

Table S2: Number of tags sequenced from orders within the Proteobacteria in each sample from the Great Sippewissett Marsh sediments. Samples designated ENV1-ENV6 are environmental replicates sampled within 100 cm² region of the sediments associated with the tall from of *Spartina alterniflora*. The HOM1 and HOM2 are subsampled from 12 pooled and homogenized sediment samples from the same 100 cm² area of the marsh. Data are normalized to the most abundant sample (ENV1: 24,675 sequences).

	ENV1	ENV2	ENV3	ENV4	ENV5	ENV6	HOM1	HOM2	Total
Caulobacterales	259	200	120	390	139	169	176	223	1676
Kiloniellales	4	0	0	2	1	0	4	9	20
Kordiimonadales	18	6	7	35	15	15	10	20	126
Parvularculales	86	45	47	90	42	53	66	80	509
Rhizobiales	661	762	557	798	501	527	519	534	4859
Rhodobacterales	1829	1783	1373	1399	1507	1455	1400	1300	12046
Rhodospirillales	1053	1389	849	1110	1092	983	940	1057	8473
Rickettsiales	94	53	47	105	60	67	62	69	557
Sneathiellales	175	243	63	386	157	160	113	166	1463
Sphingomonadales	190	131	81	312	133	118	137	95	1197
unidentified alpha	484	382	230	501	375	339	325	387	3023

Burkholderiales	47	22	50	18	31	29	33	23	253
Hydrogenophilales	64	93	107	46	65	85	71	114	645
Methylophilales	5	4	3	31	4	10	2	2	61
Neisseriales	1	0	0	1	1	1	3	1	8
Nitrosomonadales	119	131	197	43	96	150	80	133	949
Rhodocyclales	59	57	172	32	45	36	60	123	584
unidentified Beta	1	5	8	5	3	1	8	10	41
Bdellovibrionales	163	176	170	217	187	161	179	137	1390
Desulfarculales	11	21	13	17	18	12	28	17	137
Desulfobacterales	207	208	165	182	234	235	222	237	1690
Desulfovibrionales	56	62	34	35	76	50	53	45	411
Desulfurellales	5	4	6	2	8	2	2	9	38
Desulfuromonadales	92	90	67	81	93	91	100	54	668
Myxococcales	2046	3050	1176	1745	2577	2562	1878	1421	16455
SAR324	56	54	78	61	79	47	64	43	482
Syntrophobacterales	25	38	28	29	39	37	24	37	257
unidentified delta	1211	2382	1391	963	2038	1852	1386	1768	12991

Campylobacterales	9	13	11	9	18	18	10	6	94
Nautiliales	43	21	19	43	30	33	42	47	278
unidentified epsilon	7	2	1	6	2	3	4	4	29
Acidithiobacillales	85	64	56	33	52	49	57	70	466
Aeromonadales	1	21	4	2	4	2	1	2	37
Alteromonadales	401	145	382	474	339	204	393	573	2911
Cardiobacteriales	8	2	4	1	0	3	3	2	23
Chromatiales	211	160	280	204	244	196	230	280	1805
Enterobacteriales	52	11	29	45	34	28	53	67	319
Legionellales	96	26	89	89	47	29	68	46	490
Methylococcales	12	5	14	12	10	6	10	8	77
Oceanospirillales	365	173	222	278	178	175	209	256	1856
Pasteurellales	6	5	6	8	2	5	5	4	41
Pseudomonadales	141	40	202	103	141	101	115	144	987
Salinisphaerales	2	0	3	2	1	2	1	1	12
Thiotrichales	221	116	224	195	174	147	205	231	1513
Vibrionales	8	48	7	20	11	7	7	10	118

Xanthomonadales	2509	1652	2356	1632	2482	2065	2234	2992	17922
unidentified gamma	1525	935	1482	1011	1316	934	1347	1704	10254