

Table S1. Location and physicochemical data for each of the sediment samples collected from Grand Isle, Louisiana, and Dauphin Island, Alabama, 2010-2011. Grand Isle samples are shaded in gray. N.M. = not measured.

Sample Code	Latitude	Longitude	Sampling Date	Sediment pH	Average Water Content (%) (± S.D.)	Average Organic Carbon Content (%) (± S.D.)
HOR-10-03A	30° 14' 40.1"	88° 07' 27.5"	05-02-10	8.22	2.86 (0.03)	2.82 (0.01)
HOR-10-03B						
HOR-10-03C						
HOR-10-06A	30° 14' 40.1"	88° 07' 29.0"	05-02-10	6.08	12.63 (0.04)	0.39 (0.01)
HOR-10-06B					18.68 (0.08)	0.18 (0.004)
HOR-10-07B	30° 14' 39.9"	88° 07' 29.5"	05-02-10	6.26	6.64	0.11
HOR-10-18A	29° 16' 05.8"	89° 57' 08.6"	05-22-10	8.36	2.56 (0.77)	0.16 (0.02)
HOR-10-18B				8.62	4.50 (0.25)	0.34 (0.005)
HOR-10-20A	29° 16' 06.2"	89° 57' 07.8"	05-22-10	7.33	17.26 (0.37)	0.32 (0.003)
HOR-10-20B				7.57	21.88 (0.46)	0.93 (0.005)
HOR-10-21B	29° 16' 06.1"	89° 57' 07.8"	05-22-10	7.60	18.79 (0.39)	0.07 (0.05)
HOR-10-23A	30° 14' 39.6"	88° 07' 27.1"	06-01-10	6.7	2.19 (0.31)	0.07 (0.002)
HOR-10-23B				8.38	4.89 (0.79)	0.04 (0.005)
HOR-10-23C				7.91	4.72 (0.52)	0.04 (0.01)
HOR-10-24A	30° 14' 39.5"	88° 07' 27.5"	06-01-10	8.55	0.07 (0.04)	0.21 (0.25)
HOR-10-24B				6.37	4.95 (0.68)	0.03 (0.01)
HOR-10-24C				7.03	3.29 (0.56)	0.04 (0.05)
HOR-10-25A	30° 14' 39.4"	88° 07' 28.1"	06-01-10	7.63	0.03 (0.00)	0.02 (0.01)
HOR-10-25B				7.59	4.45 (0.17)	0.01 (0.01)
HOR-10-25C				8.24	7.25 (0.15)	0.02 (0.003)
HOR-10-26A	30° 14' 39.2"	88° 07' 28.6"	06-01-10	9.04	0.02 (0.00)	0.03 (0.02)
HOR-10-26B				7.70	2.80 (0.50)	0.02 (0.004)
HOR-10-26C				7.41	4.35 (0.34)	0.02 (0.007)
HOR-10-27A	30° 14' 39.1"	88° 07' 29.1"	06-01-10	7.86	0.12 (0.08)	0.04 (0.01)
HOR-10-27B				8.27	4.51 (0.64)	0.04 (0.001)
HOR-10-27C				8.71	4.23 (0.36)	0.04 (0.01)
HOR-10-28A	30° 14' 39.1"	88° 07' 29.3"	06-01-10	8.08	9.18 (0.12)	0.11 (0.01)
HOR-10-28B				8.40	12.94 (0.61)	0.10 (0.01)
HOR-10-28C				7.90	15.56 (0.22)	0.11 (0.005)
HOR-10-28oil	30° 14' 39.1"	88° 07' 29.3"	06-01-10	N.M.	14.61 (0.45)	1.66 (0.87)

Sample Code	Latitude	Longitude	Sampling Date	Sediment pH	Average Water Content (%) (\pm S.D.)	Average Organic Carbon Content (%) (\pm S.D.)
HOR-10-30A	30° 14' 39.2"	88° 07' 27.25"	08-14-10	7.37	0.99 (0.51)	0.03 (0.01)
HOR-10-30B				7.65	4.12 (0.41)	0.03 (0.01)
HOR-10-30C				7.43	6.52 (0.06)	0.02 (0.004)
HOR-10-33A	30° 14' 38.56"	88° 07' 29.39"	08-14-10	6.69	4.88 (0.1)	0.51 (0.01)
HOR-10-33B				7.85	2.52 (0.18)	0.18 (0.001)
HOR-10-33C				7.23	3.30 (0.11)	0.32 (0.06)
HOR-10-34A	30° 14' 38.46"	88° 07' 29.6"	08-14-10	6.99	0.35 (0.08)	0.18 (0.06)
HOR-10-34B				6.57	14.73 (0.19)	0.31 (0.41)
HOR-10-34C				6.89	3.20 (0.09)	0.05 (0.02)
HOR-10-39A	29° 16' 08.5"	89° 57' 12.4"	08-15-10	7.90	13.00 (0.25)	0.25 (0.03)
HOR-10-39B				8.30	13.00 (0.17)	0.17 (0.01)
HOR-10-42A	29° 16' 09.8"	89° 57' 12.3"	08-15-10	8.18	14.29 (0.09)	0.20 (0.04)
HOR-10-42B				7.89	16.58 (1.13)	0.82 (0.49)
HOR-10-43A	29° 16' 10.4"	89° 57' 11.2"	08-15-10	7.89	16.94 (0.08)	0.28 (0.13)
HOR-10-53A	30° 14' 40.4"	88° 07' 27.1"	12-10-10	7.49	0.05 (0.03)	0.02 (0.001)
HOR-10-53B				7.43	0.83 (0.11)	0.01 (0.002)
HOR-10-53C				7.10	2.21	0.05
HOR-10-54A	30° 14' 40.1"	88° 07' 27.9"	12-10-10	7.62	0.04 (0.02)	0.04 (0.004)
HOR-10-54B				7.35	2.05 (0.56)	0.06 (0.05)
HOR-10-54C				7.21	2.33 (0.39)	0.04 (0.02)
HOR-10-48A	30° 14' 39.9"	88° 07' 30.9"	12-10-10	9.03	2.62 (0.44)	0.57 (0.02)
HOR-10-48B				8.07	2.91 (0.06)	1.27 (0.009)
HOR-10-48C				8.22	5.81 (0.1)	1.34 (0.07)
HOR-10-49A	30° 14' 39.1"	88° 07' 32.6"	12-10-10	7.04	0.04 (0.003)	0.04 (0.006)
HOR-10-49B				7.92	4.09 (0.1)	0.1 (0.005)
HOR-10-49C				7.31	6.97 (0.07)	0.93 (0.009)
HOR-10-50A	30° 14' 38.5"	88° 07' 33.6"	12-10-10	7.37	0.04 (0.05)	0.02 (0.002)
HOR-10-50B				6.80	3.74 (0.04)	0.23 (0.01)
HOR-10-50C				7.33	6.06	0.04
HOR-10-51A	30° 14' 38.4"	88° 07' 33.9"	12-10-10	7.76	17.56 (0.37)	0.11 (0.002)
HOR-10-51B				7.57	15.55	0.07
HOR-10-52A	30° 14' 38.2"	88° 07' 34.0"		7.38	17.48 (0.24)	0.13 (0.005)
HOR-11-73A	29° 16' 09.3"	89° 57' 13.4"	05-14-11	7.17	0.04 (0.01)	0.34 (0.02)
HOR-11-73B				7.50	0.21 (0.003)	0.36 (0.009)
HOR-11-73C				7.49	0.21 (0.01)	0.33 (0.02)

Table S1

Sample Code	Latitude	Longitude	Sampling Date	Sediment pH	Average Water Content (%) (\pm S.D.)	Average Organic Carbon Content (%) (\pm S.D.)
HOR-11-74A	29° 16' 09.4"	89° 57' 13.7"	05-14-11	7.32	0.07 (0.008)	0.48 (0.04)
HOR-11-74B				7.99	1.19 (0.72)	0.24 (0.02)
HOR-11-74C				7.95	1.82 (0.77)	0.24 (0.002)
HOR-11-75A	29° 16' 09.6"	89° 57' 13.6"	05-14-11	8.85	5.98 (0.08)	0.52 (0.04)
HOR-11-75B				8.18	15.37 (0.18)	0.35 (0.03)
HOR-11-75C				8.11	15.50 (1.02)	0.32 (0.03)
HOR-11-76A	29° 16' 09.9"	89° 57' 13.0"	05-14-11	7.50	9.85 (0.52)	0.79 (0.02)
HOR-11-76B				7.71	13.92 (0.59)	0.26 (0.10)
HOR-11-76C				7.44	13.65 (0.42)	0.59 (0.65)
HOR-11-77A	29° 16' 10.0"	89° 57' 11.1"	05-14-11	7.48	11.82 (0.15)	1.51 (0.19)
HOR-11-77B				7.59	16.07 (0.85)	0.61 (0.03)
HOR-11-77C				7.68	14.98 (0.29)	0.57 (0.03)
HOR-11-78A	29° 16' 10.3"	89° 57' 10.7"	05-14-11	7.33	6.08 (0.04)	1.14 (0.08)
HOR-11-78B				7.63	13.79 (0.49)	0.30 (0.006)
HOR-11-78C				7.81	15.10 (0.19)	0.39 (0.07)
HOR-11-79A	29° 16' 10.3"	89° 57' 10.1"	05-14-11	7.20	10.98 (0.15)	0.24 (0.02)
HOR-11-79B				7.12	16.40 (0.20)	0.23 (0.005)
HOR-11-79C				7.07	22.61 (8.10)	0.21 (0.008)
HOR-11-80A	29° 16' 10.4"	89° 57' 09.9"	05-14-11	7.43	34.81 (8.46)	0.30 (0.05)
HOR-11-80B				7.49	15.58 (0.53)	0.23 (0.02)
HOR-11-58A	30° 14' 35.5"	88° 07' 25.6"	05-13-11	6.84	0.04 (0.01)	0.02 (0.005)
HOR-11-58B				6.78	11.99 (1.16)	0.02 (0.008)
HOR-11-58C				7.02	0.07 (0.01)	0.02 (0.001)
HOR-11-59A	30° 14' 35.3"	88° 07' 26.1"	05-13-11	6.76	0.05 (0.007)	0.02 (0.005)
HOR-11-59B				6.28	2.34 (0.52)	0.01 (0.007)
HOR-11-59C				6.36	2.56 (2.16)	0.02 (0.007)
HOR-11-60A	30° 14' 34.9"	88° 07' 27.1"	05-13-11	6.95	0.06 (0.004)	0.05 (0.06)
HOR-11-60B				6.60	3.16 (0.63)	0.03 (0.004)
HOR-11-60C				6.37	4.17 (0.09)	0.03 (0.005)
HOR-11-62A	30° 14' 34.5"	88° 07' 27.7"	05-13-11	8.62	11.63 (0.17)	0.12 (0.03)
HOR-11-62B				7.96	15.08 (0.71)	0.13 (0.04)
HOR-11-62C				7.48	14.72 (0.41)	0.11 (0.04)
HOR-11-63A	30° 14' 34.1"	88° 07' 28.4"	05-13-11	8.58	11.06 (0.02)	0.08 (0.01)
HOR-11-63B				7.80	15.61 (0.22)	0.14 (0.01)
HOR-11-63C				7.43	17.59 (1.04)	0.15 (0.01)

Table S1

Sample Code	Latitude	Longitude	Sampling Date	Sediment pH	Average Water Content (%) (± S.D.)	Average Organic Carbon Content (%) (± S.D.)
HOR-11-64A	30° 14' 32.8"	88° 07' 30.5"	05-13-11	7.74	14.41 (0.35)	0.15 (0.01)
HOR-11-64B				7.62	16.20 (0.38)	0.18 (0.01)
HOR-11-64C				7.59	16.65 (0.38)	0.15 (0.007)
HOR-11-65A	30° 14' 32.7"	88° 07' 31.2"	05-13-11	7.71	5.03 (0.85)	0.04 (0.00)
HOR-11-65B				7.33	5.68 (0.13)	0.05 (0.002)
HOR-11-65C				7.60	8.69 (0.31)	0.07 (0.004)
HOR-11-67A	30° 14' 32.2"	88° 07' 32.3"	05-13-11	7.45	6.63 (0.32)	0.04 (0.003)
HOR-11-67B				7.26	11.10 (0.26)	0.05 (0.006)
HOR-11-67C				7.34	13.21 (0.56)	0.07 (0.003)
HOR-11-68A	30° 14' 32.1"	88° 07' 32.5"	05-13-11	7.34	20.75 (0.34)	0.09 (0.006)
HOR-11-68B				7.75	14.40 (0.51)	0.09 (0.01)
HOR-11-68T				7.41	6.33 (0.10)	6.77 (0.06)

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