

Library Reference 7.9

Statistical comparison of mean results between South and North deep stations from 1999 to 2010 combined.

Statistically significant results ($P < 0.05$) are shaded. NA = No data available.

Parameter	Units	Upper Mixed Layer				Lower Water Layer			
		N	South	North	P	N	South	North	P
Secchi Disc Depth	meters	46	2.08	2.23	0.021	0	NA	NA	--
pH	Std Units	47	7.86	7.90	0.666	47	7.53	7.54	0.326
Temperature	°C	47	14.0	14.0	0.387	47	8.98	8.95	0.695
Specific conductance	umHos/cm	28	1,837	1,883	P-1	28	1,948	1,967	0.216
Dissolved oxygen	mg/L	47	10.1	10.1	0.925	47	5.70	5.40	0.006
5-day BOD	mg/L	47	2.60	2.72	0.184	47	3.23	3.31	0.544
Total Alkalinity	mg/L	47	167	167	0.211	47	190	191	0.356
Total Organic Carbon	mg/L	47	3.96	4.02	0.020	47	3.67	3.75	0.526
TOC Filtered	mg/L	47	3.61	3.64	0.064	47	3.34	3.46	0.442
Total Inorganic Carbon	mg/L	47	43	43	0.180	47	50	51	0.506
Total Kjeldahl Nitrogen	mg/L	47	1.00	0.97	0.0402	47	1.54	1.52	0.375
TKN Filtered	mg/L	47	0.83	0.79	0.123	47	1.38	1.36	0.541
Organic Nitrogen	mg/L	47	0.55	0.52	0.648	47	0.40	0.39	0.259
Ammonia-N	mg/L	47	0.45	0.45	0.144	47	1.14	1.12	0.559
Nitrite-N	mg/L	47	0.075	0.072	0.263	47	0.071	0.072	0.961
Nitrate-N	mg/L	47	1.67	1.58	1.6E-01	47	1.27	1.19	0.057
Total Phosphorus	mg/L	28	0.04	0.04	0.171	28	0.12	0.11	0.144
Soluble Reactive Phosphorus	mg/L	47	0.03	0.03	0.754	47	0.13	0.13	0.676
Silica	mg/L	40	2.44	2.48	P-1	40	3.86	3.94	0.210
Silica (dissolved)	mg/L	7	2.76	2.67	P-1	7	3.63	3.77	0.577
Calcium	mg/L	47	131	134	0.281	47	135	137	0.045
Sodium	mg/L	47	227	228	0.196	47	236	237	0.529
Potassium	mg/L	47	4.55	4.50	0.009	47	4.36	4.34	0.517
Sulfate	mg/L	47	161	162	0.080	47	154	154	0.951
Chloride	mg/L	47	429	432	0.055	47	441	444	0.426
Total Solids	mg/L	47	1,242	1,253	0.072	47	1,272	1,277	0.390
Total Volatile Solids	mg/L	42	210	220	P-1	42	208	207	0.958
Total Suspended Solids	mg/L	47	3.39	3.10	0.597	47	2.79	2.67	0.459
Volatile Suspended Solids	mg/L	42	2.46	2.42	P-1	42	2.08	2.01	0.361
Total Dissolved Solids	mg/L	47	1,161	1,179	0.047	47	1,192	1,200	0.221
Turbidity	NTU	35	3.77	3.35	0.175	0	NA	NA	--
Arsenic	mg/L	47	0.002	0.002	P-1	47	0.002	0.002	0.140
Iron	mg/L	47	0.088	0.069	0.218	47	0.10	0.08	0.199
Copper	mg/L	47	0.0022	0.0021	0.009	47	0.0020	0.0019	0.103
Chromium	mg/L	47	0.0014	0.0014	0.001	47	0.0015	0.0014	0.149
Cadmium	mg/L	47	0.00072	0.00061	0.008	47	0.00070	0.00071	0.323
Mercury	ng/L	9	3.13	2.25	P-1	9	2.94	2.78	0.593
Methyl mercury	ng/L	9	0.12	0.08	P-1	9	0.45	0.54	0.275
Lead	mg/L	35	0.0026	0.0024	0.077	35	0.00	0.00	0.238
Magnesium	mg/L	47	23.81	24.08	0.943	47	23.64	23.96	0.080
Manganese	mg/L	47	0.029	0.045	0.679	47	0.21	0.22	0.743
Nickel	mg/L	47	0.0041	0.0045	0.292	47	0.0039	0.0039	0.709
Selenium	mg/L	47	0.0020	0.0020	P-1	47	0.0020	0.0020	P-1
Zinc	mg/L	47	0.0077	0.0064	P-1	47	0.0080	0.0066	0.262
Phaeophytin-a	meters	19	0.89	0.82	P-1	0	NA	NA	--
Chlorophyll-a; Log Transformed	mg/m3	47	9.18	9.59	0.508	0	NA	NA	--
Fecal Coliforms; Log Transformed	count/100	39	17.9	11.1	0.0182	0	NA	NA	--
E. coli; Log Transformed	count/100	47	23.3	14.5	0.001	0	NA	NA	--

Notes: UML = 0m, 3m and 6m; LWL = 12m, 15m, 18m

The averages are based on concentration data, and are not volume-averages. Phaeophytin-a and Chlorophyll-a were collected in the Photic Zone through 2007; in 2008 through 2010, only Tube Composite samples were collected. Averages were calculated using the laboratory reported limit of detection when an observation was reported at below that limit. NA = Not Analyzed.

P-1 indicates the Pearson correlation was 1, and the values between North and South were identical.