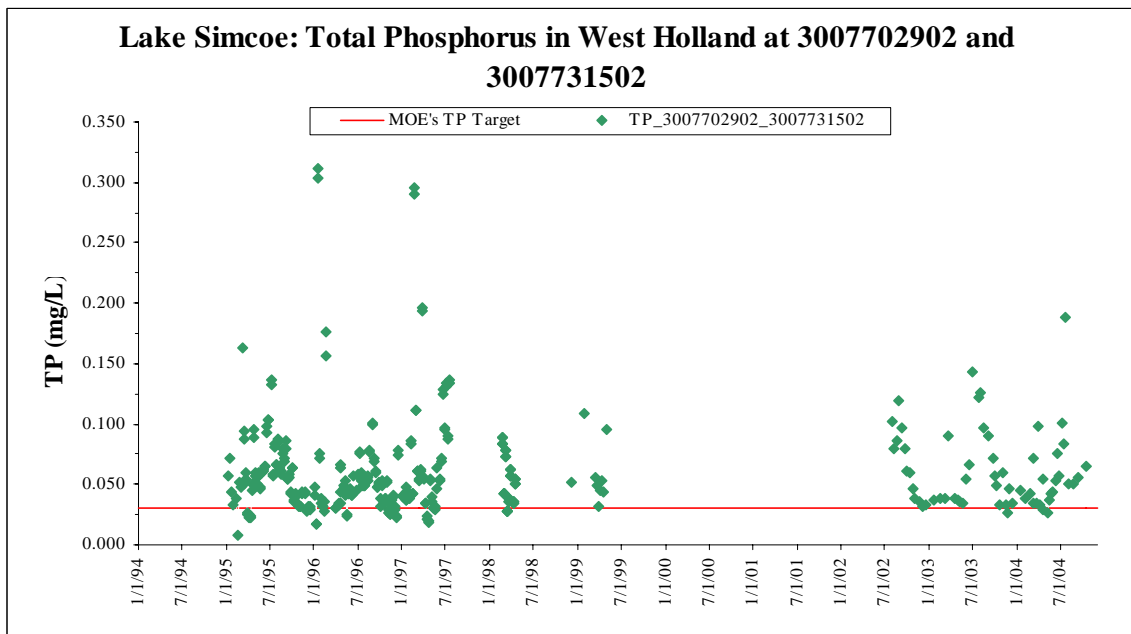
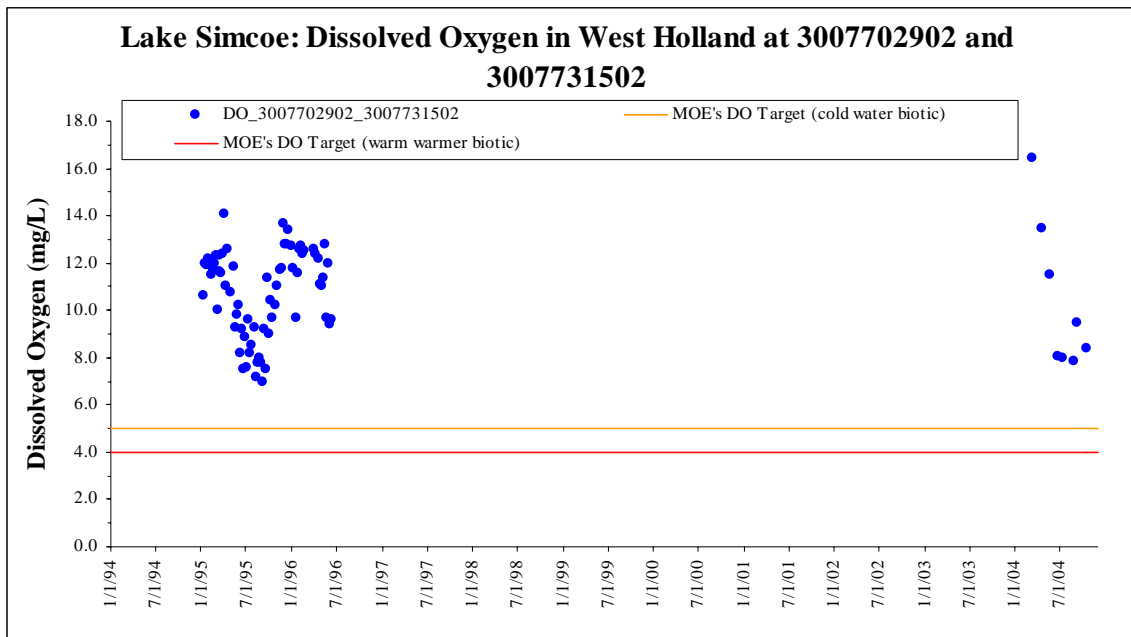
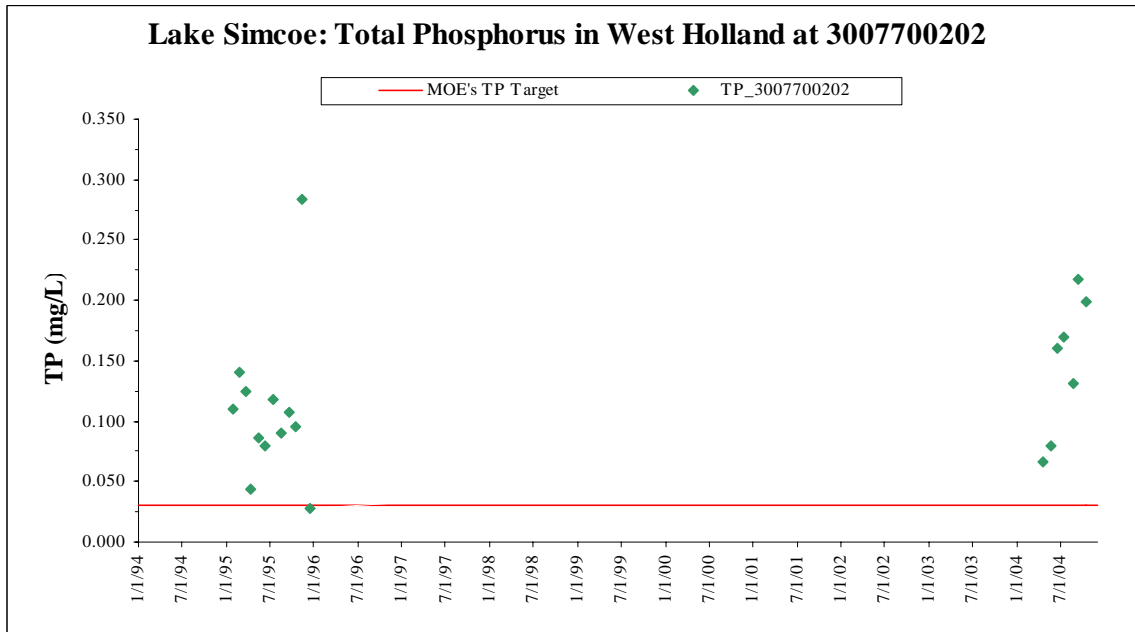
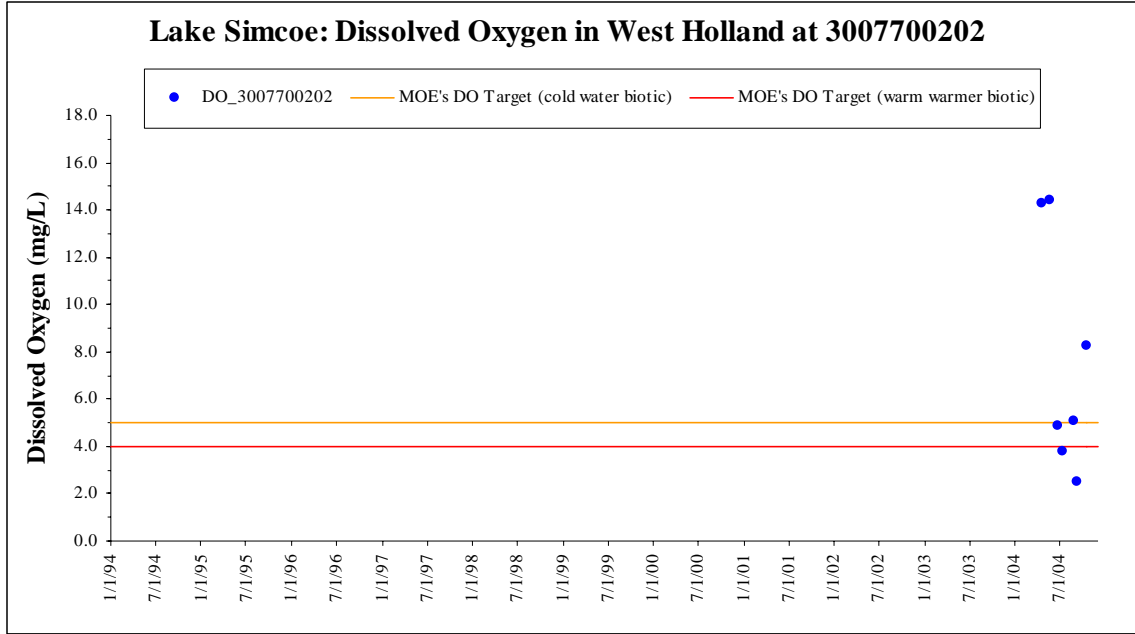


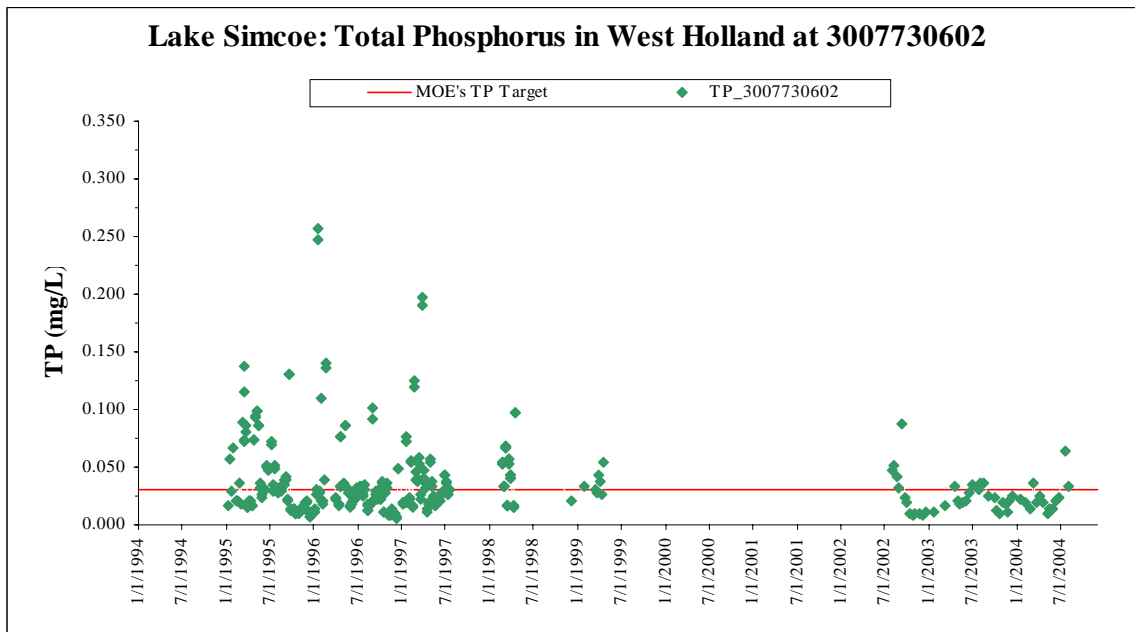
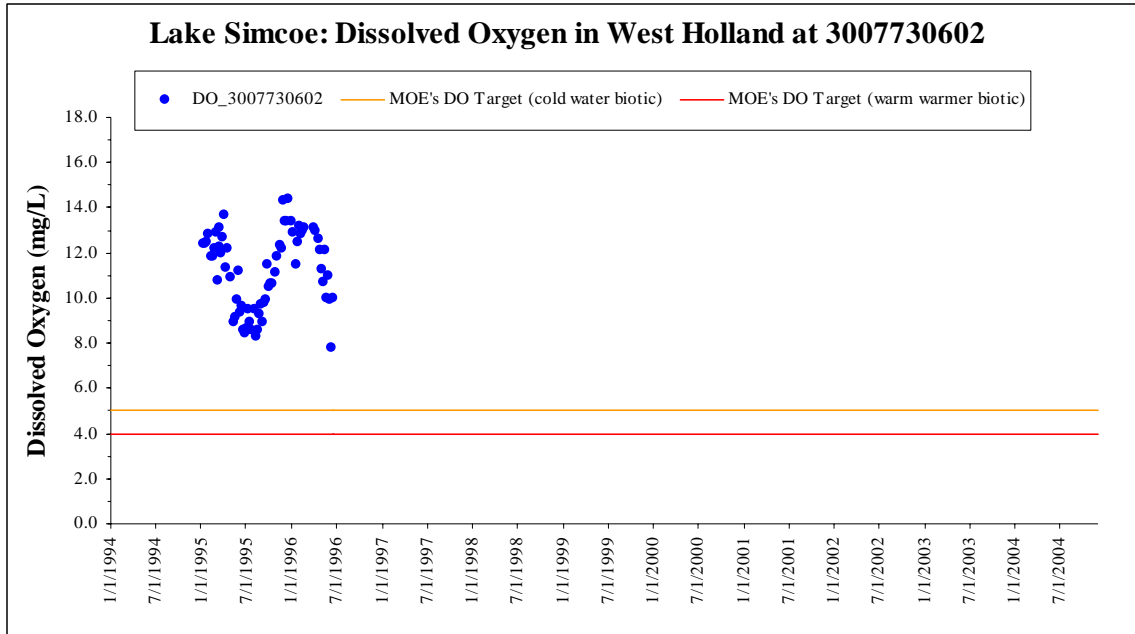
A. Appendix: Ambient Water Quality Data

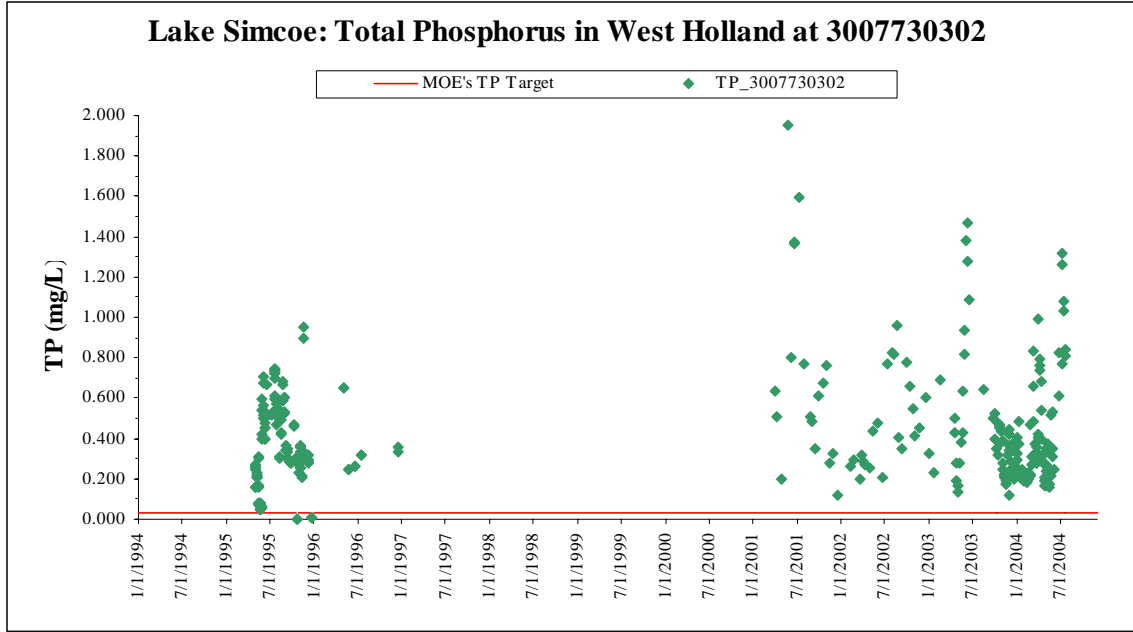
Water Quality at the West Holland Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
3007702902	Count	8	8	8	8	8	8	8	8	8	-	8	8
	Mean	10.40	13.21	7.94	613	0.063	0.016	0.59	0.04	0.51	1.10	13.56	10.51
	Min	7.87	1.00	7.65	547	0.043	0.001	0.49	0.03	0.11	0.60	6.20	5.40
	Max	16.45	21.80	8.11	679	0.084	0.029	0.69	0.06	1.88	2.57	28.60	18.10
	Range	2004	2004	2004	2004	2004	2004	2004	2004	2004	-	2004	2004
3007731502	Count	68	-	-	85	329	-	130	128	191	-	-	-
	Mean	10.75	-	-	600	0.060	-	0.61	0.06	0.89	1.50	-	-
	Min	7	-	-	345	0.009	-	0.24	0.00	0.00	0.24	-	-
	Max	14.1	-	-	740	0.312	-	1.88	0.58	5.18	7.06	-	-
	Range	1995-1996	-	-	1995-2004	1995-2004	-	1995-1998	1995-1998	1995-2004	-	-	-
3007730602	Count	69	-	-	86	323	-	130	128	189	-	-	-
	Mean	11.23	-	-	623	0.038	-	0.43	0.04	0.84	1.27	-	-
	Min	7.8	-	-	438	0.005	-	0.22	0.00	0.00	0.22	-	-
	Max	14.4	-	-	760	0.367	-	1.60	0.56	2.11	3.71	-	-
	Range	1995-1996	-	-	1995-1997	1995-2004	-	1995-1998	1995-1998	1995-2004	-	-	-
3007731402	Count	65	-	-	82	248	-	125	123	124	-	-	-
	Mean	10.74	-	-	584	0.045	-	0.42	0.04	0.47	0.89	-	-
	Min	5.7	-	-	335	0.016	-	0.16	0.00	0.00	0.16	-	-
	Max	13.4	-	-	710	0.297	-	1.26	0.43	1.96	3.22	-	-
	Range	1995-1996	-	-	1995-1998	1995-1998	-	1995-1998	1995-1998	1995-1998	-	-	-
3007700202	Count	7	7	7	19	19	19	19	19	19	-	19	19
	Mean	7.60	17.04	7.85	676	0.123	0.063	1.00	0.11	1.88	2.88	9.77	7.13
	Min	2.53	8.20	7.15	0	0.028	0.003	0.64	0.00	0.02	0.66	2.00	1.70
	Max	14.39	22.80	8.53	928	0.284	0.240	1.52	0.32	9.50	11.02	16.00	13.90
	Range	2004	2004	2004	1995-2004	1995-2004	1995-2004	1995-2004	1995-2004	1995-2004	-	1995-2004	1995-2004
3007730302	Count	-	-	-	-	311	-	70	72	232	-	-	-
	Mean	-	-	-	-	0.424	-	2.53	0.32	14.34	16.87	-	-
	Min	-	-	-	-	0.000	-	0.46	0.02	0.00	0.46	-	-
	Max	-	-	-	-	1.955	-	5.70	1.45	49.03	54.73	-	-
	Range	-	-	-	-	1995-2004	-	1995-1996	1995-1996	1995-2004	-	-	-

TN_{comp.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Turb.: Turbidity



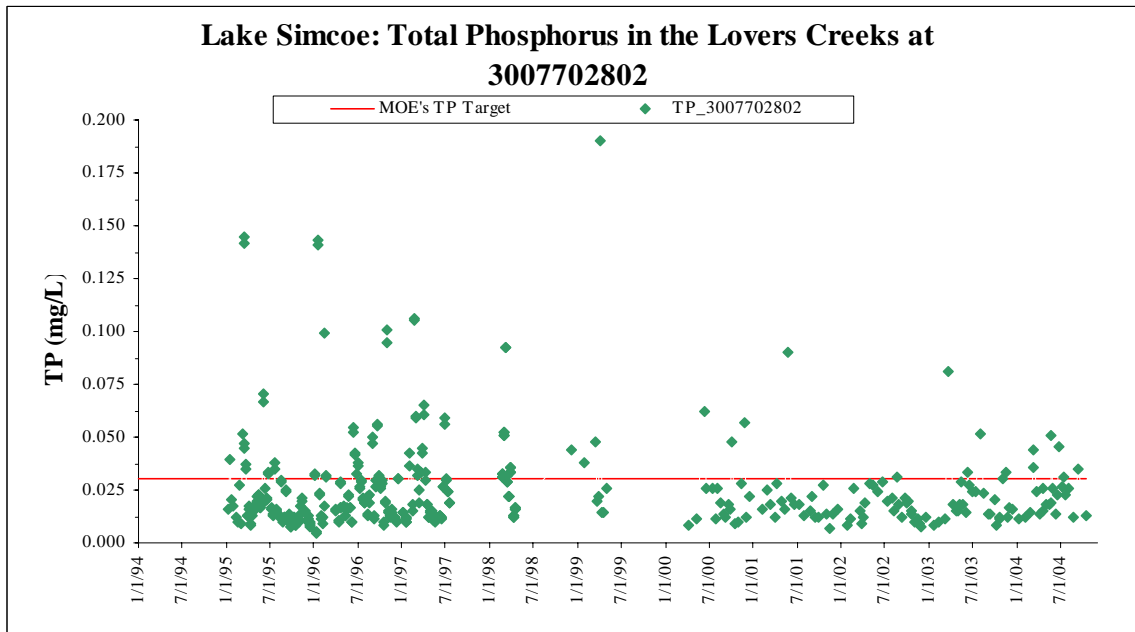
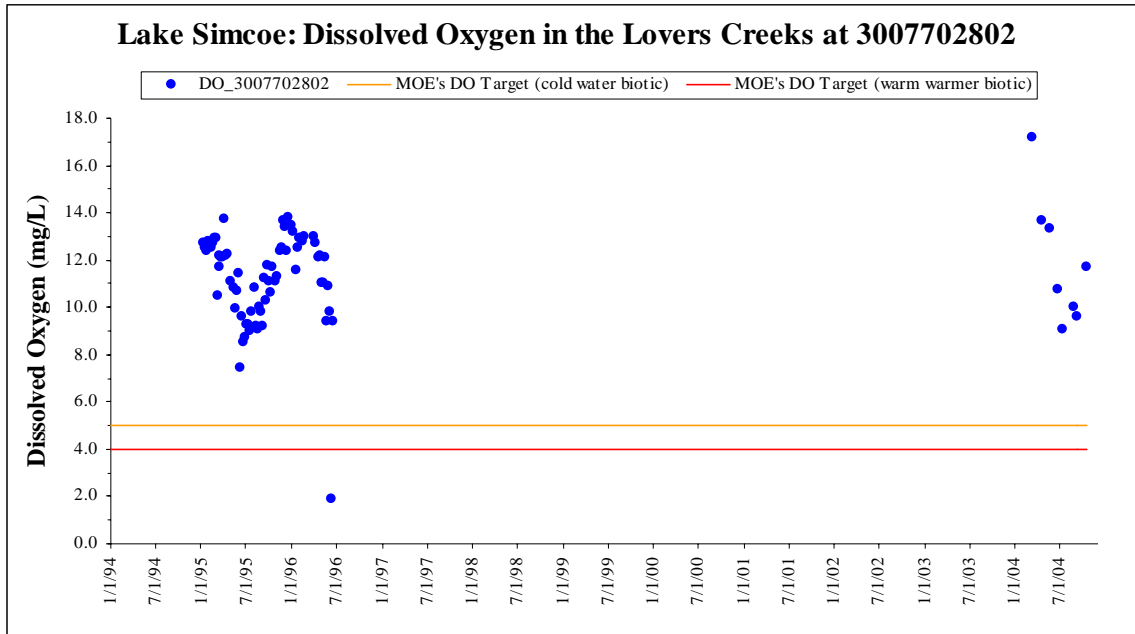






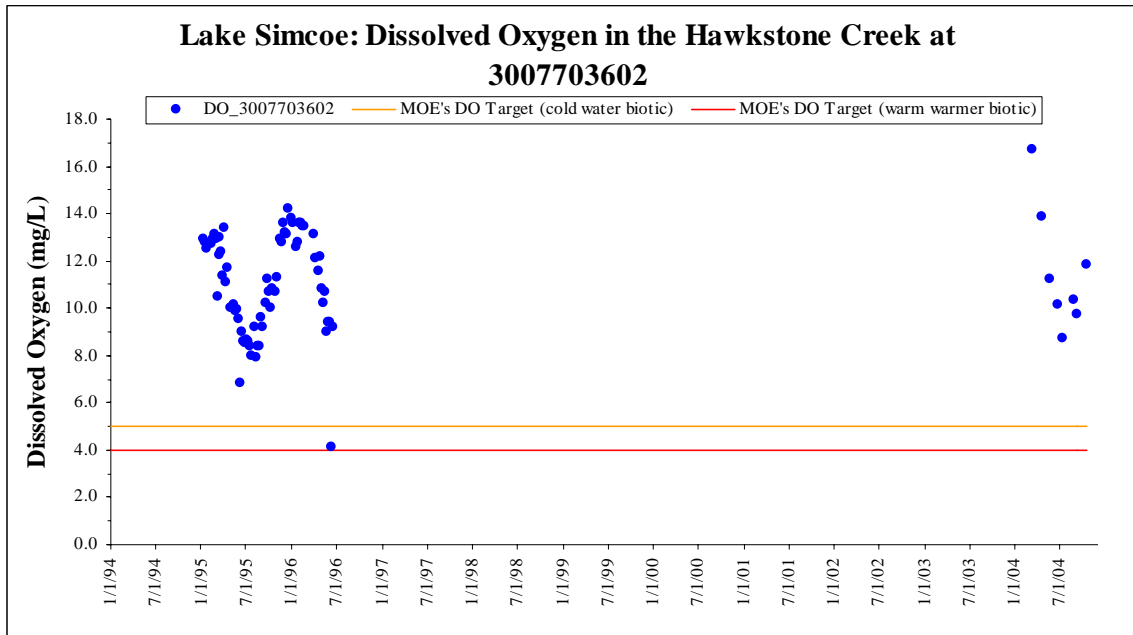
Water Quality at the Lovers Creeks Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3007702802	Count	77	8	8	94	394	8	137	135	144	-	8	8
	Mean	11.33	13.14	7.89	608	0.025	0.004	0.59	0.03	1.30	1.89	4.86	3.77
	Min	1.9	3.00	6.50	386	0.005	0.001	0.16	0.001	0.18	0.34	1.20	1.09
	Max	17.19	19.70	8.44	791	0.190	0.012	1.30	0.22	4.78	6.08	16.90	8.46
	Range	1995-2004	2004	2004	1995-2004	1995-2004	2004	1995-2004	1995-2004	1995-2004	1995-2004	-	2004

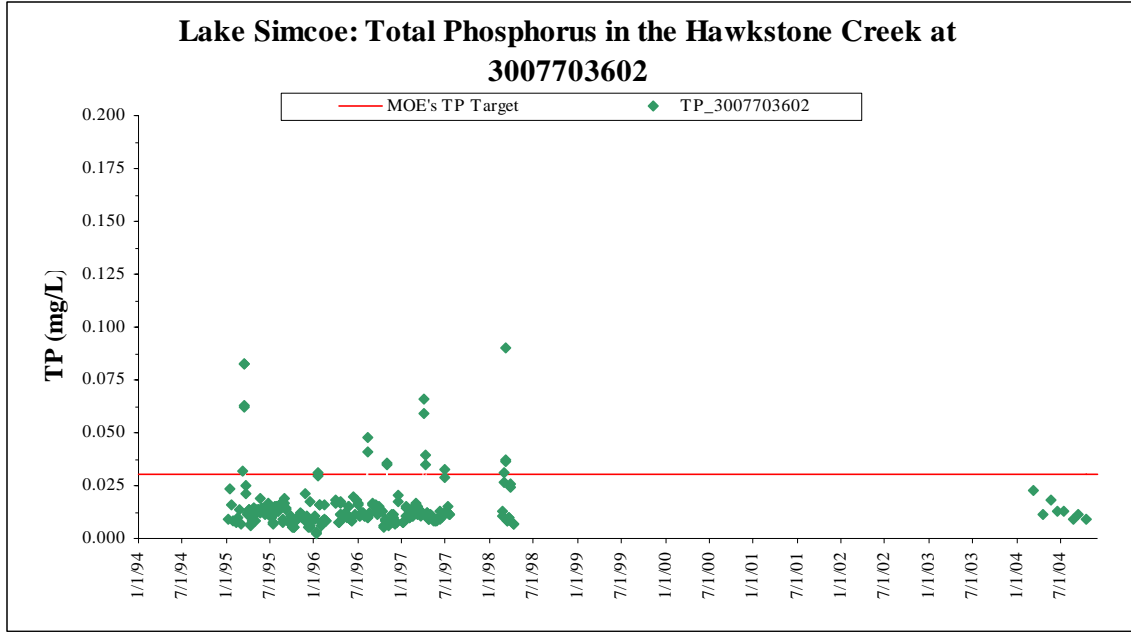
TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Turb.: Turbidity



Water Quality at the Hawkstone Creek Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3007703602	Count	76	8	-	93	251	-	137	135	209		8	8
	Mean	11.09	13.25	-	413.85	0.025	-	0.44	0.02	0.69	1.13	2.55	1.60
	Min	4.10	3.00	-	295.00	0.002	-	0.12	0.001	0.09	0.21	1.10	0.86
	Max	16.72	20.80	-	581.00	1.300	-	6.70	0.22	1.95	8.65	6.50	3.02
	Range	1995-2004	2004	-	1995-2004	1995-2004	-	1995-2004	1995-2004	1995-2004		2004	2004

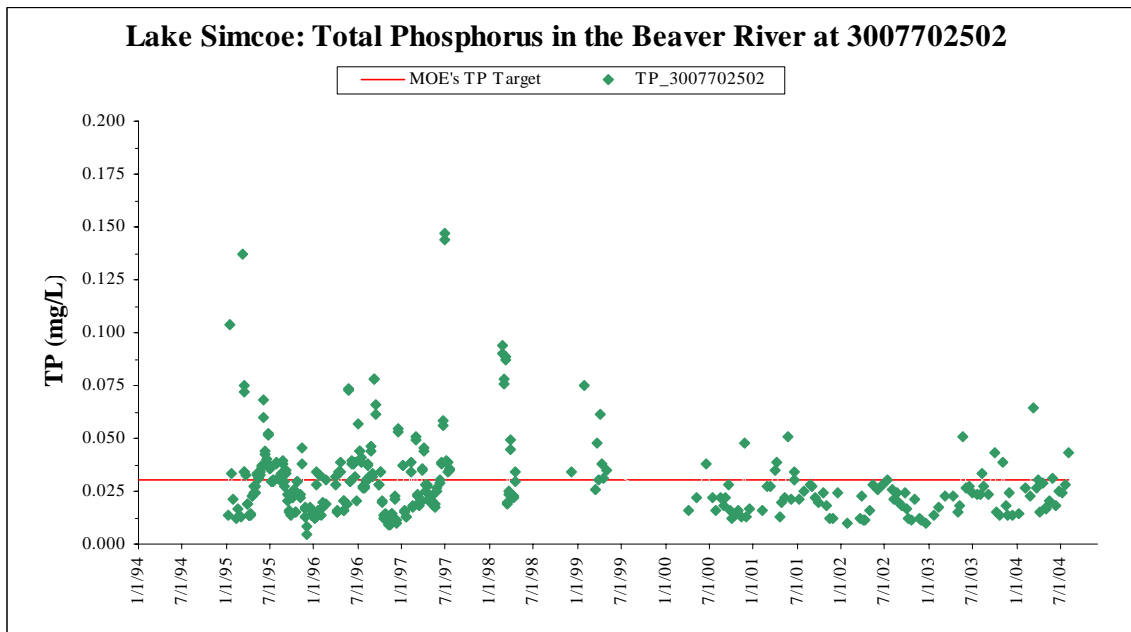
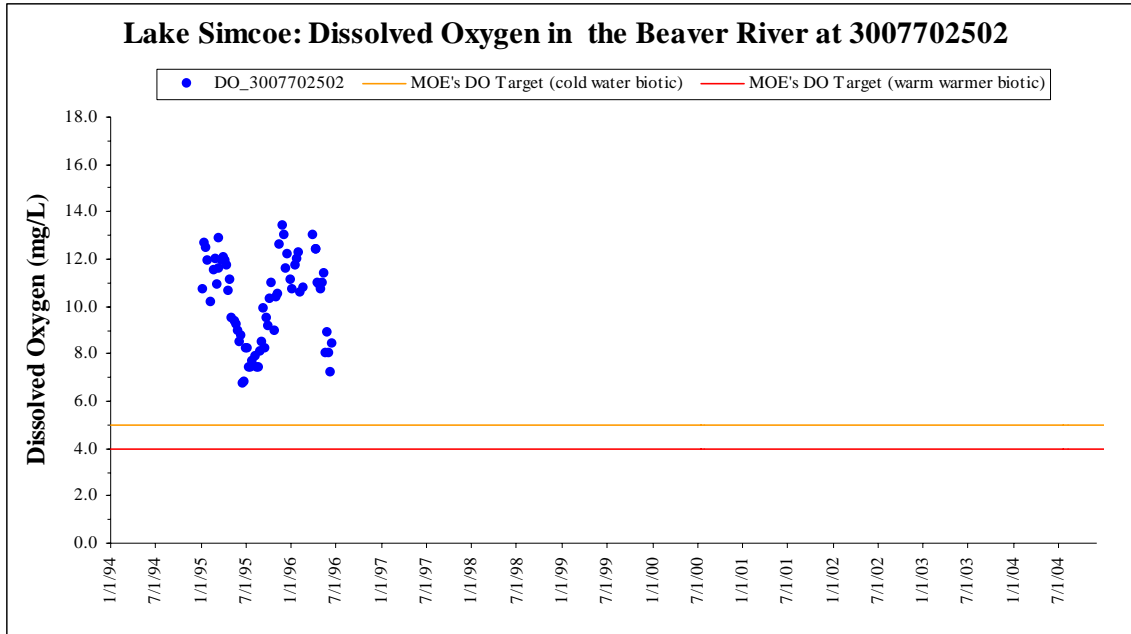
TP: Maximum value was not graphed in figure; TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Turb.: Turbidity





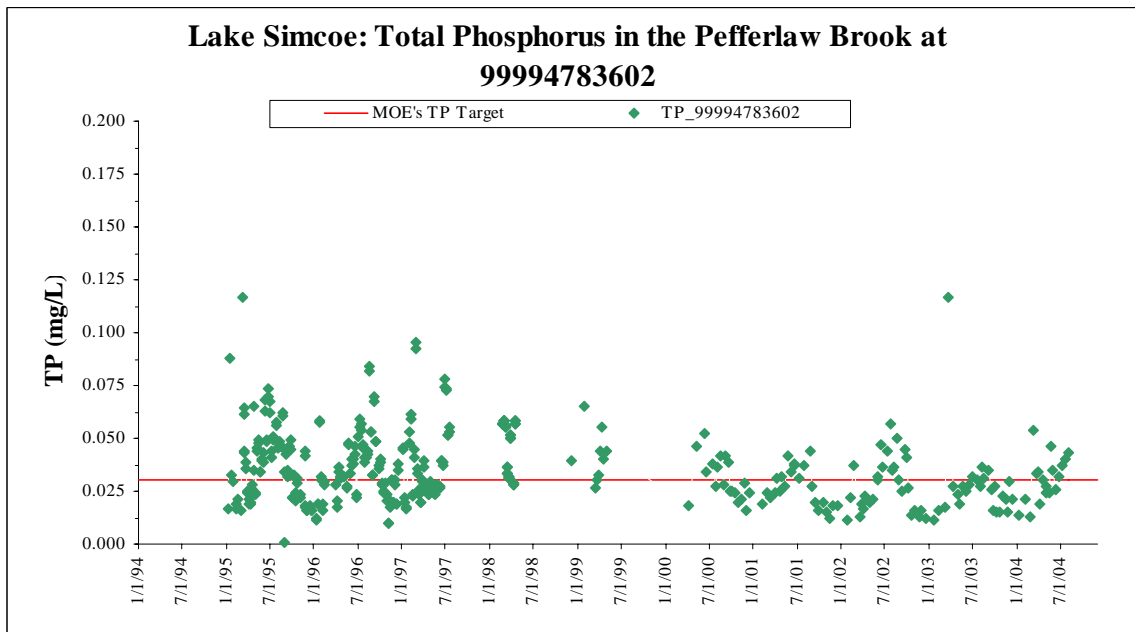
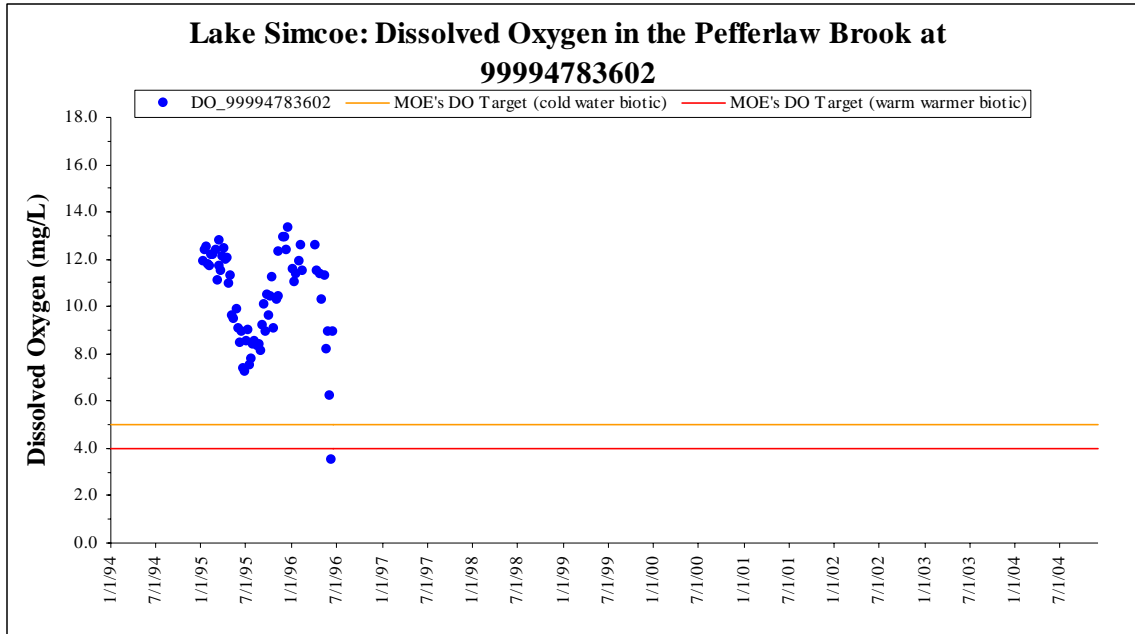
Water Quality at the Beaver River Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3007702502	Count	68	-	-	82	357	-	127	126	126	-	-	-
	Mean	10.23	-	-	489	0.030	-	0.76	0.05	0.69	1.44	-	-
	Min	6.73	-	-	208	0.004	-	0.38	0.00	0.01	0.39	-	-
	Max	13.4	-	-	662	0.147	-	1.52	0.38	4.19	5.71	-	-
	Range	1995-1996	-	-	1995-1997	1995-2004	-	1995-1998	1995-1998	1995-2004	-	-	-

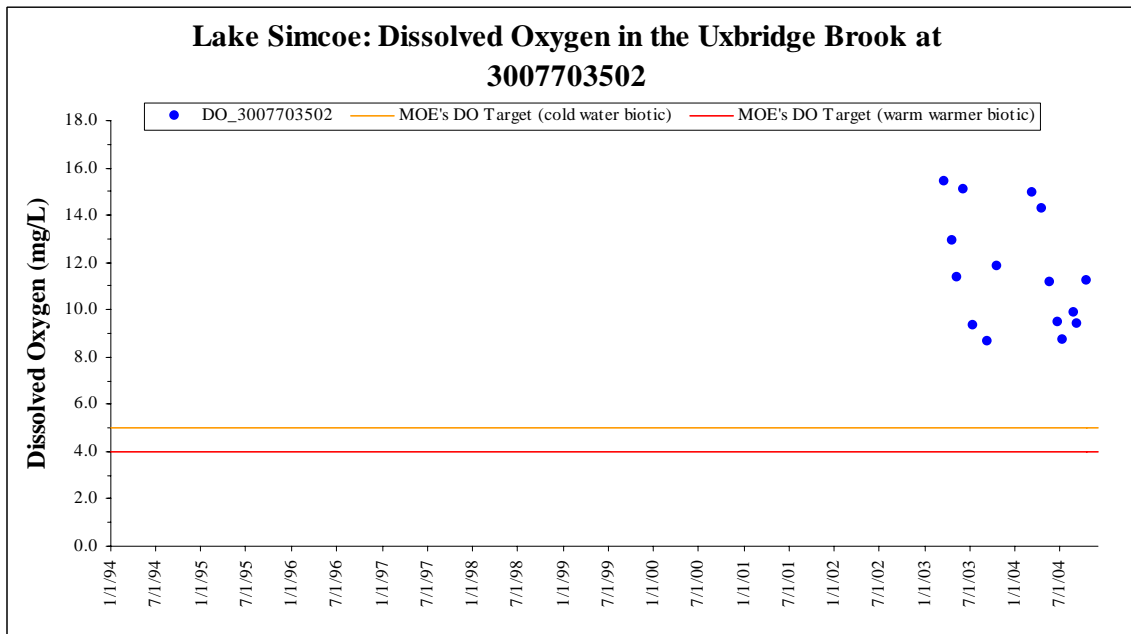
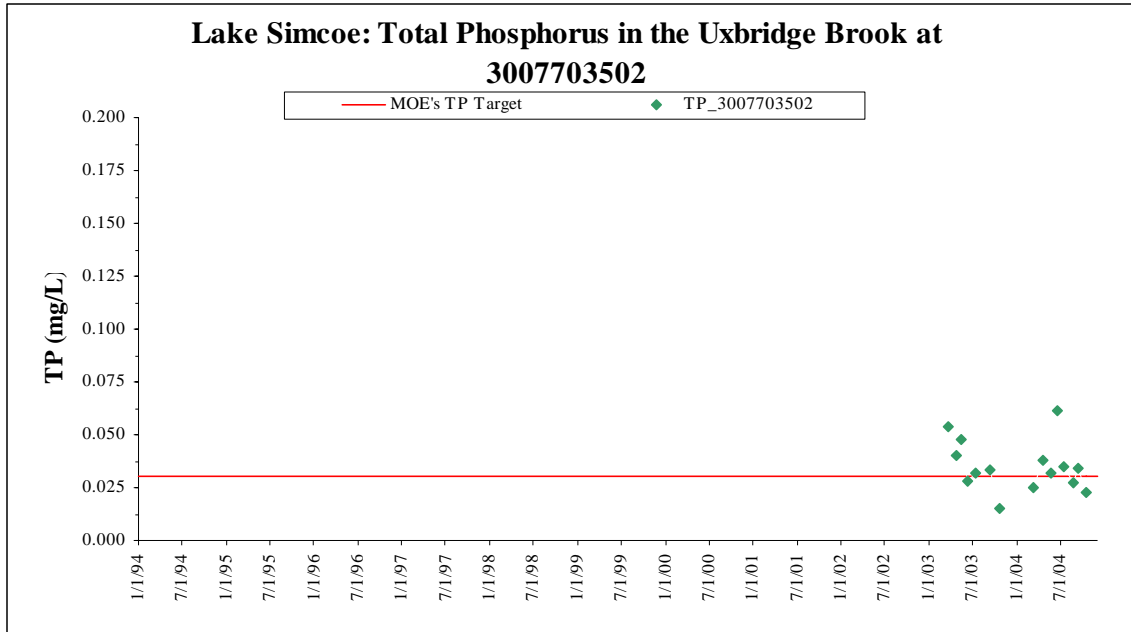
TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Turb.: Turbidity



Water Quality at the Pefferlaw/Uxbridge Brook Subwatershed													
Station		DO	T	pH	BOD ₅	TP	PO ₄	TKN	NH ₄	NO ₃	TN _{comp.}	TSS	Turb.
		mg/L	°C		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3007702702	Count	221	211	144	430	448	-	450	450	232	-	-	448
	Mean	9.76	11.35	7.81	1.38	0.050	-	0.59	0.05	0.34	0.93	-	5.81
	Min	5.20	0.00	6.76	0.18	0.010	-	0.03	0.00	0.01	0.04	-	0.85
	Max	15.2	29.50	8.69	8.40	1.100	-	2.17	0.44	1.43	3.60	-	48.0
	Range	1973-1993	1973-1993	1979-1993	1973-1993	1973-1993	-	1973-1993	1973-1993	1973-1984	-	-	1973-1993
99994783602	Count	66	-	-	-	384	-	128	126	208	-	-	-
	Mean	10.39	-	-	-	0.036	-	0.62	0.04	0.79	1.42	-	-
	Min	3.5	-	-	-	0.001	-	0.34	0.00	0.01	0.35	-	-
	Max	13.3	-	-	-	0.117	-	1.18	0.28	2.21	3.39	-	-
	Range	1995-1996	-	-	-	1995-2004	-	1995-1998	1995-1998	1995-2004	-	-	-
3007703502	Count	15	15	15	3	15	15	15	15	15	-	15	15
	Mean	11.58	13.43	8.13	0.90	0.040	0.007	0.45	0.07	1.62	2.07	7.21	4.35
	Min	8.64	4.60	7.90	0.20	0.020	0.001	0.31	0.00	0.69	1.00	1.60	1.55
	Max	15.4	20.80	8.63	1.50	0.060	0.021	0.65	1.06	2.53	3.18	17.90	11.30
	Range	2003-2004	2003-2004	2003-2004	2003-2004	2003-2004	2003-2004	2003-2004	2003-2004	2003-2004	-	2003-2004	2003-2004

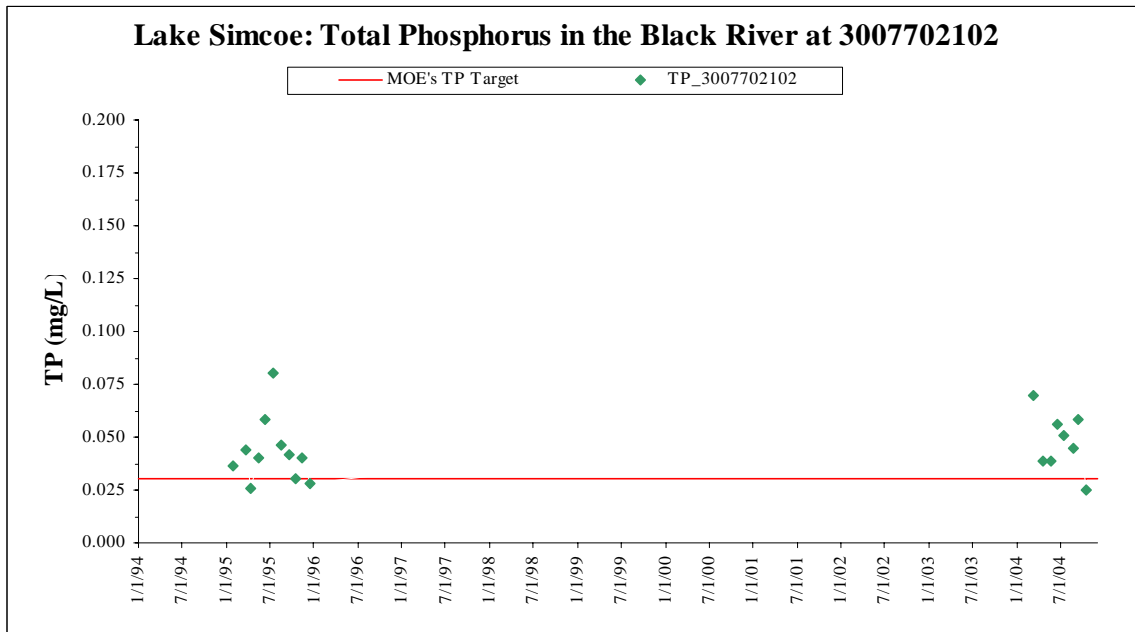
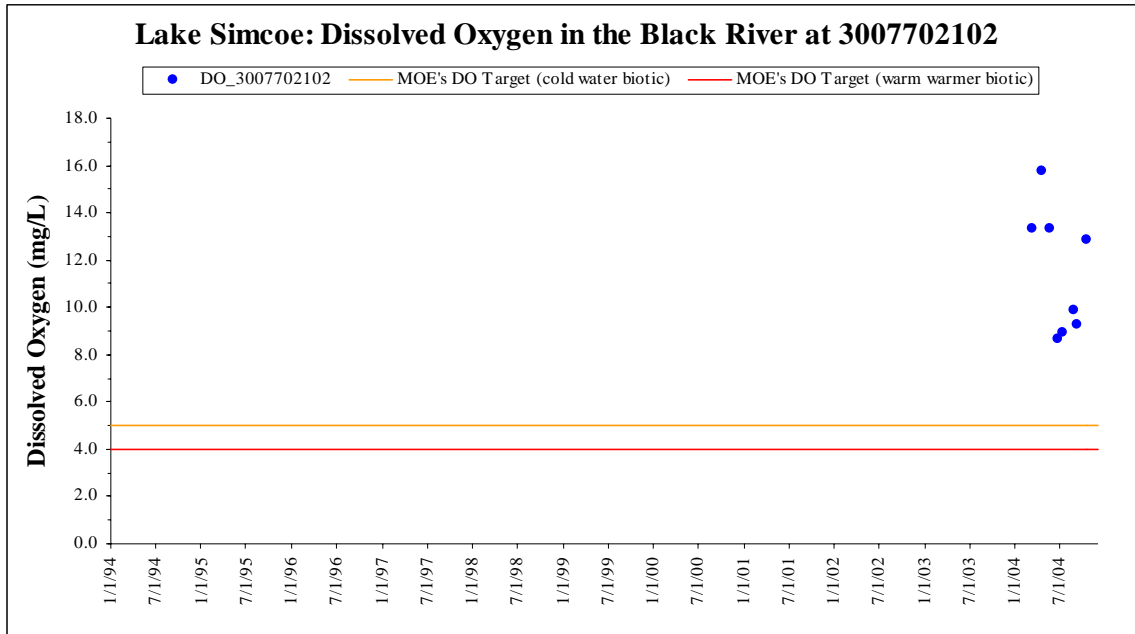
TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Cond.: Conductivity; Turb.: Turbidity

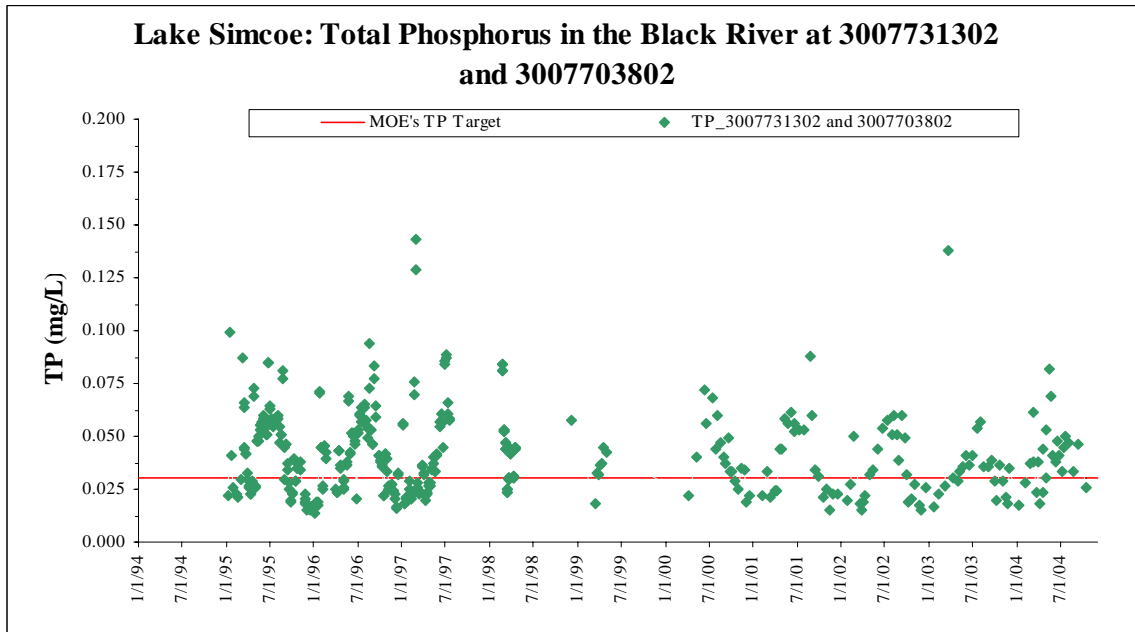
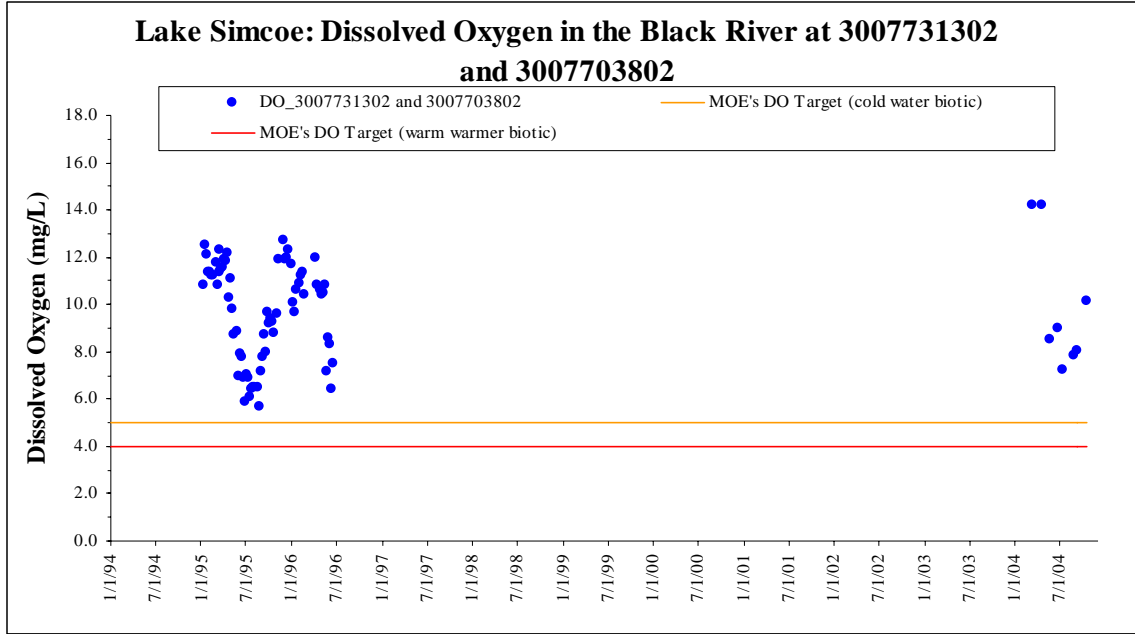




Water Quality at the Black River Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
3007702102	Count	8	8	8	19	19	19	19	19	19		19	19
	Mean	11.51	14.95	8.11	482	0.045	0.013	0.58	0.07	1.02	1.60	6.82	3.54
	Min	8.64	3.80	7.72	0	0.025	0.002	0.28	0.002	0.48	0.76	1.30	0.84
	Max	15.79	20.20	8.55	554	0.080	0.030	0.97	0.45	2.38	3.35	15.50	10.70
	Range	2004	2004	2004	1995-2004	1995-2004	1995-2004	1995-2004	1995-2004	1995-2004	-	1995-2004	1995-2004
3007731302	Count	68	-	157	85	381	-	131	129	203	-	-	-
	Mean	9.70	-	7.92	497	0.041	-	0.74	0.07	0.63	1.37	-	-
	Min	5.70	-	7.05	323	0.014	-	0.32	0.001	0.004	0.32	-	-
	Max	12.70	-	8.33	800	0.143	-	1.36	0.28	2.91	4.27	-	-
	Range	1995-1996	-	1995-1997	1995-1997	1995-1998	-	1995-1998	1995-1998	1995-2004	-	-	-
3007703802	Count	8	8	8	8	8	8	8	8	8	-	-	8
	Mean	9.91	15.49	7.96	490	0.040	0.004	0.73	0.05	0.20	0.93	-	3.46
	Min	7.26	1.00	7.48	424	0.030	0.001	0.39	0.02	0.01	0.40	-	1.71
	Max	14.23	21.90	8.17	573	0.070	0.012	0.99	0.07	0.82	1.81	-	6.24
	Range	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	-	-

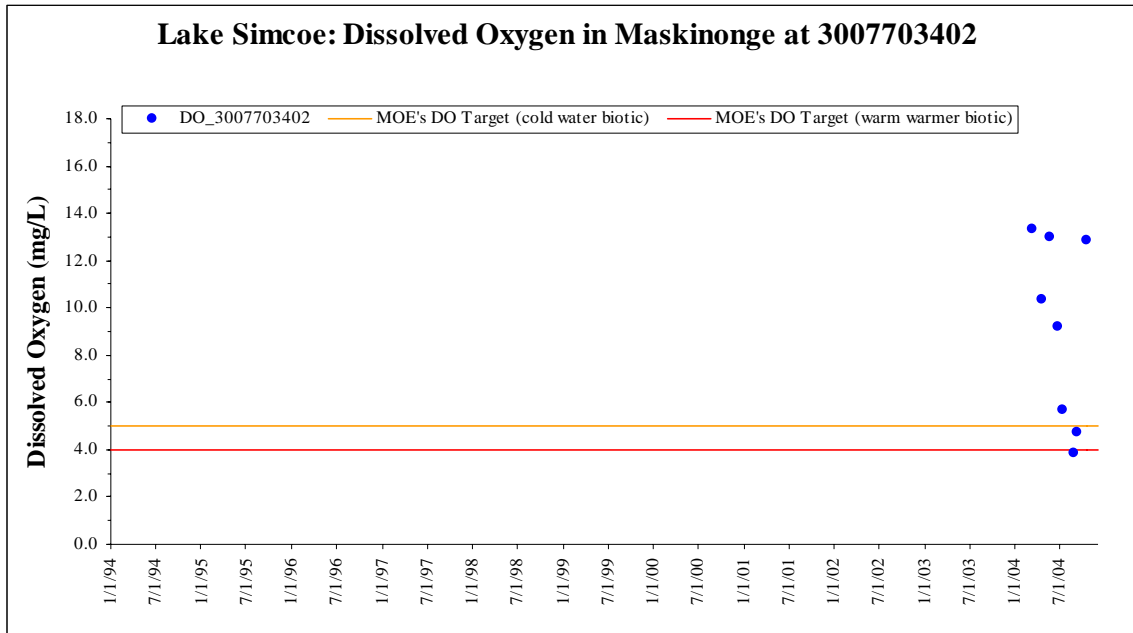
TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Turb: Turbidity

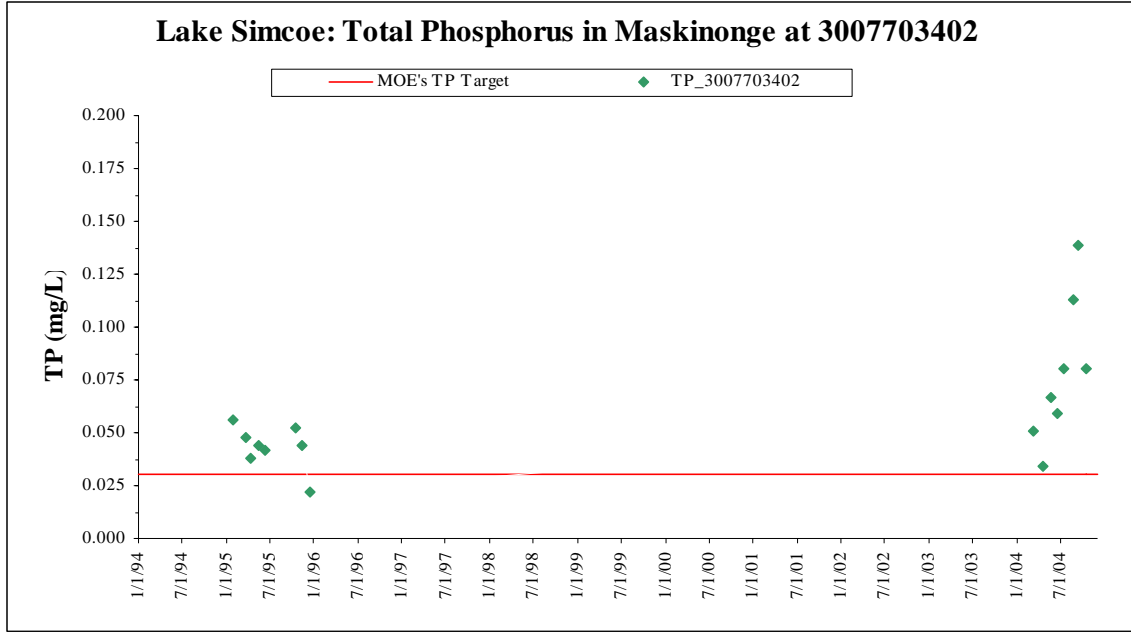




Water Quality at the Maskinonge Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3007703402	Count	8	8	8	16	16	16	16	16	16		16	16
	Mean	9.14	15.40	7.79	828	0.061	0.016	1.19	0.06	0.74	1.93	7	4.12
	Min	3.87	1.70	7.11	637	0.022	0.001	0.66	0.002	0.02	0.68	2	0.78
	Max	13.36	21.20	8.26	1040	0.139	0.052	1.86	0.16	3.69	5.55	19.5	12.10
	Range	2004	2004	2004	1995-2004	1995-2004	1995-2004	1995-2004	1995-2004	1995-2004		1995-2004	1995-2004

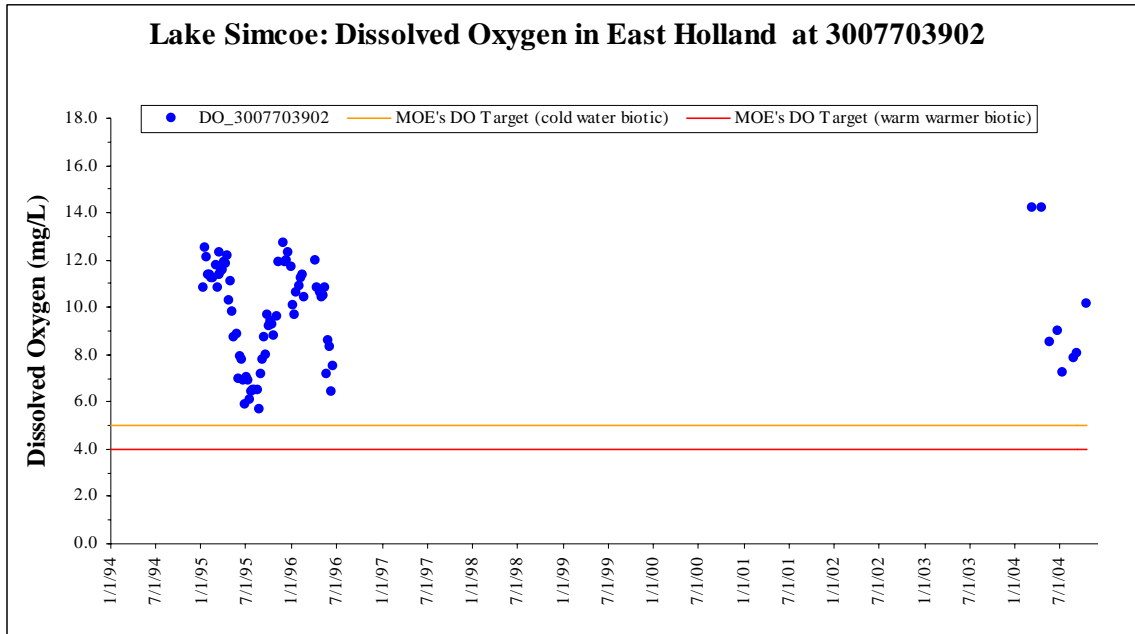
TN_{comp.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; TSS: Total Suspended Solids; Turb.: Turbidity





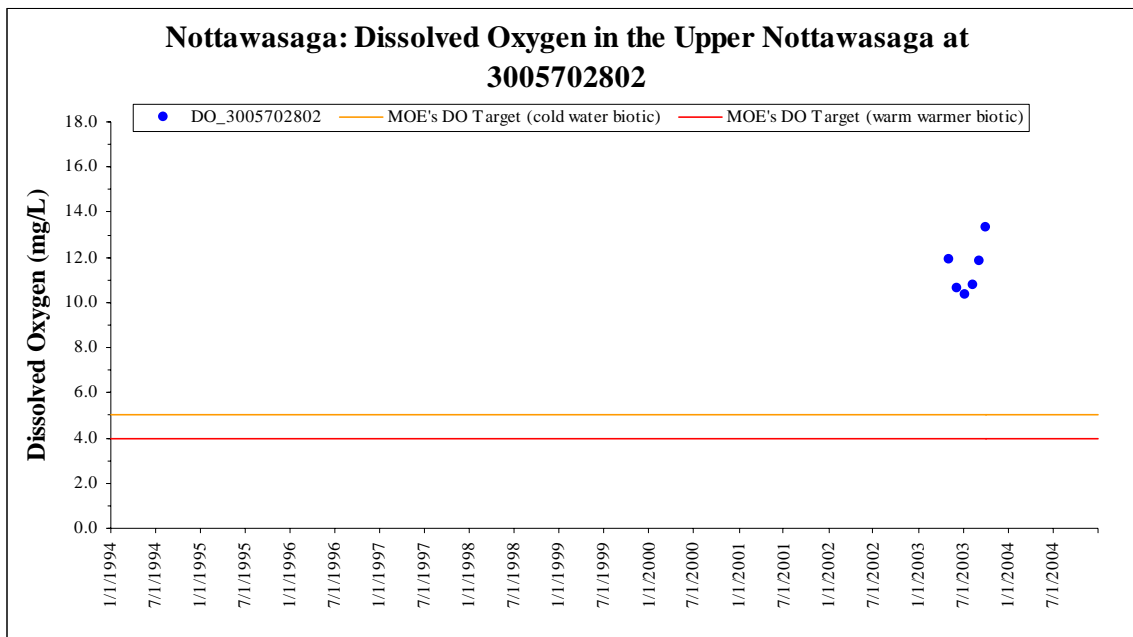
Water Quality at the East Holland Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3007703902	Count	76	8	8	93	393	8	138	136	219		8	-
	Mean	10.47	14.46	8.05	877	0.149	0.037	0.83	0.18	1.22	2.04	25.00	-
	Min	5.44	0.70	7.82	1	0.004	0.004	0.40	0.001	0.00	0.40	13.00	-
	Max	16.82	23.20	8.42	2470	0.872	0.067	2.10	1.19	3.87	5.97	34.00	-
	Range	1995-2004	2004	2004	1995-2004	1995-2004	2004	1995-2004	1995-2004	2004		2004	-

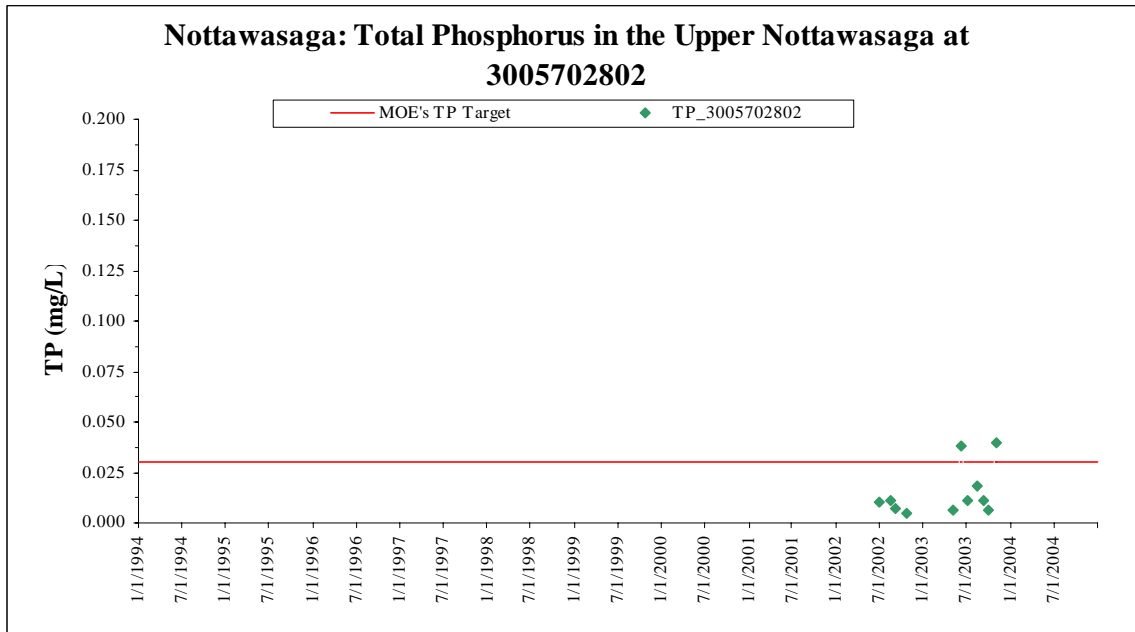
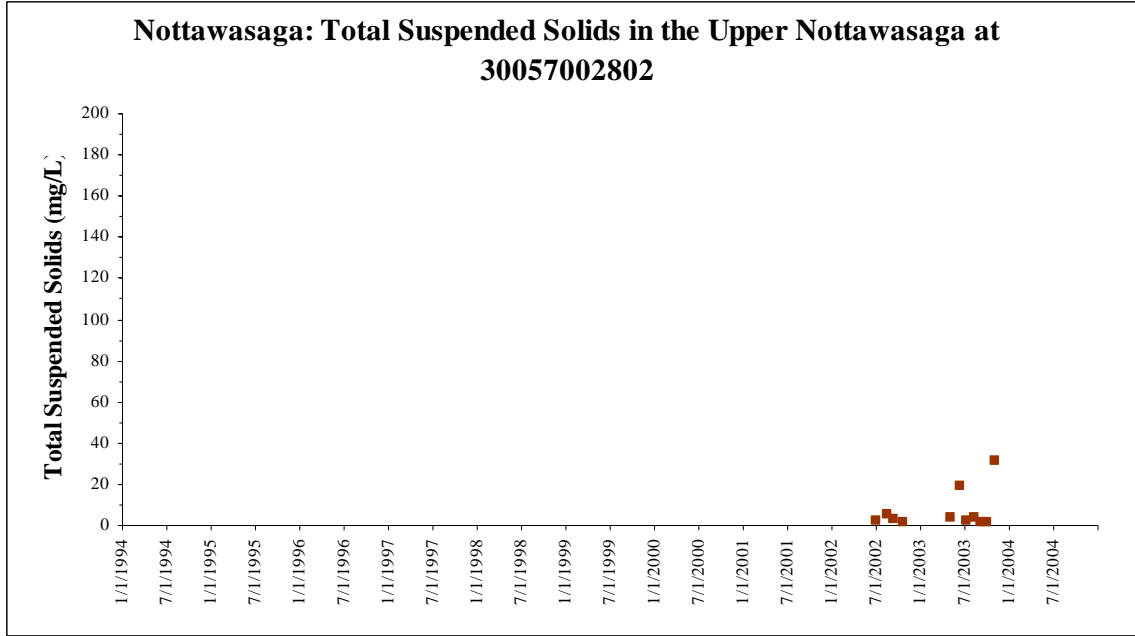
TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; TSS: Total Suspended Solids; Turb.: Turbidity

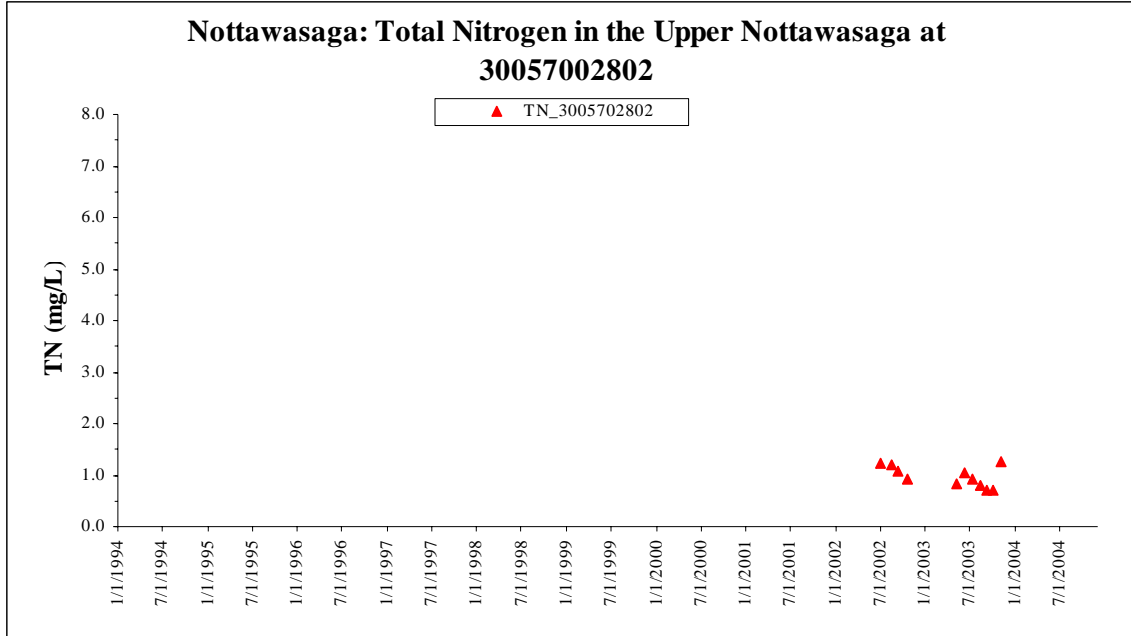


Available Water Quality at the Upper Nottawasaga Subwatershed (1995-2004)													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3005702802	Count	6	9	7	11	11	11	11	11	11	11	11	11
	Mean	11.50	14.42	8.20	508	0.015	0.001	0.35	0.01	0.62	0.97	6.79	2.80
	Min	10.38	6.80	8.11	474	0.005	0.001	0.14	0.00	0.33	0.70	1.30	0.69
	Max	13.34	22.00	8.27	539	0.040	0.002	0.73	0.02	0.95	1.27	31.20	10.30
	Range	2003	2002-2003	2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003

TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; TSS: Total Suspended Solids; Turb: Turbidity

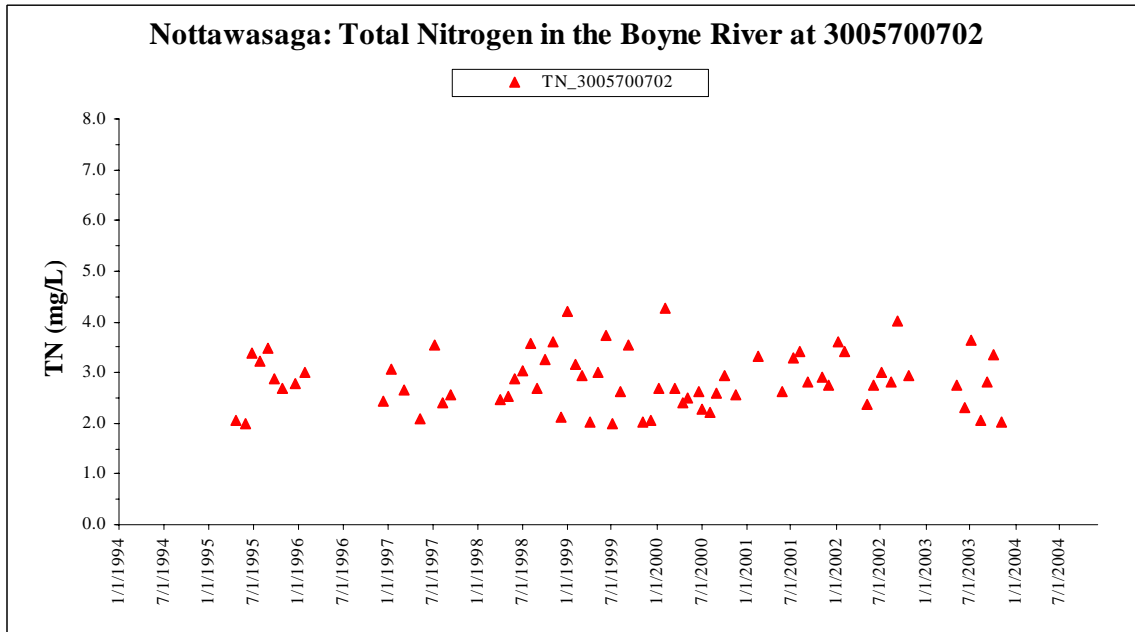
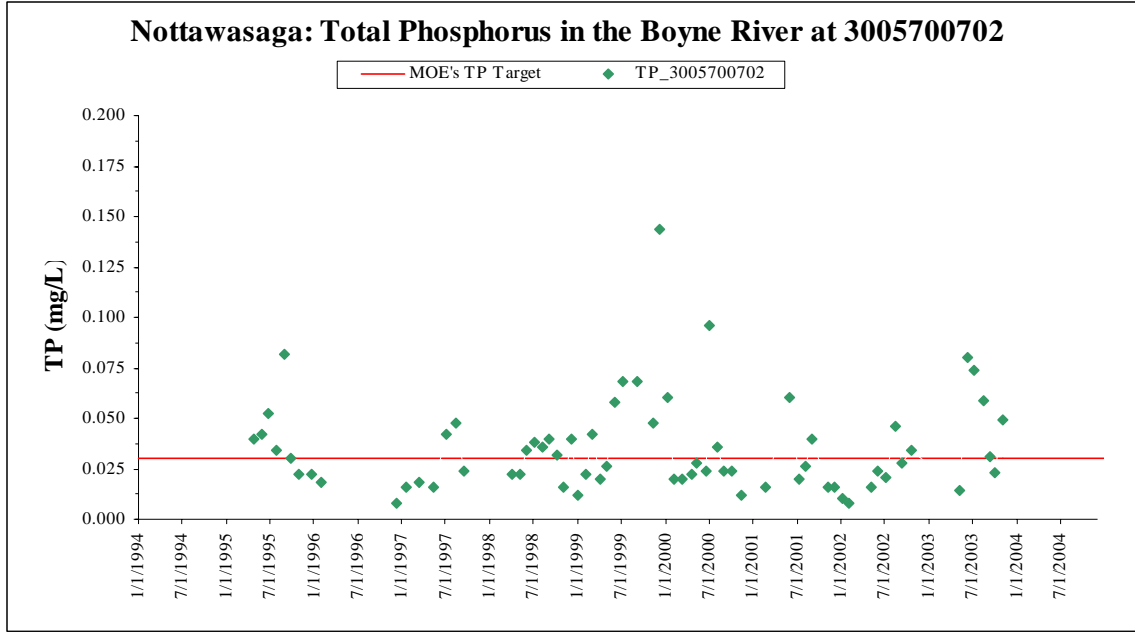






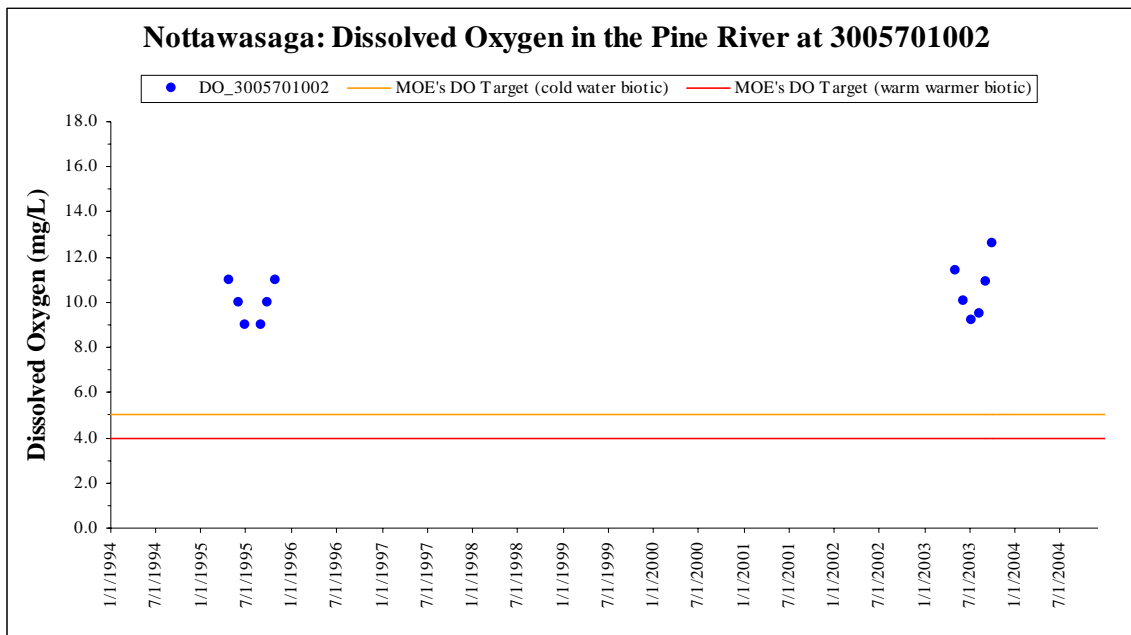
Available Water Quality at the Boyne River Subwatershed (1995-2004)														
Station		DO	T	pH	Cond.	BOD ₅	TP	PO ₄ -P	TKN	NH ₄	NO ₃	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3005700702	Count	11	65	7	69	9	68	69	69	69	69	69	66	69
	Mean	9.92	13.59	8.01	580	1.01	0.035	0.006	0.56	0.03	2.29	2.85	9.25	6.11
	Min	8.00	0.00	7.91	488	0.40	0.008	0.001	0.34	0.00	1.24	1.98	2.00	1.33
	Max	12.00	28.50	8.13	698	1.69	0.144	0.080	0.92	0.08	3.89	4.27	40.00	29.70
	Range	1995-2003	1995-2003	2003	1995-2003	1995-1996	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003

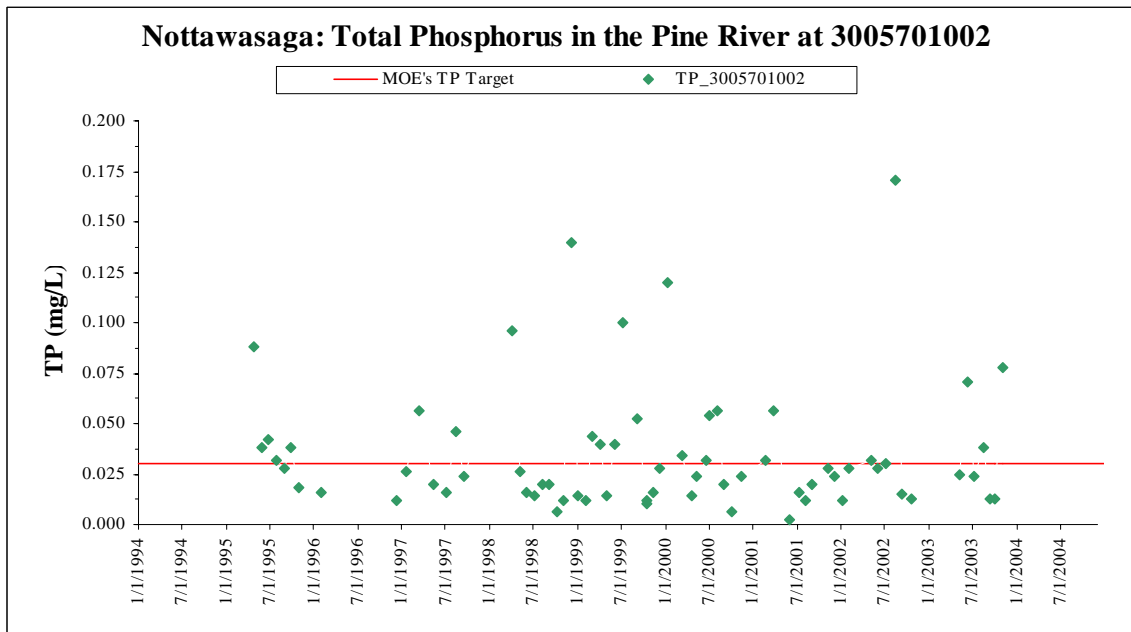
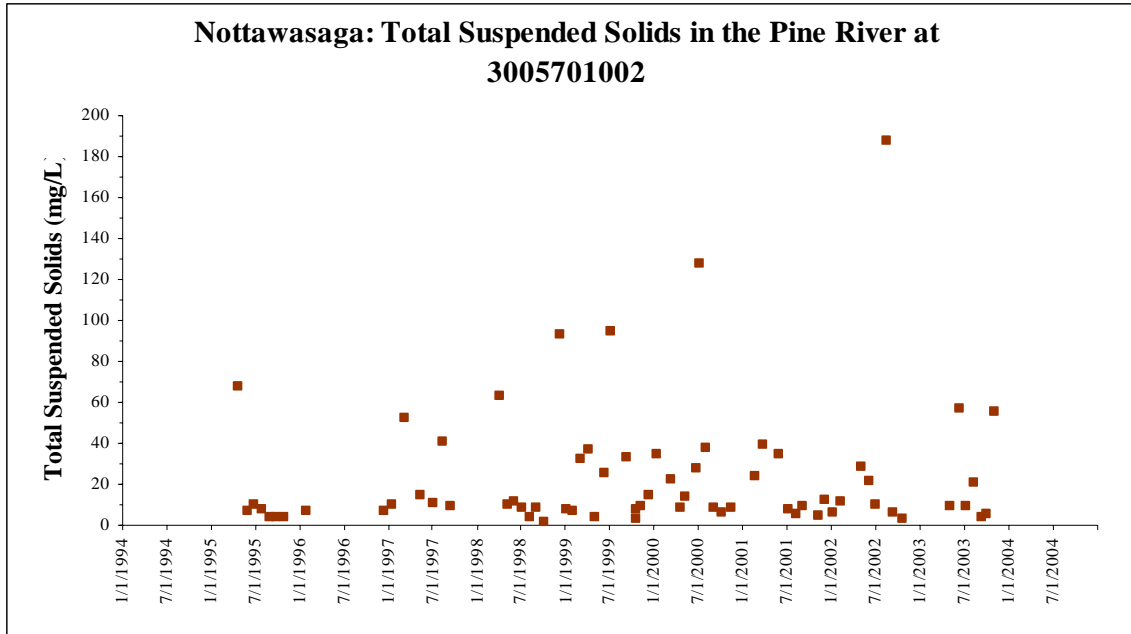
TN_{comp.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; TSS: Total Suspended Solids; Turb.: Turbidity

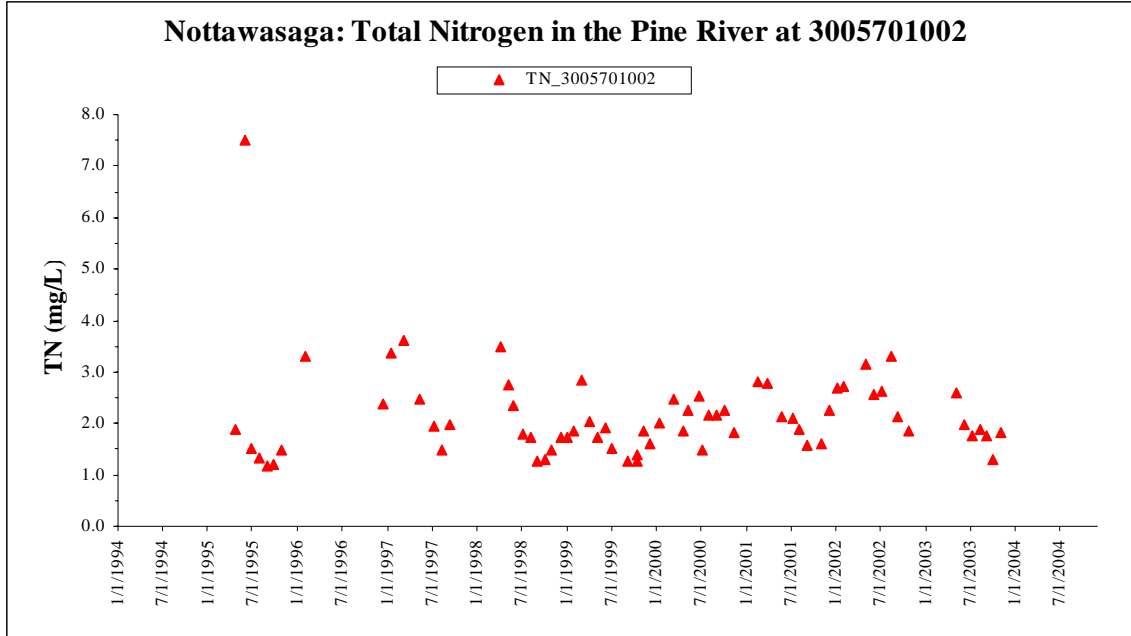


Available Water Quality at the Pine River Subwatershed (1995-2004)													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
3005701002	Count	12	65	7	69	69	69	69	69	69	69	67	69
	Mean	10.31	11.71	8.14	452	0.035	0.007	0.41	0.01	1.73	2.14	23.55	13.10
	Min	9.00	0.00	8.03	363	0.002	0.001	0.02	0.00	0.72	1.18	1.50	1.29
	Max	12.63	26.50	8.28	522	0.171	0.027	1.06	0.14	6.95	7.51	188.00	107.00
	Range	1995-2003	1995-2003	2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003

TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; TSS: Total Suspended Solids; Turb.: Turbidity

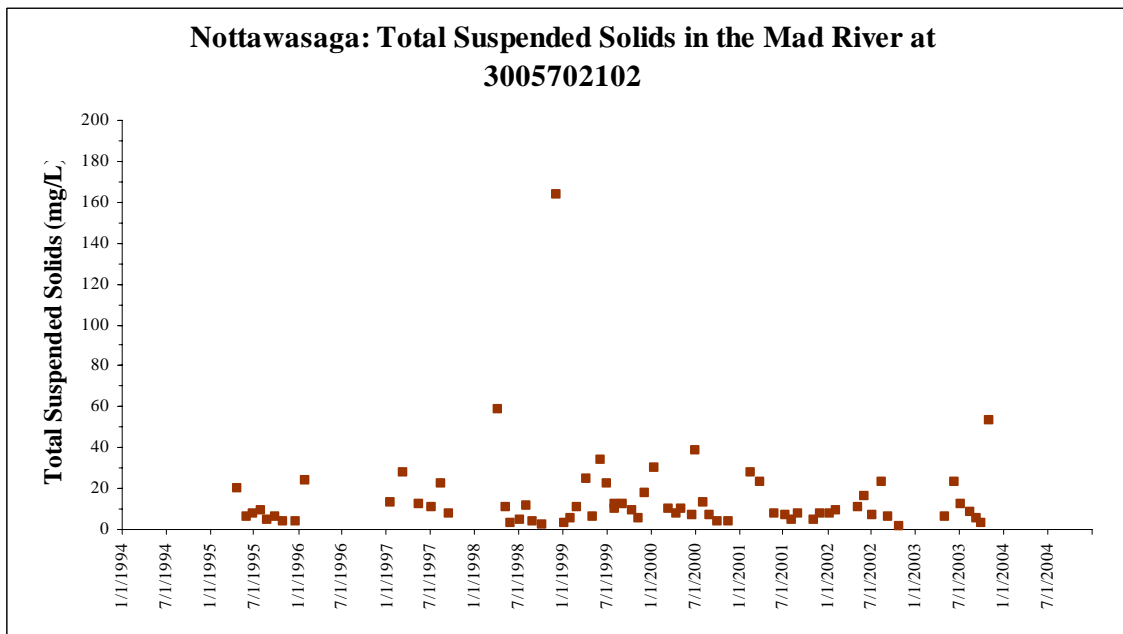
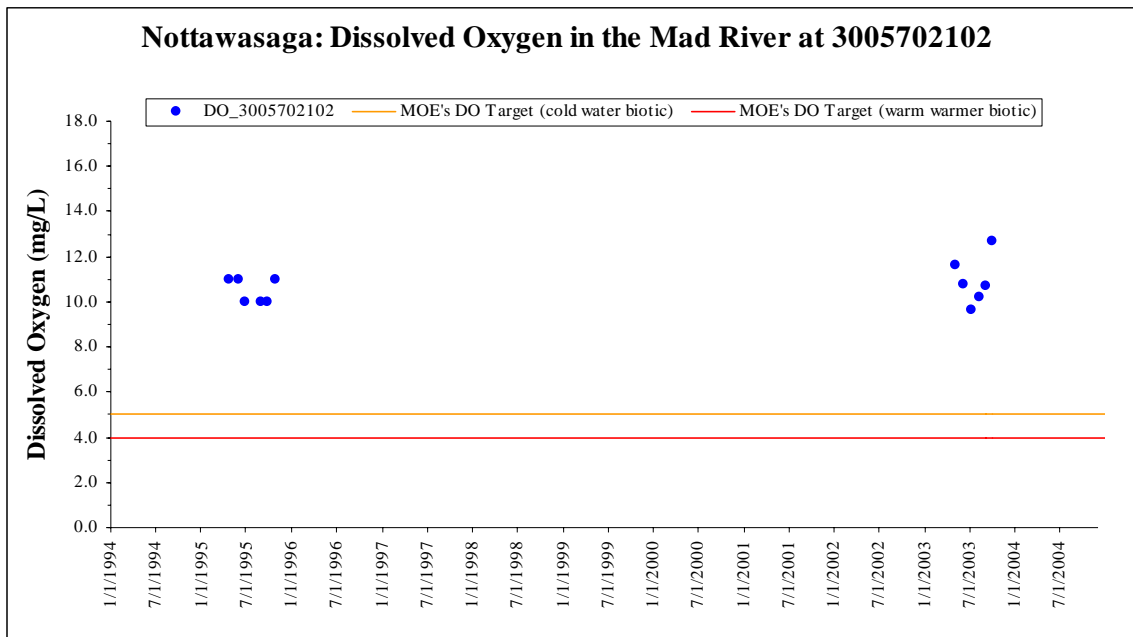


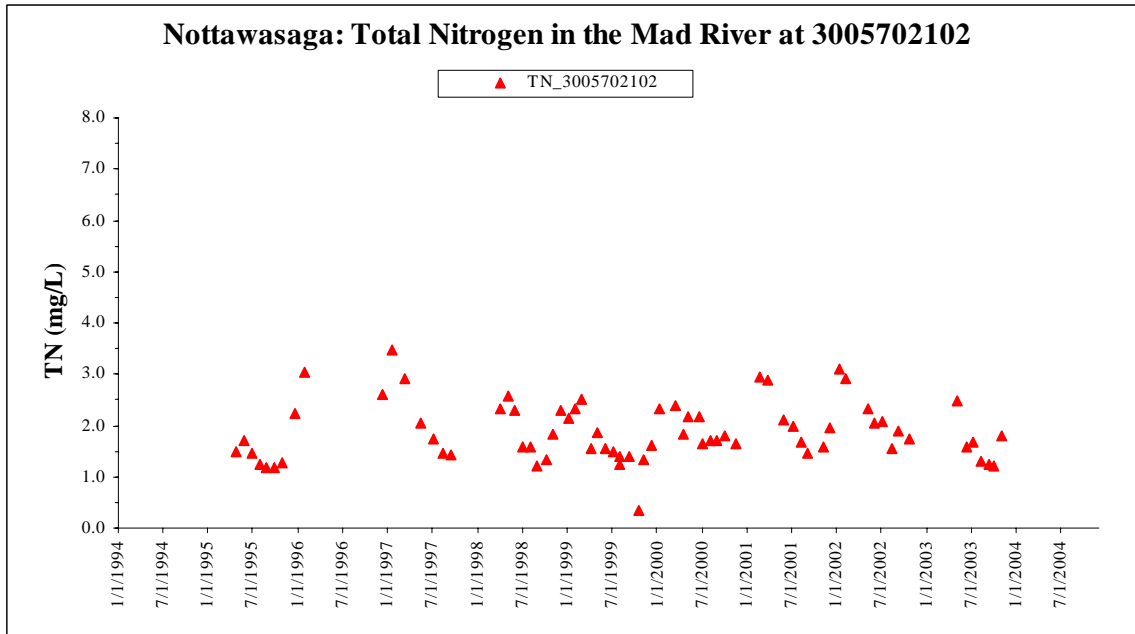
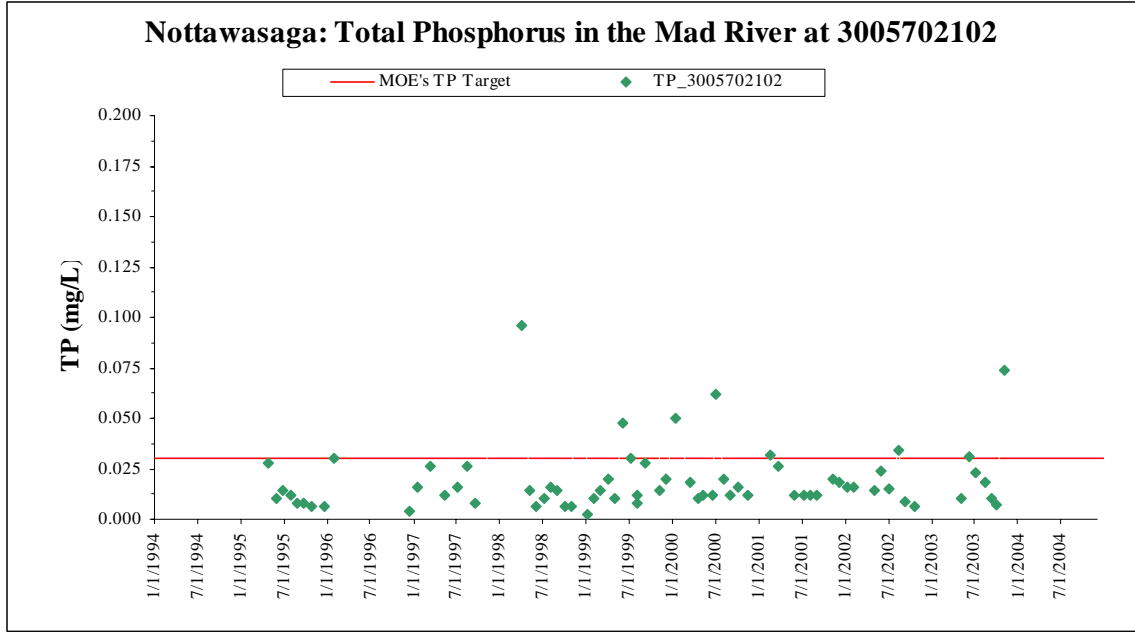




Water Quality at the Mad River Subwatershed													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3005702102	Count	12	67	7	71	71	71	71	71	71	71	69	71
	Mean	10.73	11.44	8.20	468	0.027	0.005	0.39	0.01	1.48	1.87	14.89	9.51
	Min	9.67	0.00	8.08	346	0.002	0.001	0.12	0.00	0.11	0.35	1.80	1.58
	Max	12.72	25.00	8.30	775	0.408	0.150	1.20	0.08	3.12	3.48	164.00	97.50
	Range	1995-2003	1995-2003	2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003

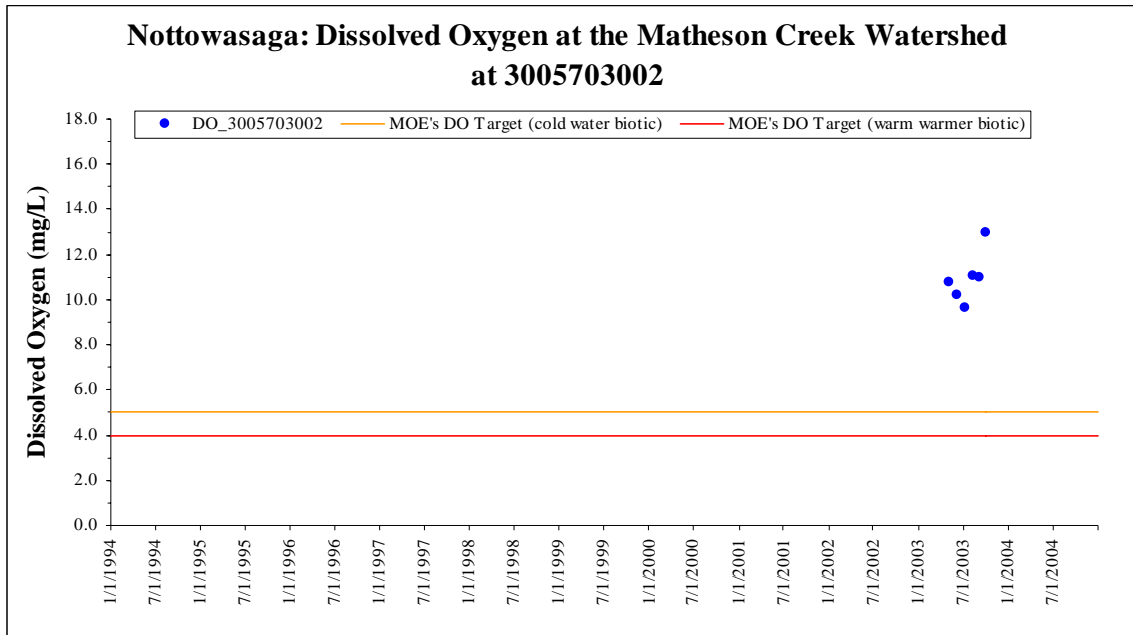
TP: Max TP of 0.408 mg/L is not included in graph
 TN_{comp.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; TSS: Total Suspended Solids; Turb.: Turbidity

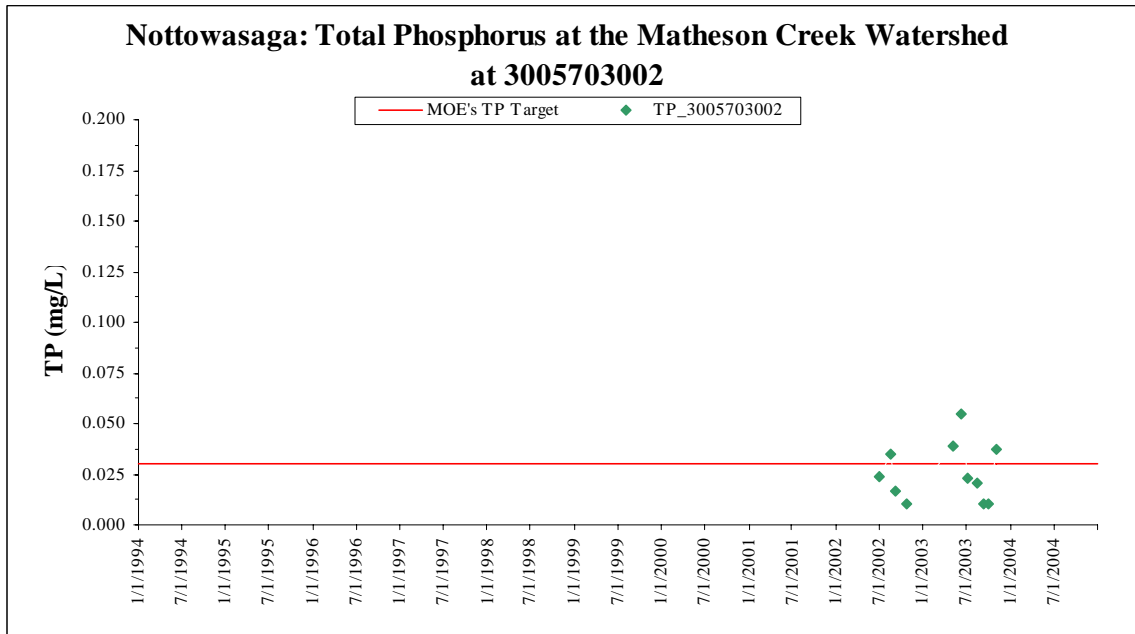
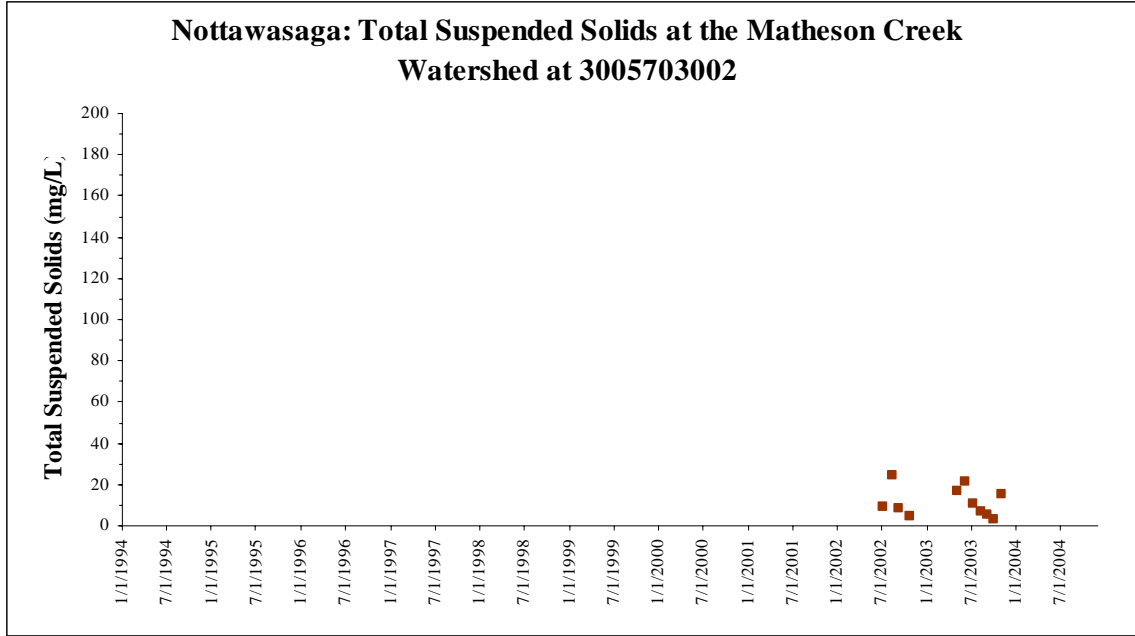


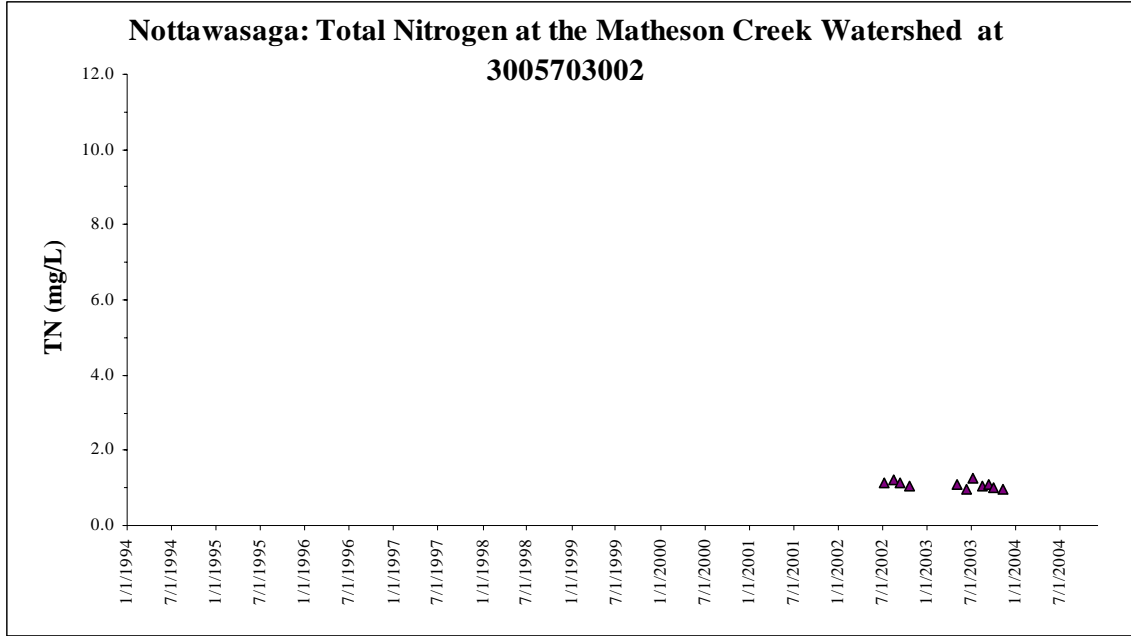


Available Water Quality at the Matheson Creek Subwatershed (1995-2004)													
Station		DO	T	pH	Cond.	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	FTU
3005703002	Count	6	10	7	11	11	11	11	11	11	11	11	11
	Mean	10.95	15.39	8.03	481	0.026	0.002	0.38	0.01	0.71	1.09	11	6.79
	Min	9.67	6.50	7.88	404	0.010	0.001	0.23	0.00	0.45	0.96	3	2.65
	Max	12.99	24.00	8.27	567	0.055	0.004	0.53	0.02	0.87	1.25	24	12.40
	Range	2003	2002-2003	2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003

TN_{comp.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; TSS: Total Suspended Solids; Turb.: Turbidity

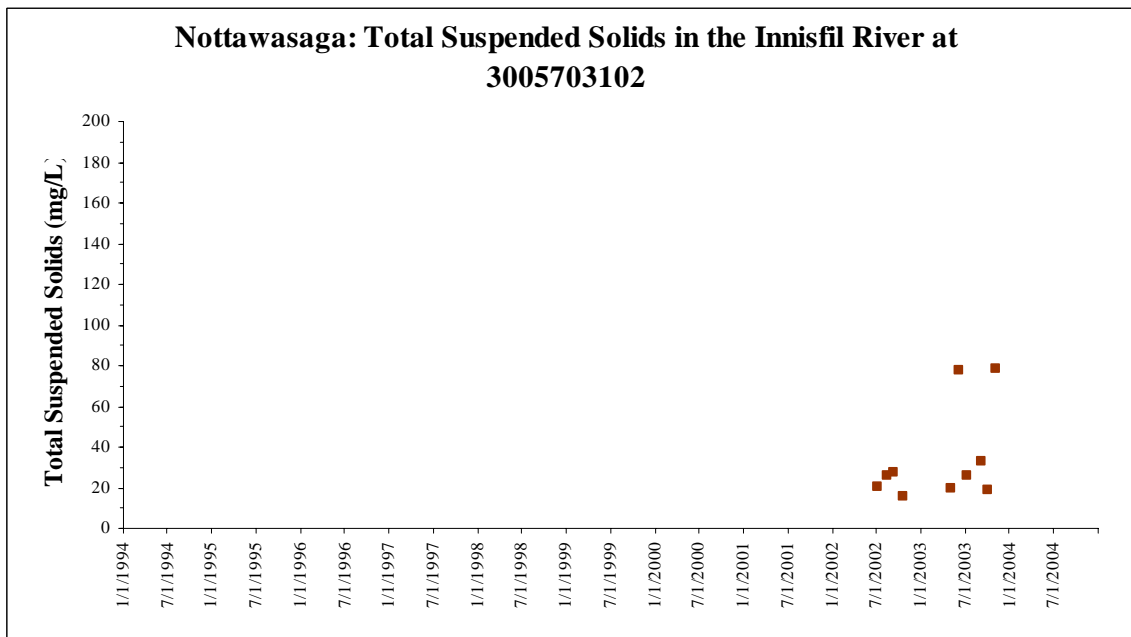
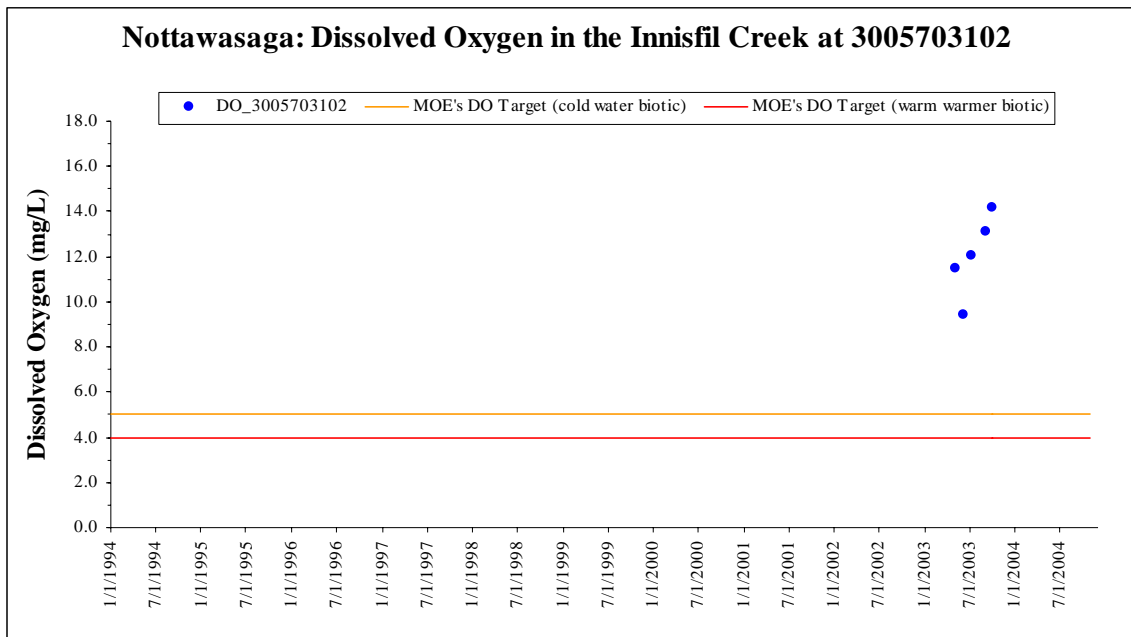


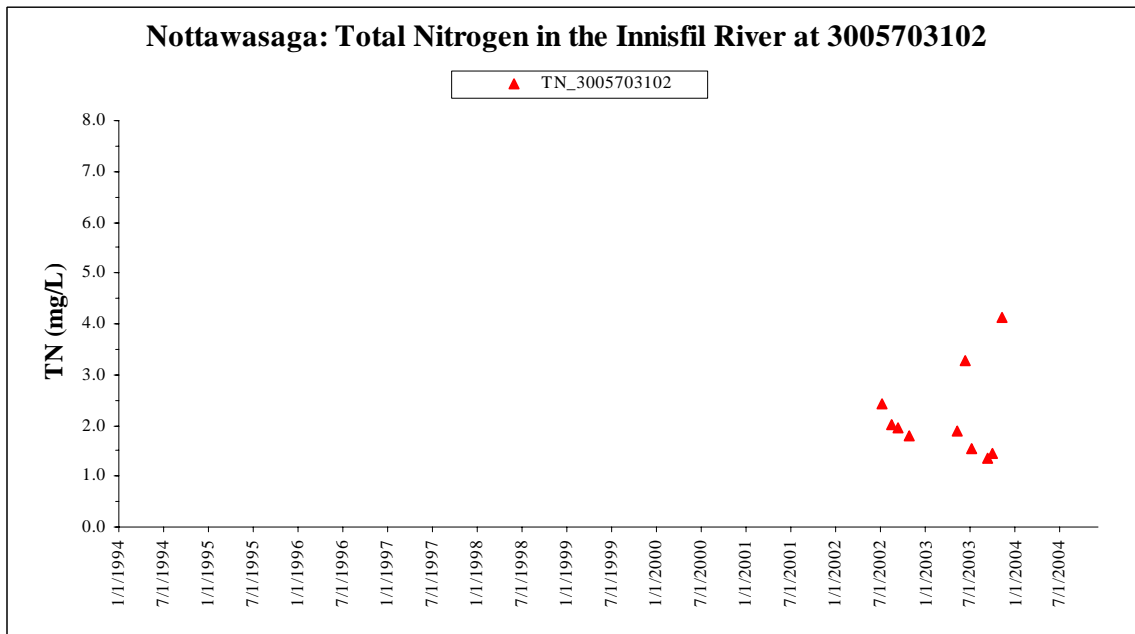
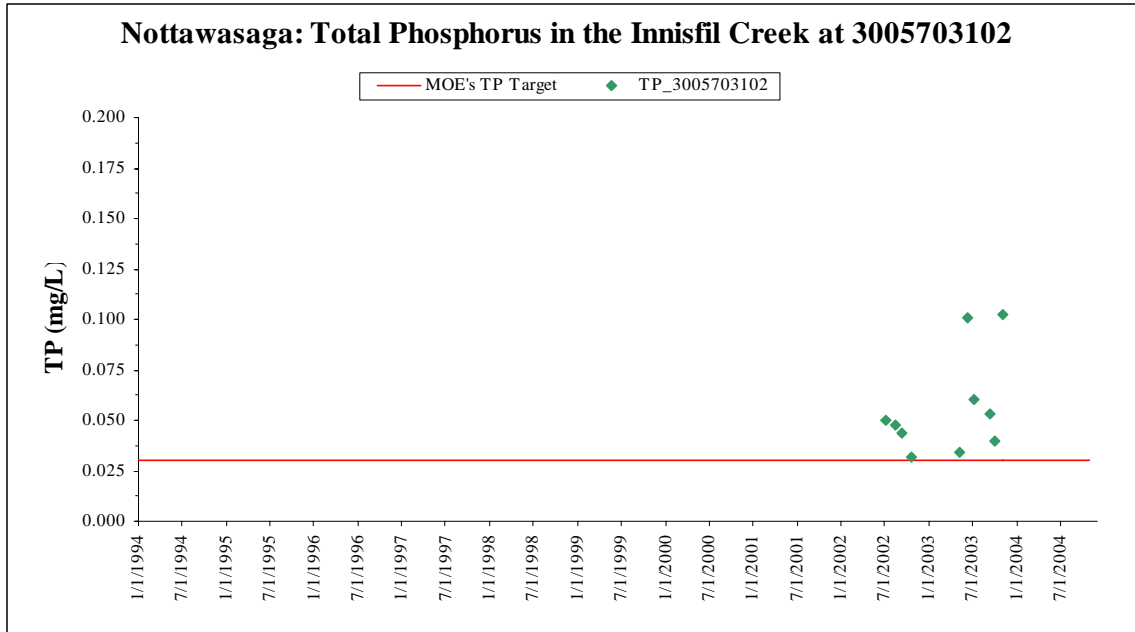


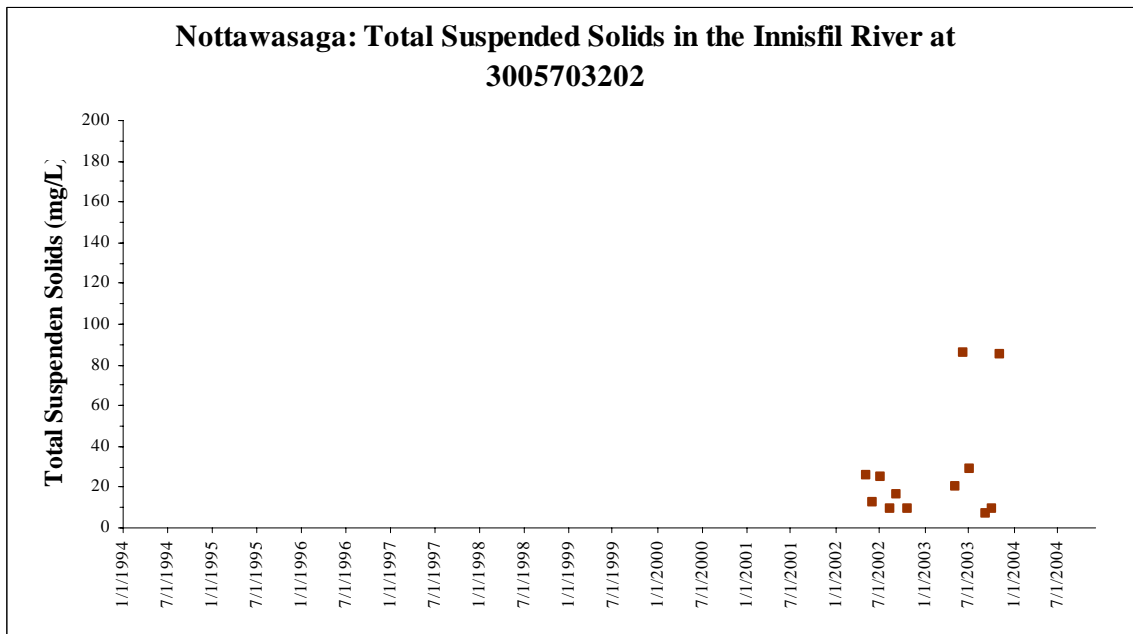
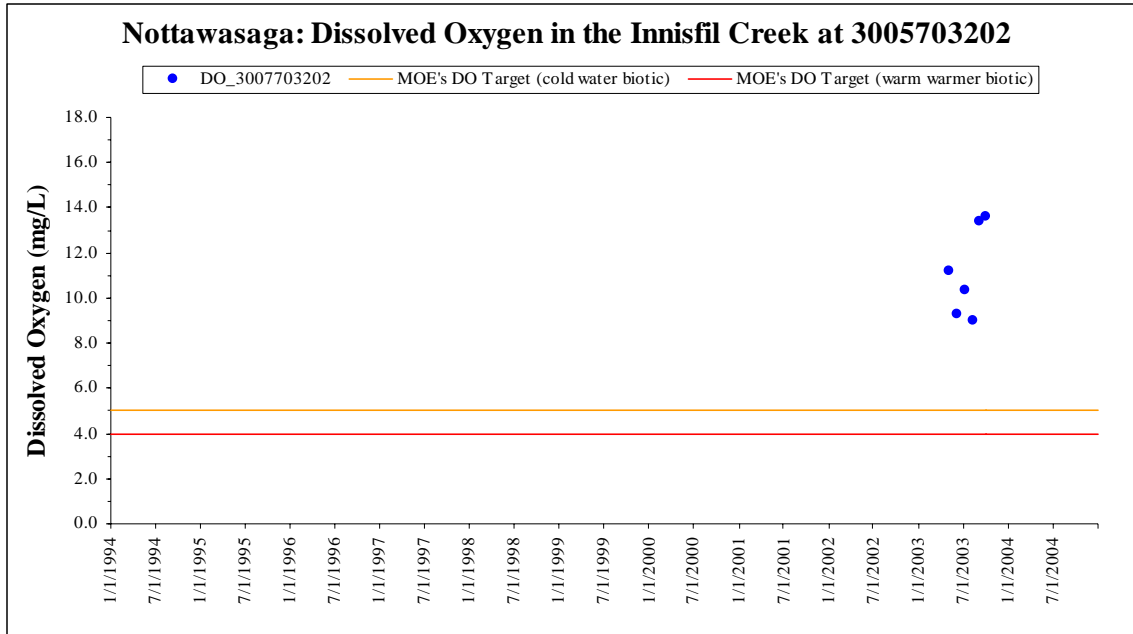


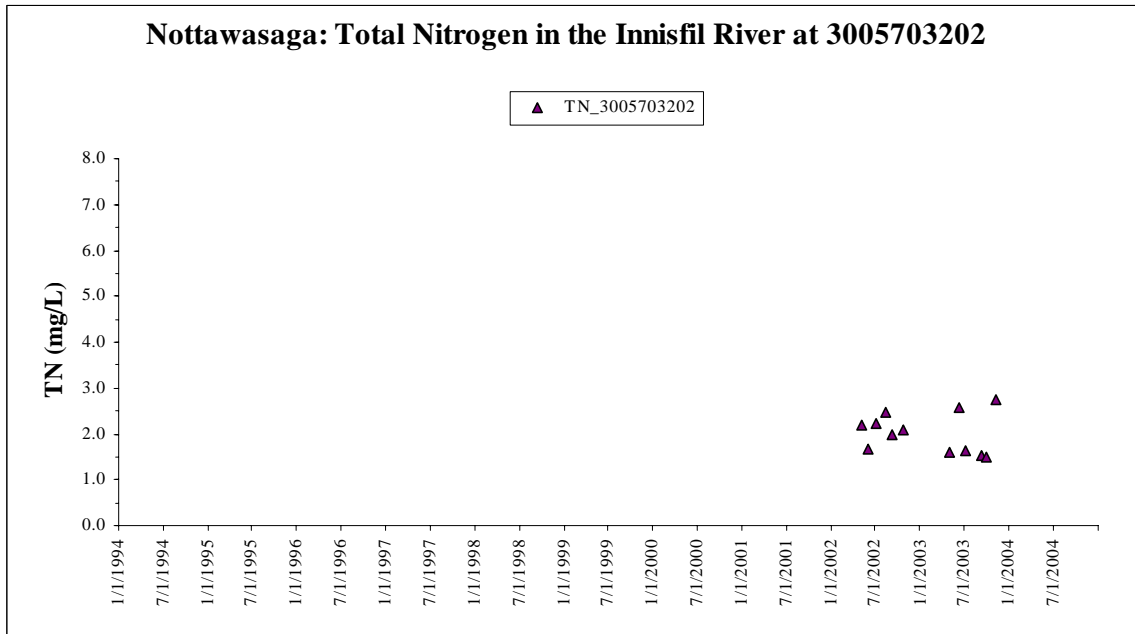
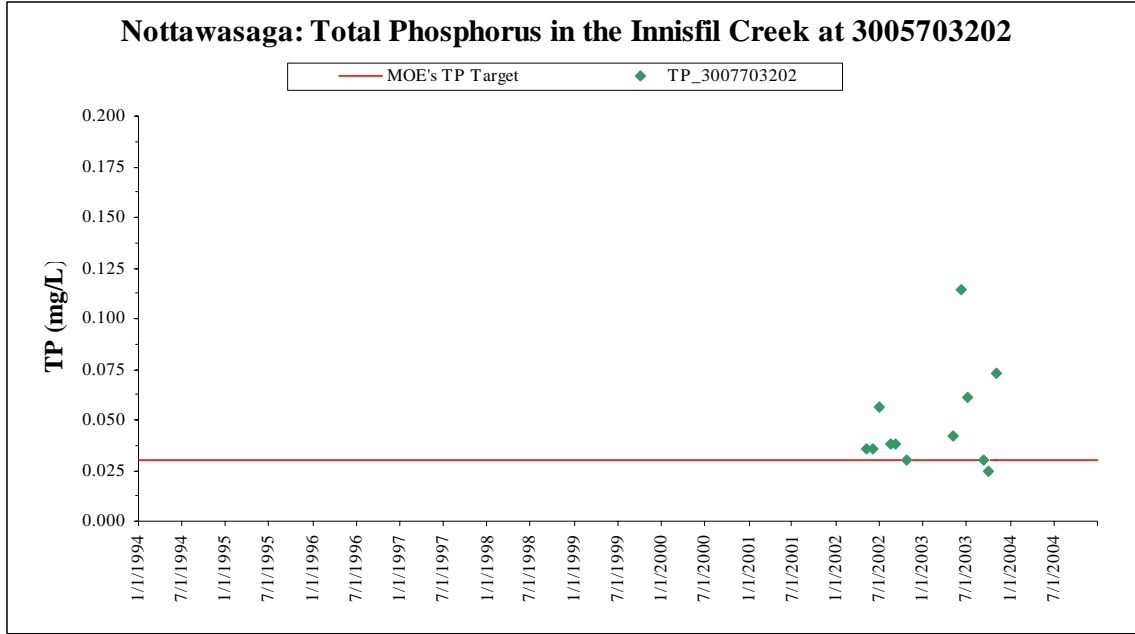
Available Water Quality at the Innisfil Creek Subwatershed (1995-2004)														
Station		DO	T	pH	Cond.	BOD ₅	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp.}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
3005703102	Count	5	9	6	10	-	10	10	10	10	10	10	10	10
	Mean	12.04	19.70	8.09	645	-	0.056	0.004	0.73	0.04	1.45	2.18	34.27	26.45
	Min	9.45	7.60	7.88	577	-	0.032	0.001	0.53	0.01	0.74	1.34	15.70	11.20
	Max	14.14	29.00	8.27	779	-	0.102	0.008	0.95	0.07	3.21	4.12	78.50	59.20
	Range	2003	2002-2003	2003	2002-2003	-	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003
3005703202	Count	6	12	7	12	-	12	12	12	12	12	12	12	12
	Mean	11.14	18.68	8.07	597	-	0.048	0.003	0.68	0.06	1.34	2.02	27.91	14.16
	Min	8.97	7.60	7.89	532	-	0.025	0.001	0.48	0.03	0.84	1.51	6.80	4.47
	Max	13.60	29.00	8.31	661	-	0.114	0.007	0.94	0.12	1.96	2.75	85.60	45.30
	Range	2003	2002-2003	2003	2002-2003	-	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003

TN_{com.}: Computed Total Nitrogen = TKN + NO₃-N; Cond.: Conductivity; Turb.: Turbidity; TSS: Total Suspended Solids









Available Water Quality at the Lower Nottawasaga Subwatershed (1995-2004)														
Station		DO	T	pH	Cond.	BOD ₅	TP	PO ₄ -P	TKN	NH ₄ -N	NO ₃ -N	TN _{comp}	TSS	Turb.
		mg/L	°C		µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
3005702902	Count	6	10	7	11	-	11	11	11	11	11	11	11	11
	Mean	10.63	19.42	8.12	567.00	-	0.040	0.004	0.61	0.03	5.31	5.93	23.64	17.65
	Min	9.29	7.60	8.02	441	-	0.017	0.001	0.48	0.01	1.02	1.63	6.00	5.31
	Max	12.52	28.00	8.27	656	-	0.104	0.022	0.93	0.06	40.10	40.59	77.00	55.80
	Range	2003	2002-2003	2003	2002-2003	-	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003	2002-2003
3005702502	Count	12	36	7	207	6	207	206	207	206	206	206	198	17
	Mean	8.55	14.32	7.78	500.67	1.42	0.052	0.010	0.59	0.03	1.18	1.77	21.75	15.66
	Min	4.70	0.10	7.44	354	0.96	0.008	0.001	0.26	0.00	0.02	0.62	1.00	1.58
	Max	11.00	27.00	8.02	648	2.20	0.906	0.372	1.48	0.24	2.76	3.66	141.00	47.30
	Range	2003	1995-2003	2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003	1995-2003

Cond.: Specific Conductivity; three consecutive outliers were removed in station 3005702902 (0.0, 7.8, and 7.9 µS/cm)

TP: Max TP of 0.906 mg/L for station 3005702502 is not included in graph

TN_{comp}: Computed Total Nitrogen = TKN + NO₃-N; Max TN of 40.59 mg/L for station 3005702902 is not included in graph ;

TSS: Total Suspended Solids; Turb: Turbidity

