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## APPENDIX C

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Water Quality Data



Year	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	16.0	0		1	4.1	0		1	20.0	0	0.0
1986	21	9.6	10	9.3	0		0		0		0	0.0
1987	15	9.8	10	9.9	0		0		0		0	0.0
1988	12	13.5	12	13.5	0		0		0		0	0.0
1989	8	10.6	5	10.9	0		0		0		0	0.0
1990	0		0		0		0		0		0	0.0
1991	0		0		0		0		0		0	0.0
1992	17	11.3	10	10.4	0		0		0		0	0.0
1993	11	14.9	8	14.7	0		0		0		0	0.0
1994	13	14.9	10	14.9	0		0		0		0	0.0
1995	22	13.5	13	13.6	0		0		0		0	0.0
1996	12	12.3	9	12.6	0		0		0		0	0.0
1997	10	13.4	6	15.1	0		0		0		0	0.0
1998	8	12.4	3	11.9	1	1.2	0		1	10.0	0	0.0
1999	13	11.3	6	10.4	3	2.3	2	3.2	4	10.5	2	10.0
2000	13	11.7	7	12.1	4	5.3	2	3.0	4	13.0	2	13.0
2001	14	14.1	7	14.1	7	4.0	5	3.8	6	12.7	4	14.0
2002	14	12.2	7	12.3	5	3.3	3	2.0	5	16.4	3	14.3
2003	15	13.3	8	13.1	4	5.5	3	4.5	5	14.4	3	13.7
2004	9	13.1	6	13.4	4	6.8	3	4.9	4	15.8	3	14.7
2005	5	11.4	3	10.7	4	5.5	3	5.3	5	12.6	2	13.5
2006	4	8.4	2	8.8	3	7.6	2	6.4	4	17.0	2	16.5
2007	5	8.1	3	7.8	3	6.9	3	6.9	4	16.5	3	16.7
2008	3	9.0	3	9.0	3	6.1	3	6.1	3	17.7	3	17.7
2009	5	10.6	4	10.9	3	5.0	3	5.0	4	15.3	3	13.7
2010	4	9.2	4	9.2	6	4.8	6	4.8	6	13.3	5	13.0
2011	3	8.7	3	8.7	3	4.4	3	4.4	4	13.3	3	14.0
2012	3	9.7	3	9.7	3	4.6	3	4.6	4	13.8	3	13.0
2013	3	10.7	3	10.7	3	3.8	3	3.8	3	11.2	2	10.3
2014	3	11.8	3	11.8	3	3.2	3	3.2	4	11.5	3	11.4
2015	2	11.3	2	11.3	3	4.2	3	4.2	5	15.5	4	15.8
2016	3	11.0	3	11.0	3	4.2	3	4.2	4	17.7	3	17.9
2017	3	10.2	3	10.2	3	2.8	3	2.8	4	15.3	3	14.8
2018	3	10.0	3	10.0	3	4.0	3	4.0	4	12.3	3	12.3
2019	3	9.3	3	9.3	4	3.3	4	3.3	5	18.0	4	17.6
<b>All Years (Weighted)</b>		11.9		11.9		4.6		4.3		14.5		14.3
<b>DSL Median</b>				11.2				3.6				15.0
<b>NLF Ecoregion Median</b>				8.9				5.6				21.0

Year	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	14.0	0		1	3.3	0		1	12.0	0.0	
1986	21	13.2	10	13.6								
1987	14	17.1	9	17.4								
1988	15	16.2	13	16.5								
1989	8	16.7	5	16.8								
1990	13	17.1	10	17.1								
1991	14	17.0	10	16.9								
1992	18	16.6	13	16.6								
1993	14	16.6	12	16.6								
1994	10	17.4	9	17.4								
1995	10	15.9	7	16.3								
1996	11	15.3	6	16.5								
1997	6	14.5	4	16.1								
1998	5	18.3	1	18.5	2	2.9	0		2	8.5	0.0	
1999	7	13.6	3	13.3	3	1.6	2	1.7	4	12.5	2.0	16.0
2000	6	15.3	4	16.3	4	3.3	2	3.0	4	10.3	2.0	11.0
2001	5	15.9	3	16.0	3	2.2	2	1.8	3	11.7	2.0	14.5
2002	4	15.9	2	15.0	5	2.4	3	1.9	5	8.2	3.0	9.3
2003	5	18.1	3	17.8	4	4.5	3	4.9	5	13.0	3.0	11.7
2004	4	17.4	3	18.5	4	3.1	3	3.0	4	12.8	3.0	11.7
2005	5	18.2	3	18.5	4	3.0	3	2.2	4	10.3	3.0	9.0
2006	4	16.4	2	20.5	3	2.5	2	1.9	4	14.3	2.0	10.0
2007	5	15.5	3	17.2	3	2.3	3	2.3	4	11.0	3.0	10.0
2008	3	15.2	3	15.2	3	1.8	3	1.8	3	12.7	3.0	12.7
2009	4	15.5	3	15.0	3	2.2	3	2.2	4	15.3	3.0	13.7
2010	5	15.0	5	15.0	5	2.1	5	2.1	7	9.4	6.0	9.2
2011	3	18.5	3	18.5	3	2.6	3	2.6	4	11.0	3.0	10.7
2012	3	16.0	3	16.0	3	2.8	3	2.8	3	11.0	2.0	10.0
2013	3	16.3	3	16.3	3	2.3	3	2.3	4	8.3	3.0	6.8
2014	1	15.5	1	15.5	3	2.0	3	2.0	4	9.9	3.0	9.3
2015	2	17.0	2	17.0	3	2.5	3	2.5	5	12.8	3.0	10.1
2016	3	15.0	3	15.0	3	1.8	3	1.8	4	14.1	3.0	13.4
2017	3	13.0	3	13.0	3	3.0	3	3.0	4	13.9	3.0	13.4
2018	3	13.3	3	13.3	3	5.0	3	5.0	3	12.6	3.0	12.6
2019	4	12.6	4	12.6	4	3.6	4	3.6	5	18.5	4.0	14.9
<b>All Years (Weighted)</b>	16.0		16.3		2.7		2.5		11.6		11.0	
<b>DSL Median</b>			11.2				3.6				15.0	
<b>NLF Ecoregion Median</b>			8.9				5.6				21.0	

Year	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	5.0	0		1	21.8	0					
1989	6	10.5	5	11.4								
1990	7	9.2	6	9.8								
1991	6	9.3	5	9.9								
1992	3	8.6	2	9.4								
1993	5	8.8	5	8.8								
1994	6	10.4	3	10.7								
1995	6	9.4	3	9.2								
1996	5	9.2	5	9.2								
1997	5	9.4	5	9.4								
1998	4	10.4	3	7.8								
1999	0		0									
2000	4	7.6	3	7.2	4	6.0	3	7.0	3	35.0	2.0	34.5
2001	8	9.5	7	9.9	4	7.1	3	5.2	4	30.8	3.0	28.0
2002	9	10.4	5	11.3	4	9.2	3	9.3	4	26.8	3.0	21.7
2003	10	10.6	5	10.9	0		0		0		0.0	
2004	11	10.8	6	11.5	0		0		0		0.0	
2005	6	10.2	5	10.4	0		0		0		0.0	
2006	7	9.4	6	8.9	0		0		0		0.0	
2007	6	11.1	4	12.0	0		0		0		0.0	
2008	5	8.9	4	8.3	0		0		0		0.0	
2009	8	8.9	5	9.4	0		0		0		0.0	
2010	13	8.4	9	8.0	7	15.2	6	13.1	7	26.7	6.0	23.7
2011	10	11.5	8	12.0	4	4.5	3	4.7	4	24.0	3.0	22.3
2012	20	12.8	13	12.0	3	26.1	3	26.1	3	46.7	3.0	46.7
2013	16	9.1	11	9.5	0		0		0		0.0	
2014	16	8.3	10	8.8	1	22.1	1	22.1	1	29.6	1.0	29.6
2015	15	10.8	11	11.3	4	11.9	4	11.9	4	36.2	4.0	36.2
2016	13	8.6	8	9.1	3	12.0	3	12.0	3	30.0	3.0	30.0
2017	7	10.1	6	10.5	3	9.1	3	9.1	3	29.0	3.0	29.0
2018	8	12.1	6	11.3	3	8.4	3	8.4	3	20.3	3.0	20.3
2019	8	9.4	5	10.0	4	9.0	4	9.0	5	20.3	4.0	20.3
<b>All Years (Weighted)</b>		9.9		10.1		11.3		11.0		28.9		27.9
<b>DLDL Median</b>				8.5				7.0				23.0
<b>NLF Ecoregion Median</b>				8.9				5.6				21.0

Year	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1995	3	6.3	1	4.8								
1996	4	9.7	3	9.3								
1997	3	10.0	1	11.5								
1998	6	8.5	2	7.8								
1999	5	8.4	2	6.9								
2000	10	6.3	5	4.6	4	18.8	3	23.3	4	44.3	3.0	48.3
2001	9	9.1	7	8.9	4	6.0	3	6.7	5	26.8	3.0	29.0
2002	3	12.3	1	13.0	1	5.8	1	5.8	2	19.0	1.0	27.0
2003	3	6.3	3	6.3	3	17.3	3	17.3	3	46.7	3.0	46.7
2004	0		0		2	18.8	2	18.8	1	23.0	1.0	23.0
2005	0		0		0		0		0		0.0	
2006	0		0		0		0		0		0.0	
2007	0		0		0		0		0		0.0	
2008	0		0		0		0		0		0.0	
2009	0		0		0		0		0		0.0	
2010	3	5.9	3	5.9	3	10.3	3	10.3	3	31.3	3.0	31.3
2011	0		0		0		0		0		0.0	
2012	0		0		0		0		0		0.0	
2013	0		0		0		0		0		0.0	
2014	0		0		0		0		0		0.0	
2015	0		0		0		0		0		0.0	
2016	0		0		0		0		0		0.0	
2017	0		0		0		0		0		0.0	
2018	0		0		0		0		0		0.0	
2019	3	7.0	3	7.0	3	10.3	3	10.3	3	29.2	3.0	29.2
<b>All Years (Weighted)</b>		8.1		7.4		12.8		13.7		33.0		35.5
<b>SHDL Median</b>				5.6				7.5				29.0
<b>NLF Ecoregion Median</b>				8.9				5.6				21.0

Year	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	6.0	0									
2001	4	9.0	2	9.3								
2002	2	7.5	0									
2003	8	8.9	4	9.3								
2004	6	9.2	2	9.5								
2005	6	8.0	5	8.0								
2006	7	7.6	6	7.5								
2007	3	8.3	2	8.5								
2008	5	7.4	4	7.1								
2009	8	8.8	5	8.9								
2010	9	7.8	6	7.2	3	10.9	3	10.9	3	29.7	3.0	29.7
2011	5	8.7	4	9.0								
2012	4	9.1	4	9.1								
2013	8	9.0	6	8.9								
2014	3	8.2	2	8.3								
2015	7	8.2	5	8.2								
2016	7	7.4	5	8.6								
2017	3	9.0	3	9.0								
2018	4	9.0	3	9.0								
2019	5	8.3	3	8.0	3	7.4	3	7.4	3	20.7	3.0	20.7
<b>All Years (Weighted)</b>		8.4		8.4		9.2		9.2		25.2		25.2
<b>SLDL Median</b>				5.6				9.4				33.0
<b>NLF Ecoregion Median</b>				8.9				5.6				21.0

Year	Secchi (feet)				Chlorophyll-a (µg/L)				Total Phosphorus (µg/L)			
	Growing Season		Summer		Growing Season		Summer		Growing Season		Summer	
	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
1979	1	7.0	1	7.0								
1990	3	10.1	0									
1991	0		0									
1992	0		0									
1993	8	5.6	4	6.8								
1994	11	6.9	5	8.6								
1995	16	7.2	6	8.3								
1996	18	6.2	9	6.6								
1997	8	8.7	6	9.0								
1998	6	6.4	1	7.3								
1999	8	6.8	3	7.4								
2000	7	6.9	3	8.3								
2001	9	7.6	3	8.1								
2002	7	8.4	2	9.7								
2003	7	8.0	1	8.1								
2004	3	9.3	2	9.6								
2005	0		0									
2006	0		0									
2007	0		0		2	10.1	2	10.1	2	24.0	2.0	24.0
2008	0		0		0		0		0		0.0	
2009	0		0		0		0		0		0.0	
2010	3	6.9	3	6.9	3	5.3	3	5.3	3	17.7	3.0	17.7
2011	0		0		0		0		0		0.0	
2012	0		0		0		0		0		0.0	
2013	0		0		0		0		0		0.0	
2014	0		0		0		0		0		0.0	
2015	0		0		0		0		0		0.0	
2016	4	4.4	0		0		0		0		0.0	
2017	6	4.9	3	5.0	0		0		0		0.0	
2018	5	4.7	2	4.8	0		0		0		0.0	
2019	3	4.1	3	4.1	3	14.5	3	14.5	4	24.2	4.0	24.2
<b>All Years (Weighted)</b>		6.8		7.4		9.9		9.9		22.0		22.0
<b>SLDL Median</b>				5.6				9.4				33.0
<b>NLF Ecoregion Median</b>				8.9				5.6				21.0