



Appendix B - Summary statistics for sample sites, Oct. 2003 – Sep. 2022

Fecal coliform (FC) and *E. coli* (EC) means are geometric means, but the standard deviations were left in arithmetic form.



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjehldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 3: Thomas Creek at Highway 99

n	454	477	478	482	438	475	481	481	50	120	120	120	119	119	120	119
Mean	6.92	6.54	56.5	10.7	14.4	153.7	0.1	53	38	0.574	0.77	0.08	0.036	0.558	0.12	8
SD	0.24	3.21	25.6	4.7	13.4	94.7	0.0	4238	367	0.529	0.50	0.06	0.029	0.523	0.13	14
Max	7.59	12.45	114.5	20.2	113.0	1799.0	0.2	92000	1700	2.220	3.68	0.44	0.180	2.220	0.92	90
Min	6.17	0.03	0.4	0.9	1.0	49.9	0.0	1	2	0.005	0.25	0.05	0.005	0.005	0.01	2

Site 4: Thomas Creek at F&S Grade Road

n	459	480	481	484	442	473	482	480	49	121	121	121	121	120	121	121
Mean	7.20	11.11	96.0	9.4	19.1	124.3	0.0	175	122	1.010	0.48	0.06	0.044	0.998	0.04	14
SD	0.32	1.29	6.9	3.8	28.3	50.4	0.0	1927	371	0.318	0.29	0.04	0.033	0.313	0.04	24
Max	8.20	15.17	128.4	16.6	291.0	222.1	0.1	23000	1600	2.110	2.22	0.35	0.160	2.100	0.25	147
Min	6.29	6.73	13.7	0.0	0.8	47.6	0.0	5	8	0.005	0.21	0.04	0.005	0.005	0.01	2

Site 6: Friday Creek at Prairie Road

n	459	478	480	485	443	482	485	484	49	121	121	121	121	120	121	121
Mean	7.27	11.24	99.8	10.5	5.9	79.0	0.0	34	19	0.505	0.37	0.05	0.023	0.500	0.03	9
SD	0.38	1.36	7.0	4.7	9.6	21.0	0.0	274	31	0.294	0.23	0.05	0.086	0.294	0.03	27
Max	8.72	15.35	119.8	20.1	118.0	140.8	0.1	3000	170	1.640	1.92	0.40	0.950	1.640	0.16	238
Min	6.26	0.24	2.5	0.1	0.3	41.7	0.0	1	2	0.017	0.14	0.01	0.005	0.017	0.01	2

Site 8: Swede Creek at Grip Road

n	460	482	483	486	444	473	487	485	50	121	121	121	121	120	121	121
Mean	7.15	10.73	92.8	9.6	13.3	68.9	0.0	58	33	0.442	0.45	0.06	0.025	0.422	0.04	11
SD	0.34	1.77	8.0	4.4	19.3	18.5	0.0	396	232	0.371	0.26	0.03	0.022	0.337	0.03	31
Max	10.43	15.14	112.0	18.2	224.0	161.4	0.1	5000	1600	2.170	1.94	0.26	0.140	1.580	0.17	282
Min	5.99	5.62	59.5	0.1	2.0	33.2	0.0	1	5	0.030	0.25	0.03	0.005	0.005	0.01	2

Site 11: Samish River at Highway 9

No.	464	485	486	488	446	480	489	488	50	120	121	121	120	120	121	120
Mean	7.01	8.71	74.7	8.9	3.3	72.4	0.0	15	13	0.303	0.29	0.06	0.014	0.302	0.03	7
SD	0.31	1.32	7.7	3.4	8.7	20.0	0.0	235	35	0.118	0.12	0.04	0.013	0.118	0.03	33
Max	8.11	12.56	96.2	17.2	155.0	129.4	0.1	5000	170	0.790	1.36	0.36	0.070	0.790	0.12	333
Min	6.00	4.70	45.1	0.8	0.0	22.0	0.0	1	1	0.070	0.12	0.02	0.005	0.070	0.01	2



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjeldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 18: Lake Creek at Highway 9

No.	461	483	484	489	452	488	489	487	52	121	121	121	121	120	121	121
Mean	7.43	11.04	96.8	10.0	3.0	90.5	0.0	42	22	0.458	0.36	0.05	0.021	0.449	0.03	5
SD	0.31	1.33	5.4	4.1	4.2	25.5	0.0	862	196	0.207	0.31	0.01	0.020	0.202	0.02	10
Max	8.34	14.34	128.6	21.9	47.8	173.8	0.1	16000	920	0.970	3.22	0.10	0.110	0.970	0.10	72
Min	6.40	7.43	74.7	0.9	0.0	0.0	0.0	1	1	0.050	0.14	0.02	0.005	0.050	0.01	2

Site 19: Hansen Creek at Hoehn Road

No.	434	454	455	457	419	445	457	455	42	115	115	116	115	115	115	115
Mean	7.08	10.29	88.3	9.2	13.6	81.6	0.0	77	52	0.419	0.41	0.08	0.025	0.414	0.04	38
SD	0.32	1.48	7.2	4.3	64.2	18.2	0.0	418	122	0.225	0.59	0.15	0.037	0.225	0.03	139
Max	8.64	14.34	110.0	19.0	848.0	228.9	0.1	5000	540	1.100	6.14	1.07	0.360	1.100	0.14	902
Min	5.26	4.71	48.0	0.1	0.2	39.3	0.0	1	7	0.030	0.18	0.04	0.005	0.030	0.01	2

Site 20: Hansen Creek at Northern State Hospital

No.	459	482	483	484	440	478	484	481	50	121	121	121	121	120	121	121
Mean	7.12	11.18	96.1	9.0	14.0	79.6	0.0	44	26	0.465	0.36	0.11	0.022	0.460	0.03	56
SD	0.31	1.20	4.7	3.6	71.1	21.6	0.0	226	99	0.251	0.31	0.26	0.030	0.251	0.03	225
Max	8.18	14.67	115.6	16.2	900.0	199.1	0.1	3000	540	1.300	2.20	1.90	0.270	1.300	0.15	1720
Min	6.08	7.34	66.5	0.5	0.0	39.7	0.0	1	2	0.050	0.08	0.02	0.005	0.050	0.01	2

Site 21: Coal Creek at Hoehn Road

No.	397	420	420	421	383	410	421	417	41	106	106	106	106	105	106	106
Mean	7.10	11.18	93.6	8.1	12.3	80.9	0.0	76	68	0.755	0.33	0.06	0.020	0.748	0.03	21
SD	0.30	1.48	5.9	4.1	59.4	23.4	0.2	626	457	0.309	0.18	0.07	0.030	0.310	0.04	67
Max	8.32	15.05	115.9	17.5	1005.0	229.5	3.9	5000	1600	2.090	1.30	0.49	0.230	2.090	0.26	438
Min	6.07	6.61	68.1	0.1	0.0	39.5	0.0	1	2	0.220	0.09	0.03	0.005	0.210	0.01	2

Site 22: Coal Creek at Highway 20

No.	463	480	481	484	446	474	483	483	50	119	120	120	119	119	120	119
Mean	7.21	11.78	99.5	8.3	10.2	80.6	0.0	12	8	0.624	0.31	0.07	0.014	0.629	0.02	21
SD	0.47	1.23	4.8	3.9	62.0	22.3	0.0	270	46	0.316	0.20	0.10	0.018	0.323	0.02	85
Max	8.55	15.60	137.0	15.7	1138.0	158.6	0.1	5000	240	2.230	1.50	0.79	0.120	2.230	0.15	650
Min	5.54	8.33	73.2	0.0	0.0	18.3	0.0	1	1	0.005	0.10	0.01	0.005	0.160	0.01	2



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjeldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 23: Wiseman Creek at Minkler Road																
No.	413	434	436	437	399	431	437	434	44	112	112	112	112	110	112	111
Mean	7.23	11.91	100.3	8.1	12.5	74.1	0.0	12	12	-0.815	0.32	0.08	0.017	0.919	0.02	26
SD	0.37	1.08	5.6	3.5	78.5	18.8	0.0	306	247	18.422	0.20	0.12	0.023	0.325	0.03	105
Max	8.52	15.77	157.7	16.2	1072.0	217.9	0.1	5000	1600	2.210	1.52	0.91	0.159	2.100	0.33	640
Min	6.06	7.52	61.7	0.7	0.0	15.0	0.0	1	1	-194.000	0.08	0.01	0.005	0.220	0.01	2

Site 24: Mannser Creek at Lyman-Hamilton Highway																
No.	464	482	483	485	444	479	486	480	49	121	121	121	121	120	121	121
Mean	6.94	6.83	58.5	8.7	2.0	107.6	0.1	15	15	0.228	0.34	0.05	0.032	0.227	0.02	4
SD	0.32	1.45	11.7	3.0	1.9	21.7	0.0	89	52	0.121	0.53	0.03	0.061	0.121	0.02	5
Max	8.12	12.40	104.2	15.3	25.7	407.6	0.2	920	350	0.560	6.00	0.33	0.590	0.560	0.08	36
Min	5.98	1.97	18.5	0.8	0.0	1.4	0.0	1	1	0.005	0.11	0.01	0.005	0.005	0.01	2

Site 25: Red Cabin Creek at Hamilton Cemetery Road																
No.	377	390	392	393	361	391	392	389	40	100	100	100	100	99	100	100
Mean	7.24	11.83	98.8	7.6	3.0	67.2	0.0	8	6	0.530	0.29	0.05	0.016	0.519	0.02	9
SD	0.44	0.80	4.7	2.4	20.5	21.3	0.0	162	46	0.204	0.15	0.04	0.016	0.187	0.02	43
Max	8.64	14.40	133.8	13.9	291.0	110.0	0.1	2400	240	1.400	1.18	0.44	0.090	1.050	0.16	410
Min	6.05	9.38	84.0	1.9	0.0	17.2	0.0	1	1	0.240	0.07	0.00	0.005	0.230	0.01	2

Site 29: Skagit River at River Bend																
No.	459	481	482	487	448	483	487	481	51	119	119	118	119	118	119	119
Mean	7.27	11.17	96.1	9.1	11.6	55.2	0.0	9	9	0.082	0.31	0.06	0.012	0.076	0.04	23
SD	0.53	1.09	5.1	3.7	35.8	12.1	0.0	124	127	0.049	0.24	0.05	0.015	0.047	0.24	56
Max	8.84	14.59	111.3	17.6	608.0	113.9	0.1	1600	540	0.200	2.10	0.40	0.100	0.190	2.65	383
Min	5.81	7.51	73.1	0.9	0.8	28.6	0.0	1	1	0.005	0.25	0.00	0.005	0.005	0.01	2

Site 30: Skagit River at Cape Horn Road																
No.	466	484	485	487	445	485	487	478	49	120	120	120	120	119	120	120
Mean	7.16	11.28	96.2	8.6	8.8	57.3	0.0	4	4	0.081	0.28	0.06	0.014	0.080	0.01	21
SD	0.40	1.07	4.7	3.4	21.4	12.7	0.0	31	13	0.067	0.12	0.06	0.020	0.068	0.01	57
Max	8.49	14.24	118.0	16.3	238.0	132.2	0.1	540	79	0.650	1.34	0.49	0.170	0.650	0.07	501
Min	5.94	7.64	72.5	0.0	0.0	27.7	0.0	1	1	0.005	0.25	0.01	0.005	0.005	0.01	2



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjeldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 32: Samish River at Thomas Road

No.	457	479	481	487	444	484	486	487	49	120	122	122	120	120	122	120
Mean	7.51	10.86	97.4	10.8	10.7	96.6	0.0	52	36	0.594	0.38	0.07	0.026	0.594	0.06	19
SD	0.45	1.17	9.3	4.7	17.8	25.5	0.1	839	63	0.210	0.24	0.07	0.025	0.202	0.08	39
Max	8.73	14.99	150.0	21.6	181.0	143.5	0.8	17000	350	1.690	1.60	0.47	0.160	1.650	0.68	229
Min	6.50	2.58	14.1	1.2	0.8	45.3	0.0	2	2	0.005	0.25	0.03	0.005	0.220	0.01	2

Site 33: Alice Bay Pump Station

No.	455	458	477	482	441	473	481	479	50	117	118	118	117	117	118	117
Mean	7.16	9.12	107.7	13.4	27.2	25348.7	15.7	48	22	0.730	2.91	0.54	0.285	0.684	1.18	44
SD	0.84	4.57	73.1	6.4	54.1	13838.7	9.1	359	63	1.165	1.81	0.51	0.340	1.170	0.83	34
Max	9.64	23.93	348.6	27.2	910.0	52822.0	30.1	5000	280	10.000	17.80	2.59	1.710	10.000	3.94	241
Min	5.66	0.41	4.0	0.4	2.7	204.5	0.1	1	2	0.005	0.74	0.05	0.005	0.005	0.01	2

Site 34: Noname Slough at Bayview-Edison Road

No.	452	475	475	479	442	469.0	477.0	474	52	118	118	118	118	117	118	118
Mean	7.00	6.84	62.70	11.9	15.57	16283.5	10.3	105	37	0.48	1.38	0.55	0.45	0.457	0.26	25
SD	0.55	3.74	33.56	6.3	15.70	18098.5	11.8	1256	115	0.71	0.70	0.81	0.95	0.691	0.29	31
Max	8.58	22.31	224.80	27.0	211.00	56800.0	38.0	16000	540	4.14	5.34	4.62	7.50	4.140	1.70	233
Min	5.67	0.00	0.00	0.1	0.93	30.8	0.0	1	2	0.01	0.25	0.05	0.01	0.005	0.01	2

Site 36: Edison Slough at Edison Elementary School

No.	455	473	480	484	440	471	482	484	50	119	120	120	120	118	119	120
Mean	7.29	9.09	97.9	13.8	9.6	13624.0	8.3	69	54	0.487	1.22	0.46	0.333	0.480	0.22	19
SD	0.73	3.56	57.7	7.8	6.4	15747.3	10.0	590	269	1.016	0.69	0.61	0.519	1.020	0.33	20
Max	9.58	26.00	359.2	32.4	49.3	44950.0	29.1	9200	1600	10.000	4.82	2.81	2.730	10.000	2.51	95
Min	5.94	2.32	21.3	0.1	0.6	49.0	0.0	1	5	0.005	0.59	0.05	0.005	0.005	0.01	2

Site 37: Edison Drainage in Edison

No.	453	460	477	481	441	476	479	482	50	120	120	120	120	119	120	120
Mean	7.31	6.97	80.3	13.5	42.8	11160.3	6.6	162	79	0.839	3.38	0.86	0.490	0.812	1.46	42
SD	0.68	4.18	67.7	6.7	113.2	11553.3	7.3	985	401	1.287	5.20	0.85	0.603	1.294	1.04	46
Max	9.35	25.00	387.3	27.5	1567.0	44758.0	28.9	16000	2200	9.630	58.30	4.26	3.220	9.630	6.71	250
Min	6.16	0.04	0.6	1.8	4.2	172.4	0.1	1	2	0.005	0.25	0.17	0.005	0.005	0.01	7



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjeldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 38: North Edison drainage at Smith Road

No.	450	450	466	477	436	471	476	477	49	119	118	119	119	118	119	119
Mean	7.22	6.89	82.2	12.9	39.3	17848.6	10.8	149	99	0.527	2.93	0.92	0.560	0.491	1.23	54
SD	0.85	4.73	79.0	5.8	126.7	13873.0	9.0	2066	876	0.978	1.03	0.83	0.685	0.983	0.75	71
Max	9.20	37.78	455.1	26.1	2300.0	45531.0	29.7	30000	5400	9.540	7.04	3.78	3.190	9.540	4.24	524
Min	5.60	0.00	0.0	1.7	1.8	111.9	0.0	1	5	0.005	1.00	0.05	0.005	0.005	0.02	5

Site 39: Colony Creek near Colony Road

No.	457	480	482	486	441	475	486	485	50	120	120	120	120	119	120	120
Mean	7.17	10.82	93.9	9.8	15.4	132.1	0.0	67	40	0.880	0.58	0.10	0.056	0.862	0.06	37
SD	0.31	1.80	8.0	4.4	36.2	84.8	0.1	1621	337	0.632	0.64	0.17	0.050	0.615	0.05	191
Max	7.97	15.52	116.4	20.5	377.0	397.9	0.2	16000	1600	3.020	4.96	1.70	0.210	3.010	0.34	1996
Min	6.19	6.11	58.3	0.0	0.3	44.5	0.0	1	2	0.100	0.20	0.01	0.005	0.190	0.01	2

Site 40: Big Indian Slough at Highway 20 truck scales

No.	453	476	476	479	442	478	478	475	52	116	117	117	116	117	117	116
Mean	6.76	4.94	43.5	10.9	23.1	432.1	0.2	63	41	0.732	0.99	0.12	0.086	0.692	0.36	10
SD	0.32	2.09	16.6	4.0	14.4	1946.2	1.3	7424	1309	0.511	0.38	0.07	0.076	0.487	0.22	9
Max	7.92	11.97	124.6	22.1	150.0	42784.0	27.8	160000	9200	2.250	2.10	0.37	0.490	2.220	0.84	54
Min	5.42	0.10	1.0	2.4	2.5	93.4	0.0	1	2	0.005	0.24	0.03	0.005	0.005	0.01	2

Site 41: Maddox Creek/Big Ditch at Milltown Road

No.	461	485	486	490	452	486	490	488	52	121	121	121	120	120	121	121
Mean	7.17	6.17	57.5	12.0	18.6	510.8	0.2	59	51	1.042	1.17	0.17	0.086	0.991	0.36	10
SD	0.36	2.14	21.4	5.1	27.8	474.7	0.3	568	275	1.062	0.72	0.12	0.074	1.021	0.36	14
Max	8.80	12.32	118.8	23.7	268.0	8358.0	4.7	9200	1600	3.460	2.79	0.62	0.340	3.460	1.49	91
Min	6.20	0.05	0.6	0.8	1.9	40.7	0.0	1	7	0.005	0.21	0.05	0.005	0.005	0.01	2

Site 42: Carpenter Creek/Hill Ditch at Cedardale Road

No.	459	484	485	488	450	485	488	482	51	121	121	121	121	119	121	121
Mean	7.29	8.16	73.1	11.4	3.9	187.5	0.1	54	56	0.580	0.56	0.07	0.045	0.567	0.07	3
SD	0.32	2.32	17.9	5.7	4.3	51.9	0.0	863	172	0.511	0.25	0.06	0.038	0.501	0.05	2
Max	8.74	14.37	159.1	23.1	47.2	364.7	0.4	16000	920	1.960	1.78	0.46	0.210	1.940	0.30	16
Min	6.30	2.05	19.1	0.1	0.0	4.5	0.0	1	5	0.005	0.25	0.01	0.005	0.005	0.01	1



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjeldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 43: Wiley Slough at Wylie Road

No.	452	475	476	479	443	477	479	473	50	117	117	132	117	116	117	117
Mean	7.14	4.86	45.3	12.1	22.2	2903.0	1.5	70	67	1.327	1.51	0.26	0.183	1.266	0.52	16
SD	0.43	2.80	27.1	5.1	49.8	2817.4	1.5	371	275	1.763	0.85	0.39	0.271	1.681	0.43	30
Max	8.98	14.16	147.0	21.9	612.0	21560.0	9.5	3500	1600	7.060	7.04	2.10	1.560	6.960	1.93	264
Min	6.08	0.12	1.4	0.8	1.3	26.3	0.0	1	2	0.005	0.25	0.01	0.005	0.005	0.01	2

Site 44: Sullivan Slough

No.	459	479	482	486	449	483	486	482	52	120	121	121	120	120	121	120
Mean	7.19	6.75	65.5	11.5	35.1	9400.0	5.6	81	51	0.675	1.44	0.27	0.132	0.630	0.66	27
SD	0.47	2.71	30.7	4.3	86.8	8825.2	5.6	348	111	1.044	0.75	0.48	0.322	0.993	0.58	36
Max	9.08	19.82	237.9	21.7	1345.0	40199.0	26.5	2400	540	7.210	4.50	5.00	3.500	7.160	3.10	280
Min	5.80	0.09	0.8	0.5	1.5	200.7	0.1	1	7	0.005	0.25	0.05	0.005	0.005	0.01	4

Site 45: North Fork Skagit River near Moore Road

No.	445	465	465	473	438	468	469	468	51	117	117	117	117	117	117	117
Mean	7.65	11.28	97.5	9.3	10.5	55.3	0.0	7	5	0.080	0.29	0.06	0.013	0.076	0.02	19
SD	0.44	1.18	4.9	3.9	32.0	10.6	0.0	27	14	0.049	0.16	0.06	0.018	0.047	0.02	47
Max	9.10	14.61	120.1	18.1	576.0	96.3	0.1	350	79	0.190	1.34	0.60	0.160	0.180	0.10	452
Min	5.93	7.35	76.0	1.4	0.6	3.0	0.0	1	1	0.005	0.07	0.01	0.005	0.005	0.01	2

Site 46: South Fork Skagit River at Conway boat ramp

No.	450	475	476	479	445	477	478	479	51	118	118	118	118	117	118	118
Mean	7.58	11.29	97.9	9.5	8.6	57.0	0.0	9	7	0.087	0.28	0.06	0.012	0.081	0.02	15
SD	0.39	1.09	4.1	3.9	11.4	33.9	0.3	43	12	0.064	0.17	0.03	0.011	0.048	0.02	28
Max	8.91	13.73	112.3	18.3	109.0	687.0	6.9	540	70	0.510	1.66	0.23	0.050	0.210	0.10	231
Min	6.38	8.40	83.9	1.4	0.9	2.6	0.0	1	1	0.005	0.25	0.01	0.005	0.005	0.01	2

Site 47: Swinomish Channel at County boat ramp

No.	462	485	486	490	451	490	490	484	51	121	121	121	121	120	121	121
Mean	7.23	8.72	88.9	10.7	5.4	33777.8	21.2	5	5	0.195	0.32	0.08	0.049	0.187	0.06	31
SD	0.66	1.07	9.4	3.3	6.0	6282.1	4.3	21	34	0.116	0.23	0.04	0.076	0.113	0.03	21
Max	8.11	11.41	115.4	18.5	80.2	45590.0	29.1	350	240	0.690	1.84	0.40	0.830	0.690	0.17	140
Min	5.29	5.48	7.3	3.3	0.6	11027.0	6.4	1	1	0.005	0.06	0.04	0.005	0.005	0.01	2



Metric	pH	DO	DO	Temp	Turb	Conductivity (°C compensated)	Salinity	Fecal Coliform	E. coli	Nitrite + Nitrate	Total Kjeldahl Nitrogen	Total Phosphorus	Ortho- Phosphate	Nitrate	Ammonia	TSS
	units	mg/L	% sat	°C	NTU	µs/cm	ppt	MPN/100mL	MPN/100 mL	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L

Site 48: Fisher Creek at Franklin Road																
No.	462	485	486	489	452	487	490	484	52	121	120	121	121	120	121	121
Mean	7.49	11.16	96.2	9.2	3.0	166.7	0.1	73	39	0.639	0.62	0.20	0.205	0.619	0.08	5
SD	0.32	1.31	5.2	3.4	4.4	112.3	0.1	795	370	0.504	0.28	0.18	0.188	0.496	0.04	11
Max	8.18	14.87	114.7	15.8	40.7	2215.0	1.1	16000	2000	2.250	1.38	0.81	0.630	2.250	0.17	98
Min	6.56	7.53	62.4	0.3	0.0	5.3	0.0	1	1	0.005	0.25	0.05	0.005	0.005	0.01	2

Site 49: Joe Leary Slough at Farm to Market Road																
No.	25	24	24	25	25	25	25	24	24	4	4	4	4	4	4	4
Mean	6.90	4.78	43.1	11.4	41.3	335.2	0.2	85	43	0.902	1.32	0.32	0.105	0.863	0.66	32
SD	0.27	1.25	10.3	2.9	20.9	51.5	0.0	268	114	0.642	0.37	0.20	0.044	0.646	0.15	26
Max	7.26	6.97	59.0	16.7	101.2	414.9	0.2	920	540	1.728	1.76	0.55	0.150	1.700	0.88	66
Min	6.45	2.37	22.5	6.8	6.1	214.3	0.1	5	2	0.199	0.86	0.07	0.050	0.160	0.55	7

Site 50: Joe Leary Slough at Tidegate																
No.	25	25	25	25	25	25	25	24	24	3	3	3	3	3	3	3
Mean	6.79	5.45	50.7	12.7	33.0	779.4	0.4	126	67	1.089	0.99	0.21	0.107	1.047	0.34	14
SD	0.32	1.88	17.5	4.3	14.3	1073.8	0.6	364	144	0.711	0.54	0.06	0.047	0.702	0.23	3
Max	7.20	9.33	88.0	20.4	54.9	5067.0	2.7	1600	540	1.823	1.41	0.26	0.160	1.780	0.48	18
Min	6.05	0.26	2.9	6.4	4.9	8.0	0.0	13	8	0.404	0.38	0.15	0.070	0.380	0.07	12

Site 51: Carpenter Creek at East Stackpole Road																
No.	26	26	26	26	26	26	26	26	4	4	4	4	4	4	4	4
Mean	7.20	9.46	81.6	10.2	4.3	277.4	0.1	127	58	0.736	0.43	0.04	0.048	0.501	0.02	4
SD	0.42	3.27	24.4	4.0	2.3	113.4	0.1	308	312	0.803	0.29	0.02	0.017	0.393	0.01	2
Max	7.82	13.21	103.3	17.0	13.2	511.0	0.4	1600	1600	1.870	0.86	0.07	0.070	0.930	0.02	7
Min	6.68	2.34	30.1	3.9	1.2	51.0	0.1	22	9	0.005	0.25	0.03	0.030	0.005	0.01	2

Site 52: Little Indian Slough at Farm to Market Road																
No.	23	22	22	23	23	23	23	23	23	4	4	4	4	4	4	4
Mean	6.86	5.15	44.0	9.8	94.4	551.9	0.3	419	144	0.366	2.30	0.39	0.123	0.205	0.41	26
SD	0.33	2.58	21.4	4.0	327.2	150.9	0.1	1124	417	0.319	0.98	0.32	0.079	0.149	0.21	10
Max	7.46	9.33	79.1	16.8	1594.0	891.0	0.4	3500	1300	0.790	3.47	0.77	0.220	0.380	0.63	40
Min	6.41	0.25	2.3	2.7	11.8	291.8	0.1	20	8	0.042	1.48	0.10	0.030	0.018	0.14	19



Appendix C - Summary of Seasonal Kendall's results for the Water Year 2022

Color Code Key

Slope
Slope between 0.0000 – 0.0001

Significant Trends (Only highlighted if confidence > 95%)
Positive (favorable)
Negative (detrimental)

Confidence of Trend
< 80%
80 - 90 %
90 - 95 %
> 95 %



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
3	19	pH	452	-0.0053	-0.101	-2.792	Yes	95
		mpH	238	-0.0063	-0.119	-2.588	Yes	95
		DO	477	0.0017	0.031	0.098	No	< 80
		mDO	242	0.0139	0.265	0.639	No	< 80
		DO % sat	478	0.0000	0.000	0.000	No	< 80
		mDO % sat	243	-0.1210	-2.299	-0.816	No	< 80
		Temp	482	0.0142	0.270	0.903	No	< 80
		mTemp	242	0.0249	0.473	1.307	No	80
		Turb	438	0.1091	2.073	2.477	Yes	95
		mTurb	229	0.04457	0.847	0.983	No	< 80
		FC	481	-0.1250	-2.375	-1.868	No	90
		mFC	242	-0.7383	-14.028	1.442	No	80
		NO3+NO2	120	-0.0082	-0.155	-2.728	Yes	95
		TKN	120	-0.0109	-0.206	-2.207	Yes	95
		TP	120	0.0007	0.013	4.807	Yes	95
	OP	119	0.0012	0.024	2.990	Yes	95	
	NH3	120	-0.0031	-0.059	-2.838	Yes	95	
	TSS	119	0.0000	0.000	1.226	No	< 80	
	10	DO	249	-0.1844	-1.844	-4.482	Yes	95
		mDO	127	-0.2087	-2.087	-3.976	Yes	95
		Temp	251	-0.0497	-0.497	1.291	No	80
		mTemp	127	0.0125	0.125	0.211	No	< 80
		FC	252	0.0000	0.000	0.000	No	< 80
		mFC	127	1.4040	14.040	0.937	No	< 80
	5	DO	121	-0.0101	-0.051	-0.102	No	< 80
		mDO	62	0.0068	0.034	0.000	No	< 80
		Temp	122	0.0000	0.000	0.125	No	< 80
mTemp		62	0.1251	0.626	1.070	No	< 80	
FC		122	0.0000	0.000	0.000	No	< 80	
mFC		62	1.8630	9.315	0.936	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
4	19	pH	459	-0.0259	-0.492	-10.500	Yes	95
		mpH	240	-0.0249	-0.472	-7.866	Yes	95
		DO	480	0.0369	0.701	6.601	Yes	95
		mDO	244	0.0338	0.642	4.946	Yes	95
		DO % sat	481	0.2550	4.845	7.929	Yes	95
		mDO % sat	244	0.2499	4.748	6.221	Yes	95
		Temp	484	0.0000	0.000	0.255	No	< 80
		mTemp	244	0.0125	0.238	1.111	No	< 80
		Turb	442	-0.2122	-4.032	-5.470	Yes	95
		mTurb	230	-0.3324	-6.316	-4.953	Yes	95
		FC	480	-4.7350	-89.965	-5.054	Yes	95
		mFC	242	-8.8000	-167.200	-4.312	Yes	95
		NO3+NO2	121	-0.0126	-0.240	-3.372	Yes	95
		TKN	121	-0.0032	-0.060	-1.868	No	90
		TP	121	0.0000	0.000	2.302	Yes	95
		OP	121	0.0000	0.000	1.075	No	< 80
		NH3	121	-0.0014	-0.027	-3.224	Yes	95
		TSS	121	0.0000	0.000	-1.485	No	80
		10	DO	249	0.0491	0.491	3.275	Yes
	mDO		127	0.0351	0.351	1.848	No	90
	Temp		251	-0.0834	-0.834	-2.389	Yes	95
	mTemp		127	-0.0250	-0.250	-0.680	No	< 80
	FC		249	2.5260	25.260	2.237	Yes	95
	mFC		127	7.5310	75.310	2.412	Yes	95
	5	DO	121	-0.0828	-0.414	-2.030	Yes	95
		mDO	92	-0.0905	-0.452	-2.068	Yes	95
		Temp	122	0.0865	0.433	0.674	No	< 80
		mTemp	62	0.1355	0.678	1.407	No	80
		FC	120	10.8200	54.100	2.246	Yes	95
		mFC	62	19.4600	97.300	1.872	No	90



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
6	19	pH	458	-0.0180	-0.342	-7.305	Yes	95
		mpH	240	-0.0177	-0.336	-5.962	Yes	95
		DO	477	0.0281	0.534	4.505	Yes	95
		mDO	243	0.0220	0.418	3.075	Yes	95
		DO % sat	479	0.2688	5.107	7.495	Yes	95
		mDO % sat	243	0.2707	5.143	5.583	Yes	95
		Temp	485	0.0214	0.407	1.690	No	90
		mTemp	244	0.0498	0.945	2.484	Yes	95
		Turb	443	0.0116	0.221	0.839	No	< 80
		mTurb	230	-0.01574	-0.299	-0.740	No	< 80
		FC	484	0.0000	0.000	-1.271	No	< 80
		mFC	244	-0.3467	-6.587	-1.473	No	80
		NO3+NO2	121	-0.0141	-0.268	-5.286	Yes	95
		TKN	121	0.0000	0.000	-0.387	No	< 80
		TP	121	0.0000	0.000	-3.231	Yes	95
		OP	121	0.0000	0.000	2.613	Yes	95
		NH3	121	0.0000	0.000	-2.965	Yes	95
	TSS	121	0.0000	0.000	-0.319	No	< 80	
	10	DO	126	0.0641	0.641	3.045	Yes	95
		mDO	126	0.0641	0.641	3.045	Yes	95
		Temp	253	-0.0841	-0.841	-2.132	Yes	95
		mTemp	127	-0.0167	-0.167	-0.305	No	< 80
		FC	251	0.0000	0.000	-0.186	No	< 80
		mFC	127	0.3174	3.174	0.633	No	< 80
	5	DO	120	-0.0354	-0.177	-0.786	No	< 80
		mDO	61	-0.1029	-0.515	-1.080	No	< 80
		Temp	124	0.0966	0.483	0.527	No	< 80
		mTemp	62	0.1689	0.845	1.273	No	< 80
		FC	122	0.0000	0.000	0.360	No	< 80
		mFC	62	0.8850	4.425	0.334	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
8	19	pH	460	-0.0086	-0.163	-3.422	Yes	95
		mpH	240	-0.0080	-0.152	-2.606	Yes	95
		DO	482	-0.0077	-0.146	-0.980	No	80
		mDO	244	-0.0210	-0.399	-2.274	Yes	95
		DO % sat	483	-0.0662	-1.258	-1.529	No	80
		mDO % sat	244	-0.0896	-1.702	-1.776	Yes	95
		Temp	486	0.0083	0.158	0.603	No	< 80
		mTemp	232	0.0345	0.655	1.826	No	90
		Turb	444	-0.1099	-2.088	-4.019	Yes	95
		mTurb	231	-0.1799	-3.418	-4.007	Yes	95
		FC	485	-1.3340	-25.346	-5.158	Yes	95
		mFC	244	-2.2110	-42.009	-3.847	Yes	95
		NO3+NO2	120	-0.0107	-0.203	-5.109	Yes	95
		TKN	120	0.0000	0.000	0.179	No	< 80
		TP	120	0.0000	0.000	-0.054	No	< 80
		OP	120	0.0005	0.010	3.240	Yes	95
		NH3	120	-0.0028	-0.053	-5.271	Yes	95
		TSS	120	0.0000	0.000	-0.347	No	< 80
	10	DO	251	0.0551	0.551	2.287	Yes	95
		mDO	127	0.0256	0.256	0.927	No	< 80
		Temp	252	-0.1044	-1.044	-2.027	Yes	95
		mTemp	127	-0.0562	-0.562	-0.952	No	< 80
		FC	252	0.0000	0.000	-0.485	No	< 80
		mFC	127	0.0000	0.000	0.025	No	< 80
	5	DO	123	0.0408	0.204	0.472	No	< 80
		mDO	62	-0.0377	-0.188	-0.467	No	< 80
		Temp	123	0.0000	0.000	-0.049	No	< 80
		mTemp	62	0.1482	0.741	1.204	No	< 80
		FC	123	0.0000	0.000	0.580	No	< 80
		mFC	62	0.6474	3.237	0.200	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
11	19	pH	464	0.0059	0.113	2.466	Yes	95
		mpH	240	0.0060	0.113	2.190	Yes	95
		DO	485	0.0411	0.781	5.130	Yes	95
		mDO	244	0.0382	0.726	3.737	Yes	95
		DO % sat	486	0.2932	5.571	5.391	Yes	95
		mDO % sat	244	0.3000	5.700	4.372	Yes	95
		Temp	488	-0.0222	-0.421	-1.855	No	90
		mTemp	244	-0.0100	-0.189	-0.623	No	< 80
		Turb	446	-0.0099	-0.189	-1.005	No	< 80
		mTurb	230	-0.0206	-0.391	-1.697	No	90
		FC	487	0.0000	0.000	-1.654	No	90
		mFC	242	-0.1360	-2.584	-1.501	No	80
		NO3+NO2	119	-0.0039	-0.074	-2.407	Yes	95
		TKN	120	0.0000	0.000	-0.259	No	< 80
		TP	120	0.0000	0.000	-4.650	Yes	95
		OP	119	0.0000	0.000	2.340	Yes	95
	NH3	120	0.0000	0.000	-1.413	No	80	
	TSS	119	0.0000	0.000	-1.094	No	< 80	
	10	DO	251	0.0818	0.818	3.465	Yes	95
		mDO	127	0.0748	0.748	2.550	Yes	95
		Temp	253	0.0991	0.991	-2.905	Yes	95
		mTemp	127	-0.0501	-0.501	-1.498	No	80
		FC	253	0.0000	0.000	1.890	No	90
		mFC	126	0.5000	5.000	2.103	Yes	95
	5	DO	124	-0.1631	-0.816	-2.316	No	< 80
		mDO	62	-0.1205	-0.603	-1.134	No	< 80
		Temp	125	0.0985	0.493	1.119	No	< 80
		mTemp	62	0.1517	0.759	1.337	No	80
		FC	124	1.0490	5.245	1.955	No	< 80
		mFC	62	1.9170	9.585	1.605	No	80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
12	19	pH	435	0.0034	0.064	1.633	No	80
		mpH	232	0.0041	0.078	1.354	No	80
		DO	458	-0.0291	-0.552	-2.500	Yes	95
		mDO	241	-0.0344	-0.653	-2.311	Yes	95
		DO % sat	460	-0.2117	-4.022	-2.875	Yes	95
		mDO % sat	240	-0.2024	-3.846	-1.869	No	90
		Temp	463	0.0251	0.476	1.789	No	90
		mTemp	242	0.0324	0.615	1.797	No	90
		Turb	429	-0.0540	-1.025	-2.474	Yes	95
		mTurb	228	-0.0445	-0.846	-1.795	No	90
		FC	462	-0.0833	-1.582	-2.045	Yes	95
		mFC	242	-0.3882	-7.376	-0.917	No	< 80
		NO3+NO2	116	-0.0136	-0.259	-3.962	Yes	95
		TKN	115	-0.0053	-0.100	-1.539	No	80
		TP	116	0.0000	-0.100	5.152	Yes	95
		OP	116	0.0009	0.017	5.194	Yes	95
	NH3	116	-0.0027	-0.051	-3.589	Yes	95	
	TSS	116	-0.1247	-2.369	-0.125	Yes	95	
	10	DO	245	-0.0219	-0.219	-0.524	No	< 80
		mDO	125	0.0149	0.149	0.288	No	< 80
		Temp	246	-0.0670	-0.670	-1.953	No	90
		mTemp	126	-0.1162	-1.162	-2.333	Yes	95
		FC	246	0.0000	0.000	-1.365	No	< 80
		mFC	126	-2.3590	-23.590	-2.072	Yes	95
	5	DO	122	-0.1970	-0.985	-1.967	Yes	95
		mDO	60	-0.2388	-1.194	-2.087	Yes	95
		Temp	123	0.0000	0.000	-0.150	No	< 80
		mTemp	61	0.1006	0.503	0.795	No	< 80
		FC	123	0.0000	0.000	0.682	No	< 80
		mFC	61	0.6235	3.118	0.198	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
13	19	pH	457	0.0000	0.000	-0.112	No	< 80
		mpH	237	0.0000	0.000	0.000	No	< 80
		DO	481	-0.0349	-0.663	-3.628	Yes	95
		mDO	244	-0.0383	-0.727	-2.934	Yes	95
		DO % sat	482	-0.2137	-4.060	-2.888	Yes	95
		mDO % sat	244	-0.2206	-4.191	-2.640	Yes	95
		Temp	484	0.0447	0.848	2.928	Yes	95
		mTemp	244	0.0499	0.948	2.828	Yes	95
		Turb	449	0.0117	0.222	0.831	No	< 80
		mTurb	230	0.0050	0.095	0.256	No	< 80
		FC	483	-0.1244	-2.364	-2.385	Yes	95
		mFC	244	-0.5212	-9.903	-1.686	No	90
		NO3+NO2	120	0.0053	0.101	-2.437	Yes	95
		TKN	119	0.0000	0.000	0.000	No	< 80
		TP	120	0.0000	0.000	-0.931	No	90
		OP	120	0.0000	0.000	4.237	Yes	95
		NH3	120	-0.0025	-0.047	-4.166	Yes	95
	TSS	120	0.0000	0.000	-0.866	No	< 80	
	10	DO	254	-0.0382	-0.382	-1.413	No	90
		mDO	127	-0.0087	-0.087	-0.141	No	< 80
		Temp	254	-0.0500	-0.500	-1.139	No	< 80
		mTemp	127	-0.0830	-0.830	-2.004	Yes	95
		FC	254	-0.2942	-2.942	-1.580	No	80
		mFC	127	-2.3420	-23.420	-1.742	No	90
	5	DO	123	-0.1719	-0.860	-2.292	Yes	95
		mDO	62	-0.1945	-0.973	-2.064	Yes	95
		Temp	124	0.0677	0.339	0.838	No	< 80
		mTemp	62	1.0990	5.495	0.150	No	< 80
		FC	124	2.4240	12.120	2.285	Yes	95
		mFC	62	3.4900	17.450	2.262	Yes	95



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
15	19	pH	457	0.0020	0.038	0.748	No	< 80
		mpH	238	0.0029	0.054	0.967	No	< 80
		DO	478	0.0330	0.626	3.403	Yes	95
		mDO	244	0.0243	0.462	1.576	No	80
		DO % sat	479	0.2882	5.476	3.952	Yes	95
		mDO % sat	244	0.2507	4.763	2.287	Yes	95
		Temp	484	0.0133	0.253	1.067	No	< 80
		mTemp	244	0.0333	0.633	1.858	No	90
		Turb	448	-0.0054	-0.103	-0.459	No	< 80
		mTurb	230	-0.0138	-0.262	-0.671	No	< 80
		FC	482	-0.5014	-9.527	-3.195	Yes	95
		mFC	244	1.0850	20.615	1.803	No	90
		NO3+NO2	121	-0.0001	-0.002	-0.413	No	< 80
		TKN	120	-0.0083	-0.158	-2.285	Yes	95
		TP	121	0.0020	0.037	6.175	Yes	95
		OP	121	0.0022	0.042	4.910	Yes	95
		NH3	121	-0.0032	-0.062	-4.028	Yes	95
		TSS	121	0.0000	0.000	-0.233	No	< 80
	10	DO	249	0.0310	0.310	1.205	No	< 80
		mDO	127	0.0729	0.729	1.904	No	< 80
		Temp	252	-0.1202	-1.202	-3.390	Yes	95
		mTemp	127	-0.2003	-2.003	-3.511	Yes	95
		FC	252	0.0000	0.000	-0.974	No	< 80
		mFC	127	-2.6280	-26.280	-1.272	No	< 80
	5	DO	119	0.0300	0.150	0.314	No	< 80
		mDO	62	-0.0971	-0.486	0.645	No	< 80
		Temp	122	0.0000	0.000	-0.176	No	< 80
		mTemp	62	0.0754	0.377	0.714	No	< 80
		FC	122	0.0000	0.000	-0.688	No	< 80
		mFC	62	-3.0910	-15.455	-0.582	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
16	19	pH	459	-0.0100	-0.190	-4.007	Yes	95
		mpH	238	-0.0079	-0.150	-2.508	Yes	95
		DO	483	0.0193	0.366	3.333	Yes	95
		mDO	244	0.0175	0.332	2.128	Yes	95
		DO % sat	484	0.1910	3.629	5.307	Yes	95
		mDO % sat	244	0.2087	3.965	4.403	Yes	95
		Temp	488	0.0331	0.629	2.259	Yes	95
		mTemp	244	0.0313	0.595	2.012	Yes	95
		Turb	451	0.0181	0.344	2.739	Yes	95
		mTurb	230	0.0159	0.302	1.608	No	80
		FC	485	0.0000	0.000	-0.418	No	< 80
		mFC	120	-0.0029	-0.054	-1.420	No	< 80
		NO3+NO2	116	-0.0022	-0.042	-1.008	No	80
		TKN	119	0.0000	0.000	0.363	No	< 80
		TP	120	0.0000	0.000	-0.137	No	< 80
		OP	120	0.0000	0.000	3.447	Yes	95
	NH3	120	0.0000	0.000	-0.841	No	< 80	
	TSS	120	0.0000	0.000	1.973	Yes	95	
	10	DO	253	0.0775	0.775	4.648	Yes	95
		mDO	127	0.0923	0.923	4.537	Yes	95
		Temp	255	-0.0745	-0.745	-2.186	Yes	95
		mTemp	127	-0.0998	-0.998	-2.685	Yes	95
		FC	255	0.0000	0.000	-0.216	No	< 80
		mFC	127	-0.0672	-0.672	-0.188	No	< 80
	5	DO	123	-0.0253	-0.126	-1.071	No	< 80
		mDO	62	-0.0198	-0.099	-0.258	No	< 80
		Temp	125	0.0584	0.292	0.537	No	< 80
mTemp		62	0.0750	0.375	0.648	No	< 80	
FC		125	0.0000	0.000	0.838	No	< 80	
mFC		62	2.8010	14.005	1.425	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
17	19	pH	457	-0.0099	-0.187	-4.108	Yes	95
		mpH	238	-0.0093	-0.178	-3.099	Yes	95
		DO	482	0.0114	0.216	1.854	No	90
		mDO	244	0.0007	0.014	0.072	No	< 80
		DO % sat	483	0.1230	2.337	2.354	Yes	95
		mDO % sat	244	0.0666	1.266	1.121	No	< 80
		Temp	488	0.0250	0.474	1.748	No	90
		mTemp	244	0.0498	0.945	2.130	Yes	95
		Turb	450	0.0433	0.823	5.873	Yes	95
		mTurb	230	0.0468	0.889	4.537	Yes	95
		FC	484	0.0000	0.000	0.534	No	< 80
		mFC	243	0.0707	1.343	0.749	No	< 80
		NO3+NO2	121	0.0000	0.000	0.354	No	< 80
		TKN	120	0.0000	0.000	-1.047	No	< 80
		TP	121	0.0000	0.000	0.000	No	< 80
		OP	121	0.0000	0.000	4.288	Yes	95
		NH3	121	-0.0011	-0.021	-2.909	Yes	95
	TSS	121	0.0000	0.000	0.688	No	< 80	
	10	DO	252	0.0661	0.661	3.840	Yes	95
		mDO	127	0.0706	0.706	3.268	Yes	95
		Temp	255	-0.0693	-0.693	-2.126	Yes	95
		mTemp	127	-0.1655	-1.655	-2.943	Yes	95
		FC	255	0.0000	0.000	0.078	No	< 80
		mFC	127	-0.0166	-0.166	-0.047	No	< 80
	5	DO	121	0.0100	0.050	0.304	No	< 80
		mDO	62	-0.0456	-0.228	-0.516	No	< 80
		Temp	124	0.0985	0.493	0.758	No	< 80
		mTemp	62	0.0936	0.468	0.969	No	< 80
FC		124	0.0999	0.499	-1.087	No	< 80	
mFC		62	-0.8607	-4.304	-1.228	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
18	19	pH	461	-0.0028	-0.054	-1.127	No	< 80
		mpH	238	-0.0032	-0.061	-0.967	No	< 80
		DO	483	0.0074	0.141	1.287	No	80
		mDO	244	0.0040	0.076	0.616	No	< 80
		DO % sat	484	0.0601	1.142	1.648	No	90
		mDO % sat	244	0.0664	1.261	1.474	No	80
		Temp	489	0.0251	0.477	2.015	Yes	95
		mTemp	244	0.0334	0.635	2.339	Yes	95
		Turb	230	0.0214	0.406	1.913	No	90
		mTurb	218	0.0216	0.410	1.737	No	90
		FC	487	-0.3889	-7.389	-3.360	Yes	95
		mFC	244	-0.6672	-12.677	-2.365	Yes	95
		NO3+NO2	121	0.0023	0.044	-0.877	No	< 80
		TKN	120	0.0000	0.000	-0.611	No	< 80
		TP	121	0.0000	0.000	-1.803	No	90
		OP	121	0.0000	0.000	2.326	Yes	95
		NH3	121	0.0000	0.000	-2.883	Yes	95
		TSS	121	0.0000	0.000	1.328	No	< 80
	10	DO	253	0.0665	0.665	4.817	Yes	95
		mDO	127	0.0835	0.835	3.928	Yes	95
		Temp	256	-0.0583	-0.583	-1.621	No	90
		mTemp	127	-0.0813	-0.813	487-2.334	Yes	95
		FC	256	-0.5011	-5.011	-2.050	Yes	95
		mFC	127	-0.8284	-8.284	-1.413	No	80
	5	DO	122	0.0129	0.065	0.429	No	< 80
		mDO	62	0.0000	0.000	0.000	No	< 80
		Temp	125	0.0374	0.187	0.170	No	< 80
		mTemp	62	0.0499	0.250	0.390	No	< 80
		FC	125	0.0000	0.000	-0.616	No	< 80
		mFC	62	0.8261	4.131	0.453	No	80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
19	19	pH	431	-0.0100	-0.190	-3.864	Yes	95
		mpH	228	-0.0100	-0.191	-3.244	Yes	95
		DO	453	-0.0361	-0.685	-5.173	Yes	95
		mDO	233	-0.4138	-7.862	-4.446	Yes	95
		DO % sat	453	-0.2309	-4.387	-5.588	Yes	95
		mDO % sat	223	-0.2306	-4.381	-4.103	Yes	95
		Temp	456	0.0664	1.262	3.720	Yes	95
		mTemp	235	0.0815	1.548	3.677	Yes	95
		Turb	418	-0.0215	-0.409	-1.120	No	< 80
		mTurb	222	-0.0587	-1.116	-2.195	Yes	95
		FC	454	0.0000	0.000	0.838	No	80
		mFC	234	-1.2490	-23.731	-1.759	No	90
		NO3+NO2	115	-0.0107	-0.204	-4.130	Yes	95
		TKN	115	0.0000	0.000	0.853	No	< 80
		TP	116	0.0000	0.000	-2.248	Yes	95
	OP	115	0.0000	0.000	1.576	No	80	
	NH3	115	0.0000	0.000	-1.428	No	80	
	TSS	116	0.0000	0.000	-1.041	No	< 80	
	10	DO	222	0.0183	0.183	1.070	No	< 80
		mDO	116	0.0042	0.042	0.227	No	< 80
		Temp	224	0.0429	0.429	1.063	Yes	95
		mTemp	118	0.1277	1.277	2.094	Yes	95
		FC	223	-0.9124	-9.124	-1.547	No	80
		mFC	117	-2.5400	-25.400	-1.716	No	90
	5	DO	222	0.0183	0.091	1.070	No	< 80
		mDO	55	-0.0237	-0.119	-0.267	No	< 80
		Temp	106	0.0335	0.167	0.198	No	< 80
mTemp		56	0.0959	0.479	0.557	No	< 80	
FC		105	3.9630	19.815	1.439	No	80	
mFC		56	3.1110	15.555	0.823	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
20	19	pH	459	-0.0120	-0.228	-4.598	Yes	95
		mpH	240	-0.0102	-0.194	-3.253	Yes	95
		DO	482	0.0300	0.569	5.516	Yes	95
		mDO	244	0.0252	0.479	3.791	Yes	95
		DO % sat	483	0.2172	4.127	6.784	Yes	95
		mDO % sat	244	0.2385	4.532	5.590	Yes	95
		Temp	484	0.0000	0.000	-0.464	No	< 80
		mTemp	244	0.0000	0.271	0.271	No	< 80
		Turb	440	-0.0099	-0.188	-1.064	No	< 80
		mTurb	230	-0.0195	-0.370	-1.361	No	80
		FC	480	0.0000	0.000	0.081	No	< 80
		mFC	243	-0.0167	-0.317	-0.119	No	< 80
		NO3+NO2	121	-0.0029	-0.055	-1.520	No	80
		TKN	121	0.0000	0.000	-2.520	Yes	95
		TP	121	0.0000	0.000	-5.153	Yes	95
		OP	121	0.0000	0.000	1.155	No	< 80
	NH3	121	0.0000	0.000	-2.209	Yes	95	
	TSS	121	0.0000	0.000	-1.062	No	< 80	
	10	DO	250	0.0816	0.816	5.303	Yes	95
		mDO	127	0.0601	0.601	3.205	Yes	95
		Temp	251	-0.0667	-0.667	-2.088	Yes	95
		mTemp	127	-0.0099	-0.099	-0.469	No	< 80
		FC	250	0.0000	0.000	0.773	No	< 80
		mFC	126	1.8600	18.600	1.408	No	80
	5	DO	124	-0.0196	-0.098	-0.641	No	< 80
		mDO	62	-0.0423	-0.211	-1.268	No	< 80
		Temp	124	0.0000	0.000	0.198	No	< 80
		mTemp	62	0.0698	0.349	0.671	No	< 80
FC		123	0.0000	0.000	0.661	No	< 80	
mFC		62	2.3420	11.710	0.401	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
21	19	pH	395	-0.0070	-0.132	-2.565	Yes	95
		mpH	217	-0.0079	-0.149	-2.356	Yes	95
		DO	418	0.0164	0.311	2.201	Yes	95
		mDO	222	0.0150	0.285	1.736	No	90
		DO % sat	418	0.1424	2.706	3.888	Yes	95
		mDO % sat	223	0.1321	2.510	3.039	Yes	95
		Temp	419	0.0166	0.316	1.005	No	< 80
		mTemp	222	0.0299	0.568	1.519	No	< 80
		Turb	381	-0.0349	-0.663	-1.322	No	80
		mTurb	209	-0.0681	-1.293	-2.304	Yes	95
		FC	413	-0.1378	-2.618	-1.992	Yes	95
		mFC	222	-0.8152	-15.489	-1.440	No	80
		NO3+NO2	106	-0.0069	-0.132	-1.753	No	90
		TKN	106	0.0000	0.000	0.639	No	< 80
		TP	106	0.0000	0.000	-1.917	No	90
		OP	106	0.0000	0.000	2.725	Yes	95
	NH3	106	0.0000	0.000	-0.733	No	< 80	
	TSS	106	-0.5946	-11.297	-0.595	No	< 80	
	10	DO	209	0.0555	0.555	2.791	Yes	95
		mDO	113	0.0518	0.518	2.664	Yes	95
		Temp	210	-0.0336	-0.336	-0.741	No	< 80
		mTemp	113	0.0248	0.248	0.385	No	< 80
		FC	208	0.0000	0.000	-0.010	No	< 80
		mFC	113	1.2540	12.540	1.105	No	< 80
	5	DO	102	-0.0326	-0.163	-0.405	No	< 80
		mDO	54	-0.1093	-0.547	-0.969	No	< 80
		Temp	102	0.0000	0.000	-0.507	No	< 80
		mTemp	54	0.0918	0.459	0.592	No	< 80
FC		100	2.2030	11.015	0.925	No	< 80	
mFC		54	6.8690	34.345	1.400	No	80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
22	19	pH	463	-0.0188	-0.357	-4.653	Yes	95
		mpH	238	-0.0182	-0.346	-3.649	Yes	95
		DO	481	0.0019	0.036	0.297	No	< 80
		mDO	243	0.0008	0.015	0.109	No	< 80
		DO % sat	458	0.0182	0.400	0.572	No	< 80
		mDO % sat	244	0.0579	1.101	1.479	No	80
		Temp	484	0.0241	0.457	1.642	No	80
		mTemp	243	0.0311	0.592	2.031	Yes	95
		Turb	446	-0.0078	-0.148	-1.015	No	< 80
		mTurb	229	-0.0301	-0.572	-1.964	Yes	95
		FC	483	0.0000	0.000	1.114	No	< 80
		mFC	241	0.0994	1.888	1.597	No	80
		NO3+NO2	119	-0.0033	-0.063	-1.329	No	80
		TKN	120	0.0000	0.000	-3.011	Yes	95
		TP	120	0.0000	0.000	-2.184	Yes	95
		OP	119	0.0000	0.000	2.658	Yes	95
	NH3	120	0.0000	0.000	-2.486	Yes	95	
	TSS	119	0.0000	0.000	-1.836	No	90	
	10	DO	250	0.0807	0.807	5.897	Yes	95
		mDO	127	0.0595	0.595	3.298	Yes	95
		Temp	251	-0.0499	-0.499	-1.330	No	80
		mTemp	127	0.0000	0.000	0.117	No	< 80
		FC	252	0.0000	0.000	-2.404	Yes	95
		mFC	126	-0.0453	-0.453	-0.523	No	< 80
	5	DO	124	0.0295	0.030	0.954	No	< 80
		mDO	62	-0.0105	-0.052	0.268	No	< 80
		Temp	124	-0.0329	-0.165	-0.270	No	< 80
		mTemp	62	0.0627	0.313	0.535	No	< 80
		FC	124	0.0000	0.000	-0.803	No	< 80
		mFC	62	0.0000	0.000	0.068	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
23	19	pH	413	-0.0217	-0.413	-6.805	Yes	95
		mpH	211	-0.0208	-0.395	-5.181	Yes	95
		DO	434	0.0147	0.279	2.425	Yes	95
		mDO	217	0.0111	0.211	1.623	No	80
		DO % sat	436	0.1333	2.533	4.113	Yes	95
		mDO % sat	219	0.1398	2.656	3.127	Yes	95
		Temp	437	0.0000	0.000	-0.318	No	< 80
		mTemp	218	0.0000	0.000	0.052	No	< 80
		Turb	399	0.0080	0.152	1.048	No	< 80
		mTurb	206	-0.0050	-0.094	-0.538	No	< 80
		FC	435	0.0000	0.000	1.049	No	< 80
		mFC	217	0.0827	1.571	1.011	No	< 80
		NO3+NO2	111	-0.0252	-0.480	-5.087	Yes	95
		TKN	112	0.0000	0.000	-0.277	No	< 80
		TP	112	0.0000	0.000	-3.871	Yes	95
		OP	112	0.0000	0.000	2.230	Yes	95
	NH3	112	0.0000	0.000	-0.426	No	< 80	
	TSS	111	0.0000	0.000	-1.469	No	80	
	10	DO	220	0.0672	0.672	4.218	Yes	95
		mDO	105	0.0450	0.450	1.957	No	90
		Temp	221	-0.0573	-0.573	-1.591	No	80
		mTemp	105	0.0188	0.188	0.527	No	< 80
		FC	221	0.0000	0.000	1.056	No	< 80
		mFC	105	0.5008	5.008	1.700	No	90
	5	DO	111	0.0402	0.201	0.788	No	< 80
		mDO	57	-0.0101	-0.050	-0.236	No	< 80
		Temp	111	0.0000	0.000	0.057	No	< 80
mTemp		57	0.1481	0.741	0.839	No	< 80	
FC		111	0.0000	0.000	-0.261	No	< 80	
mFC		57	0.7252	3.626	0.630	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
24	19	pH	463	-0.0045	-0.086	-1.750	No	90
		mpH	241	-0.0050	-0.095	-1.397	No	80
		DO	481	0.0646	1.227	5.820	Yes	95
		mDO	245	0.0646	1.227	4.644	Yes	95
		DO % sat	482	0.5521	10.490	6.711	Yes	95
		mDO % sat	244	0.5999	11.398	5.319	Yes	95
		Temp	484	0.0166	0.316	1.601	No	80
		mTemp	244	0.0181	0.343	1.536	No	80
		Turb	443	0.0436	0.828	7.000	Yes	95
		mTurb	230	0.0440	0.836	5.098	Yes	95
		FC	479	0.0000	0.000	-2.173	Yes	95
		mFC	243	-0.1817	-3.452	-1.534	No	80
		NO3+NO2	121	0.0000	0.000	0.158	No	< 80
		TKN	120	0.0000	0.000	0.032	No	< 80
		TP	121	0.0000	0.000	0.130	No	< 80
		OP	121	0.0000	0.000	0.725	No	< 80
		NH3	121	0.0000	0.000	-0.108	No	< 80
	TSS	121	0.0000	0.000	1.806	No	90	
	10	DO	248	0.1453	1.453	5.212	Yes	95
		mDO	128	0.1601	1.601	4.420	Yes	95
		Temp	250	0.0329	0.329	0.862	No	< 80
		mTemp	127	0.0668	0.668	1.782	No	90
		FC	249	0.2224	2.224	2.010	Yes	95
		mFC	127	0.5363	5.363	1.477	No	80
	5	DO	120	-0.2417	-1.209	-3.163	Yes	95
		mDO	63	-0.1650	-0.825	-1.499	No	80
		Temp	120	0.3792	1.896	3.461	Yes	95
mTemp		62	0.4102	2.051	2.881	Yes	95	
FC		119	1.0060	5.030	1.607	No	80	
mFC		62	1.9490	9.745	1.947	No	90	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
25	19	pH	377	-0.0212	-0.403	-5.182	Yes	95
		mpH	198	-0.0186	-0.353	-3.663	Yes	95
		DO	392	0.0165	0.313	2.898	Yes	95
		mDO	201	0.0144	0.274	1.671	No	90
		DO % sat	392	0.1194	2.269	3.443	Yes	95
		mDO % sat	202	0.0852	1.619	2.206	Yes	95
		Temp	393	0.0000	0.000	0.008	No	< 80
		mTemp	201	0.0000	0.000	0.000	No	< 80
		Turb	361	0.0237	0.451	7.156	Yes	95
		mTurb	189	0.0185	0.351	3.354	Yes	95
		FC	389	0.0000	0.000	0.765	No	< 80
		mFC	200	0.0000	0.000	0.229	No	< 80
		NO3+NO2	100	-0.0036	-0.068	-1.136	No	< 80
		TKN	100	0.0000	0.000	-3.120	Yes	95
		TP	100	0.0000	0.000	-3.208	Yes	95
		OP	100	0.0000	0.000	2.273	Yes	95
	NH3	100	0.0000	0.000	-0.194	No	< 80	
	TSS	100	0.0000	0.000	-0.680	No	< 80	
	10	DO	199	0.0735	0.735	4.676	Yes	95
		mDO	98	0.0512	0.512	2.423	Yes	95
		Temp	200	-0.0494	-0.494	-1.185	No	< 80
		mTemp	98	0.0000	0.000	0.056	No	< 80
		FC	199	0.0000	0.000	0.219	No	< 80
		mFC	98	0.0000	0.000	0.090	No	< 80
	5	DO	96	0.0098	0.049	0.229	No	< 80
		mDO	52	-0.0050	-0.025	-0.028	No	< 80
		Temp	96	-0.0488	-0.244	-0.512	No	< 80
		mTemp	52	0.0500	0.250	0.139	No	< 80
FC		94	0.0000	0.000	1.060	No	< 80	
mFC		52	0.1234	0.617	0.564	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
29	19	pH	449	0.0100	0.190	2.111	Yes	95
		mpH	240	0.0070	0.133	1.143	No	< 80
		DO	470	0.0171	0.325	3.613	Yes	95
		mDO	243	0.0149	0.284	1.967	Yes	95
		DO % sat	471	0.0998	1.896	2.612	Yes	95
		mDO % sat	244	0.0935	1.776	1.998	Yes	95
		Temp	476	0.0000	0.000	-0.340	No	< 80
		mTemp	244	0.0042	0.079	0.336	No	< 80
		Turb	437	-0.1106	-2.101	-3.833	Yes	95
		mTurb	230	-0.1666	-3.165	-3.738	Yes	95
		FC	470	0.0000	0.000	-0.017	No	< 80
		mFC	244	0.0000	0.000	0.409	No	< 80
		NO3+NO2	119	0.0000	0.000	0.574	No	< 80
		TKN	118	0.0000	0.000	-1.804	No	90
		TP	118	0.0000	0.000	-1.136	No	< 80
		OP	119	0.0000	0.000	3.019	Yes	95
	NH3	119	0.0000	0.000	0.899	No	< 80	
	TSS	119	0.0000	0.000	-0.498	No	< 80	
	10	DO	253	0.0592	0.592	0.282	Yes	95
		mDO	127	0.0770	0.770	4.235	Yes	95
		Temp	253	-0.0427	-0.427	-1.681	No	90
		mTemp	127	-0.0984	-0.984	-2.871	Yes	95
		FC	252	0.0994	0.994	2.280	Yes	95
		mFC	127	0.1560	1.560	1.131	No	< 80
	5	DO	123	0.0762	0.381	2.305	Yes	95
		mDO	62	0.0703	0.351	1.290	No	90
		Temp	123	-0.0498	-0.249	-0.720	No	< 80
mTemp		62	0.0166	0.083	0.000	No	< 80	
FC		122	0.1121	0.561	1.095	No	< 80	
mFC		62	0.4325	2.163	0.648	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
30	19	pH	446	-0.0100	-0.190	-2.989	Yes	95
		mpH	240	-0.0075	-0.143	-1.930	No	90
		DO	484	0.0143	0.271	2.970	Yes	95
		mDO	244	0.0127	0.240	2.497	Yes	95
		DO % sat	485	0.1193	2.267	3.821	Yes	95
		mDO % sat	244	0.1305	2.480	3.219	Yes	95
		Temp	486	0.0000	0.000	0.646	No	< 80
		mTemp	244	0.0083	0.158	1.057	No	< 80
		Turb	445	-0.0763	-1.450	-3.179	Yes	95
		mTurb	230	-0.1321	-2.510	-3.185	Yes	95
		FC	480	0.0000	0.000	1.265	No	< 80
		mFC	241	0.0000	0.000	0.157	No	< 80
		NO3+NO2	120	0.0000	0.000	-0.404	No	< 80
		TKN	120	0.0000	0.000	-0.876	No	< 80
		TP	120	0.0000	0.000	-3.025	Yes	95
		OP	120	0.0000	0.000	3.107	Yes	95
	NH3	120	0.0000	0.000	-1.979	Yes	95	
	TSS	120	0.0000	0.000	-2.009	Yes	95	
	10	DO	252	0.0745	0.745	5.545	Yes	95
		mDO	127	0.0560	0.560	3.791	Yes	95
		Temp	253	-0.0460	-0.460	-1.622	No	80
		mTemp	127	0.0168	0.168	0.657	No	< 80
		FC	255	0.0000	0.000	0.569	No	< 80
		mFC	127	0.0000	0.000	0.000	No	< 80
	5	DO	123	-0.0099	-0.049	-0.445	No	< 80
		mDO	62	0.0207	0.104	0.467	No	< 80
		Temp	124	-0.0984	-0.492	-1.132	No	< 80
		mTemp	62	0.0208	0.104	0.268	No	< 80
		FC	123	0.0000	0.000	0.310	No	< 80
		mFC	62	0.1295	0.648	0.880	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
32	19	pH	457	0.0080	0.151	2.682	Yes	95
		mpH	241	0.0062	0.118	1.345	No	80
		DO	479	0.0306	0.582	4.465	Yes	95
		mDO	245	0.0275	0.522	3.458	Yes	95
		DO % sat	482	0.2640	5.016	6.110	Yes	95
		mDO % sat	245	0.2480	4.712	4.865	Yes	95
		Temp	488	0.0199	0.379	1.233	No	< 80
		mTemp	245	0.0334	0.634	1.879	No	90
		Turb	445	-0.0433	-0.823	-2.913	Yes	95
		mTurb	223	-0.0947	-1.799	-3.582	Yes	95
		FC	488	-0.0667	-1.266	-1.806	No	90
		mFC	242	-0.6981	-13.264	-1.617	No	90
		NO3+NO2	120	-0.0067	-0.127	-3.391	Yes	95
		TKN	122	0.0000	0.000	0.805	No	< 80
		TP	122	0.0000	0.000	-1.304	No	80
		OP	120	0.0000	0.000	1.317	No	80
		NH3	122	-0.0033	-0.063	-5.805	Yes	95
	TSS	120	-0.1004	-1.908	-2.591	Yes	95	
	10	DO	250	0.0783	0.783	4.598	Yes	95
		mDO	127	0.0668	0.668	3.862	Yes	95
		Temp	254	-0.0996	-0.996	-2.482	Yes	95
		mTemp	127	-0.0375	-0.375	-0.867	No	< 80
		FC	253	0.0000	0.000	1.448	No	80
		mFC	127	2.3190	23.190	2.117	Yes	95
	5	DO	124	-0.0497	-0.248	-1.527	No	80
		mDO	62	-0.0411	-0.205	-1.471	No	80
		Temp	125	0.0000	0.000	0.000	No	< 80
		mTemp	62	0.1103	0.552	1.070	No	< 80
		FC	124	4.9060	24.530	2.236	Yes	95
		mFC	62	5.8540	29.270	1.821	No	90



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
33	19	pH	456	-0.0246	-0.467	-6.419	Yes	95
		mpH	239	-0.0241	-0.457	-4.983	Yes	95
		DO	460	-0.0424	-0.806	-1.530	No	80
		mDO	241	-0.0441	-0.838	-1.246	No	< 80
		DO % sat	479	-0.6613	-12.565	-2.309	Yes	95
		mDO % sat	246	-0.7220	-13.718	-2.295	Yes	95
		Temp	484	-0.0166	-0.316	-0.891	No	< 80
		mTemp	244	0.0083	0.158	0.297	No	< 80
		Turb	442	-0.3312	-6.293	-5.026	Yes	95
		mTurb	229	-0.3871	-7.355	-4.313	Yes	95
		FC	484	-0.2402	-4.564	-2.196	Yes	95
		mFC	243	-0.9998	-18.996	-1.298	No	80
		NO3+NO2	117	0.0000	0.000	0.390	No	< 80
		TKN	118	0.0090	0.170	0.711	No	< 80
		TP	118	0.0102	0.193	1.641	No	80
		OP	117	0.0068	0.128	2.613	Yes	95
		NH3	118	-0.0146	-0.278	-1.595	No	80
	TSS	117	-1.0650	-20.235	2.722	Yes	95	
	10	DO	244	0.0104	0.104	0.146	No	< 80
		mDO	127	0.0587	0.587	0.327	No	< 80
		Temp	248	-0.1723	-1.723	-3.104	Yes	95
		mTemp	127	-0.0755	-0.755	-1.125	No	< 80
		FC	247	0.0000	0.000	0.179	No	< 80
		mFC	126	0.0000	0.000	0.000	No	< 80
	5	DO	121	-0.6419	-3.210	-2.957	Yes	95
		mDO	62	-0.5970	-2.985	-2.202	Yes	95
		Temp	122	-0.3170	-1.585	-1.523	No	80
		mTemp	62	-0.0042	-0.021	0.000	No	< 80
		FC	121	8.8530	44.265	3.593	Yes	95
		mFC	62	10.1500	50.750	2.869	Yes	95



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
34	19	pH	452	-0.0326	-0.619	-8.062	Yes	95
		mpH	235	-0.0300	-0.570	-5.741	Yes	95
		DO	475	0.0407	0.773	2.427	Yes	95
		mDO	241	0.0363	0.690	1.770	No	90
		DO % sat	475	0.4445	8.446	3.013	Yes	95
		mDO % sat	242	0.4019	7.636	1.981	Yes	95
		Temp	479	0.0999	1.899	4.618	Yes	95
		mTemp	242	0.1185	2.252	4.859	Yes	95
		Turb	442	-0.3700	-7.030	-7.158	Yes	95
		mTurb	228	-0.5088	-9.667	-6.795	Yes	95
		FC	474	-2.3380	-44.422	-3.755	Yes	95
		mFC	229	-4.2330	-80.427	-2.678	Yes	95
		NO3+NO2	118	-0.0012	-0.024	-2.564	Yes	95
		TKN	117	-0.0166	-0.316	-2.987	Yes	95
		TP	118	0.0050	0.095	3.745	Yes	95
		OP	118	0.0030	0.056	2.734	Yes	95
		NH3	118	-0.0133	-0.253	-7.416	Yes	95
	TSS	118	-0.1904	-3.618	-1.004	No	< 80	
	10	DO	245	0.0650	0.650	1.570	No	90
		mDO	127	0.1248	1.248	2.092	Yes	95
		Temp	247	0.0991	0.991	1.724	No	90
		mTemp	127	0.0415	0.415	0.753	No	< 80
		FC	246	-0.1420	-1.420	-1.110	No	< 80
		mFC	114	-0.6689	-6.689	-0.331	No	< 80
	5	DO	119	-0.2099	-1.050	-1.340	No	80
		mDO	62	-0.2160	-1.080	-1.032	No	< 80
		Temp	121	0.1502	0.751	1.084	No	< 80
mTemp		62	0.3175	1.588	1.419	No	80	
FC		120	0.0000	0.000	0.461	No	< 80	
mFC		62	-1.2450	-6.225	-0.258	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
36	19	pH	457	-0.0236	-0.449	-7.733	Yes	95
		mpH	241	-0.0241	-0.458	-5.244	Yes	95
		DO	473	0.0131	0.249	0.591	No	< 80
		mDO	243	0.0193	0.367	0.019	No	< 80
		DO % sat	480	0.1215	2.309	0.697	No	< 80
		mDO % sat	245	0.1062	2.018	0.627	No	< 80
		Temp	484	0.0167	0.317	0.749	No	< 80
		mTemp	244	0.0541	1.029	1.892	No	90
		Turb	440	-0.0827	-1.572	-2.294	Yes	95
		mTurb	230	-0.0968	-1.839	-1.961	Yes	95
		FC	485	1.0670	20.273	3.473	Yes	95
		mFC	244	1.6990	32.281	2.505	Yes	95
		NO3+NO2	120	-0.0004	-0.007	-1.524	No	80
		TKN	120	-0.0172	-0.326	-3.242	Yes	95
		TP	120	0.0040	0.075	2.487	Yes	95
		OP	120	0.0034	0.065	2.777	Yes	95
		NH3	120	-0.0093	-0.177	-5.997	Yes	95
	TSS	120	0.0000	0.000	0.386	No	< 80	
	10	DO	249	0.0188	0.188	0.370	No	< 80
		mDO	127	0.0000	0.000	0.000	No	< 80
		Temp	253	-0.0399	-0.399	-0.561	No	< 80
		mTemp	127	0.0813	0.813	0.937	No	< 80
		FC	253	0.0000	0.000	0.288	No	< 80
		mFC	127	1.0740	10.740	0.633	No	< 80
	5	DO	123	-0.2618	-1.309	-1.615	No	80
		mDO	62	-0.1142	-0.571	-1.204	No	< 80
		Temp	124	0.1029	0.515	0.343	No	< 80
mTemp		62	0.3201	1.601	0.936	No	< 80	
FC		123	3.9510	19.755	1.613	No	80	
mFC		62	10.7200	53.600	1.872	No	90	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
37	19	pH	453	-0.0193	-0.366	-6.760	Yes	95
		mpH	239	-0.0182	-0.347	-4.371	Yes	95
		DO	460	-0.0100	-0.189	0.456	No	< 80
		mDO	240	-0.0015	-0.028	-0.028	No	< 80
		DO % sat	477	-0.2315	-4.399	-0.972	No	< 80
		mDO % sat	232	-0.1474	-2.801	-0.523	No	< 80
		Temp	481	0.0214	0.407	0.948	No	< 80
		mTemp	243	0.0499	0.947	2.218	Yes	95
		Turb	441	-0.1994	-3.789	-2.809	Yes	95
		mTurb	230	-0.4071	-7.735	-4.028	Yes	95
		FC	484	4.0090	76.171	3.788	Yes	95
		mFC	243	6.8980	131.062	3.295	Yes	95
		NO3+NO2	120	-0.0125	-0.238	-1.128	No	< 80
		TKN	120	0.0077	0.146	0.488	No	< 80
		TP	120	0.0059	0.112	1.749	No	90
		OP	120	0.0075	0.143	2.241	Yes	95
		NH3	120	-0.0125	-0.238	-1.128	No	< 80
	TSS	120	-0.1177	-2.236	-0.560	No	< 80	
	10	DO	241	0.0083	0.083	0.111	No	< 80
		mDO	125	-0.0310	-0.310	-0.334	No	< 80
		Temp	248	-0.0711	-0.711	-1.246	No	< 80
		mTemp	126	0.0250	0.250	0.638	No	< 80
		FC	248	0.0000	0.000	-1.003	No	80
		mFC	126	-6.7050	-67.050	-0.756	No	80
	5	DO	121	-0.5673	-2.837	-2.916	Yes	95
		mDO	62	-0.5059	-2.530	-3.403	Yes	95
		Temp	122	0.0727	0.363	0.559	No	< 80
		mTemp	62	0.2954	1.477	2.068	Yes	95
		FC	121	-5.1740	-25.870	-0.913	No	< 80
		mFC	62	-35.6100	-178.050	-1.668	No	90



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
38	19	pH	449	-0.0271	-0.514	-7.612	Yes	95
		mpH	239	-0.0277	-0.527	-5.750	Yes	95
		DO	449	-0.0742	-1.409	-2.936	Yes	95
		mDO	236	-0.0937	-1.780	-3.316	Yes	95
		DO % sat	466	-0.7592	-14.425	-3.130	Yes	95
		mDO % sat	244	-0.9033	-17.163	-3.451	Yes	95
		Temp	477	0.0084	0.159	0.514	No	< 80
		mTemp	243	0.0250	0.475	0.906	No	< 80
		Turb	436	-0.3304	-6.278	-4.494	Yes	95
		mTurb	229	-0.4298	-8.166	-4.550	Yes	95
		FC	477	0.9951	18.907	2.254	Yes	95
		mFC	243	1.9430	36.917	1.594	No	80
		NO3+NO2	119	0.0029	0.056	2.243	Yes	95
		TKN	119	0.0150	0.286	1.203	No	< 80
		TP	119	0.0129	0.245	2.254	Yes	95
		OP	119	0.0144	0.274	3.679	Yes	95
		NH3	119	-0.0037	-0.071	-0.332	No	< 80
	TSS	119	-0.4547	-8.639	-1.222	No	< 80	
	10	DO	237	-0.2415	-2.415	-3.238	Yes	95
		mDO	124	-0.2691	-2.691	-3.314	Yes	95
		Temp	249	-0.1610	-1.610	-2.816	Yes	95
		mTemp	127	-0.0745	-0.745	-1.428	No	80
		FC	248	-3.2450	-32.450	-1.702	No	90
		mFC	127	-6.5450	-65.450	-1.053	No	< 80
	5	DO	120	-0.8649	-4.325	-4.066	Yes	95
		mDO	62	-0.8124	-4.062	-4.337	Yes	95
		Temp	121	-0.0999	-0.499	-0.508	No	< 80
		mTemp	62	0.1739	0.870	0.467	No	< 80
		FC	120	8.9460	44.730	1.700	No	90
		mFC	62	26.7300	133.650	1.605	No	80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
39	19	pH	456	-0.0175	-0.333	-7.597	Yes	95
		mpH	241	-0.0172	-0.327	-5.135	Yes	95
		DO	479	0.0100	0.190	1.381	No	80
		mDO	244	0.0018	0.035	0.198	No	< 80
		DO % sat	481	0.0465	0.884	1.248	No	< 80
		mDO % sat	246	0.0318	0.604	0.624	No	< 80
		Temp	485	-0.0154	-0.292	-1.203	No	< 80
		mTemp	245	0.0000	0.000	0.143	No	< 80
		Turb	440	-0.0285	-0.542	-0.962	No	< 80
		mTurb	230	-0.0757	-1.438	-1.674	No	90
		FC	484	-0.3099	-5.888	-2.401	Yes	95
		mFC	245	-1.1370	-21.603	-2.284	Yes	95
		NO3+NO2	120	-0.0059	-0.112	-1.821	No	90
		TKN	120	-0.0022	-0.042	-1.769	No	90
		TP	120	0.0000	0.000	3.107	Yes	95
		OP	120	0.0016	0.031	4.669	Yes	95
		NH3	120	-0.0012	-0.023	-2.000	Yes	95
	TSS	120	0.0000	0.000	-1.242	No	< 80	
	10	DO	247	0.0693	0.693	3.555	Yes	95
		mDO	128	0.0344	0.344	1.574	No	90
		Temp	250	-0.1291	-1.291	-3.703	Yes	95
		mTemp	128	-0.0754	-0.754	-1.717	No	90
		FC	249	0.0000	0.000	-1.245	No	< 80
		mFC	128	0.0000	0.000	0.000	No	< 80
	5	DO	122	0.0101	0.050	0.075	No	< 80
		mDO	62	-0.0811	-0.405	-1.534	No	80
		Temp	123	0.0000	0.000	-0.074	No	< 80
mTemp		62	0.0930	0.465	0.669	No	< 80	
FC		122	0.0000	0.000	0.457	No	< 80	
mFC		62	1.8530	0.000	0.268	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
40	19	pH	430	-0.0140	-0.265	-5.097	Yes	95
		mpH	221	-0.0128	-0.244	-3.400	Yes	95
		DO	454	-0.0151	-0.287	-1.180	No	< 80
		mDO	225	0.0028	0.053	0.173	No	< 80
		DO % sat	454	-0.1324	-2.516	-1.125	No	< 80
		mDO % sat	227	0.0319	0.606	0.321	No	< 80
		Temp	456	0.0166	0.316	1.217	No	< 80
		mTemp	227	-0.0277	-0.526	-1.768	No	90
		Turb	419	-0.1505	-2.860	-2.121	Yes	95
		mTurb	212	-0.1444	-2.744	-1.370	No	80
		FC	452	1.2330	23.427	2.773	Yes	95
		mFC	226	2.2600	42.940	2.210	Yes	95
		NO3+NO2	112	-0.0084	-0.160	-1.630	No	80
		TKN	113	-0.0080	-0.152	-1.415	No	80
		TP	113	0.0015	0.028	4.199	Yes	95
		OP	112	-0.0006	-0.011	-0.635	No	< 80
		NH3	113	-0.0072	-0.137	-2.428	Yes	95
	TSS	112	0.0000	0.000	0.304	No	< 80	
	10	DO	225	0.0188	0.188	0.379	No	< 80
		mDO	112	0.0729	0.729	1.405	No	80
		Temp	225	0.0167	0.167	0.442	No	< 80
		mTemp	112	-0.0250	-0.250	-0.563	No	< 80
		FC	225	6.3960	63.960	4.679	Yes	95
		mFC	112	11.9000	119.000	4.019	Yes	95
	5	DO	98	-0.0407	-0.203	-0.314	No	< 80
		mDO	49	-0.1122	-0.561	-0.967	No	< 80
		Temp	98	0.1962	0.981	1.609	No	80
mTemp		49	0.1629	0.815	1.208	No	< 80	
FC		98	20.1700	100.850	3.156	Yes	95	
mFC		48	24.2400	121.200	2.311	Yes	95	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
41	19	pH	461	-0.0100	-0.189	-3.716	Yes	95
		mpH	239	-0.0075	-0.143	-2.167	Yes	95
		DO	485	0.0300	0.571	1.662	Yes	95
		mDO	242	0.0364	0.692	1.655	No	90
		DO % sat	486	0.2308	4.385	1.430	No	80
		mDO % sat	244	0.2285	4.342	1.184	No	< 80
		Temp	490	0.0000	0.000	0.003	No	< 80
		mTemp	243	0.0062	0.119	0.310	No	< 80
		Turb	452	0.2366	4.495	6.270	Yes	95
		mTurb	229	0.2270	4.313	3.919	Yes	95
		FC	488	1.0710	20.349	2.912	Yes	95
		mFC	243	1.6110	30.609	2.395	Yes	95
		NO3+NO2	121	0.0000	0.000	-0.742	No	< 80
		TKN	120	-0.0078	-0.149	-1.526	No	80
		TP	121	0.0047	0.089	4.750	Yes	95
		OP	121	0.0036	0.067	5.314	Yes	95
	NH3	121	-0.0057	-0.108	-3.057	Yes	95	
	TSS	121	0.1394	2.649	3.575	Yes	95	
	10	DO	254	0.0300	0.300	0.860	No	< 80
		mDO	127	0.0295	0.295	0.823	No	< 80
		Temp	256	-0.0998	-0.998	-2.136	Yes	95
		mTemp	127	-0.1228	-1.228	-2.612	Yes	95
		FC	256	-1.1180	-11.180	-1.975	Yes	95
		mFC	127	-3.3850	-33.850	-1.767	No	90
	5	DO	123	-0.4582	-2.291	-3.307	No	90
		mDO	62	-0.4902	-2.451	-2.064	Yes	95
		Temp	125	0.2882	1.441	1.554	No	80
mTemp		62	0.2731	1.366	2.709	Yes	95	
FC		125	4.3100	21.550	1.445	No	80	
mFC		63	5.1860	25.930	0.582	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
42	19	pH	459	-0.0080	-0.152	-3.151	Yes	95
		mpH	236	-0.0084	-0.159	-2.388	Yes	95
		DO	483	0.0574	1.090	4.650	Yes	95
		mDO	241	0.0713	1.354	4.215	Yes	95
		DO % sat	485	0.4410	8.379	4.673	Yes	95
		mDO % sat	243	0.5014	9.527	4.457	Yes	95
		Temp	488	0.0251	0.476	1.635	No	80
		mTemp	242	-0.0246	-0.467	-1.386	No	80
		Turb	449	0.0425	0.808	3.830	Yes	95
		mTurb	228	0.0510	0.968	2.842	Yes	95
		FC	482	2.2270	42.313	6.141	Yes	95
		mFC	242	3.0450	57.855	4.580	Yes	95
		NO3+NO2	121	-0.0008	-0.014	-0.625	No	< 80
		TKN	120	-0.0099	-0.188	-2.451	Yes	95
		TP	121	0.0000	0.000	1.097	No	< 80
		OP	121	0.0007	0.013	1.908	No	90
		NH3	121	-0.0026	-0.050	-3.469	Yes	95
	TSS	121	0.0000	0.000	1.479	No	80	
	10	DO	254	-0.1682	-1.682	-5.140	Yes	95
		mDO	127	-0.1785	-1.785	-3.951	Yes	95
		Temp	256	-0.0978	-0.978	-2.149	Yes	95
		mTemp	127	-0.1393	-1.393	-2.687	Yes	95
		FC	255	1.5020	15.020	1.925	No	90
		mFC	127	3.7070	37.070	1.341	No	80
	5	DO	124	-0.2487	-1.244	-2.960	Yes	95
		mDO	62	-0.3050	-1.525	-2.650	Yes	95
		Temp	125	0.0000	0.000	0.024	No	< 80
mTemp		62	0.0999	0.500	0.970	No	< 80	
FC		124	10.0000	50.000	3.215	Yes	95	
mFC		62	23.3500	116.750	2.521	Yes	95	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
43	19	pH	452	-0.0254	-0.483	-8.222	Yes	95
		mpH	234	-0.0254	-0.482	-6.144	Yes	95
		DO	475	-0.0416	-0.791	-2.303	Yes	95
		mDO	237	-0.0334	-0.635	-1.509	No	80
		DO % sat	477	-0.3981	-7.564	-2.171	Yes	95
		mDO % sat	241	-0.2958	-5.620	-1.442	No	80
		Temp	480	0.0067	0.126	0.634	No	< 80
		mTemp	239	0.0235	0.447	1.630	No	80
		Turb	444	0.3287	6.245	7.040	Yes	95
		mTurb	225	0.3178	6.038	4.933	Yes	95
		FC	474	1.2530	23.807	3.485	Yes	95
		mFC	239	2.6660	50.654	3.287	Yes	95
		NO3+NO2	118	0.0000	0.000	-0.233	No	< 80
		TKN	117	0.0015	0.029	0.288	No	< 80
		TP	118	0.0024	0.046	1.850	No	90
		OP	118	0.0000	0.000	0.230	No	< 80
		NH3	118	0.0008	0.014	0.266	No	< 80
	TSS	118	0.1331	2.529	1.481	No	80	
	10	DO	252	-0.0550	-0.550	-1.008	No	< 80
		mDO	126	-0.0351	-0.351	-0.380	No	< 80
		Temp	255	-0.0503	-0.503	-1.454	No	80
		mTemp	127	-0.0884	-0.884	-2.003	Yes	95
		FC	253	0.0000	0.000	1.063	No	< 80
		mFC	127	0.4763	4.763	0.141	No	< 80
	5	DO	122	-0.2509	-1.255	-1.654	No	90
		mDO	62	-0.2625	-1.313	-1.935	No	90
		Temp	124	0.0414	0.207	0.441	No	< 80
mTemp		62	0.0874	0.437	0.582	No	< 80	
FC		122	3.5140	17.570	1.189	No	< 80	
mFC		62	10.9000	54.500	1.161	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
44	19	pH	417	-0.0478	-0.907	-12.560	Yes	95
		mpH	217	-0.0481	-0.914	-9.314	Yes	95
		DO	437	-0.1179	-2.240	-5.669	Yes	95
		mDO	220	-0.1105	-2.100	-4.406	Yes	95
		DO % sat	440	-1.1460	-21.774	-5.522	Yes	95
		mDO % sat	222	-1.0410	-19.779	3.843	Yes	95
		Temp	444	-0.0091	-0.172	-0.541	No	< 80
		mTemp	222	0.0141	0.268	0.476	No	< 80
		Turb	407	-0.0332	-0.630	-0.472	No	< 80
		mTurb	209	-0.0972	-1.847	1.211	No	< 80
		FC	441	0.0000	0.000	0.602	No	< 80
		mFC	222	0.1214	2.307	0.207	No	< 80
		NO3+NO2	99	-0.0011	-0.021	-1.128	No	< 80
		TKN	99	-0.0209	-0.397	-2.011	Yes	95
		TP	100	0.0075	0.143	4.754	Yes	95
		OP	99	-0.0013	-0.025	-1.164	No	< 80
		NH3	100	-0.0052	-0.099	-1.582	No	80
	TSS	99	0.0000	0.000	0.174	No	< 80	
	10	DO	252	-0.0795	-0.795	-1.905	No	90
		mDO	126	-0.0785	-0.785	-1.353	No	80
		Temp	253	-0.0541	-0.541	-1.299	No	80
		mTemp	127	-0.0833	-0.833	-1.177	No	< 80
		FC	253	-3.1940	-31.940	-2.389	Yes	95
		mFC	127	-6.1360	-61.360	2.096	Yes	95
	5	DO	123	-0.1480	-0.740	-1.246	No	< 80
		mDO	61	-0.0903	-0.903	-0.723	No	< 80
		Temp	124	0.0983	0.491	0.839	No	< 80
mTemp		62	0.1496	0.748	1.032	No	< 80	
FC		124	7.7250	38.625	2.039	Yes	95	
mFC		62	9.5050	47.525	0.903	No	< 80	



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
45	19	pH	444	0.0059	0.112	1.467	No	80
		mpH	237	0.0057	0.109	1.303	No	80
		DO	463	0.0130	0.247	2.753	Yes	95
		mDO	239	0.0100	0.190	1.862	No	90
		DO % sat	463	0.0764	1.451	2.229	Yes	95
		mDO % sat	242	0.0708	1.345	1.506	No	80
		Temp	472	0.0000	0.000	0.524	No	< 80
		mTemp	242	0.0000	0.000	0.303	No	< 80
		Turb	437	-0.1260	-2.394	-3.875	Yes	95
		mTurb	229	-0.1688	-3.207	-2.982	Yes	95
		FC	466	0.0000	0.000	-0.550	No	< 80
		mFC	242	-0.0503	-0.955	-1.266	No	< 80
		NO3+NO2	116	0.0000	0.000	0.666	No	< 80
		TKN	116	0.0000	0.000	-1.642	No	< 80
		TP	116	0.0000	0.000	-3.301	Yes	95
		OP	116	0.0000	0.000	3.743	Yes	95
		NH3	116	0.0000	0.000	-0.858	No	< 80
		TSS	116	-0.1904	-3.618	-1.900	No	90
	10	DO	247	0.0554	0.554	3.709	Yes	95
		mDO	127	0.0685	0.685	4.039	Yes	95
		Temp	249	-0.0604	-0.604	-2.059	Yes	95
		mTemp	127	-0.0896	-0.896	-2.967	Yes	95
		FC	249	0.0000	0.000	0.769	No	< 80
		mFC	127	-0.0202	-0.202	-0.401	No	< 80
	5	DO	123	-0.0257	-0.128	-0.849	No	< 80
		mDO	62	-0.0554	-0.277	-1.290	No	80
		Temp	125	-0.0999	-0.499	-1.101	No	< 80
		mTemp	62	-0.0503	-0.251	-0.582	No	< 80
		FC	125	0.0000	0.000	0.124	No	< 80
		mFC	62	-0.0502	-0.251	-0.195	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
46	19	pH	450	0.0007	0.013	0.266	No	< 80
		mpH	234	0.0025	0.048	0.068	No	< 80
		DO	475	0.0159	0.301	3.875	Yes	95
		mDO	240	0.0224	0.426	4.202	Yes	95
		DO % sat	476	0.0998	1.895	3.285	Yes	95
		mDO % sat	242	0.0856	1.627	2.424	Yes	95
		Temp	479	0.0000	0.000	-0.260	No	< 80
		mTemp	241	-0.0249	-0.473	-1.949	No	90
		Turb	445	-0.1249	-2.373	-3.998	Yes	95
		mTurb	227	-0.1658	-3.150	-3.150	Yes	95
		FC	478	0.0000	0.000	1.218	No	< 80
		mFC	241	0.1124	2.136	1.393	No	80
		NO3+NO2	118	0.0004	0.007	1.123	No	< 80
		TKN	117	0.0000	0.000	0.062	No	< 80
		TP	118	0.0000	0.000	-1.877	No	90
		OP	118	0.0000	0.000	3.680	Yes	95
		NH3	118	0.0000	0.000	2.083	Yes	95
	TSS	117	-0.1731	-3.289	-2.044	Yes	95	
	10	DO	250	0.0482	0.482	4.088	Yes	95
		mDO	126	0.0676	0.676	3.995	Yes	95
		Temp	251	-0.0573	-0.573	-1.932	No	90
		mTemp	126	-0.0911	-0.911	-2.718	Yes	95
		FC	252	0.0000	0.000	1.409	No	80
		mFC	126	0.2111	2.111	1.217	No	< 80
	5	DO	122	0.0000	0.000	-0.050	No	< 80
		mDO	61	-0.0301	-0.150	-0.792	No	< 80
		Temp	124	-0.0333	-0.166	-0.443	No	< 80
		mTemp	61	0.0488	0.244	0.398	No	< 80
		FC	125	0.0000	0.000	-0.568	No	< 80
		mFC	61	-0.7439	-3.720	-0.533	No	< 80



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
47	19	pH	462	-0.0720	-1.367	-15.750	Yes	95
		mpH	239	-0.0727	-1.381	-11.730	Yes	95
		DO	485	-0.0020	-0.038	-0.350	No	< 80
		mDO	242	-0.0068	-0.128	-0.928	No	< 80
		DO % sat	486	-0.0111	-0.211	-0.247	No	< 80
		mDO % sat	244	0.0176	0.334	0.298	No	< 80
		Temp	490	0.0121	0.230	1.408	No	80
		mTemp	243	0.0231	0.438	2.124	Yes	95
		Turb	451	-0.0084	-0.159	-0.429	No	< 80
		mTurb	229	-0.0029	-0.054	0.198	No	< 80
		FC	483	0.0385	0.732	3.416	Yes	95
		mFC	242	0.1457	2.768	3.153	Yes	95
		NO3+NO2	121	0.0054	0.103	3.236	Yes	95
		TKN	120	0.0000	0.000	0.950	No	< 80
		TP	121	0.0009	0.017	4.676	Yes	95
		OP	121	0.0020	0.039	4.966	Yes	95
		NH3	121	-0.0012	-0.022	-3.164	Yes	95
	TSS	121	-0.6971	-13.245	-2.140	Yes	95	
	10	DO	254	0.0242	0.242	1.343	No	80
		mDO	127	0.0252	0.252	1.318	No	80
		Temp	256	-0.0332	-0.332	-1.365	No	80
		mTemp	127	-0.0778	-0.778	-2.027	Yes	95
		FC	253	0.0000	0.000	1.052	No	< 80
		mFC	126	0.1495	1.495	1.048	No	< 80
	5	DO	123	-0.0295	-0.148	-0.822	No	< 80
		mDO	62	-0.0750	-0.375	-1.752	No	90
		Temp	125	-0.1292	-0.646	-2.295	Yes	95
		mTemp	62	-0.0874	-0.437	-0.518	No	< 80
		FC	124	0.1664	0.832	1.403	No	80
		mFC	62	0.8022	4.011	1.684	No	90



Site	Period (years)	Parameter	n	Slope	Δ (units/period)	Z-score	Significant (95%)	Confidence (%)
48	19	pH	462	-0.0202	-0.384	-7.993	Yes	95
		mpH	239	-0.0192	-0.365	-5.971	Yes	95
		DO	485	0.0277	0.526	1.985	Yes	95
		mDO	242	0.0260	0.493	4.133	Yes	95
		DO % sat	486	0.2407	4.573	7.233	Yes	95
		mDO % sat	244	0.2364	4.492	5.769	Yes	95
		Temp	489	0.0330	0.628	3.163	Yes	95
		mTemp	243	0.0357	0.678	3.179	Yes	95
		Turb	452	0.0050	0.094	0.618	No	< 80
		mTurb	229	0.0005	0.009	0.010	No	< 80
		FC	484	0.0000	0.000	-0.933	No	< 80
		mFC	229	0.0005	0.009	0.010	No	< 80
		NO3+NO2	121	-0.0039	-0.075	-2.347	Yes	95
		TKN	119	-0.0087	-0.165	-3.101	Yes	95
		TP	121	0.0020	0.038	4.809	Yes	95
		OP	121	0.0000	0.000	0.510	No	< 80
		NH3	121	-0.0050	-0.095	-8.246	Yes	95
	TSS	121	0.0000	0.000	0.181	No	< 80	
	10	DO	255	0.0800	0.800	5.286	Yes	95
		mDO	127	0.0908	0.908	4.703	Yes	95
		Temp	255	0.0000	0.000	-0.421	No	< 80
		mTemp	127	-0.0498	-0.498	-1.341	No	80
		FC	254	0.0000	0.000	-1.408	No	80
		mFC	127	-2.1900	-21.900	-1.178	No	< 80
	5	DO	125	0.0202	0.101	0.390	No	< 80
		mDO	62	-0.0141	-0.070	-0.194	No	< 80
		Temp	126	0.0418	0.209	0.289	No	< 80
mTemp		62	0.0749	0.374	0.774	No	< 80	
FC		125	0.0000	0.000	0.568	No	< 80	
mFC		62	3.4620	17.310	0.847	No	< 80	