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BIOGEOCHEMICAL OBSERVATIONS TO ASSESS BENTHIC IMPACTS OF ORGANIC ENRICHMENT FROM MARINE AQUACULTURE IN THE WESTERN ISLES REGION OF THE BAY OF FUNDY, 1995

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TABLE OF CONTENTS

ABSTRACT.....	iv
RÉSUMÉ.....	iv
INTRODUCTION.....	1
METHODS.....	1
STATION LOCATIONS.....	1
SAMPLE COLLECTION.....	1
ANALYTICAL METHODS.....	3
Vertical Profiles for Redox and Sulfide.....	3
Sediment Water Content, Grain Size, Organic Carbon, and Nitrogen.....	3
Benthic Enrichment Index.....	3
DATA PRESENTATION.....	3
DISCUSSION.....	9
WATER CONTENT.....	9
ORGANIC CARBON AND NITROGEN.....	9
TOTAL SULFIDE.....	9
REDOX POTENTIALS.....	9
BENTHIC ENRICHMENT INDEX.....	10
ACKNOWLEDGEMENTS.....	10
REFERENCES.....	10
APPENDIX. SEDIMENT GEOCHEMICAL PROFILES.....	18

ABSTRACT

Hargrave, B.T., L.I. Doucette, G.A. Phillips, T.G. Milligan, and D.J. Wildish. 1998.

Biogeochemical observations to assess benthic impacts of organic enrichment from marine aquaculture in the Western Isles region of the Bay of Fundy, 1995. Can. Data Rep. Fish. Aquat. Sci. 1031: iv + 50 p.

Water content, modal grain size, redox potentials (Eh), total sulfides (S^{\pm}), and organic carbon and nitrogen were determined in sediment cores collected at 20 stations in the Western Isles region of the Bay of Fundy between June and July 1995. All sites were located under net-pens which contained a range of biomass of Atlantic salmon. Total S^{\pm} and Eh in surface sediments were sensitive indicators of the supply of organic matter associated with salmon aquaculture. Relationships between the variables were used to rank sites with respect to benthic enrichment.

RÉSUMÉ

Hargrave, B.T., L.I. Doucette, G.A. Phillips, T.G. Milligan, and D.J. Wildish. 1998.

Biogeochemical observations to assess benthic impacts of organic enrichment from marine aquaculture in the Western Isles region of the Bay of Fundy, 1995. Can. Data Rep. Fish. Aquat. Sci. 1031: iv + 50 p.

La teneur en eau, la granulométrie modale, les potentiels d'oxydoréduction (Eh), les concentrations de sulfures totaux (S^{\pm}), de carbone et d'azote organiques ont été mesurés dans des carottes de sédiments prélevées dans 20 stations situées dans la région des îles Western dans la baie de Fundy entre juin et juillet 1995. Tous les sites se situaient dans des parcs en filet contenant une biomasse variable de saumons atlantiques. Les S^{\pm} totaux et les Eh des sédiments de surface sont des indicateurs sensibles de l'apport en matières organiques lié à la salmoniculture. Les relations entre les variables ont été utilisées pour classer les sites en fonction de l'enrichissement benthique.

INTRODUCTION

The information contained in this report is meant to supplement the observations of Hargrave et al. 1995. Assessment of the data in the 1995 report resulted in a reduction of the number of variables measured in this study to those which showed the highest degree of sensitivity for detecting benthic impacts of net-pen aquaculture at different sites. Sediment profiles of redox potential (Eh), total sulphides (S^{\pm}), organic carbon and nitrogen, and water content were determined as well as modal grain size of the surface sediment. All of the twenty sites sampled in this study were under salmon net-pens. Eight of these were sampled in the previous study and twelve were new sampling sites.

METHODS

STATION LOCATIONS

Sediment cores were collected between June 5 and July 24, 1995, at twenty stations in the Bay of Fundy (Table 1; Fig. 1). To keep individual sites anonymous, coordinates and NBDFA site licence numbers have not been reported. The site numbers used in this report were assigned randomly.

SAMPLE COLLECTION

As sediment cores were collected by diver, sampling time during daylight hours was selected to coincide approximately with the time of low tide. Two long cores (6.5 cm inside dia., 50 cm length), collected at each station were handled as described in the 1995 report. The vertical profile for redox potential was again done by insertion of an electrode through the sampling hole, while samples for water content, grain size, organic carbon and nitrogen, and sulphide were withdrawn by syringe.

Table 1. Twenty sampling sites from 1995 in the Western Isles region of the Bay of Fundy.

Site #	Depth (m)	DFA Licence Capacity	Prod.Area ¹ (hectares)	Prod. Area ² (hectares)
Cage Sites:				
2	18.0	100,000	10.64	10.64
3	8.0	140,000	7.80	7.80
4	20.0	200,000	17.21	17.21
5	10.0	100,000	4.70	4.70
6	11.0	320,000	22.73	22.73
7	20.0	200,000	4.50	29.10
8	9.6	200,000	8.01	9.78
9	10.0	200,000	9.70	9.70
10	13.0	200,000	13.99	15.72
11	14.0	300,000	13.10	15.50
12	16.0	150,000	10.19	10.19
13	8.0	60,000	2.39	6.23 ³
14	10.0	75,000	6.26	6.26
15	15.0	100,000	8.39	8.39
16	16.0	180,000	10.00	10.00
17	9.0	80,000	7.30	12.79
18	8.0	240,000	9.63	16.35
19	25.0	240,000	23.43	23.43
20	16.0	150,000	13.05	13.05
21	16.0	150,000	12.15	7.50

¹ Based on NB DFA (New Brunswick Department of Fisheries and Aquaculture) data from 1994 provided by B. Chang (pers. comm.).

² Based on new NB DFA surveys from 1997 provided by B. Sweeney (pers. comm.).

³ Site has been consolidated with another parcel. The original was 2.3 hectares.

ANALYTICAL METHODS

Vertical Profiles for Redox and Sulfide

Calibration of the redox and sulfide electrodes and core profile sampling for these variables followed the procedure described in Hargrave et al. (1995).

Sediment Water Content, Grain Size, Organic Carbon and Nitrogen

These measurements were also determined as described in Hargrave et al. (1995).

Benthic Enrichment Index: Data for water content (W, percent of sediment wet weight), Eh (R, mV), and organic carbon (C, percent sediment dry weight in the 0 to 2 cm sediment layer) were combined to calculate an index of benthic enrichment (BEI) (units of mol C m⁻² x mV) as described in Hargrave (1994) by:

$$\text{BEI} = [\{ (100-W)/100 \} \times 10^4 \times \{ (C/100)/12 \}] \times R$$

DATA PRESENTATION

Data for variables measured in this study are presented by site number in the Appendix. Sediment profiles of water content, redox potentials, total sulfides, organic carbon and nitrogen appear, along with modal grain size of the surface sediment. Mean values for all variables for the surface (0 to 2 cm) sediment layer at each site are summarized in Table 2, as well as a minimum, maximum and mean for all sites. Included in Table 2 is the benthic enrichment index calculation. Surface sediment values for those variables measured at the same site in both years are shown in Table 3, with the mean values for each variable from the two years plotted as histograms in Figure 2, A-G. A summary of means, maxima, minima, standard deviations, and standard errors for each variable grouped by year for revisited sites is presented in Table 4. A one-way analysis of variance was performed (Table 5) to assess the relative variance between years.

Figure 1. Map showing approximate locations of sampling sites in the Western Isles region of the Bay of Fundy.

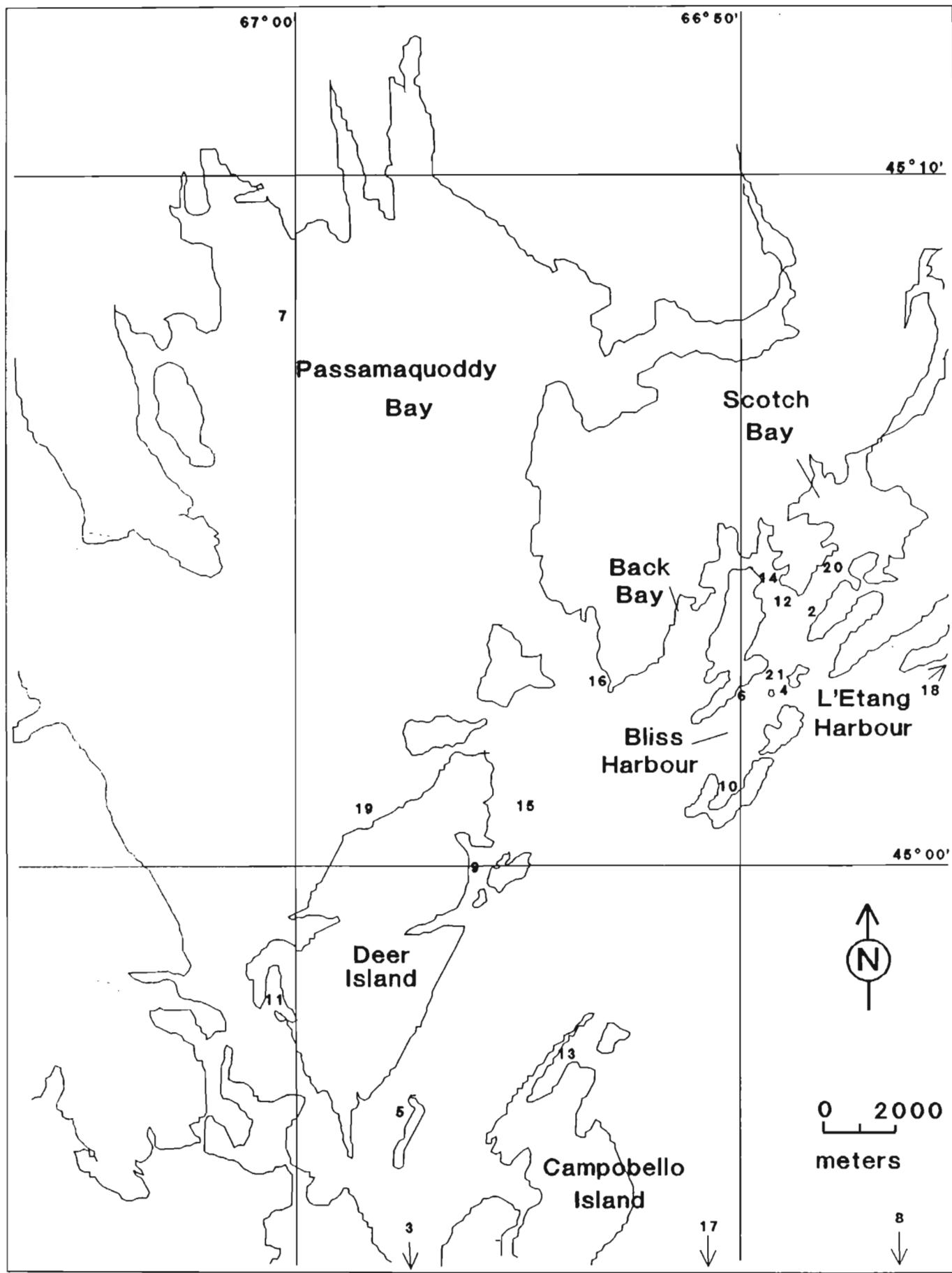


Table 2. Values for variables in surface (0-2 cm) sediment layers at stations described in Table 1.

Site# (core#)	Water Content (% wet wt.)	Org. C (% dry wt.)	Nitrogen (% dry wt.)	C:N (mol eq.)	Eh (mV)	BEI	BEI Site Avg.	S= (µM)	Modal Grain Size (µm)
2 (7)	31.36	0.80	0.17	5.30	-16	-73		3000	168.9
2 (8)	29.96	0.64	0.15	4.94	22	82		2450	168.9
mean	30.66	0.72	0.16	5.12	3	4	4	2725	168.9
3 (5)	62.29	2.62	0.26	11.59	-21	-173		3600	97.0
3 (6)	57.15	3.23	0.31	11.97	74	854		1000	111.4
mean	59.72	2.93	0.29	11.78	27	340	340	2300	104.2
4 (1)	61.52	5.78	0.77	8.66	-168	-3114		4200	16.0*
4 (2)	48.58	2.02	0.41	5.66	-23	-199		4300	512.0*
mean	55.05	3.90	0.59	7.16	-96	-1656	-1656	4250	264.0*
5 (2)	42.63	3.04	0.18	19.71	92	1337		5600	388.0
5 (12)	28.12	1.40	0.15	10.86	192	1610		2500	337.8
mean	35.38	2.22	0.17	15.29	142	1474	1474	4050	362.9
6 (3)	71.85	3.31	0.42	9.04	-141	-1095		5400	21.1
6 (4)	74.38	4.71	0.60	9.08	-128	-1287		5800	13.9
mean	73.12	4.01	0.51	9.06	-135	-1191	-1191	5600	17.5
7 (3)**	70.75	1.61	0.39	4.78	-205	-804		9800	10.6
7 (4)**	68.59	3.65	0.48	8.74	-132	-1261		14000	12.1
mean	69.67	2.63	0.44	6.76	-169	-1033	-1033	11900	11.4
8 (1)	25.73	0.46	0.13	3.99	-138	-393		5800	194.0
8 (2)**	42.19	1.67	0.37	5.19	-164	-1319		9500	194.0
mean	33.96	1.07	0.25	4.59	-151	-856	-856	7650	194.0
9 (9)	72.71	5.53	0.66	9.70	-146	-1836		5100	10.6
9 (10)	64.47	3.42	0.44	9.05	-106	-1073		3300	18.4
mean	68.59	4.48	0.55	9.38	-126	-1455	-1455	4200	14.5
10 (1)	70.12	2.69	0.35	8.79	-57	-382		2800	16.0
10 (2)	72.21	3.23	0.40	9.32	-64	-479		1600	16.0
mean	71.17	2.96	0.38	9.06	-61	-430	-430	2200	16.0
11 (1)	55.56	4.23	0.61	8.05	194	3039		980	147.0
11 (8)	55.53	3.62	0.61	6.91	-141	-1892		2200	194.0
mean	55.55	3.93	0.61	7.48	27	574	574	1590	170.5

Site# (core#)	Water Content (% wet wt.)	Org. C (% dry wt.)	Nitrogen (% dry wt.)	C:N (mol eq.)	Eh (mV)	BEI	BEI Site Avg	S= (µM)	Modal Grain Size (µm)
12 (1)	77.14	6.60	0.82	9.31	-184	-2313		6400	12.1
12 (2)	62.30	2.94	0.44	7.74	-89	-822		3600	168.9
mean	69.72	4.77	0.63	8.53	-137	-1568	-1568	5000	90.5
13 (7)	63.16	4.52	0.53	9.94	137	1901		2200	21.1
13 (8)	59.05	4.36	0.63	8.08	-37	-551		1600	10.6
mean	61.11	4.44	0.58	9.01	50	675	675	1900	15.9
14 (7)	64.31	1.53	0.25	7.04	-161	-733		2000	16.0
14 (8)	62.13	2.75	0.40	7.92	-131	-1137		3000	13.9
mean	63.22	2.14	0.33	7.48	-146	-935	-935	2500	15.0
15 (5)	58.88	2.75	0.33	9.47	-56	-528		3100	84.4
15 (6)	61.46	3.34	0.47	8.22	-6	-64		1900	21.1
mean	60.17	3.05	0.40	8.85	-31	-296	-296	2500	52.8
16 (9)	41.06	1.13	0.22	5.78	-114	-633		3200	222.9
16 (10)	32.61	1.66	0.28	6.85	-28	-261		2700	222.9
mean	36.84	1.40	0.25	6.32	-71	-447	-447	2950	222.9
17 (3)	47.16	1.45	0.24	6.91	161	1028		430	97.0
17 (4)	47.33	1.01	0.19	6.14	95	421		400	97.0
mean	47.25	1.23	0.22	6.53	128	725	725	415	97.0
18 (5)	58.23	3.77	0.50	8.73	-156	-2047		4500	36.8
18 (6)	53.33	2.26	0.44	6.01	-174	-1529		12000	36.8
mean	55.78	3.02	0.47	7.37	-165	-1788	-1788	8250	36.8
19 (1)**	49.32	1.46	0.22	7.54	-163	-1005		n/a	128.0
19 (2)**	56.91	2.27	0.21	12.23	-74	-603		n/a	111.4
mean	53.12	1.87	0.22	9.89	-119	-804	-804		119.7
20 (5)	70.66	3.03	0.43	8.15	-171	-1267		3700	8.0
20 (6)	72.24	3.16	0.59	6.19	-151	-1104		5000	10.6
mean	71.45	3.10	0.51	7.17	-161	-1185	-1185	4350	9.3
21 (3)	64.85	1.98	0.42	5.51	-84	-487		3900	12.1
21 (4)	65.34	2.92	0.52	6.52	-114	-961		4500	13.9
mean	65.10	2.45	0.47	6.02	-99	-724	-724	4200	13.0

* values reflect heterogeneity of sediments at this site

** values for 2-4 cm layer

	Water Content (% wet wt.)	Org. C (% dry wt.)	Nitrogen (% dry wt.)	C:N (mol eq.)	Eh (mV)	BEI	S= (µM)	Modal Grain Size (µm)
Cage site min.	30.66	0.72	0.16	4.59	-169	-1788	415	9.3
Cage site max.	73.12	4.77	0.63	15.29	142	1474	11900	362.9
Cage site mean	56.83	2.82	0.40	8.14	-65	-529	4133	99.8
S.D.	13.19	1.16	0.15	2.34	95	885	2653	98.9
c.v.	0.23	0.41	0.38	0.29	-1.5	-1.7	0.6	1.0

DISCUSSION

WATER CONTENT

Sediment water content in the surface sediments (0 to 2 cm layer) varied widely (30.7 to 73.1%) over all cage sites visited in 1995, just as it had in 1994. At most of the replicated sites, the values are similar in both years, except at sites 6, 18, and 20 where a much higher water content was found in 1995.

ORGANIC CARBON AND NITROGEN

The range of values for organic carbon (0.7 to 4.8%) in the surface sediments at the 1995 cage sites was greater than that measured at cage sites the previous year, resulting in a mean value for all cage sites that was 20% higher in 1995. Nitrogen showed a similar increase. At the revisited sites, six out of eight had increased carbon values and seven of the eight had higher nitrogen. This indicates increased storage of organic matter in at least 75% of the revisited sites. The largest increases were at sites 4 and 20.

These changes in organic carbon and nitrogen resulted in decreased C:N ratios in 1995 in seven out of eight cases, with only site 11 having a higher ratio in 1995 than in 1994. These decreased ratios reflect a proportionately higher amount of nitrogen over carbon in the surface sediment. The largest changes between years occurred at sites 4, 18, 20, and 21. Only site 11 showed the opposite effect - C:N higher in 1995 due to carbon accumulation without a corresponding nitrogen increase.

TOTAL SULFIDE

There was a general increase in total S²⁻ concentrations in the surface sediments at the twenty cage sites in 1995 when compared to values from the eleven sites in 1994. All revisited sites had higher S²⁻ levels. Figure 2-E supports the idea that sites 4 and 20 received increased organic matter loading. Sites 6 and 18 had the greatest increases in total sulfides.

REDOX POTENTIALS

The pattern of changes in Eh between years is generally consistent with total sulfide concentrations. Six of eight sites were more negative in 1995, the remainder being relatively unchanged. Again, the greatest changes occurred at sites 6, 18 and 20. Although total sulfide doubled at site 21, this did not affect Eh values.

BENTHIC ENRICHMENT INDEX

Since the index is derived from C_{org} and Eh values, one could expect similar trends as in these variables. Sites 13 and 21 showed no great changes. The largest changes were measured at 4, 6, 18 and 20.

In summary, all of the comparisons indicate that at 75% of the sites, sediments have become more anoxic, with S²⁻ accumulation (all >1000uM) causing Eh potentials to decrease. The accumulation of organic carbon and nitrogen correlates with the S²⁻ accumulation and decreased Eh potentials to indicate that organic enrichment has increased at six of the eight sites between 1994 and 1995.

Probability values from one-way ANOVA tests for differences between years support these findings. S²⁻ and nitrogen ($p<.05$) were significantly different between the two years. C_{org}, Eh and BEI were also different between years, but due to the higher variance in the data, the significance levels were slightly lower (p 0.05 to 0.1). Water content and grain size, however, were not different ($p>0.4$) between years, demonstrating that these two variables do not reflect increasing organic enrichment, as found by Hargrave et al. (1997).

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Table 3. Variables measured in surface (0-2 cm) sediments at cage sites visited in both 1994 and 1995.

	Water Content (% wet wt.)	Org. C (% dry wt.)	Nitrogen (% dry wt.)	C:N (mol eq.)	Eh (mV)	BEI	BEI Site Avg.	S= (µM)	Modal Grain Size (µm)
Site 2:									
1994	38.29	1.66	0.26	7.45	-35	-299		2400	168.9
"	34.29	0.82	0.14	6.83	-5	-22		2000	
1994 mean	36.29	1.24	0.20	7.14	-20	-161	-161	2200	
1995	31.36	0.80	0.17	5.49	-16	-73		3000	168.9
"	29.96	0.64	0.15	4.98	22	82		2450	168.9
1995 mean	30.66	0.72	0.16	5.23	3	4	4	2725	168.9
Site 4:									
1994	64.59	2.17	0.26	9.74	74	474		1400	
"	57.15	1.79	0.22	9.49	-126	-805		2000	16.0
1994 mean	60.87	1.98	0.24	9.61	-26	-166	-166	1700	
1995	61.52	5.78	0.77	8.76	-168	-3114		4200	16.0
"	48.58	2.02	0.41	5.75	-23	-199		4300	512.0
1995 mean	55.05	3.90	0.59	7.25	-96	-1656	-1656	4250	264.0
Site 6:									
1994	67.10	1.69	0.18	10.95	84	389		190	
"	56.22	2.88	0.36	9.33	-21	-221		1000	13.9
1994 mean	61.66	2.29	0.27	10.14	32	84	84	595	
1995	71.85	3.31	0.42	9.19	-141	-1095		5400	21.1
"	74.38	4.71	0.60	9.16	-128	-1287		5800	13.9
1995 mean	73.12	4.01	0.51	9.18	-135	-1191	-1191	5600	17.5
Site 11:									
1994	53.80	2.19	0.47	5.44	76	641		1400	168.9
"	55.16	2.80	0.69	4.73	1	10		1600	
1994 mean	54.48	2.50	0.58	5.09	39	326	326	1500	
1995	55.56	4.23	0.61	8.09	194	3039		980	147.0
"	55.53	3.62	0.61	6.92	-141	-1892		2200	194.0
1995 mean	55.55	3.93	0.61	7.51	27	574	574	1590	170.5

	Water Content (% wet wt.)	Org. C (% dry wt.)	Nitrogen (% dry wt.)	C:N (mol eq.)	Eh (mV)	BEI	BEI Site Avg.	S= (µM)	Modal Grain Size (µm)
Site 13:									
1994	63.18	3.41	0.39	10.20	52	544		230	
"	62.74	3.66	0.40	10.68	100	1136		680	84.4
1994 mean	62.96	3.54	0.40	10.44	76	840	840	455	
1995	63.16	4.52	0.53	9.95	137	1901		2200	21.1
"	59.05	4.36	0.63	8.07	-37	-551		1600	10.6
1995 mean	61.11	4.44	0.58	9.01	50	675	675	1900	15.9
Site 18:									
1994	40.27	2.45	0.24	11.91	12	146		2500	
"	38.26	1.00	0.17	6.86	-33	-170		4200	27.9
1994 mean	39.27	1.73	0.21	9.39	-11	-12	-12	3350	
1995	58.23	3.77	0.50	8.80	-156	-2047		4500	36.8
"	53.33	2.26	0.44	5.99	-174	-1529		12000	36.8
1995 mean	55.78	3.02	0.47	7.39	-165	-1788	-1788	8250	36.8
Site 20:									
1994	40.93	0.89	0.10	10.38	54	237		370	147.0
"	34.96	0.61	0.06	11.86	42	139		420	
1994 mean	37.96	0.75	0.08	11.12	48	188	188	395	
1995	70.00	3.03	0.43	8.22	-171	-1267		3700	8.0
"	72.24	3.16	0.59	6.25	-151	-1104		5000	10.6
1995 mean	71.45	3.10	0.51	7.23	-161	-1185	-1185	4350	9.3
Site 21:									
1994	66.42	2.71	0.37	8.55	-147	-1048		1700	13.9
"	72.61	2.64	0.33	9.33	-69	-416		3000	
1994 mean	70.52	2.68	0.35	8.94	-108	-732	-732	2350	
1995	64.85	1.98	0.42	5.50	-84	-487		3900	12.1
"	65.34	2.92	0.52	6.55	-114	-961		4500	
1995 mean	65.10	2.45	0.47	6.03	-99	-724	-724	4200	
8 Revisited Sites:									
1994 mean	53.00	2.09	0.29	8.98	4	46		1568	80.1
S.D.	12.75	0.90	0.15	2.10	71	532		1076	67.0
1995 mean	58.48	3.19	0.49	7.35	-72	-662		4108	91.9
S.D.	12.70	1.36	0.16	1.55	108	1433		2443	130.7

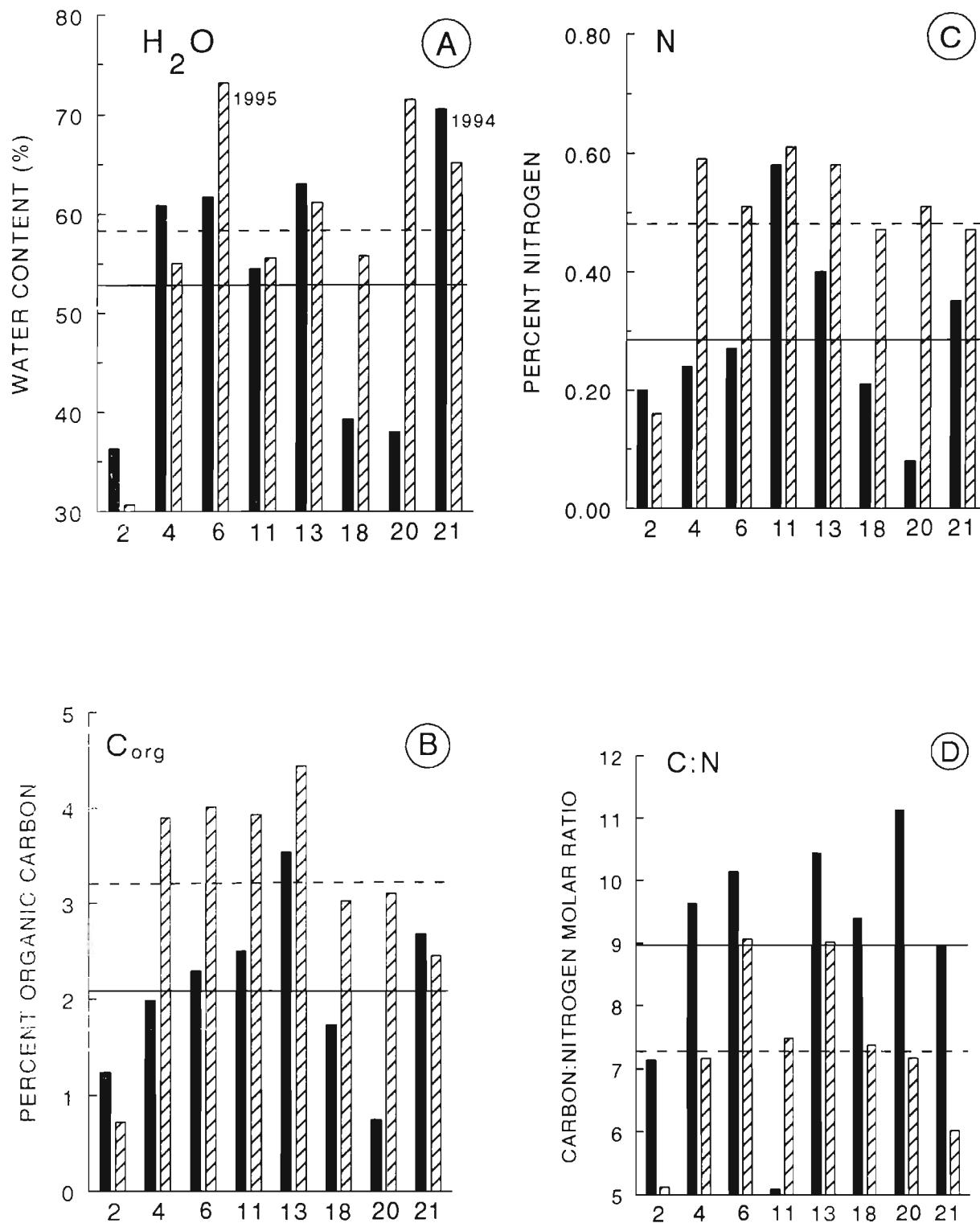
Table 4. Mean, maximum, mininum, σ , and SE (n=16) values for variables in surface (0-2 cm) sediment layers at stations visited in both 1994 and 1995 (Table 3).

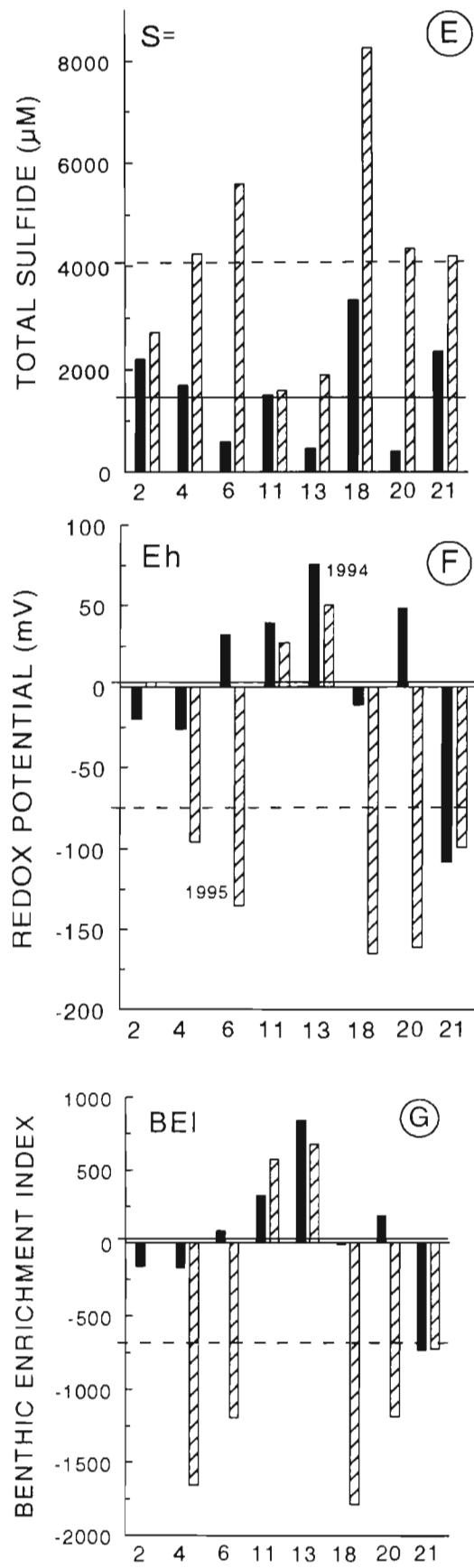
Variable	Mean	Maximum	Mininum	σ	S.E.
Water Content (%):					
1994	53.00	72.61	34.29	12.75	3.2
1995	58.48	74.38	29.96	12.70	3.2
Modal Grain Size (μm):					
1994	80.1	168.9	13.9	67.0	16.8
1995	91.9	512.0	8.0	130.7	32.7
Organic Carbon (%):					
1994	2.09	3.66	0.61	0.90	0.23
1995	3.19	5.78	0.64	1.36	0.34
Nitrogen (%):					
1994	0.29	0.69	0.06	0.15	0.04
1995	0.49	0.77	0.15	0.16	0.04
Redox Potential, Eh (mV):					
1994	4	100	-147	71	18
1995	-72	194	-174	108	27
Benthic Enrichment Index (mol C_{org} m⁻² x Eh[mV]):					
1994	46	1136	-1048	532	133
1995	-662	3039	-3114	1433	358
Total S⁼ (μM):					
1994	1568	4200	190	1076	269
1995	4108	12000	980	2443	611

Table 5. Ranked probability values (p) from one-way ANOVA comparisons of variables measured at the same cage sites in 1994 and 1995 (Table 3).

Variable	n	p
Total Sulfide	32	0.010
Nitrogen	32	0.019
Organic Carbon	32	0.052
Redox Potential (Eh)	32	0.058
Benthic Enrichment Index	32	0.082
Percent Water	32	0.424
Grain Size	23	0.878

Figure 2, A-G. Mean values for each variable for surface (0-2 cm) sediment layers from sites sampled in both 1994 and 1995. Site numbers are shown on the x-axis. The solid horizontal line is the mean of all 1994 values and the broken line is the mean of all 1995 values.





APPENDIX. SEDIMENT GEOCHEMICAL PROFILES

DATE: July 12, 1995

SITE: 2-95

CORE # 7

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	31.36	168.9	-16	3000	0.80	0.17
2-4	30.79		-101	4000	0.70	0.15
4-6	21.13		-136	3200	0.55	0.10
6-8	23.23		-166	1800	0.41	0.10
8-10	24.14		-135	1200	0.31	0.10

DATE: July 12, 1995

SITE: 2-95

CORE # 8

Dcpth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	29.96	168.9	22	2450	0.64	0.15
2-4	28.11		-126	2900	0.54	0.12
4-6	23.00		-182	3900	0.71	0.14
6-8	25.01		-186	3600	0.56	0.12

DATE: June 9, 1995

SITE: 3-95

CORE # 5

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	62.29	97.01	-21	3600	2.62	0.26
2-4	60.18		-30	4100	2.79	0.24
4-6	59.26		-76	6000	3.01	0.25
6-8	54.11		-106	6800	2.82	0.30
8-10	49.03		-118	5200	3.22	0.30

DATE: June 9, 1995

SITE: 3-95

CORE # 6

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	57.15	111.4	74	1000	3.23	0.31
2-4	52.10		23	3900	4.17	0.33
4-6	50.14		35	4600	3.89	0.42

DATE: July 17, 1995

SITE: 4-95

CORE # 1

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	61.52	16.0	-168	4200	5.78	0.77
2-4	48.21		-168	4400	1.90	0.39
4-6	40.03		-193	4900	1.87	0.31
6-8	35.18		-208	5100	1.37	0.29
8-10	32.9		-206	4400	1.09	0.27
10-12	30.58		-226	5600	1.24	0.28
12-14	31.32		-204	3700	0.87	0.17
14-16	24.52		-236	2000	0.58	0.15
16-18	28.34		-214	1100	0.94	0.21
18-20	27.93		-224	740	0.62	0.15
20-22	29.13		-175	760	0.82	0.19
22-24	34.85		-156	760	0.85	0.23
24-26	27.10		-164	760	0.96	0.19
26-28	30.54		-173	560	1.06	0.25

DATE: July 17, 1995

SITE: 4-95

CORE # 2

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	48.58	512.0	-23	4300	2.02	0.41
2-4	39.44		-75	4300	1.31	0.26
4-6	40.32		-103	3100	1.06	0.23
6-8	39.94		-129	3400	1.36	0.24
8-10	39.47		-134	1600	1.14	0.22
10-12	29.14		-153	1500	1.05	0.22
12-14	31.55		-161	1200	0.89	0.20
14-16	27.48		-194	1200	0.78	0.20
16-18	30.95		-185	1100	0.69	0.22
18-20	29.61		-160	1600	0.88	0.22

DATE: June 22, 1995

SITE: 5-95

CORE # 2

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	42.63	388.0	92	5600	3.04	0.18
2-4	29.73		-45	4800	1.90	0.09
4-6	30.93		22	3900	0.70	0.19
6-8	24.25		-183	2300	0.57	0.16
8-10	24.27		-44	1600	0.41	0.14
10-12	21.02		174	1000	1.09	0.06
12-14	20.66		81	640	0.96	0.05
14-16	21.22		36	870	1.23	0.06
16-18	23.64		13	890	0.92	0.06
18-20	22.13		44	810	0.80	0.04
20-22	25.16		10	400	0.89	0.05
22-24	27.33		96	500	3.55	0.48

DATE: June 22, 1995

SITE: 5-95

CORE # 12

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	28.12	337.8	192	2500	1.40	0.15
2-4	25.65		76	4500	1.42	0.13
4-6	27.34		-107	5400	1.36	0.11
6-8	26.11		-79	4400	1.28	0.10
8-10	24.77		-63	2350	1.05	0.06
10-12	27.05		-74	1700	1.26	0.10
12-14	22.88		-38	2100	1.05	0.06

DATE: June 16, 1995

SITE: 6-95

CORE # 3

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	71.85	21.1	-141	5400	3.31	0.42
2-4	69.14		-149	7500	3.52	0.45
4-6	63.25		-152	7600	2.26	0.28
6-8	60.30		-162	5000	2.47	0.33
8-10	56.35		-156	4500	2.31	0.35
10-12	57.46		-157	4300	2.25	0.30
12-14	57.80		-161	3600	2.51	0.34
14-16	58.74		-161	3400	2.15	0.31
16-18	57.37		-159	3000	3.35	0.39
18-20	55.86		-202	3000	1.84	0.28
20-22	53.30		-214	2700	2.17	0.28
22-24	53.14		-194	2600	1.68	0.24
24-26	51.62		-188	2400	1.69	0.23
26-28	53.91		-188	2200	1.75	0.26
28-30	55.60		-190	2200	1.98	0.23
30-32	53.38		-188	1700	1.61	0.13
32-34	52.40		-185	980	1.58	0.11

DATE: June 16, 1995

SITE: 6-95

CORE # 4

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	74.38	13.9	-128	5800	4.71	0.60
2-4	71.26		-125	5900	3.21	0.36
4-6	60.14		-134	5200	2.30	0.25
6-8	55.93		-147	4800	2.08	0.22
8-10	56.89		-162	3800	1.93	0.20
10-12	57.01		-160	3600	2.09	0.21
12-14	53.08		-159	3600	1.91	0.19
14-16	52.21		-166	3000	1.75	0.16
16-18	53.07		-150	1900	1.68	0.16
18-20	54.35		-156	1600	1.67	0.16
20-22	54.01		-154	1500	1.65	0.15
22-24	54.71		-176	2300	1.90	0.17

DATE: June 5, 1995

SITE: 7-95

CORE # 3

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	84.61	10.6	-170	5100	10.37*	1.51
2-4	70.75		-205	9800	1.61	0.39
4-6	66.05		-199	3000	2.54	0.46
6-8	60.42		-208	1100	1.98	0.30
8-10	59.45		-225	1000	2.31	0.37
10-12	55.16		-216	1500	1.00	0.21
12-14	56.32		-213	1600	2.11	0.28
14-16	55.69		-214	830	1.71	0.21
16-18	51.47		-219	740	1.61	0.19
18-20	51.59		-205	900	1.49	0.18
20-22	51.20		-214	740	1.39	0.16
22-24	46.63		-197	2200	1.39	0.15
24-26	52.36		-208	860	2.06	0.20
26-28	58.63		-217	850	1.35	0.16
28-30	51.73		-216	710	1.35	0.16
30-32	54.05		-204	210	1.36	0.16
32-34	52.39		-196	340	1.44	0.15
34-36	53.32		-193	360	1.38	0.16

*pellet layer

DATE: June 5, 1995

SITE: 7-95

CORE # 4

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	82.19	12.1	-144	12000	7.02*	0.86
2-4	68.59		-132	14000	3.65	0.48
4-6	63.96		-170	12000	1.85	0.23
6-8	58.09		-184	11000	1.74	0.22
8-10	56.26		-186	9100	1.64	0.20
10-12	55.25		-193	7500	1.68	0.21
12-14	51.70		-194	7100	1.62	0.19
14-16	51.18		-215	5500	1.58	0.19
16-18	49.57		-196	3200	1.54	0.18
18-20	48.42		-189	2700	1.58	0.19
20-22	48.79		-184	2300	1.44	0.17
22-24	51.09		-179	1700	1.41	0.17
24-26	50.86		-164	1400	1.34	0.17
26-28	51.41		-144	1200	1.39	0.17
28-30	51.74		-141	810	1.33	0.23
30-32	50.58		-144	450	1.21	0.23
32-34	51.41		-143	380	0.91	0.17

*pellet layer

DATE: July 7, 1995

SITE: 8-95

CORE # 1

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	25.73	194.01	-138	5800	0.46	0.13
2-4	23.80		-179	6700	0.42	0.10
4-6	22.78		-214	6300	0.13	0.05
6-8	25.57		-123	4500	0.11	0.04
8-10	23.68		-164	3500	0.11	0.04

DATE: July 7, 1995

SITE: 8-95

CORE # 2

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	81.25	194.01	-185	6100	20.85*	2.69
2-4	42.19		-164	9500	1.67	0.37
4-6	39.18		-201	9200	1.32	0.40
6-8	25.79		-199	8600	0.73	0.15
8-10	25.52		-198	9500	0.44	0.12
10-12	22.31		-151	9400	0.11	0.03
12-14	20.97		-177	12000	0.11	0.04

*pellet layer

DATE: June 19, 1995

SITE: 9-95

CORE # 9

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	72.71	10.56	-146	5100	5.53	0.66
2-4	70.62		-150	6800	4.01	0.47
4-6	64.47		-150	5350	2.60	0.25
6-8	60.65		-145	3500	2.18	0.22
8-10	46.51		-136	2200	1.88	0.14
10-12	46.06		-144	1900	1.61	0.13
12-14	41.38		-144	1800	1.47	0.12
14-16	35.99		-140	1600	1.13	0.08
16-18	37.62		-144	1500	1.35	0.22

DATE: June 19, 1995

SITE: 9-95

CORE # 10

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	64.47	18.38	-106	3300	3.42	0.44
2-4	60.68		-87	2600	2.64	0.30
4-6	58.42		-94	1700	2.11	0.23
6-8	53.44		-66	2300	2.07	0.20
8-10	52.35		-77	2200	2.02	0.21
10-12	54.45		-70	1800	5.56	0.86
12-14	39.51		-96	1600	1.35	0.10
14-16	31.12		-96	950	1.32	0.05
16-18	42.82		-86	450	1.55	0.15

DATE: June 16, 1995

SITE: 10-95

CORE # 1

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	70.12	16.0	-57	2800	2.69	0.35
2-4	66.54		-67	3200	2.48	0.33
4-6	63.52		-64	1300	2.70	0.35
6-8	62.09		-51	1000	2.46	0.31
8-10	61.87		-46	920	2.14	0.27
10-12	57.33		-46	900	2.05	0.25
12-14	55.48		-49	840	1.98	0.24
14-16	54.54		-52	930	1.94	0.23
16-18	53.18		-56	770	2.13	0.26
18-20	51.36		-57	580	1.85	0.22
20-22	50.86		-56	480	1.94	0.22
22-24	51.66		-72	540	1.81	0.23
24-26	50.19		-61	380	1.81	0.19
26-28	50.58		-62	290	1.68	0.19
28-30	52.15		-76	270	1.74	0.18

DATE: June 16, 1995

SITE: 10-95

CORE # 2

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	72.21	16.0	-64	1600	3.23	0.40
2-4	66.16		-49	3400	2.65	0.34
4-6	67.36		-69	2400	2.94	0.37
6-8	65.21		-68	2100	2.41	0.29
8-10	62.30		-83	1300	2.27	0.28
10-12	60.80		-86	1100	2.17	0.26
12-14	62.48		-85	1000	2.10	0.26
14-16	59.60		-89	1300	1.98	0.25
16-18	56.96		-98	1200	1.90	0.23
18-20	53.99		-100	1700	2.03	0.27
20-22	51.54		-99	1200	1.96	0.26
22-24	50.75		-106	1200	1.84	0.22
24-26	54.17		-107	910	1.89	0.22

DATE: June 22, 1995

SITE: 11-95

CORE # 1

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	55.56	147.0	194	980	4.23	0.61
2-4	49.08		203	4400	3.57	0.54
4-6	45.19		166	4700	3.9	0.63
6-8	34.10		24	4800	1.44	0.16
8-10	32.08		-53	4300	1.48	0.15
10-12	30.81		-47	2900	1.13	0.09
12-14	33.08		-83	2700	0.89	0.07

DATE: June 22, 1995

SITE: 11-95

CORE # 8

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	55.53	194.0	-141	2200	3.62	0.61
2-4	56.19		-151	2800	5.49	0.66
4-6	42.08		-160	4200	2.91	0.55
6-8	30.77		-87	4100	1.30	0.18
8-10	30.28		-79	3200	0.76	0.17

DATE: June 27, 1995

SITE: 12-95

CORE # 1

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	77.14	128.0	-184	6400	6.60	0.82
2-4	69.07		-200	9000	6.68	0.92
4-6	66.87		-213	12000	4.29	0.66
6-8	56.84		-206	10000	4.16	0.80

DATE: June 27, 1995

SITE: 12-95

CORE # 2

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	62.30	168.9	-89	3600	2.94	0.44
2-4	53.01		-154	4500	2.29	0.37
4-6	43.18		-74	3100	1.52	0.35
6-8	35.21		-176	2100	1.45	0.26
8-10	33.16		-204	1600	1.03	0.17

DATE: June 9, 1995

SITE: 13-95

CORE # 7

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	63.16	21.1	137	2200	4.52	0.53
2-4	59.20		143	3100	5.14	0.72
4-6	57.99		88	4250	4.85	0.62
6-8	57.69		80	6950	5.81	0.85
8-10	57.56		-83	6100	5.67	0.78
10-12	56.39		-118	5800	4.80	0.67
12-14	57.76		-136	7000	4.50	0.60
14-16	56.17		-144	7200	3.95	0.46
16-18	54.52		-164	8100	4.11	0.45
18-20	51.65		-174	7100	3.56	0.46
20-22	50.84		-174	7100	2.47	0.28
22-24	51.34		-178	6300	2.61	0.31
24-26	51.00		-178	6000	2.66	0.30
26-28	48.73		-180	5900	2.80	0.28

DATE: June 9, 1995

SITE: 13-95

CORE # 8

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	59.05	10.6	-37	1600	4.36	0.63
2-4	60.43		-40	1900	4.40	0.70
4-6	61.00		-111	4500	3.18	0.71
6-8	58.89		-138	4300	4.88	0.88
8-10	57.54		-173	5750	5.48	0.92
10-12	51.88		-194	5700	1.74	0.19
12-14	55.11		-207	6200	2.06	0.38
14-16	54.21		-211	6400	4.35	0.55
16-18	53.305		-221	6900	4.16	0.48
18-20	54.63		-225	7100	3.24	0.43
20-22	53.68		-251	6800	2.62	0.40
22-24	52.11		-229	6700	2.96	0.44
24-26	51.54		-220	7200	3.55	0.61
26-28	52.39		-223	5000	3.72	0.47
28-30	53.74		-233	5850	3.56	0.40

DATE: June 27, 1995

SITE: 14-95

CORE # 7

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	64.31	16.0	-161	2000	1.53	0.25
2-4	56.86		-171	2300	2.01	0.32
4-6	56.03		-186	2400	2.68	0.40
6-8	54.59		-200	2500	5.79	0.63
8-10	51.06		-194	2100	3.21	0.46
10-12	50.80		-200	2200	2.29	0.34
12-14	47.94		-203	2200	2.10	0.25
14-16	46.26		-213	1600	1.11	0.18
16-18	45.16		-183	1500	1.03	0.17
18-20	42.53		-214	1100	1.36	0.20
20-22	45.06		-190	730	1.03	0.18
22-24	47.73		-180	640	1.23	0.18
24-26	49.33		-144	630	1.03	0.19
26-28	43.60		-147	550	1.17	0.19
28-30	48.99		-148	610	1.16	0.18
30-32	49.73		-150	450	1.43	0.20
32-34	46.51		-163	430	1.14	0.17

DATE: June 27, 1995

SITE: 14-95

CORE # 8

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	62.13	13.9	-131	3000	2.75	0.40
2-4	52.57		-136	3000	1.11	0.29
4-6	51.09		-144	3400	3.38	0.55
6-8	50.95		-148	3100	2.46	0.36
8-10	50.84		-175	2400	2.76	0.37
10-12	52.01		-185	3400	1.75	0.28
12-14	51.23		-194	3600	2.04	0.31
14-16	46.44		-208	3300	2.71	0.41
16-18	48.34		-204	3700	1.54	0.23
18-20	48.22		-210	3300	1.38	0.22
20-22	44.81		-206	3300	1.34	0.22
22-24	47.49		-194	1300	1.30	0.23
24-26	47.77		-208	1400	1.18	0.19
26-28	47.41		-184	1200	1.33	0.22

DATE: June 19, 1995

SITE: 15-95

CORE # 5

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	58.88	84.5	-56	3100	2.75	0.33
2-4	55.71		-68	2500	2.37	0.30
4-6	54.13		-86	2100	2.46	0.26
6-8	52.27		-100	2100	2.29	0.28
8-10	49.95		-124	1700	2.08	0.25
10-12	49.61		-124	1400	2.18	0.25
12-14	48.12		-135	1200	1.98	0.22
14-16	47.71		-126	820	1.93	0.21
16-18	50.16		-107	590	1.95	0.21
18-20	50.60		-97	710	1.83	0.21
20-22	49.65		-94	780	1.69	0.20
22-24	49.68		-96	430	1.68	0.18
24-26	48.42		-94	390	1.75	0.20
26-28	49.38		-94	580	1.56	0.17
28-30	49.09		-89	510	1.47	0.16
30-32	49.43		-83	470	1.48	0.16
32-34	48.53		-105	390	1.48	0.19
34-36	48.79		-108	400	1.47	0.18

DATE: June 19, 1995

SITE: 15-95

CORE # 6

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	61.46	21.1	-6	1900	3.34	0.47
2-4	58.08		-35	2500	2.75	0.39
4-6	56.06		-90	2700	2.35	0.31
6-8	50.84		-114	2000	2.13	0.22
8-10	50.48		-109	1800	2.01	0.21
10-12	45.62		-126	900	1.86	0.20
12-14	48.32		-140	660	1.86	0.25
14-16	48.62		-109	600	1.71	0.22
16-18	52.02		-118	520	1.67	0.18
18-20	49.91		-117	600	1.66	0.20
20-22	50.18		-109	640	1.64	0.19
22-24	47.30		-118	760	1.63	0.19
24-26	48.58		-118	880	1.49	0.16
26-28	50.18		-134	850	1.42	0.16
28-30	48.38		-145	840	1.38	0.15
30-32	49.77		-148	830	1.37	0.14

DATE: July 24, 1995

SITE: 16-95

CORE # 9

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	41.06	222.9	-114	3200	1.13	0.22
2-4	39.39		-110	3300	1.39	0.27
4-6	35.77		-121	3200	1.40	0.28
6-8	34.33		-68	2500	0.81	0.17

DATE: July 24, 1995

SITE: 16-95

CORE # 10

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	32.61	222.9	-28	2700	1.66	0.28
2-4	28.74		-45	2300	0.92	0.19
4-6	21.53		-107	3400	0.56	0.11
6-8	27.43		-83	4100	0.64	0.17
8-10	24.33		-95	1500	0.59	0.16
10-12	24.58		-135	1100	0.72	0.18
12-14	21.88		-178	650	0.53	0.14
14-16	24.61		-169	320	0.43	0.17

DATE: July 7, 1995

SITE: 17-95

CORE # 3

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	47.16	97.0	161	430	1.45	0.24
2-4	38.65		64	1000	1.08	0.23
4-6	35.89		-24	1400	0.47	0.11
6-8	31.44		-153	1800	0.44	0.11
8-10	36.26		-207	1200	0.71	0.23

DATE: July 7, 1995

SITE: 17-95

CORE # 4

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	47.33	97.0	95	400	1.01	0.19
2-4	40.36		68	640	1.14	0.23
4-6	36.08		-41	2400	0.83	0.16
6-8	39.73		-159	2100	1.37	0.33
8-10	34.75		-118	1900	0.77	0.14
10-12	32.36		-231	1000	0.53	0.15
12-14	31.38		-147	1300	0.68	0.14

DATE: July 17, 1995

SITE: 18-95

CORE # 5

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	58.23	36.8	-156	4500	3.77	0.50
2-4	20.08		-183	7200	2.77	0.53
4-6	43.29		-177	3700	2.28	0.41
6-8	50.65		-190	3400	2.01	0.39
8-10	50.51		-203	2400	2.36	0.40
10-12	48.59		-204	2800	2.92	0.36
12-14	39.00		-234	2700	1.24	0.20
14-16	32.29		-220	3500	1.59	0.20
16-18	33.10		-237	4500	0.69	0.14
18-20	29.91		-223	4200	0.63	0.14
20-22	31.23		-214	3900	1.19	0.14
22-24	34.42		-210	3300	0.68	0.12
24-26	34.80		-207	3000	0.78	0.13
26-28	33.72		-213	2600	0.48	0.13
28-30	33.73		-214	2400	0.68	0.13
30-32	34.91		-214	2100	0.75	0.13

DATE: July 17, 1995

SITE: 18-95

CORE # 6

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	53.33	36.8	-174	12000	2.26	0.44
2-4	48.91		-184	8400	2.17	0.54
4-6	48.72		-204	6200	1.60	0.51
6-8	56.19		-194	2500	2.87	0.69
8-10	50.23		-218	3100	2.12	0.49
10-12	40.61		-226	4100	2.44	0.54
12-14	33.75		-234	4000	1.13	0.20
14-16	30.06		-217	4400	0.90	0.16
16-18	31.44		-216	4900	0.88	0.15
18-20	32.23		-216	4800	0.71	0.15
20-22	32.78		-198	3000	1.22	0.16
22-24	31.52		-226	3500	0.93	0.14
24-26	31.79		-216	3300	0.63	0.12
26-28	33.71		-203	3100	0.93	0.15
28-30	33.02		-209	2900	0.65	0.12
30-32	34.44		-213	3000	0.80	0.13

DATE: June 5, 1995

SITE: 19-95

CORE # 1

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	---		-146	---		
2-4	49.32	128.0	-163	---	1.46	0.22
4-6	44.87		-180	---	1.55	0.23
6-8	40.50		-167	---	1.98	0.29
8-10	50.50		-173	---	2.09	0.26
10-12	47.24		-174	---	2.49	0.34
12-14	46.52		-149	---	1.73	0.24
14-16	40.89		-147	---	1.03	0.20
16-18	36.63		-154	---	0.85	0.15

* mussel layer

DATE: June 5, 1995

SITE: 19-95

CORE # 2

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	---		-16	---		
2-4	56.91	111.4	-74	---	2.27	0.21
4-6	59.24		-107	3100	3.22	0.30
6-8	48.91		-111	2700	2.74	0.24
8-10	48.05		-144	1100	1.91	0.17
10-12	46.7		-150	970	1.99	0.19

* mussel layer

DATE: July 12, 1995

SITE: 20-95

CORE # 5

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	70.66	8.0	-171	3700	3.03	0.43
2-4	66.31		-169	3950	2.82	0.51
4-6	56.61		-192	4000	3.18	0.61
6-8	42.30		-188	4100	2.68	0.39
8-10	41.82		-200	4300	1.90	0.28

DATE: July 12, 1995

SITE: 20-95

CORE # 6

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	72.24	128.0	-151	5000	3.16	0.59
2-4	70.23		-152	4600	4.85	0.81
4-6	64.72		-170	5000	5.34	0.82
6-8	54.43		-190	6200	3.39	0.57
8-10	40.82		-207	6900	1.77	0.31
10-12	41.69		-207	6400	4.34	0.50
12-14	44.64		-196	4900	1.13	0.23

DATE: July 24, 1995

SITE: 21-95

CORE # 3

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	64.85	12.1	-84	3900	1.98	0.42
2-4	60.60		-124	4300	3.31	0.67
4-6	57.74		-154	3400	2.71	0.40
6-8	50.65		-166	3800	2.29	0.36
8-10	43.03		-185	3350	1.57	0.27
10-12	37.25		-170	3300	1.72	0.24
12-14	52.29		-187	2400	4.50	0.43
14-16	47.00		-176	1900	1.52	0.19
16-18	32.26		-165	1300	1.17	0.16
18-20	35.72		-155	820	0.81	0.14

DATE: July 24, 1995

SITE: 21-95

CORE # 4

Depth (cm)	Water (%)	Modal Size (μm)	Eh (mv)	Total S (μM)	Org C (%)	N (%)
0-2	65.34	13.9	-114	4500	2.92	0.52
2-4	58.16		-134	4600	2.23	0.41
4-6	55.12		-143	4700	3.62	0.49
6-8	41.91		-150	4300	1.56	0.20
8-10	39.75		-161	4400	1.77	0.22
10-12	40.31		-148	4650	0.85	0.15
12-14	37.09		-193	3000	1.12	0.19
14-16	34.60		-96	2200	1.36	0.20
16-18	31.55		-115	1100	1.13	0.18