



**VERSAR**

Final Report

# Chesapeake Bay Water Quality Monitoring Program

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

July 1984 – December 2014  
(Volume 2)

Prepared for

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

Prepared by

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Columbia, MD 21045

December 2015

**CHESAPEAKE BAY WATER QUALITY  
MONITORING PROGRAM**

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

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**DATA SUMMARY A**

**BENTHIC ENVIRONMENT AND COMMUNITY  
COMPOSITION AT FIXED SITES:  
SUMMER 2014**



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem		Station: 001		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 12:29:11	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 12.16		Temperature (C): 24.94	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 1.50		Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.99	3	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	560	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.41	1	Pollution Sensitive Species Abundance (%)	14.29	3
Carnivore-Omnivore Abundance (%)	35.71	5	Pollution Sensitive Species Biomass (%)	85.29	
Deep Deposit Feeder Abundance (%)	7.14				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	80		0.02800		
Gemma gemma	40		0.00200		
Glycinde solitaria	40		0.01200		
Haminoea solitaria	40		0.00200		
Heteromastus filiformis	40		0.01600		
Macoma balthica	40		0.33600		
Macoma mitchelli	120		0.00200		
Neanthes succinea	40		0.00200		
Paraonis fulgens	120		0.00800		
Total Abundance w/ Epi.	560				
Total Abundance w/o Epi.	560				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.40800		
Total Biomass w/o Epi.			0.40800		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem		Station: 001		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 12:29:11	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 12.16		Temperature (C): 24.94	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 1.50		Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.58	3	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	840	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	1.70	3	Pollution Sensitive Species Abundance (%)	4.76	1
Carnivore-Omnivore Abundance (%)	33.33	3	Pollution Sensitive Species Biomass (%)	0.12	
Deep Deposit Feeder Abundance (%)	4.76				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		40		0.00400	
Gemma gemma		120		0.00400	
Glycinde solitaria		40		0.00200	
Haminoea solitaria		40		0.00400	
Heteromastus filiformis		40		0.00400	
Laeonereis culveri		40		0.30800	
Macoma mitchelli		360		0.00400	
Micrura leidyi		80		1.35200	
Neanthes succinea		40		0.01600	
Paraonis fulgens		40		0.00200	
Stylochus ellipticus (Epi)		40		0.01600	
Total Abundance w/ Epi.		880			
Total Abundance w/o Epi.		840			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		10			
Total Biomass w/ Epi.				1.71600	
Total Biomass w/o Epi.				1.70000	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem		Station: 001		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 12:29:11	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 12.16		Temperature (C): 24.94	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 1.50		Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.79	3	Pollution Indicative Species Abundance (%)	3.45	5
Abundance (#/m2)	1160	3	Pollution Indicative Species Biomass (%)	3.80	
Biomass (g/m2)	0.32	1	Pollution Sensitive Species Abundance (%)	17.24	3
Carnivore-Omnivore Abundance (%)	27.59	3	Pollution Sensitive Species Biomass (%)	73.42	
Deep Deposit Feeder Abundance (%)	3.45				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	40		0.00400		
Gemma gemma	320		0.02000		
Glycinde solitaria	120		0.01600		
Haminoea solitaria	200		0.00800		
Heteromastus filiformis	40		0.00800		
Lepidactylus dytiscus	40		0.01200		
Macoma balthica	40		0.20400		
Macoma mitchelli	280		0.02000		
Mulinia lateralis	40		0.01200		
Phoronis spp.	40		0.01200		
Total Abundance w/ Epi.	1160				
Total Abundance w/o Epi.	1160				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			0.31600		
Total Biomass w/o Epi.			0.31600		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 11:27:43	
BOTTOM ENVIRONMENT					
Depth (m): 2.4		Salinity (ppt): 12.21		Temperature (C): 25.81	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 1.34		Total Carbon (%): 0.04	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.07	1	Pollution Indicative Species Abundance (%)	8.70	5
Abundance (#/m2)	920	1	Pollution Indicative Species Biomass (%)	6.00	
Biomass (g/m2)	0.20	1	Pollution Sensitive Species Abundance (%)	4.35	1
Carnivore-Omnivore Abundance (%)	43.48	5	Pollution Sensitive Species Biomass (%)	2.00	
Deep Deposit Feeder Abundance (%)	4.35				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	80		0.00400		
Glycinde solitaria	40		0.00400		
Heteromastus filiformis	40		0.02800		
Macoma mitchelli	320		0.01200		
Mulinia lateralis	80		0.01200		
Neanthes succinea	360		0.14000		
Total Abundance w/ Epi.	920				
Total Abundance w/o Epi.	920				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			0.20000		
Total Biomass w/o Epi.			0.20000		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 11:27:43	
BOTTOM ENVIRONMENT					
Depth (m): 2.4		Salinity (ppt): 12.21		Temperature (C): 25.81	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 1.34		Total Carbon (%): 0.04	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.81	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	320	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.24	1	Pollution Sensitive Species Abundance (%)	0.00	1
Carnivore-Omnivore Abundance (%)	62.50	5	Pollution Sensitive Species Biomass (%)	0.00	
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	120		0.00800		
Laeonereis culveri	40		0.08400		
Micrura leidyi	40		0.02800		
Neanthes succinea	120		0.12400		
Total Abundance w/ Epi.	320				
Total Abundance w/o Epi.	320				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.24400		
Total Biomass w/o Epi.			0.24400		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Calvert Cliffs Discharge		Station: 006		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 11:27:43	
BOTTOM ENVIRONMENT					
Depth (m): 2.4		Salinity (ppt): 12.21		Temperature (C): 25.81	
Dissolved Oxygen (mg/l): 7.2		Sediment Silt-Clay (%): 1.34		Total Carbon (%): 0.04	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.77	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	760	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.56	1	Pollution Sensitive Species Abundance (%)	21.05	3
Carnivore-Omnivore Abundance (%)	73.68	5	Pollution Sensitive Species Biomass (%)	15.77	
Deep Deposit Feeder Abundance (%)	5.26				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	40		0.00800		
Glycinde solitaria	80		0.00400		
Heteromastus filiformis	40		0.04400		
Macoma mitchelli	40		0.00200		
Marenzelleria viridis	80		0.08400		
Neanthes succinea	480		0.41600		
Total Abundance w/ Epi.	760				
Total Abundance w/o Epi.	760				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			0.55800		
Total Biomass w/o Epi.			0.55800		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem		Station: 015		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 9:59:27	
BOTTOM ENVIRONMENT					
Depth (m): 3.1		Salinity (ppt): 11.08		Temperature (C): 22.28	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 2.42		Total Carbon (%): 0.1	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.39	1	Pollution Indicative Species Abundance (%)	26.32	1
Abundance (#/m2)	760	1	Pollution Indicative Species Biomass (%)	29.18	
Biomass (g/m2)	3.58	5	Pollution Sensitive Species Abundance (%)	15.79	3
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	34.21	
Deep Deposit Feeder Abundance (%)	21.05				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Gemma gemma	80		0.00200		
Heteromastus filiformis	160		0.06000		
Macoma balthica	80		1.20800		
Macoma mitchelli	200		1.24800		
Marenzelleria viridis	40		0.01600		
Mulinia lateralis	200		1.04400		
Total Abundance w/ Epi.	760				
Total Abundance w/o Epi.	760				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	6				
Total Biomass w/ Epi.			3.57800		
Total Biomass w/o Epi.			3.57800		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem	Station: 015	Rep: 02
Gear: Modified Box Corer	Habitat: High Mesohaline Sand	Date: 15SEP14
	Sampled Area: 0.025 sq.m	Time: 9:59:27
BOTTOM ENVIRONMENT		
Depth (m): 3.1	Salinity (ppt): 11.08	Temperature (C): 22.28
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 2.42	Total Carbon (%): 0.1
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 1.67	Condition: Severely Degr.	# Attributes Scored: 6
	Value	Score
Shannon-Wiener Index	2.28	1
Abundance (#/m2)	880	1
Biomass (g/m2)	1.25	3
Carnivore-Omnivore Abundance (%)	4.55	1
Deep Deposit Feeder Abundance (%)	27.27	
	Pollution Indicative Species Abundance (%)	18.18
	Pollution Indicative Species Biomass (%)	79.23
	Pollution Sensitive Species Abundance (%)	4.55
	Pollution Sensitive Species Biomass (%)	1.60
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Gemma gemma	120	0.00800
Heteromastus filiformis	240	0.06000
Macoma mitchelli	280	0.00800
Marenzelleria viridis	40	0.02000
Micrura leidyi	40	0.16400
Mulinia lateralis	160	0.99200
Total Abundance w/ Epi.	880	
Total Abundance w/o Epi.	880	
Number of Taxa w/ Epi.	6	
Number of Taxa w/o Epi.	6	
Total Biomass w/ Epi.		1.25200
Total Biomass w/o Epi.		1.25200

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem	Station: 015	Rep: 03
Gear: Modified Box Corer	Habitat: High Mesohaline Sand	Date: 15SEP14
	Sampled Area: 0.025 sq.m	Time: 9:59:27
BOTTOM ENVIRONMENT		
Depth (m): 3.1	Salinity (ppt): 11.08	Temperature (C): 22.28
Dissolved Oxygen (mg/l): 7.0	Sediment Silt-Clay (%): 2.42	Total Carbon (%): 0.1
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6
	Value Score	Value Score
Shannon-Wiener Index	2.50 3	Pollution Indicative Species Abundance (%) 10.64 3
Abundance (#/m2)	1880 5	Pollution Indicative Species Biomass (%) 0.88
Biomass (g/m2)	4.57 5	Pollution Sensitive Species Abundance (%) 2.13 1
Carnivore-Omnivore Abundance (%)	10.64 1	Pollution Sensitive Species Biomass (%) 19.61
Deep Deposit Feeder Abundance (%)	23.40	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Ameroculodes species complex	40	0.00200
Carinoma tremaphoros	40	0.00400
Gemma gemma	240	0.00200
Heteromastus filiformis	400	0.29600
Macoma balthica	40	0.89600
Macoma mitchelli	720	0.05200
Micrura leidyi	120	3.27200
Mulinia lateralis	200	0.04000
Neanthes succinea	40	0.00400
Tubificoides spp.	40	0.00200
Total Abundance w/ Epi.	1880	
Total Abundance w/o Epi.	1880	
Number of Taxa w/ Epi.	10	
Number of Taxa w/o Epi.	10	
Total Biomass w/ Epi.		4.57000
Total Biomass w/o Epi.		4.57000



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:34:45	
BOTTOM ENVIRONMENT					
Depth (m): 5.7		Salinity (ppt): 12.38		Temperature (C): 25.23	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 87.25		Total Carbon (%): 3.48	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.00	1	Pollution Indicative Species Abundance (%)	50.00	1
Abundance (#/m2)	182	1	Pollution Indicative Species Biomass (%)	4.00	
Biomass (g/m2)	0.11	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	50.00		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	91		0.10908		
Streblospio benedicti	91		0.00455		
Total Abundance w/ Epi.	182				
Total Abundance w/o Epi.	182				
Number of Taxa w/ Epi.	2				
Number of Taxa w/o Epi.	2				
Total Biomass w/ Epi.			0.11363		
Total Biomass w/o Epi.			0.11363		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:34:45	
BOTTOM ENVIRONMENT					
Depth (m): 5.7		Salinity (ppt): 12.38		Temperature (C): 25.23	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 87.25		Total Carbon (%): 3.48	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.80		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.26	1	Pollution Indicative Species Abundance (%)	70.00	1
Abundance (#/m2)	909	3	Pollution Indicative Species Biomass (%)	3.31	
Biomass (g/m2)	0.27	1	Pollution Sensitive Species Abundance (%)	5.00	
Carnivore-Omnivore Abundance (%)	20.00		Pollution Sensitive Species Biomass (%)	66.12	3
Deep Deposit Feeder Abundance (%)	5.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	91		0.06363		
Macoma balthica	45		0.18180		
Micrura leidyi	91		0.01818		
Streblospio benedicti	636		0.00909		
Tubificoides spp.	45		0.00227		
Total Abundance w/ Epi.	909				
Total Abundance w/o Epi.	909				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.27497		
Total Biomass w/o Epi.			0.27497		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 022		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:34:45	
BOTTOM ENVIRONMENT					
Depth (m): 5.7		Salinity (ppt): 12.38		Temperature (C): 25.23	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 87.25		Total Carbon (%): 3.48	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.40		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.84	3	Pollution Indicative Species Abundance (%)	42.86	1
Abundance (#/m2)	318	1	Pollution Indicative Species Biomass (%)	2.94	
Biomass (g/m2)	0.31	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	14.29		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	42.86				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		45		0.12726	
Heteromastus filiformis		45		0.16817	
Littoridinops tenuipes (Epi)		45		0.01363	
Streblospio benedicti		136		0.00909	
Tubificoides spp.		91		0.00455	
Total Abundance w/ Epi.		364			
Total Abundance w/o Epi.		318			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.32270	
Total Biomass w/o Epi.				0.30906	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 023		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:41:38	
BOTTOM ENVIRONMENT					
Depth (m): 6.5		Salinity (ppt): 12.53		Temperature (C): 25.27	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 54.93		Total Carbon (%): 1.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.10	1	Pollution Indicative Species Abundance (%)	75.00	1
Abundance (#/m2)	2545	3	Pollution Indicative Species Biomass (%)	8.07	
Biomass (g/m2)	0.73	1	Pollution Sensitive Species Abundance (%)	3.57	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	90.06	5
Deep Deposit Feeder Abundance (%)	21.43				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Heteromastus filiformis		91		0.00909	
Macoma balthica		91		0.65903	
Streblospio benedicti		1909		0.05908	
Tubificoides spp.		455		0.00454	
Total Abundance w/ Epi.		2545			
Total Abundance w/o Epi.		2545			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.73175	
Total Biomass w/o Epi.				0.73175	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 023		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:41:38	
BOTTOM ENVIRONMENT					
Depth (m): 6.5		Salinity (ppt): 12.53		Temperature (C): 25.27	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 54.93		Total Carbon (%): 1.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.40		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.90	1	Pollution Indicative Species Abundance (%)	88.57	1
Abundance (#/m2)	3182	3	Pollution Indicative Species Biomass (%)	33.43	
Biomass (g/m2)	0.75	1	Pollution Sensitive Species Abundance (%)	1.43	
Carnivore-Omnivore Abundance (%)	4.29		Pollution Sensitive Species Biomass (%)	37.35	1
Deep Deposit Feeder Abundance (%)	7.14				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00227		
Eteone heteropoda	45		0.00227		
Macoma balthica	45		0.28179		
Mulinia lateralis	45		0.17725		
Neanthes succinea	45		0.21361		
Streblospio benedicti	2727		0.07272		
Tubificoides spp.	227		0.00454		
Total Abundance w/ Epi.	3182				
Total Abundance w/o Epi.	3182				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			0.75447		
Total Biomass w/o Epi.			0.75447		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 023		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:41:38	
BOTTOM ENVIRONMENT					
Depth (m): 6.5		Salinity (ppt): 12.53		Temperature (C): 25.27	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 54.93		Total Carbon (%): 1.57	
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 (%)	84.00	1
Abundance (#/m2)	1136	3	Pollution Indicative Species Biomass (%)	6.96	
Biomass (g/m2)	0.52	1	Pollution Sensitive Species Abundance (%)	4.00	
Carnivore-Omnivore Abundance (%)	4.00		Pollution Sensitive Species Biomass (%)	80.00	5
Deep Deposit Feeder Abundance (%)	8.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.05908		
Macoma balthica	45		0.41814		
Streblospio benedicti	954		0.03636		
Tubificoides spp.	91		0.00909		
Total Abundance w/ Epi.	1136				
Total Abundance w/o Epi.	1136				
Number of Taxa w/ Epi.	4				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.52268		
Total Biomass w/o Epi.			0.52268		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem	Station: 024	Rep: 01
Gear: Wildco Box Corer	Habitat: High Mesohaline Mud	Date: 19AUG14
	Sampled Area: 0.022 sq.m	Time: 18:00:57
BOTTOM ENVIRONMENT		
Depth (m): 6.5	Salinity (ppt): 10.10	Temperature (C): 25.03
Dissolved Oxygen (mg/l): 1.5	Sediment Silt-Clay (%): 75.82	Total Carbon (%): 1.88
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.67	Condition: Meets Goal	# Attributes Scored: 6
	Value Score	Value Score
Shannon-Wiener Index	2.13 3	Pollution Indicative Species Abundance (%) 0.00
Abundance (#/m2)	2863 3	Pollution Indicative Species Biomass (%) 0.00 5
Biomass (g/m2)	18.35 3	Pollution Sensitive Species Abundance (%) 31.75
Carnivore-Omnivore Abundance (%)	19.05 3	Pollution Sensitive Species Biomass (%) 89.79 5
Deep Deposit Feeder Abundance (%)	11.11	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Carinoma tremaphoros	136	0.00909
Heteromastus filiformis	227	0.05000
Leptocheirus plumulosus	1091	0.38178
Macoma balthica	909	16.47563
Micrura leidyi	45	0.00455
Neanthes succinea	364	1.42259
Tubificoides spp.	91	0.00454
Total Abundance w/ Epi.	2863	
Total Abundance w/o Epi.	2863	
Number of Taxa w/ Epi.	7	
Number of Taxa w/o Epi.	7	
Total Biomass w/ Epi.		18.34817
Total Biomass w/o Epi.		18.34817

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem		Station: 024		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 19AUG14	
		Sampled Area: 0.022 sq.m		Time: 18:00:57	
BOTTOM ENVIRONMENT					
Depth (m): 6.5		Salinity (ppt): 10.10		Temperature (C): 25.03	
Dissolved Oxygen (mg/l): 1.5		Sediment Silt-Clay (%): 75.82		Total Carbon (%): 1.88	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.03	3	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	2000	5	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	22.56	3	Pollution Sensitive Species Abundance (%)	38.64	
Carnivore-Omnivore Abundance (%)	25.00	5	Pollution Sensitive Species Biomass (%)	97.56	5
Deep Deposit Feeder Abundance (%)	15.91				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00909		
Heteromastus filiformis	318		0.09999		
Leptocheirus plumulosus	409		0.23634		
Macoma balthica	773		22.00689		
Melita nitida (Epi)	45		0.00455		
Neanthes succinea	455		0.20453		
Total Abundance w/ Epi.	2045				
Total Abundance w/o Epi.	2000				
Number of Taxa w/ Epi.	6				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			22.56138		
Total Biomass w/o Epi.			22.55683		



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Mainstem		Station: 024		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 19AUG14	
		Sampled Area: 0.022 sq.m		Time: 18:00:57	
BOTTOM ENVIRONMENT					
Depth (m): 6.5		Salinity (ppt): 10.10		Temperature (C): 25.03	
Dissolved Oxygen (mg/l): 1.5		Sediment Silt-Clay (%): 75.82		Total Carbon (%): 1.88	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.40	3	Pollution Indicative Species Abundance (%)	4.08	
Abundance (#/m2)	2227	5	Pollution Indicative Species Biomass (%)	0.35	5
Biomass (g/m2)	5.14	5	Pollution Sensitive Species Abundance (%)	26.53	
Carnivore-Omnivore Abundance (%)	34.69	5	Pollution Sensitive Species Biomass (%)	76.19	5
Deep Deposit Feeder Abundance (%)	8.16				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	273		0.18635		
Eteone heteropoda	91		0.01818		
Heteromastus filiformis	136		0.01818		
Leptocheirus plumulosus	682		0.28179		
Macoma balthica	591		3.91325		
Neanthes succinea	409		0.71357		
Tubificoides spp.	45		0.00454		
Total Abundance w/ Epi.	2227				
Total Abundance w/o Epi.	2227				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			5.13585		
Total Biomass w/o Epi.			5.13585		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Western Shore		Station: 026		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 19AUG14	
		Sampled Area: 0.022 sq.m		Time: 15:51:08	
BOTTOM ENVIRONMENT					
Depth (m): 4.4		Salinity (ppt): 4.25		Temperature (C): 25.07	
Dissolved Oxygen (mg/l): 7.3		Sediment Silt-Clay (%): 91.01		Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.39	3	Pollution Indicative Species Abundance (%)	4.55	5
Abundance (#/m2)	1000	3	Pollution Indicative Species Biomass (%)	0.20	
Biomass (g/m2)	2.30	3	Pollution Sensitive Species Abundance (%)	63.64	
Carnivore-Omnivore Abundance (%)	45.45		Pollution Sensitive Species Biomass (%)	82.45	5
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00455		
Coelotanypus spp.	45		0.00455		
Cyathura polita	364		0.14089		
Leptocheirus plumulosus	182		0.02727		
Macoma mitchelli	91		0.36815		
Marenzelleria viridis	227		0.29543		
Rangia cuneata	45		1.46349		
Total Abundance w/ Epi.	1000				
Total Abundance w/o Epi.	1000				
Number of Taxa w/ Epi.	7				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			2.30431		
Total Biomass w/o Epi.			2.30431		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Western Shore		Station: 026		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 19AUG14	
		Sampled Area: 0.022 sq.m		Time: 15:51:08	
BOTTOM ENVIRONMENT					
Depth (m): 4.4		Salinity (ppt): 4.25		Temperature (C): 25.07	
Dissolved Oxygen (mg/l): 7.3		Sediment Silt-Clay (%): 91.01		Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.19	3	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1591	5	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	44.66	1	Pollution Sensitive Species Abundance (%)	71.43	
Carnivore-Omnivore Abundance (%)	22.86		Pollution Sensitive Species Biomass (%)	99.80	5
Deep Deposit Feeder Abundance (%)	17.14				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		45		0.00227	
Cyathura polita		364		0.06363	
Gammarus daiberi (Epi)		91		0.02727	
Heteromastus filiformis		91		0.02273	
Leptocheirus plumulosus		136		0.06363	
Littoridinops tenuipes (Epi)		45		0.01364	
Marenzelleria viridis		727		0.79992	
Melita nitida (Epi)		45		0.00227	
Mytilopsis leucophaeata (Epi)		91		0.01363	
Rangia cuneata		45		43.70927	
Rhithropanopeus harrisi (Epi)		45		0.02727	
Tubificoides spp.		182		0.00227	
Total Abundance w/ Epi.		1909			
Total Abundance w/o Epi.		1591			
Number of Taxa w/ Epi.		12			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				44.74780	
Total Biomass w/o Epi.				44.66372	

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Western Shore		Station: 026		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 19AUG14	
		Sampled Area: 0.022 sq.m		Time: 15:51:08	
BOTTOM ENVIRONMENT					
Depth (m): 4.4		Salinity (ppt): 4.25		Temperature (C): 25.07	
Dissolved Oxygen (mg/l): 7.3		Sediment Silt-Clay (%): 91.01		Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.55	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	545	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.37	1	Pollution Sensitive Species Abundance (%)	75.00	
Carnivore-Omnivore Abundance (%)	41.67		Pollution Sensitive Species Biomass (%)	91.46	5
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Cyathura polita	227		0.29088		
Leptocheirus plumulosus	136		0.03181		
Marenzelleria viridis	182		0.04999		
Total Abundance w/ Epi.	545				
Total Abundance w/o Epi.	545				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.37269		
Total Biomass w/o Epi.			0.37269		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029	Rep: 01
Gear: Wildco Box Corer		Habitat: Oligohaline	Date: 25AUG14
		Sampled Area: 0.022 sq.m	Time: 12:42:34
BOTTOM ENVIRONMENT			
Depth (m): 6.0	Salinity (ppt): 1.08	Temperature (C): 25.17	
Dissolved Oxygen (mg/l): 6.9	Sediment Silt-Clay (%): 46.97	Total Carbon (%): 1.54	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.		# Attributes Scored: 6
	Value	Score	Value Score
Shannon-Wiener Index	1.80		Oligohaline Pollution Indicative Spp. Abund. 20.69 5
Abundance (#/m2)	7908	1	Tolerance Score 6.94 3
Deep Deposit Feeder Abundance (%)	19.54		Oligohaline Pollution Sensitive Spp. Abund. 0.00 1
Carnivore-Omnivore Abundance (%)	4.02	1	Tanypodinae/Chironomidae Abundance Ratio 100.00 1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Coelotanypus spp.	91		0.00227
Cyathura polita	227		0.05454
Gammarus daiberi (Epi)	136		0.00227
Hobsonia florida	45		0.02273
Limnodrilus hoffmeisteri	636		
Marenzelleria viridis	1364		0.72720
Oligochaeta			0.12726
Rangia cuneata	4636		42.20942
Tubificidae imm w/o cap chaetae *	909		
Total Abundance w/ Epi.	8045		
Total Abundance w/o Epi.	7908		
Number of Taxa w/ Epi.	7		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			43.14569
Total Biomass w/o Epi.			43.14341

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029	Rep: 02
Gear: Wildco Box Corer		Habitat: Oligohaline	Date: 25AUG14
		Sampled Area: 0.022 sq.m	Time: 12:42:34
BOTTOM ENVIRONMENT			
Depth (m): 6.0		Salinity (ppt): 1.08	Temperature (C): 25.17
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 46.97	Total Carbon (%): 1.54
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00		Condition: Severely Degr.	# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.55		Oligohaline Pollution Indicative Spp. Abund. 17.88
Abundance (#/m2)	12453	1	Tolerance Score 6.74
Deep Deposit Feeder Abundance (%)	16.79		Oligohaline Pollution Sensitive Spp. Abund. 0.00
Carnivore-Omnivore Abundance (%)	5.47	1	Tanypodinae/Chironomidae Abundance Ratio 66.67
			1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Coelotanypus spp.	91	0.00455	
Cryptochironomus spp.	45	0.00227	
Cyathura polita	545	0.27725	
Gammarus daiberi (Epi)	500	0.02273	
Limnodrilus hoffmeisteri	636		
Marenzelleria viridis	1000	0.84537	
Oligochaeta		0.12726	
Rangia cuneata	8636	104.37592	
Streblospio benedicti	45	0.00454	
Tubificidae imm w/o cap chaetae *	1454		
Total Abundance w/ Epi.	12953		
Total Abundance w/o Epi.	12453		
Number of Taxa w/ Epi.	8		
Number of Taxa w/o Epi.	7		
Total Biomass w/ Epi.		105.65989	
Total Biomass w/o Epi.		105.63716	

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 029		Rep: 03	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 25AUG14	
		Sampled Area: 0.022 sq.m		Time: 12:42:34	
BOTTOM ENVIRONMENT					
Depth (m): 6.0		Salinity (ppt): 1.08		Temperature (C): 25.17	
Dissolved Oxygen (mg/l): 6.9		Sediment Silt-Clay (%): 46.97		Total Carbon (%): 1.54	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.67		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.34		Oligohaline Pollution Indicative Spp. Abund.	44.16	3
Abundance (#/m2)	10499	1	Tolerance Score	7.90	3
Deep Deposit Feeder Abundance (%)	42.42		Oligohaline Pollution Sensitive Spp. Abund.	0.00	1
Carnivore-Omnivore Abundance (%)	7.36	1	Tanypodinae/Chironomidae Abundance Ratio	80.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Chironomidae			0.00227		
Coelotanypus spp.	136		0.00454		
Cryptochironomus spp.	45				
Cyathura polita	545		0.17725		
Gammarus daiberi (Epi)	136		0.00909		
Limnodrilus hoffmeisteri	1500				
Marenzelleria viridis	1273		1.30442		
Oecetis inconspicua (Epi)	45		0.00454		
Oligochaeta			0.39413		
Procladius spp.	45				
Rangia cuneata	4000		93.18159		
Tubificidae imm w/o cap chaetae *	2591				
Tubificoides spp.	364		0.00909		
Total Abundance w/ Epi.	10681				
Total Abundance w/o Epi.	10499				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	8				
Total Biomass w/ Epi.			95.08693		
Total Biomass w/o Epi.			95.07329		

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 036	Rep: 01
Gear: Wildco Box Corer		Habitat: Tidal Freshwater	Date: 10SEP14
		Sampled Area: 0.022 sq.m	Time: 9:49:55
BOTTOM ENVIRONMENT			
Depth (m): 2.5	Salinity (ppt): 0.21	Temperature (C): 25.29	
Dissolved Oxygen (mg/l): 6.3	Sediment Silt-Clay (%): 75.42	Total Carbon (%): 2.16	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.00	Condition: Severely Degr.		# Attributes Scored: 3
	Value	Score	Value Score
Shannon-Wiener Index	2.16		76.11 3
Abundance (#/m2)	11226	1	T.F. Pollution Indicative Spp. Abund. (%)
Deep Deposit Feeder Abundance (%)	89.07	3	Tolerance Score
Carnivore-Omnivore Abundance (%)	4.45		9.58 1
			Limnodrilus Abundance (%)
			76.11
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)	Biomass (g/m2)	
Branchiura sowerbyi	636	1.10898	
Chironomidae		0.00227	
Chironomus spp.	91		
Coelotanypus spp.	91	0.01364	
Cryptochironomus spp.	182		
Dicrotendipes spp.	91		
Elliptio complanata	45	88.39116	
Gammarus daiberi (Epi)	45	0.00909	
Harnischia spp.	45		
Hirudinea (Epi)	91	0.03636	
Limnodrilus hoffmeisteri	2409		
Musculium transversum	409	0.06363	
Oligochaeta		0.62031	
Pisidium spp.	273	0.03636	
Quistadrilus multisetosus	273		
Tubificidae imm w cap chaetae	545		
Tubificidae imm w/o cap chaetae *	6136		
Total Abundance w/ Epi.	11363		
Total Abundance w/o Epi.	11226		
Number of Taxa w/ Epi.	14		
Number of Taxa w/o Epi.	12		
Total Biomass w/ Epi.		90.28180	
Total Biomass w/o Epi.		90.23635	

\*Indicates taxa is skipped in taxon counts



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 036		Rep: 02	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 10SEP14	
		Sampled Area: 0.022 sq.m		Time: 9:49:55	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 0.21		Temperature (C): 25.29	
Dissolved Oxygen (mg/l): 6.3		Sediment Silt-Clay (%): 75.42		Total Carbon (%): 2.16	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
		Value	Score	Value	Score
Shannon-Wiener Index		1.83		79.84	3
Abundance (#/m2)		11726	1	Tolerance Score	9.62
Deep Deposit Feeder Abundance (%)		90.70	3	Limnodrilus Abundance (%)	82.17
Carnivore-Omnivore Abundance (%)		3.10			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Branchiura sowerbyi		455		0.50904	
Chironomidae				0.00227	
Coelotanypus spp.		273		0.04090	
Corbicula fluminea		136		0.37269	
Cryptochironomus spp.		45			
Goniobasis virginica (Epi)		45		0.10908	
Limnodrilus cervix		273			
Limnodrilus hoffmeisteri		1591			
Musculium transversum		364		0.02273	
Oligochaeta				0.76236	
Pisidium spp.		227		0.05454	
Polypedilum halterale group		45			
Quistadrilus multisetosus		545			
Tubificidae imm w/o cap chaetae *		7772			
Total Abundance w/ Epi.		11772			
Total Abundance w/o Epi.		11726			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		10			
Total Biomass w/ Epi.				1.87361	
Total Biomass w/o Epi.				1.76453	

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 036		Rep: 03	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 10SEP14	
		Sampled Area: 0.022 sq.m		Time: 9:49:55	
BOTTOM ENVIRONMENT					
Depth (m): 2.5		Salinity (ppt): 0.21		Temperature (C): 25.29	
Dissolved Oxygen (mg/l): 6.3		Sediment Silt-Clay (%): 75.42		Total Carbon (%): 2.16	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 3	
		Value	Score	Value	Score
Shannon-Wiener Index		1.85		72.48	3
Abundance (#/m2)		6772	1	Tolerance Score	9.43
Deep Deposit Feeder Abundance (%)		79.87	3	Limnodrilus Abundance (%)	72.48
Carnivore-Omnivore Abundance (%)		8.72			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Branchiura sowerbyi		500		0.84083	
Chironomidae				0.00227	
Chironomus spp.		91			
Coelotanypus spp.		318		0.01363	
Cryptochironomus spp.		91			
Gammarus daiberi (Epi)		45		0.02727	
Goniobasis virginica (Epi)		45		0.21816	
Limnodrilus hoffmeisteri		409			
Musculium transversum		455		0.03636	
Oligochaeta				0.28979	
Pisidium spp.		318		0.05000	
Procladius spp.		45			
Stictochironomus caffarius		45			
Tubificidae imm w/o cap chaetae *		4500			
Total Abundance w/ Epi.		6863			
Total Abundance w/o Epi.		6772			
Number of Taxa w/ Epi.		11			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				1.47831	
Total Biomass w/o Epi.				1.23288	

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 040		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 03SEP14	
		Sampled Area: 0.022 sq.m		Time: 13:33:31	
BOTTOM ENVIRONMENT					
Depth (m): 7.6		Salinity (ppt): 3.00		Temperature (C): 27.46	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 90.00		Total Carbon (%): 2.87	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
		Value	Score	Value	Score
Shannon-Wiener Index		2.44		72.22	3
Abundance (#/m2)		818	5	Tolerance Score	7.65
Deep Deposit Feeder Abundance (%)		16.67		Oligohaline Pollution Sensitive Spp. Abund.	0.00
Carnivore-Omnivore Abundance (%)		22.22	3	Tanypodinae/Chironomidae Abundance Ratio	100.00
					1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		45		0.01364	
Cyathura polita		136		0.04545	
Leptocheirus plumulosus		318		0.03181	
Littoridinops tenuipes (Epi)		45		0.00455	
Procladius spp.		45		0.00227	
Rangia cuneata		45		34.93287	
Streblospio benedicti		91		0.00454	
Tubificoides spp.		136		0.03182	
Total Abundance w/ Epi.		864			
Total Abundance w/o Epi.		818			
Number of Taxa w/ Epi.		8			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				35.06695	
Total Biomass w/o Epi.				35.06240	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 040		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 03SEP14	
		Sampled Area: 0.022 sq.m		Time: 13:33:31	
BOTTOM ENVIRONMENT					
Depth (m): 7.6		Salinity (ppt): 3.00		Temperature (C): 27.46	
Dissolved Oxygen (mg/l): 6.1		Sediment Silt-Clay (%): 90.00		Total Carbon (%): 2.87	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.69		Oligohaline Pollution Indicative Spp. Abund.	73.53	3
Abundance (#/m2)	1545	5	Tolerance Score	6.00	3
Deep Deposit Feeder Abundance (%)	2.94		Oligohaline Pollution Sensitive Spp. Abund.	17.65	3
Carnivore-Omnivore Abundance (%)	2.94	1	Tanypodinae/Chironomidae Abundance Ratio	0.00	
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	45		0.00455		
Cyathura polita	45		0.04091		
Gammarus daiberi (Epi)	273		0.04091		
Leptocheirus plumulosus	1000		0.18180		
Marenzelleria viridis	273		0.26815		
Melita nitida (Epi)	91		0.00909		
Rangia cuneata	45		0.00909		
Streblospio benedicti	91		0.00909		
Tubificoides spp.	45		0.00455		
Total Abundance w/ Epi.	1909				
Total Abundance w/o Epi.	1545				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			0.56813		
Total Biomass w/o Epi.			0.51813		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River	Station: 040	Rep: 03
Gear: Wildco Box Corer	Habitat: Oligohaline	Date: 03SEP14
	Sampled Area: 0.022 sq.m	Time: 13:33:31
BOTTOM ENVIRONMENT		
Depth (m): 7.6	Salinity (ppt): 3.00	Temperature (C): 27.46
Dissolved Oxygen (mg/l): 6.1	Sediment Silt-Clay (%): 90.00	Total Carbon (%): 2.87
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.00	Condition: Meets Goal	# Attributes Scored: 6
	Value	Score
Shannon-Wiener Index	2.02	3
Abundance (#/m2)	773	5
Deep Deposit Feeder Abundance (%)	0.00	3
Carnivore-Omnivore Abundance (%)	35.29	5
	Oligohaline Pollution Indicative Spp. Abund.	47.06
	Tolerance Score	9.30
	Oligohaline Pollution Sensitive Spp. Abund.	23.53
	Tanypodinae/Chironomidae Abundance Ratio	100.00
	Value	Score
	47.06	3
	9.30	1
	23.53	3
	100.00	1
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Cyathura polita	227	0.02727
Gammarus daiberi (Epi)	136	0.01818
Leptocheirus plumulosus	273	0.05000
Littoridinops tenuipes (Epi)	45	0.00909
Marenzelleria viridis	182	0.32724
Procladius spp.	45	0.00227
Streblospio benedicti	45	0.00455
Total Abundance w/ Epi.	954	
Total Abundance w/o Epi.	773	
Number of Taxa w/ Epi.	7	
Number of Taxa w/o Epi.	5	
Total Biomass w/ Epi.		0.43859
Total Biomass w/o Epi.		0.41132

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.025 sq.m		Time: 12:01:19	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 5.71		Temperature (C): 27.81	
Dissolved Oxygen (mg/l): 5.3		Sediment Silt-Clay (%): 3.57		Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.20	3	Pollution Indicative Species Abundance (%)	10.81	3
Abundance (#/m2)	2960	3	Pollution Indicative Species Biomass (%)	2.08	
Biomass (g/m2)	0.96	1	Pollution Sensitive Species Abundance (%)	54.05	
Carnivore-Omnivore Abundance (%)	10.81		Pollution Sensitive Species Biomass (%)	70.83	3
Deep Deposit Feeder Abundance (%)	1.35				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Apocorophium lacustre	(Epi)	40		0.00800	
Cyathura polita		160		0.00400	
Eteone heteropoda		160		0.01600	
Heteromastus filiformis		40		0.06400	
Leptocheirus plumulosus		680		0.12000	
Macoma mitchelli		320		0.07600	
Marenzelleria viridis		1400		0.66000	
Mytilopsis leucophaeata	(Epi)	80		0.02800	
Rangia cuneata		40		0.01600	
Streblospio benedicti		160		0.00400	
Total Abundance w/ Epi.		3080			
Total Abundance w/o Epi.		2960			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				0.99600	
Total Biomass w/o Epi.				0.96000	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Station: 043		Rep: 02
Watershed: Potomac River	Habitat: Low Mesohaline	Date: 03SEP14
Gear: Modified Box Corer	Sampled Area: 0.025 sq.m	Time: 12:01:19
BOTTOM ENVIRONMENT		
Depth (m): 2.6	Salinity (ppt): 5.71	Temperature (C): 27.81
Dissolved Oxygen (mg/l): 5.3	Sediment Silt-Clay (%): 3.57	Total Carbon (%): 0.13
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.40	Condition: Meets Goal	# Attributes Scored: 5
	Value Score	Value Score
Shannon-Wiener Index	2.33 3	Pollution Indicative Species Abundance (%) 7.89 5
Abundance (#/m2)	3040 3	Pollution Indicative Species Biomass (%) 1.63
Biomass (g/m2)	1.47 3	Pollution Sensitive Species Abundance (%) 51.32
Carnivore-Omnivore Abundance (%)	9.21	Pollution Sensitive Species Biomass (%) 53.13 3
Deep Deposit Feeder Abundance (%)	15.79	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Cyathura polita	40	0.00400
Eteone heteropoda	200	0.02000
Heteromastus filiformis	80	0.15200
Leptocheirus plumulosus	480	0.06800
Macoma mitchelli	240	0.41600
Marenzelleria viridis	1480	0.75600
Mytilopsis leucophaeata (Epi)	40	0.01600
Neanthes succinea	40	0.01200
Rangia cuneata	40	0.02000
Streblospio benedicti	40	0.00400
Tubificoides spp.	400	0.01600
Total Abundance w/ Epi.	3080	
Total Abundance w/o Epi.	3040	
Number of Taxa w/ Epi.	11	
Number of Taxa w/o Epi.	10	
Total Biomass w/ Epi.		1.48400
Total Biomass w/o Epi.		1.46800

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 043		Rep: 03	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.025 sq.m		Time: 12:01:19	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 5.71		Temperature (C): 27.81	
Dissolved Oxygen (mg/l): 5.3		Sediment Silt-Clay (%): 3.57		Total Carbon (%): 0.13	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.22	3	Pollution Indicative Species Abundance (%)	16.00	3
Abundance (#/m2)	2000	5	Pollution Indicative Species Biomass (%)	2.10	
Biomass (g/m2)	0.57	1	Pollution Sensitive Species Abundance (%)	44.00	
Carnivore-Omnivore Abundance (%)	10.00		Pollution Sensitive Species Biomass (%)	50.35	3
Deep Deposit Feeder Abundance (%)	2.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Eteone heteropoda		160		0.00800	
Heteromastus filiformis		40		0.13200	
Leptocheirus plumulosus		360		0.09600	
Macoma mitchelli		360		0.03200	
Marenzelleria viridis		880		0.28800	
Melita nitida (Epi)		80		0.01600	
Mytilopsis leucophaeata (Epi)		120		0.05200	
Neanthes succinea		40		0.01200	
Streblospio benedicti		160		0.00400	
Total Abundance w/ Epi.		2200			
Total Abundance w/o Epi.		2000			
Number of Taxa w/ Epi.		9			
Number of Taxa w/o Epi.		7			
Total Biomass w/ Epi.				0.64000	
Total Biomass w/o Epi.				0.57200	



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 044		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.022 sq.m		Time: 12:30:50	
BOTTOM ENVIRONMENT					
Depth (m): 12.7		Salinity (ppt): 7.85		Temperature (C): 26.01	
Dissolved Oxygen (mg/l): 1.9		Sediment Silt-Clay (%): 90.20		Total Carbon (%): 2.04	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.73	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1454	3	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	0.32	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	6.25		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	6.25				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00455		
Heteromastus filiformis	91		0.05000		
Leptocheirus plumulosus	1273		0.17271		
Melita nitida (Epi)	182		0.00909		
Neanthes succinea	45		0.09090		
Total Abundance w/ Epi.	1636				
Total Abundance w/o Epi.	1454				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			0.32724		
Total Biomass w/o Epi.			0.31815		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 044		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.022 sq.m		Time: 12:30:50	
BOTTOM ENVIRONMENT					
Depth (m): 12.7		Salinity (ppt): 7.85		Temperature (C): 26.01	
Dissolved Oxygen (mg/l): 1.9		Sediment Silt-Clay (%): 90.20		Total Carbon (%): 2.04	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.62	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	1818	5	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	1.18	3	Pollution Sensitive Species Abundance (%)	2.50	
Carnivore-Omnivore Abundance (%)	5.00		Pollution Sensitive Species Biomass (%)	64.48	3
Deep Deposit Feeder Abundance (%)	2.50				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Heteromastus filiformis	45		0.00455		
Leptocheirus plumulosus	1636		0.40450		
Macoma balthica	45		0.75901		
Melita nitida (Epi)	409		0.03636		
Neanthes succinea	91		0.00909		
Total Abundance w/ Epi.	2227				
Total Abundance w/o Epi.	1818				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	4				
Total Biomass w/ Epi.			1.21351		
Total Biomass w/o Epi.			1.17715		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 044		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.022 sq.m		Time: 12:30:50	
BOTTOM ENVIRONMENT					
Depth (m): 12.7		Salinity (ppt): 7.85		Temperature (C): 26.01	
Dissolved Oxygen (mg/l): 1.9		Sediment Silt-Clay (%): 90.20		Total Carbon (%): 2.04	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.81	1	Pollution Indicative Species Abundance (%)	2.63	5
Abundance (#/m2)	1727	5	Pollution Indicative Species Biomass (%)	0.34	
Biomass (g/m2)	1.35	3	Pollution Sensitive Species Abundance (%)	2.63	
Carnivore-Omnivore Abundance (%)	7.89		Pollution Sensitive Species Biomass (%)	71.28	3
Deep Deposit Feeder Abundance (%)	2.63				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		91		0.01364	
Eteone heteropoda		45		0.00454	
Heteromastus filiformis		45		0.00909	
Leptocheirus plumulosus		1500		0.35906	
Macoma balthica		45		0.95900	
Melita nitida (Epi)		455		0.02727	
Total Abundance w/ Epi.		2182			
Total Abundance w/o Epi.		1727			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				1.37259	
Total Biomass w/o Epi.				1.34532	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 01	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.025 sq.m		Time: 11:07:37	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 5.69		Temperature (C): 29.29	
Dissolved Oxygen (mg/l): 5.2		Sediment Silt-Clay (%): 5.51		Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.74	5	Pollution Indicative Species Abundance (%)	3.19	5
Abundance (#/m2)	3760	3	Pollution Indicative Species Biomass (%)	1.76	
Biomass (g/m2)	2.39	3	Pollution Sensitive Species Abundance (%)	18.09	
Carnivore-Omnivore Abundance (%)	5.32		Pollution Sensitive Species Biomass (%)	56.33	3
Deep Deposit Feeder Abundance (%)	26.60				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Edotea triloba (Epi)		40		0.00400	
Eteone heteropoda		80		0.04000	
Heteromastus filiformis		200		0.17200	
Laeonereis culveri		40		0.04000	
Leptocheirus plumulosus		1120		0.17200	
Littoridinops tenuipes (Epi)		160		0.00400	
Macoma balthica		40		1.02800	
Macoma mitchelli		760		0.04000	
Marenzelleria viridis		400		0.10400	
Micrura leidyi		40		0.52000	
Mytilopsis leucophaeata (Epi)		40		0.00800	
Neanthes succinea		40		0.04400	
Rangia cuneata		240		0.21200	
Tubificidae imm w/o cap chaetae		40		0.00200	
Tubificoides spp.		760		0.01200	
Total Abundance w/ Epi.		4000			
Total Abundance w/o Epi.		3760			
Number of Taxa w/ Epi.		15			
Number of Taxa w/o Epi.		12			
Total Biomass w/ Epi.				2.40200	
Total Biomass w/o Epi.				2.38600	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 02	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.025 sq.m		Time: 11:07:37	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 5.69		Temperature (C): 29.29	
Dissolved Oxygen (mg/l): 5.2		Sediment Silt-Clay (%): 5.51		Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.47	3	Pollution Indicative Species Abundance (%)	2.33	5
Abundance (#/m2)	3440	3	Pollution Indicative Species Biomass (%)	0.44	
Biomass (g/m2)	1.83	3	Pollution Sensitive Species Abundance (%)	43.02	
Carnivore-Omnivore Abundance (%)	4.65		Pollution Sensitive Species Biomass (%)	48.09	3
Deep Deposit Feeder Abundance (%)	16.28				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Cyathura polita		40		0.05200	
Edotea triloba (Epi)		40		0.00200	
Eteone heteropoda		80		0.00800	
Heteromastus filiformis		480		0.58400	
Laeonereis culveri		40		0.04800	
Leptocheirus plumulosus		840		0.12800	
Macoma mitchelli		440		0.18000	
Marenzelleria viridis		1200		0.43200	
Melita nitida (Epi)		120		0.00400	
Mytilopsis leucophaeata (Epi)		40		0.00200	
Rangia cuneata		240		0.39600	
Tubificoides spp.		80		0.00200	
Total Abundance w/ Epi.		3640			
Total Abundance w/o Epi.		3440			
Number of Taxa w/ Epi.		12			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				1.83800	
Total Biomass w/o Epi.				1.83000	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Morgantown Discharge		Station: 047		Rep: 03	
Gear: Modified Box Corer		Habitat: Low Mesohaline		Date: 03SEP14	
		Sampled Area: 0.025 sq.m		Time: 11:07:37	
BOTTOM ENVIRONMENT					
Depth (m): 2.6		Salinity (ppt): 5.69		Temperature (C): 29.29	
Dissolved Oxygen (mg/l): 5.2		Sediment Silt-Clay (%): 5.51		Total Carbon (%): 0.21	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.80		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.55	5	Pollution Indicative Species Abundance (%)	7.41	5
Abundance (#/m2)	3240	3	Pollution Indicative Species Biomass (%)	1.28	
Biomass (g/m2)	2.81	3	Pollution Sensitive Species Abundance (%)	28.40	
Carnivore-Omnivore Abundance (%)	4.94		Pollution Sensitive Species Biomass (%)	72.12	3
Deep Deposit Feeder Abundance (%)	12.35				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Edotea triloba	(Epi)	120		0.00800	
Eteone heteropoda		160		0.02800	
Heteromastus filiformis		280		0.67200	
Leptocheirus plumulosus		840		0.04400	
Littoridinops tenuipes	(Epi)	160		0.00400	
Macoma balthica		40		1.49200	
Macoma mitchelli		840		0.02800	
Marenzelleria viridis		800		0.53200	
Mytilopsis leucophaeata	(Epi)	80		0.00400	
Rangia cuneata		80		0.00400	
Streblospio benedicti		80		0.00800	
Tubificoides spp.		120		0.00400	
Total Abundance w/ Epi.		3600			
Total Abundance w/o Epi.		3240			
Number of Taxa w/ Epi.		12			
Number of Taxa w/o Epi.		9			
Total Biomass w/ Epi.				2.82800	
Total Biomass w/o Epi.				2.81200	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 01	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 15:58:14	
BOTTOM ENVIRONMENT					
Depth (m): 3.0		Salinity (ppt): 6.47		Temperature (C): 24.46	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 2.69		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.98	3	Pollution Indicative Species Abundance (%)	10.00	5
Abundance (#/m2)	1200	3	Pollution Indicative Species Biomass (%)	2.08	
Biomass (g/m2)	1.06	3	Pollution Sensitive Species Abundance (%)	6.67	1
Carnivore-Omnivore Abundance (%)	16.67	1	Pollution Sensitive Species Biomass (%)	52.17	
Deep Deposit Feeder Abundance (%)	26.67				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		40		0.00800	
Amphiporus bioculatus		40		0.04000	
Carinoma tremaphoros		80		0.02400	
Eteone heteropoda		40		0.01200	
Gemma gemma		120		0.05200	
Heteromastus filiformis		280		0.13600	
Laeonereis culveri		40		0.18400	
Leitoscoloplos spp.		40		0.00800	
Leptocheirus plumulosus		40		0.00400	
Littoridinops tenuipes (Epi)		80		0.00400	
Macoma balthica		40		0.51200	
Macoma mitchelli		360		0.03600	
Marenzelleria viridis		40		0.04000	
Streblospio benedicti		40		0.00200	
Total Abundance w/ Epi.		1280			
Total Abundance w/o Epi.		1200			
Number of Taxa w/ Epi.		14			
Number of Taxa w/o Epi.		13			
Total Biomass w/ Epi.				1.06200	
Total Biomass w/o Epi.				1.05800	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 02	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 15:58:14	
BOTTOM ENVIRONMENT					
Depth (m): 3.0		Salinity (ppt): 6.47		Temperature (C): 24.46	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 2.69		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	3.02	3	Pollution Indicative Species Abundance (%)	9.76	5
Abundance (#/m2)	1640	5	Pollution Indicative Species Biomass (%)	0.88	
Biomass (g/m2)	2.74	3	Pollution Sensitive Species Abundance (%)	2.44	1
Carnivore-Omnivore Abundance (%)	24.39	3	Pollution Sensitive Species Biomass (%)	3.65	
Deep Deposit Feeder Abundance (%)	26.83				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		40		0.02800	
Carinoma tremaphoros		80		0.02000	
Edwardsia elegans		40		0.01200	
Gemma gemma		80		0.01600	
Heteromastus filiformis		400		0.13600	
Hirudinea (Epi)		40		0.05600	
Laeonereis culveri		200		2.12000	
Leitoscoloplos spp.		40		0.00800	
Leptocheirus plumulosus		40		0.01600	
Littoridinops tenuipes (Epi)		40		0.00400	
Macoma mitchelli		480		0.02400	
Marenzelleria viridis		40		0.10000	
Mulinia lateralis		80		0.00800	
Neanthes succinea		80		0.24000	
Streblospio benedicti		40		0.00800	
Total Abundance w/ Epi.		1720			
Total Abundance w/o Epi.		1640			
Number of Taxa w/ Epi.		15			
Number of Taxa w/o Epi.		13			
Total Biomass w/ Epi.				2.79600	
Total Biomass w/o Epi.				2.73600	



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 051		Rep: 03	
Gear: Modified Box Corer		Habitat: High Mesohaline Sand		Date: 15SEP14	
		Sampled Area: 0.025 sq.m		Time: 15:58:14	
BOTTOM ENVIRONMENT					
Depth (m): 3.0		Salinity (ppt): 6.47		Temperature (C): 24.46	
Dissolved Oxygen (mg/l): 7.7		Sediment Silt-Clay (%): 2.69		Total Carbon (%): 0.22	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.99	3	Pollution Indicative Species Abundance (%)	6.67	5
Abundance (#/m2)	1200	3	Pollution Indicative Species Biomass (%)	3.69	
Biomass (g/m2)	4.01	5	Pollution Sensitive Species Abundance (%)	3.33	1
Carnivore-Omnivore Abundance (%)	33.33	3	Pollution Sensitive Species Biomass (%)	0.30	
Deep Deposit Feeder Abundance (%)	30.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	40		0.00400		
Carinoma tremaphoros	120		0.02400		
Gemma gemma	40		0.00200		
Glycinde solitaria	40		0.01200		
Heteromastus filiformis	280		0.29600		
Laeonereis culveri	200		3.13600		
Leitoscoloplos fragilis	80		0.14800		
Leptocheirus plumulosus	160		0.00400		
Macoma mitchelli	200		0.38400		
Neanthes succinea	40		0.00200		
Total Abundance w/ Epi.	1200				
Total Abundance w/o Epi.	1200				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			4.01200		
Total Biomass w/o Epi.			4.01200		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 052		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 21AUG14	
		Sampled Area: 0.022 sq.m		Time: 14:37:46	
BOTTOM ENVIRONMENT					
Depth (m): 11.7		Salinity (ppt): 4.10		Temperature (C): 25.40	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 92.44		Total Carbon (%): 3.26	
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 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 052		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 21AUG14	
		Sampled Area: 0.022 sq.m		Time: 14:37:46	
BOTTOM ENVIRONMENT					
Depth (m): 11.7		Salinity (ppt): 4.10		Temperature (C): 25.40	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 92.44		Total Carbon (%): 3.26	
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 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Potomac River		Station: 052		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 21AUG14	
		Sampled Area: 0.022 sq.m		Time: 14:37:46	
BOTTOM ENVIRONMENT					
Depth (m): 11.7		Salinity (ppt): 4.10		Temperature (C): 25.40	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 92.44		Total Carbon (%): 3.26	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	0.00	1	Pollution Indicative Species Abundance (%)	100.00	
Abundance (#/m2)	45	1	Pollution Indicative Species Biomass (%)	100.00	1
Biomass (g/m2)	0.01	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	0.00	1	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
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 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Lower Eastern Shore		Station: 062		Rep: 01	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 11SEP14	
		Sampled Area: 0.025 sq.m		Time: 14:15:00	
BOTTOM ENVIRONMENT					
Depth (m): 4.7		Salinity (ppt): 3.97		Temperature (C): 25.04	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 81.15		Total Carbon (%): 4.26	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.73	1	Pollution Indicative Species Abundance (%)	0.00	5
Abundance (#/m2)	11880	1	Pollution Indicative Species Biomass (%)	0.00	
Biomass (g/m2)	1.06	3	Pollution Sensitive Species Abundance (%)	1.01	
Carnivore-Omnivore Abundance (%)	0.34		Pollution Sensitive Species Biomass (%)	41.97	3
Deep Deposit Feeder Abundance (%)	88.89				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	560		0.03600		
Chiridotea almyra	40		0.00200		
Gammarus daiberi (Epi)	400		0.09600		
Leptocheirus plumulosus	400		0.06000		
Leucon americanus	40		0.00400		
Macoma balthica	120		0.44400		
Macoma mitchelli	160		0.38800		
Melita nitida (Epi)	120		0.01200		
Tubificoides spp.	10560		0.12400		
Total Abundance w/ Epi.	12400				
Total Abundance w/o Epi.	11880				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			1.16600		
Total Biomass w/o Epi.			1.05800		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Lower Eastern Shore		Station: 062		Rep: 02	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 11SEP14	
		Sampled Area: 0.025 sq.m		Time: 14:15:00	
BOTTOM ENVIRONMENT					
Depth (m): 4.7		Salinity (ppt): 3.97		Temperature (C): 25.04	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 81.15		Total Carbon (%): 4.26	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.68	1	Pollution Indicative Species Abundance (%)	2.05	5
Abundance (#/m2)	13680	1	Pollution Indicative Species Biomass (%)	0.63	
Biomass (g/m2)	0.96	1	Pollution Sensitive Species Abundance (%)	0.88	
Carnivore-Omnivore Abundance (%)	0.88		Pollution Sensitive Species Biomass (%)	43.42	3
Deep Deposit Feeder Abundance (%)	92.69				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	200		0.00800		
Chiridotea almyra	80		0.01200		
Cyathura polita	40		0.02400		
Edotea triloba (Epi)	80		0.01200		
Gammarus daiberi (Epi)	480		0.10800		
Geukensia demissa (Epi)	40		0.00800		
Leptocheirus plumulosus	400		0.02400		
Macoma balthica	80		0.39200		
Macoma mitchelli	160		0.32800		
Streblospio benedicti	40		0.00400		
Tubificidae imm w/o cap chaetae	240		0.00200		
Tubificoides spp.	12440		0.16400		
Total Abundance w/ Epi.	14280				
Total Abundance w/o Epi.	13680				
Number of Taxa w/ Epi.	12				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			1.08600		
Total Biomass w/o Epi.			0.95800		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Lower Eastern Shore		Station: 062		Rep: 03	
Gear: Petite Ponar		Habitat: Low Mesohaline		Date: 11SEP14	
		Sampled Area: 0.025 sq.m		Time: 14:15:00	
BOTTOM ENVIRONMENT					
Depth (m): 4.7		Salinity (ppt): 3.97		Temperature (C): 25.04	
Dissolved Oxygen (mg/l): 7.0		Sediment Silt-Clay (%): 81.15		Total Carbon (%): 4.26	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.85	1	Pollution Indicative Species Abundance (%)	1.37	5
Abundance (#/m2)	11680	1	Pollution Indicative Species Biomass (%)	0.69	
Biomass (g/m2)	0.87	1	Pollution Sensitive Species Abundance (%)	1.03	
Carnivore-Omnivore Abundance (%)	0.34		Pollution Sensitive Species Biomass (%)	70.80	3
Deep Deposit Feeder Abundance (%)	87.67				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	560		0.02800		
Chiridotea almyra	40		0.00400		
Edotea triloba (Epi)	160		0.00400		
Gammarus daiberi (Epi)	280		0.06000		
Geukensia demissa (Epi)	80		0.00200		
Leptocheirus plumulosus	440		0.08400		
Macoma balthica	40		0.22800		
Macoma mitchelli	160		0.02400		
Marenzelleria viridis	80		0.38800		
Neomysis americana (Epi)	40		0.00200		
Streblospio benedicti	120		0.00400		
Tubificidae imm w/o cap chaetae	40		0.00200		
Tubificoides spp.	10200		0.10800		
Total Abundance w/ Epi.	12240				
Total Abundance w/o Epi.	11680				
Number of Taxa w/ Epi.	13				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.93800		
Total Biomass w/o Epi.			0.87000		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 04SEP14	
		Sampled Area: 0.022 sq.m		Time: 13:30:15	
BOTTOM ENVIRONMENT					
Depth (m): 9.5		Salinity (ppt): 10.51		Temperature (C): 26.82	
Dissolved Oxygen (mg/l): 4.2		Sediment Silt-Clay (%): 80.97		Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.33		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.30	3	Pollution Indicative Species Abundance (%)	9.09	
Abundance (#/m2)	2000	5	Pollution Indicative Species Biomass (%)	0.20	5
Biomass (g/m2)	5.57	5	Pollution Sensitive Species Abundance (%)	50.00	
Carnivore-Omnivore Abundance (%)	22.73	3	Pollution Sensitive Species Biomass (%)	76.90	5
Deep Deposit Feeder Abundance (%)	20.45				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	136		0.06818		
Cyathura polita	45		0.06363		
Heteromastus filiformis	91		0.02727		
Macoma balthica	954		4.21776		
Mulinia lateralis	136		0.00909		
Neanthes succinea	273		1.17716		
Streblospio benedicti	45		0.00227		
Tubificoides spp.	318		0.00227		
Total Abundance w/ Epi.	2000				
Total Abundance w/o Epi.	2000				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	8				
Total Biomass w/ Epi.			5.56762		
Total Biomass w/o Epi.			5.56762		



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 04SEP14	
		Sampled Area: 0.022 sq.m		Time: 13:30:15	
BOTTOM ENVIRONMENT					
Depth (m): 9.5		Salinity (ppt): 10.51		Temperature (C): 26.82	
Dissolved Oxygen (mg/l): 4.2		Sediment Silt-Clay (%): 80.97		Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.16	3	Pollution Indicative Species Abundance (%)	4.65	
Abundance (#/m2)	1954	5	Pollution Indicative Species Biomass (%)	0.07	5
Biomass (g/m2)	6.13	5	Pollution Sensitive Species Abundance (%)	60.47	
Carnivore-Omnivore Abundance (%)	25.58	5	Pollution Sensitive Species Biomass (%)	93.55	5
Deep Deposit Feeder Abundance (%)	11.63				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	318		0.18635		
Cyathura polita	45		0.15453		
Heteromastus filiformis	91		0.04545		
Macoma balthica	1091		5.39037		
Marenzelleria viridis	45		0.19089		
Mulinia lateralis	91		0.00455		
Neanthes succinea	91		0.15453		
Parahesionia luteola	45		0.00227		
Tubificoides spp.	136		0.00227		
Total Abundance w/ Epi.	1954				
Total Abundance w/o Epi.	1954				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			6.13120		
Total Biomass w/o Epi.			6.13120		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Choptank River		Station: 064		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 04SEP14	
		Sampled Area: 0.022 sq.m		Time: 13:30:15	
BOTTOM ENVIRONMENT					
Depth (m): 9.5		Salinity (ppt): 10.51		Temperature (C): 26.82	
Dissolved Oxygen (mg/l): 4.2		Sediment Silt-Clay (%): 80.97		Total Carbon (%): 2.18	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 4.00		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.21	3	Pollution Indicative Species Abundance (%)	7.81	
Abundance (#/m2)	2909	3	Pollution Indicative Species Biomass (%)	0.81	5
Biomass (g/m2)	3.65	5	Pollution Sensitive Species Abundance (%)	29.69	
Carnivore-Omnivore Abundance (%)	17.19	3	Pollution Sensitive Species Biomass (%)	86.25	5
Deep Deposit Feeder Abundance (%)	48.44				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	364		0.28634		
Glycinde solitaria	91		0.02727		
Heteromastus filiformis	136		0.08636		
Macoma balthica	773		3.12242		
Mulinia lateralis	182		0.02727		
Neanthes succinea	45		0.08635		
Streblospio benedicti	45		0.00227		
Tubificoides spp.	1273		0.01364		
Total Abundance w/ Epi.	2909				
Total Abundance w/o Epi.	2909				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	8				
Total Biomass w/ Epi.			3.65191		
Total Biomass w/o Epi.			3.65191		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 01	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 11SEP14	
		Sampled Area: 0.022 sq.m		Time: 10:24:47	
BOTTOM ENVIRONMENT					
Depth (m): 4.9		Salinity (ppt): 3.80		Temperature (C): 25.40	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 60.41		Total Carbon (%): 4.15	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.50		Oligohaline Pollution Indicative Spp. Abund.	83.05	3
Abundance (#/m2)	2682	5	Tolerance Score	9.43	1
Deep Deposit Feeder Abundance (%)	77.97		Oligohaline Pollution Sensitive Spp. Abund.	5.08	3
Carnivore-Omnivore Abundance (%)	8.47	1	Tanypodinae/Chironomidae Abundance Ratio	100.00	1
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Ameroculodes species complex	182		0.01363		
Chaoborus punctipennis	45		0.00455		
Coelotanypus spp.	91		0.00455		
Cyathura polita	91		0.00227		
Edotea triloba (Epi)	45		0.00909		
Gammarus daiberi (Epi)	1591		0.07727		
Heteromastus filiformis	45		0.00454		
Leptocheirus plumulosus	45		0.00909		
Limnodrilus hoffmeisteri	364				
Littoridinops tenuipes (Epi)	45		0.00909		
Marenzelleria viridis	136		0.70448		
Neomysis americana (Epi)	136		0.01818		
Oligochaeta			0.00455		
Tubificidae imm w/o cap chaetae *	545				
Tubificoides spp.	1136		0.01364		
Total Abundance w/ Epi.	4500				
Total Abundance w/o Epi.	2682				
Number of Taxa w/ Epi.	13				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.87491		
Total Biomass w/o Epi.			0.76129		

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Choptank River		Station: 066		Rep: 02	
Gear: Wildco Box Corer		Habitat: Oligohaline		Date: 11SEP14	
		Sampled Area: 0.022 sq.m		Time: 10:24:47	
BOTTOM ENVIRONMENT					
Depth (m): 4.9		Salinity (ppt): 3.80		Temperature (C): 25.40	
Dissolved Oxygen (mg/l): 5.4		Sediment Silt-Clay (%): 60.41		Total Carbon (%): 4.15	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
		Value	Score	Value	Score
Shannon-Wiener Index		2.34		Oligohaline Pollution Indicative Spp. Abund.	92.11 3
Abundance (#/m2)		3454	3	Tolerance Score	9.72 1
Deep Deposit Feeder Abundance (%)		81.58		Oligohaline Pollution Sensitive Spp. Abund.	1.32 3
Carnivore-Omnivore Abundance (%)		3.95	1	Tanypodinae/Chironomidae Abundance Ratio	0.00 5
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Ameroculodes species complex		91		0.00227	
Chaoborus punctipennis		45		0.00227	
Cryptochironomus spp.		45		0.00227	
Cyathura polita		45		0.00227	
Gammarus daiberi (Epi)		2454		0.09090	
Leptocheirus plumulosus		364		0.12272	
Limnodrilus hoffmeisteri		1000			
Littoridinops tenuipes (Epi)		273		0.02273	
Marenzelleria viridis		45		0.39087	
Oligochaeta				0.23634	
Tubificidae imm w/o cap chaetae *		1000			
Tubificoides spp.		818		0.00455	
Total Abundance w/ Epi.		6181			
Total Abundance w/o Epi.		3454			
Number of Taxa w/ Epi.		10			
Number of Taxa w/o Epi.		8			
Total Biomass w/ Epi.				0.87719	
Total Biomass w/o Epi.				0.76356	

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Choptank River		Station: 066	Rep: 03
Gear: Wildco Box Corer		Habitat: Oligohaline	Date: 11SEP14
		Sampled Area: 0.022 sq.m	Time: 10:24:47
BOTTOM ENVIRONMENT			
Depth (m): 4.9	Salinity (ppt): 3.80	Temperature (C): 25.40	
Dissolved Oxygen (mg/l): 5.4	Sediment Silt-Clay (%): 60.41	Total Carbon (%): 4.15	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.33	Condition: Degraded		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	2.65		76.47
Abundance (#/m2)	3091	5	3
Deep Deposit Feeder Abundance (%)	70.59		9.49
Carnivore-Omnivore Abundance (%)	4.41	1	1
			8.82
			100.00
			1
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Ameroculodes species complex	273		0.01363
Chaoborus punctipennis	45		0.00455
Coelotanypus spp.	45		0.00909
Cyathura polita	45		0.00454
Gammarus daiberi (Epi)	3318		0.12726
Leptocheirus plumulosus	136		0.01364
Limnodrilus hoffmeisteri	545		
Littoridinops tenuipes (Epi)	182		0.01818
Marenzelleria viridis	273		1.80891
Neomysis americana (Epi)	91		0.01364
Oligochaeta			0.15453
Rangia cuneata	91		8.88548
Tubificidae imm w/o cap chaetae *	1091		
Tubificoides spp.	545		0.00227
Total Abundance w/ Epi.	6681		
Total Abundance w/o Epi.	3091		
Number of Taxa w/ Epi.	12		
Number of Taxa w/o Epi.	9		
Total Biomass w/ Epi.			11.05571
Total Biomass w/o Epi.			10.89664

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 08SEP14	
		Sampled Area: 0.022 sq.m		Time: 10:00:31	
BOTTOM ENVIRONMENT					
Depth (m): 6.1		Salinity (ppt): 8.68		Temperature (C): 27.37	
Dissolved Oxygen (mg/l): 4.8		Sediment Silt-Clay (%): 85.10		Total Carbon (%): 3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.21	3	Pollution Indicative Species Abundance (%)	4.84	5
Abundance (#/m2)	2818	3	Pollution Indicative Species Biomass (%)	0.01	
Biomass (g/m2)	78.95	1	Pollution Sensitive Species Abundance (%)	53.23	
Carnivore-Omnivore Abundance (%)	9.68		Pollution Sensitive Species Biomass (%)	98.41	5
Deep Deposit Feeder Abundance (%)	27.42				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Carinoma tremaphoros		45		0.01818	
Coelotanypus spp.		91		0.00909	
Cyathura polita		45		0.10908	
Eteone heteropoda		45		0.00227	
Heteromastus filiformis		45		0.09999	
Leptocheirus plumulosus		182		0.04090	
Macoma balthica		1409		75.15158	
Macoma mitchelli		136		1.07717	
Neanthes succinea		45		0.00455	
Neomysis americana (Epi)		45		0.02273	
Rangia cuneata		45		2.43612	
Tubificoides spp.		727		0.00454	
Total Abundance w/ Epi.		2863			
Total Abundance w/o Epi.		2818			
Number of Taxa w/ Epi.		12			
Number of Taxa w/o Epi.		11			
Total Biomass w/ Epi.				78.97619	
Total Biomass w/o Epi.				78.95347	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 08SEP14	
		Sampled Area: 0.022 sq.m		Time: 10:00:31	
BOTTOM ENVIRONMENT					
Depth (m): 6.1		Salinity (ppt): 8.68		Temperature (C): 27.37	
Dissolved Oxygen (mg/l): 4.8		Sediment Silt-Clay (%): 85.10		Total Carbon (%): 3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.74	5	Pollution Indicative Species Abundance (%)	24.24	1
Abundance (#/m2)	3000	3	Pollution Indicative Species Biomass (%)	0.17	
Biomass (g/m2)	54.48	1	Pollution Sensitive Species Abundance (%)	28.79	
Carnivore-Omnivore Abundance (%)	22.73		Pollution Sensitive Species Biomass (%)	98.23	5
Deep Deposit Feeder Abundance (%)	30.30				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Coelotanypus spp.	500		0.08636		
Cyathura polita	91		0.27724		
Eteone heteropoda	91		0.00454		
Heteromastus filiformis	91		0.00909		
Leptocheirus plumulosus	409		0.06818		
Macoma balthica	727		53.22649		
Macoma mitchelli	91		0.77720		
Marenzelleria viridis	45		0.01364		
Melita nitida (Epi)	91		0.00227		
Streblospio benedicti	136		0.00227		
Tubificoides spp.	818		0.01818		
Total Abundance w/ Epi.	3091				
Total Abundance w/o Epi.	3000				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			54.48546		
Total Biomass w/o Epi.			54.48319		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Upper Eastern Shore		Station: 068		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 08SEP14	
		Sampled Area: 0.022 sq.m		Time: 10:00:31	
BOTTOM ENVIRONMENT					
Depth (m): 6.1		Salinity (ppt): 8.68		Temperature (C): 27.37	
Dissolved Oxygen (mg/l): 4.8		Sediment Silt-Clay (%): 85.10		Total Carbon (%): 3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.77	3	Pollution Indicative Species Abundance (%)	13.79	3
Abundance (#/m2)	2636	3	Pollution Indicative Species Biomass (%)	0.10	
Biomass (g/m2)	80.30	1	Pollution Sensitive Species Abundance (%)	63.79	
Carnivore-Omnivore Abundance (%)	15.52		Pollution Sensitive Species Biomass (%)	99.23	5
Deep Deposit Feeder Abundance (%)	8.62				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Coelotanypus spp.	364		0.07727		
Heteromastus filiformis	91		0.00455		
Leptocheirus plumulosus	227		0.05454		
Macoma balthica	1682		79.68749		
Macoma mitchelli	91		0.47268		
Melita nitida (Epi)	182		0.00455		
Neanthes succinea	45		0.00227		
Tubificoides spp.	136		0.00455		
Total Abundance w/ Epi.	2818				
Total Abundance w/o Epi.	2636				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			80.30788		
Total Biomass w/o Epi.			80.30333		



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 01	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 27AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:13:09	
BOTTOM ENVIRONMENT					
Depth (m): 12.4		Salinity (ppt): 12.59		Temperature (C): 25.88	
Dissolved Oxygen (mg/l): 2.8		Sediment Silt-Clay (%): 81.88		Total Carbon (%): 3.02	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.67		Condition: Marginal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.00	3	Pollution Indicative Species Abundance (%)	25.00	
Abundance (#/m2)	364	1	Pollution Indicative Species Biomass (%)	6.52	3
Biomass (g/m2)	0.63	3	Pollution Sensitive Species Abundance (%)	12.50	
Carnivore-Omnivore Abundance (%)	37.50	5	Pollution Sensitive Species Biomass (%)	2.90	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Eteone heteropoda	45		0.00909		
Glycinde solitaria	45		0.01818		
Macoma mitchelli	182		0.53631		
Mulinia lateralis	45		0.03182		
Neanthes succinea	45		0.03181		
Total Abundance w/ Epi.	364				
Total Abundance w/o Epi.	364				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.62721		
Total Biomass w/o Epi.			0.62721		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 02	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 27AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:13:09	
BOTTOM ENVIRONMENT					
Depth (m): 12.4		Salinity (ppt): 12.59		Temperature (C): 25.88	
Dissolved Oxygen (mg/l): 2.8		Sediment Silt-Clay (%): 81.88		Total Carbon (%): 3.02	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.33		Condition: Degraded		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.00	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	182	1	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	0.37	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	50.00	5	Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Macoma mitchelli		91		0.32724	
Micrura leidyi		91		0.04545	
Total Abundance w/ Epi.		182			
Total Abundance w/o Epi.		182			
Number of Taxa w/ Epi.		2			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				0.37269	
Total Biomass w/o Epi.				0.37269	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 071		Rep: 03	
Gear: Wildco Box Corer		Habitat: High Mesohaline Mud		Date: 27AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:13:09	
BOTTOM ENVIRONMENT					
Depth (m): 12.4		Salinity (ppt): 12.59		Temperature (C): 25.88	
Dissolved Oxygen (mg/l): 2.8		Sediment Silt-Clay (%): 81.88		Total Carbon (%): 3.02	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.00		Condition: Severely Degr.		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.25	3	Pollution Indicative Species Abundance (%)	50.00	
Abundance (#/m2)	273	1	Pollution Indicative Species Biomass (%)	72.73	1
Biomass (g/m2)	0.12	1	Pollution Sensitive Species Abundance (%)	16.67	
Carnivore-Omnivore Abundance (%)	33.33	5	Pollution Sensitive Species Biomass (%)	18.18	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Glycinde solitaria	45		0.02273		
Macoma mitchelli	45		0.00909		
Mulinia lateralis	45		0.08635		
Neanthes succinea	45		0.00227		
Streblospio benedicti	91		0.00455		
Total Abundance w/ Epi.	273				
Total Abundance w/o Epi.	273				
Number of Taxa w/ Epi.	5				
Number of Taxa w/o Epi.	5				
Total Biomass w/ Epi.			0.12499		
Total Biomass w/o Epi.			0.12499		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Chalk Point Discharge		Station: 074		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:07:47	
BOTTOM ENVIRONMENT					
Depth (m): 2.1		Salinity (ppt): 8.78		Temperature (C): 27.42	
Dissolved Oxygen (mg/l): 5.6		Sediment Silt-Clay (%): 82.33		Total Carbon (%): 2.46	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.98	3	Pollution Indicative Species Abundance (%)	8.28	5
Abundance (#/m2)	7136	1	Pollution Indicative Species Biomass (%)	0.19	
Biomass (g/m2)	14.38	3	Pollution Sensitive Species Abundance (%)	4.46	
Carnivore-Omnivore Abundance (%)	5.10		Pollution Sensitive Species Biomass (%)	89.04	5
Deep Deposit Feeder Abundance (%)	26.11				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Eteone heteropoda	91		0.01364		
Heteromastus filiformis	455		0.15453		
Leptocheirus plumulosus	4045		0.63630		
Macoma balthica	273		12.75327		
Macoma mitchelli	45		0.01818		
Melita nitida (Epi)	455		0.02273		
Neanthes succinea	273		0.72265		
Rangia cuneata	45		0.05454		
Streblospio benedicti	500		0.01364		
Tubificoides spp.	1409		0.01818		
Total Abundance w/ Epi.	7590				
Total Abundance w/o Epi.	7136				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			14.40765		
Total Biomass w/o Epi.			14.38492		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Chalk Point Discharge		Station: 074		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:07:47	
BOTTOM ENVIRONMENT					
Depth (m): 2.1		Salinity (ppt): 8.78		Temperature (C): 27.42	
Dissolved Oxygen (mg/l): 5.6		Sediment Silt-Clay (%): 82.33		Total Carbon (%): 2.46	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.90	3	Pollution Indicative Species Abundance (%)	4.67	5
Abundance (#/m2)	6818	1	Pollution Indicative Species Biomass (%)	0.11	
Biomass (g/m2)	21.19	3	Pollution Sensitive Species Abundance (%)	5.33	
Carnivore-Omnivore Abundance (%)	6.67		Pollution Sensitive Species Biomass (%)	94.32	5
Deep Deposit Feeder Abundance (%)	22.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	91		0.08635		
Eteone heteropoda	91		0.01364		
Heteromastus filiformis	273		0.16817		
Leptocheirus plumulosus	4181		0.56358		
Macoma balthica	364		19.98436		
Macoma mitchelli	91		0.20453		
Melita nitida (Epi)	864		0.03636		
Micrura leidyi	45		0.04090		
Neanthes succinea	227		0.09999		
Streblospio benedicti	227		0.00909		
Tubificoides spp.	1227		0.01818		
Total Abundance w/ Epi.	7681				
Total Abundance w/o Epi.	6818				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			21.22515		
Total Biomass w/o Epi.			21.18879		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Station: 074		Rep: 03
Watershed: Chalk Point Discharge	Habitat: Low Mesohaline	Date: 28AUG14
Gear: Wildco Box Corer	Sampled Area: 0.022 sq.m	Time: 9:07:47
BOTTOM ENVIRONMENT		
Depth (m): 2.1	Salinity (ppt): 8.78	Temperature (C): 27.42
Dissolved Oxygen (mg/l): 5.6	Sediment Silt-Clay (%): 82.33	Total Carbon (%): 2.46
BENTHIC INDEX OF BIOTIC INTEGRITY		
B-IBI Score: 3.80	Condition: Meets Goal	# Attributes Scored: 5
	Value Score	Value Score
Shannon-Wiener Index	2.07 3	Pollution Indicative Species Abundance (%) 4.44 5
Abundance (#/m2)	4091 3	Pollution Indicative Species Biomass (%) 0.11
Biomass (g/m2)	24.86 3	Pollution Sensitive Species Abundance (%) 12.22
Carnivore-Omnivore Abundance (%)	4.44	Pollution Sensitive Species Biomass (%) 96.78 5
Deep Deposit Feeder Abundance (%)	20.00	
BENTHIC ABUNDANCE (per sq. meter)		
TAXA	Abundance (#/m2)	Biomass (g/m2)
Eteone heteropoda	91	0.02273
Heteromastus filiformis	227	0.07727
Leptocheirus plumulosus	2409	0.44996
Macoma balthica	455	24.04759
Macoma mitchelli	136	0.21816
Melita nitida (Epi)	636	0.02727
Micrura leidyi	45	0.00454
Neanthes succinea	45	0.00909
Rangia cuneata	45	0.01364
Streblospio benedicti	45	0.00227
Tubificidae imm w/o cap chaetae	45	0.00227
Tubificoides spp.	545	0.01363
Total Abundance w/ Epi.	4727	
Total Abundance w/o Epi.	4091	
Number of Taxa w/ Epi.	12	
Number of Taxa w/o Epi.	11	
Total Biomass w/ Epi.		24.88842
Total Biomass w/o Epi.		24.86115

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 077		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:48:10	
BOTTOM ENVIRONMENT					
Depth (m): 3.3		Salinity (ppt): 5.69		Temperature (C): 27.85	
Dissolved Oxygen (mg/l): 5.6		Sediment Silt-Clay (%): 91.21		Total Carbon (%): 2.98	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	2.40	3	Pollution Indicative Species Abundance (%)	33.33	1
Abundance (#/m2)	1500	3	Pollution Indicative Species Biomass (%)	0.32	
Biomass (g/m2)	5.74	5	Pollution Sensitive Species Abundance (%)	27.27	
Carnivore-Omnivore Abundance (%)	3.03		Pollution Sensitive Species Biomass (%)	98.50	5
Deep Deposit Feeder Abundance (%)	15.15				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Cyathura polita	45		0.18180		
Edotea triloba (Epi)	91		0.01818		
Leptocheirus plumulosus	364		0.06363		
Macoma balthica	91		5.17676		
Marenzelleria viridis	227		0.28634		
Melita nitida (Epi)	45		0.00454		
Rangia cuneata	45		0.00909		
Streblospio benedicti	500		0.01818		
Tubificoides spp.	227		0.00455		
Total Abundance w/ Epi.	1636				
Total Abundance w/o Epi.	1500				
Number of Taxa w/ Epi.	9				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			5.76306		
Total Biomass w/o Epi.			5.74034		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 077		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:48:10	
BOTTOM ENVIRONMENT					
Depth (m): 3.3		Salinity (ppt): 5.69		Temperature (C): 27.85	
Dissolved Oxygen (mg/l): 5.6		Sediment Silt-Clay (%): 91.21		Total Carbon (%): 2.98	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.40		Condition: Meets Goal		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.95	3	Pollution Indicative Species Abundance (%)	41.18	1
Abundance (#/m2)	1545	5	Pollution Indicative Species Biomass (%)	0.31	
Biomass (g/m2)	4.40	3	Pollution Sensitive Species Abundance (%)	29.41	
Carnivore-Omnivore Abundance (%)	8.82		Pollution Sensitive Species Biomass (%)	99.59	5
Deep Deposit Feeder Abundance (%)	29.41				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Cyathura polita		136		0.41360	
Edotea triloba (Epi)		273		0.03181	
Macoma balthica		45		3.56783	
Marenzelleria viridis		273		0.39542	
Streblospio benedicti		636		0.01364	
Tubificoides spp.		455		0.00454	
Total Abundance w/ Epi.		1818			
Total Abundance w/o Epi.		1545			
Number of Taxa w/ Epi.		6			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				4.42683	
Total Biomass w/o Epi.				4.39502	



BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 077		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 9:48:10	
BOTTOM ENVIRONMENT					
Depth (m): 3.3		Salinity (ppt): 5.69		Temperature (C): 27.85	
Dissolved Oxygen (mg/l): 5.6		Sediment Silt-Clay (%): 91.21		Total Carbon (%): 2.98	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.66	1	Pollution Indicative Species Abundance (%)	34.23	1
Abundance (#/m2)	6772	1	Pollution Indicative Species Biomass (%)	21.89	
Biomass (g/m2)	0.38	1	Pollution Sensitive Species Abundance (%)	4.03	
Carnivore-Omnivore Abundance (%)	4.70		Pollution Sensitive Species Biomass (%)	24.26	1
Deep Deposit Feeder Abundance (%)	54.36				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.00909		
Cyathura polita	227		0.00227		
Edotea triloba (Epi)	45		0.00227		
Leptocheirus plumulosus	409		0.06818		
Macoma mitchelli	45		0.09545		
Marenzelleria viridis	45		0.09090		
Melita nitida (Epi)	45		0.00455		
Procladius spp.	45		0.00227		
Streblospio benedicti	2273		0.08181		
Tubificidae imm w/o cap chaetae	45		0.00227		
Tubificoides spp.	3636		0.03182		
Total Abundance w/ Epi.	6863				
Total Abundance w/o Epi.	6772				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			0.39087		
Total Biomass w/o Epi.			0.38405		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 01	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:47:54	
BOTTOM ENVIRONMENT					
Depth (m): 0.6		Salinity (ppt): 0.22		Temperature (C): 26.48	
Dissolved Oxygen (mg/l): 5.8		Sediment Silt-Clay (%): 86.60		Total Carbon (%): 3.61	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 3	
		Value	Score	Value	Score
Shannon-Wiener Index		1.41		55.26	3
Abundance (#/m2)		5181	3	Tolerance Score	7.63
Deep Deposit Feeder Abundance (%)		97.37	1	Limnodrilus Abundance (%)	55.26
Carnivore-Omnivore Abundance (%)		2.63			
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Aulodrilus pigueti		2182			
Chironomidae				0.00227	
Chironomus spp.		91		0.04090	
Cryptochironomus spp.		45			
Limnodrilus hoffmeisteri		273			
Oligochaeta				0.48693	
Tubificidae imm w/o cap chaetae *		2591			
Total Abundance w/ Epi.		5181			
Total Abundance w/o Epi.		5181			
Number of Taxa w/ Epi.		4			
Number of Taxa w/o Epi.		4			
Total Biomass w/ Epi.				0.53010	
Total Biomass w/o Epi.				0.53010	

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 02	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:47:54	
BOTTOM ENVIRONMENT					
Depth (m): 0.6		Salinity (ppt): 0.22		Temperature (C): 26.48	
Dissolved Oxygen (mg/l): 5.8		Sediment Silt-Clay (%): 86.60		Total Carbon (%): 3.61	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 3	
	Value	Score		Value	Score
Shannon-Wiener Index	2.40		T.F. Pollution Indicative Spp. Abund. (%)	63.55	3
Abundance (#/m2)	4863	3	Tolerance Score	8.89	3
Deep Deposit Feeder Abundance (%)	83.18	3	Limnodrilus Abundance (%)	63.55	
Carnivore-Omnivore Abundance (%)	16.82				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Aulodrilus pigueti	545				
Branchiura sowerbyi	45		0.23180		
Chironomidae			0.00227		
Chironomus spp.	227				
Coelotanypus spp.	273		0.00909		
Cryptochironomus spp.	45				
Harnischia spp.	45				
Limnodrilus hoffmeisteri	545				
Oligochaeta			0.42117		
Polypedilum halterale group	45				
Procladius spp.	91				
Tanypus spp.	45				
Tanytarsus spp.	45				
Tubificidae imm w cap chaetae *	364				
Tubificidae imm w/o cap chaetae *	2545				
Total Abundance w/ Epi.	4863				
Total Abundance w/o Epi.	4863				
Number of Taxa w/ Epi.	11				
Number of Taxa w/o Epi.	11				
Total Biomass w/ Epi.			0.66433		
Total Biomass w/o Epi.			0.66433		

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patuxent River		Station: 079		Rep: 03	
Gear: Wildco Box Corer		Habitat: Tidal Freshwater		Date: 28AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:47:54	
BOTTOM ENVIRONMENT					
Depth (m): 0.6		Salinity (ppt): 0.22		Temperature (C): 26.48	
Dissolved Oxygen (mg/l): 5.8		Sediment Silt-Clay (%): 86.60		Total Carbon (%): 3.61	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.00		Condition: Meets Goal		# Attributes Scored: 3	
		Value	Score	Value	Score
Shannon-Wiener Index		1.62		36.11	5
Abundance (#/m2)		6545	1	Tolerance Score	7.31
Deep Deposit Feeder Abundance (%)		97.22	1	T.F. Pollution Indicative Spp. Abund. (%)	36.11
Carnivore-Omnivore Abundance (%)		2.78		Limnodrilus Abundance (%)	36.11
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Aulodrilus pigueti		3091			
Chironomidae				0.00227	
Chironomus spp.		91			
Oligochaeta				0.38481	
Procladius spp.		45			
Tanytarsus spp. G Epler		45			
Tubificidae imm w cap chaetae *		909			
Tubificidae imm w/o cap chaetae		2363			
Total Abundance w/ Epi.		6545			
Total Abundance w/o Epi.		6545			
Number of Taxa w/ Epi.		5			
Number of Taxa w/o Epi.		5			
Total Biomass w/ Epi.				0.38708	
Total Biomass w/o Epi.				0.38708	

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 201		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 11:14:54	
BOTTOM ENVIRONMENT					
Depth (m): 4.1		Salinity (ppt): 10.09		Temperature (C): 25.76	
Dissolved Oxygen (mg/l): 0.9		Sediment Silt-Clay (%): 71.76		Total Carbon (%): 3.15	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.20		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.21	1	Pollution Indicative Species Abundance (%)	57.89	1
Abundance (#/m2)	864	3	Pollution Indicative Species Biomass (%)	1.00	
Biomass (g/m2)	2.73	3	Pollution Sensitive Species Abundance (%)	36.84	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	78.04	3
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Macoma balthica	318		2.13161		
Macoma mitchelli	45		0.57267		
Streblospio benedicti	500		0.02727		
Total Abundance w/ Epi.	864				
Total Abundance w/o Epi.	864				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			2.73155		
Total Biomass w/o Epi.			2.73155		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 201		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 11:14:54	
BOTTOM ENVIRONMENT					
Depth (m): 4.1		Salinity (ppt): 10.09		Temperature (C): 25.76	
Dissolved Oxygen (mg/l): 0.9		Sediment Silt-Clay (%): 71.76		Total Carbon (%): 3.15	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.98	1	Pollution Indicative Species Abundance (%)	58.62	1
Abundance (#/m2)	1318	3	Pollution Indicative Species Biomass (%)	0.61	
Biomass (g/m2)	3.75	3	Pollution Sensitive Species Abundance (%)	41.38	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	99.39	5
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA		Abundance (#/m2)		Biomass (g/m2)	
Hydrobia truncata (Epi)		45		0.01364	
Macoma balthica		545		3.73145	
Streblospio benedicti		773		0.02273	
Total Abundance w/ Epi.		1364			
Total Abundance w/o Epi.		1318			
Number of Taxa w/ Epi.		3			
Number of Taxa w/o Epi.		2			
Total Biomass w/ Epi.				3.76781	
Total Biomass w/o Epi.				3.75417	

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 201		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 11:14:54	
BOTTOM ENVIRONMENT					
Depth (m): 4.1		Salinity (ppt): 10.09		Temperature (C): 25.76	
Dissolved Oxygen (mg/l): 0.9		Sediment Silt-Clay (%): 71.76		Total Carbon (%): 3.15	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 2.60		Condition: Degraded		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.31	1	Pollution Indicative Species Abundance (%)	46.15	1
Abundance (#/m2)	1182	3	Pollution Indicative Species Biomass (%)	0.07	
Biomass (g/m2)	3.49	3	Pollution Sensitive Species Abundance (%)	46.15	
Carnivore-Omnivore Abundance (%)	0.00		Pollution Sensitive Species Biomass (%)	99.87	5
Deep Deposit Feeder Abundance (%)	7.69				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Macoma balthica	545		3.48601		
Streblospio benedicti	545		0.00227		
Tubificoides spp.	91		0.00227		
Total Abundance w/ Epi.	1182				
Total Abundance w/o Epi.	1182				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			3.49056		
Total Biomass w/o Epi.			3.49056		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 202		Rep: 01	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:07:34	
BOTTOM ENVIRONMENT					
Depth (m): 5.9		Salinity (ppt): 12.49		Temperature (C): 25.29	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 81.87		Total Carbon (%): 2.55	
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 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 202		Rep: 02	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:07:34	
BOTTOM ENVIRONMENT					
Depth (m): 5.9		Salinity (ppt): 12.49		Temperature (C): 25.29	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 81.87		Total Carbon (%): 2.55	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	0.92	1	Pollution Indicative Species Abundance (%)	66.67	1
Abundance (#/m2)	136	1	Pollution Indicative Species Biomass (%)	3.03	
Biomass (g/m2)	0.07	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	33.33		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.07272		
Streblospio benedicti	91		0.00227		
Total Abundance w/ Epi.	136				
Total Abundance w/o Epi.	136				
Number of Taxa w/ Epi.	2				
Number of Taxa w/o Epi.	2				
Total Biomass w/ Epi.			0.07499		
Total Biomass w/o Epi.			0.07499		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 202		Rep: 03	
Gear: Wildco Box Corer		Habitat: Low Mesohaline		Date: 29AUG14	
		Sampled Area: 0.022 sq.m		Time: 10:07:34	
BOTTOM ENVIRONMENT					
Depth (m): 5.9		Salinity (ppt): 12.49		Temperature (C): 25.29	
Dissolved Oxygen (mg/l): 0.2		Sediment Silt-Clay (%): 81.87		Total Carbon (%): 2.55	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 1.00		Condition: Severely Degr.		# Attributes Scored: 5	
	Value	Score		Value	Score
Shannon-Wiener Index	1.15	1	Pollution Indicative Species Abundance (%)	85.71	1
Abundance (#/m2)	318	1	Pollution Indicative Species Biomass (%)	9.68	
Biomass (g/m2)	0.07	1	Pollution Sensitive Species Abundance (%)	0.00	
Carnivore-Omnivore Abundance (%)	28.57		Pollution Sensitive Species Biomass (%)	0.00	1
Deep Deposit Feeder Abundance (%)	0.00				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	45		0.06363		
Chironomus spp.	45		0.00227		
Streblospio benedicti	227		0.00454		
Total Abundance w/ Epi.	318				
Total Abundance w/o Epi.	318				
Number of Taxa w/ Epi.	3				
Number of Taxa w/o Epi.	3				
Total Biomass w/ Epi.			0.07045		
Total Biomass w/o Epi.			0.07045		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 203	Rep: 01
Gear: Young Grab		Habitat: Oligohaline	Date: 18AUG14
		Sampled Area: 0.044 sq.m	Time: 14:07:05
BOTTOM ENVIRONMENT			
Depth (m): 1.6	Salinity (ppt): 2.67	Temperature (C): 25.10	
Dissolved Oxygen (mg/l): 6.1	Sediment Silt-Clay (%): 80.91	Total Carbon (%): 4	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.00	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.80	5	98.47
Abundance (#/m2)	2976		9.74
Deep Deposit Feeder Abundance (%)	61.07		1.53
Carnivore-Omnivore Abundance (%)	26.72	3	5.71
			5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chironomus spp.	750		0.64298
Coelotanypus spp.	45		0.00909
Leptocheirus plumulosus	318		0.09770
Limnodrilus hoffmeisteri	136		
Marenzelleria viridis	45		0.07043
Oligochaeta			0.24341
Tubificidae imm w/o cap chaetae *	1636		
Tubificoides spp.	45		0.00114
Total Abundance w/ Epi.	2976		
Total Abundance w/o Epi.	2976		
Number of Taxa w/ Epi.	6		
Number of Taxa w/o Epi.	6		
Total Biomass w/ Epi.			1.06474
Total Biomass w/o Epi.			1.06474

\*Indicates taxa is skipped in taxon counts

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 203	Rep: 02
Gear: Young Grab		Habitat: Oligohaline	Date: 18AUG14
		Sampled Area: 0.044 sq.m	Time: 14:07:05
BOTTOM ENVIRONMENT			
Depth (m): 1.6	Salinity (ppt): 2.67	Temperature (C): 25.10	
Dissolved Oxygen (mg/l): 6.1	Sediment Silt-Clay (%): 80.91	Total Carbon (%): 4	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 3.67	Condition: Meets Goal		# Attributes Scored: 6
	Value	Score	Value Score
Shannon-Wiener Index	1.94		87.88 3
Abundance (#/m2)	750	5	Tolerance Score 8.51 3
Deep Deposit Feeder Abundance (%)	12.12		Oligohaline Pollution Sensitive Spp. Abund. 12.12 3
Carnivore-Omnivore Abundance (%)	72.73	5	Tanypodinae/Chironomidae Abundance Ratio 41.67 3
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chironomus spp.	318		0.20221
Coelotanypus spp.	227		0.05226
Leptocheirus plumulosus	23		0.00909
Marenzelleria viridis	91		0.03181
Tubificidae imm w/o cap chaetae	91		0.00114
Total Abundance w/ Epi.	750		
Total Abundance w/o Epi.	750		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.			0.29650
Total Biomass w/o Epi.			0.29650

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Patapsco & Back Rivers		Station: 203	Rep: 03
Gear: Young Grab		Habitat: Oligohaline	Date: 18AUG14
		Sampled Area: 0.044 sq.m	Time: 14:07:05
BOTTOM ENVIRONMENT			
Depth (m): 1.6	Salinity (ppt): 2.67	Temperature (C): 25.10	
Dissolved Oxygen (mg/l): 6.1	Sediment Silt-Clay (%): 80.91	Total Carbon (%): 4	
BENTHIC INDEX OF BIOTIC INTEGRITY			
B-IBI Score: 2.67	Condition: Marginal		# Attributes Scored: 6
	Value	Score	Value
Shannon-Wiener Index	1.95		100.00
Abundance (#/m2)	1931	5	9.61
Deep Deposit Feeder Abundance (%)	64.71		0.00
Carnivore-Omnivore Abundance (%)	31.76	3	14.81
			5
BENTHIC ABUNDANCE (per sq. meter)			
TAXA	Abundance (#/m2)		Biomass (g/m2)
Chironomus spp.	523		0.48848
Coelotanypus spp.	91		0.02954
Leptocheirus plumulosus	68		0.01818
Limnodrilus hoffmeisteri	182		
Mediomastus ambiseta	114		0.13405
Oligochaeta			0.23629
Tubificidae imm w/o cap chaetae *	954		
Total Abundance w/ Epi.	1931		
Total Abundance w/o Epi.	1931		
Number of Taxa w/ Epi.	5		
Number of Taxa w/o Epi.	5		
Total Biomass w/ Epi.			0.90653
Total Biomass w/o Epi.			0.90653

\*Indicates taxa is skipped in taxon counts

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 01	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 26AUG14	
		Sampled Area: 0.044 sq.m		Time: 10:20:57	
BOTTOM ENVIRONMENT					
Depth (m): 7.0		Salinity (ppt): 9.58		Temperature (C): 25.33	
Dissolved Oxygen (mg/l): 2.7		Sediment Silt-Clay (%): 52.45		Total Carbon (%): 1.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.53	3	Pollution Indicative Species Abundance (%)	4.26	
Abundance (#/m2)	3204	3	Pollution Indicative Species Biomass (%)	0.02	5
Biomass (g/m2)	9.46	5	Pollution Sensitive Species Abundance (%)	32.62	
Carnivore-Omnivore Abundance (%)	4.96	1	Pollution Sensitive Species Biomass (%)	89.53	5
Deep Deposit Feeder Abundance (%)	53.90				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	68		0.03635		
Heteromastus filiformis	682		0.29990		
Leptocheirus plumulosus	182		0.03181		
Macoma balthica	863		8.10422		
Macoma mitchelli	23		0.10906		
Marenzelleria viridis	182		0.36806		
Neanthes succinea	91		0.49530		
Streblospio benedicti	68		0.00114		
Tubificidae imm w/o cap chaetae	68		0.00114		
Tubificoides spp.	977		0.01590		
Total Abundance w/ Epi.	3204				
Total Abundance w/o Epi.	3204				
Number of Taxa w/ Epi.	10				
Number of Taxa w/o Epi.	10				
Total Biomass w/ Epi.			9.46288		
Total Biomass w/o Epi.			9.46288		

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 02	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 26AUG14	
		Sampled Area: 0.044 sq.m		Time: 10:20:57	
BOTTOM ENVIRONMENT					
Depth (m): 7.0		Salinity (ppt): 9.58		Temperature (C): 25.33	
Dissolved Oxygen (mg/l): 2.7		Sediment Silt-Clay (%): 52.45		Total Carbon (%): 1.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	1.95	1	Pollution Indicative Species Abundance (%)	0.00	
Abundance (#/m2)	1908	5	Pollution Indicative Species Biomass (%)	0.00	5
Biomass (g/m2)	6.12	5	Pollution Sensitive Species Abundance (%)	44.05	
Carnivore-Omnivore Abundance (%)	5.95	1	Pollution Sensitive Species Biomass (%)	93.34	5
Deep Deposit Feeder Abundance (%)	42.86				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Carinoma tremaphoros	91		0.03635		
Edotea triloba (Epi)	23		0.00227		
Heteromastus filiformis	659		0.25901		
Leptocheirus plumulosus	114		0.01363		
Macoma balthica	841		5.71181		
Macoma mitchelli	23		0.05680		
Neanthes succinea	23		0.04090		
Tubificoides spp.	159		0.00114		
Total Abundance w/ Epi.	1931				
Total Abundance w/o Epi.	1908				
Number of Taxa w/ Epi.	8				
Number of Taxa w/o Epi.	7				
Total Biomass w/ Epi.			6.12190		
Total Biomass w/o Epi.			6.11963		

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) FIXED STATIONS

Watershed: Lower Western Shore		Station: 204		Rep: 03	
Gear: Young Grab		Habitat: High Mesohaline Mud		Date: 26AUG14	
		Sampled Area: 0.044 sq.m		Time: 10:20:57	
BOTTOM ENVIRONMENT					
Depth (m): 7.0		Salinity (ppt): 9.58		Temperature (C): 25.33	
Dissolved Oxygen (mg/l): 2.7		Sediment Silt-Clay (%): 52.45		Total Carbon (%): 1.57	
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score: 3.67		Condition: Meets Goal		# Attributes Scored: 6	
	Value	Score		Value	Score
Shannon-Wiener Index	2.53	3	Pollution Indicative Species Abundance (%)	7.92	
Abundance (#/m2)	4589	3	Pollution Indicative Species Biomass (%)	0.18	5
Biomass (g/m2)	4.95	5	Pollution Sensitive Species Abundance (%)	22.77	
Carnivore-Omnivore Abundance (%)	4.95	1	Pollution Sensitive Species Biomass (%)	79.25	5
Deep Deposit Feeder Abundance (%)	52.97				
BENTHIC ABUNDANCE (per sq. meter)					
TAXA	Abundance (#/m2)		Biomass (g/m2)		
Balanus improvisus (Epi)	23		0.02954		
Carinoma tremaphoros	45		0.09770		
Heteromastus filiformis	545		0.19766		
Leptocheirus plumulosus	477		0.07725		
Macoma balthica	727		3.53750		
Macoma mitchelli	45		0.11133		
Marenzelleria viridis	318		0.38397		
Mucrogammarus mucronatus (Epi)	23		0.00227		
Mytilopsis leucophaeata (Epi)	23		0.01363		
Neanthes succinea	182		0.50666		
Streblospio benedicti	364		0.00909		
Tubificoides spp.	1886		0.02726		
Total Abundance w/ Epi.	4658				
Total Abundance w/o Epi.	4589				
Number of Taxa w/ Epi.	12				
Number of Taxa w/o Epi.	9				
Total Biomass w/ Epi.			4.99386		
Total Biomass w/o Epi.			4.94842		



**DATA SUMMARY B**

**BENTHIC ENVIRONMENT AND COMMUNITY  
COMPOSITION AT RANDOM SITES:  
SUMMER 2014**



**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21401	21402	21403	21404	21405
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	High Meso Mud	Low Mesohaline	High Meso Mud	High Meso Sand	High Meso Mud
Date	09/19/14	09/19/14	09/18/14	09/18/14	09/18/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044

**BOTTOM ENVIRONMENT**

Depth (m)	1.9	7.8	5.2	2.1	3.1
Salinity (ppt)	12.71	6.20	15.08	14.57	14.36
Temperature (C)	22.70	22.65	22.87	23.25	22.63
Dissolved Oxygen (mg/L)	6.9	5.0	7.6	7.9	7.6
Sediment Silt-Clay (%)	71.71	20.91	78.54	11.64	83.78
Total Carbon (%)	3.30	1.12	2.40	0.44	1.88

**BENTHIC INDEX OF BIOTIC INTEGRITY**

B-IBI Score	3.67		3.00		2.33		4.00		1.67	
Condition	Meets Goal		Meets Goal		Degraded		Meets Goal		Severely Degr.	
# Attributes Scored	6		5		6		6		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	2.21	3	2.47	3	2.36	3	3.43	5	2.17	3
Abundance (#/m2)	4408	3	1295	3	523	1	3953	3	227	1
Biomass (g/m2)	0.93	3	0.62	1	0.26	1	10.25	5	0.21	1
Pollution Indicative Spp Abund (%)	2.58		5.26	5	4.35		2.30	5	40.00	
Pollution Indicative Spp Biom (%)	2.45	5	0.18		8.62	3	0.69		85.25	1
Pollution Sensitive Spp Abund (%)	43.30		22.81		73.91		60.92	5	20.00	
Pollution Sensitive Spp Biom (%)	82.58	5	71.79	3	28.45	1	62.95		0.55	1
Carnivore-Omnivore Abund (%)	12.89	3	26.32		60.87	5	17.82	1	20.00	3
Deep Deposit Feeder Abund (%)	81.44		26.32		21.74		62.07		30.00	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		5.26		0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Tolerance Score	0.00		9.80		0.00		0.00		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00		0.00		0.00	

**BENTHIC ABUNDANCE (per sq. meter)**

Site	21401	21402	21403	21404	21405
<i>Acteocina canaliculata</i>	23		250	91	45
<i>Ampelisca abdita</i>				23	
<i>Amphiporus bioculatus</i>	45		23	23	
<i>Carinoma tremaphoros</i>	23				
<i>Chiridotea almyra</i>		341			
<i>Clymenella torquata</i>				1386	
<i>Cyathura polita</i>	91				
<i>Edotea triloba (Epi.)</i>		23			
<i>Edwardsia elegans</i>	23			23	
<i>Eteone heteropoda</i>	23				
<i>Gammarus daiberi (Epi.)</i>		159			
<i>Glycera dibranchiata</i>				68	
<i>Glycinde solitaria</i>	341			227	
<i>Haminoea solitaria</i>			23		
<i>Heteromastus filiformis</i>	204	182		91	
<i>Leitoscoloplos robustus</i>				23	
<i>Leptocheirus plumulosus</i>		295			
<i>Leucon americanus</i>			23		
<i>Listriella barnardi</i>				341	
<i>Loimia medusa</i>				91	
<i>Macoma balthica</i>	68				
<i>Macoma mitchelli</i>	23	23	23	45	23
<i>Marenzelleria viridis</i>	68	295			
<i>Mediomastus ambiseta</i>	1318		114	409	
<i>Melinna maculata</i>				23	
<i>Melita nitida (Epi.)</i>		45			
<i>Mercenaria mercenaria</i>				68	
<i>Mulinia lateralis</i>	68				23

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21401	21402	21403	21404	21405
<i>Mytilus edulis</i> (Epi.)				182	
<i>Neanthes succinea</i>			23	23	
<i>Parahesion luteola</i>				91	
<i>Paraprionospio pinnata</i>			23	68	68
<i>Pectinaria gouldii</i>				68	
<i>Phoronis</i> spp.				68	
<i>Podarkeopsis levifuscina</i>				136	
<i>Ptilanthura tenuis</i>				23	
<i>Spiochaetopterus costarum</i>			23	68	
<i>Streblospio benedicti</i>	23				
Tubificidae imm w/o cap chaetae		68			
<i>Tubificoides</i> spp.	2068	91		477	68
Total Abundance w/ Epifauna	4408	1522	523	4135	227
Total Abundance w/o Epifauna	4408	1295	523	3953	227
Number of Taxa w/ Epifauna	15	10	9	25	5
Number of Taxa w/o Epifauna	15	7	9	24	5
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21401	21402	21403	21404	21405
<i>Acteocina canaliculata</i>	0.0011		0.0227	0.0045	0.0011
<i>Ampelisca abdita</i>				0.0045	
<i>Amphiporus bioculatus</i>	0.0023		0.0045	0.0045	
<i>Carinoma tremaphoros</i>	0.0045				
<i>Chiridotea almyra</i>		0.0886			
<i>Clymenella torquata</i>				5.4074	
<i>Cyathura polita</i>	0.1454				
<i>Edotea triloba</i> (Epi.)		0.0011			
<i>Edwardsia elegans</i>	0.0068			0.0091	
<i>Eteone heteropoda</i>	0.0011				
<i>Gammarus daiberi</i> (Epi.)		0.0204			
<i>Glycera dibranchiata</i>				3.5171	
<i>Glycinde solitaria</i>	0.0432			0.0159	
<i>Haminoea solitaria</i>			0.0023		
<i>Heteromastus filiformis</i>	0.0932	0.0250		0.0795	
<i>Leitoscoloplos robustus</i>				0.0068	
<i>Leptocheirus plumulosus</i>		0.0409			
<i>Leucon americanus</i>			0.0045		
<i>Listriella barnardi</i>				0.0204	
<i>Loimia medusa</i>				0.8861	
<i>Macoma balthica</i>	0.2476				
<i>Macoma mitchelli</i>	0.0159	0.0182	0.1409	0.0295	0.0273
<i>Marenzelleria viridis</i>	0.2976	0.4453			
<i>Mediomastus ambiseta</i>	0.0295		0.0068	0.0068	
<i>Melinna maculata</i>				0.0318	
<i>Melita nitida</i> (Epi.)		0.0023			
<i>Mercenaria mercenaria</i>				0.0500	
<i>Mulinia lateralis</i>	0.0204				0.0863
<i>Mytilus edulis</i> (Epi.)				0.0045	
<i>Neanthes succinea</i>			0.0136	0.0045	
<i>Parahesion luteola</i>				0.0068	
<i>Paraprionospio pinnata</i>			0.0227	0.0636	0.0909
<i>Pectinaria gouldii</i>				0.0045	
<i>Phoronis</i> spp.				0.0091	

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21401	21402	21403	21404	21405
Podarkeopsis levifuscina				0.0068	
Ptilanthura tenuis				0.0045	
Spiochaetopterus costarum			0.0454	0.0704	
Streblospio benedicti	0.0011				
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.	0.0159	0.0011		0.0023	0.0023
Total Biomass w/ Epifauna	0.9258	0.6441	0.2636	10.2513	0.2079
Total Biomass w/o Epifauna	0.9258	0.6203	0.2636	10.2467	0.2079

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21406	21407	21408	21409	21410
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	High Meso Sand	Low Mesohaline	Low Mesohaline	High Meso Sand	High Meso Mud
Date	09/18/14	09/18/14	09/18/14	09/18/14	09/18/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	2.6	2.1	5.3	1.9	3.3
Salinity (ppt)	14.60	11.69	11.10	12.34	12.41
Temperature (C)	23.02	22.73	22.79	22.51	22.82
Dissolved Oxygen (mg/L)	8.1	7.6	6.7	7.8	7.2
Sediment Silt-Clay (%)	5.16	64.45	83.89	11.28	77.24
Total Carbon (%)	0.07	2.18	2.66	0.73	2.23
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	4.67	3.00	3.40	3.33	3.33
Condition	Meets Goal	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	6	5	5	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.30 5	1.77 3	2.81 5	3.27 5	1.64 1
Abundance (#/m2)	2476 5	1045 3	841 3	2772 5	2567 3
Biomass (g/m2)	3.95 5	0.53 1	1.21 3	1.53 3	1.27 3
Pollution Indicative Spp Abund (%)	2.75 5	0.00 5	21.62 1	27.87 1	8.85
Pollution Indicative Spp Biom (%)	1.64	0.00	1.88	9.48	1.79 5
Pollution Sensitive Spp Abund (%)	77.06 5	10.87	29.73	15.57 3	12.39
Pollution Sensitive Spp Biom (%)	72.50	45.49 3	80.75 5	4.30	92.77 5
Carnivore-Omnivore Abund (%)	34.86 3	17.39	16.22	29.51 3	10.62 3
Deep Deposit Feeder Abund (%)	45.87	71.74	29.73	44.26	73.45
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	14.75	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
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21406	21407	21408	21409	21410
<i>Acteocina canaliculata</i>	386				
<i>Ameroculodes species complex</i>				23	
<i>Ampelisca abdita</i>	23				
<i>Amygdalum papyrium (Epi.)</i>	23				
<i>Carinoma tremaphoros</i>		23	91	45	45
<i>Clymenella torquata</i>	659				
<i>Cyathura polita</i>		23	23		136
<i>Edwardsia elegans</i>					23
<i>Gemma gemma</i>	23			91	
<i>Glycera dibranchiata</i>	68				
<i>Glycinde solitaria</i>	295	45	23	409	23
<i>Haminoea solitaria</i>	91			45	
<i>Heteromastus filiformis</i>	45	23	23	682	45
<i>Leptosynapta tenuis</i>	23				
<i>Leucon americanus</i>		68	23		23
<i>Listriella barnardi</i>	91				
<i>Lyonsia hyalina</i>	45				
<i>Macoma balthica</i>		45	159		159
<i>Macoma mitchelli</i>			45	227	
<i>Marenzelleria viridis</i>			45	23	
<i>Mediomastus ambiseta</i>	409				
<i>Mulinia lateralis</i>	23		182	136	227
<i>Mytilus edulis (Epi.)</i>				23	
<i>Neanthes succinea</i>		45		204	23
<i>Ogyrides alphaerostris</i>					23
<i>Parahesionia luteola</i>		45			
<i>Paraprionospio pinnata</i>	45				
<i>Pectinaria gouldii</i>	23				

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21406	21407	21408	21409	21410
Phoronis spp.	136				
Podarkeopsis levifuscina	23				
Rictaxis punctostriatus				114	
Saccoglossus kowalevskii	45				
Spiochaetopterus costarum	23				
Streblospio benedicti				227	
Stylochus ellipticus (Epi.)	23				
Tubificidae imm w/o cap chaetae				409	
Tubificoides spp.		727	227	136	1840
Total Abundance w/ Epifauna	2522	1045	841	2795	2567
Total Abundance w/o Epifauna	2476	1045	841	2772	2567
Number of Taxa w/ Epifauna	21	9	10	15	11
Number of Taxa w/o Epifauna	19	9	10	14	11
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21406	21407	21408	21409	21410
Acteocina canaliculata	0.0341				
Ameroculodes species complex				0.0068	
Ampelisca abdita	0.0045				
Amygdalum papyrium (Epi.)	0.0023				
Carinoma tremaphoros		0.0045	0.0727	0.6452	0.0136
Clymenella torquata	2.7173				
Cyathura polita		0.0273	0.0863		0.4748
Edwardsia elegans					0.0068
Gemma gemma	0.0011			0.0091	
Glycera dibranchiata	0.9156				
Glycinde solitaria	0.0182	0.0023	0.0204	0.0568	0.0011
Haminoea solitaria	0.0045			0.0023	
Heteromastus filiformis	0.0545	0.0045	0.0182	0.2681	0.0091
Leptosynapta tenuis	0.0227				
Leucon americanus		0.0045	0.0011		0.0023
Listriella barnardi	0.0068				
Lyonsia hyalina	0.0011				
Macoma balthica		0.2113	0.6407		0.7043
Macoma mitchelli			0.1136	0.1250	
Marenzelleria viridis			0.2295	0.0091	
Mediomastus ambiseta	0.0045				
Mulinia lateralis	0.0011		0.0227	0.1363	0.0227
Mytilus edulis (Epi.)				0.0045	
Neanthes succinea		0.2613		0.2545	0.0091
Ogyrides alphaerostris					0.0011
Parahesionia luteola		0.0045			
Paraprionospio pinnata	0.0636				
Pectinaria gouldii	0.0011				
Phoronis spp.	0.0636				
Podarkeopsis levifuscina	0.0011				
Rictaxis punctostriatus				0.0091	
Saccoglossus kowalevskii	0.0068				
Spiochaetopterus costarum	0.0227				
Streblospio benedicti				0.0045	
Stylochus ellipticus (Epi.)	0.0011				
Tubificidae imm w/o cap chaetae				0.0045	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21406	21407	21408	21409	21410
Tubificoides spp.		0.0091	0.0045	0.0023	0.0273
Total Biomass w/ Epifauna	3.9487	0.5294	1.2098	1.5381	1.2723
Total Biomass w/o Epifauna	3.9453	0.5294	1.2098	1.5336	1.2723



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21411	21412	21413	21414	21415					
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs					
Habitat	Oligohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Oligohaline					
Date	09/11/14	09/04/14	09/04/14	09/04/14	09/11/14					
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab					
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044					
BOTTOM ENVIRONMENT										
Depth (m)	5.9	7.9	9.0	3.7	6.4					
Salinity (ppt)	1.30	9.45	9.41	8.17	4.25					
Temperature (C)	25.25	26.82	26.86	27.26	25.41					
Dissolved Oxygen (mg/L)	5.6	4.2	4.3	5.2	5.2					
Sediment Silt-Clay (%)	39.57	86.59	86.38	61.43	77.02					
Total Carbon (%)	6.12	2.24	2.04	2.18	3.55					
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	2.00		4.60		3.40		4.20		2.60	
Condition	Severely Degr.		Meets Goal		Meets Goal		Meets Goal		Degraded	
# Attributes Scored	6		5		5		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.22		2.29	3	2.19	3	2.18	3	2.21	
Abundance (#/m2)	6430	1	1522	5	954	3	1772	5	659	5
Biomass (g/m2)	4.56		6.46	5	3.96	3	1.71	3	0.22	
Pollution Indicative Spp Abund (%)	95.05		7.46	5	19.05	3	7.69	5	27.59	
Pollution Indicative Spp Biom (%)	12.36		0.32		1.15		0.53		2.56	
Pollution Sensitive Spp Abund (%)	3.89		58.21		57.14		11.54		13.79	
Pollution Sensitive Spp Biom (%)	87.47		95.21	5	89.00	5	84.59	5	52.31	
Carnivore-Omnivore Abund (%)	1.41	1	26.87		30.95		8.97		10.34	1
Deep Deposit Feeder Abund (%)	95.05		25.37		11.90		21.79		37.93	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	95.05		0.00		0.00		2.56		20.69	
Oligo Poll. Indic. Spp Abund (%)	95.05	1	0.00		0.00		0.00		86.21	3
Oligo Poll. Sens. Spp Abund (%)	2.83	3	0.00		0.00		0.00		3.45	3
Tolerance Score	9.77	1	6.20		6.20		7.95		9.80	1
Tany./Chir. Abundance Ratio	0.00	5	100.00		100.00		100.00		0.00	

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	21411	21412	21413	21414	21415
Ameroculodes species complex	23				
Carinoma tremaphoros		91	45	23	
Chaoborus punctipennis	23				
Coelotanypus spp.		114	182	23	
Cryptochironomus spp.	23				
Cyathura polita	45	136	68	114	68
Gammarus daiberi (Epi.)	68				114
Glycinde solitaria		23			
Heteromastus filiformis		295	68	68	
Leptocheirus plumulosus				1022	273
Limnodrilus hoffmeisteri	1840				
Macoma balthica		727	477	68	
Macoma mitchelli			68	45	
Marenzelleria viridis	182				23
Melita nitida (Epi.)				114	273
Neanthes succinea		45			
Rangia cuneata	23			23	
Streblospio benedicti				68	45
Tubificidae imm w/o cap chaetae				45	136
Tubificidae imm w/o cap chaetae *	4271				
Tubificoides spp.		91	45	273	114
Total Abundance w/ Epifauna	6498	1522	954	1886	1045
Total Abundance w/o Epifauna	6430	1522	954	1772	659
Number of Taxa w/ Epifauna	8	8	7	12	8
Number of Taxa w/o Epifauna	7	8	7	11	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21411	21412	21413	21414	21415
Ameroculodes species complex	0.0023				
Carinoma tremaphoros		0.0659	0.0727	0.0023	
Chaoborus punctipennis	0.0045				
Coelotanypus spp.		0.0204	0.0454	0.0068	
Cryptochironomus spp.	0.0011				
Cyathura polita	0.0045	0.4249	0.2545	0.2590	0.0136
Gammarus daiberi (Epi.)	0.0023				0.0068
Glycinde solitaria		0.0011			
Heteromastus filiformis		0.1772	0.0477	0.0386	
Leptocheirus plumulosus				0.2045	0.0954
Macoma balthica		5.7209	3.2740	1.1701	
Macoma mitchelli			0.2658	0.0045	
Marenzelleria viridis	1.0020				0.1022
Melita nitida (Epi.)				0.0068	0.0136
Neanthes succinea		0.0432			
Oligochaeta	0.5635				
Rangia cuneata	2.9809			0.0182	
Streblospio benedicti				0.0011	0.0045
Tubificidae imm w/o cap chaetae				0.0011	0.0011
Tubificoides spp.		0.0023	0.0045	0.0045	0.0045
Total Biomass w/ Epifauna	4.5610	6.4559	3.9646	1.7176	0.2420
Total Biomass w/o Epifauna	4.5588	6.4559	3.9646	1.7108	0.2215

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21416	21417	21418	21420	21421
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	High Meso Sand	Low Mesohaline	High Meso Mud	Low Mesohaline	Low Mesohaline
Date	09/02/14	09/02/14	09/02/14	09/08/14	09/02/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	9.2	3.9	8.2	3.6	2.1
Salinity (ppt)	12.23	10.29	13.41	7.63	6.12
Temperature (C)	25.18	25.78	25.03	27.26	28.16
Dissolved Oxygen (mg/L)	0.2	3.7	0.5	5.6	1.3
Sediment Silt-Clay (%)	32.83	1.96	84.21	89.38	89.43
Total Carbon (%)	0.94	0.06	2.04	2.15	3.31
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	3.00	2.60	3.00	4.20	1.80
Condition	Meets Goal	Degraded	Meets Goal	Meets Goal	Severely Degr.
# Attributes Scored	6	5	6	5	5
	Value	Score	Value	Score	Value
Shannon-Wiener Index	2.33	1	2.66	5	0.00
Abundance (#/m2)	1568	5	2658	3	136
Biomass (g/m2)	4.04	5	0.55	1	0.00
Pollution Indicative Spp Abund (%)	15.94	3	11.11	3	0.00
Pollution Indicative Spp Biom (%)	5.49	3	3.10	5	0.00
Pollution Sensitive Spp Abund (%)	26.09	3	2.56	5	0.00
Pollution Sensitive Spp Biom (%)	90.68	3	10.74	1	0.00
Carnivore-Omnivore Abund (%)	4.35	1	5.13	5	0.00
Deep Deposit Feeder Abund (%)	62.32	1	10.26	5	100.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	8.70	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	9.80	0.00	9.80	6.19	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	100.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21416	21417	21418	21420	21421
Ameroculodes species complex		68			
Apocorophium lacustre (Epi.)		23			
Carinoma tremaphoros	23		91	23	
Coelotanypus spp.				318	
Cyathura polita				204	
Edotea triloba (Epi.)		91			
Eteone foliosa		23			
Gemma gemma		91			
Heteromastus filiformis	250	182	23		
Leitoscoloplos spp.		45			
Leptocheirus plumulosus		1000		591	
Macoma balthica	409		500	704	
Macoma mitchelli		772		136	
Marenzelleria viridis		68			
Melita nitida (Epi.)				91	
Micrura leidyi		68			
Mulinia lateralis	23	114			
Neanthes succinea	45	45	136	91	
Rangia cuneata				23	
Streblospio benedicti	91	136		68	
Tubificidae imm w/o cap chaetae	136		23		
Tubificoides spp.	591	45	23	114	136
Total Abundance w/ Epifauna	1568	2772	795	2363	136
Total Abundance w/o Epifauna	1568	2658	795	2272	136
Number of Taxa w/ Epifauna	8	15	6	11	1
Number of Taxa w/o Epifauna	8	13	6	10	1

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21416	21417	21418	21420	21421
Ameroculodes species complex		0.0068			
Apocorophium lacustre (Epi.)		0.0023			
Carinoma tremaphoros	0.0091		0.0727	0.0114	
Coelotanypus spp.				0.0704	
Cyathura polita				0.5294	
Edotea triloba (Epi.)		0.0045			
Eteone foliosa		0.0568			
Gemma gemma		0.0204			
Heteromastus filiformis	0.1045	0.0295	0.0386		
Leitoscoloplos spp.		0.0011			
Leptocheirus plumulosus		0.1568		0.1068	
Macoma balthica	3.6602		9.4538	8.1633	
Macoma mitchelli		0.1250		1.3882	
Marenzelleria viridis		0.0591			
Melita nitida (Epi.)				0.0045	
Micrura leidyi		0.0727			
Mulinia lateralis	0.2158	0.0136			
Neanthes succinea	0.0364	0.0045	0.4544	0.1636	
Rangia cuneata				0.0432	
Streblospio benedicti	0.0045	0.0023		0.0023	
Tubificidae imm w/o cap chaetae	0.0011		0.0011		
Tubificoides spp.	0.0045	0.0011	0.0023	0.0023	0.0023
Total Biomass w/ Epifauna	4.0362	0.5566	10.0229	10.4853	0.0023
Total Biomass w/o Epifauna	4.0362	0.5498	10.0229	10.4807	0.0023

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21422	21423	21424	21425	21426
Watershed	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs	Eastern Tribs
Habitat	Oligohaline	Oligohaline	Freshwater	Oligohaline	Oligohaline
Date	09/08/14	09/08/14	08/25/14	08/25/14	09/11/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	5.4	7.8	1.4	5.3	7.7
Salinity (ppt)	4.21	1.82	0.49	1.14	1.84
Temperature (C)	27.40	27.50	25.23	25.11	25.24
Dissolved Oxygen (mg/L)	5.9	6.4	7.1	6.7	3.0
Sediment Silt-Clay (%)	90.96	27.49	59.05	48.92	79.71
Total Carbon (%)	2.81	1.66	2.37	1.66	4.37
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	3.00	4.33	3.50	2.67	1.40
Condition	Meets Goal	Meets Goal	Meets Goal	Marginal	Severely Degr.
# Attributes Scored	6	6	4	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.44	2.77	2.61	1.79	0.39
Abundance (#/m2)	364 3	1136 5	4408 3	3385 3	295 3
Biomass (g/m2)	23.67	1.61	70.01	78.35	0.00
Pollution Indicative Spp Abund (%)	56.25	2.00	70.10	20.13	7.69
Pollution Indicative Spp Biom (%)	0.08	0.07	0.33	0.03	50.00
Pollution Sensitive Spp Abund (%)	31.25	68.00	21.13	79.19	0.00
Pollution Sensitive Spp Biom (%)	99.50	93.36	88.32	99.85	0.00
Carnivore-Omnivore Abund (%)	50.00 5	30.00 3	18.04	5.37 1	0.00 1
Deep Deposit Feeder Abund (%)	6.25	12.00	65.98 5	18.79	100.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	62.89 3	0.00	0.00
Limnodrilus Abundance (%)	0.00	2.00	62.89	18.79	7.69
Oligo Poll. Indic. Spp Abund (%)	62.50 3	22.00 5	0.00	20.13 5	100.00 1
Oligo Poll. Sens. Spp Abund (%)	6.25 3	38.00 5	0.00	16.11 3	0.00 1
Tolerance Score	6.13 3	6.38 3	8.92 3	6.90 3	9.80 1
Tany./Chir. Abundance Ratio	100.00 1	0.00 5	68.18	100.00 1	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21422	21423	21424	21425	21426
Ameroculodes species complex		23			
Apocorophium lacustre (Epi.)		45			
Carinoma tremaphoros	23	23		23	
Chiridotea almyra		45			
Coelotanypus spp.	136		318	45	
Corbicula fluminea			68		
Cricotopus bicinctus			23		
Cyathura polita	23	182	295	114	
Dicrotendipes spp.			45		
Gammarus daiberi (Epi.)		1181	23		68
Gyraulius spp. (Epi.)			23		
Heteromastus filiformis	23				
Hobsonia florida		23			
Leptocheirus plumulosus		23			
Limnodrilus hoffmeisteri		23	1000	227	
Marenzelleria viridis	23	386	204	545	
Polypedilum halterale group		91	45		
Procladius spp.			23		
Rangia cuneata	68	204	432	2022	
Streblospio benedicti	68				
Tanytarsus spp. G Epler			45		
Tubificidae imm w/o cap chaetae					23
Tubificidae imm w/o cap chaetae *			1772	409	
Tubificoides spp.		114	136		273
Total Abundance w/ Epifauna	364	2363	4453	3385	364
Total Abundance w/o Epifauna	364	1136	4408	3385	295
Number of Taxa w/ Epifauna	7	13	14	6	3
Number of Taxa w/o Epifauna	7	11	12	6	2

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21422	21423	21424	21425	21426
Ameroculodes species complex		0.0068			
Apocorophium lacustre (Epi.)		0.0011			
Carinoma tremaphoros	0.0977	0.0795		0.0932	
Chiridotea almyra		0.0023			
Chironomidae			0.0011		
Coelotanypus spp.	0.0182		0.0318	0.0023	
Corbicula fluminea			7.9406		
Cyathura polita	0.0011	0.0182	0.1136	0.0795	
Gammarus daiberi (Epi.)		0.1136	0.0023		0.0045
Gyraulus spp. (Epi.)			0.0068		
Heteromastus filiformis	0.0011				
Hobsonia florida		0.0068			
Leptocheirus plumulosus		0.0068			
Limnodrilus hoffmeisteri		0.0011			
Marenzelleria viridis	0.0318	0.4589	0.2931	0.2704	
Oligochaeta			0.1977	0.0204	
Polypedilum halterale group		0.0011			
Rangia cuneata	23.5220	1.0247	61.4235	77.8864	
Streblospio benedicti	0.0011				
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.		0.0023	0.0045		0.0011
Total Biomass w/ Epifauna	23.6731	1.7233	70.0151	78.3522	0.0068
Total Biomass w/o Epifauna	23.6731	1.6086	70.0060	78.3522	0.0023

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21501	21502	21503	21504	21505
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Sand	Low Mesohaline
Date	08/21/14	08/20/14	08/20/14	09/18/14	08/20/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	12.3	5.9	7.2	2.6	6.8
Salinity (ppt)	9.36	10.17	9.58	15.02	10.52
Temperature (C)	25.16	26.19	25.40	23.61	25.44
Dissolved Oxygen (mg/L)	1.3	7.4	6.6	8.4	4.5
Sediment Silt-Clay (%)	92.27	1.42	3.99	1.79	1.83
Total Carbon (%)	2.38	0.06	0.17	0.04	0.04
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	1.80	3.40	3.40	2.33	3.80
Condition	Severely Degr.	Meets Goal	Meets Goal	Degraded	Meets Goal
# Attributes Scored	5	5	5	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.59 1	3.58 5	3.71 5	2.42 1	4.11 5
Abundance (#/m2)	159 1	1318 3	1318 3	10201 1	1977 5
Biomass (g/m2)	0.69 1	1.50 3	1.50 3	1.79 3	2.23 3
Pollution Indicative Spp Abund (%)	0.00 5	0.00 5	0.00 5	0.67 5	3.45 5
Pollution Indicative Spp Biom (%)	0.00	0.00	0.00	1.90	0.92
Pollution Sensitive Spp Abund (%)	14.29	41.38	46.55	32.96 3	28.74
Pollution Sensitive Spp Biom (%)	10.82 1	12.71 1	25.28 1	49.05	12.86 1
Carnivore-Omnivore Abund (%)	85.71	22.41	58.62	14.92 1	22.99
Deep Deposit Feeder Abund (%)	0.00	8.62	13.79	74.39	14.94
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21501	21502	21503	21504	21505
<i>Acteocina canaliculata</i>		91	386	795	45
<i>Ameroculodes species complex</i>			68		
<i>Ampelisca abdita</i>			23		159
<i>Ampelisca verrilli</i>			45	91	
<i>Amphiporus bioculatus</i>				23	
<i>Amygdalum papyrium (Epi.)</i>				23	159
<i>Ancistrosyllis hartmanae</i>				23	
<i>Carinoma tremaphoros</i>			23		
<i>Clymenella torquata</i>				68	
<i>Cyathura polita</i>					182
<i>Edwardsia elegans</i>				23	68
<i>Eteone heteropoda</i>				45	
<i>Gemma gemma</i>		114			204
<i>Glycera americana</i>			68		
<i>Glycera dibranchiata</i>		45	68	23	45
<i>Glycinde solitaria</i>		45	23	341	45
<i>Haminoea solitaria</i>		45		91	
<i>Heteromastus filiformis</i>		114	68	204	159
<i>Leitoscoloplos robustus</i>				23	
<i>Leitoscoloplos spp.</i>					23
<i>Lepidactylus dytiscus</i>		91			159
<i>Leptosynapta tenuis</i>		136			68
<i>Listriella barnardi</i>			23		
<i>Listriella clymenellae</i>				227	
<i>Loimia medusa</i>	23		45	23	23
<i>Macoma mitchelli</i>			45		45
<i>Marenzelleria viridis</i>		23	23	45	23
<i>Mediomastus ambiseta</i>			23	1386	

Continued . . .

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21501	21502	21503	21504	21505
<i>Microprotopus raneyi</i> (Epi.)				23	
<i>Molgula manhattensis</i> (Epi.)				68	
<i>Mulinia lateralis</i>					45
<i>Neanthes succinea</i>	136	23	68	91	45
<i>Neomysis americana</i> (Epi.)		23			
<i>Odostomia engonia</i> (Epi.)		23			
<i>Oxyurostylis smithi</i>			23	23	
<i>Paraonis fulgens</i>		23			23
<i>Parvilucina crenella</i>		68	23		227
<i>Pectinaria gouldii</i>			91	23	91
<i>Phoronis</i> spp.		318	45	364	182
<i>Podarkeopsis levifuscina</i>				45	
<i>Rictaxis punctostriatus</i>			136	23	23
<i>Scolelepis texana</i>				91	
<i>Sphaeroma quadridentatum</i> (Epi.)				204	
<i>Spiochaetopterus costarum</i>				114	68
<i>Spiophanes bombyx</i>		23			
<i>Stylochus ellipticus</i> (Epi.)					23
<i>Tharyx</i> sp. A Morris		114			
<i>Tubificoides</i> spp.				5884	23
Total Abundance w/ Epifauna	159	1363	1318	10519	2158
Total Abundance w/o Epifauna	159	1318	1318	10201	1977
Number of Taxa w/ Epifauna	2	18	20	30	25
Number of Taxa w/o Epifauna	2	16	20	26	23
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21501	21502	21503	21504	21505
<i>Acteocina canaliculata</i>		0.0091	0.0386	0.0613	0.0068
<i>Ameroculodes species complex</i>			0.0068		
<i>Ampelisca abdita</i>			0.0011		0.0159
<i>Ampelisca verrilli</i>			0.0227	0.0114	
<i>Amphiporus bioculatus</i>				0.0011	
<i>Amygdalum papyrium</i> (Epi.)				0.0045	0.0250
<i>Ancistrosyllis hartmanae</i>				0.0011	
<i>Carinoma tremaphoros</i>			0.0045		
<i>Clymenella torquata</i>				0.4226	
<i>Cyathura polita</i>		0.0182			0.0772
<i>Edwardsia elegans</i>				0.0545	0.1250
<i>Eteone heteropoda</i>				0.0023	
<i>Gemma gemma</i>		0.0659			0.0045
<i>Glycera americana</i>			0.0613		
<i>Glycera dibranchiata</i>		0.2317	0.8452	0.1181	0.9088
<i>Glycinde solitaria</i>		0.0023	0.0045	0.0273	0.0250
<i>Haminocia solitaria</i>		0.0023		0.0091	
<i>Heteromastus filiformis</i>		0.0136	0.0045	0.0545	0.0454
<i>Leitoscoloplos robustus</i>				0.0318	
<i>Leitoscoloplos</i> spp.					0.0136
<i>Lepidactylus dytiscus</i>		0.0091			0.0295
<i>Leptosynapta tenuis</i>		0.3726		0.0909	0.2522
<i>Listriella barnardi</i>			0.0011		
<i>Listriella clymenellae</i>				0.0204	
<i>Loimia medusa</i>	0.0750		0.2476	0.0045	0.0114
<i>Macoma mitchelli</i>			0.0011		0.0023
<i>Marenzelleria viridis</i>		0.0250	0.0114	0.0954	0.0182
<i>Mediomastus ambiseta</i>			0.0023	0.0273	

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21501	21502	21503	21504	21505
Microprotopus raneyi (Epi.)				0.0011	
Molgula manhattensis (Epi.)				0.0045	
Mulinia lateralis					0.0068
Neanthes succinea	0.6180	0.0023	0.0341	0.0295	0.0023
Neomysis americana (Epi.)		0.0023			
Odostomia engonia (Epi.)		0.0023			
Oxyurostylis smithi			0.0023	0.0023	
Paraonis fulgens		0.0045			0.0023
Parvilucina crenella		0.5862	0.1659		0.5089
Pectinaria gouldii			0.0295	0.0023	0.0182
Phoronis spp.		0.0818	0.0136	0.1954	0.0591
Podarkeopsis levifuscina				0.0011	
Rictaxis punctostriatus			0.0023	0.0011	0.0023
Scolecopsis texana				0.0295	
Sphaeroma quadridentatum (Epi.)				0.0068	
Spiochaetopterus costarum				0.0250	0.0886
Spiophanes bombyx		0.0545			
Stylochus ellipticus (Epi.)					0.0068
Tharyx sp. A Morris		0.0227			
Tubificoides spp.				0.4726	0.0011
Total Biomass w/ Epifauna	0.6930	1.5063	1.5007	1.8096	2.2572
Total Biomass w/o Epifauna	0.6930	1.5018	1.5007	1.7926	2.2254

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21506	21507	21508	21509	21510
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	High Meso Sand	High Meso Mud	High Meso Mud	Low Mesohaline
Date	08/20/14	09/18/14	09/18/14	09/18/14	08/20/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	5.4	3.6	9.5	8.0	7.1
Salinity (ppt)	10.29	14.89	15.24	14.69	11.07
Temperature (C)	25.70	23.48	23.89	23.55	25.35
Dissolved Oxygen (mg/L)	6.0	8.0	6.7	7.8	2.4
Sediment Silt-Clay (%)	1.82	1.90	81.76	56.35	3.09
Total Carbon (%)	0.08	0.06	1.55	1.01	0.11
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	3.80	3.33	3.67	2.67	3.80
Condition	Meets Goal	Meets Goal	Meets Goal	Marginal	Meets Goal
# Attributes Scored	5	6	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.98 5	3.03 3	3.35 5	3.43 5	3.51 5
Abundance (#/m2)	1749 5	4589 3	2908 3	1227 3	1659 5
Biomass (g/m2)	2.24 3	3.27 5	2.34 5	0.27 1	2.97 3
Pollution Indicative Spp Abund (%)	9.09 5	0.99 5	14.84	12.96	0.00 5
Pollution Indicative Spp Biom (%)	39.21	0.35	5.24 3	39.00 1	0.00
Pollution Sensitive Spp Abund (%)	27.27	19.31 3	10.94	35.19	31.51
Pollution Sensitive Spp Biom (%)	10.82 1	7.15	18.72 1	41.91 3	21.35 1
Carnivore-Omnivore Abund (%)	23.38	13.86 1	49.22 5	14.81 3	35.62
Deep Deposit Feeder Abund (%)	11.69	56.93	20.31	27.78	5.48
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
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21506	21507	21508	21509	21510
Acteocina canaliculata	23	182	91	68	250
Ameroculodes species complex	23				23
Ampelisca abdita			23	182	114
Ampelisca verrilli		273			
Amphiporus bioculatus		23		45	
Ancistrosyllis hartmanae		23			
Balanus improvisus (Epi.)				23	
Cyathura polita	114				
Demonax microphthalmus			136		
Diadumene leucolena (Epi.)			1045		
Edotea triloba (Epi.)			45		
Edwardsia elegans		45	45		
Epitonium rupicola (Epi.)	23		23		
Eteone heteropoda		23			
Gemma gemma	68	91			
Glycera americana	23				45
Glycera dibranchiata		91			
Glycinde solitaria	23	91	114	23	68
Haminoea solitaria	159	23			
Heteromastus filiformis	159	68		23	
Leitoscoloplos robustus	45	23		23	
Leitoscoloplos spp.			23		
Lepidactylus dytiscus	227				
Leptosynapta tenuis	91	409			23
Leucon americanus				136	
Listriella barnardi					23
Loimia medusa	45		45		45
Lyonsia hyalina			45		

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21506	21507	21508	21509	21510
<i>Macoma mitchelli</i>	159		68		114
<i>Marenzelleria viridis</i>					23
<i>Mediomastus ambiseta</i>		364		91	
<i>Melita nitida</i> (Epi.)	23			23	
<i>Micrura leidyi</i>					45
<i>Molgula manhattensis</i> (Epi.)		23	204		
<i>Mulinia lateralis</i>	114		136	45	
<i>Mya arenaria</i>			23		
<i>Mytilus edulis</i> (Epi.)					45
<i>Neanthes succinea</i>	23		1000	45	
<i>Odostomia engonia</i> (Epi.)			23		
<i>Oxyurostylis smithi</i>	45				23
<i>Parahesionia luteola</i>			23		23
<i>Paraonis fulgens</i>		136			
<i>Paraprionospio pinnata</i>			273	91	
<i>Parvilucina crenella</i>	114	23			477
<i>Pectinaria gouldii</i>			68	204	91
<i>Phoronis</i> spp.	204	136		45	91
<i>Podarke obscura</i>			23		
<i>Podarkeopsis levifuscina</i>		136	68		
<i>Polydora cornuta</i>			91		
<i>Ptilanthura tenuis</i>					23
<i>Rictaxis punctostriatus</i>	45		68		136
<i>Saccoglossus kowalevskii</i>					23
<i>Scolecopsis texana</i>		159			
<i>Spiochaetopterus costarum</i>	23	68	45	204	
<i>Spiophanes bombyx</i>	23	45			
<i>Stenothoe minuta</i> (Epi.)			386		
<i>Tubificoides</i> spp.		2158	500		
Total Abundance w/ Epifauna	1795	4612	4635	1272	1704
Total Abundance w/o Epifauna	1749	4589	2908	1227	1659
Number of Taxa w/ Epifauna	23	23	27	16	20
Number of Taxa w/o Epifauna	21	22	21	14	19
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21506	21507	21508	21509	21510
<i>Acteocina canaliculata</i>	0.0011	0.0250	0.0159	0.0250	0.0318
<i>Ameroculodes species complex</i>	0.4135				0.0023
<i>Ampelisca abdita</i>			0.0023	0.0136	0.0068
<i>Ampelisca verrilli</i>		0.1727			
<i>Amphiporus bioculatus</i>		0.0045		0.0023	
<i>Ancistrosyllis hartmanae</i>		0.0023			
<i>Balanus improvisus</i> (Epi.)				0.0636	
<i>Cyathura polita</i>	0.0477				
<i>Demonax microphthalmus</i>			0.0045		
<i>Diadumene leucolena</i> (Epi.)			0.7702		
<i>Edotea triloba</i> (Epi.)			0.0045		
<i>Edwardsia elegans</i>		0.0386	0.0136		
<i>Epitonium rupicola</i> (Epi.)	0.0045		0.0045		
<i>Eteone heteropoda</i>		0.0023			
<i>Gemma gemma</i>	0.0114	0.0045			
<i>Glycera americana</i>	0.0318				0.0863
<i>Glycera dibranchiata</i>		2.1152			

Continued . . .

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21506	21507	21508	21509	21510
Glycinde solitaria	0.0045	0.0045	0.0295	0.0068	0.0114
Haminoea solitaria	0.0250	0.0023			
Heteromastus filiformis	0.0273	0.0045		0.0068	
Leitoscoloplos robustus	0.7520	0.0091		0.0295	
Leitoscoloplos spp.			0.0454		
Lepidactylus dytiscus	0.0386				
Leptosynapta tenuis	0.1590	0.5476			0.0045
Leucon americanus				0.0091	
Listriella barnardi					0.0045
Loimia medusa	0.0682		0.3885		0.4135
Lyonsia hyalina			0.0011		
Macoma mitchelli	0.0818		0.0023		0.0023
Marenzelleria viridis					0.0250
Mediomastus ambiseta		0.0091		0.0045	
Melita nitida (Epi.)	0.0011			0.0068	
Micrura leidyi					0.1045
Molgula manhattensis (Epi.)		0.0011	0.5385		
Mulinia lateralis	0.1250		0.0023	0.0318	
Mya arenaria			0.0023		
Mytilus edulis (Epi.)					0.0011
Neanthes succinea	0.0068		1.7244	0.0023	
Odostomia engonia (Epi.)			0.0023		
Oxyurostylis smithi	0.0114				0.0011
Parahesionia luteola			0.0011		0.0011
Paraonis fulgens		0.0136			
Paraprionospio pinnata			0.0750	0.0454	
Parvilucina crenella	0.3408	0.0454			2.1720
Pectinaria gouldii			0.0159	0.0182	0.0091
Phoronis spp.	0.0500	0.0568		0.0011	0.0659
Podarke obscura			0.0045		
Podarkeopsis levifuscina		0.0204	0.0011		
Polydora cornuta			0.0023		
Ptilanthura tenuis					0.0136
Rictaxis punctostriatus	0.0023		0.0011		0.0011
Saccoglossus kowalevskii					0.0114
Scolecopsis texana		0.0091			
Spiochaetopterus costarum	0.0182	0.0114	0.0023	0.0772	
Spiophanes bombyx	0.0204	0.1272			
Stenothoe minuta (Epi.)			0.0045		
Tubificoides spp.		0.0477	0.0068		
<b>Total Biomass w/ Epifauna</b>	<b>2.2425</b>	<b>3.2751</b>	<b>3.6670</b>	<b>0.3442</b>	<b>2.9695</b>
<b>Total Biomass w/o Epifauna</b>	<b>2.2368</b>	<b>3.2740</b>	<b>2.3424</b>	<b>0.2738</b>	<b>2.9684</b>

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21511	21512	21513	21514	21515
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	High Meso Mud	High Meso Sand	High Meso Mud	Low Mesohaline
Date	08/20/14	09/18/14	09/17/14	09/17/14	08/20/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m)	2.6	3.5	2.3	1.0	6.5
Salinity (ppt)	9.40	13.50	12.99	12.80	9.53
Temperature (C)	25.80	22.71	22.63	21.48	25.18
Dissolved Oxygen (mg/L)	8.2	7.9	8.2	8.8	6.0
Sediment Silt-Clay (%)	2.78	80.74	10.20	72.15	8.29
Total Carbon (%)	0.15	1.71	0.32	0.34	0.08
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score	2.20	1.67	2.33	3.67	3.40
Condition	Degraded	Severely Degr.	Degraded	Meets Goal	Meets Goal
# Attributes Scored	5	6	6	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.56 5	2.73 3	2.43 1	2.50 3	2.72 5
Abundance (#/m2)	1181 3	204 1	2499 5	3022 3	659 3
Biomass (g/m2)	0.39 1	0.14 1	1.77 3	2.07 5	0.19 1
Pollution Indicative Spp Abund (%)	57.69 1	44.44	11.82 3	1.50	3.45 5
Pollution Indicative Spp Biom (%)	81.50	70.08 1	27.93	0.11 5	7.27
Pollution Sensitive Spp Abund (%)	11.54	11.11	2.73 1	8.27	31.03
Pollution Sensitive Spp Biom (%)	2.02 1	1.57 1	1.99	7.36 1	61.82 3
Carnivore-Omnivore Abund (%)	21.15	11.11 3	9.09 1	39.85 5	17.24
Deep Deposit Feeder Abund (%)	19.23	22.22	25.45	49.62	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
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
Site	21511	21512	21513	21514	21515
Acteocina canaliculata	114				23
Americamysis spp. (Epi.)				23	
Ameroculodes species complex	23				68
Amphiporus bioculatus			23		
Carinoma tremaphoros		23	45	45	
Cyathura polita				45	
Doridella obscura (Epi.)	23				
Edotea triloba (Epi.)	23		23		
Erichsonella attenuata (Epi.)				613	
Gemma gemma			204		
Glycera dibranchiata			68		
Glycinde solitaria	23		23	204	68
Haminoea solitaria	45			23	
Heteromastus filiformis	91		568	932	
Laeonereis culveri				23	
Leitoscoloplos robustus	91	23			
Leucon americanus		45			
Lyonsia hyalina					68
Macoma mitchelli	68	23	1091	273	273
Marenzelleria viridis			45		68
Mediomastus ambiseta		23			
Microprotopus raneyi (Epi.)	295			273	
Micrura leidy					23
Mucrogammarus mucronatus (Epi.)				409	
Mulinia lateralis	591		295		23
Mytilus edulis (Epi.)				45	
Neanthes succinea			45	841	
Paraprionospio pinnata		45			

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21511	21512	21513	21514	21515
Parvilucina crenella	23				
Pectinaria gouldii	45				
Phoronis spp.					23
Rictaxis punctostriatus	68		23	23	
Spiophanes bombyx					23
Streblospio benedicti		23		45	
Stylochus ellipticus (Epi.)	23				
Tubificoides spp.			68	568	
Total Abundance w/ Epifauna	1545	204	2522	4385	659
Total Abundance w/o Epifauna	1181	204	2499	3022	659
Number of Taxa w/ Epifauna	15	7	13	16	10
Number of Taxa w/o Epifauna	11	7	12	11	10
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21511	21512	21513	21514	21515
Acteocina canaliculata	0.0068				0.0068
Americamysis spp. (Epi.)				0.0023	
Ameroculodes species complex	0.0045				0.0011
Amphiporus bioculatus			0.0023		
Carinoma tremaphoros		0.0386	0.0045	0.0250	
Cyathura polita				0.0568	
Doridella obscura (Epi.)	0.0011				
Edotea triloba (Epi.)	0.0011		0.0023		
Erichsonella attenuata (Epi.)				0.2249	
Gemma gemma			0.0114		
Glycera dibranchiata			0.9815		
Glycinde solitaria	0.0011		0.0011	0.0954	0.0045
Haminoea solitaria	0.0023			0.0011	
Heteromastus filiformis	0.0182		0.1159	0.3408	
Laeonereis culveri				0.0477	
Leitoscoloplos robustus	0.1068	0.0818			
Leucon americanus		0.0011			
Lyonsia hyalina					0.0068
Macoma mitchelli	0.0091	0.0011	0.0204	0.0386	0.0250
Marenzelleria viridis			0.0341		0.0772
Mediomastus ambiseta		0.0023			
Microprotopus raneyi (Epi.)	0.0091			0.0227	
Micrura leidyi					0.0250
Mucrogammarus mucronatus (Epi.)				0.0863	
Mulinia lateralis	0.2136		0.4953		0.0136
Mytilus edulis (Epi.)				0.0045	
Neanthes succinea			0.1022	1.4495	
Paraprionospio pinnata		0.0182			
Parvilucina crenella	0.0273				
Pectinaria gouldii	0.0023				
Phoronis spp.					0.0159
Rictaxis punctostriatus	0.0011		0.0023	0.0011	
Spiophanes bombyx					0.0114
Streblospio benedicti		0.0011		0.0023	
Stylochus ellipticus (Epi.)	0.0045				
Tubificoides spp.			0.0023	0.0091	
Total Biomass w/ Epifauna	0.4090	0.1443	1.7756	2.4083	0.1874
Total Biomass w/o Epifauna	0.3931	0.1443	1.7733	2.0675	0.1874

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21516	21517	21518	21519	21520
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	High Meso Sand	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/20/14	09/17/14	08/20/14	08/20/14	09/15/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
=====					
BOTTOM ENVIRONMENT					
=====					
Depth (m)	5.8	2.4	3.7	10.1	9.0
Salinity (ppt)	8.93	12.50	8.88	10.33	11.28
Temperature (C)	25.33	22.33	25.41	25.22	23.76
Dissolved Oxygen (mg/L)	6.1	7.5	6.1	1.1	6.9
Sediment Silt-Clay (%)	2.59	14.92	60.84	5.93	78.09
Total Carbon (%)	0.08	0.23	0.90	0.72	2.69
=====					
BENTHIC INDEX OF BIOTIC INTEGRITY					
=====					
B-IBI Score	2.20	2.33	2.20	1.80	1.00
Condition	Degraded	Degraded	Degraded	Severely Degr.	Severely Degr.
# Attributes Scored	5	6	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	3.31 5	2.79 3	2.09 3	1.85 3	0.00 1
Abundance (#/m2)	613 3	2045 5	909 3	1477 3	0 1
Biomass (g/m2)	0.46 1	0.61 1	0.67 1	0.62 1	0.00 1
Pollution Indicative Spp Abund (%)	25.93 1	23.33 3	15.00 3	89.23 1	100.00 1
Pollution Indicative Spp Biom (%)	45.32	62.15	8.66	92.08	100.00
Pollution Sensitive Spp Abund (%)	22.22	7.78 1	22.50	6.15	0.00
Pollution Sensitive Spp Biom (%)	30.05 1	2.60	26.49 1	5.89 1	0.00 1
Carnivore-Omnivore Abund (%)	29.63	14.44 1	25.00	3.08	0.00
Deep Deposit Feeder Abund (%)	18.52	15.56	0.00	6.15	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
=====					
BENTHIC ABUNDANCE (per sq. meter)					
=====					
Site	21516	21517	21518	21519	21520
Acteocina canaliculata	45	114	23		
Carinoma tremaphoros	23	45			
Cyclaspis varians		114			
Edotea triloba (Epi.)		114			
Eteone heteropoda	23				
Gemma gemma		68			
Glycinde solitaria		45	136		
Heteromastus filiformis	68	295			
Leitoscoloplos robustus		23		91	
Leucon americanus		45			
Macoma balthica			45		
Macoma mitchelli	91	750	500		
Marenzelleria viridis	68				
Mulinia lateralis	136	432	114	45	
Nassarius trivittatus	23				
Neanthes succinea	45	45	45	45	
Parahesion luteola			23		
Paraprionospio pinnata				341	
Pectinaria gouldii	45				
Phoronis spp.	23			91	
Rictaxis punctostriatus	23	45			
Streblospio benedicti		23	23	841	
Tharyx sp. A Morris				23	
=====					
Total Abundance w/ Epifauna	613	2158	909	1477	0
Total Abundance w/o Epifauna	613	2045	909	1477	
Number of Taxa w/ Epifauna	12	14	8	7	0
Number of Taxa w/o Epifauna	12	13	8	7	0
=====					

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21516	21517	21518	21519	21520
<i>Acteocina canaliculata</i>	0.0114	0.0114	0.0023		
<i>Carinoma tremaphoros</i>	0.0068	0.0114			
<i>Cyclaspis varians</i>		0.0045			
<i>Edotea triloba</i> (Epi.)		0.0091			
<i>Eteone heteropoda</i>	0.0114				
<i>Gemma gemma</i>		0.0136			
<i>Glycinde solitaria</i>		0.0045	0.0204		
<i>Heteromastus filiformis</i>	0.0227	0.1227			
<i>Leitoscoloplos robustus</i>		0.1136		0.2068	
<i>Leucon americanus</i>		0.0023			
<i>Macoma balthica</i>			0.1545		
<i>Macoma mitchelli</i>	0.0068	0.0227	0.0841		
<i>Marenzelleria viridis</i>	0.1136				
<i>Mulinia lateralis</i>	0.1977	0.2658	0.0568	0.2204	
<i>Nassarius trivittatus</i>	0.0182				
<i>Neanthes succinea</i>	0.0523	0.0364	0.3476	0.0114	
<i>Parahesionia luteola</i>			0.0023		
<i>Paraprionospio pinnata</i>				0.1181	
<i>Pectinaria gouldii</i>	0.0045				
<i>Phoronis</i> spp.	0.0136			0.0364	
<i>Rictaxis punctostriatus</i>	0.0023	0.0023			
<i>Streblospio benedicti</i>		0.0011	0.0011	0.0227	
<i>Tharyx</i> sp. A Morris				0.0011	
Total Biomass w/ Epifauna	0.4612	0.6214	0.6691	0.6168	0.0000
Total Biomass w/o Epifauna	0.4612	0.6123	0.6691	0.6168	0.0000



**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21521	21522	21523	21524	21525
Watershed	Mainstem	Mainstem	Mainstem	Mainstem	Mainstem
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/20/14	09/04/14	08/20/14	09/02/14	09/02/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	4.8	1.5	5.7	2.1	2.9
Salinity (ppt)	8.99	6.10	6.84	11.11	10.40
Temperature (C)	25.44	27.59	25.22	26.43	26.84
Dissolved Oxygen (mg/L)	6.3	6.9	6.4	7.4	5.1
Sediment Silt-Clay (%)	3.59	5.36	8.34	2.46	15.87
Total Carbon (%)	0.13	0.19	0.29	0.08	0.35
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	2.20	2.60	2.60	3.00
Condition	Meets Goal	Degraded	Degraded	Degraded	Meets Goal
# Attributes Scored	5	5	5	5	5
	Value	Score	Value	Score	Value
Shannon-Wiener Index	2.80	5	2.89	5	1.97
Abundance (#/m2)	1886	5	2840	3	1318
Biomass (g/m2)	1.64	3	0.36	1	1.07
Pollution Indicative Spp Abund (%)	26.51	1	21.60	1	10.34
Pollution Indicative Spp Biom (%)	76.14	1	15.24	1	34.72
Pollution Sensitive Spp Abund (%)	10.84	1	4.00	1	0.00
Pollution Sensitive Spp Biom (%)	7.07	1	28.25	1	0.00
Carnivore-Omnivore Abund (%)	16.87	1	7.20	1	18.97
Deep Deposit Feeder Abund (%)	4.82	1	5.60	1	60.34
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	21521	21522	21523	21524	21525
<i>Acteocina canaliculata</i>	23				
<i>Ameroculodes species complex</i>		45			
<i>Carinoma tremaphoros</i>	45		91		68
<i>Cassidinidea ovalis (Epi.)</i>		23			
<i>Cyathura polita</i>		45			
<i>Cyclaspis varians</i>		386			
<i>Edotea triloba (Epi.)</i>	23	250		45	
<i>Eteone heteropoda</i>	23	91			
<i>Gemma gemma</i>	523	636		113759	
<i>Glycinde solitaria</i>	68				
<i>Heteromastus filiformis</i>	91	136	772	704	1681
<i>Laeonereis culveri</i>		68			
<i>Leitoscoloplos fragilis</i>				23	
<i>Lepidactylus dytiscus</i>				636	
<i>Leptocheirus plumulosus</i>		45			
<i>Littoridinops tenuipes (Epi.)</i>		68			
<i>Macoma balthica</i>		23			68
<i>Macoma mitchelli</i>	364	795	136	114	341
<i>Marenzelleria viridis</i>	114	23		45	523
<i>Mediomastus ambiseta</i>		23			
<i>Micrura leidyi</i>				45	45
<i>Mulinia lateralis</i>	432	68	68	500	250
<i>Neanthes succinea</i>	159		159	45	
<i>Pectinaria gouldii</i>			23		
<i>Sayella chesapeakea (Epi.)</i>		454		250	
<i>Streblospio benedicti</i>	45	454	68	159	23

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21521	21522	21523	21524	21525
Tubificoides spp.				23	
Total Abundance w/ Epifauna	1908	3635	1318	116349	2999
Total Abundance w/o Epifauna	1886	2840	1318	116054	2999
Number of Taxa w/ Epifauna	12	18	7	13	8
Number of Taxa w/o Epifauna	11	14	7	11	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21521	21522	21523	21524	21525
Acteocina canaliculata	0.0182				
Ameroculodes species complex		0.0068			
Carinoma tremaphoros	0.0045		0.0273		0.0091
Cassidinidea ovalis (Epi.)		0.0045			
Cyathura polita		0.0182			
Cyclaspis varians		0.0182			
Edotea triloba (Epi.)	0.0023	0.0182		0.0045	
Eteone heteropoda	0.1091	0.0159			
Gemma gemma	0.0841	0.0545		5.1006	
Glycinde solitaria	0.0091				
Heteromastus filiformis	0.0523	0.0182	0.3113	0.1522	0.6589
Laeonereis culveri		0.0250			
Leitoscoloplos fragilis				0.0432	
Lepidactylus dytiscus				0.2590	
Leptocheirus plumulosus		0.0068			
Littoridinops tenuipes (Epi.)		0.0011			
Macoma balthica		0.0454			0.1590
Macoma mitchelli	0.0932	0.0727	0.2045	0.0091	0.3044
Marenzelleria viridis	0.0886	0.0364		0.0954	0.4544
Mediomastus ambiseta		0.0011			
Micrura leidyi				0.1363	0.1863
Mulinia lateralis	1.0656	0.0159	0.3658	0.3067	0.6498
Neanthes succinea	0.0409		0.1522	0.0750	
Pectinaria gouldii			0.0011		
Sayella chesapeakea (Epi.)		0.0318		0.0318	
Streblospio benedicti	0.0727	0.0227	0.0045	0.0159	0.0011
Tubificoides spp.				0.0023	
Total Biomass w/ Epifauna	1.6404	0.4135	1.0667	6.2321	2.4231
Total Biomass w/o Epifauna	1.6381	0.3578	1.0667	6.1957	2.4231

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21301	21302	21303	21304	21305
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/20/14	08/26/14	08/26/14	08/26/14	08/26/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.5	4.7	4.6	4.2	3.2
Salinity (ppt)	6.26	7.69	7.75	7.29	7.59
Temperature (C)	25.32	25.56	25.59	25.45	25.96
Dissolved Oxygen (mg/L)	6.8	4.2	5.6	6.2	6.6
Sediment Silt-Clay (%)	69.24	74.48	93.06	91.69	2.45
Total Carbon (%)	0.99	3.90	4.05	2.18	0.20
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.60	1.00	1.00	3.80	1.40
Condition	Degraded	Severely Degr.	Severely Degr.	Meets Goal	Severely Degr.
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.65 1	0.00 1	0.00 1	1.70 1	1.58 1
Abundance (#/m2)	5953 3	0 1	23 1	591 3	704 3
Biomass (g/m2)	3.93 3	0.00 1	0.00 1	7.97 5	0.12 1
Pollution Indicative Spp Abund (%)	0.00 5	100.00 1	100.00 1	7.69 5	80.65 1
Pollution Indicative Spp Biom (%)	0.00	100.00	100.00	0.01	44.66
Pollution Sensitive Spp Abund (%)	3.82	0.00	0.00	57.69	0.00
Pollution Sensitive Spp Biom (%)	33.68 1	0.00 1	0.00 1	99.50 5	0.00 1
Carnivore-Omnivore Abund (%)	5.34	0.00	0.00	7.69	22.58
Deep Deposit Feeder Abund (%)	53.44	0.00	0.00	26.92	19.35
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 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	21301	21302	21303	21304	21305
Carinoma tremaphoros	91				
Eteone heteropoda					159
Heteromastus filiformis	3022			23	45
Leptocheirus plumulosus	2227				
Macoma balthica	159			341	
Marenzelleria viridis	68				
Micrura leidyi				45	
Neanthes succinea	227				
Streblospio benedicti			23	45	409
Tubificoides spp.	159			136	91
Total Abundance w/ Epifauna	5953	0	23	591	704
Total Abundance w/o Epifauna	5953		23	591	704
Number of Taxa w/ Epifauna	7	0	1	5	4
Number of Taxa w/o Epifauna	7	0	1	5	4
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21301	21302	21303	21304	21305
Carinoma tremaphoros	0.0341				
Eteone heteropoda					0.0432
Heteromastus filiformis	0.8066			0.0023	0.0636
Leptocheirus plumulosus	0.6430				
Macoma balthica	1.2746			7.9338	
Marenzelleria viridis	0.0500				
Micrura leidyi				0.0341	
Neanthes succinea	1.1178				
Streblospio benedicti			0.0011	0.0011	0.0091
Tubificoides spp.	0.0068			0.0023	0.0011
Total Biomass w/ Epifauna	3.9328	0.0000	0.0011	7.9736	0.1170
Total Biomass w/o Epifauna	3.9328	0.0000	0.0011	7.9736	0.1170

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21306	21307	21308	21309	21310
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Low Mesohaline	Low Mesohaline
Date	08/26/14	08/29/14	08/29/14	08/29/14	08/29/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	2.5	3.7	1.1	2.3	4.7
Salinity (ppt)	7.01	6.45	4.96	7.17	7.63
Temperature (C)	25.92	25.26	26.35	26.19	25.85
Dissolved Oxygen (mg/L)	0.5	6.2	12.6	6.0	2.8
Sediment Silt-Clay (%)	68.50	82.89	3.73	9.19	31.47
Total Carbon (%)	5.18	2.02	0.29	1.01	1.21
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	1.00	2.20	2.60	3.40	2.20
Condition	Severely Degr.	Degraded	Degraded	Meets Goal	Degraded
# Attributes Scored	5	5	5	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.92 1	1.51 1	2.02 1	2.84 5	1.67 1
Abundance (#/m2)	68 1	477 1	8338 1	4680 3	3999 3
Biomass (g/m2)	0.00 1	3.74 3	12.78 3	6.29 5	11.15 3
Pollution Indicative Spp Abund (%)	66.67 1	19.05 3	8.45 3	25.73 1	28.98 1
Pollution Indicative Spp Biom (%)	50.00 1	0.21 3	1.28 3	1.72 1	0.30 1
Pollution Sensitive Spp Abund (%)	0.00 1	71.43 3	20.98 3	34.95 3	10.23 3
Pollution Sensitive Spp Biom (%)	0.00 1	94.84 3	58.14 3	62.56 3	69.75 3
Carnivore-Omnivore Abund (%)	0.00 1	9.52 3	5.72 1	8.74 3	4.55 3
Deep Deposit Feeder Abund (%)	0.00 1	0.00 3	4.36 3	32.04 3	56.82 3
TF Poll. Indicative Spp Abund (%)	0.00 1	0.00 3	0.00 3	0.00 3	0.00 3
Limnodrilus Abundance (%)	0.00 1	0.00 3	0.00 3	0.97 3	0.57 3
Oligo Poll. Indic. Spp Abund (%)	0.00 1	0.00 3	68.66 3	0.00 3	0.00 3
Oligo Poll. Sens. Spp Abund (%)	0.00 1	0.00 3	20.44 3	0.00 3	0.00 3
Tolerance Score	0.00 1	9.80 3	6.00 5	9.80 3	9.80 3
Tany./Chir. Abundance Ratio	0.00 1	0.00 3	0.00 3	0.00 3	0.00 3
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21306	21307	21308	21309	21310
Ameroculodes species complex			45		
Chironomus spp.		23			
Edotea triloba (Epi.)				23	
Eteone heteropoda		23	477	386	
Heteromastus filiformis			341	977	68
Lepidactylus dytiscus			591		
Leptocheirus plumulosus	23	23	4658	227	
Littoridinops tenuipes (Epi.)			273		
Macoma balthica		341		386	409
Macoma mitchelli		23	227	136	
Marenzelleria viridis			1704	1227	
Melita nitida (Epi.)				91	
Mya arenaria				23	
Mytilopsis leucophaeata (Epi.)			68		
Neanthes succinea				23	182
Rangia cuneata			45		
Streblospio benedicti	45	45	227	772	1136
Tubificidae imm w/o cap chaetae				45	23
Tubificoides spp.			23	477	2181
Total Abundance w/ Epifauna	68	477	8679	4794	3999
Total Abundance w/o Epifauna	68	477	8338	4680	3999
Number of Taxa w/ Epifauna	2	6	12	13	6
Number of Taxa w/o Epifauna	2	6	10	11	6

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21306	21307	21308	21309	21310
Ameroculodes species complex			0.0068		
Chironomus spp.		0.0011			
Edotea triloba (Epi.)				0.0011	
Eteone heteropoda		0.0023	0.1568	0.0863	
Heteromastus filiformis			0.0659	0.4112	0.0023
Lepidactylus dytiscus			0.2976		
Leptocheirus plumulosus	0.0011	0.0011	0.8338	0.4362	
Littoridinops tenuipes (Epi.)			0.0364		
Macoma balthica		3.5511		2.9468	7.7771
Macoma mitchelli		0.1840	3.9805	1.2996	
Marenzelleria viridis			0.7725	0.6725	
Melita nitida (Epi.)				0.0045	
Mya arenaria				0.3158	
Mytilopsis leucophaeata (Epi.)			0.0477		
Neanthes succinea				0.0954	3.3058
Rangia cuneata			6.6592		
Streblospio benedicti	0.0011	0.0045	0.0068	0.0204	0.0318
Tubificidae imm w/o cap chaetae				0.0011	0.0011
Tubificoides spp.			0.0023	0.0045	0.0318
Total Biomass w/ Epifauna	0.0023	3.7443	12.8663	6.2957	11.1498
Total Biomass w/o Epifauna	0.0023	3.7443	12.7823	6.2900	11.1498

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21311	21312	21313	21314	21315
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Oligohaline	High Meso Mud
Date	08/29/14	08/29/14	08/29/14	08/18/14	08/29/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	4.8	2.6	3.1	3.0	6.5
Salinity (ppt)	9.38	7.51	6.82	4.55	12.58
Temperature (C)	25.56	25.67	25.64	24.76	25.33
Dissolved Oxygen (mg/L)	0.9	7.9	3.1	4.4	0.5
Sediment Silt-Clay (%)	76.16	14.11	46.59	82.00	70.43
Total Carbon (%)	1.76	0.90	1.02	2.74	3.10
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	4.20	2.60	3.40	3.40	2.33
Condition	Meets Goal	Degraded	Meets Goal	Meets Goal	Degraded
# Attributes Scored	5	5	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.85 3	2.34 3	2.81 5	1.96	1.21 1
Abundance (#/m2)	1704 5	409 1	3817 3	613 5	1977 5
Biomass (g/m2)	7.40 5	0.33 1	22.00 3	2.88	0.21 1
Pollution Indicative Spp Abund (%)	18.67 3	0.00 5	36.31 1	0.00	71.26
Pollution Indicative Spp Biom (%)	0.12	0.00	0.17	0.00	12.77 3
Pollution Sensitive Spp Abund (%)	52.00	50.00	30.95	18.52	0.00
Pollution Sensitive Spp Biom (%)	93.99 5	81.94 3	94.79 5	79.75	0.00 1
Carnivore-Omnivore Abund (%)	6.67	5.56	6.55	7.41 1	16.09 3
Deep Deposit Feeder Abund (%)	20.00	11.11	22.02	33.33	12.64
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	1.79	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	77.78 3	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	7.41 3	0.00
Tolerance Score	0.00	6.00	7.90	6.00 5	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21311	21312	21313	21314	21315
Carinoma tremaphoros	91		23		295
Cyathura polita			45	45	
Eteone heteropoda			45		
Heteromastus filiformis		23	227		
Leptocheirus plumulosus			250	273	
Littoridinops tenuipes (Epi.)		568			
Macoma balthica	886	45	909		
Macoma mitchelli	45	136	23	23	
Marenzelleria viridis		23	159	45	
Melita nitida (Epi.)				23	
Micrura leidyi		23			
Mytilopsis leucophaeata (Epi.)		23			23
Neanthes succinea	23		136		23
Polydora cornuta			45		
Rangia cuneata		136	68	23	
Streblospio benedicti	318		1272		1409
Tubificidae imm w/o cap chaetae			68		
Tubificoides spp.	341	23	545	204	250
Total Abundance w/ Epifauna	1704	1000	3817	636	1999
Total Abundance w/o Epifauna	1704	409	3817	613	1977
Number of Taxa w/ Epifauna	6	9	14	7	5
Number of Taxa w/o Epifauna	6	7	14	6	4

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21311	21312	21313	21314	21315
Carinoma tremaphoros	0.0477		0.0136		0.1636
Cyathura polita			0.1113	0.1295	
Eteone heteropoda			0.0068		
Heteromastus filiformis		0.0182	0.0318		
Leptocheirus plumulosus			0.0477	0.1250	
Littoridinops tenuipes (Epi.)		0.0477			
Macoma balthica	6.9591	0.0727	15.6586		
Macoma mitchelli	0.2636	0.0364	0.0250	0.4567	
Marenzelleria viridis		0.0227	0.1000	0.0341	
Melita nitida (Epi.)				0.0023	
Micrura leidyi		0.0023			
Mytilopsis leucophaeata (Epi.)		0.0023			0.0011
Neanthes succinea	0.1204		0.9792		0.0182
Polydora cornuta			0.0023		
Rangia cuneata		0.1727	4.9825	2.1357	
Streblospio benedicti	0.0091		0.0295		0.0273
Tubificidae imm w/o cap chaetae			0.0011		
Tubificoides spp.	0.0045	0.0023	0.0091	0.0023	0.0045
Total Biomass w/ Epifauna	7.4044	0.3772	21.9986	2.8854	0.2147
Total Biomass w/o Epifauna	7.4044	0.3272	21.9986	2.8832	0.2136



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21316	21317	21318	21319	21320					
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs					
Habitat	High Meso Mud	Oligohaline	Oligohaline	Low Mesohaline	Oligohaline					
Date	08/29/14	08/18/14	08/18/14	09/19/14	09/19/14					
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab					
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044					
BOTTOM ENVIRONMENT										
Depth (m)	13.6	0.5	2.2	2.4	2.1					
Salinity (ppt)	14.52	2.14	2.57	5.42	3.38					
Temperature (C)	24.99	26.32	24.71	22.06	21.30					
Dissolved Oxygen (mg/L)	0.3	7.4	8.0	8.2	8.8					
Sediment Silt-Clay (%)	78.40	84.27	87.52	23.81	80.76					
Total Carbon (%)	4.42	2.60	1.72	0.62	1.70					
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	1.67		2.67		3.67		3.80		3.33	
Condition	Severely Degr.		Marginal		Meets Goal		Meets Goal		Meets Goal	
# Attributes Scored	6		6		6		5		6	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.00	1	1.58		0.92		2.01	3	2.32	
Abundance (#/m2)	45	1	636	5	841	5	5271	3	1568	5
Biomass (g/m2)	0.01	1	0.07		0.52		22.62	3	7.88	
Pollution Indicative Spp Abund (%)	0.00		82.14		0.00		2.59	5	46.38	
Pollution Indicative Spp Biom (%)	0.00	5	66.67		0.00		0.28		1.17	
Pollution Sensitive Spp Abund (%)	0.00		3.57		16.22		28.02		31.88	
Pollution Sensitive Spp Biom (%)	0.00	1	12.70		71.77		99.15	5	98.41	
Carnivore-Omnivore Abund (%)	0.00	1	7.14	1	16.22	3	5.17		50.72	5
Deep Deposit Feeder Abund (%)	100.00		78.57		0.00		54.31		7.25	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		78.57		0.00		0.43		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		89.29	3	81.08	3	0.00		68.12	3
Oligo Poll. Sens. Spp Abund (%)	0.00		3.57	3	2.70	3	0.00		18.84	3
Tolerance Score	0.00		9.66	1	7.30	3	6.14		6.18	3
Tany./Chir. Abundance Ratio	0.00		50.00	3	0.00	5	100.00		100.00	1

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**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

BENTHIC ABUNDANCE (per sq. meter)					
Site	21316	21317	21318	21319	21320
Apocorophium lacustre (Epi.)				68	
Carinoma tremaphoros				23	
Coelotanypus spp.		23		68	682
Cricotopus sylvestris		23			
Cryptochironomus spp.			23		
Cyathura polita			114	182	114
Heteromastus filiformis	23				
Hobsonia florida		23			
Leptocheirus plumulosus		45	682	795	227
Limnodrilus hoffmeisteri		45			
Marenzelleria viridis		23	23	659	295
Rangia cuneata				636	91
Streblospio benedicti				45	45
Tubificidae imm w/o cap chaetae				23	
Tubificidae imm w/o cap chaetae *		454			
Tubificoides spp.	23			2840	114
Total Abundance w/ Epifauna	45	636	841	5339	1568
Total Abundance w/o Epifauna	45	636	841	5271	1568
Number of Taxa w/ Epifauna	2	6	4	10	7
Number of Taxa w/o Epifauna	2	6	4	9	7
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21316	21317	21318	21319	21320
Apocorophium lacustre (Epi.)				0.0159	
Carinoma tremaphoros				0.0068	
Coelotanypus spp.		0.0091		0.0295	0.0909
Cricotopus sylvestris		0.0011			
Cryptochironomus spp.			0.0011		
Cyathura polita			0.3522	0.0613	0.1954
Heteromastus filiformis	0.0068				
Hobsonia florida		0.0045			
Leptocheirus plumulosus		0.0091	0.1454	0.1091	0.0318
Marenzelleria viridis		0.0091	0.0204	0.6452	0.4726
Oligochaeta		0.0386			
Rangia cuneata				21.7249	7.0886
Streblospio benedicti				0.0318	0.0011
Tubificidae imm w/o cap chaetae				0.0011	
Tubificoides spp.	0.0023			0.0136	0.0011
Total Biomass w/ Epifauna	0.0091	0.0716	0.5192	22.6393	7.8816
Total Biomass w/o Epifauna	0.0091	0.0716	0.5192	22.6234	7.8816

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21321	21322	21323	21324	21325
Watershed	Western Tribs	Western Tribs	Western Tribs	Western Tribs	Western Tribs
Habitat	Oligohaline	Oligohaline	Oligohaline	Oligohaline	Freshwater
Date	09/19/14	09/19/14	08/19/14	09/19/14	08/19/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	1.6	2.2	0.5	0.9	0.6
Salinity (ppt)	3.48	3.54	1.69	2.83	0.19
Temperature (C)	21.33	21.79	25.93	21.47	26.23
Dissolved Oxygen (mg/L)	8.6	8.5	8.4	9.8	11.0
Sediment Silt-Clay (%)	78.01	85.95	93.63	91.39	66.08
Total Carbon (%)	1.96	1.54	3.45	1.67	1.94
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	3.00	2.67	3.67	3.33	2.00
Condition	Meets Goal	Marginal	Meets Goal	Meets Goal	Severely Degr.
# Attributes Scored	6	6	6	6	4
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.36	2.73	2.05	2.40	2.46
Abundance (#/m2)	273 3	204 3	841 5	613 5	454 1
Biomass (g/m2)	7.53	4.16	0.31	0.35	0.56
Pollution Indicative Spp Abund (%)	41.67	11.11	67.57	59.26	75.00
Pollution Indicative Spp Biom (%)	0.17	0.11	54.98	29.26	5.49
Pollution Sensitive Spp Abund (%)	50.00	44.44	2.70	22.22	10.00
Pollution Sensitive Spp Biom (%)	99.77	96.80	3.69	64.95	74.19
Carnivore-Omnivore Abund (%)	58.33 5	33.33 3	64.86 5	40.74 5	20.00
Deep Deposit Feeder Abund (%)	0.00	22.22	5.41	33.33	75.00 1
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	60.00 3
Limnodrilus Abundance (%)	0.00	0.00	5.41	18.52	65.00
Oligo Poll. Indic. Spp Abund (%)	50.00 3	44.44 3	94.59 3	77.78 3	0.00
Oligo Poll. Sens. Spp Abund (%)	25.00 3	11.11 3	2.70 3	22.22 3	0.00
Tolerance Score	6.66 3	6.07 3	8.41 3	7.64 3	9.07 3
Tany./Chir. Abundance Ratio	80.00 1	100.00 1	39.13 3	90.00 1	66.67
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21321	21322	21323	21324	21325
Branchiura sowerbyi					45
Carinoma tremaphoros		23			
Ceratopogonidae			23		
Chironomus spp.	23		318	23	23
Coelotanypus spp.	91	23	204	204	45
Cyathura polita	23	23			23
Eteone heteropoda				23	
Hirudinea (Epi.)					45
Leptocheirus plumulosus		23	227	23	
Limnodrilus hoffmeisteri			45		68
Limnodrilus udekemianus					23
Marenzelleria viridis	68	23	23	136	
Neanthes succinea	23				
Rangia cuneata	45	45			23
Tubificidae imm w/o cap chaetae				114	
Tubificidae imm w/o cap chaetae *					204
Tubificoides spp.		45		91	
Total Abundance w/ Epifauna	273	204	841	613	500
Total Abundance w/o Epifauna	273	204	841	613	454
Number of Taxa w/ Epifauna	6	7	6	7	8
Number of Taxa w/o Epifauna	6	7	6	7	7

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21321	21322	21323	21324	21325
Branchiura sowerbyi					0.1136
Carinoma tremaphoros		0.1227			
Ceratopogonidae			0.0091		
Chironomus spp.	0.0011		0.1431	0.0454	0.0273
Coelotanypus spp.	0.0114	0.0045	0.0250	0.0545	0.0023
Cyathura polita	0.0068	0.1386			0.0011
Eteone heteropoda				0.0023	
Hirudinea (Epi.)					0.0227
Leptocheirus plumulosus		0.0045	0.1181	0.0182	
Limnodrilus hoffmeisteri			0.0011		
Marenzelleria viridis	0.1749	0.0182	0.0114	0.2295	
Neanthes succinea	0.0045				
Oligochaeta					0.0011
Rangia cuneata	7.3340	3.8669			0.4135
Tubificidae imm w/o cap chaetae				0.0011	
Tubificoides spp.		0.0011		0.0023	
Total Biomass w/ Epifauna	7.5328	4.1566	0.3079	0.3533	0.5816
Total Biomass w/o Epifauna	7.5328	4.1566	0.3079	0.3533	0.5589

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21101	21102	21103	21104	21105
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	High Meso Mud	High Meso Mud
Date	08/21/14	08/21/14	08/21/14	08/21/14	08/21/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	7.6	9.7	12.8	14.0	17.8
Salinity (ppt)	10.04	11.20	13.11	14.07	14.14
Temperature (C)	25.45	25.39	25.01	24.97	24.92
Dissolved Oxygen (mg/L)	4.7	1.5	0.2	0.3	0.2
Sediment Silt-Clay (%)	1.76	79.56	92.61	84.42	89.27
Total Carbon (%)	0.04	3.19	3.43	3.47	4.00
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.60	1.80	1.00	1.00	1.00
Condition	Degraded	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.90 5	0.00 1	0.00 1	0.00 1	0.00 1
Abundance (#/m2)	1749 5	23 1	23 1	0 1	0 1
Biomass (g/m2)	0.88 1	0.00 1	0.00 1	0.00 1	0.00 1
Pollution Indicative Spp Abund (%)	28.57 1	0.00 5	100.00 1	100.00 1	100.00 1
Pollution Indicative Spp Biom (%)	47.23	0.00	100.00 1	100.00 1	100.00 1
Pollution Sensitive Spp Abund (%)	10.39	0.00	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	4.13 1	0.00 1	0.00 1	0.00 1	0.00 1
Carnivore-Omnivore Abund (%)	22.08	0.00	0.00 1	0.00 1	0.00 1
Deep Deposit Feeder Abund (%)	36.36	100.00	0.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	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 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	21101	21102	21103	21104	21105
<i>Acteocina canaliculata</i>	91				
<i>Glycinde solitaria</i>	23				
<i>Heteromastus filiformis</i>	204				
<i>Leitoscoloplos robustus</i>	23				
<i>Lyonsia hyalina</i>	23				
<i>Macoma mitchelli</i>	91				
<i>Micrura leidyi</i>	23				
<i>Mulinia lateralis</i>	477				
<i>Parvilucina crenella</i>	68				
<i>Pectinaria gouldii</i>	409	23			
<i>Phoronis spp.</i>	68				
<i>Rictaxis punctostriatus</i>	250				
<i>Streblospio benedicti</i>			23		
Total Abundance w/ Epifauna	1749	23	23	0	0
Total Abundance w/o Epifauna	1749	23	23		
Number of Taxa w/ Epifauna	12	1	1	0	0
Number of Taxa w/o Epifauna	12	1	1	0	0
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21101	21102	21103	21104	21105
<i>Acteocina canaliculata</i>	0.0227				
<i>Glycinde solitaria</i>	0.0023				
<i>Heteromastus filiformis</i>	0.0432				
<i>Leitoscoloplos robustus</i>	0.1000				
<i>Lyonsia hyalina</i>	0.0011				
<i>Macoma mitchelli</i>	0.0045				
<i>Micrura leidyi</i>	0.0545				
<i>Mulinia lateralis</i>	0.3158				
<i>Parvilucina crenella</i>	0.2681				
<i>Pectinaria gouldii</i>	0.0454	0.0023			
<i>Phoronis spp.</i>	0.0114				
<i>Rictaxis punctostriatus</i>	0.0114				
<i>Streblospio benedicti</i>			0.0023		
Total Biomass w/ Epifauna	0.8804	0.0023	0.0023	0.0000	0.0000
Total Biomass w/o Epifauna	0.8804	0.0023	0.0023	0.0000	0.0000

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21107	21108	21109	21110	21111
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	Oligohaline	Low Mesohaline
Date	08/21/14	08/21/14	08/21/14	08/21/14	08/21/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	7.4	3.9	14.9	14.2	6.9
Salinity (ppt)	9.83	9.76	12.27	4.02	6.58
Temperature (C)	25.87	26.43	24.99	25.14	25.52
Dissolved Oxygen (mg/L)	5.1	5.5	0.2	0.4	2.2
Sediment Silt-Clay (%)	2.29	20.03	46.20	73.91	84.32
Total Carbon (%)	0.09	0.71	1.48	2.44	2.49
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	2.60	2.20	1.00	1.00	1.00
Condition	Degraded	Degraded	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	5	5	6	4	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.48 3	2.91 5	0.00 1	0.00	0.00 1
Abundance (#/m2)	1204 3	3317 3	0 1	0 1	0 1
Biomass (g/m2)	0.54 1	0.83 1	0.00 1	0.00	0.00 1
Pollution Indicative Spp Abund (%)	0.00 5	30.82 1	100.00	100.00	100.00 1
Pollution Indicative Spp Biom (%)	0.00	13.88	100.00 1	100.00	100.00
Pollution Sensitive Spp Abund (%)	24.53	3.42	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	12.24 1	2.72 1	0.00 1	0.00	0.00 1
Carnivore-Omnivore Abund (%)	67.92	54.11	0.00 1	0.00 1	0.00
Deep Deposit Feeder Abund (%)	22.64	8.90	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	100.00 1	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00 1	0.00
Tolerance Score	0.00	9.80	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21107	21108	21109	21110	21111
Acteocina canaliculata	68	23			
Americamysis bigelowi (Epi.)		23			
Chironomus spp.		636			
Edotea triloba (Epi.)		68			
Gemma gemma	23	613			
Glycera dibranchiata	23				
Glycinde solitaria	204	91			
Heteromastus filiformis		91			
Littoridinops tenuipes (Epi.)		409			
Macoma mitchelli		227			
Micrura leidyi		23			
Mulinia lateralis		91			
Neanthes succinea	68	45			
Parvilucina crenella	68				
Pectinaria gouldii	273	159			
Rictaxis punctostriatus	454	977			
Spiochaetopterus costarum	23				
Streblospio benedicti		295			
Tubificoides spp.		45			
Total Abundance w/ Epifauna	1204	3817	0	0	0
Total Abundance w/o Epifauna	1204	3317			
Number of Taxa w/ Epifauna	9	16	0	0	0
Number of Taxa w/o Epifauna	9	13	0	0	0

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21107	21108	21109	21110	21111
<i>Acteocina canaliculata</i>	0.0295	0.0045			
<i>Americamysis bigelowi</i> (Epi.)		0.0023			
<i>Chironomus</i> spp.		0.0932			
<i>Edotea triloba</i> (Epi.)		0.0136			
<i>Gemma gemma</i>	0.0023	0.0295			
<i>Glycera dibranchiata</i>	0.0454				
<i>Glycinde solitaria</i>	0.0227	0.0182			
<i>Heteromastus filiformis</i>		0.1522			
<i>Littoridinops tenuipes</i> (Epi.)		0.0159			
<i>Macoma mitchelli</i>		0.0545			
<i>Micrura leidyi</i>		0.3885			
<i>Mulinia lateralis</i>		0.0114			
<i>Neanthes succinea</i>	0.0136	0.0364			
<i>Parvilucina crenella</i>	0.3885				
<i>Pectinaria gouldii</i>	0.0136	0.0159			
<i>Rictaxis punctostriatus</i>	0.0091	0.0182			
<i>Spiochaetopterus costarum</i>	0.0136				
<i>Streblospio benedicti</i>		0.0114			
<i>Tubificoides</i> spp.		0.0011			
Total Biomass w/ Epifauna	0.5385	0.8668	0.0000	0.0000	0.0000
Total Biomass w/o Epifauna	0.5385	0.8350	0.0000	0.0000	0.0000



**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21112	21113	21114	21115	21116
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Oligohaline	Oligohaline	Oligohaline	Oligohaline	Oligohaline
Date	08/21/14	08/21/14	08/21/14	08/21/14	08/21/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	8.7	17.2	8.1	6.5	7.2
Salinity (ppt)	4.37	4.02	2.90	1.81	2.46
Temperature (C)	25.52	25.09	25.54	25.66	25.40
Dissolved Oxygen (mg/L)	1.6	0.2	0.9	1.7	0.6
Sediment Silt-Clay (%)	83.18	91.13	88.07	95.95	96.19
Total Carbon (%)	2.62	2.30	3.01	2.60	2.57
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	3.00	1.00	1.00	1.00	1.00
Condition	Meets Goal	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	4	4	4	4	4
	Value	Score	Value	Score	Value
Shannon-Wiener Index	0.00	0.00	0.00	0.00	0.00
Abundance (#/m2)	23	1	0	1	0
Biomass (g/m2)	0.02	0.00	0.00	0.00	0.00
Pollution Indicative Spp Abund (%)	0.00	100.00	100.00	100.00	100.00
Pollution Indicative Spp Biom (%)	0.00	100.00	100.00	100.00	100.00
Pollution Sensitive Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	0.00	0.00	0.00	0.00	0.00
Carnivore-Omnivore Abund (%)	100.00	5	0.00	1	0.00
Deep Deposit Feeder Abund (%)	0.00	0.00	0.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	5	100.00	1	100.00
Oligo Poll. Sens. Spp Abund (%)	0.00	1	0.00	1	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
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21112	21113	21114	21115	21116
Micrura leidyi	23				
Total Abundance w/ Epifauna	23	0	0	0	0
Total Abundance w/o Epifauna	23				
Number of Taxa w/ Epifauna	1	0	0	0	0
Number of Taxa w/o Epifauna	1	0	0	0	0
<b>BENTHIC BIOMASS (Grams per sq. meter)</b>					
Site	21112	21113	21114	21115	21116
Micrura leidyi	0.0204				
Total Biomass w/ Epifauna	0.0204	0.0000	0.0000	0.0000	0.0000
Total Biomass w/o Epifauna	0.0204	0.0000	0.0000	0.0000	0.0000

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21117	21118	21120	21121	21122
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R
Habitat	Low Mesohaline	Oligohaline	Oligohaline	Low Mesohaline	Oligohaline
Date	09/15/14	08/21/14	09/03/14	09/15/14	09/03/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.4	5.8	3.4	2.3	5.5
Salinity (ppt)	6.70	3.11	1.41	7.47	1.83
Temperature (C)	24.26	25.92	27.94	22.96	27.52
Dissolved Oxygen (mg/L)	7.7	4.3	6.4	7.2	6.2
Sediment Silt-Clay (%)	2.12	95.26	68.48	37.99	94.10
Total Carbon (%)	0.10	2.40	2.23	0.83	2.69
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	2.60	2.00	4.00	3.80	3.80
Condition	Degraded	Severely Degr.	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	4	6	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	1.85 3	0.80	2.47	2.40 3	1.60
Abundance (#/m2)	1454 3	409 3	772 5	932 3	1159 5
Biomass (g/m2)	0.57 1	0.51	40.28	3.46 3	165.87
Pollution Indicative Spp Abund (%)	3.13 5	83.33	14.71	7.32 5	0.00
Pollution Indicative Spp Biom (%)	2.41	1.35	0.05	0.20	0.00
Pollution Sensitive Spp Abund (%)	1.56	11.11	58.82	53.66	90.20
Pollution Sensitive Spp Biom (%)	1.61 1	98.21	99.84	85.10 5	99.98
Carnivore-Omnivore Abund (%)	3.13	5.56 1	41.18 5	24.39	9.80 1
Deep Deposit Feeder Abund (%)	1.56	0.00	2.94	31.71	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	2.94	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	83.33 3	23.53 5	0.00	7.84 5
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00 1	38.24 5	0.00	60.78 5
Tolerance Score	0.00	0.00	7.40 3	6.20	6.21 3
Tany./Chir. Abundance Ratio	0.00	0.00	100.00 1	100.00	0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	21117	21118	21120	21121	21122
Ameroculodes species complex	45				
Apocorophium lacustre (Epi.)					45
Chaoborus punctipennis			136		23
Coelotanypus spp.			91		
Cyathura polita			91	182	91
Eteone heteropoda	23				
Gammarus daiberi (Epi.)					45
Laeonereis culveri	23				
Leitoscoloplos spp.	23				
Lepidactylus dytiscus	727				
Leptocheirus plumulosus	477		68	45	91
Limnodrilus hoffmeisteri			23		
Macoma balthica		45		273	
Macoma mitchelli	114				
Marenzelleria viridis	23		295	45	704
Melita nitida (Epi.)			23	23	45
Micrura leidyi		23			
Mytilopsis leucophaeata (Epi.)					23
Neanthes succinea				23	
Rangia cuneata			68		250
Streblospio benedicti		341		45	
Tubificoides spp.				295	
Total Abundance w/ Epifauna	1454	409	795	954	1318
Total Abundance w/o Epifauna	1454	409	772	932	1159
Number of Taxa w/ Epifauna	8	3	8	9	9
Number of Taxa w/o Epifauna	8	3	7	8	5

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21117	21118	21120	21121	21122
Ameroculodes species complex	0.0068				
Apocorophium lacustre (Epi.)					0.0023
Chaoborus punctipennis			0.0068		0.0045
Coelotanypus spp.			0.0204	0.0023	
Cyathura polita			0.2249	0.3181	0.1590
Eteone heteropoda	0.0091				
Gammarus daiberi (Epi.)					0.0114
Laeonereis culveri	0.0500				
Leitoscoloplos spp.	0.0045				
Lepidactylus dytiscus	0.2022				
Leptocheirus plumulosus	0.0954		0.0341	0.0159	0.0227
Limnodrilus hoffmeisteri			0.0011		
Macoma balthica		0.4976		2.4038	
Macoma mitchelli	0.1886				
Marenzelleria viridis	0.0091		0.3499	0.2249	1.3564
Melita nitida (Epi.)			0.0011	0.0023	0.0011
Micrura leidyi		0.0023			
Mytilopsis leucophaeata (Epi.)					0.0045
Neanthes succinea				0.4908	
Rangia cuneata			39.6441		164.3269
Streblospio benedicti		0.0068		0.0045	
Tubificoides spp.				0.0023	
Total Biomass w/ Epifauna	0.5657	0.5067	40.2826	3.4648	165.8889
Total Biomass w/o Epifauna	0.5657	0.5067	40.2814	3.4625	165.8696

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21123	21124	21125	21126	21127					
Watershed	Potomac R	Potomac R	Potomac R	Potomac R	Potomac R					
Habitat	Oligohaline	Freshwater	Freshwater	Low Mesohaline	Low Mesohaline					
Date	09/03/14	09/03/14	09/10/14	08/21/14	09/03/14					
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	3.6	2.7	7.9	3.1					
Salinity (ppt)	1.98	0.45	0.21	10.00	5.70					
Temperature (C)	27.64	27.35	25.24	25.45	27.85					
Dissolved Oxygen (mg/L)	6.7	6.8	6.4	1.0	6.2					
Sediment Silt-Clay (%)	85.11	79.90	90.15	78.59	76.48					
Total Carbon (%)	2.59	2.31	2.47	2.59	1.38					
BENTHIC INDEX OF BIOTIC INTEGRITY										
B-IBI Score	3.67		2.50		3.00		1.00		3.00	
Condition	Meets Goal		Degraded		Meets Goal		Severely Degr.		Meets Goal	
# Attributes Scored	6		4		4		5		5	
	Value	Score	Value	Score	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.71		2.24		2.05		0.00	1	2.46	3
Abundance (#/m2)	682	5	500	1	2340	5	23	1	1295	3
Biomass (g/m2)	76.72		84.81		0.79		0.00	1	1.05	3
Pollution Indicative Spp Abund (%)	13.33		27.27		77.67		100.00	1	12.28	3
Pollution Indicative Spp Biom (%)	0.02		0.01		45.34		100.00		0.65	
Pollution Sensitive Spp Abund (%)	86.67		59.09		0.00		0.00		8.77	
Pollution Sensitive Spp Biom (%)	99.98		99.99		0.00		0.00	1	77.85	3
Carnivore-Omnivore Abund (%)	16.67	3	27.27		2.91		0.00		5.26	
Deep Deposit Feeder Abund (%)	3.33		13.64	1	92.23	3	0.00		36.84	
TF Poll. Indicative Spp Abund (%)	0.00		13.64	5	75.73	3	0.00		0.00	
Limnodrilus Abundance (%)	3.33		13.64		82.52		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	13.33	5	0.00		0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	56.67	5	0.00		0.00		0.00		0.00	
Tolerance Score	6.40	3	8.25	3	9.64	1	0.00		0.00	
Tany./Chir. Abundance Ratio	100.00	1	80.00		0.00		0.00		0.00	

Continued . . .

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

BENTHIC ABUNDANCE (per sq. meter)					
Site	21123	21124	21125	21126	21127
Apocorophium lacustre (Epi.)	91				818
Branchiura sowerbyi			227		
Chaoborus punctipennis		23			
Chironomus spp.		23	23		
Coelotanypus spp.	68	45			
Cryptochironomus spp.			23		
Cyathura polita	45				68
Eteone heteropoda			23		
Gammarus daiberi (Epi.)	45				
Heteromastus filiformis					91
Leptocheirus plumulosus					454
Limnodrilus cervix			159		
Limnodrilus hoffmeisteri	23		636		
Macoma balthica					23
Macoma mitchelli					45
Marenzelleria viridis	386	250			23
Melita nitida (Epi.)					250
Musculium transversum			91		
Mytilopsis leucophaeata (Epi.)	23				
Pisidium spp.			23		
Polydora cornuta					45
Procladius spp.		45			
Rangia cuneata	159	45			
Streblospio benedicti				23	159
Tubificidae imm w/o cap chaetae		68			
Tubificidae imm w/o cap chaetae *			1136		
Tubificoides spp.					386
Total Abundance w/ Epifauna	841	500	2340	23	2363
Total Abundance w/o Epifauna	682	500	2340	23	1295
Number of Taxa w/ Epifauna	8	7	8	1	11
Number of Taxa w/o Epifauna	5	7	8	1	9

  

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21123	21124	21125	21126	21127
Apocorophium lacustre (Epi.)	0.0045				0.0613
Branchiura sowerbyi			0.4112		
Chaoborus punctipennis		0.0023			
Chironomidae		0.0011	0.0011		
Coelotanypus spp.	0.0114	0.0045			
Cyathura polita	0.0795				0.0011
Eteone heteropoda			0.0091		
Gammarus daiberi (Epi.)	0.0023				
Heteromastus filiformis					0.0704
Leptocheirus plumulosus					0.1000
Limnodrilus hoffmeisteri	0.0068				
Macoma balthica					0.8088
Macoma mitchelli					0.0454
Marenzelleria viridis	0.7952	0.1977			0.0045
Melita nitida (Epi.)					0.0114
Musculium transversum			0.0114		
Mytilopsis leucophaeata (Epi.)	0.0023				

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BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21123	21124	21125	21126	21127
Oligochaeta			0.3460		
Pisidium spp.			0.0068		
Polydora cornuta					0.0023
Rangia cuneata	75.8257	84.6025			
Streblospio benedicti				0.0023	0.0068
Tubificidae imm w/o cap chaetae		0.0011			
Tubificoides spp.					0.0068
Total Biomass w/ Epifauna	76.7277	84.8092	0.7856	0.0023	1.1190
Total Biomass w/o Epifauna	76.7186	84.8092	0.7856	0.0023	1.0463

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21202	21203	21204	21205	21206
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Oligohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	High Meso Mud
Date	08/20/14	08/20/14	08/20/14	08/20/14	08/27/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	15.1	15.8	13.9	17.5	12.9
Salinity (ppt)	2.65	8.02	7.28	7.93	12.74
Temperature (C)	25.60	25.87	25.53	25.57	25.80
Dissolved Oxygen (mg/L)	4.4	4.6	2.9	4.5	4.1
Sediment Silt-Clay (%)	86.71	58.51	73.39	86.32	84.04
Total Carbon (%)	3.19	1.80	2.49	2.56	2.82
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	1.00	1.80	1.00	1.00	1.67
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.
# Attributes Scored	4	5	5	5	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00	1.00	1.50	0.00	0.00
Abundance (#/m2)	0 1	45 1	91 1	0 1	23 1
Biomass (g/m2)	0.00	0.08	0.30	0.00	0.15
Pollution Indicative Spp Abund (%)	100.00	0.00	25.00	100.00	0.00
Pollution Indicative Spp Biom (%)	100.00	0.00	19.85	100.00	0.00
Pollution Sensitive Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Pollution Sensitive Spp Biom (%)	0.00	0.00	0.00	0.00	0.00
Carnivore-Omnivore Abund (%)	0.00	100.00	50.00	0.00	0.00
Deep Deposit Feeder Abund (%)	0.00	0.00	0.00	0.00	0.00
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	100.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	0.00	0.00
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21202	21203	21204	21205	21206
Carinoma tremaphoros		23			
Macoma mitchelli			23		23
Mulinia lateralis			23		
Neanthes succinea		23	45		
Total Abundance w/ Epifauna	0	45	91	0	23
Total Abundance w/o Epifauna		45	91		23
Number of Taxa w/ Epifauna	0	2	3	0	1
Number of Taxa w/o Epifauna	0	2	3	0	1
<b>BENTHIC BIOMASS (Grams per sq. meter)</b>					
Site	21202	21203	21204	21205	21206
Carinoma tremaphoros		0.0568			
Macoma mitchelli			0.0932		0.1545
Mulinia lateralis			0.0591		
Neanthes succinea		0.0204	0.1454		
Total Biomass w/ Epifauna	0.0000	0.0772	0.2976	0.0000	0.1545
Total Biomass w/o Epifauna	0.0000	0.0772	0.2976	0.0000	0.1545

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21207	21208	21209	21210	21211
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud
Date	08/27/14	08/27/14	08/27/14	08/27/14	08/27/14
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)	10.0	13.6	13.6	4.4	3.5
Salinity (ppt)	12.46	12.79	12.82	12.57	12.16
Temperature (C)	25.91	25.80	25.80	25.97	25.99
Dissolved Oxygen (mg/L)	4.4	4.0	4.2	2.4	4.6
Sediment Silt-Clay (%)	83.35	87.57	86.39	72.09	50.62
Total Carbon (%)	2.80	3.85	3.88	3.76	2.36
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	1.00	1.00	1.67	2.00	3.00
Condition	Severely Degr.	Severely Degr.	Severely Degr.	Severely Degr.	Meets Goal
# Attributes Scored	6	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	0.00 1	0.00 1	0.99 1	2.69 3
Abundance (#/m2)	0 1	0 1	23 1	204 1	2726 3
Biomass (g/m2)	0.00 1	0.00 1	0.28 1	0.15 1	1.28 3
Pollution Indicative Spp Abund (%)	100.00	100.00	0.00	77.78	60.83
Pollution Indicative Spp Biom (%)	100.00 1	100.00 1	0.00 5	48.89 1	14.50 3
Pollution Sensitive Spp Abund (%)	0.00	0.00	0.00	11.11	0.83
Pollution Sensitive Spp Biom (%)	0.00 1	0.00 1	0.00 1	50.37 3	16.73 1
Carnivore-Omnivore Abund (%)	0.00 1	0.00 1	0.00 1	77.78 5	57.50 5
Deep Deposit Feeder Abund (%)	0.00	0.00	0.00	0.00	21.67
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	8.33
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	0.00	0.00	9.80	9.80
Tany./Chir. Abundance Ratio	0.00	0.00	0.00	0.00	0.00

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	21207	21208	21209	21210	21211
Carinoma tremaphoros					45
Chironomus spp.				159	1181
Edotea triloba (Epi.)					23
Heteromastus filiformis					68
Hobsonia florida					45
Leptocheirus plumulosus				23	23
Macoma balthica				23	23
Macoma mitchelli			23		227
Mulinia lateralis					23
Neanthes succinea					341
Pectinaria gouldii					23
Streblospio benedicti					227
Tubificidae imm w/o cap chaetae					227
Tubificoides spp.					273
Total Abundance w/ Epifauna	0	0	23	204	2749
Total Abundance w/o Epifauna			23	204	2726
Number of Taxa w/ Epifauna	0	0	1	3	14
Number of Taxa w/o Epifauna	0	0	1	3	13
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21207	21208	21209	21210	21211
Carinoma tremaphoros					0.0182
Chironomus spp.				0.0750	0.1636
Edotea triloba (Epi.)					0.0045
Heteromastus filiformis					0.0204
Hobsonia florida					0.0011
Leptocheirus plumulosus				0.0011	0.0023
Macoma balthica				0.0772	0.2136
Macoma mitchelli			0.2772		0.0295
Mulinia lateralis					0.0091
Neanthes succinea					0.7952
Pectinaria gouldii					0.0091
Streblospio benedicti					0.0114
Tubificidae imm w/o cap chaetae					0.0011
Tubificoides spp.					0.0023
Total Biomass w/ Epifauna	0.0000	0.0000	0.2772	0.1534	1.2814
Total Biomass w/o Epifauna	0.0000	0.0000	0.2772	0.1534	1.2769

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21212	21213	21214	21215	21216
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	High Meso Mud	High Meso Sand	Low Mesohaline	High Meso Mud	Low Mesohaline
Date	08/27/14	08/27/14	08/27/14	08/27/14	08/27/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	4.2	3.2	1.4	6.4	1.2
Salinity (ppt)	12.48	12.00	11.22	12.34	10.97
Temperature (C)	26.07	25.65	26.83	25.91	25.77
Dissolved Oxygen (mg/L)	1.5	6.9	7.4	1.9	6.6
Sediment Silt-Clay (%)	82.81	4.59	3.92	89.17	2.85
Total Carbon (%)	2.89	0.24	0.17	2.64	0.11
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	1.67	1.33	3.40	2.33	3.00
Condition	Severely Degr.	Severely Degr.	Meets Goal	Degraded	Meets Goal
# Attributes Scored	6	6	5	6	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.00 1	2.29 1	2.58 5	1.00 1	2.20 3
Abundance (#/m2)	45 1	886 1	1863 5	91 1	1659 5
Biomass (g/m2)	0.00 1	0.65 1	0.62 1	0.28 1	0.92 1
Pollution Indicative Spp Abund (%)	0.00	33.33 1	1.22 5	0.00	8.22 5
Pollution Indicative Spp Biom (%)	0.00 5	22.54	0.18	0.00 5	47.03
Pollution Sensitive Spp Abund (%)	0.00	7.69 1	9.76	0.00	8.22
Pollution Sensitive Spp Biom (%)	0.00 1	21.48	14.34 1	0.00 1	5.69 1
Carnivore-Omnivore Abund (%)	0.00 1	33.33 3	13.41	100.00 5	8.22
Deep Deposit Feeder Abund (%)	0.00	33.33	19.51	0.00	35.62
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	9.80	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 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	21212	21213	21214	21215	21216
Carinoma tremaphoros				45	
Chironomus spp.		250			
Gemma gemma			68		23
Glycinde solitaria		23	23		
Hargeria rapax			23		
Heteromastus filiformis		295	364		591
Laeonereis culveri			114		68
Leptocheirus plumulosus	45		250		
Macoma balthica		45			
Macoma mitchelli		204	727		636
Marenzelleria viridis			159		136
Micrura leidyi		23			
Mulinia lateralis		23			68
Neanthes succinea			114	45	68
Streblospio benedicti		23	23		68
Total Abundance w/ Epifauna	45	886	1863	91	1659
Total Abundance w/o Epifauna	45	886	1863	91	1659
Number of Taxa w/ Epifauna	1	8	10	2	8
Number of Taxa w/o Epifauna	1	8	10	2	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21212	21213	21214	21215	21216
Carinoma tremaphoros				0.1159	
Chironomus spp.		0.0068			
Gemma gemma			0.1727		0.0023
Glycinde solitaria		0.0273	0.0045		
Hargeria rapax			0.0011		
Heteromastus filiformis		0.1704	0.2158		0.2817
Laeonereis culveri			0.0068		0.0318
Leptocheirus plumulosus	0.0011		0.0545		
Macoma balthica		0.1113			
Macoma mitchelli		0.0159	0.0432		0.0477
Marenzelleria viridis			0.0841		0.0523
Micrura leidyi		0.1749			
Mulinia lateralis		0.1363			0.4271
Neanthes succinea			0.0341	0.1659	0.0704
Streblospio benedicti		0.0023	0.0011		0.0045
Total Biomass w/ Epifauna	0.0011	0.6452	0.6180	0.2817	0.9179
Total Biomass w/o Epifauna	0.0011	0.6452	0.6180	0.2817	0.9179

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21217	21218	21219	21220	21221
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline	Low Mesohaline
Date	08/27/14	08/27/14	08/27/14	08/27/14	08/27/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	1.0	4.7	2.4	2.4	5.3
Salinity (ppt)	11.18	10.87	9.15	9.87	8.75
Temperature (C)	25.61	26.06	25.88	26.72	26.12
Dissolved Oxygen (mg/L)	6.5	3.8	5.4	6.0	3.7
Sediment Silt-Clay (%)	7.40	82.61	4.42	8.83	87.87
Total Carbon (%)	0.26	1.83	0.18	0.28	2.60
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.00	2.20	3.00	3.00	2.20
Condition	Meets Goal	Degraded	Meets Goal	Meets Goal	Degraded
# Attributes Scored	5	5	5	5	5
	Value	Score	Value	Score	Value
Shannon-Wiener Index	2.78	5	1.26	1	1.89
Abundance (#/m2)	1295	3	613	3	1431
Biomass (g/m2)	0.70	1	0.52	1	0.52
Pollution Indicative Spp Abund (%)	7.02	5	0.00	5	4.76
Pollution Indicative Spp Biom (%)	0.32		0.00		0.44
Pollution Sensitive Spp Abund (%)	1.75		0.00		6.35
Pollution Sensitive Spp Biom (%)	35.60	1	0.00	1	49.67
Carnivore-Omnivore Abund (%)	38.60		18.52		9.52
Deep Deposit Feeder Abund (%)	10.53		7.41		26.98
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00
Limnodrilus Abundance (%)	1.75		0.00		0.00
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00
Tolerance Score	9.80		0.00		0.00
Tany./Chir. Abundance Ratio	0.00		0.00		0.00
BENTHIC ABUNDANCE (per sq. meter)					
Site	21217	21218	21219	21220	21221
Carinoma tremaphoros	23	23	23	23	91
Edotea triloba (Epi.)	23				
Gemma gemma	182				
Glycinde solitaria			23	23	
Heteromastus filiformis	114	23	386	364	
Laeonereis culveri	114				
Leptocheirus plumulosus	68	454		318	500
Macoma balthica	23		45	45	
Macoma mitchelli	318		772	182	
Marenzelleria viridis				23	
Mya arenaria			23		
Neanthes succinea	364	91	91	91	45
Streblospio benedicti	68		68	23	23
Tubificidae imm w/o cap chaetae	23			23	
Tubificoides spp.		23			114
Total Abundance w/ Epifauna	1318	613	1431	1113	772
Total Abundance w/o Epifauna	1295	613	1431	1113	772
Number of Taxa w/ Epifauna	11	5	8	10	5
Number of Taxa w/o Epifauna	10	5	8	10	5

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21217	21218	21219	21220	21221
Carinoma tremaphoros	0.0023	0.0011	0.0011	0.0023	0.0591
Edotea triloba (Epi.)	0.0023				
Gemma gemma	0.0250				
Glycinde solitaria			0.0136	0.0023	
Heteromastus filiformis	0.0227	0.0204	0.1363	0.2772	
Laeonereis culveri	0.0523				
Leptocheirus plumulosus	0.0114	0.2704		0.0500	0.1727
Macoma balthica	0.2499		0.2431	0.3317	
Macoma mitchelli	0.0727		0.0886	0.2340	
Marenzelleria viridis				0.0136	
Mya arenaria			0.0023		
Neanthes succinea	0.2636	0.2272	0.0341	0.0477	0.0364
Streblospio benedicti	0.0011		0.0023	0.0023	0.0045
Tubificidae imm w/o cap chaetae	0.0011			0.0011	
Tubificoides spp.		0.0011			0.0023
Total Biomass w/ Epifauna	0.7043	0.5203	0.5214	0.9622	0.2749
Total Biomass w/o Epifauna	0.7020	0.5203	0.5214	0.9622	0.2749

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21222	21223	21225	21226	21227
Watershed	Patuxent R	Patuxent R	Patuxent R	Patuxent R	Patuxent R
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Low Mesohaline	Low Mesohaline
Date	08/27/14	08/27/14	08/28/14	08/27/14	08/27/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	0.7	3.3	4.7	0.9	6.0
Salinity (ppt)	8.70	10.24	4.26	9.76	10.05
Temperature (C)	27.52	26.13	27.25	27.55	25.90
Dissolved Oxygen (mg/L)	5.6	3.0	5.9	7.7	1.4
Sediment Silt-Clay (%)	88.80	78.03	81.84	91.90	93.43
Total Carbon (%)	2.83	2.42	2.48	2.58	2.17
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	4.20	2.20	2.00	2.20	2.20
Condition	Meets Goal	Degraded	Severely Degr.	Degraded	Degraded
# Attributes Scored	5	5	4	5	5
	Value	Score	Value	Score	Value
Shannon-Wiener Index	2.74	5	1.04	1	2.00
Abundance (#/m2)	772	3	2772	3	91
Biomass (g/m2)	4.04	3	0.74	1	0.16
Pollution Indicative Spp Abund (%)	0.00	5	0.00	5	0.00
Pollution Indicative Spp Biom (%)	0.00		0.00		0.00
Pollution Sensitive Spp Abund (%)	26.47		0.00		0.00
Pollution Sensitive Spp Biom (%)	93.53	5	0.00	1	0.00
Carnivore-Omnivore Abund (%)	32.35		9.84		50.00
Deep Deposit Feeder Abund (%)	17.65		9.02		25.00
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00
Limnodrilus Abundance (%)	0.00		0.00		0.00
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00	1	0.00
Tolerance Score	0.00		0.00		0.00
Tany./Chir. Abundance Ratio	0.00		0.00		0.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21222	21223	21225	21226	21227
Carinoma tremaphoros	114	91	23		23
Cyathura polita	68				
Heteromastus filiformis	45	204		68	
Leptocheirus plumulosus	227	2249		1045	23
Macoma balthica	136				
Macoma mitchelli	23				
Melita nitida (Epi.)	45	273		318	
Neanthes succinea	68	182		68	23
Streblospio benedicti			45	23	
Tubificoides spp.	91	45	523	68	23
Total Abundance w/ Epifauna	818	3044	591	1590	91
Total Abundance w/o Epifauna	772	2772	591	1272	91
Number of Taxa w/ Epifauna	9	6	3	6	4
Number of Taxa w/o Epifauna	8	5	3	5	4
<b>BENTHIC BIOMASS (Grams per sq. meter)</b>					
Site	21222	21223	21225	21226	21227
Carinoma tremaphoros	0.0364	0.0136	0.0273		0.0523
Cyathura polita	0.1113				
Heteromastus filiformis	0.0409	0.0772		0.0500	
Leptocheirus plumulosus	0.0341	0.5680		0.2408	0.0136
Macoma balthica	3.6670				
Macoma mitchelli	0.0727				
Melita nitida (Epi.)	0.0023	0.0204		0.0159	
Neanthes succinea	0.0750	0.0818		0.1068	0.0954

Continued . . .

BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21222	21223	21225	21226	21227
Streblospio benedicti			0.0045	0.0011	
Tubificoides spp.	0.0023	0.0023	0.0091	0.0023	0.0023
Total Biomass w/ Epifauna	4.0419	0.7634	0.0409	0.4169	0.1636
Total Biomass w/o Epifauna	4.0396	0.7429	0.0409	0.4010	0.1636

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

Site	21601	21602	21603	21604	21605
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	High Meso Mud	High Meso Mud	High Meso Mud	High Meso Mud
Date	08/19/14	08/19/14	08/19/14	08/19/14	08/19/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
BOTTOM ENVIRONMENT					
Depth (m)	5.9	14.7	14.3	7.6	8.9
Salinity (ppt)	11.31	16.32	16.37	13.80	13.53
Temperature (C)	25.15	25.19	25.20	25.13	25.15
Dissolved Oxygen (mg/L)	2.0	0.4	0.3	0.7	0.8
Sediment Silt-Clay (%)	2.55	78.87	88.91	88.37	81.69
Total Carbon (%)	0.13	3.17	3.22	2.51	1.88
BENTHIC INDEX OF BIOTIC INTEGRITY					
B-IBI Score	3.80	1.67	1.00	1.00	3.00
Condition	Meets Goal	Severely Degr.	Severely Degr.	Severely Degr.	Meets Goal
# Attributes Scored	5	6	6	6	6
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	2.48 3	0.00 1	0.00 1	0.00 1	1.93 1
Abundance (#/m2)	1999 5	23 1	0 1	0 1	545 1
Biomass (g/m2)	1.45 3	0.00 1	0.00 1	0.00 1	2.13 5
Pollution Indicative Spp Abund (%)	4.55 5	100.00	100.00	100.00	8.33
Pollution Indicative Spp Biom (%)	12.17	100.00 1	100.00 1	100.00 1	15.34 3
Pollution Sensitive Spp Abund (%)	6.82	0.00	0.00	0.00	41.67
Pollution Sensitive Spp Biom (%)	61.85 3	0.00 1	0.00 1	0.00 1	63.19 3
Carnivore-Omnivore Abund (%)	2.27	100.00 5	0.00 1	0.00 1	41.67 5
Deep Deposit Feeder Abund (%)	26.14	0.00	0.00	0.00	4.17
TF Poll. Indicative Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Limnodrilus Abundance (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Indic. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Oligo Poll. Sens. Spp Abund (%)	0.00	0.00	0.00	0.00	0.00
Tolerance Score	0.00	9.80	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 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter)					
Site	21601	21602	21603	21604	21605
Carinoma tremaphoros					23
Chironomus spp.		23			
Heteromastus filiformis	432				
Leitoscoloplos fragilis	23				
Lepidactylus dytiscus	23				
Leptocheirus plumulosus	523				
Macoma balthica					227
Macoma mitchelli	682				23
Marenzelleria viridis	114				
Micrura leidyi	23				
Mulinia lateralis	45				45
Mya arenaria	23				
Neanthes succinea	23				204
Streblospio benedicti	23				
Tubificoides spp.	68				23
Total Abundance w/ Epifauna	1999	23	0	0	545
Total Abundance w/o Epifauna	1999	23			545
Number of Taxa w/ Epifauna	12	1	0	0	6
Number of Taxa w/o Epifauna	12	1	0	0	6
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21601	21602	21603	21604	21605
Carinoma tremaphoros					0.0011
Chironomus spp.		0.0011			
Heteromastus filiformis	0.1704				
Leitoscoloplos fragilis	0.1727				
Lepidactylus dytiscus	0.0250				
Leptocheirus plumulosus	0.1204				
Macoma balthica					1.3473
Macoma mitchelli	0.0454				0.0023
Marenzelleria viridis	0.0909				
Micrura leidyi	0.0091				
Mulinia lateralis	0.0023				0.3272
Mya arenaria	0.8043				
Neanthes succinea	0.0045				0.4521
Streblospio benedicti	0.0011				
Tubificoides spp.	0.0011				0.0023
Total Biomass w/ Epifauna	1.4473	0.0011	0.0000	0.0000	2.1323
Total Biomass w/o Epifauna	1.4473	0.0011	0.0000	0.0000	2.1323

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21606	21607	21610	21611	21612	
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay	
Habitat	Low Mesohaline	Low Mesohaline	High Meso Mud	Low Mesohaline	Low Mesohaline	
Date	08/19/14	08/19/14	08/19/14	08/19/14	08/19/14	
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab	
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044	
BOTTOM ENVIRONMENT						
Depth (m)	3.5	6.5	6.7	5.8	5.3	
Salinity (ppt)	8.69	8.01	12.87	10.10	5.51	
Temperature (C)	25.29	25.00	25.08	25.09	25.05	
Dissolved Oxygen (mg/L)	7.4	4.7	0.5	1.9	6.8	
Sediment Silt-Clay (%)	6.09	25.87	92.35	88.95	85.63	
Total Carbon (%)	0.15	1.78	2.21	1.89	3.06	
BENTHIC INDEX OF BIOTIC INTEGRITY						
B-IBI Score	2.60	4.20	2.67	3.80	4.20	
Condition	Degraded	Meets Goal	Marginal	Meets Goal	Meets Goal	
# Attributes Scored	5	5	6	5	5	
	Value	Score	Value	Score	Value	Score
Shannon-Wiener Index	1.65	1	2.82	5	1.18	1
Abundance (#/m2)	2045	5	3931	3	500	1
Biomass (g/m2)	0.87	1	13.96	3	2.56	5
Pollution Indicative Spp Abund (%)	1.11	5	4.62	5	0.00	5
Pollution Indicative Spp Biom (%)	0.52		0.02		0.00	5
Pollution Sensitive Spp Abund (%)	7.78		24.86		68.18	
Pollution Sensitive Spp Biom (%)	4.72	1	83.75	5	95.83	3
Carnivore-Omnivore Abund (%)	1.11		12.72		9.09	1
Deep Deposit Feeder Abund (%)	11.11		30.64		22.73	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00	
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00	
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00	
Tolerance Score	0.00		0.00		0.00	
Tany./Chir. Abundance Ratio	0.00		0.00		0.00	
BENTHIC ABUNDANCE (per sq. meter)						
Site	21606	21607	21610	21611	21612	
Carinoma tremaphoros		68		45		
Cyathura polita				45	295	
Eteone heteropoda	23	45				
Heteromastus filiformis	227	704	114	227	23	
Leptocheirus plumulosus	1181	1000		136	227	
Macoma balthica		795	341	364	954	
Macoma mitchelli	454	114		23		
Marenzelleria viridis	159	182			182	
Melita nitida (Epi.)		45		68	45	
Neanthes succinea		386	45	136	23	
Rangia cuneata					23	
Streblospio benedicti		136			23	
Tubificoides spp.		500		91	159	
Total Abundance w/ Epifauna	2045	3976	500	1136	1954	
Total Abundance w/o Epifauna	2045	3931	500	1068	1908	
Number of Taxa w/ Epifauna	5	11	3	9	10	
Number of Taxa w/o Epifauna	5	10	3	8	9	
BENTHIC BIOMASS (Grams per sq. meter)						
Site	21606	21607	21610	21611	21612	
Carinoma tremaphoros		0.0068		0.0454		
Cyathura polita				0.0341	0.4271	
Eteone heteropoda	0.0045	0.0023				
Heteromastus filiformis	0.0750	0.2045	0.0364	0.0750	0.0023	
Leptocheirus plumulosus	0.1590	0.1772		0.0659	0.0295	

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter) - Contd.					
Site	21606	21607	21610	21611	21612
<i>Macoma balthica</i>		11.5758	2.4538	2.0902	18.5213
<i>Macoma mitchelli</i>	0.5862	0.0932		0.0136	
<i>Marenzelleria viridis</i>	0.0409	0.1159			0.0863
<i>Melita nitida</i> (Epi.)		0.0011		0.0011	0.0023
<i>Neanthes succinea</i>		1.7812	0.0704	0.3817	0.1250
<i>Rangia cuneata</i>					0.3204
<i>Streblospio benedicti</i>		0.0011			0.0011
<i>Tubificoides</i> spp.		0.0023		0.0011	0.0023
Total Biomass w/ Epifauna	0.8656	13.9614	2.5605	2.7082	19.5176
Total Biomass w/o Epifauna	0.8656	13.9603	2.5605	2.7071	19.5153

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21613	21614	21615	21616	21617
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Low Mesohaline	Low Mesohaline	Oligohaline	Oligohaline	Low Mesohaline
Date	08/19/14	08/19/14	08/19/14	08/19/14	08/19/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	12.6	5.3	4.9	3.5	7.0
Salinity (ppt)	10.35	5.11	4.40	3.45	5.90
Temperature (C)	25.02	24.85	24.92	24.81	25.01
Dissolved Oxygen (mg/L)	1.6	6.8	7.3	7.9	4.3
Sediment Silt-Clay (%)	95.52	84.36	92.11	93.80	52.61
Total Carbon (%)	5.49	1.64	1.65	2.32	3.93
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	3.80	4.20	3.50	3.40	4.20
Condition	Meets Goal	Meets Goal	Meets Goal	Meets Goal	Meets Goal
# Attributes Scored	5	5	4	5	5
	Value Score	Value Score	Value Score	Value Score	Value Score
Shannon-Wiener Index	0.50 1	2.72 5	2.12 5	1.53 3	1.84 3
Abundance (#/m2)	1636 5	2181 5	227 3	682 5	3044 3
Biomass (g/m2)	20.27 3	2.15 3	0.26 3	3.47 5	9.20 5
Pollution Indicative Spp Abund (%)	0.00 5	18.75 3	0.00 3	0.00 3	2.24 5
Pollution Indicative Spp Biom (%)	0.00 5	0.63 3	0.00 3	0.00 3	0.01 5
Pollution Sensitive Spp Abund (%)	93.06 5	54.17 3	60.00 3	30.00 3	76.12 5
Pollution Sensitive Spp Biom (%)	98.39 5	87.45 5	89.08 3	95.03 3	93.02 5
Carnivore-Omnivore Abund (%)	4.17 3	14.58 3	40.00 5	13.33 1	18.66 3
Deep Deposit Feeder Abund (%)	1.39 3	8.33 3	30.00 3	0.00 3	15.67 3
TF Poll. Indicative Spp Abund (%)	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
Limnodrilus Abundance (%)	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
Oligo Poll. Indic. Spp Abund (%)	0.00 3	0.00 3	40.00 3	66.67 3	0.00 3
Oligo Poll. Sens. Spp Abund (%)	0.00 3	0.00 3	20.00 3	13.33 3	0.00 3
Tolerance Score	0.00 3	6.00 3	0.00 3	6.00 5	6.00 3
Tany./Chir. Abundance Ratio	0.00 3	0.00 3	0.00 3	0.00 3	0.00 3
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21613	21614	21615	21616	21617
Balanus improvisus (Epi.)					114
Carinoma tremaphoros		23		23	
Cyathura polita		227	91	68	386
Edotea triloba (Epi.)					91
Heteromastus filiformis	23	91	45		114
Leptocheirus plumulosus	23	227	23	454	
Macoma balthica	1522	23			
Macoma mitchelli		68			
Marenzelleria viridis		863	45	91	1863
Melita nitida (Epi.)			23	136	
Micrura leidyi	23				
Mytilopsis leucophaeata (Epi.)		45			
Neanthes succinea	45	68			182
Polydora cornuta		23			
Rangia cuneata		68		45	68
Rhithropanopeus harrisi (Epi.)				45	45
Streblospio benedicti		409			68
Tubificoides spp.		91	23		364
Total Abundance w/ Epifauna	1636	2227	250	863	3294
Total Abundance w/o Epifauna	1636	2181	227	682	3044
Number of Taxa w/ Epifauna	5	13	6	7	10
Number of Taxa w/o Epifauna	5	12	5	5	7

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## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21613	21614	21615	21616	21617
Balanus improvisus (Epi.)					1.0383
Carinoma tremaphoros		0.0818		0.0114	
Cyathura polita		0.2068	0.2068	0.0750	0.5135
Edotea triloba (Epi.)					0.0159
Heteromastus filiformis	0.0227	0.0250	0.0250		0.0841
Leptocheirus plumulosus	0.0011	0.0409	0.0023	0.1613	
Macoma balthica	19.9436	0.0273			
Macoma mitchelli		0.0136			
Marenzelleria viridis		0.4635	0.0250	0.0364	0.8770
Melita nitida (Epi.)			0.0023	0.0091	
Micrura leidyi	0.0068				
Mytilopsis leucophaeata (Epi.)		0.0136			
Neanthes succinea	0.2954	0.0863			0.5498
Polydora cornuta		0.0023			
Rangia cuneata		1.1860		3.1876	7.1636
Rhithropanopeus harrisi (Epi.)				0.2295	1.0315
Streblospio benedicti		0.0136			0.0011
Tubificoides spp.		0.0068	0.0011		0.0068
Total Biomass w/ Epifauna	20.2696	2.1675	0.2624	3.7102	11.2816
Total Biomass w/o Epifauna	20.2696	2.1539	0.2601	3.4716	9.1959

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21618	21619	21620	21621	21622					
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay					
Habitat	Oligohaline	Low Mesohaline	Oligohaline	Freshwater	Oligohaline					
Date	09/19/14	09/19/14	09/19/14	08/19/14	09/19/14					
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab					
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044					
<b>BOTTOM ENVIRONMENT</b>										
Depth (m)	3.1	3.7	4.3	6.5	1.7					
Salinity (ppt)	4.39	5.13	4.50	0.48	0.65					
Temperature (C)	22.01	22.19	22.03	25.11	20.58					
Dissolved Oxygen (mg/L)	7.8	7.1	7.3	6.5	7.8					
Sediment Silt-Clay (%)	90.50	89.08	94.15	77.56	52.25					
Total Carbon (%)	1.60	2.28	2.46	1.84	2.84					
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>										
B-IBI Score	2.67	3.00	3.33	5.00	2.60					
Condition	Marginal	Meets Goal	Meets Goal	Meets Goal	Degraded					
# Attributes Scored	6	5	6	4	5					
	Value	Score	Value	Score	Value	Score				
Shannon-Wiener Index	1.84	2.10	3	1.19	2.24	1.51				
Abundance (#/m2)	159	1	3363	3	1045	5	2408	5	704	5
Biomass (g/m2)	25.35		46.54	1	15.30		69.05		7.54	
Pollution Indicative Spp Abund (%)	28.57		15.54	3	2.17		16.04		87.10	
Pollution Indicative Spp Biom (%)	0.03		0.01		0.03		0.03		0.96	
Pollution Sensitive Spp Abund (%)	57.14		72.97		97.83		76.42		12.90	
Pollution Sensitive Spp Biom (%)	99.88		99.97	5	99.97		97.50		99.04	
Carnivore-Omnivore Abund (%)	42.86	5	14.19		4.35	1	5.66		3.23	1
Deep Deposit Feeder Abund (%)	0.00		1.35		0.00		16.04	5	87.10	
TF Poll. Indicative Spp Abund (%)	0.00		0.00		0.00		16.04	5	0.00	
Limnodrilus Abundance (%)	0.00		0.00		0.00		16.04		87.10	
Oligo Poll. Indic. Spp Abund (%)	42.86	3	0.00		2.17	5	0.00		87.10	3
Oligo Poll. Sens. Spp Abund (%)	14.29	3	0.00		63.04	5	0.00		6.45	3
Tolerance Score	6.08	3	6.00		6.01	3	7.38	5	9.66	1
Tany./Chir. Abundance Ratio	100.00	1	0.00		100.00	1	0.00		0.00	
<b>BENTHIC ABUNDANCE (per sq. meter)</b>										
Site	21618	21619	21620	21621	21622					
Balanus improvisus (Epi.)		68								
Boccardiella ligERICA		23								
Coelotanypus spp.	45		23							
Corbicula fluminea				23						
Cyathura polita		477	23	136	23					
Gammarus daiberi (Epi.)		68		45						
Hobsonia florida		45		91						
Leptocheirus plumulosus				68						
Limnodrilus hoffmeisteri				182	182					
Marenzelleria viridis	23	1727	659	1045	45					
Mytilopsis leucophaeata (Epi.)		182	23							
Neanthes succinea	23									
Polydora cornuta		273								
Rangia cuneata	68	250	341	659	23					
Streblospio benedicti		523								
Stylochus ellipticus (Epi.)		23								
Tubificidae imm w/o cap chaetae *				204	432					
Tubificoides spp.		45								
Total Abundance w/ Epifauna	159	3703	1068	2454	704					
Total Abundance w/o Epifauna	159	3363	1045	2408	704					
Number of Taxa w/ Epifauna	4	12	5	8	4					
Number of Taxa w/o Epifauna	4	8	4	7	4					

Continued . . .

## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC BIOMASS (Grams per sq. meter)					
Site	21618	21619	21620	21621	21622
Balanus improvisus (Epi.)		0.4180			
Boccardiella ligERICA		0.0011			
Coelotanypus spp.	0.0068		0.0045		
Corbicula fluminea				1.6676	
Cyathura polita		0.2090	0.0091		0.0182
Gammarus daiberi (Epi.)		0.0114		0.0091	
Hobsonia florida		0.0011		0.0341	
Leptocheirus plumulosus				0.0045	
Marenzelleria viridis	0.1931	0.8611	1.8903	0.6044	0.0477
Mytilopsis leucophaeata (Epi.)		0.0136	0.0011		
Neanthes succinea	0.0227				
Oligochaeta				0.0216	0.0727
Polydora cornuta		0.0045			
Rangia cuneata	25.1238	45.4536	13.3980	66.5401	7.4044
Streblospio benedicti		0.0045			
Stylochus ellipticus (Epi.)		0.0011			
Tubificoides spp.		0.0011			
Total Biomass w/ Epifauna	25.3464	46.9804	15.3031	69.0563	7.5430
Total Biomass w/o Epifauna	25.3464	46.5362	15.3019	69.0472	7.5430

**BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES**

Site	21623	21624	21625	21627	21628
Watershed	Upper Bay	Upper Bay	Upper Bay	Upper Bay	Upper Bay
Habitat	Freshwater	Freshwater	Freshwater	High Meso Mud	Freshwater
Date	08/25/14	08/25/14	08/25/14	08/19/14	08/19/14
Gear	Young Grab	Young Grab	Young Grab	Young Grab	Young Grab
Sampled Area (sq.m)	0.044	0.044	0.044	0.044	0.044
<b>BOTTOM ENVIRONMENT</b>					
Depth (m)	2.0	1.6	2.2	7.3	3.5
Salinity (ppt)	0.17	0.17	0.17	14.09	0.15
Temperature (C)	24.40	23.99	25.09	25.12	25.33
Dissolved Oxygen (mg/L)	9.7	10.1	10.0	0.4	6.9
Sediment Silt-Clay (%)	15.77	5.27	7.81	92.52	70.77
Total Carbon (%)	0.86	0.88	0.28	2.49	1.84
<b>BENTHIC INDEX OF BIOTIC INTEGRITY</b>					
B-IBI Score	4.50	5.00	5.00	2.67	5.00
Condition	Meets Goal	Meets Goal	Meets Goal	Marginal	Meets Goal
# Attributes Scored	4	4	4	6	4
	Value	Score	Value	Score	Value
Shannon-Wiener Index	2.03		2.89		2.59
Abundance (#/m2)	5067	3	1749	5	2726
Biomass (g/m2)	1.20		1.02		135.42
Pollution Indicative Spp Abund (%)	12.56		33.77		16.67
Pollution Indicative Spp Biom (%)	8.70		15.11		0.01
Pollution Sensitive Spp Abund (%)	0.00		5.19		58.33
Pollution Sensitive Spp Biom (%)	0.00		7.33		88.51
Carnivore-Omnivore Abund (%)	23.32		31.17		12.50
Deep Deposit Feeder Abund (%)	17.04	5	28.57	5	15.00
TF Poll. Indicative Spp Abund (%)	12.56	5	25.97	5	15.00
Limnodrilus Abundance (%)	13.45		25.97		15.00
Oligo Poll. Indic. Spp Abund (%)	0.00		0.00		0.00
Oligo Poll. Sens. Spp Abund (%)	0.00		0.00		0.00
Tolerance Score	7.05	5	7.51	5	7.11
Tany./Chir. Abundance Ratio	5.77		0.00		100.00
<b>BENTHIC ABUNDANCE (per sq. meter)</b>					
Site	21623	21624	21625	21627	21628
Ablabesmyia mallochi	68				
Branchiura sowerbyi	182				
Chironomus spp.			91		
Cladotanytarsus viridiventris		136			
Coelotanypus spp.			136		45
Corbicula fluminea	3022	364	45		591
Cryptochironomus spp.	68	364			
Cyathura polita					273
Dicrotendipes spp.	136				
Dugesia spp. (Epi.)	23				
Gammarus daiberi (Epi.)	19721				45
Harnischia spp.	68				
Heteromastus filiformis				23	
Leptocheirus plumulosus					68
Limnodrilus hoffmeisteri	318	45			68
Limnodrilus udekemianus	45				
Lipiniella spp.			1204		
Macoma balthica				250	
Marenzelleria viridis		91	91		750
Musculium transversum		114	23		
Mytilopsis leucophaeata (Epi.)	23				
Nanocladus crassicornus	818				
Nanocladus distinctus	23				
Neanthes succinea				23	
Oecetis spp. (Epi.)	114	23			
Piguetiella michiganensis		45			
Pisidium spp.		136			
Polypedilum halterale group		45			

Continued . . .



## BOTTOM ENVIRONMENT AND BENTHOS, SUMMER 2014 (CRUISE 01:2014/2015) BAY-WIDE RANDOM SITES

BENTHIC ABUNDANCE (per sq. meter) - Contd.					
Site	21623	21624	21625	21627	21628
Procladius spp.			91		23
Rangia cuneata					568
Tubificidae imm w/o cap chaetae *	318	409			341
Total Abundance w/ Epifauna	24947	1772	1681	295	2772
Total Abundance w/o Epifauna	5067	1749	1681	295	2726
Number of Taxa w/ Epifauna	14	10	7	3	9
Number of Taxa w/o Epifauna	10	9	7	3	8
BENTHIC BIOMASS (Grams per sq. meter)					
Site	21623	21624	21625	21627	21628
Branchiura sowerbyi	0.3976				
Chironomidae	0.0409	0.0318	0.1662		
Chironomus spp.			0.0886		
Coelotanypus spp.			0.0136		0.0011
Corbicula fluminea	0.6589	0.7520	0.0227		15.5382
Cyathura polita					0.1454
Dugesia spp. (Epi.)	0.0011				
Gammarus daiberi (Epi.)	1.8131				0.0159
Heteromastus filiformis				0.1272	
Leptocheirus plumulosus					0.0091
Macoma balthica				2.0971	
Marenzelleria viridis		0.0750	0.0250		0.3999
Musculium transversum		0.0045	0.0227		
Mytilopsis leucophaeata (Epi.)	0.0068				
Neanthes succinea				0.0068	
Oecetis spp. (Epi.)	0.0068	0.0068			
Oligochaeta	0.1045	0.1545	0.0080		0.0080
Pisidium spp.		0.0045			
Procladius spp.					0.0011
Rangia cuneata					119.3186
Total Biomass w/ Epifauna	3.0297	1.0292	0.3468	2.2311	135.4373
Total Biomass w/o Epifauna	1.2019	1.0224	0.3468	2.2311	135.4214