus ambiseta			0.0011		
Melita nitida (Epi.)	0.0023				
Mulinia lateralis		0.3885	0.0023		
Mytilopsis leucophaea (Epi.)	0.0182				
Neanthes succinea			0.0091		0.0011
Rangia cuneata	106.1410				
Rhithropanopeus harrisi (Epi.)	0.9860				
Sayella chesapeakea (Epi.)		0.0011			
Streblospio benedicti			0.0011	0.0023	0.0011
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.	0.0091				0.0045
Total Biomass w/ Epifauna	108.4210	0.4851	0.3090	0.3885	0.4510
Total Biomass w/o Epifauna	106.2717	0.4839	0.3067	0.3885	0.4499

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28501	28502	28503	28504	28505
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	High Meso Mud	High Meso Sand	High Meso Sand	High Meso Sand
Date	08/17/21	09/28/21	09/28/21	09/28/21	09/28/21
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)	5.0	13.9	3.8	11.3	2.9
Salinity (ppt)	15.60	16.59	16.55	16.45	16.10
Temperature (C)	28.20	23.00	22.91	23.23	22.63
Dissolved Oxygen (mg/L)	6.3	6.8	6.9	6.7	7.6
Sediment Silt-Clay (%)	3.64	63.51	2.49	13.06	3.97
Total Carbon (%)	0.09	1.10	0.03	0.37	0.11
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.67	2.67	4.33	3.00	2.33
Condition	Meets Goal	Marginal	Meets Goal	Meets Goal	Degraded
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.19 3	2.18 3	3.32 5	3.17 3	2.20 1
Abundance (#/m2)	1045 3	750 1	1068 3	1590 5	659 1
Biomass (g/m2)	0.97 1	0.75 3	1.02 3	2.73 3	0.71 1
Pollution Indicative Spp Abund (%)	4.35 5	42.42 3	4.26 5	28.57 1	10.34 3
Pollution Indicative Spp Biom (%)	30.95	8.16 3	0.89	2.42	13.16
Pollution Sensitive Spp Abund (%)	54.35 5	6.06	55.32 5	38.57 3	72.41 3
Pollution Sensitive Spp Biom (%)	43.14	5.74 1	71.22	23.33	81.54
Carnivore-Omnivore Abund (%)	54.35 5	51.52 5	59.57 5	30.00 3	65.52 5
Deep Deposit Feeder Abund (%)	8.70	0.00	10.64	18.57	13.79
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	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28501	28502	28503	28504	28505
Acteocina canaliculata	295		364	295	409
Arcuatula papyria (Epi.)				23	
Carinomella lactea				23	
Clymenella torquata				91	
Edotea triloba (Epi.)				23	
Edwardsia elegans	23		91		
Ensis directus					23
Gemma gemma			23		
Glycera dibranchiata				23	23
Glycinde solitaria	182		45	91	
Heteromastus filiformis	68				23
Leptosynapta tenuis	114				
Listriella barnardi				250	
Loimia medusa	45	23	68	23	23
Macoma mitchelli	45				23
Maldanidae			23		23
Marenzelleria viridis	23			23	
Mediomastus ambiseta			23	45	23
Micrura leidyi		23	45	23	
Mulinia lateralis	45				45
Neanthes succinea	68	23			
Odostomia engonia (Epi.)				23	
Ogyrides alphaerostris		91			
Ophiuroidea				23	
Paraprionospio pinnata		318	45	454	23
Parvilucina crenella	91		91		
Pectinaria gouldii	23			91	
Phoronis spp.		23	68	45	
Podarkeopsis levifuscina			23	23	
Pseudeurythoe paucibranchiata		23			
Ptilanthura tenuis			68		
Sigambra tentaculata		227			
Spiochaetopterus costarum	23		23		
Stylochus ellipticus (Epi.)			23		
Tubificoides spp.			68	68	23
Turbonilla interrupta (Epi.)				45	
Total Abundance w/ Epifauna	1045	750	1091	1704	659
Total Abundance w/o Epifauna	1045	750	1068	1590	659
Number of Taxa w/ Epifauna	13	8	16	20	11
Number of Taxa w/o Epifauna	13	8	15	16	11

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	28501	28502	28503	28504	28505
Acteocina canaliculata	0.0318		0.0500	0.0227	0.0477
Arcuatula papyria (Epi.)				0.0023	
Carinomella lactea				0.0023	
Clymenella torquata				0.5430	
Edotea triloba (Epi.)				0.0011	
Edwardsia elegans	0.0182		0.0136		
Ensis directus					0.4862
Gemma gemma			0.0318		
Glycera dibranchiata				1.9835	0.0182
Glycinde solitaria	0.0114		0.0011	0.0068	
Heteromastus filiformis	0.0364				0.0045
Leptosynapta tenuis	0.0591				
Listriella barnardi				0.0227	
Loimia medusa	0.3113	0.0250	0.6293	0.0454	0.0409
Macoma mitchelli	0.0011				0.0023
Maldanidae			0.0091		0.0114
Marenzelleria viridis	0.0227			0.0114	
Mediomastus ambiseta			0.0023	0.0045	0.0023
Micrura leidy		0.2068	0.0227	0.0091	
Mulinia lateralis	0.2999				0.0886
Neanthes succinea	0.0386	0.0045			
Odostomia engonia (Epi.)				0.0011	
Ogyrides alphaerostris		0.3363			
Ophiuroidea				0.0011	
Paraprionospio pinnata		0.0613	0.0091	0.0659	0.0045
Parvilucina crenella	0.0182		0.1954		
Pectinaria gouldii	0.0795			0.0023	
Phoronis spp.		0.0182	0.0204	0.0023	
Podarkeopsis levifuscina			0.0011	0.0023	
Pseudeurythoe paucibranchiata		0.0727			
Ptilanthura tenuis			0.0091		
Sigambra tentaculata		0.0273			
Spiochaetopterus costarum	0.0409		0.0250		
Stylochus ellipticus (Epi.)			0.0023		
Tubificoides spp.			0.0023	0.0011	0.0011
Turbonilla interrupta (Epi.)				0.0068	
Total Biomass w/ Epifauna	0.9690	0.7520	1.0247	2.7378	0.7077
Total Biomass w/o Epifauna	0.9690	0.7520	1.0224	2.7264	0.7077

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28506	28507	28508	28509	28510
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	High Meso Mud	High Meso Sand	High Meso Sand	High Meso Sand
Date	08/17/21	08/17/21	09/28/21	08/17/21	09/20/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.4	10.1	1.2	9.1	1.1
Salinity (ppt)	15.43	16.66	13.41	15.91	14.88
Temperature (C)	27.65	26.72	22.54	27.35	25.50
Dissolved Oxygen (mg/L)	6.3	0.0	8.8	2.0	8.0
Sediment Silt-Clay (%)	2.64	89.54	11.04	21.72	8.27
Total Carbon (%)	0.05	2.73	0.27	0.80	0.16
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.33	1.00	2.67	1.67	2.33
Condition	Meets Goal	Severely Degr.	Marginal	Severely Degr.	Degraded
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.44 5	0.00 1	3.16 3	1.25 1	2.76 3
Abundance (#/m2)	932 1	0 1	818 1	136 1	1454 3
Biomass (g/m2)	0.55 1	0.00 1	0.56 1	0.26 1	0.47 1
Pollution Indicative Spp Abund (%)	0.00 5	100.00 1	8.33 5	66.67 1	12.50 3
Pollution Indicative Spp Biom (%)	0.00	100.00 1	47.18	93.10	46.25
Pollution Sensitive Spp Abund (%)	58.54 3	0.00	44.44 3	16.67 3	29.69 3
Pollution Sensitive Spp Biom (%)	81.97	0.00 1	50.00	6.03	22.76
Carnivore-Omnivore Abund (%)	41.46 5	0.00 1	30.56 3	33.33 3	14.06 1
Deep Deposit Feeder Abund (%)	2.44	0.00	8.33	66.67	17.19
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	6.20
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28506	28507	28508	28509	28510
Acteocina canaliculata	182		45	23	
Ameroculodes species complex	23				
Carinoma tremaphoros					45
Coelotanypus spp.					23
Gemma gemma	91		114		
Glycinde solitaria	91		91		91
Hermundura americana			114		23
Heteromastus filiformis	23				114
Leitoscoloplos robustus				91	45
Lepidactylus dytiscus	23				
Leptosynapta tenuis	45				
Loimia medusa	114				
Macoma mitchelli	68		159		636
Marenzelleria viridis			91		23
Mediomastus ambiseta			68		91
Micrura leidy	45				
Molgula manhattensis (Epi.)	45				
Mulinia lateralis			45		91
Neanthes succinea	68				
Paraprionospio pinnata			23		
Phoronis spp.	114				
Podarkeopsis levifuscina				23	
Rictaxis punctostriatus					23
Spiochaetopterus costarum	45		68		
Streblospio benedicti					23
Tagelus plebeius					227
Total Abundance w/ Epifauna	977	0	818	136	1454
Total Abundance w/o Epifauna	932		818	136	1454
Number of Taxa w/ Epifauna	14	0	10	3	13
Number of Taxa w/o Epifauna	13	0	10	3	13
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28506	28507	28508	28509	28510
Acteocina canaliculata	0.0409		0.0045	0.0159	
Ameroculodes species complex	0.0091				
Carinoma tremaphoros					0.0227
Coelotanypus spp.					0.0023
Gemma gemma	0.0045		0.0045		
Glycinde solitaria	0.0068		0.0023		0.0023
Hermundura americana			0.0091		0.0364
Heteromastus filiformis	0.0250				0.0386
Leitoscoloplos robustus				0.2454	0.1272
Lepidactylus dytiscus	0.0023				
Leptosynapta tenuis	0.0068				
Loimia medusa	0.3385				
Macoma mitchelli	0.0045		0.0023		0.0432
Marenzelleria viridis			0.2431		0.0932
Mediomastus ambiseta			0.0045		0.0091
Micrura leidy	0.0364				
Molgula manhattensis (Epi.)	0.1772				
Mulinia lateralis			0.2636		0.0863
Neanthes succinea	0.0114				
Paraprionospio pinnata			0.0023		
Phoronis spp.	0.0659				
Podarkeopsis levifuscina				0.0023	
Rictaxis punctostriatus					0.0045
Spiochaetopterus costarum	0.0023		0.0273		
Streblospio benedicti					0.0011
Tagelus plebeius					0.0023
Total Biomass w/ Epifauna	0.7316	0.0000	0.5635	0.2636	0.4692
Total Biomass w/o Epifauna	0.5544	0.0000	0.5635	0.2636	0.4692

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28512	28513	28514	28515	28516
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	High Meso Mud	High Meso Sand	High Meso Sand	Low Mesohaline
Date	09/20/21	08/18/21	08/18/21	08/18/21	08/18/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	2.0	8.2	4.0	7.6	2.7
Salinity (ppt)	14.46	15.07	12.79	13.86	11.95
Temperature (C)	25.74	27.05	27.78	27.41	27.26
Dissolved Oxygen (mg/L)	8.1	1.9	7.0	3.0	6.8
Sediment Silt-Clay (%)	2.21	78.78	3.36	24.96	23.93
Total Carbon (%)	0.11	1.50	0.53	0.89	0.22
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.00	1.00	3.00	3.33	3.00
Condition	Severely Degr.	Severely Degr.	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	6	6	6	6	5
Shannon-Wiener Index	Value 1.82 Score 1	Value 0.00 Score 1	Value 3.15 Score 3	Value 2.99 Score 3	Value 2.69 Score 5
Abundance (#/m2)	591	0	1204	2954	4226
Biomass (g/m2)	0.09	0.00	0.58	1.31	2.63
Pollution Indicative Spp Abund (%)	15.38	100.00	20.75	23.85	27.42
Pollution Indicative Spp Biom (%)	42.11	100.00	49.61	12.90	14.89
Pollution Sensitive Spp Abund (%)	34.62	0.00	13.21	33.08	18.82
Pollution Sensitive Spp Biom (%)	39.47	0.00	9.06	12.12	40.33
Carnivore-Omnivore Abund (%)	34.62	0.00	47.17	22.31	6.99
Deep Deposit Feeder Abund (%)	0.00	0.00	18.87	40.00	50.54
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	1.54	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	9.80	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28512	28513	28514	28515	28516
Acteocina canaliculata	182			23	
Carinoma tremaphoros			91	23	114
Eteone foliosa			23		
Glycinde solitaria			136	68	45
Haminoea solitaria	23				
Heteromastus filiformis			182	114	1477
Laeonereis culveri			23		
Leitoscoloplos fragilis			45		
Leitoscoloplos robustus				23	
Leitoscoloplos spp.					23
Macoma balthica				23	136
Macoma mitchelli	273		114	432	454
Marenzelleria viridis			23	23	68
Mediomastus ambiseta				841	545
Micrura leidyi			23	23	
Mulinia lateralis	91		23	182	136
Neanthes succinea			273	523	136
Paraonis fulgens			68		
Pectinaria gouldii				23	
Streblospio benedicti			182	454	1000
Tagelus plebeius	23				
Tubificidae imm w/o cap chaetae				45	
Tubificoides spp.				136	91
Total Abundance w/ Epifauna	591	0	1204	2954	4226
Total Abundance w/o Epifauna	591	0	1204	2954	4226
Number of Taxa w/ Epifauna	5	0	13	16	12
Number of Taxa w/o Epifauna	5	0	13	16	12
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28512	28513	28514	28515	28516
Acteocina canaliculata	0.0318			0.0023	
Carinoma tremaphoros			0.0204	0.0091	0.0432
Eteone foliosa			0.0182		
Glycinde solitaria			0.0318	0.0318	0.0227
Haminoea solitaria	0.0045				
Heteromastus filiformis			0.0477	0.0682	0.5248
Laeonereis culveri			0.0341		
Leitoscoloplos fragilis			0.0295		
Leitoscoloplos robustus				0.1068	
Leitoscoloplos spp.					0.0114
Macoma balthica				0.0591	0.8316
Macoma mitchelli	0.0114		0.0182	0.0204	0.4203
Marenzelleria viridis			0.0204	0.0318	0.1818
Mediomastus ambiseta				0.0341	0.0227
Micrura leidyi			0.0182	0.4658	
Mulinia lateralis	0.0364		0.2522	0.0500	0.3204
Neanthes succinea			0.0772	0.4158	0.1863
Paraonis fulgens			0.0045		
Pectinaria gouldii				0.0023	
Streblospio benedicti			0.0045	0.0114	0.0591
Tagelus plebeius	0.0023				
Tubificidae imm w/o cap chaetae				0.0011	
Tubificoides spp.				0.0023	0.0011
Total Biomass w/ Epifauna	0.0863	0.0000	0.5771	1.3121	2.6253
Total Biomass w/o Epifauna	0.0863	0.0000	0.5771	1.3121	2.6253

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28517	28518	28520	28521	28522
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	High Meso Sand	Low Mesohaline	High Meso Mud	Polyhaline Mud	Low Mesohaline
Date	08/18/21	08/18/21	08/18/21	08/18/21	09/29/21
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	2.3	9.9	18.8	8.4
Salinity (ppt)	12.46	11.92	14.08	19.67	11.18
Temperature (C)	27.50	27.67	26.81	25.98	22.70
Dissolved Oxygen (mg/L)	6.1	6.8	0.4	0.0	8.1
Sediment Silt-Clay (%)	6.91	3.33	98.74	87.73	88.16
Total Carbon (%)	1.19	0.14	3.08	2.25	2.55
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	3.00	1.00	1.00	1.00
Condition	Meets Goal	Meets Goal	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	5	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.07 3	2.17 3	0.00 1	0.00 1	0.00 1
Abundance (#/m2)	2227 5	1613 5	0 1	0 1	68 1
Biomass (g/m2)	1.17 3	0.59 1	0.00 1	0.00 1	0.01 1
Pollution Indicative Spp Abund (%)	29.59 1	9.86 5	100.00	100.00	100.00 1
Pollution Indicative Spp Biom (%)	39.92	6.56	100.00 1	100.00 1	100.00
Pollution Sensitive Spp Abund (%)	14.29 3	4.23	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	11.68	3.47 1	0.00 1	0.00 1	0.00 1
Carnivore-Omnivore Abund (%)	27.55 3	4.23	0.00 1	0.00 1	0.00
Deep Deposit Feeder Abund (%)	32.65	8.45	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	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28517	28518	28520	28521	28522
Americamysis almyra (Epi.)					23
Carinoma tremaphoros	45				
Eteone heteropoda	23				
Gemma gemma	45	841			
Glycinde solitaria	68	23			
Heteromastus filiformis	386	114			
Leitoscoloplos spp.		23			
Lepidactylus dytiscus		23			
Macoma mitchelli	136	364			
Marenzelleria viridis	45	45			
Mediomastus ambiseta	204				
Mulinia lateralis	68	91			
Neanthes succinea	477	45			
Parvilucina crenella	23				
Pectinaria gouldii	45				
Streblospio benedicti	568	45			68
Tubificoides spp.	91				
Total Abundance w/ Epifauna	2227	1613	0	0	91
Total Abundance w/o Epifauna	2227	1613			68
Number of Taxa w/ Epifauna	14	10	0	0	2
Number of Taxa w/o Epifauna	14	10	0	0	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28517	28518	28520	28521	28522
Americamysis almyra (Epi.)					0.0068
Carinoma tremaphoros	0.0159				
Eteone heteropoda	0.0068				
Gemma gemma	0.0023	0.2454			
Glycinde solitaria	0.0273	0.0182			
Heteromastus filiformis	0.3090	0.1091			
Leitoscoloplos spp.		0.0091			
Lepidactylus dytiscus		0.0023			
Macoma mitchelli	0.0091	0.1272			
Marenzelleria viridis	0.1045	0.0023			
Mediomastus ambiseta	0.0045				
Mulinia lateralis	0.4362	0.0273			
Neanthes succinea	0.2204	0.0454			
Parvilucina crenella	0.0023				
Pectinaria gouldii	0.0011				
Streblospio benedicti	0.0227	0.0023			0.0114
Tubificoides spp.	0.0045				
Total Biomass w/ Epifauna	1.1667	0.5884	0.0000	0.0000	0.0182
Total Biomass w/o Epifauna	1.1667	0.5884	0.0000	0.0000	0.0114

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28523	28524	28525	28526	28527
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	High Meso Mud	Low Mesohaline	High Meso Mud	High Meso Sand
Date	09/29/21	08/18/21	08/18/21	08/18/21	09/27/21
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	7.8	6.2	8.8	0.9
Salinity (ppt)	11.74	13.14	11.06	14.15	13.33
Temperature (C)	23.08	27.04	27.75	26.99	22.84
Dissolved Oxygen (mg/L)	5.9	1.4	6.7	1.1	8.9
Sediment Silt-Clay (%)	90.57	84.47	88.39	83.72	1.97
Total Carbon (%)	3.02	2.70	2.67	1.83	0.06
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	2.00	3.00	1.67	2.00
Condition	Severely Degr.	Severely Degr.	Meets Goal	Severely Degr.	Severely Degr.
# Attributes Scored	5	6	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	1.00 1	2.30 3	0.00 1	1.99 1
Abundance (#/m2)	0 1	45 1	500 1	23 1	477 1
Biomass (g/m2)	0.00 1	0.41 1	2.50 3	0.00 1	0.06 1
Pollution Indicative Spp Abund (%)	100.00 1	0.00 5	0.00 5	0.00 5	4.76 5
Pollution Indicative Spp Biom (%)	100.00	0.00	0.00	0.00	1.82
Pollution Sensitive Spp Abund (%)	0.00	50.00	22.73	0.00	23.81
Pollution Sensitive Spp Biom (%)	0.00 1	94.41 3	70.55 3	0.00 1	80.00
Carnivore-Omnivore Abund (%)	0.00	0.00 1	22.73	0.00 1	9.52 1
Deep Deposit Feeder Abund (%)	0.00	50.00	31.82	0.00	4.76
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28523	28524	28525	28526	28527
Gemma gemma					159
Glycinde solitaria					45
Heteromastus filiformis		23	68		
Leitoscoloplos spp.					23
Leptocheirus plumulosus				23	
Macoma balthica		23	114		
Macoma mitchelli			114		182
Marenzelleria viridis					68
Neanthes succinea			114		
Tubificoides spp.			91		
Total Abundance w/ Epifauna	0	45	500	23	477
Total Abundance w/o Epifauna		45	500	23	477
Number of Taxa w/ Epifauna	0	2	5	1	5
Number of Taxa w/o Epifauna	0	2	5	1	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28523	28524	28525	28526	28527
Gemma gemma					0.0091
Glycinde solitaria					0.0023
Heteromastus filiformis		0.0227	0.1500		
Leitoscoloplos spp.					0.0011
Leptocheirus plumulosus				0.0023	
Macoma balthica		0.3840	1.7631		
Macoma mitchelli			0.0977		0.0023
Marenzelleria viridis					0.0477
Neanthes succinea			0.4839		
Tubificoides spp.			0.0045		
Total Biomass w/ Epifauna	0.0000	0.4067	2.4992	0.0023	0.0625
Total Biomass w/o Epifauna	0.0000	0.4067	2.4992	0.0023	0.0625

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28301	28302	28303	28304	28306
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/31/21	08/31/21	08/31/21	08/31/21	08/31/21
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)	3.8	4.1	3.5	5.0	7.0
Salinity (ppt)	10.02	10.91	10.02	9.95	10.45
Temperature (C)	28.51	28.18	28.97	29.32	27.19
Dissolved Oxygen (mg/L)	1.9	1.0	2.1	3.3	0.0
Sediment Silt-Clay (%)	68.15	93.12	81.02	98.74	98.90
Total Carbon (%)	1.51	0.98	1.53	2.17	5.57
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.40	3.80	3.80	2.20	1.00
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Severely Degr.
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.64 1	2.36 3	2.70 5	1.41 1	0.00 1
Abundance (#/m2)	1840 5	1818 5	591 3	182 1	0 1
Biomass (g/m2)	1.04 3	2.13 3	1.68 3	1.54 3	0.00 1
Pollution Indicative Spp Abund (%)	1.23 5	2.50 5	3.85 5	12.50 3	100.00 1
Pollution Indicative Spp Biom (%)	0.11	0.05	0.07	0.29	100.00
Pollution Sensitive Spp Abund (%)	4.94	18.75	30.77	50.00	0.00
Pollution Sensitive Spp Biom (%)	54.76 3	51.79 3	63.39 3	94.85 3	0.00 1
Carnivore-Omnivore Abund (%)	8.64	5.00	7.69	0.00	0.00
Deep Deposit Feeder Abund (%)	79.01	68.75	57.69	37.50	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28301	28302	28303	28304	28306
Carinoma tremaphoros	45				
Cyathura polita	45				
Heteromastus filiformis	1340	954	227	68	
Leptocheirus plumulosus	114	182	68		
Macoma balthica	23	91	45	91	
Macoma mitchelli	45	45	23		
Marenzelleria viridis	23	114	45		
Mediomastus ambiseta		136	91		
Neanthes succinea	68	91	45		
Streblospio benedicti	23	45	23	23	
Tubificoides spp.	114	159	23		
Total Abundance w/ Epifauna	1840	1818	591	182	0
Total Abundance w/o Epifauna	1840	1818	591	182	0
Number of Taxa w/ Epifauna	10	9	9	3	0
Number of Taxa w/o Epifauna	10	9	9	3	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28301	28302	28303	28304	28306
Carinoma tremaphoros	0.1840				
Cyathura polita	0.3999				
Heteromastus filiformis	0.0204	0.3226	0.0682	0.0750	
Leptocheirus plumulosus	0.0204	0.0341	0.0136		
Macoma balthica	0.1454	1.0065	0.9588	1.4654	
Macoma mitchelli	0.1545	0.0545	0.1045		
Marenzelleria viridis	0.0227	0.0863	0.1045		
Mediomastus ambiseta		0.0091	0.0045		
Neanthes succinea	0.0863	0.6089	0.4271		
Streblospio benedicti	0.0011	0.0011	0.0011	0.0045	
Tubificoides spp.	0.0023	0.0045	0.0023		
Total Biomass w/ Epifauna	1.0372	2.1277	1.6847	1.5450	0.0000
Total Biomass w/o Epifauna	1.0372	2.1277	1.6847	1.5450	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28307	28308	28309	28310	28311
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/31/21	08/10/21	08/10/21	08/10/21	08/10/21
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)	4.5	3.9	5.3	1.6	4.8
Salinity (ppt)	7.86	6.13	10.11	6.02	8.30
Temperature (C)	28.48	26.52	26.06	26.62	26.16
Dissolved Oxygen (mg/L)	0.0	5.2	0.8	7.5	0.6
Sediment Silt-Clay (%)	97.80	5.53	94.13	2.66	29.12
Total Carbon (%)	6.23	0.26	2.50	0.14	0.81
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.80	2.60	3.00	3.00	3.00
Condition	Severely Degr.	Degraded	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	1.59 1	1.28 1	2.87 5	2.45 3
Abundance (#/m2)	23 1	3317 3	409 1	1113 3	772 3
Biomass (g/m2)	0.01 1	2.12 3	5.24 5	0.41 1	2.81 3
Pollution Indicative Spp Abund (%)	0.00 5	10.96 3	0.00 5	8.16 5	11.76 3
Pollution Indicative Spp Biom (%)	0.00	8.24	0.00	2.78	0.08
Pollution Sensitive Spp Abund (%)	0.00	76.71	72.22	14.29	11.76
Pollution Sensitive Spp Biom (%)	0.00 1	75.80 3	95.92 3	33.89 1	68.61 3
Carnivore-Omnivore Abund (%)	0.00	5.48	11.11	12.24	17.65
Deep Deposit Feeder Abund (%)	100.00	7.53	16.67	8.16	50.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	6.00	0.00	6.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28307	28308	28309	28310	28311
Apocorophium lacustre (Epi.)				2749	
Chiridotea almyra		23			
Eteone heteropoda		91		91	
Heteromastus filiformis	23	159	23	68	136
Hydrobiidae (Epi.)		2545		227	
Laonereis culveri				23	
Lepidactylus dytiscus				250	
Leptocheirus plumulosus				114	
Macoma balthica			295		91
Macoma mitchelli		68		341	68
Marenzelleria viridis		2454		114	
Mulinia lateralis		23			
Mya arenaria		23			
Mytilopsis leucophaeata (Epi.)		91		68	
Neanthes succinea		68	45	23	136
Polydora cornuta				23	
Rangia cuneata		68		45	
Streblospio benedicti		250			91
Tubificoides spp.		91	45	23	250
Total Abundance w/ Epifauna	23	5953	409	4158	772
Total Abundance w/o Epifauna	23	3317	409	1113	772
Number of Taxa w/ Epifauna	1	13	4	14	6
Number of Taxa w/o Epifauna	1	11	4	11	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28307	28308	28309	28310	28311
Apocorophium lacustre (Epi.)				0.1613	
Chiridotea almyra		0.0045			
Eteone heteropoda		0.0091		0.0114	
Heteromastus filiformis	0.0068	0.0318	0.0068	0.0409	0.0568
Hydrobiidae (Epi.)		0.2749		0.0114	
Laonereis culveri				0.0091	
Lepidactylus dytiscus				0.0841	
Leptocheirus plumulosus				0.0204	
Macoma balthica			5.0257		1.9267
Macoma mitchelli		0.0136		0.0932	0.5566
Marenzelleria viridis		0.8543		0.0750	
Mulinia lateralis		0.1636			
Mya arenaria		0.6384			
Mytilopsis leucophaeata (Epi.)		0.3067		0.0023	
Neanthes succinea		0.2863	0.2045	0.0091	0.2613
Polydora cornuta				0.0011	
Rangia cuneata		0.1159		0.0636	
Streblospio benedicti		0.0023			0.0023
Tubificoides spp.		0.0023	0.0023	0.0011	0.0045
Total Biomass w/ Epifauna	0.0068	2.7037	5.2392	0.5839	2.8082
Total Biomass w/o Epifauna	0.0068	2.1220	5.2392	0.4090	2.8082

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28312	28314	28315	28316	28317
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Mud	Freshwater
Date	08/10/21	08/10/21	08/30/21	08/30/21	08/12/21
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)	5.2	4.5	5.2	10.2	0.5
Salinity (ppt)	9.25	8.20	9.73	14.16	0.17
Temperature (C)	26.16	26.45	28.14	26.94	29.18
Dissolved Oxygen (mg/L)	1.2	0.8	1.6	0.0	6.8
Sediment Silt-Clay (%)	84.15	98.72	97.95	99.45	93.38
Total Carbon (%)	2.47	2.74	3.51	3.60	4.35
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.40	2.60	1.00	1.00	1.00
Condition	Meets Goal	Degraded	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	5	6	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.11 3	0.00 1	0.00 1	0.00 1	1.19
Abundance (#/m2)	409 1	182 1	0 1	0 1	727 1
Biomass (g/m2)	5.38 5	3.56 3	0.00 1	0.00 1	0.35
Pollution Indicative Spp Abund (%)	5.56 5	0.00 5	100.00 1	100.00	93.75
Pollution Indicative Spp Biom (%)	0.02	0.00	100.00	100.00 1	98.70
Pollution Sensitive Spp Abund (%)	44.44	100.00	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	68.00 3	100.00 3	0.00 1	0.00 1	0.00
Carnivore-Omnivore Abund (%)	5.56	0.00	0.00	0.00 1	6.25
Deep Deposit Feeder Abund (%)	11.11	0.00	0.00	0.00	87.50 1
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	87.50 1
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	87.50
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	9.80 1
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28312	28314	28315	28316	28317
Chironomus spp.					45
Hirudinea (Epi.)					68
Limnodrilus hoffmeisteri					91
Macoma balthica	159	182			
Macoma mitchelli	136				
Marenzelleria viridis	23				
Neanthes succinea	23				
Sphaerium spp.					45
Streblospio benedicti	23				
Tubificidae imm w/o cap chaetae *					545
Tubificoides spp.	45				
Total Abundance w/ Epifauna	409	182	0	0	795
Total Abundance w/o Epifauna	409	182			727
Number of Taxa w/ Epifauna	6	1	0	0	4
Number of Taxa w/o Epifauna	6	1	0	0	3
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28312	28314	28315	28316	28317
Chironomus spp.					0.0432
Hirudinea (Epi.)					0.0477
Macoma balthica	3.6443	3.5557			
Macoma mitchelli	1.7017				
Marenzelleria viridis	0.0136				
Neanthes succinea	0.0136				
Oligochaeta					0.3022
Sphaerium spp.					0.0045
Streblospio benedicti	0.0011				
Tubificoides spp.	0.0045				
Total Biomass w/ Epifauna	5.3790	3.5557	0.0000	0.0000	0.3976
Total Biomass w/o Epifauna	5.3790	3.5557	0.0000	0.0000	0.3499

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28318	28319	28321	28322	28323
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Oligohaline	Oligohaline	Oligohaline	Oligohaline	Oligohaline
Date	09/14/21	09/15/21	09/15/21	09/17/21	09/15/21
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)	2.1	1.8	1.4	2.2	1.8
Salinity (ppt)	1.73	1.11	1.14	0.56	1.06
Temperature (C)	24.41	25.40	25.30	25.55	25.50
Dissolved Oxygen (mg/L)	8.6	8.4	8.6	7.8	8.5
Sediment Silt-Clay (%)	96.89	96.58	97.48	95.85	98.61
Total Carbon (%)	3.12	2.76	2.84	2.20	2.83
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	2.00	2.67	3.67	2.33
Condition	Marginal	Severely Degr.	Marginal	Meets Goal	Degraded
# Attributes Scored	6	6	6	6	6
Shannon-Wiener Index	Value 1.93 Score 5	Value 0.92 Score 1	Value 1.37 Score 1	Value 1.12 Score 5	Value 1.50 Score 1
Abundance (#/m2)	704	68	114	477	91
Biomass (g/m2)	0.17	0.01	0.15	0.33	0.07
Pollution Indicative Spp Abund (%)	16.13	66.67	60.00	66.67	75.00
Pollution Indicative Spp Biom (%)	5.33	50.00	8.96	19.44	37.70
Pollution Sensitive Spp Abund (%)	6.45	0.00	40.00	28.57	25.00
Pollution Sensitive Spp Biom (%)	50.67	0.00	91.04	79.86	62.30
Carnivore-Omnivore Abund (%)	9.68	66.67	80.00	71.43	75.00
Deep Deposit Feeder Abund (%)	29.03	0.00	0.00	0.00	25.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	25.00
Oligo Poll. Indic. Spp Abund (%)	93.55	100.00	60.00	66.67	75.00
Oligo Poll. Sens. Spp Abund (%)	3.23	0.00	20.00	28.57	0.00
Tolerance Score	6.20	6.20	6.20	6.35	7.40
Tany./Chir. Abundance Ratio	100.00	100.00	100.00	100.00	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28318	28319	28321	28322	28323
Chaoborus punctipennis				23	
Coelotanypus spp.	45	45	68	318	45
Cyathura polita	23		23		23
Leptocheirus plumulosus	341	23			
Marenzelleria viridis	23		23	136	
Streblospio benedicti	68				
Tubificidae imm w/o cap chaetae					23
Tubificoides spp.	204				
Total Abundance w/ Epifauna	704	68	114	477	91
Total Abundance w/o Epifauna	704	68	114	477	91
Number of Taxa w/ Epifauna	6	2	3	3	3
Number of Taxa w/o Epifauna	6	2	3	3	3
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28318	28319	28321	28322	28323
Chaoborus punctipennis				0.0023	
Coelotanypus spp.	0.0068	0.0045	0.0136	0.0636	0.0182
Cyathura polita	0.0023		0.1363		0.0432
Leptocheirus plumulosus	0.0727	0.0045			
Marenzelleria viridis	0.0841		0.0023	0.2613	
Oligochaeta					0.0068
Streblospio benedicti	0.0023				
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.	0.0023				
Total Biomass w/ Epifauna	0.1704	0.0091	0.1522	0.3272	0.0693
Total Biomass w/o Epifauna	0.1704	0.0091	0.1522	0.3272	0.0693

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28324	28325	28326	28327	28328
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Freshwater	Oligohaline	Low Mesohaline	Oligohaline	Oligohaline
Date	09/14/21	09/17/21	08/30/21	09/15/21	09/17/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	0.4	2.0	5.8	2.0	2.1
Salinity (ppt)	0.23	0.53	10.91	1.26	0.61
Temperature (C)	26.81	25.66	27.59	24.70	25.66
Dissolved Oxygen (mg/L)	10.1	7.4	0.0	8.3	8.1
Sediment Silt-Clay (%)	98.73	98.72	97.48	90.12	98.56
Total Carbon (%)	2.63	3.53	3.90	2.11	3.07
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.00	3.00	1.00	2.67	3.00
Condition	Severely Degr.	Meets Goal	Severely Degr.	Marginal	Meets Goal
# Attributes Scored	4	6	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.95	1.76	0.00	2.49	1.51
Abundance (#/m2)	182	841	0	1159	432
Biomass (g/m2)	0.13	0.27	0.00	57.82	40.04
Pollution Indicative Spp Abund (%)	100.00	91.89	100.00	5.88	78.95
Pollution Indicative Spp Biom (%)	100.00	77.41	100.00	0.01	0.17
Pollution Sensitive Spp Abund (%)	0.00	2.70	0.00	35.29	15.79
Pollution Sensitive Spp Biom (%)	0.00	15.06	0.00	81.99	99.83
Carnivore-Omnivore Abund (%)	62.50	37.84	0.00	7.84	68.42
Deep Deposit Feeder Abund (%)	37.50	54.05	0.00	5.88	15.79
TF Poll. Indicative Spp Abund (%)	37.50	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	37.50	54.05	0.00	0.00	10.53
Oligo Poll. Indic. Spp Abund (%)	0.00	97.30	0.00	60.78	84.21
Oligo Poll. Sens. Spp Abund (%)	0.00	2.70	0.00	21.57	10.53
Tolerance Score	9.80	8.53	0.00	6.14	6.80
Tany./Chir. Abundance Ratio	0.00	85.71	0.00	100.00	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28324	28325	28326	28327	28328
Apocorophium lacustre (Epi.)				45	
Boccardiella ligERICA				45	
Chironomus spp.	114				
Coelotanypus spp.		45		23	295
Corbicula fluminea		273		68	
Cyathura polita				68	
Leptocheirus plumulosus		45		500	
Limnodrilus hoffmeisteri		23			
Marenzelleria viridis		23		250	45
Melita nitida (Epi.)				45	
Rangia cuneata				91	23
Streblospio benedicti				45	
Tubificidae imm w cap chaetae					23
Tubificidae imm w/o cap chaetae	68				45
Tubificidae imm w/o cap chaetae *		432			
Tubificoides spp.				68	
Total Abundance w/ Epifauna	182	841	0	1250	432
Total Abundance w/o Epifauna	182	841		1159	432
Number of Taxa w/ Epifauna	2	5	0	11	5
Number of Taxa w/o Epifauna	2	5	0	9	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28324	28325	28326	28327	28328
Apocorophium lacustre (Epi.)				0.0023	
Boccardiella ligERICA				0.0023	
Chironomus spp.	0.1295	0.0750			
Coelotanypus spp.		0.1295		0.0023	0.0659
Corbicula fluminea				10.3240	
Cyathura polita				0.1045	
Leptocheirus plumulosus		0.0204		0.0841	
Marenzelleria viridis		0.0409		0.4203	0.2636
Melita nitida (Epi.)				0.0023	
Oligochaeta	0.0011	0.0057			0.0034
Rangia cuneata				46.8804	39.7077
Streblospio benedicti				0.0011	
Tubificidae imm w/o cap chaetae	0.0011				
Tubificoides spp.				0.0023	
Total Biomass w/ Epifauna	0.1318	0.2715	0.0000	57.8258	40.0406
Total Biomass w/o Epifauna	0.1318	0.2715	0.0000	57.8213	40.0406

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28101	28102	28103	28106	28107
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	High Meso Sand	High Meso Sand	High Meso Sand	High Meso Mud	Low Mesohaline
Date	08/17/21	08/17/21	08/17/21	08/17/21	09/07/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	4.0	7.3	7.4	6.5	5.0
Salinity (ppt)	15.18	16.20	14.47	14.90	8.85
Temperature (C)	27.23	26.73	27.76	27.14	26.53
Dissolved Oxygen (mg/L)	2.4	0.5	6.2	0.8	3.3
Sediment Silt-Clay (%)	1.31	22.11	3.06	98.40	86.26
Total Carbon (%)	0.05	0.82	0.12	3.22	2.27
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	2.00	2.33	1.67	2.20
Condition	Degraded	Severely Degr.	Degraded	Severely Degr.	Degraded
# Attributes Scored	6	6	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.23 1	2.20 1	3.05 3	0.00 1	0.72 1
Abundance (#/m2)	1227 3	204 1	682 1	23 1	114 1
Biomass (g/m2)	0.74 1	1.07 3	0.57 1	0.00 1	0.01 1
Pollution Indicative Spp Abund (%)	12.96 3	22.22 3	36.67 1	0.00 0.00	0.00 5
Pollution Indicative Spp Biom (%)	1.23	0.21	78.61	0.00 5	0.00
Pollution Sensitive Spp Abund (%)	27.78 3	33.33 3	46.67 3	0.00	80.00
Pollution Sensitive Spp Biom (%)	20.86	92.39	16.24	0.00 1	88.89 3
Carnivore-Omnivore Abund (%)	29.63 3	11.11 1	46.67 5	0.00 1	20.00
Deep Deposit Feeder Abund (%)	0.00	11.11	30.00	100.00	80.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28101	28102	28103	28106	28107
Acteocina canaliculata			182		
Eteone heteropoda			23		
Gemma gemma	568				
Glycinde solitaria	295		68		
Haminoea solitaria	45				
Hermundura americana					23
Heteromastus filiformis		23		23	
Leitoscoloplos robustus			68		
Macoma balthica		68			
Macoma mitchelli	23				
Mediomastus ambiseta			68		91
Mulinia lateralis			23		
Neanthes succinea	23	23	23		
Paraonis fulgens	68				
Pectinaria gouldii			45		
Podarkeopsis levifuscina			23		
Polydora cornuta		45			
Spiochaetopterus costarum	23				
Streblospio benedicti	159	45	136		
Tagelus plebeius	23				
Tubificoides spp.			23		
Total Abundance w/ Epifauna	1227	204	682	23	114
Total Abundance w/o Epifauna	1227	204	682	23	114
Number of Taxa w/ Epifauna	9	5	11	1	2
Number of Taxa w/o Epifauna	9	5	11	1	2

BENTHIC BIOMASS (Grams per sq. meter)					
Site	28101	28102	28103	28106	28107
Acteocina canaliculata			0.0682		
Eteone heteropoda			0.0114		
Gemma gemma	0.5430				
Glycinde solitaria	0.0727		0.0136		
Haminoea solitaria	0.0045				
Hermundura americana					0.0011
Heteromastus filiformis		0.0136		0.0023	
Leitoscoloplos robustus			0.4362		
Macoma balthica		0.9929			
Macoma mitchelli	0.0091				
Mediomastus ambiseta			0.0114		0.0091
Mulinia lateralis			0.0023		
Neanthes succinea	0.0182	0.0636	0.0068		
Paraonis fulgens	0.0023				
Pectinaria gouldii			0.0091		
Podarkeopsis levifuscina			0.0114		
Polydora cornuta		0.0023			
Spiochaetopterus costarum	0.0795				
Streblospio benedicti	0.0091	0.0023	0.0011		
Tagelus plebeius	0.0023				
Tubificoides spp.			0.0023		
Total Biomass w/ Epifauna	0.7407	1.0747	0.5737	0.0023	0.0102
Total Biomass w/o Epifauna	0.7407	1.0747	0.5737	0.0023	0.0102

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28114	28115	28116	28117	28119
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	High Meso Mud	High Meso Mud	Low Mesohaline	Oligohaline
Date	09/07/21	09/07/21	09/07/21	09/07/21	09/13/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.8	7.6	7.0	5.6	5.2
Salinity (ppt)	11.85	13.06	12.35	11.94	3.10
Temperature (C)	26.77	26.60	26.56	26.47	25.23
Dissolved Oxygen (mg/L)	0.0	1.7	1.6	3.4	5.8
Sediment Silt-Clay (%)	99.13	94.97	98.41	97.94	98.70
Total Carbon (%)	2.61	2.15	2.64	2.84	2.56
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.20	1.00	1.00	1.00	4.00
Condition	Degraded	Severely Degr.	Severely Degr.	Severely Degr.	Meets Goal
# Attributes Scored	5	6	6	5	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	0.00 1	0.00 1	0.00 1	2.13
Abundance (#/m2)	114 1	0 1	0 1	0 1	1590 5
Biomass (g/m2)	0.01 1	0.00 1	0.00 1	0.00 1	0.31
Pollution Indicative Spp Abund (%)	0.00 5	100.00	100.00	100.00 1	7.14
Pollution Indicative Spp Biom (%)	0.00	100.00 1	100.00 1	100.00	1.45
Pollution Sensitive Spp Abund (%)	100.00	0.00	0.00	0.00	15.71
Pollution Sensitive Spp Biom (%)	100.00 3	0.00 1	0.00 1	0.00 1	50.72
Carnivore-Omnivore Abund (%)	0.00	0.00 1	0.00 1	0.00	51.43 5
Deep Deposit Feeder Abund (%)	100.00	0.00	0.00	0.00	15.71
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	45.71 3
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	2.86 3
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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28114	28115	28116	28117	28119
Cyathura polita					45
Hermundura americana					772
Hydrobiidae (Epi.)					295
Leptocheirus plumulosus					364
Marenzelleria viridis					45
Mediomastus ambiseta	114				159
Melita nitida (Epi.)					23
Streblospio benedicti					114
Tubificoides spp.					91
Total Abundance w/ Epifauna	114	0	0	0	1908
Total Abundance w/o Epifauna	114				1590
Number of Taxa w/ Epifauna	1	0	0	0	9
Number of Taxa w/o Epifauna	1	0	0	0	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28114	28115	28116	28117	28119
Cyathura polita					0.1295
Hermundura americana					0.1091
Hydrobiidae (Epi.)					0.0068
Leptocheirus plumulosus					0.0341
Marenzelleria viridis					0.0227
Mediomastus ambiseta	0.0068				0.0068
Melita nitida (Epi.)					0.0023
Streblospio benedicti					0.0045
Tubificoides spp.					0.0068
Total Biomass w/ Epifauna	0.0068	0.0000	0.0000	0.0000	0.3226
Total Biomass w/o Epifauna	0.0068	0.0000	0.0000	0.0000	0.3135

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28120	28121	28122	28124	28125
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Freshwater	Oligohaline	Oligohaline	Oligohaline	Oligohaline
Date	09/13/21	09/13/21	09/13/21	09/07/21	09/07/21
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)	4.5	4.0	6.2	2.5	2.1
Salinity (ppt)	0.17	4.18	4.72	4.53	4.77
Temperature (C)	24.67	25.33	25.39	26.82	28.28
Dissolved Oxygen (mg/L)	7.1	5.3	5.2	7.7	10.5
Sediment Silt-Clay (%)	89.36	99.32	95.33	98.93	53.77
Total Carbon (%)	2.45	2.65	1.91	2.41	1.52
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	5.00	3.00	3.80	2.33	3.00
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Meets Goal
# Attributes Scored	4	6	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.27	1.37	1.40	2.24	1.70
Abundance (#/m2)	1318	1091	1045	159	795
Biomass (g/m2)	23.70	0.18	1.16	0.15	0.10
Pollution Indicative Spp Abund (%)	70.69	6.25	0.00	28.57	40.00
Pollution Indicative Spp Biom (%)	0.58	4.97	0.00	5.43	43.18
Pollution Sensitive Spp Abund (%)	8.62	2.08	13.04	28.57	51.43
Pollution Sensitive Spp Biom (%)	61.17	0.62	3.93	79.07	25.00
Carnivore-Omnivore Abund (%)	37.93	64.58	78.26	71.43	37.14
Deep Deposit Feeder Abund (%)	6.90	2.08	4.35	0.00	51.43
TF Poll. Indicative Spp Abund (%)	3.45	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	3.45	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	37.50	21.74	42.86	94.29
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.52	6.20	6.30	6.20	6.20
Tany./Chir. Abundance Ratio	100.00	100.00	0.00	100.00	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28120	28121	28122	28124	28125
Coelotanypus spp.	409	23		23	250
Corbicula fluminea	23		23		
Cyathura polita	91		91	45	
Gammarus spp. (Epi.)	23				
Gastropoda (Epi.)				23	
Hermundura americana		682	727	45	45
Hydrobiidae (Epi.)	454	182	591		
Leptocheirus plumulosus	204	318	159	23	23
Mediomastus ambiseta		23	45		409
Melita nitida (Epi.)		23			
Rangia cuneata	23				
Streblospio benedicti	477	45		23	68
Tubificidae imm w/o cap chaetae	45				
Tubificoides spp.	45				
Total Abundance w/ Epifauna	1795	1295	1636	182	795
Total Abundance w/o Epifauna	1318	1091	1045	159	795
Number of Taxa w/ Epifauna	10	7	6	6	5
Number of Taxa w/o Epifauna	8	5	5	5	5

BENTHIC BIOMASS (Grams per sq. meter)					
Site	28120	28121	28122	28124	28125
Coelotanypus spp.	0.1227	0.0068		0.0068	0.0386
Corbicula fluminea	9.0198		1.0020		
Cyathura polita	0.1386		0.0409	0.1159	
Gammarus spp. (Epi.)	0.0023				
Gastropoda (Epi.)				0.0023	
Hermundura americana		0.1159	0.0818	0.0114	0.0273
Hydrobiidae (Epi.)	0.0477	0.0068	0.0568		
Leptocheirus plumulosus	0.0454	0.0568	0.0273	0.0114	0.0045
Mediomastus ambiseta		0.0011	0.0045		0.0250
Melita nitida (Epi.)		0.0045			
Rangia cuneata	14.3613				
Streblospio benedicti	0.0136	0.0023		0.0011	0.0045
Tubificidae imm w/o cap chaetae	0.0011				
Tubificoides spp.	0.0011				
Total Biomass w/ Epifauna	23.7538	0.1943	1.2132	0.1488	0.1000
Total Biomass w/o Epifauna	23.7038	0.1829	1.1564	0.1465	0.1000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28126	28127	28128	28129	28130
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Freshwater	High Meso Sand	High Meso Mud	Freshwater	Freshwater
Date	09/13/21	08/17/21	08/17/21	09/30/21	09/28/21
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	3.3	8.1	2.0	4.1
Salinity (ppt)	0.11	13.86	15.79	0.14	0.13
Temperature (C)	23.95	28.16	26.63	21.65	23.40
Dissolved Oxygen (mg/L)	5.7	7.7	0.0	7.4	7.4
Sediment Silt-Clay (%)	97.34	3.40	98.26	49.13	99.35
Total Carbon (%)	2.54	0.10	3.58	3.13	2.63
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.50	2.00	1.00	2.50	2.50
Condition	Meets Goal	Severely Degr.	Severely Degr.	Degraded	Degraded
# Attributes Scored	4	6	6	4	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.65	2.75	0.00	1.21	2.27
Abundance (#/m2)	3272	636	0	3067	318
Biomass (g/m2)	92.40	0.44	0.00	0.54	0.38
Pollution Indicative Spp Abund (%)	84.03	46.43	100.00	91.85	28.57
Pollution Indicative Spp Biom (%)	0.00	71.50	100.00	0.00	4.14
Pollution Sensitive Spp Abund (%)	2.78	14.29	0.00	1.48	42.86
Pollution Sensitive Spp Biom (%)	88.92	1.04	0.00	25.07	91.72
Carnivore-Omnivore Abund (%)	4.86	25.00	0.00	1.48	21.43
Deep Deposit Feeder Abund (%)	91.67	28.57	0.00	94.81	21.43
TF Poll. Indicative Spp Abund (%)	81.25	0.00	0.00	91.85	21.43
Limnodrilus Abundance (%)	81.25	0.00	0.00	91.85	21.43
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	9.34	0.00	0.00	9.68	8.77
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	100.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28126	28127	28128	28129	28130
Aulodrilus pigueti	91				
Branchiura sowerbyi	159				
Campeloma decisum (Epi.)	23				
Chaoborus punctipennis					45
Chiridotea almyra				23	
Coelotanypus spp.					23
Corbicula fluminea	45			91	
Cryptochironomus spp.	136				
Cyathura polita	23			23	
Gammarus daiberi (Epi.)	114				
Gastropoda (Epi.)					23
Girardia tigrina (Epi.)	114				
Glycinde solitaria		23			
Hermundura americana		91			
Leitoscoloplos fragilis		114			
Leptocheirus plumulosus					45
Limnodrilus hoffmeisteri	364			523	23
Macoma mitchelli		114			
Marenzelleria viridis				23	136
Mediomastus ambiseta		68			
Mulinia lateralis		23			
Neanthes succinea		45			
Pleurocera spp. (Epi.)	23				
Rangia cuneata	68				
Streblospio benedicti		159			
Tubificidae imm w cap chaetae				91	
Tubificidae imm w cap chaetae *	91				
Tubificidae imm w/o cap chaetae *	2295			2295	45
Turbellaria (Epi.)				23	
Total Abundance w/ Epifauna	3544	636	0	3090	341
Total Abundance w/o Epifauna	3272	636		3067	318
Number of Taxa w/ Epifauna	11	8	0	7	6
Number of Taxa w/o Epifauna	7	8	0	6	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28126	28127	28128	28129	28130
Branchiura sowerbyi	0.1409				
Campeloma decisum (Epi.)	11.2623				
Chaoborus punctipennis					0.0068
Chiridotea almyra				0.0091	
Coelotanypus spp.					0.0136
Corbicula fluminea	9.6719			0.0091	
Cryptochironomus spp.	0.0011				
Cyathura polita	0.0023			0.0068	
Gammarus daiberi (Epi.)	0.0182				
Gastropoda (Epi.)					0.0045
Girardia tigrina (Epi.)	0.0204				
Glycinde solitaria		0.0023			
Hermundura americana		0.1113			
Leitoscoloplos fragilis		0.2772			
Leptocheirus plumulosus					0.0091
Macoma mitchelli		0.0045			
Marenzelleria viridis				0.1295	0.3522
Mediomastus ambiseta		0.0023			
Mulinia lateralis		0.0250			
Neanthes succinea		0.0045			
Oligochaeta	0.4226			0.3893	0.0023
Pleurocera spp. (Epi.)	0.0704				
Rangia cuneata	82.1623				
Streblospio benedicti		0.0114			
Turbellaria (Epi.)				0.0011	
Total Biomass w/ Epifauna	103.7725	0.4385	0.0000	0.5449	0.3885
Total Biomass w/o Epifauna	92.4011	0.4385	0.0000	0.5438	0.3840

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28201	28202	28204	28205	28206
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Sand	High Meso Mud	High Meso Mud	High Meso Mud
Date	08/18/21	08/24/21	08/24/21	08/24/21	08/24/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	10.1	0.4	17.1	6.6	10.8
Salinity (ppt)	13.96	13.41	13.24	13.27	13.39
Temperature (C)	28.09	29.05	28.22	28.22	28.14
Dissolved Oxygen (mg/L)	3.1	6.6	3.2	2.4	2.0
Sediment Silt-Clay (%)	81.28	1.96	96.44	66.96	81.85
Total Carbon (%)	2.37	0.08	4.20	2.01	3.17
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.67	1.67	1.00	4.00	1.00
Condition	Marginal	Severely Degr.	Severely Degr.	Meets Goal	Severely Degr.
# Attributes Scored	6	6	6	6	6
Shannon-Wiener Index	2.00	2.02	0.00	2.78	0.00
Abundance (#/m2)	91	886	0	1091	23
Biomass (g/m2)	0.38	0.49	0.00	5.12	0.00
Pollution Indicative Spp Abund (%)	25.00	2.56	100.00	6.25	100.00
Pollution Indicative Spp Biom (%)	6.63	5.14	100.00	0.20	100.00
Pollution Sensitive Spp Abund (%)	25.00	2.56	0.00	56.25	0.00
Pollution Sensitive Spp Biom (%)	67.47	1.40	0.00	88.17	0.00
Carnivore-Omnivore Abund (%)	25.00	12.82	0.00	22.92	0.00
Deep Deposit Feeder Abund (%)	50.00	7.69	0.00	12.50	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28201	28202	28204	28205	28206
Americamysis bigelowi (Epi.)		23			
Carinoma tremaphoros		23			
Gemma gemma		477			
Glycinde solitaria		23		68	
Haminoea solitaria		23			
Heteromastus filiformis		68			
Laeonereis culveri		45			
Leitoscoloplos robustus	23				
Leptocheirus plumulosus				159	
Macoma balthica	23			454	
Macoma mitchelli		204		23	
Mediomastus ambiseta				91	
Micrura leidy				23	
Mulinia lateralis		23			
Neanthes succinea	23			114	
Paraprionospio pinnata				23	23
Podarke obscura				23	
Podarkeopsis levifuscina				23	
Streblospio benedicti				45	
Tubificoides spp.	23			45	
Total Abundance w/ Epifauna	91	909	0	1091	23
Total Abundance w/o Epifauna	91	886		1091	23
Number of Taxa w/ Epifauna	4	9	0	12	1
Number of Taxa w/o Epifauna	4	8	0	12	1
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28201	28202	28204	28205	28206
Americamysis bigelowi (Epi.)		0.0045			
Carinoma tremaphoros		0.0045			
Gemma gemma		0.0273			
Glycinde solitaria		0.0068		0.0159	
Haminoea solitaria		0.0023			
Heteromastus filiformis		0.0704			
Laeonereis culveri		0.0159			
Leitoscoloplos robustus	0.0250				
Leptocheirus plumulosus				0.0409	
Macoma balthica	0.2545			4.4940	
Macoma mitchelli		0.3340		0.0011	
Mediomastus ambiseta				0.0045	
Micrura leidy				0.0182	
Mulinia lateralis		0.0250			
Neanthes succinea	0.0954			0.5316	
Paraprionospio pinnata				0.0091	0.0045
Podarke obscura				0.0011	
Podarkeopsis levifuscina				0.0011	
Streblospio benedicti				0.0011	
Tubificoides spp.	0.0023			0.0011	
Total Biomass w/ Epifauna	0.3772	0.4908	0.0000	5.1200	0.0045
Total Biomass w/o Epifauna	0.3772	0.4862	0.0000	5.1200	0.0045

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28207	28208	28209	28210	28211
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Mud	High Meso Sand	High Meso Sand	High Meso Sand
Date	08/24/21	08/25/21	08/24/21	08/24/21	08/25/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	6.9	9.2	2.5	3.1	2.5
Salinity (ppt)	13.22	13.25	12.92	12.45	12.55
Temperature (C)	28.20	28.19	28.27	28.35	28.45
Dissolved Oxygen (mg/L)	2.3	1.5	2.8	4.3	2.6
Sediment Silt-Clay (%)	94.05	89.73	8.14	31.43	4.00
Total Carbon (%)	3.25	2.76	0.26	0.73	0.04
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.00	1.00	2.00	2.00	1.67
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.06 1	0.00 1	2.49 1	2.45 1	2.63 3
Abundance (#/m2)	182 1	0 1	2885 5	3499 3	818 1
Biomass (g/m2)	0.11 1	0.00 1	0.54 1	0.64 1	0.13 1
Pollution Indicative Spp Abund (%)	75.00	100.00	48.03 1	28.57 1	19.44 3
Pollution Indicative Spp Biom (%)	4.08 5	100.00 1	13.36	23.13	4.24
Pollution Sensitive Spp Abund (%)	0.00	0.00	21.26 3	40.91 5	5.56 1
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	15.03	33.81	3.39
Carnivore-Omnivore Abund (%)	12.50 3	0.00 1	7.87 1	5.84 1	16.67 1
Deep Deposit Feeder Abund (%)	12.50	0.00	24.41	50.65	30.56
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	9.80	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28207	28208	28209	28210	28211
Carinoma tremaphoros			45		68
Chironomus spp.				68	
Diadumene leucolena (Epi.)				23	23
Eteone heteropoda			23	23	
Glycinde solitaria			45		
Heteromastus filiformis			159	68	227
Leptocheirus plumulosus				136	
Macoma balthica				23	
Macoma mitchelli			545	454	227
Marenzelleria viridis			45		45
Mediomastus ambiseta			523	1409	
Mulinia lateralis			182	45	114
Neanthes succinea	23		114	114	68
Streblospio benedicti	136		1181	863	45
Tubificoides spp.	23		23	295	23
Total Abundance w/ Epifauna	182	0	2885	3522	841
Total Abundance w/o Epifauna	182		2885	3499	818
Number of Taxa w/ Epifauna	3	0	11	12	9
Number of Taxa w/o Epifauna	3	0	11	11	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28207	28208	28209	28210	28211
Carinoma tremaphoros			0.0273		0.0091
Chironomus spp.				0.0091	
Diadumene leucolena (Epi.)				0.0068	0.0045
Eteone heteropoda			0.0023	0.0045	
Glycinde solitaria			0.0500		
Heteromastus filiformis			0.1159	0.0727	0.0818
Leptocheirus plumulosus				0.0409	
Macoma balthica				0.1681	
Macoma mitchelli			0.2045	0.1068	0.0045
Marenzelleria viridis			0.0204		0.0045
Mediomastus ambiseta			0.0114	0.0477	
Mulinia lateralis			0.0341	0.0886	0.0045
Neanthes succinea	0.1045		0.0409	0.0500	0.0273
Streblospio benedicti	0.0045		0.0364	0.0454	0.0011
Tubificoides spp.	0.0023		0.0011	0.0045	0.0011
Total Biomass w/ Epifauna	0.1113	0.0000	0.5441	0.6452	0.1386
Total Biomass w/o Epifauna	0.1113	0.0000	0.5441	0.6384	0.1340

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28212	28213	28214	28215	28216
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	Low Mesohaline	High Meso Mud	High Meso Mud	High Meso Mud
Date	08/25/21	08/25/21	08/25/21	08/25/21	08/25/21
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)	6.8	0.5	6.6	6.6	4.6
Salinity (ppt)	13.31	10.82	13.42	13.23	12.70
Temperature (C)	28.21	29.32	28.15	28.18	28.37
Dissolved Oxygen (mg/L)	1.0	6.7	0.6	0.4	1.0
Sediment Silt-Clay (%)	79.03	4.65	96.26	98.91	96.72
Total Carbon (%)	2.97	0.05	3.83	3.73	3.13
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	2.60	1.33	1.00	1.00
Condition	Meets Goal	Degraded	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	6	5	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.04 3	2.47 3	1.00 1	0.00 1	1.58 1
Abundance (#/m2)	250 1	1045 3	45 1	0 1	68 1
Biomass (g/m2)	0.34 1	0.85 1	0.01 1	0.00 1	0.01 1
Pollution Indicative Spp Abund (%)	18.18	6.52 5	50.00	100.00	33.33
Pollution Indicative Spp Biom (%)	1.33 5	0.27	25.00 3	100.00 1	40.00 1
Pollution Sensitive Spp Abund (%)	63.64	15.22	0.00	0.00	33.33
Pollution Sensitive Spp Biom (%)	34.00 3	18.55 1	0.00 1	0.00 1	20.00 1
Carnivore-Omnivore Abund (%)	27.27 5	6.52	0.00 1	0.00 1	0.00 1
Deep Deposit Feeder Abund (%)	45.45	52.17	50.00	0.00	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28212	28213	28214	28215	28216
Carinoma tremaphoros		45			
Glycinde solitaria	23				
Heteromastus filiformis		432	23		
Leptocheirus plumulosus		91			
Macoma balthica	23	23			
Macoma mitchelli		227			
Marenzelleria viridis		23			
Mediomastus ambiseta	114	114			23
Neanthes succinea	45	23			
Paraprionospio pinnata			23		
Streblospio benedicti	45	68			23
Tubificoides spp.					23
Total Abundance w/ Epifauna	250	1045	45	0	68
Total Abundance w/o Epifauna	250	1045	45		68
Number of Taxa w/ Epifauna	5	9	2	0	3
Number of Taxa w/o Epifauna	5	9	2	0	3
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28212	28213	28214	28215	28216
Carinoma tremaphoros		0.0114			
Glycinde solitaria	0.0204				
Heteromastus filiformis		0.2726	0.0068		
Leptocheirus plumulosus		0.0045			
Macoma balthica	0.0932	0.1454			
Macoma mitchelli		0.3908			
Marenzelleria viridis		0.0091			
Mediomastus ambiseta	0.0023	0.0023			0.0011
Neanthes succinea	0.2204	0.0068			
Paraprionospio pinnata			0.0023		
Streblospio benedicti	0.0045	0.0023			0.0023
Tubificoides spp.					0.0023
Total Biomass w/ Epifauna	0.3408	0.8452	0.0091	0.0000	0.0057
Total Biomass w/o Epifauna	0.3408	0.8452	0.0091	0.0000	0.0057

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28217	28218	28219	28221	28222
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/25/21	08/25/21	08/25/21	08/25/21	08/25/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	0.9	1.4	1.1	2.2	1.9
Salinity (ppt)	9.49	9.06	9.87	9.01	8.01
Temperature (C)	29.32	29.44	30.08	29.11	29.78
Dissolved Oxygen (mg/L)	5.8	5.0	5.4	3.0	5.8
Sediment Silt-Clay (%)	96.81	86.56	5.34	98.78	97.42
Total Carbon (%)	2.59	2.64	0.18	3.04	3.11
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	4.20	3.80	3.40	2.60	3.80
Condition	Meets Goal	Meets Goal	Meets Goal	Degraded	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.84 3	1.78 3	2.65 5	2.25 3	2.24 3
Abundance (#/m2)	568 3	1477 3	2249 5	432 1	1749 5
Biomass (g/m2)	6.91 5	3.17 3	0.37 1	0.74 1	1.76 3
Pollution Indicative Spp Abund (%)	0.00 5	1.54 5	3.03 5	0.00 5	0.00 5
Pollution Indicative Spp Biom (%)	0.00	0.14	1.22	0.00	0.00
Pollution Sensitive Spp Abund (%)	60.00	72.31	24.24	42.11	42.86
Pollution Sensitive Spp Biom (%)	97.70 5	87.46 5	13.41 1	83.18 3	50.77 3
Carnivore-Omnivore Abund (%)	4.00	9.23	3.03	21.05	10.39
Deep Deposit Feeder Abund (%)	20.00	80.00	55.56	47.37	68.83
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	6.20	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	100.00	0.00	0.00	0.00

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28217	28218	28219	28221	28222
Carinoma tremaphoros		23	23	68	91
Coelotanypus spp.		23			
Edotea triloba (Epi.)			23		
Glycinde solitaria			23		
Heteromastus filiformis			318		23
Leptocheirus plumulosus	182	23	182	114	295
Macoma balthica	250	91		23	23
Macoma mitchelli		23	613		23
Marenzelleria viridis		23	68		23
Mediomastus ambiseta	91	954	454	159	704
Neanthes succinea	23	91	23	23	91
Streblospio benedicti			68		
Tubificoides spp.	23	227	477	45	477
Total Abundance w/ Epifauna	568	1477	2272	432	1749
Total Abundance w/o Epifauna	568	1477	2249	432	1749
Number of Taxa w/ Epifauna	5	9	11	6	9
Number of Taxa w/o Epifauna	5	9	10	6	9
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28217	28218	28219	28221	28222
Carinoma tremaphoros		0.0068	0.0091	0.0341	0.0568
Coelotanypus spp.		0.0045			
Edotea triloba (Epi.)			0.0023		
Glycinde solitaria			0.0091		
Heteromastus filiformis			0.2340		0.0114
Leptocheirus plumulosus	0.0454	0.0045	0.0227	0.0386	0.0454
Macoma balthica	6.7410	2.6401		0.6134	0.8520
Macoma mitchelli		0.0568	0.0273		0.0227
Marenzelleria viridis		0.0750	0.0273		0.0068
Mediomastus ambiseta	0.0068	0.0568	0.0136	0.0045	0.0364
Neanthes succinea	0.1113	0.3181	0.0204	0.0500	0.7270
Streblospio benedicti			0.0045		
Tubificoides spp.	0.0023	0.0068	0.0045	0.0023	0.0045
Total Biomass w/ Epifauna	6.9069	3.1694	0.3749	0.7429	1.7631
Total Biomass w/o Epifauna	6.9069	3.1694	0.3726	0.7429	1.7631

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28223	28224	28225	28226	28227
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Oligohaline	Freshwater	Freshwater	Low Mesohaline	Low Mesohaline
Date	08/25/21	08/27/21	08/27/21	08/25/21	08/25/21
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)	0.8	1.3	0.5	0.5	2.9
Salinity (ppt)	2.42	0.22	0.17	5.16	10.56
Temperature (C)	30.70	29.79	29.69	32.03	29.05
Dissolved Oxygen (mg/L)	7.7	6.6	6.8	9.1	3.0
Sediment Silt-Clay (%)	96.02	95.49	98.39	55.42	81.61
Total Carbon (%)	2.87	3.72	2.16	1.50	2.34
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.33	1.00	2.00	2.20	3.80
Condition	Degraded	Severely Degr.	Severely Degr.	Degraded	Meets Goal
# Attributes Scored	6	4	4	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.58	0.65	1.95	1.56	2.01
Abundance (#/m2)	2317	136	409	772	1204
Biomass (g/m2)	0.14	0.01	0.08	0.67	3.66
Pollution Indicative Spp Abund (%)	4.90	100.00	94.44	11.76	0.00
Pollution Indicative Spp Biom (%)	15.87	100.00	85.51	0.68	0.00
Pollution Sensitive Spp Abund (%)	18.63	0.00	5.56	5.88	67.92
Pollution Sensitive Spp Biom (%)	15.87	0.00	14.49	43.92	92.30
Carnivore-Omnivore Abund (%)	11.76	0.00	38.89	20.59	5.66
Deep Deposit Feeder Abund (%)	82.35	100.00	61.11	73.53	69.81
TF Poll. Indicative Spp Abund (%)	0.00	100.00	61.11	0.00	0.00
Limnodrilus Abundance (%)	0.00	100.00	61.11	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	93.14	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	6.20	9.80	9.16	6.20	0.00
Tany./Chir. Abundance Ratio	100.00	0.00	50.00	100.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28223	28224	28225	28226	28227
Carinoma tremaphoros	159			23	23
Chironomus spp.			68		
Coelotanypus spp.	114		68	91	
Cyathura polita			23	45	
Gammarus spp. (Epi.)			23		
Heteromastus filiformis				23	91
Leptocheirus plumulosus	136			23	159
Limnodrilus hoffmeisteri		114	45		
Macoma balthica					114
Macoma mitchelli				23	23
Mediomastus ambiseta	432				704
Neanthes succinea					45
Tubificidae imm w/o cap chaetae *		23	204		
Tubificoides spp.	1477			545	45
Total Abundance w/ Epifauna	2317	136	432	772	1204
Total Abundance w/o Epifauna	2317	136	409	772	1204
Number of Taxa w/ Epifauna	5	1	5	7	8
Number of Taxa w/o Epifauna	5	1	4	7	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28223	28224	28225	28226	28227
Carinoma tremaphoros	0.0636			0.0204	0.0318
Chironomus spp.			0.0386		
Coelotanypus spp.	0.0227		0.0023	0.0045	
Cyathura polita			0.0114	0.2954	
Gammarus spp. (Epi.)			0.0023		
Heteromastus filiformis				0.0023	0.1295
Leptocheirus plumulosus	0.0204			0.0068	0.0250
Macoma balthica					3.3444
Macoma mitchelli				0.3363	0.0204
Mediomastus ambiseta	0.0227				0.0318
Neanthes succinea					0.0727
Oligochaeta		0.0148	0.0261		
Tubificoides spp.	0.0136			0.0068	0.0023
Total Biomass w/ Epifauna	0.1431	0.0148	0.0807	0.6725	3.6579
Total Biomass w/o Epifauna	0.1431	0.0148	0.0784	0.6725	3.6579

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28601	28602	28603	28604	28605
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Polyhaline Mud	Low Mesohaline	High Meso Mud	Low Mesohaline	Polyhaline Mud
Date	08/18/21	08/26/21	08/18/21	08/26/21	08/18/21
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	14.0	1.2	12.1	5.1	17.0
Salinity (ppt)	18.75	8.89	17.37	9.87	18.21
Temperature (C)	26.19	28.54	26.38	27.63	26.26
Dissolved Oxygen (mg/L)	0.0	7.5	0.0	3.7	0.0
Sediment Silt-Clay (%)	77.14	2.14	75.29	5.62	91.23
Total Carbon (%)	3.31	0.08	1.96	0.21	1.66
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	3.00	2.33	2.60	1.00
Condition	Severely Degr.	Meets Goal	Degraded	Degraded	Severely Degr.
# Attributes Scored	6	5	6	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	2.79 5	1.58 1	1.77 3	0.00 1
Abundance (#/m2)	0 1	909 3	68 1	932 3	0 1
Biomass (g/m2)	0.00 1	0.46 1	0.00 1	0.60 1	0.00 1
Pollution Indicative Spp Abund (%)	100.00	10.00 5	0.00	0.00 5	100.00
Pollution Indicative Spp Biom (%)	100.00 1	15.40	0.00 5	0.00	100.00 1
Pollution Sensitive Spp Abund (%)	0.00	20.00	0.00	2.44	0.00
Pollution Sensitive Spp Biom (%)	0.00 1	39.61 1	0.00 1	0.75 1	0.00 1
Carnivore-Omnivore Abund (%)	0.00 1	10.00	66.67 5	12.20	0.00 1
Deep Deposit Feeder Abund (%)	0.00	10.00	33.33	39.02	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28601	28602	28603	28604	28605
Carinoma tremaphoros		23			
Heteromastus filiformis		68		364	
Laeonereis culveri		68			
Leitoscoloplos fragilis		23			
Lepidactylus dytiscus		295		23	
Leptocheirus plumulosus		136			
Macoma mitchelli		45		409	
Marenzelleria viridis		182		23	
Micrura leidy			23		
Mulinia lateralis		23			
Neanthes succinea				91	
Nemertina				23	
Sigambra tentaculata			23		
Streblospio benedicti		45			
Tubificoides spp.			23		
Total Abundance w/ Epifauna	0	909	68	932	0
Total Abundance w/o Epifauna		909	68	932	
Number of Taxa w/ Epifauna	0	10	3	6	0
Number of Taxa w/o Epifauna	0	10	3	6	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28601	28602	28603	28604	28605
Carinoma tremaphoros		0.0114			
Heteromastus filiformis		0.0432		0.2045	
Laeonereis culveri		0.0023			
Leitoscoloplos fragilis		0.0682			
Lepidactylus dytiscus		0.0932		0.0023	
Leptocheirus plumulosus		0.0227			
Macoma mitchelli		0.0364		0.3204	
Marenzelleria viridis		0.1840		0.0045	
Micrura leidy			0.0011		
Mulinia lateralis		0.0023			
Neanthes succinea				0.0364	
Nemertina				0.0364	
Sigambra tentaculata			0.0011		
Streblospio benedicti		0.0011			
Tubificoides spp.			0.0011		
Total Biomass w/ Epifauna	0.0000	0.4646	0.0034	0.6044	0.0000
Total Biomass w/o Epifauna	0.0000	0.4646	0.0034	0.6044	0.0000

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28606	28607	28608	28609	28610
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Mud	Low Mesohaline
Date	08/26/21	08/18/21	08/26/21	08/18/21	08/18/21
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	6.1	5.3	8.4	6.5
Salinity (ppt)	11.26	10.82	9.99	13.60	9.60
Temperature (C)	26.97	27.17	27.34	26.84	27.45
Dissolved Oxygen (mg/L)	0.2	2.3	2.8	0.5	4.0
Sediment Silt-Clay (%)	46.46	93.07	3.99	99.22	99.34
Total Carbon (%)	0.93	2.79	0.10	3.26	2.24
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.40	4.20	3.40	1.00	2.60
Condition	Severely Degr.	Meets Goal	Meets Goal	Severely Degr.	Degraded
# Attributes Scored	5	5	5	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.85 3	2.04 3	2.55 5	0.00 1	0.75 1
Abundance (#/m2)	295 1	818 3	409 1	0 1	454 1
Biomass (g/m2)	0.09 1	7.24 5	1.22 3	0.00 1	4.48 3
Pollution Indicative Spp Abund (%)	69.23 1	0.00 5	5.56 5	100.00 0.00	0.00 5
Pollution Indicative Spp Biom (%)	81.93	0.00	15.08	100.00 1	0.00
Pollution Sensitive Spp Abund (%)	7.69	50.00	11.11	0.00	85.00
Pollution Sensitive Spp Biom (%)	4.82 1	98.31 5	62.57 3	0.00 1	99.85 3
Carnivore-Omnivore Abund (%)	7.69	13.89	22.22	0.00 1	0.00
Deep Deposit Feeder Abund (%)	23.08	36.11	27.78	0.00	15.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	6.00	6.00	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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28606	28607	28608	28609	28610
Carinoma tremaphoros	23	45	45		
Gemma gemma			23		
Heteromastus filiformis	23	91	114		23
Leitoscoloplos robustus	23				
Macoma balthica		386			386
Macoma mitchelli	23		114		
Mediomastus ambiseta	23				
Mulinia lateralis			23		
Neanthes succinea		68	45		
Rangia cuneata		23	45		
Streblospio benedicti	182				
Tubificoides spp.		204			45
Total Abundance w/ Epifauna	295	818	409	0	454
Total Abundance w/o Epifauna	295	818	409		454
Number of Taxa w/ Epifauna	6	6	7	0	3
Number of Taxa w/o Epifauna	6	6	7	0	3
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28606	28607	28608	28609	28610
Carinoma tremaphoros	0.0068	0.0136	0.0818		
Gemma gemma			0.0023		
Heteromastus filiformis	0.0045	0.0636	0.0341		0.0045
Leitoscoloplos robustus	0.0704				
Macoma balthica		7.0568			4.4781
Macoma mitchelli	0.0011		0.1500		
Mediomastus ambiseta	0.0045				
Mulinia lateralis			0.1840		
Neanthes succinea		0.0432	0.0045		
Rangia cuneata		0.0636	0.7634		
Streblospio benedicti	0.0068				
Tubificoides spp.		0.0023			0.0023
Total Biomass w/ Epifauna	0.0943	7.2431	1.2201	0.0000	4.4849
Total Biomass w/o Epifauna	0.0943	7.2431	1.2201	0.0000	4.4849

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28611	28612	28613	28614	28615
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud	Low Mesohaline
Date	08/26/21	08/26/21	08/26/21	08/26/21	08/26/21
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)	9.2	8.9	8.8	10.6	5.3
Salinity (ppt)	14.80	14.64	13.36	12.90	8.82
Temperature (C)	26.71	26.74	26.87	26.93	27.43
Dissolved Oxygen (mg/L)	0.0	0.0	0.0	0.3	1.1
Sediment Silt-Clay (%)	98.04	99.59	99.50	99.19	98.81
Total Carbon (%)	2.18	2.93	3.39	2.01	2.48
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	2.33	1.67	1.00	3.80
Condition	Severely Degr.	Degraded	Severely Degr.	Severely Degr.	Meets Goal
# Attributes Scored	6	6	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	0.00 1	0.00 1	0.00 1	1.26 1
Abundance (#/m2)	0 1	23 1	23 1	0 1	1318 3
Biomass (g/m2)	0.00 1	0.01 1	0.01 1	0.00 1	7.88 5
Pollution Indicative Spp Abund (%)	100.00	0.00	0.00	100.00	0.00 5
Pollution Indicative Spp Biom (%)	100.00 1	0.00 5	0.00 5	100.00 1	0.00
Pollution Sensitive Spp Abund (%)	0.00	0.00	0.00	0.00	62.07
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	0.00 1	0.00 1	96.25 5
Carnivore-Omnivore Abund (%)	0.00 1	100.00 5	0.00 1	0.00 1	3.45
Deep Deposit Feeder Abund (%)	0.00	0.00	100.00	0.00	34.48
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 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28611	28612	28613	28614	28615
Heteromastus filiformis			23		432
Macoma balthica					818
Micrura leidyi					23
Neanthes succinea		23			23
Tubificoides spp.					23
Total Abundance w/ Epifauna	0	23	23	0	1318
Total Abundance w/o Epifauna		23	23		1318
Number of Taxa w/ Epifauna	0	1	1	0	5
Number of Taxa w/o Epifauna	0	1	1	0	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28611	28612	28613	28614	28615
Heteromastus filiformis			0.0136		0.2499
Macoma balthica					7.5885
Micrura leidyi					0.0045
Neanthes succinea		0.0114			0.0386
Tubificoides spp.					0.0023
Total Biomass w/ Epifauna	0.0000	0.0114	0.0136	0.0000	7.8838
Total Biomass w/o Epifauna	0.0000	0.0114	0.0136	0.0000	7.8838

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28616	28617	28618	28619	28620
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Oligohaline	Oligohaline	Oligohaline	Freshwater
Date	08/26/21	09/14/21	08/26/21	08/26/21	08/26/21
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)	5.2	1.0	4.0	3.5	6.7
Salinity (ppt)	9.53	1.74	2.82	2.78	0.37
Temperature (C)	27.32	25.02	28.29	28.22	28.56
Dissolved Oxygen (mg/L)	1.5	11.1	6.0	4.7	6.3
Sediment Silt-Clay (%)	98.23	2.74	98.00	69.85	92.02
Total Carbon (%)	3.21	0.09	3.01	4.45	3.38
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.80	3.40	3.00	1.40	5.00
Condition	Meets Goal	Meets Goal	Meets Goal	Severely Degr.	Meets Goal
# Attributes Scored	5	5	4	5	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.46 1	2.47	2.16	1.33	1.57
Abundance (#/m2)	954 3	932 5	818 5	9565 1	1091 5
Biomass (g/m2)	7.73 5	29.47	0.44	1.42	90.60
Pollution Indicative Spp Abund (%)	2.38 5	12.20	0.00	10.45	2.08
Pollution Indicative Spp Biom (%)	3.41	0.02	0.00	1.52	0.00
Pollution Sensitive Spp Abund (%)	59.52	17.07	16.67	1.66	93.75
Pollution Sensitive Spp Biom (%)	93.65 5	98.34	23.32	11.19	96.27
Carnivore-Omnivore Abund (%)	4.76	4.88 1	13.89 1	7.13 1	8.33
Deep Deposit Feeder Abund (%)	33.33	2.44	30.56	75.30	0.00 5
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00 5
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.48	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	46.34 3	77.78 3	97.86 1	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	7.32 3	5.56 3	0.24 3	0.00
Tolerance Score	6.00	6.00 5	0.00	9.80 1	6.03 5
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	100.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28616	28617	28618	28619	28620
Americamysis almyra (Epi.)				23	
Balanus improvisus (Epi.)				114	
Boccardiella ligERICA				23	
Carinoma tremaphoros			23		
Coelotanypus spp.					23
Corbicula fluminea					23
Cyathura polita		45	91	136	68
Heteromastus filiformis	318		68		
Lepidactylus dytiscus		295			
Leptocheirus plumulosus		295			
Limnodrilus hoffmeisteri			386		23
Macoma balthica	545			45	
Macoma mitchelli		45	23	23	
Marenzelleria viridis		68	45	23	636
Melita nitida (Epi.)			23	45	
Mulinia lateralis	23				
Mytilopsis leucophaeata (Epi.)				909	
Neanthes succinea	45			545	
Polydora cornuta				659	
Rangia cuneata	23	45			318
Rhithropanopeus harrisi (Epi.)				182	
Streblospio benedicti		114		954	
Tubificoides spp.		23	182	7157	
Total Abundance w/ Epifauna	954	932	841	10837	1091
Total Abundance w/o Epifauna	954	932	818	9565	1091
Number of Taxa w/ Epifauna	5	8	8	14	6
Number of Taxa w/o Epifauna	5	8	7	9	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28616	28617	28618	28619	28620
Americamysis almyra (Epi.)				0.0023	
Balanus improvisus (Epi.)				0.2772	
Boccardiella ligERICA				0.0011	
Carinoma tremaphoros			0.0114		
Coelotanypus spp.					0.0023
Corbicula fluminea					3.3762
Cyathura polita		0.0454	0.0795	0.1204	0.0364
Heteromastus filiformis	0.2022		0.0136		
Lepidactylus dytiscus		0.0863			
Leptocheirus plumulosus		0.0568	0.0682		0.0045
Limnodrilus hoffmeisteri				0.0011	
Macoma balthica	7.1795				
Macoma mitchelli		0.3385	0.2408	0.0011	
Marenzelleria viridis		0.0341	0.0227	0.0386	0.4635
Melita nitida (Epi.)			0.0045	0.0023	
Mulinia lateralis	0.2636				
Mytilopsis leucophaeata (Epi.)				14.3977	
Neanthes succinea	0.0250			1.1269	
Polydora cornuta				0.0182	
Rangia cuneata	0.0613	28.9067			86.7154
Rhithropanopeus harrisi (Epi.)				0.7134	
Streblospio benedicti		0.0045		0.0204	
Tubificoides spp.		0.0023	0.0023	0.0932	
Total Biomass w/ Epifauna	7.7316	29.4747	0.4430	16.8139	90.5983
Total Biomass w/o Epifauna	7.7316	29.4747	0.4385	1.4211	90.5983

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

Site	28621	28622	28625	28626	28627
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Freshwater	Freshwater	Freshwater	Low Mesohaline	Low Mesohaline
Date	08/26/21	09/09/21	09/09/21	08/18/21	08/26/21
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)	3.0	4.9	1.2	6.1	1.4
Salinity (ppt)	0.13	0.10	0.09	9.84	7.22
Temperature (C)	28.52	22.85	22.13	27.68	30.26
Dissolved Oxygen (mg/L)	6.7	8.4	8.6	5.7	12.1
Sediment Silt-Clay (%)	69.14	3.45	31.46	97.42	3.62
Total Carbon (%)	2.74	0.11	1.29	3.30	0.11
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	4.50	3.00	2.00	3.80	2.60
Condition	Meets Goal	Meets Goal	Severely Degr.	Meets Goal	Degraded
# Attributes Scored	4	4	4	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.29	1.94	2.22	0.88	2.08
Abundance (#/m2)	1227	841	591	727	591
Biomass (g/m2)	73.70	20.91	0.12	6.49	0.80
Pollution Indicative Spp Abund (%)	29.63	72.97	69.23	0.00	3.85
Pollution Indicative Spp Biom (%)	0.02	0.17	10.48	0.00	7.98
Pollution Sensitive Spp Abund (%)	66.67	5.41	19.23	81.25	3.85
Pollution Sensitive Spp Biom (%)	92.67	0.09	38.10	92.63	1.14
Carnivore-Omnivore Abund (%)	11.11	0.00	15.38	9.38	3.85
Deep Deposit Feeder Abund (%)	25.93	81.08	65.38	9.38	3.85
TF Poll. Indicative Spp Abund (%)	25.93	72.97	65.38	0.00	0.00
Limnodrilus Abundance (%)	25.93	72.97	65.38	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	8.25	9.25	9.13	0.00	0.00
Tany./Chir. Abundance Ratio	100.00	0.00	100.00	0.00	0.00

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2021 (CRUISE 01:2021/2022) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	28621	28622	28625	28626	28627
Coelotanypus spp.	45		23		
Corbicula fluminea	23	114	68		
Cyathura polita	91		68		23
Heteromastus filiformis					23
Lepidactylus dytiscus					136
Leptocheirus plumulosus	23				204
Limnodrilus hoffmeisteri	91	227	227		
Macoma balthica				591	
Macoma mitchelli					182
Marenzelleria viridis	568	45	45		
Mulinia lateralis					23
Neanthes succinea				68	
Rangia cuneata	159				
Tubificidae imm w/o cap chaetae *	227	386	159		
Tubificoides spp.		68		68	
Total Abundance w/ Epifauna	1227	841	591	727	591
Total Abundance w/o Epifauna	1227	841	591	727	591
Number of Taxa w/ Epifauna	7	4	5	3	6
Number of Taxa w/o Epifauna	7	4	5	3	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	28621	28622	28625	28626	28627
Coelotanypus spp.	0.0045		0.0023		
Corbicula fluminea	5.3869	20.8547	0.0613		
Cyathura polita	0.0432		0.0227		0.0091
Heteromastus filiformis					0.0114
Lepidactylus dytiscus					0.0477
Leptocheirus plumulosus	0.0023				0.0295
Macoma balthica				6.0140	
Macoma mitchelli					0.6362
Marenzelleria viridis	0.2113	0.0182	0.0227		
Mulinia lateralis					0.0636
Neanthes succinea				0.4771	
Oligochaeta	0.0080	0.0364	0.0102		
Rangia cuneata	68.0441				
Tubificoides spp.		0.0023		0.0011	
Total Biomass w/ Epifauna	73.7003	20.9115	0.1193	6.4922	0.7975
Total Biomass w/o Epifauna	73.7003	20.9115	0.1193	6.4922	0.7975