



**BIOMANIPULATION OF SHALLOW WETLANDS IN SOUTHERN
MINNESOTA USING ROTENONE RECLAMATION AND WALLEYE
FRY STOCKING: SUPPLEMENTAL MATERIAL**

by

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	Macroinvertebrate composition in South Wilson Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from South Wilson Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. South Wilson Pond was a control pond during this study; therefore, South Wilson Pond was not chemically reclaimed.
Appendix 5.10 70
	Macroinvertebrate composition in Oak Leaf Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Oak Leaf Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Oak Leaf Pond was a control pond during this study; therefore, Oak Leaf Pond was not chemically reclaimed.
Appendix 5.11 71
	Macroinvertebrate composition in Kinbrae Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Kinbrae Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Kinbrae Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.
Appendix 5.12 72
	Macroinvertebrate composition in Toners Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Toners Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Toners Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

Appendix 5.13	73
<p>Macroinvertebrate composition in Upper Case Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Upper Case Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Upper Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.</p>	
Appendix 5.14	74
<p>Macroinvertebrate composition in Lower Case Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Lower Case Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Lower Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.</p>	
Appendix 5.15	75
<p>Macroinvertebrate composition in Butterfield Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Butterfield Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Butterfield Pond was a control pond during this study; therefore, Butterfield Pond was not chemically reclaimed.</p>	
Appendix 6.1	76
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Appendix 1.1. Fish assemblage composition in Clear Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Clear Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	2004	2005			2006			2007		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	2	0	0	0	0	0	2	2	1	1
Overall	3	0	1	1	0	1	3	2	2	2
Relative Density										
Bullhead	82.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crappie	0.0	0.0	0.0	0.0	0.0	0.0	5.2	4.0	0.8	0.0
Fathead Minnow	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.4	0.0	0.8
Walleye	7.2	0.0	2,473.2	2.0	0.0	85.2	3.2	0.0	9.2	1.2
Yellow Perch	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall	95.6	0.0	2,473.2	2.0	0.0	85.2	10.8	4.4	10.0	2.0
Biomass										
Bullhead	4,740.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crappie	0.0	0.0	0.0	0.0	0.0	0.0	45.2	105.2	162.0	0.0
Fathead Minnow	0.0	0.0	0.0	0.0	0.0	0.0	3.2	1.2	0.0	2.0
Walleye	210.0	0.0	8,650.0	24.0	0.0	3,172.0	131.2	0.0	901.2	140.0
Yellow Perch	385.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall	5,335.2	0.0	8,650.0	24.0	0.0	3,172.0	179.6	106.4	1,063.2	142.0

Appendix 1.2. Fish assemblage composition in Clear (Dundee) Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Clear (Dundee) Pond was a control pond during this study; therefore, Clear (Dundee) Pond was not chemically reclaimed.

	2004		2005			2006			2007		
	Fall		Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness											
Excluding Walleye	6		4	6	5	4	6	7	4	7	8
Overall	6		4	6	5	4	6	7	4	7	8
Relative Density											
Bullhead	46.4		100.4	84.8	109.2	86.0	186.8	1.2	59.2	27.6	4.4
Brook Stickleback	0.0		0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Carp	0.0		0.0	1.2	1.2	0.0	1.2	1.2	0.0	0.0	1.2
Common Shiner	1.2		0.0	102.0	0.0	0.0	0.0	555.6	0.0	1.2	3.2
Crappie	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Fathead Minnow	1,167.2		851.6	4,227.2	115.6	49.6	40.4	15,301.2	202.4	253.6	4,926.0
Green Sunfish	1.2		0.0	0.0	0.0	0.0	8.0	106.0	0.0	0.0	2.0
Orangespotted Sunfish	47.2		6.0	294.8	43.2	2.0	622.0	276.0	1.2	24.0	341.2
White Sucker	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Yellow Perch	1.2		0.0	2,991.2	83.2	4.0	36.0	247.2	10.8	380.8	711.6
Overall	1,264.4		958.8	7,701.2	352.4	141.6	894.4	16,488.4	273.6	691.2	5,990.8
Biomass											
Bullhead	9,600.0		19,600.0	18,125.2	12,250.0	19,525.2	40,000.0	85.2	11,522.0	5,840.0	130.0
Brook Stickleback	0.0		2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Carp	0.0		0.0	1,500.0	3,150.0	0.0	210.0	2,000.0	0.0	0.0	80.0
Common Shiner	3.2		0.0	514.0	0.0	0.0	0.0	1,200.0	0.0	15.2	32.0
Crappie	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	750.0	0.0
Fathead Minnow	2,570.0		2,575.2	6,087.2	262.0	118.0	152.0	33,050.0	408.0	1,170.0	9,931.2
Green Sunfish	10.0		0.0	0.0	0.0	0.0	174.0	2,650.0	0.0	0.0	120.0
Orangespotted Sunfish	235.2		40.0	1,495.2	218.0	20.0	5,770.0	3,000.0	18.0	265.2	341.2
White Sucker	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	640.0
Yellow Perch	10.0		0.0	6,951.2	696.0	48.0	1,326.0	10,750.0	1,411.2	3,175.2	6,640.0
Overall	12,428.4		22,217.2	34,672.8	16,576.0	19,711.2	47,632.0	52,735.2	13,359.2	11,215.6	17,914.4

Appendix 1.3. Fish assemblage composition in County 13 Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. County 13 Pond was a control pond during this study; therefore, County 13 Pond was not chemically reclaimed.

	2002	2003			2004			2005		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	7	7	9	8	8	5	8	5	9	6
Overall	7	8	9	8	8	5	9	6	9	6
Relative Density										
Bigmouth Buffalo	27.2	50.4	31.2	2.0	3.2	7.2	10.8	6.0	2.0	2.0
Bullhead	1,176.0	696.8	359.2	216.4	182.0	170.8	209.2	78.0	422.8	206.8
Common Carp	80.4	4.4	1.2	0.0	2.0	2.0	1.2	0.0	1.2	2.0
Crappie	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0
Fathead Minnow	64.4	34.8	1.2	452.4	61.6	0.0	12.4	496.0	50.8	56.8
Green Sunfish	0.0	2.4	4.0	3.2	1.2	0.0	0.0	0.0	5.2	0.0
Northern Pike	0.0	0.0	2.0	1.2	0.0	0.0	1.2	0.0	0.0	0.0
Orangespotted Sunfish	216.8	0.0	3.2	148.0	9.6	7.2	4.8	0.0	44.0	192.0
Tadpole Madtom	2.4	2.0	1.2	1.6	68.4	0.0	0.0	9.2	18.0	0.0
Walleye	0.0	2.4	0.0	0.0	0.0	0.0	2.0	1.2	0.0	0.0
White Sucker	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Yellow Perch	56.8	4.0	8.4	4.4	40.4	4.0	15.6	12.4	1.2	27.2
Overall	1,624.0	797.2	411.6	829.2	368.4	191.2	258.4	602.8	546.4	486.8
Biomass										
Bigmouth Buffalo	6,200.0	10,090.0	13,150.0	1,400.0	2,210.0	5,400.0	13,600.0	5,300.0	6,800.0	3,750.0
Bullhead	38,100.0	17,400.0	32,200.0	8,650.0	24,650.0	14,200.0	21,100.0	12,400.0	43,700.0	20,263.2
Common Carp	6,080.0	4,590.0	150.0	0.0	3,940.0	5,300.0	798.0	0.0	3,350.0	4,250.0
Crappie	0.0	0.0	0.0	0.0	0.0	0.0	378.0	0.0	0.0	0.0
Fathead Minnow	172.0	58.0	2.0	226.0	123.2	0.0	22.0	900.0	100.0	117.2
Green Sunfish	0.0	95.2	315.2	101.2	185.2	0.0	0.0	0.0	250.0	0.0
Northern Pike	0.0	0.0	3,200.0	1,800.0	0.0	0.0	2,200.0	0.0	0.0	0.0
Orangespotted Sunfish	635.2	0.0	30.0	1,702.0	64.0	120.0	65.2	0.0	780.0	672.0
Tadpole Madtom	40.0	20.0	20.0	30.0	525.2	0.0	0.0	195.2	270.0	0.0
Walleye	0.0	1,060.0	0.0	0.0	0.0	0.0	2,700.0	125.2	0.0	0.0
White Sucker	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	580.0	0.0
Yellow Perch	8,585.2	850.0	1,745.2	965.2	8,105.2	600.0	3,160.0	1,365.2	40.0	168.0
Overall	59,812.4	34,163.2	50,812.4	14,874.4	39,802.8	25,620.0	44,023.2	14,985.6	55,870.0	29,220.4

Appendix 1.4. Fish assemblage composition in Boot Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Boot Pond was a control pond during this study; therefore, Boot Pond was not chemically reclaimed.

	2004	2005			2006			2007		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	5	4	4	5	4	6	4	4	3	4
Overall	5	4	4	6	5	6	5	5	3	4
Relative Density										
Bullhead	190.8	2,664.8	522.8	58.4	67.2	129.2	0.4	1,180.0	5.2	55.6
Fathead Minnow	1,217.6	0.0	6.0	231.6	12.4	228.4	8.0	2.4	0.0	3.2
Northern Pike	3.2	0.8	1.2	0.8	0.0	0.8	0.0	0.0	0.0	0.0
Orangespotted Sunfish	3.2	0.0	0.0	80.0	9.2	4.0	4.0	4.0	4.4	2.8
Walleye	0.0	0.0	0.0	1.2	4.0	0.0	0.4	2.0	0.0	0.0
White Sucker	0.0	1.2	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
Yellow Perch	126.8	9.2	1.2	35.2	8.8	21.6	2.4	2.8	2.0	12.0
Overall	1,541.6	2,676.0	531.2	407.2	101.6	384.8	15.2	1,191.2	11.6	73.6
Biomass										
Bullhead	26,200.0	110,900.0	24,100.0	4,892.0	4,710.0	11,268.0	6.0	12,400.0	19,450.0	5,560.0
Fathead Minnow	2,350.0	0.0	12.0	525.2	32.0	864.0	15.2	5.2	0.0	6.0
Northern Pike	4,400.0	2,500.0	2,000.0	780.0	0.0	2,800.0	0.0	0.0	0.0	0.0
Orangespotted Sunfish	30.0	0.0	0.0	694.0	70.0	50.0	50.0	70.0	53.2	29.2
Walleye	0.0	0.0	0.0	912.0	5,000.0	0.0	1.2	3,200.0	0.0	0.0
White Sucker	0.0	1,650.0	0.0	0.0	0.0	1,450.0	0.0	0.0	0.0	0.0
Yellow Perch	820.0	2,320.0	15.2	1,664.0	2,550.0	2,130.0	51.2	1,020.0	90.0	810.0
Overall	33,800.0	117,370.0	26,127.2	9,467.2	12,362.0	18,562.0	123.6	16,695.2	19,593.2	6,405.2

Appendix 1.5. Fish assemblage composition in Oak Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Oak Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	2004	2005			2006			2007		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	2	1	1	1	1	1	1	4	3	1
Overall	3	1	2	2	2	1	2	4	4	2
Relative Density										
Bullhead	0.0	0.0	134.0	16.0	3.2	0.0	200.4	49.2	15.2	94.0
Fathead Minnow	8.0	1.2	0.0	0.0	0.0	0.0	0.0	12.4	0.4	0.0
Fourspine Stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0
Iowa Darter	8.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Ninespine Stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	144.0	0.0
Walleye	4.0	0.0	142.0	118.0	330.0	33.2	138.8	0.0	155.6	1,337.2
Overall	20.0	1.2	276.0	134.0	333.2	33.2	339.2	93.6	315.2	1,431.2
Biomass										
Bullhead	0.0	0.0	135.2	240.0	135.2	0.0	7,595.2	3,145.2	420.0	720.0
Fathead Minnow	15.2	3.2	0.0	0.0	0.0	0.0	0.0	25.2	1.2	0.0
Fourspine Stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.2	0.0	0.0
Iowa Darter	10.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
Ninespine Stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0	0.0
Walleye	170.0	0.0	895.2	1,595.2	5,160.0	1,050.0	5,740.0	0.0	280.0	16,050.0
Overall	195.2	3.2	1,030.4	1,835.2	5,295.2	1,050.0	13,335.2	3,245.6	1,021.2	16,770.0

Appendix 1.6. Fish assemblage composition in Bohemian Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Bohemian Pond was a control pond during this study; therefore, Bohemian Pond was not chemically reclaimed.

	2004		2005			2006			2007		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Species Richness											
Excluding Walleye	4	5	4	4	4	5	4	5	3	3	
Overall	4	5	4	4	4	5	4	5	3	3	
Relative Density											
Bullhead	44.4	4.0	2.0	7.2	2.0	14.0	37.2	10.0	2.0	164.4	
Fathead Minnow	1,640.4	2,623.6	702.0	3,428.0	5,004.8	4,836.4	6,706.8	1,773.2	1,289.6	902.8	
Fourspine Stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	
Iowa Darter	0.0	3.6	3.2	6.8	0.0	68.8	0.0	4.0	0.0	0.0	
Johnny Darter	27.2	15.2	27.2	10.0	1.2	70.0	6.0	0.0	0.0	0.0	
Yellow Perch	3.2	7.2	0.0	0.0	1.2	3,670.8	116.0	94.0	140.8	206.8	
Overall	1,715.2	2,653.6	734.4	3,452.0	5,009.2	8,660.0	6,866.0	1,900.4	1,432.4	1,274.0	
Biomass											
Bullhead	2,225.2	2,010.0	140.0	250.0	575.2	2,010.0	1,593.2	465.2	40.0	8,855.2	
Fathead Minnow	3,100.0	6,800.0	1,415.2	7,067.6	11,351.2	17,550.0	14,400.0	3,575.2	2,600.0	1,820.0	
Fourspine Stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	0.0	0.0	
Iowa Darter	0.0	7.2	5.2	10.0	0.0	104.0	0.0	8.0	0.0	0.0	
Johnny Darter	34.0	31.2	40.0	15.2	2.0	106.0	12.0	0.0	0.0	0.0	
Yellow Perch	190.0	700.0	0.0	0.0	180.0	16,650.0	1,210.0	1,318.0	2,740.0	2,865.2	
Overall	5,549.2	9,548.4	1,600.4	7,342.8	12,108.4	36,420.0	17,215.2	5,404.4	5,380.0	13,540.4	

Appendix 1.7. Fish assemblage composition in Clam Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Clam Pond was a control pond during this study; therefore, Clam Pond was not chemically reclaimed.

	2002	2003			2004			2005		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	11	9	11	9	8	7	9	9	10	10
Overall	11	9	11	9	8	7	9	9	11	10
Relative Density										
Bigmouth Buffalo	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.2	0.0	0.0
Bullhead	110.0	490.0	23.2	732.8	108.0	18.8	24.8	105.2	10.0	16.0
Common Carp	6.0	3.2	1.2	1.2	1.2	0.0	2.0	0.0	0.0	1.2
Crappie	18.8	139.2	3.2	4.0	42.0	1.2	4.0	35.2	8.0	6.8
Fathead Minnow	6.8	0.0	26.0	1.2	2.0	0.0	1.2	0.0	49.6	91.6
Golden Shiner	39.2	29.2	7.2	7.6	2.0	0.0	0.0	30.0	3.2	2.0
Green Sunfish	1.2	12.0	4.4	0.0	1.2	0.0	0.0	0.0	0.0	0.0
Northern Pike	0.0	1.2	2.0	4.4	0.0	4.8	1.2	0.8	2.0	1.2
Orangespotted Sunfish	432.4	458.0	45.2	14.0	18.8	1.2	3.2	8.0	101.2	8.4
Walleye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
White Sucker	2.0	0.0	2.0	23.2	0.0	0.0	3.2	0.0	3.2	6.0
Yellow Perch	239.6	609.2	49.2	96.4	32.0	2.0	3.2	3.2	12.0	2.0
Overall	856.0	1,742.0	163.6	884.8	207.2	30.0	42.8	183.6	189.6	135.2
Biomass										
Bigmouth Buffalo	0.0	0.0	0.0	0.0	0.0	3,500.0	0.0	2,500.0	0.0	0.0
Bullhead	6,905.2	15,475.2	7,000.0	39,050.0	7,661.2	4,067.2	1,950.0	20,440.0	2,706.0	1,879.2
Common Carp	2,800.0	3,575.2	681.2	1,125.2	1,220.0	0.0	2,725.2	0.0	0.0	1,250.0
Crappie	2,676.0	67,100.0	1,700.0	1,630.0	19,068.0	438.0	1,650.0	15,530.0	752.0	1,254.0
Fathead Minnow	15.2	0.0	55.2	2.0	6.0	0.0	2.0	0.0	98.0	181.2
Golden Shiner	741.2	500.0	575.2	95.2	114.0	0.0	0.0	640.0	72.0	49.2
Green Sunfish	81.2	590.0	1,025.2	0.0	85.2	0.0	0.0	0.0	0.0	0.0
Northern Pike	0.0	4,540.0	5,448.0	8,400.0	0.0	20,200.0	2,650.0	4,000.0	8,150.0	2,450.0
Orangespotted Sunfish	1,090.0	3,520.0	1,375.2	125.2	323.2	12.0	56.0	140.0	2,025.2	52.0
Walleye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0	0.0
White Sucker	300.0	0.0	2,450.0	7,275.2	0.0	0.0	1,100.0	0.0	240.0	791.2
Yellow Perch	3,620.0	21,250.0	2,450.0	2,725.2	1,997.2	43.6	60.0	260.0	82.0	22.0
Overall	18,228.8	116,550.4	22,760.0	60,428.0	30,474.8	28,260.8	10,193.2	43,510.0	14,445.2	7,928.8

Appendix 1.8. Fish assemblage composition in Little Twin Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Little Twin Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002		2003			2004			2005		
	Fall		Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness											
Excluding Walleye	3		0	0	0	0	0	1	1	2	1
Overall	3		0	0	0	0	1	2	2	3	1
Relative Density											
Bullhead	2,212.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crappie	0.0		0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
Fathead Minnow	20.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	529.6
Orangespotted Sunfish	20.4		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walleye	0.0		0.0	0.0	0.0	0.0	4.8	38.0	1.2	58.0	0.0
White Sucker	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Yellow Perch	0.0		0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Overall	2,253.2		0.0	0.0	0.0	0.0	4.8	40.0	2.4	63.2	529.6
Biomass											
Bullhead	38,600.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crappie	0.0		0.0	0.0	0.0	0.0	0.0	0.0	300.0	0.0	0.0
Fathead Minnow	47.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	1,201.2
Orangespotted Sunfish	53.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walleye	0.0		0.0	0.0	0.0	0.0	7.6	1,675.2	20.0	982.0	0.0
White Sucker	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	120.0	0.0
Yellow Perch	0.0		0.0	0.0	0.0	0.0	0.0	625.2	0.0	0.0	0.0
Overall	38,700.4		0.0	0.0	0.0	0.0	7.6	2,300.4	320.0	1,110.0	1,201.2

Appendix 1.9. Fish assemblage composition in South Wilson Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. South Wilson Pond was a control pond during this study; therefore, South Wilson Pond was not chemically reclaimed.

	2002		2003			2004			2005		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Species Richness											
Excluding Walleye	6	5	5	5	6	4	5	7	5	3	
Overall	7	5	5	5	7	4	6	8	5	4	
Relative Density											
Bullhead	2,070.0	234.4	380.4	320.4	275.6	11.2	12.0	270.8	34.8	31.6	
Crappie	0.0	0.0	0.0	8.0	3.2	0.0	1.2	1.2	0.0	0.0	
Fathead Minnow	234.4	51.6	500.4	2,852.4	15.2	93.2	803.6	476.4	5,434.4	666.8	
Green Sunfish	425.6	36.8	37.6	44.8	11.2	2.0	7.2	5.2	17.6	2.0	
Orangespotted Sunfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Walleye	1.2	0.0	0.0	0.0	2.0	0.0	2.0	1.2	0.0	1.2	
White Sucker	1.2	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	
Yellow Perch	688.0	3.2	26.0	32.8	9.2	3.2	121.2	4.0	3.2	0.0	
Overall	3,420.4	326.0	944.4	3,258.4	316.4	109.6	947.2	762.8	5,490.0	701.6	
Biomass											
Bullhead	54,650.0	27,030.0	84,192.0	57,650.0	47,355.2	4,280.0	3,000.0	44,850.0	7,630.0	10,950.0	
Crappie	0.0	0.0	0.0	1,900.0	1,285.2	0.0	84.0	940.0	0.0	0.0	
Fathead Minnow	545.2	77.2	1,250.0	5,700.0	30.0	217.2	1,488.0	900.0	9,860.0	1,440.0	
Green Sunfish	2,970.0	305.2	1,775.2	3,790.0	880.0	190.0	15.2	600.0	630.0	140.0	
Orangespotted Sunfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Walleye	1,500.0	0.0	0.0	0.0	2,800.0	0.0	2,600.0	1,350.0	0.0	0.0	
White Sucker	1,200.0	0.0	0.0	0.0	0.0	0.0	0.0	7,950.0	0.0	0.0	
Yellow Perch	10,400.0	70.0	275.2	4,080.0	1,110.0	60.0	1,709.2	655.2	120.0	1,450.0	
Overall	71,265.2	27,482.4	87,492.4	73,120.0	53,460.4	4,747.2	8,896.4	57,245.2	18,240.0	13,980.0	

Appendix 1.10. Fish assemblage composition in Oak Leaf Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Oak Leaf Pond was a control pond during this study; therefore, Oak Leaf Pond was not chemically reclaimed.

	2004	2005			2006			2007		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	4	4	6	4	5	4	5	2	2	2
Overall	4	4	6	4	5	4	6	3	2	2
Relative Density										
Bluegill	158.4	6.0	38.8	15.2	7.2	11.2	68.0	19.2	0.0	0.0
Bullhead	207.2	1,502.4	353.6	349.2	69.2	11.2	31.2	8,160.0	17.2	203.6
Crappie	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fathead Minnow	173.2	30.8	2,143.6	211.6	308.0	1,208.4	342.8	0.0	1,240.0	332.4
Golden Shiner	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Sunfish	0.0	0.0	1.2	0.0	1.2	63.2	17.2	0.0	0.0	0.0
Walleye	0.0	0.0	0.0	0.0	0.0	0.0	1.2	5.2	0.0	0.0
Overall	540.0	1,539.2	2,539.2	576.0	385.6	1,294.0	460.4	8,184.4	1,257.2	536.0
Biomass										
Bluegill	9,500.0	315.2	465.2	618.0	380.0	338.0	775.2	2,050.0	0.0	0.0
Bullhead	11,400.0	75,150.0	13,080.0	5,401.2	4,710.0	694.0	3,115.2	16,450.0	1,450.0	1,400.0
Crappie	120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fathead Minnow	300.0	58.0	4,420.0	384.0	798.0	2,108.0	290.0	0.0	3,100.0	670.0
Golden Shiner	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Sunfish	0.0	0.0	20.0	0.0	2.0	670.0	760.0	0.0	0.0	0.0
Walleye	0.0	0.0	0.0	0.0	0.0	0.0	65.2	820.0	0.0	0.0
Overall	21,320.0	75,523.2	18,005.2	6,403.2	5,890.0	3,810.0	5,005.6	19,320.0	4,550.0	2,070.0

Appendix 1.11. Fish assemblage composition in Kinbrae Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Kinbrae Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002		2003			2004			2005		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Species Richness											
Excluding Walleye	5	0	0	0	0	0	0	1	0	1	
Overall	6	0	1	1	0	0	0	1	0	1	
Relative Density											
Bigmouth Buffalo	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bullhead	1,121.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.2	
Common Carp	23.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fathead Minnow	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Walleye	180.0	0.0	1,039.2	432.8	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow Perch	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Overall	1,370.0	0.0	1,039.2	432.8	0.0	0.0	0.0	1.2	0.0	1.2	
Biomass											
Bigmouth Buffalo	1,470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bullhead	46,225.2	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	180.0	
Common Carp	10,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fathead Minnow	87.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Walleye	11,655.2	0.0	2,694.0	4,390.0	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow Perch	885.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Overall	70,822.8	0.0	2,694.0	4,390.0	0.0	0.0	0.0	30.0	0.0	180.0	

Appendix 1.12. Fish assemblage composition in Toners Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2004 through 2007. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Toners Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	2004		2005			2006			2007		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Species Richness											
Excluding Walleye	2	1	1	1	2	2	1	2	2	2	
Overall	3	1	2	2	3	3	1	2	3	2	
Relative Density											
Bluegill	0.0	0.0	0.0	0.0	3.2	14.0	0.0	0.0	1.2	823.2	
Bullhead	16.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4	0.0	0.0	
Fathead Minnow	9.6	11.2	7.6	78.0	192.0	238.8	15,324.8	1,103.6	3,884.0	1,066.4	
Walleye	30.0	0.0	88.8	8.0	8.0	4.0	0.0	0.0	1.2	0.0	
Overall	55.6	11.2	96.4	86.0	203.2	256.8	15,324.8	1,176.0	3,886.4	1,889.6	
Biomass											
Bluegill	0.0	0.0	0.0	0.0	20.0	1,110.0	0.0	0.0	260.0	1,427.2	
Bullhead	730.0	0.0	0.0	0.0	0.0	0.0	0.0	4,838.0	0.0	0.0	
Fathead Minnow	18.0	20.0	15.2	177.2	484.0	984.0	15,325.2	2,225.2	7,900.0	2,150.0	
Walleye	3,630.0	0.0	1,210.0	487.2	560.0	540.0	0.0	0.0	538.0	0.0	
Overall	4,378.0	20.0	1,225.2	664.4	1,064.0	2,634.0	15,325.2	7,063.2	8,698.0	3,577.2	

Appendix 1.13. Fish assemblage composition in Upper Case Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Upper Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002	2003			2004			2005		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness										
Excluding Walleye	1	0	0	0	0	0	0	0	1	0
Overall	2	0	1	1	0	1	1	1	2	0
Relative Density										
Bullhead	266.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minnow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Walleye	17.6	0.0	2.4	19.2	0.0	827.2	450.0	5.6	9.2	0.0
Overall	284.0	0.0	2.4	19.2	0.0	827.2	450.0	5.6	10.0	0.0
Biomass										
Bullhead	9,300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minnow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Walleye	805.2	0.0	5.2	600.0	0.0	3,700.0	6,585.2	160.0	700.0	0.0
Overall	10,105.2	0.0	5.2	600.0	0.0	3,700.0	6,585.2	160.0	702.0	0.0

Appendix 1.14. Fish assemblage composition in Lower Case Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total mass captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Lower Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002		2003			2004			2005		
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	
Species Richness											
Excluding Walleye	2	2	0	1	0	2	2	1	2	1	
Overall	2	2	0	1	0	2	2	1	2	1	
Relative Density											
Bluegill	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bullhead	2.4	0.0	0.0	6.8	0.0	0.8	0.0	0.0	2.0	0.0	
Fathead Minnow	990.4	0.0	0.0	0.0	0.0	0.0	23.2	58.0	2,094.4	755.2	
Pumpkinseed	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow Perch	0.0	0.0	0.0	0.0	0.0	1.2	3.2	0.0	0.0	0.0	
Overall	992.8	3.2	0.0	6.8	0.0	2.0	26.4	58.0	2,096.4	755.2	
Biomass											
Bluegill	0.0	240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bullhead	15.2	0.0	0.0	48.0	0.0	520.0	0.0	0.0	3.2	0.0	
Fathead Minnow	2,496.0	0.0	0.0	0.0	0.0	0.0	42.0	290.0	4,750.0	1,370.0	
Pumpkinseed	0.0	140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow Perch	0.0	0.0	0.0	0.0	0.0	128.0	590.0	0.0	0.0	0.0	
Overall	2,511.2	380.0	0.0	48.0	0.0	648.0	632.0	290.0	4,753.2	1,370.0	

Appendix 1.15. Fish assemblage composition in Butterfield Pond based on species richness (number of species encountered), numbers (Relative Density; total number captured) and weight (Biomass; total weight captured, g) for fish collected in 0.25-inch frame nets from study ponds from 2002 through 2005. Sampling was conducted using four frame nets during each sampling period including: pre-treatment period (September) and subsequently during May, July, and September of the following three years. Butterfield Pond was a control pond during this study; therefore, Butterfield Pond was not chemically reclaimed.

	2002		2003		2004			2005			
	Fall		Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall
Species Richness											
Excluding Walleye	6		5	5	6	4	4	5	6	6	3
Overall	6		5	5	6	4	4	5	6	6	3
Relative Density											
Bluegill	0.0		0.0	2.4	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Bullhead	4,818.8		2,004.4	423.2	188.4	1,548.0	274.4	254.0	774.8	665.6	234.4
Common Carp	6.0		18.8	6.8	8.8	12.0	0.0	5.2	5.2	0.0	0.0
Crappie	110.8		37.6	49.2	17.2	0.0	20.0	8.0	46.0	10.4	7.2
Fathead Minnow	17.6		0.0	0.0	2.0	0.0	0.0	18.4	1.2	0.0	12.0
Green Sunfish	0.8		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northern Pike	35.6		16.8	17.6	8.0	9.2	6.0	3.2	4.0	5.2	0.0
Pumpkinseed	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
White Sucker	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
Overall	4,989.6		2,077.6	499.2	224.4	1,569.2	300.4	288.8	831.2	683.6	253.6
Biomass											
Bluegill	0.0		0.0	250.0	0.0	0.0	0.0	0.0	0.0	170.0	0.0
Bullhead	18,215.2		140,100.0	16,798.0	6,275.2	58,750.0	9,600.0	10,550.0	42,600.0	36,600.0	16,850.0
Common Carp	5,325.2		2,930.0	7,604.0	3,500.0	2,170.0	0.0	2,975.2	7,325.2	0.0	0.0
Crappie	6,275.2		5,070.0	11,123.2	3,400.0	0.0	3,015.2	2,000.0	13,325.2	2,795.2	410.0
Fathead Minnow	42.0		0.0	0.0	1.2	0.0	0.0	33.2	2.0	0.0	20.0
Green Sunfish	40.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northern Pike	16,150.0		7,930.0	15,890.0	5,300.0	10,100.0	8,400.0	4,050.0	6,260.0	7,000.0	0.0
Pumpkinseed	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
White Sucker	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.0	0.0
Overall	46,047.6		156,030.0	51,665.2	18,476.4	71,020.0	21,015.2	19,608.4	69,512.4	46,695.2	17,280.0

Appendix 2.1. Clear Pond physical and chemical properties from August 23, 2004 to September 17, 2007. Clear Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-17-2007	9-17-2007
Water Temperature (°C)	---	24.4	22.2	21.7	---	25.0	16.7
Alkalinity (CaCO ₃)	130.0	171.0	182.0	177.0	220.0	179.0	161.0
pH	9.0	8.3	8.5	8.5	8.3	8.2	8.0
Secchi Depth (inches)	12.0	60.0	36.0	48.0	---	48.0	18.0
Conductivity (microohms)	480.0	570.0	570.0	590.0	680.0	583.0	536.0
Total Dissolved Solids	432.0	436.0	448.0	488.0	436.0	392.0	412.0
Total Suspended Solids	75.0	4.2	39.6	7.8	7.6	22.8	27.2
<i>Productivity</i>							
Phosphorus (PO ₄)	0.161	0.130	0.543	0.123	0.144	0.257	0.322
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	3.550	3.660	5.580	1.110	1.640	2.740	3.620
Nitrite (NO ₂) and Nitrate (NO ₃)	0.030	0.140	0.150	0.400	0.030	0.400	0.400
Ammonia (NH ₃)	0.021	1.370	0.222	0.055	0.076	0.310	0.663
Total (NO ₂ + NO ₃ + NH ₃)	0.051	1.510	0.372	0.455	0.106	0.710	1.063
N:P Ratio ¹	0.317	11.615	0.685	3.699	0.736	2.763	3.301
Chlorophyll-a	0.066	0.016	0.256	0.009	0.024	0.045	0.118

¹Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.2. Clear (Dundee) Pond physical and chemical properties from August 23, 2004 to September 17, 2007. Clear (Dundee) Pond was a control pond during this study; therefore, Clear (Dundee) Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment	Post-treatment					
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-17-2007	9-17-2007
Water Temperature (°C)	---	24.4	22.2	20.0	---	25.2	16.7
Alkalinity (CaCO ₃)	101.0	151.0	116.0	151.0	144.0	156.0	123.0
pH	8.7	8.4	8.1	8.5	8.0	8.5	8.6
Secchi Depth (inches)	12.0	18.0	18.0	14.4	---	12.0	6.0
Conductivity (microohms)	900.0	1,050.0	960.0	870.0	890.0	827.0	730.0
Total Dissolved Solids	792.0	888.0	728.0	696.0	620.0	620.0	572.0
Total Suspended Solids	44.0	23.6	23.6	45.2	22.4	30.8	36.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.112	0.073	0.102	0.103	0.064	0.099	0.164
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	3.300	1.550	2.440	1.480	2.060	1.590	2.690
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	1.360	0.030	1.520	0.030	0.400	0.400
Ammonia (NH ₃)	0.020	0.082	0.371	0.026	0.698	0.024	0.020
Total (NO ₂ + NO ₃ + NH ₃)	0.040	1.442	0.401	1.546	0.728	0.424	0.420
N:P Ratio ¹	0.357	19.753	3.931	15.010	11.375	4.283	2.561
Chlorophyll-a	0.128	0.031	0.085	0.075	0.025	0.056	0.150

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.3. County-13 Pond physical and chemical properties from September 9, 2002 to September 12, 2005. County 13 Pond was a control pond during this study; therefore, County 13 Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment	Post-treatment					
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	20.5	---	23.6	---	22.8	22.2
Alkalinity (CaCO ₃)	120.0	136.0	116.0	124.0	121.0	151.0	133.0
pH	9.1	8.4	8.8	8.4	8.5	8.3	8.6
Secchi Depth (inches)	---	9.6	---	12.0	---	12.0	18.0
Conductivity (μohms)	456.0	478.0	488.0	415.0	382.0	510.0	450.0
Total Dissolved Solids	356.0	460.0	380.0	300.0	328.0	428.0	352.0
Total Suspended Solids	50.4	66.0	42.8	39.6	69.0	90.8	51.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.223	0.283	0.204	0.291	0.299	0.322	0.205
Nitrogen							
Total Kjeldahl Nitrogen	0.000	4.050	0.000	4.100	4.420	3.620	3.100
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.030	0.010	0.960	0.020	0.010	0.010
Ammonia (NH ₃)	0.026	0.229	0.061	0.302	0.020	0.028	0.032
Total (NO ₂ + NO ₃ + NH ₃)	0.046	0.259	0.071	1.262	0.040	0.038	0.042
N:P Ratio ¹	0.206	0.915	0.348	4.337	0.134	0.118	0.205
Chlorophyll-a	0.104	0.188	0.157	0.228	0.391	0.201	0.189

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.4. Boot Pond physical and chemical properties from August 23, 2004 to September 17, 2007. Boot Pond was a control pond during this study; therefore, Boot Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-18-2007	9-17-2007
Water Temperature (°C)	---	23.9	23.3	20.6	---	---	16.7
Alkalinity (CaCO ₃)	217.0	198.0	198.0	229.0	186.0	201.0	195.0
pH	9.4	9.5	9.4	7.9	8.9	8.8	9.0
Secchi Depth (inches)	9.6	9.6	6.0	9.0	---	---	6.0
Conductivity (microohms)	400.0	360.0	371.0	440.0	365.0	401.0	362.0
Total Dissolved Solids	376.0	380.0	328.0	316.0	276.0	296.0	256.0
Total Suspended Solids	124.0	158.0	98.0	72.4	48.0	32.0	23.6
<i>Productivity</i>							
Phosphorus (PO ₄)	0.297	0.314	0.190	0.293	0.107	0.112	0.072
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	6.680	7.690	7.240	6.160	3.570	2.590	2.470
Nitrite (NO ₂) and Nitrate (NO ₃)	0.040	0.010	0.020	0.400	0.010	0.400	0.400
Ammonia (NH ₃)	0.022	0.089	0.042	1.580	0.021	0.020	0.022
Total (NO ₂ + NO ₃ + NH ₃)	0.062	0.099	0.062	1.980	0.031	0.420	0.422
N:P Ratio ¹	0.209	0.315	0.326	6.758	0.290	3.750	5.861
Chlorophyll-a	0.234	0.246	0.356	0.132	0.089	0.039	0.046

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.5. Oak Pond physical and chemical properties from August 23, 2004 to September 17, 2007. Oak Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment	Post-treatment					
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-17-2007	9-17-2007
Water Temperature (°C)	---	22.8	21.1	19.4	---	25.2	11.7
Alkalinity (CaCO ₃)	84.0	113.0	149.0	81.0	114.0	139.0	143.0
pH	9.7	8.9	8.0	9.4	8.1	8.7	8.4
Secchi Depth (inches)	60.0	60.0	60.0	60.0	---	60.0	60.0
Conductivity (microohms)	690.0	750.0	820.0	730.0	830.0	743.0	786.0
Total Dissolved Solids	584.0	592.0	656.0	548.0	616.0	568.0	640.0
Total Suspended Solids	5.0	4.0	2.4	4.4	4.4	8.8	1.6
<i>Productivity</i>							
Phosphorus (PO ₄)	0.028	0.072	0.059	0.043	0.010	0.053	0.045
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	1.190	1.240	1.650	0.960	0.980	1.260	1.180
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.010	0.040	0.400	0.010	1.260	0.400
Ammonia (NH ₃)	0.025	0.070	0.426	0.027	0.029	0.022	0.040
Total (NO ₂ + NO ₃ + NH ₃)	0.045	0.080	0.466	0.427	0.039	1.282	0.440
N:P Ratio ¹	1.607	1.111	7.898	9.930	3.900	24.189	9.778
Chlorophyll-a	0.009	0.003	0.004	0.005	0.008	0.011	0.013

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.6. Bohemian Pond physical and chemical properties from August 23, 2004 to September 17, 2007. Bohemian Pond was a control pond during this study; therefore, Bohemian Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-17-2007	9-17-2007
Water Temperature (°C)	---	21.7	21.1	19.4	---	25.0	12.2
Alkalinity (CaCO ₃)	274.0	278.0	238.0	304.0	304.0	296.0	293.0
pH	8.6	8.7	8.7	8.8	8.4	8.3	8.7
Secchi Depth (inches)	15.6	36.0	36.0	24.0	---	18.0	6.0
Conductivity (microohms)	2,070.0	1,870.0	1,890.0	1,850.0	1,940.0	1,730.0	1,640
Total Dissolved Solids	1,760.0	1,540.0	1,550.0	1,500.0	1,570.0	1,520.0	1,610
Total Suspended Solids	46.8	4.2	10.0	18.8	18.8	9.6	15.6
<i>Productivity</i>							
Phosphorus (PO ₄)	0.107	0.043	0.103	0.143	0.110	0.121	0.156
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	2.560	1.870	2.700	2.780	2.950	2.220	2.870
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.010	0.030	0.400	0.020	0.400	0.400
Ammonia (NH ₃)	0.021	0.040	0.245	0.040	0.027	0.178	0.022
Total (NO ₂ + NO ₃ + NH ₃)	0.041	0.050	0.275	0.440	0.047	0.578	0.622
N:P Ratio ¹	0.383	1.163	2.670	3.077	0.427	4.777	3.987
Chlorophyll-a	0.038	0.008	0.043	0.080	0.112	0.034	0.086

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.7. Clam Pond physical and chemical properties from September 9, 2002 to September 12, 2005. Clam Pond was a control pond during this study; therefore, Clam Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment	Post-treatment					
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	27.6	---	27.2	---	23.9	22.8
Alkalinity (CaCO ₃)	167.0	157.0	157.0	141.0	169.0	199.0	128.0
pH	8.9	9.2	9.0	9.2	8.3	8.6	8.1
Secchi Depth (inches)	---	24.0	---	6.0	---	24.0	9.6
Conductivity (µohms)	480.0	448.0	462.0	440.0	483.0	500.0	395.0
Total Dissolved Solids	388.0	364.0	348.0	360.0	360.0	492.0	280.0
Total Suspended Solids	31.2	72.0	61.2	72.0	69.0	26.4	55.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.095	0.162	0.143	0.250	0.238	0.054	0.225
Nitrogen							
Total Kjeldahl Nitrogen	0.000	4.070	0.000	4.580	4.200	1.570	2.940
Nitrite (NO ₂) and Nitrate (NO ₃)	0.120	0.010	0.010	0.110	0.070	1.200	0.010
Ammonia (NH ₃)	0.041	0.026	0.033	0.026	0.204	0.126	0.036
Total (NO ₂ + NO ₃ + NH ₃)	0.161	0.036	0.043	0.136	0.274	1.326	0.046
N:P Ratio ¹	1.695	0.222	0.301	0.544	1.151	24.56	0.204
Chlorophyll-a	0.047	0.180	0.050	0.267	0.176	0.035	0.118

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.8. Little Twin Pond physical and chemical properties from September 9, 2002 to September 12, 2005. Little Twin Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment	Post-treatment					
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	27.0	---	27.1	---	24.4	22.2
Alkalinity (CaCO ₃)	144.0	146.0	176.0	151.0	162.0	122.0	153.0
pH	9.2	9.6	9.3	9.6	8.6	10.2	9.0
Secchi Depth (inches)	---	60.0	---	60.0	---	60.0	18.0
Conductivity (μohms)	353.0	350.0	380.0	327.0	361.0	300.0	337.0
Total Dissolved Solids	348.0	232.0	284.0	332.0	252.0	452.0	248.0
Total Suspended Solids	17.6	24.8	6.0	8.4	36.8	1.2	20.4
<i>Productivity</i>							
Phosphorus (PO ₄)	0.086	0.189	0.473	0.480	0.371	0.038	0.864
Nitrogen							
Total Kjeldahl Nitrogen	0.000	2.510	0.000	2.090	3.390	0.860	4.540
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.220	0.010	0.010	0.120	0.010	0.020
Ammonia (NH ₃)	0.025	0.029	0.044	0.036	0.089	0.047	0.302
Total (NO ₂ + NO ₃ + NH ₃)	0.045	0.249	0.054	0.046	0.209	0.057	0.322
N:P Ratio ¹	0.523	1.317	0.114	0.096	0.563	1.500	0.373
Chlorophyll-a	0.023	0.064	0.034	0.043	0.134	0.006	0.364

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.9. South Wilson Pond physical and chemical properties from September 9, 2002 to September 12, 2005. South Wilson Pond was a control pond during this study; therefore, South Wilson Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	19.8	---	24.9	---	22.2	21.1
Alkalinity (CaCO ₃)	351.0	412.0	392.0	399.0	409.0	400.0	344.0
pH	9.4	9.0	9.2	9.1	8.9	9.1	9.4
Secchi Depth (inches)	---	28.8	---	24.0	---	27.6	12.0
Conductivity (μohms)	960.0	1,090.0	1,070.0	1,090.0	1,210.0	1,160.0	990.0
Total Dissolved Solids	800.0	812.0	772.0	788.0	844.0	864.0	732.0
Total Suspended Solids	30.0	31.6	34.4	13.4	17.6	37.6	12.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.178	0.282	0.183	0.226	0.132	0.139	0.135
Nitrogen							
Total Kjeldahl Nitrogen	0.000	3.260	0.000	2.980	2.610	2.600	4.110
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.020	0.010	0.030	0.020	0.010	0.020
Ammonia (NH ₃)	0.031	0.186	0.030	0.212	0.025	0.039	0.035
Total (NO ₂ + NO ₃ + NH ₃)	0.051	0.206	0.040	0.242	0.045	0.049	0.055
N:P Ratio ¹	0.287	0.730	0.219	1.071	0.341	0.353	0.407
Chlorophyll-a	0.075	0.057	0.070	0.056	0.074	0.057	0.208

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.10. Oak Leaf Pond physical and chemical properties from August 23, 2004 to September 15, 2007. Oak Leaf Pond was a control pond during this study; therefore, South Wilson Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-17-2007	9-15-2007
Water Temperature (°C)	---	23.9	22.2	22.2	---	---	14.4
Alkalinity (CaCO ₃)	159.0	138.0	168.0	138.0	185.0	194.0	143.0
pH	8.8	9.6	9.0	9.6	8.3	8.1	9.6
Secchi Depth (inches)	9.6	9.6	7.2	6.0	---	---	3.0
Conductivity (microohms)	378.0	330.0	409.0	342.0	473.0	469.0	392.0
Total Dissolved Solids	316.0	364.0	412.0	352.0	484.0	340.0	328.0
Total Suspended Solids	88.0	84.0	106.0	111.0	98.0	89.0	105.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.139	0.154	0.187	0.263	0.148	0.186	0.184
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	4.990	4.800	6.510	6.170	8.750	4.720	4.510
Nitrite (NO ₂) and Nitrate (NO ₃)	0.030	0.010	0.010	0.400	0.010	0.400	0.400
Ammonia (NH ₃)	0.021	0.037	0.033	0.020	0.023	0.027	0.022
Total (NO ₂ + NO ₃ + NH ₃)	0.051	0.047	0.043	0.420	0.033	0.427	0.422
N:P Ratio ¹	0.367	0.305	0.230	1.597	0.223	2.296	2.293
Chlorophyll-a	0.181	0.168	0.220	0.246	0.570	0.109	0.077

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.11. Kinbrae Pond physical and chemical properties from September 9, 2002 to September 12, 2005. Kinbrae Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	21.5	---	28.1	---	25.6	21.7
Alkalinity (CaCO ₃)	215.0	282.0	316.0	252.0	266.0	213.0	230.0
pH	---	34.8	---	60.0	---	60.0	60.0
Secchi Depth (inches)	9.2	9.1	9.4	9.1	9.8	10.4	9.9
Conductivity (μohms)	580.0	700.0	800.0	620.0	610.0	520.0	520.0
Total Dissolved Solids	464.0	620.0	624.0	512.0	540.0	420.0	508.0
Total Suspended Solids	80.0	7.6	5.8	2.0	3.2	6.4	3.6
<i>Productivity</i>							
Phosphorus (PO ₄)	0.292	0.316	0.199	0.306	0.243	0.150	0.091
Nitrogen							
Total Kjeldahl Nitrogen	0.000	4.530	0.000	2.690	2.790	2.200	2.360
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.140	0.010	0.060	0.010	0.010	0.010
Ammonia (NH ₃)	0.030	1.140	0.038	0.125	0.059	0.071	0.045
Total (NO ₂ + NO ₃ + NH ₃)	0.050	1.280	0.048	0.185	0.070	0.081	0.055
N:P Ratio ¹	0.171	4.051	0.241	0.605	0.288	0.540	0.604
Chlorophyll-a	0.176	0.004	0.024	0.004	0.008	0.006	0.005

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.12. Toners Pond physical and chemical properties from August 23, 2004 to September 15, 2007. Toners Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	8-23-2004	6-20-2005	9-12-2005	6-19-2006	9-18-2006	6-17-2007	9-15-2007
Water Temperature (°C)	---	22.2	21.7	17.8	---	---	14.4
Alkalinity (CaCO ₃)	102.0	96.0	116.0	118.0	143.0	120.0	136.0
pH	8.9	9.7	8.8	8.0	8.0	9.4	9.1
Secchi Depth (inches)	14.4	48.0	60.0	60.0	---	---	60.0
Conductivity (microohms)	228.0	220.0	268.0	278.0	326.0	245.0	257.0
Total Dissolved Solids	216.0	356.0	192.0	252.0	244.0	172.0	224.0
Total Suspended Solids	82.0	4.4	12.0	53.5	68.0	4.4	23.6
<i>Productivity</i>							
Phosphorus (PO ₄)	0.244	0.057	0.126	0.403	0.353	0.269	0.262
Nitrogen							
Total Kjeldahl Nitrogen (TKN)	6.220	1.680	1.640	3.450	4.540	1.990	3.340
Nitrite (NO ₂) and Nitrate (NO ₃)	0.040	0.010	0.010	0.400	0.020	0.400	0.400
Ammonia (NH ₃)	0.022	0.048	0.061	0.116	0.024	0.089	0.164
Total (NO ₂ + NO ₃ + NH ₃)	0.062	0.058	0.071	0.516	0.044	0.489	0.564
N:P Ratio ¹	0.254	1.018	0.563	1.280	0.125	1.818	2.153
Chlorophyll-a	0.284	0.012	0.013	0.165	0.205	0.021	0.012

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.13. Upper Case Pond physical and chemical properties from September 9, 2002 to September 12, 2005. Upper Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	26.0	---	26.7	---	23.9	22.2
Alkalinity (CaCO ₃)	135.0	142.0	98.0	111.0	133.0	123.0	96.0
pH	9.7	8.9	9.4	10.1	8.8	8.9	9.6
Secchi Depth (inches)	---	72.0	---	12.0	---	72.0	72.0
Conductivity (µohms)	320.0	340.0	260.0	262.0	321.0	305.0	257.0
Total Dissolved Solids	232.0	388.0	216.0	236.0	252.0	340.0	264.0
Total Suspended Solids	52.8	1.6	2.0	44.8	10.8	1.0	2.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.185	0.067	0.152	0.344	0.169	0.035	0.063
Nitrogen							
Total Kjeldahl Nitrogen	0.000	1.600	2.000	4.040	2.740	1.030	1.160
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.020	0.010	0.020	0.020	0.010	0.010
Ammonia (NH ₃)	0.024	0.056	0.057	0.024	0.085	0.059	0.050
Total (NO ₂ + NO ₃ + NH ₃)	0.044	0.076	0.067	0.044	0.105	0.069	0.060
N:P Ratio ¹	0.238	1.134	0.441	0.128	0.621	1.971	0.952
Chlorophyll-a	0.043	0.003	0.002	0.244	0.066	0.005	0.004

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.14. Lower Case Pond physical and chemical properties from September 9, 2002 to September 12, 2005. Lower Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	31.2	---	26.8	---	23.3	22.8
Alkalinity (CaCO ₃)	127.0	127.0	137.0	106.0	121.0	127.0	84.0
pH	9.5	7.9	8.3	8.7	8.4	8.6	8.0
Secchi Depth (inches)	---	6.0	---	6.0	---	60.0	36.0
Conductivity (µohms)	239.0	270.0	289.0	225.0	250.0	278.0	173.0
Total Dissolved Solids	228.0	220.0	332.0	192.0	240.0	420.0	200.0
Total Suspended Solids	262.0	176.0	356.0	60.0	128.0	3.0	6.80
<i>Productivity</i>							
Phosphorus (PO ₄)	1.230	1.030	2.250	0.807	1.500	0.145	0.236
Nitrogen							
Total Kjeldahl Nitrogen	0.000	13.000	0.000	5.370	12.000	2.420	2.550
Nitrite (NO ₂) and Nitrate (NO ₃)	0.040	0.060	0.010	0.040	0.050	0.060	0.010
Ammonia (NH ₃)	0.043	0.784	0.064	0.030	0.029	0.092	0.497
Total (NO ₂ + NO ₃ + NH ₃)	0.083	0.844	0.074	0.070	0.079	0.152	0.507
N:P Ratio ¹	0.067	0.819	0.033	0.087	0.053	1.048	2.148
Chlorophyll-a	0.379	0.289	0.573	0.240	0.564	0.084	0.010

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 2.15. Butterfield Pond physical and chemical properties from September 9, 2002 to September 12, 2005. Butterfield Pond was a control pond during this study; therefore, Butterfield Pond was not chemically reclaimed. All measurements were reported in mg/L unless noted.

Pond Property	Pre-treatment		Post-treatment				
	9-9-2002	7-21-2003	9-8-2003	7-12-2004	9-13-2004	6-20-2005	9-12-2005
Water Temperature (°C)	---	22.3	---	25.6	---	23.3	23.3
Alkalinity (CaCO ₃)	164.0	170.0	186.0	163.0	175.0	210.0	145.0
pH	9.0	8.8	8.7	8.7	8.8	8.4	8.8
Secchi Depth (inches)	---	9.6	---	13.2	---	13.3	13.3
Conductivity (µohms)	500.0	510.0	610.0	530.0	510.0	595.0	468.0
Total Dissolved Solids	424.0	500.0	512.0	420.0	444.0	544.0	316.0
Total Suspended Solids	56.4	50.0	24.8	18.0	53.0	62.0	36.0
<i>Productivity</i>							
Phosphorus (PO ₄)	0.224	0.196	0.081	0.119	0.326	0.169	0.194
Nitrogen							
Total Kjeldahl Nitrogen	0.000	4.380	0.000	2.950	5.070	2.160	3.640
Nitrite (NO ₂) and Nitrate (NO ₃)	0.020	0.250	0.020	0.420	0.020	3.050	0.010
Ammonia (NH ₃)	0.032	0.035	0.194	0.181	0.020	0.207	0.031
Total (NO ₂ + NO ₃ + NH ₃)	0.052	0.285	0.214	0.601	0.040	3.257	0.041
N:P Ratio ¹	0.232	1.454	2.642	5.050	0.123	19.272	0.211
Chlorophyll-a	0.097	0.141	0.052	0.075	0.245	0.147	0.182

¹ Total nitrogen (NO₂ + NO₃ + NH₃) to phosphorus (PO₄) ratio.

Appendix 3.1. Aquatic macrophyte abundance based on frequency of occurrence (proportion of transects with aquatic vegetation present) for macrophytes collected in eight 5x50 m transects in each pond during 2002 through 2007. Sampling was conducted using standard lake survey methods during mid-summer prior to treatment and each year following treatment for three years (Year 1, Year 2, and Year 3). Values represent the mean proportion (standard error) of transects that emergent, floating, submergent, and terrestrial aquatic vegetation was observed.

	Pre-Treat	Year 1	Year 2	Year 3
Emergent macrophytes				
<i>Treatment</i>				
3-square bullrush	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.09 (0.09)
Arrowhead	0.02 (0.02)	0.04 (0.04)	0.07 (0.05)	0.04 (0.02)
Arum-leaved arrowhead	0.00 (0.00)	0.02 (0.02)	0.04 (0.04)	0.02 (0.02)
Bog sedge	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Chufa	0.02 (0.02)	0.02 (0.02)	0.00 (0.00)	0.00 (0.00)
Common cattail	0.20 (0.10)	0.14 (0.10)	0.25 (0.09)	0.34 (0.12)
Comosa sedge	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Filamentous Algae	0.14 (0.14)	0.32 (0.14)	0.57 (0.17)	0.45 (0.17)
Giant burreed	0.14 (0.08)	0.13 (0.08)	0.13 (0.07)	0.07 (0.05)
Hardstem BR	0.21 (0.09)	0.32 (0.11)	0.34 (0.11)	0.27 (0.12)
Marsh skullcap	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Narrowleaf cattail	0.20 (0.10)	0.20 (0.10)	0.27 (0.10)	0.34 (0.14)
Needles rush	0.02 (0.02)	0.04 (0.04)	0.04 (0.04)	0.02 (0.02)
Needle spike rush	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Pusillis	0.02 (0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Reed canary	0.54 (0.09)	0.57 (0.12)	0.80 (0.04)	0.82 (0.09)
River bullrush	0.55 (0.14)	0.57 (0.15)	0.48 (0.14)	0.55 (0.14)
Softstem bullrush	0.27 (0.10)	0.25 (0.11)	0.27 (0.11)	0.30 (0.12)
Spatdock	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Spike rush	0.00 (0.00)	0.00 (0.00)	0.04 (0.02)	0.07 (0.05)
Wapato	0.00 (0.00)	0.05 (0.05)	0.00 (0.00)	0.00 (0.00)
Water stargrass	0.00 (0.00)	0.07 (0.07)	0.07 (0.07)	0.00 (0.00)
White water buttercup	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Overall</i>	0.06 (0.01)	0.06 (0.01)	0.07 (0.01)	0.06 (0.01)
<i>Control</i>				
3-square bullrush	0.05 (0.05)	0.03 (0.03)	0.09 (0.06)	0.03 (0.03)
Arrowhead	0.03 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Arum-leaved arrowhead	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Bog sedge	0.02 (0.02)	0.02 (0.02)	0.00 (0.00)	0.00 (0.00)
Chufa	0.19 (0.13)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Common cattail	0.16 (0.08)	0.23 (0.12)	0.25 (0.14)	0.17 (0.10)
Comosa sedge	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.00 (0.00)
Filamentous Algae	0.13 (0.11)	0.14 (0.12)	0.20 (0.11)	0.42 (0.18)
Giant burreed	0.02 (0.02)	0.00 (0.00)	0.03 (0.02)	0.00 (0.00)
Hardstem BR	0.16 (0.07)	0.23 (0.07)	0.19 (0.05)	0.31 (0.07)
Marsh skullcap	0.00 (0.00)	0.00 (0.00)	0.02 (0.02)	0.00 (0.00)
Narrowleaf cattail	0.53 (0.10)	0.58 (0.11)	0.50 (0.12)	0.48 (0.08)
Needles rush	0.11 (0.06)	0.05 (0.03)	0.03 (0.02)	0.09 (0.06)
Needle spike rush	0.03 (0.03)	0.00 (0.00)	0.00 (0.00)	0.03 (0.03)
Pusillis	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Reed canary	0.39 (0.12)	0.50 (0.13)	0.69 (0.07)	0.61 (0.10)
River bullrush	0.36 (0.10)	0.44 (0.13)	0.48 (0.12)	0.23 (0.08)
Softstem bullrush	0.27 (0.09)	0.27 (0.10)	0.23 (0.11)	0.20 (0.11)
Spatdock	0.02 (0.02)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Spike rush	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Wapato	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Water stargrass	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
White water buttercup	0.00 (0.00)	0.02 (0.02)	0.00 (0.00)	0.00 (0.00)
<i>Overall</i>	0.06 (0.01)	0.06 (0.01)	0.06 (0.01)	0.05 (0.01)

Appendix 3.1 continued.

	Pre-Treat	Year 1	Year 2	Year 3
Floating macrophytes				
<i>Treatment</i>				
Floatingleaf pondweed	0.02 (0.02)	0.02 (0.02)	0.00 (0.00)	0.00 (0.00)
Greater duckweed	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Lesser duckweed	0.02 (0.02)	0.05 (0.05)	0.14 (0.09)	0.05 (0.05)
Star duckweed	0.00 (0.00)	0.00 (0.00)	0.05 (0.05)	0.11 (0.11)
White water lily	0.13 (0.13)	0.14 (0.14)	0.14 (0.14)	0.14 (0.14)
Yellow water lily	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Overall</i>	0.04 (0.00)	0.04 (0.00)	0.07 (0.00)	0.04 (0.00)
<i>Control</i>				
Floatingleaf pondweed	0.08 (0.08)	0.09 (0.09)	0.13 (0.13)	0.05 (0.05)
Greater duckweed	0.02 (0.02)	0.00 (0.00)	0.05 (0.05)	0.00 (0.00)
Lesser duckweed	0.00 (0.00)	0.00 (0.00)	0.02 (0.02)	0.02 (0.02)
Star duckweed	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
White water lily	0.13 (0.13)	0.13 (0.13)	0.11 (0.11)	0.11 (0.11)
Yellow water lily	0.05 (0.05)	0.06 (0.06)	0.13 (0.13)	0.02 (0.02)
<i>Overall</i>	0.05 (0.01)	0.04 (0.00)	0.06 (0.01)	0.05 (0.00)
Submergent macrophytes				
<i>Treatment</i>				
Bushy pondweed	0.02 (0.02)	0.45 (0.17)	0.61 (0.19)	0.68 (0.17)
Canada waterweed	0.00 (0.00)	0.00 (0.00)	0.14 (0.14)	0.20 (0.13)
Water celery	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Chara spp.</i>	0.21 (0.11)	0.36 (0.14)	0.34 (0.15)	0.16 (0.14)
Claspingleaf pondweed	0.09 (0.06)	0.14 (0.11)	0.14 (0.10)	0.02 (0.02)
Coontail	0.14 (0.14)	0.43 (0.17)	0.66 (0.17)	0.68 (0.14)
Curlyleaf pondweed	0.04 (0.04)	0.14 (0.14)	0.05 (0.05)	0.09 (0.06)
Flatstem pondweed	0.02 (0.02)	0.29 (0.17)	0.18 (0.10)	0.46 (0.18)
Frie's pondweed	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Leafy pondweed	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Northern watermilfoil	0.14 (0.14)	0.13 (0.13)	0.23 (0.15)	0.14 (0.14)
Plantain	0.05 (0.04)	0.13 (0.07)	0.13 (0.08)	0.21 (0.14)
Sago pondweed	0.30 (0.14)	0.77 (0.12)	0.80 (0.14)	0.84 (0.07)
Watercress	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Overall</i>	0.50 (0.10)	0.89 (0.07)	1.00 (0.00)	1.00 (0.00)
<i>Control</i>				
Bushy pondweed	0.11 (0.06)	0.05 (0.03)	0.03 (0.02)	0.08 (0.06)
Canada waterweed	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Water celery	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Chara spp.</i>	0.17 (0.06)	0.11 (0.04)	0.00 (0.00)	0.00 (0.00)
Claspingleaf pondweed	0.02 (0.02)	0.02 (0.02)	0.13 (0.13)	0.05 (0.05)
Coontail	0.06 (0.04)	0.11 (0.07)	0.23 (0.14)	0.05 (0.03)
Curlyleaf pondweed	0.06 (0.06)	0.06 (0.06)	0.00 (0.00)	0.00 (0.00)
Flatstem pondweed	0.06 (0.06)	0.05 (0.05)	0.03 (0.03)	0.00 (0.00)
Frie's pondweed	0.03 (0.03)	0.02 (0.02)	0.02 (0.02)	0.00 (0.00)
Leafy pondweed	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Northern watermilfoil	0.19 (0.12)	0.22 (0.15)	0.20 (0.13)	0.00 (0.00)
Plantain	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Sago pondweed	0.44 (0.17)	0.39 (0.15)	0.47 (0.17)	0.55 (0.17)
Watercress	0.11 (0.11)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<i>Overall</i>	0.55 (0.16)	0.52 (0.14)	0.50 (0.16)	0.61 (0.15)

Appendix 4.1. Zooplankton composition in Clear Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Clear Pond during 2004 through 2007. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Clear Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	2004	Short Term		Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3
Species Richness						
<i>Overall</i>	5	4	4	6	5	5
Relative Abundance						
Copepoda	135.2	4.8	767.5	72.4	24.2	152.7
Nauplii	6.9	0.0	304.2	19.5	2.4	88.9
Harpacticoida	0.0	0.0	2.5	0.0	0.0	0.0
Calanoida	94.5	2.7	0.0	21.0	21.6	11.3
Cyclopoida	33.8	2.1	460.7	31.8	0.2	52.6
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0
Cladocera	40.7	1.3	3.8	84.4	7.7	112.7
Daphniidae	5.6	0.0	3.8	67.4	7.5	111.4
Chydoridae	0.0	0.0	0.0	0.0	0.2	0.0
Bosminidae	35.1	1.8	0.0	16.8	0.0	1.3
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0
Sididae	0.0	0.5	0.0	0.3	0.0	0.0
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0
<i>Overall</i>	175.9	6.1	771.2	156.7	31.9	265.4
Biomass						
Copepoda	833.9	26.6	1,288.0	152.7	134.5	460.9
Nauplii	1.3	0.0	61.5	5.9	0.9	25.5
Harpacticoida	0.0	0.0	1.2	0.0	0.0	0.0
Calanoida	708.0	20.4	0.0	54.5	132.9	139.7
Cyclopoida	124.7	6.2	1,225.3	92.4	0.7	295.7
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0
Cladocera	100.1	2.2	13.2	1,174.5	184.0	1,633.0
Daphniidae	32.7	0.0	13.2	1,141.7	184	1,631.5
Chydoridae	0.0	0.0	0.0	0.0	0.1	1.5
Bosminidae	67.3	1.8	0.0	31.8	0.0	0.0
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0
Sididae	0.0	0.5	0.0	1.1	0.0	0.0
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0
<i>Overall</i>	934.0	28.8	1,301.2	1,327.2	318.5	2,093.9

Appendix 4.2. Zooplankton composition in Clear (Dundee) Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Clear (Dundee) Pond during 2004 through 2007. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Although Clear (Dundee) Pond was not chemically reclaimed, samples were collected on the same schedule as for treatment ponds; samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Clear (Dundee) Pond was a control pond during this study.

	2004	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	6	6	5	6	7	6	
Relative Abundance							
Copepoda	240.4	113.3	191.6	435.7	13.7	162.1	
Nauplii	57.0	56.0	30.0	179.0	3.4	93.9	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	122.7	32.6	86.4	77.6	8.9	57.6	
Cyclopoida	60.7	24.7	75.1	179.0	1.4	10.6	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	42.6	68.2	510.8	393.1	10.6	95.8	
Daphniidae	1.9	0.6	16.3	20.0	3.1	80.1	
Chydoridae	0.0	0.0	0.0	0.0	1.0	6.3	
Bosminidae	39.4	67.3	494.5	321.8	4.3	9.4	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	1.3	0.3	0.0	51.3	2.3	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	282.9	181.5	702.3	828.8	24.3	257.9	
Biomass							
Copepoda	1,751.3	480.9	983.0	564.2	38.1	901.7	
Nauplii	10.0	9.5	5.8	38.7	0.9	26.8	
Harpacticoida	0	0.0	0.0	0.0	0.0	0.0	
Calanoida	1,372.4	357.9	755.8	321.4	33.0	804.8	
Cyclopoida	368.9	113.5	221.3	204.1	4.3	70.1	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	81.1	138.4	719.4	573.9	16.5	715.3	
Daphniidae	6.7	8.7	77.7	43.3	3.1	687.1	
Chydoridae	0.0	0.0	0.0	0.0	0.8	11.2	
Bosminidae	66.6	127.1	641.8	327.2	4.4	17.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	7.9	2.6	0.0	203.4	8.2	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	1,832.4	619.3	1,702.4	1,138.2	54.7	1,617.0	

Appendix 4.3. Zooplankton composition in County 13 Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from County 13 Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. County 13 Pond was a control pond during this study; therefore, County 13 Pond was not chemically reclaimed.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	4	5	5	6	5	6	
Relative Abundance							
Copepoda	25.5	72.5	77.6	94.3	585.9	637.2	
Nauplii	3.6	63.1	33.2	30.0	321.8	320.5	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	21.8	8.3	8.1	8.3	1.3	6.3	
Cyclopoida	0.2	1.1	36.3	56.0	262.9	310.5	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	72.7	43.2	5.0	71.7	8.8	235.4	
Daphniidae	0.0	0.0	3.1	1.1	1.3	16.3	
Chydoridae	0.0	1.1	0.0	3.8	0.0	0.0	
Bosminidae	72.7	42.1	1.9	66.9	6.3	217.8	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	1.3	
Macrothricidae	0.0	0.0	0.0	0.0	1.3	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	98.2	115.7	82.6	166.0	594.7	872.6	
Biomass							
Copepoda	166.5	61.1	128.9	203.2	872.0	897.8	
Nauplii	0.9	12.3	7.0	5.2	56.2	43.3	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	165.5	44.9	65.3	47.0	11.5	50.4	
Cyclopoida	0.1	3.9	56.6	151.1	804.3	804.0	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	74.6	30.8	15.3	57.4	8.4	322.6	
Daphniidae	0.0	0.0	13.4	1.7	0.8	37.7	
Chydoridae	0.0	0.8	0.0	3.0	0.0	0.0	
Bosminidae	74.6	29.9	2.0	52.7	7.4	281.2	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	3.8	
Macrothricidae	0.0	0.0	0.0	0.0	0.2	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	241.0	91.9	144.2	260.6	880.4	1,220.4	

Appendix 4.4. Zooplankton composition in Boot Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Boot Pond during 2004 through 2007. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Boot Pond was a control pond during this study; therefore, Boot Pond was not chemically reclaimed.

	2004	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	8	7	6	6	7	7	
Relative Abundance							
Copepoda	180.3	115.2	59.2	346.8	4.3	108.9	
Nauplii	84.5	58.2	17.8	266.7	0.9	16.3	
Harpacticoida	0.6	0.0	0.0	0.0	0.0	0.0	
Calanoida	11.3	5.0	28.8	51.3	3.1	41.3	
Cyclopoida	83.9	52.0	12.5	28.8	0.3	51.3	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	113.9	128.3	28.8	608.5	48.5	490.8	
Daphniidae	1.9	0.6	0.3	1.3	3.6	15.0	
Chydoridae	7.5	8.1	0.6	0.0	18.9	276.7	
Bosminidae	103.3	118.9	27.9	604.7	25.7	187.8	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	1.3	0.6	0.0	2.5	0.3	11.3	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	294.2	243.5	88.0	955.3	52.7	599.7	
Biomass							
Copepoda	282.3	153.3	210.1	260.2	12.2	288.2	
Nauplii	11.9	11.2	3.3	33.0	0.2	4.2	
Harpacticoida	0.1	0.0	0.0	0.0	0.0	0.0	
Calanoida	81.7	38.7	171.4	214.8	11.1	188.3	
Cyclopoida	188.6	103.4	35.4	12.3	0.9	95.8	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	104.6	121.6	36.0	212.2	48.3	636.7	
Daphniidae	4.9	3.0	1.5	0.4	4.6	22.2	
Chydoridae	4.4	6.7	0.4	0.0	16.4	296.5	
Bosminidae	88.7	109.1	34.1	206.3	26.7	272.5	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	6.5	2.8	0.0	5.5	0.6	45.6	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	386.9	274.9	246.1	472.4	60.5	924.9	

Appendix 4.5. Zooplankton composition in Oak Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Oak Pond during 2004 through 2007. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Oak Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	2004	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	6	6	5	5	5	6	
Relative Abundance							
Copepoda	48.6	0.6	169.0	50.7	38.3	8.8	
Nauplii	23.7	< 0.1	64.5	19.7	20.5	6.5	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	7.9	< 0.1	3.1	16.0	10.5	0.0	
Cyclopoida	17.0	0.5	101.4	15.0	7.3	2.3	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	17.5	0.5	58.9	94.8	40.4	144.0	
Daphniidae	4.5	< 0.1	54.5	81.4	40.3	48.8	
Chydoridae	0.8	0.3	0.0	0.0	0.0	35.3	
Bosminidae	12.3	0.2	4.4	13.5	0.0	59.3	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.5	
Macrothricidae	0.0	0.0	0.0	0.0	0.1	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	66.1	1.1	227.9	145.5	78.8	152.7	
Biomass							
Copepoda	240.6	1.9	192.1	120.2	121.5	38.3	
Nauplii	4.9	< 0.1	9.7	3.0	3.5	2.3	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	94.5	0.2	26.5	68.5	79.3	0.0	
Cyclopoida	141.2	1.7	155.8	48.7	38.7	36.0	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	65.7	0.9	338.7	352.8	259.6	540.9	
Daphniidae	31.7	0.2	332.9	336.6	259.5	405.0	
Chydoridae	0.9	0.5	0.0	0.0	0.0	42.3	
Bosminidae	33.1	0.2	5.8	16.2	0.0	91.4	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	2.2	
Macrothricidae	0.0	0.0	0.0	0.0	0.1	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	306.3	2.8	530.7	472.9	381.1	579.2	

Appendix 4.6. Zooplankton composition in Bohemian Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Bohemian Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Bohemian Pond was a control pond during this study; therefore, Bohemian Pond was not chemically reclaimed.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	6	5	4	4	5	7	
Relative Abundance							
Copepoda	120.2	69.2	58.8	47.0	7.3	13.3	
Nauplii	28.8	31.3	21.3	40.1	4.3	7.5	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	21.3	1.9	3.1	4.4	2.8	1.3	
Cyclopoida	70.1	36.0	34.4	2.5	0.2	4.5	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	1,797.8	224.1	48.2	107.0	1.8	13.8	
Daphniidae	48.8	21.3	48.2	107.0	1.5	0.8	
Chydoridae	0.0	0.0	0.0	0.0	0.0	1.0	
Bosminidae	1,746.5	202.8	0.0	0.0	0.3	11.5	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	2.5	0.0	0.0	0.0	0.0	0.5	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	1,918.0	293.3	107.0	154.0	9.1	27.0	
Biomass							
Copepoda	425.6	161.5	214.2	34.6	13.9	12.9	
Nauplii	6.0	5.9	2.6	5.4	0.9	1.2	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	193.6	11.4	24.3	23.6	12.2	4.0	
Cyclopoida	226.0	144.2	187.4	5.6	0.9	7.6	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	2,805.2	521.5	681.6	796.8	15.4	11.0	
Daphniidae	255.6	135.3	681.6	796.8	15.2	0.9	
Chydoridae	0.0	0.0	0.0	0.0	0.0	0.9	
Bosminidae	2,532.5	386.2	0.0	0.0	0.2	7.9	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	17.2	0.0	0.0	0.0	0.0	1.3	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	3,230.8	683.0	895.8	831.4	29.4	23.9	

Appendix 4.7. Zooplankton composition in Clam Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Clam Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Clam Pond was a control pond during this study; therefore, Clam Pond was not chemically reclaimed.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	5	5	6	7	7	6	
Relative Abundance							
Copepoda	162.1	98.9	47.6	92.7	41.3	47.3	
Nauplii	5.6	0.6	4.4	18.8	5.0	19.9	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	64.5	58.8	39.4	23.8	16.3	27.2	
Cyclopoida	92.0	39.4	3.8	20.0	20.0	0.3	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	145.9	83.9	343.0	150.2	272.9	10.3	
Daphniidae	10.6	8.8	23.2	120.2	103.3	5.6	
Chydoridae	0.0	0.0	3.8	1.3	127.7	0.0	
Bosminidae	135.2	75.1	316.1	25.0	40.7	4.1	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	3.8	0.0	0.5	
Macrothricidae	0.0	0.0	0.0	0.0	1.3	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	308.0	182.8	390.6	242.9	314.2	57.6	
Biomass							
Copepoda	841.5	623.7	259.4	327.0	200.7	67.7	
Nauplii	1.9	0.2	1.2	4.1	1.3	3.5	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	529.6	476.4	244.6	284.9	147.8	64.1	
Cyclopoida	310.0	147.1	13.6	38.0	51.6	0.1	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	262.2	189.1	689.7	145.1	502.3	15.9	
Daphniidae	29.5	39.0	61.4	109.2	295.8	12.6	
Chydoridae	0.0	0.0	3.9	0.6	140.3	0.0	
Bosminidae	232.7	150.1	624.4	25.7	65.9	2.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	9.6	0.0	1.3	
Macrothricidae	0.0	0.0	0.0	0.0	0.2	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	1,103.7	812.8	949.2	472.1	703.0	83.6	

Appendix 4.8. Zooplankton composition in Little Twin Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Little Twin Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Little Twin Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002	Short Term			Long Term	
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3
Species Richness						
<i>Overall</i>	3	2	5	---	6	6
Relative Abundance						
Copepoda	0.5	0.2	1.9	---	33.8	1.8
Nauplii	0.0	0.0	0.6	---	6.3	0.4
Harpacticoida	0.0	0.0	0.0	---	0.0	0.0
Calanoida	0.1	< 0.1	1.3	---	12.5	1.3
Cyclopoida	0.4	0.2	0.0	---	15.0	0.2
Ergasilidae	0.0	0.0	0.0	---	0.0	0.0
Cladocera	0.1	0.0	116.4	---	70.7	0.2
Daphniidae	0.0	0.0	102.7	---	68.9	0.2
Chydoridae	0.0	0.0	0.0	---	1.3	< 0.1
Bosminidae	0.1	0.0	12.5	---	0.6	< 0.1
Leptodoridae	0.0	0.0	0.0	---	0.0	0.0
Sididae	0.0	0.0	1.3	---	0.0	0.0
Macrothricidae	0.0	0.0	0.0	---	0.0	0.0
Moinidae	0.0	0.0	0.0	---	0.0	0.0
<i>Overall</i>	0.6	0.2	118.3	---	104.6	2.0
Biomass						
Copepoda	1.5	0.5	24.6	---	118.2	5.8
Nauplii	0.0	0.0	0.2	---	1.5	0.1
Harpacticoida	0.0	0.0	0.0	---	0.0	0.0
Calanoida	1.0	< 0.1	24.4	---	86.1	5.4
Cyclopoida	0.5	0.5	0.0	---	30.7	0.3
Ergasilidae	0.0	0.0	0.0	---	0.0	0.0
Cladocera	0.2	0.0	477.7	---	247.3	0.7
Daphniidae	0.0	0.0	447.5	---	244.7	0.7
Chydoridae	0.0	0.0	0.0	---	1.6	< 0.1
Bosminidae	0.2	0.0	26.2	---	1.1	< 0.1
Leptodoridae	0.0	0.0	0.0	---	0.0	0.0
Sididae	0.0	0.0	4.0	---	0.0	0.0
Macrothricidae	0.0	0.0	0.0	---	0.0	0.0
Moinidae	0.0	0.0	0.0	---	0.0	0.0
<i>Overall</i>	1.7	0.5	502.3	---	2.9	6.5

Appendix 4.9. Zooplankton composition in South Wilson Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from South Wilson Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. South Wilson Pond was a control pond during this study; therefore, South Wilson Pond was not chemically reclaimed.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	6	5	6	6	4	7	
Relative Abundance							
Copepoda	93.0	31.9	66.5	97.0	142.7	160.3	
Nauplii	5.3	8.8	14.6	21.3	101.4	56.3	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	61.7	3.8	20.3	19.4	0.0	60.1	
Cyclopoida	26.0	19.4	31.6	56.3	41.3	43.8	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	43.5	5.0	21.4	152.4	341.8	192.8	
Daphniidae	11.0	0.0	15.4	135.5	125.2	187.8	
Chydoridae	0.0	3.1	0.4	0.9	0.0	1.3	
Bosminidae	30.4	1.9	5.6	16.0	216.6	2.5	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	2.2	0.0	0.0	0.0	0.0	1.3	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	136.5	36.9	87.9	249.5	484.5	353.1	
Biomass							
Copepoda	612.0	91.2	249.8	299.6	154.9	740.2	
Nauplii	1.2	1.6	5.2	5.8	18.5	17.7	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	531.0	31.7	184.7	194.9	0.0	549.0	
Cyclopoida	79.8	57.9	59.9	98.9	136.4	173.5	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	107.9	15.6	93.9	666.3	864.5	1,399.2	
Daphniidae	48.5	0.0	76.9	636.2	547.1	1,386.1	
Chydoridae	0.0	12.7	1.2	1.0	0.0	1.1	
Bosminidae	48.6	2.9	15.8	29.1	317.4	3.5	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	10.7	0.0	0.0	0.0	0.0	8.5	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	719.9	106.8	343.7	965.8	1,019.4	2,139.4	

Appendix 4.10. Zooplankton composition in Oak Leaf Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Oak Leaf Pond during 2004 through 2007. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Oak Leaf Pond was a control pond during this study; therefore, Oak Leaf Pond was not chemically reclaimed.

	2004	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	5	5	5	5	6	5	
Relative Abundance							
Copepoda	14.3	5.0	124.6	41.6	2.9	351.8	
Nauplii	4.0	0.4	40.1	28.2	0.5	126.5	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	0.9	1.4	0.0	1.3	1.8	0.0	
Cyclopoida	9.4	3.2	84.5	12.2	0.6	225.4	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	12.9	4.8	43.2	4.7	1.4	525.8	
Daphniidae	0.0	0.0	40.7	0.0	1.3	23.8	
Chydoridae	0.7	0.6	1.9	0.3	< 0.1	45.1	
Bosminidae	12.3	4.2	0.0	4.4	< 0.1	457.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.6	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	27.2	9.8	167.8	46.3	4.2	877.6	
Biomass							
Copepoda	37.4	34.5	198.7	43.0	11.9	1,543.4	
Nauplii	1.1	0.1	8.6	5.6	0.1	35.3	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	14.4	20.5	0.0	6.3	10.6	0.0	
Cyclopoida	21.9	13.9	190.0	31.2	1.2	1,508.1	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	16.6	7.1	450.2	3.6	32.1	1,290.1	
Daphniidae	0.0	0.0	448.2	0.0	31.9	191.0	
Chydoridae	0.6	0.6	1.7	0.2	< 0.1	72.6	
Bosminidae	16.0	6.5	0.0	3.4	0.1	1,026.5	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.3	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	54.1	41.6	648.8	46.6	44.0	2,833.5	

Appendix 4.11. Zooplankton composition in Kinbrae Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Kinbrae Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Kinbrae Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	5	4	5	7	5	5	
Relative Abundance							
Copepoda	105.2	0.1	169.0	118.6	57.0	167.8	
Nauplii	7.5	0.0	41.3	7.8	37.3	120.5	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	90.1	< 0.1	13.8	77.0	5.6	45.7	
Cyclopoida	7.5	0.1	113.9	33.8	14.1	1.6	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	1,100.5	0.1	131.5	85.8	128.6	10.6	
Daphniidae	26.3	0.0	85.1	31.0	126.8	10.3	
Chydoridae	0.0	0.1	0.0	0.3	0.0	0.3	
Bosminidae	1,074.2	< 0.1	46.3	53.2	1.9	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	1.3	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	1,205.6	0.2	300.5	204.4	185.6	178.4	
Biomass							
Copepoda	780.2	0.2	616.7	649.7	91.1	173.1	
Nauplii	1.8	0.0	13.2	2.0	6.3	9.9	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	742.7	0.1	136.7	471.3	39.9	161.6	
Cyclopoida	35.7	0.2	466.8	176.4	44.9	1.7	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	1,942.8	0.2	455.9	578.6	2,406.1	63.0	
Daphniidae	126.3	0.0	348.4	495.0	2,403.6	62.6	
Chydoridae	0.0	0.1	0.0	0.5	0.0	0.4	
Bosminidae	1,816.5	0.1	107.5	77.5	2.4	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	5.6	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	2,723.0	0.4	1,072.6	1,228.2	2,497.2	236.1	

Appendix 4.12. Zooplankton composition in Toners Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Toners Pond during 2004 through 2007. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Toners Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	2004	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	6	3	5	5	4	6	
Relative Abundance							
Copepoda	42.6	0.1	183.4	22.2	7.1	98.2	
Nauplii	0.9	0.0	1.3	6.3	3.4	28.0	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	38.5	0.0	0.6	0.3	0.0	13.5	
Cyclopoida	3.1	0.1	181.5	15.7	3.8	56.6	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	52.6	< 0.1	159.6	24.7	19.9	7.8	
Daphniidae	50.7	< 0.1	159.0	24.4	17.8	0.5	
Chydoridae	0.3	0.0	0.0	0.3	2.1	6.0	
Bosminidae	1.6	< 0.1	0.6	0.0	0.0	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	1.3	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	95.2	0.1	343.0	47.0	27.0	105.9	
Biomass							
Copepoda	515.2	0.3	503.3	24.4	4.6	410.6	
Nauplii	0.2	0.0	0.1	1.5	0.8	8.0	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	469.5	0.0	1.2	0.6	0.0	166.5	
Cyclopoida	45.5	0.3	502.0	22.2	3.7	236.2	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	1,855.9	0.5	1,468.4	307.2	11.2	20.7	
Daphniidae	1,851.4	0.5	1,466.4	306.9	9.6	6.4	
Chydoridae	0.5	0.0	0.0	0.4	1.6	0.0	
Bosminidae	4.0	< 0.1	2.0	0.0	0.0	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	5.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	2,371.1	0.8	1,971.7	331.6	15.8	431.4	

Appendix 4.13. Zooplankton composition in Upper Case Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Upper Case Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Upper Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	4	6	5	6	5	5	
Relative Abundance							
Copepoda	192.8	0.3	206.6	96.4	15.7	90.2	
Nauplii	0.0	0.0	52.6	14.4	6.9	62.6	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	156.5	0.1	5.0	68.2	1.9	13.8	
Cyclopoida	36.3	0.2	149.0	13.8	6.9	13.8	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	35.1	0.3	71.4	38.8	167.8	140.8	
Daphniidae	8.8	< 0.1	61.3	33.8	31.9	134.0	
Chydoridae	0.0	< 0.1	0.0	1.9	135.8	6.9	
Bosminidae	26.3	0.2	10.0	3.1	0.0	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	< 0.1	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	227.9	0.6	277.9	135.2	183.4	231.0	
Biomass							
Copepoda	1,106.0	1.3	299.6	443.3	63.1	114.1	
Nauplii	0.0	0.0	9.2	3.5	1.1	9.3	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	978.1	0.6	41.0	397.8	14.8	66.5	
Cyclopoida	127.8	0.7	249.3	42.0	47.2	38.2	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	119.4	0.7	357.6	284.9	311.5	996.4	
Daphniidae	55.3	0.2	347.4	279.7	159.7	989.2	
Chydoridae	0.0	< 0.1	0.0	1.8	151.8	7.2	
Bosminidae	64.1	0.5	10.2	3.4	0.0	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	< 0.1	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	1,225.3	2.0	657.2	728.2	374.6	1,110.5	

Appendix 4.14. Zooplankton composition in Lower Case Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; µg/L) for zooplankton collected from Lower Case Pond during 2002 through 2005. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Lower Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	5	1	6	5	5	4	
Relative Abundance							
Copepoda	134.4	0.1	451.3	503.3	508.3	315.5	
Nauplii	11.7	0.0	25.1	200.3	214.1	39.4	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	118.9	0.0	9.4	72.6	0.0	233.5	
Cyclopoida	3.8	0.1	416.9	230.4	294.2	42.6	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	37.6	0.0	108.9	513.3	38.8	40.7	
Daphniidae	1.3	0.0	15.7	338.0	33.8	0.0	
Chydoridae	0.0	0.0	4.4	0.0	2.5	0.0	
Bosminidae	36.3	0.0	88.9	175.3	2.5	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	172.0	0.1	560.3	1,016.6	547.1	356.2	
Biomass							
Copepoda	664.2	0.1	821.2	1,467.3	1,958.2	1,382.4	
Nauplii	3.3	0.0	5.6	36.9	29.5	8.4	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	655.2	0.0	34.7	401.4	0.0	1,302.3	
Cyclopoida	5.7	0.1	781.0	1,029.0	1,928.7	71.6	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	39.5	0.0	172.5	833.0	214.3	432.7	
Daphniidae	5.7	0.0	42.7	667.9	206.7	432.7	
Chydoridae	0.0	0.0	6.4	0.0	1.9	0.0	
Bosminidae	5.6	0.0	123.3	165.1	5.7	0.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	33.9	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	703.7	0.1	993.7	2,300.2	2,172.5	1,815.1	

Appendix 4.15. Zooplankton composition in Butterfield Pond based on species richness (number of species encountered), numbers (Relative Abundance; number/L) and weight (Biomass; $\mu\text{g/L}$) for zooplankton collected from Butterfield Pond during 2002 through 2004. Samples were collected from five locations in each pond and pooled. Three replicate samples were analyzed in the lab. A replicate average was then calculated to represent the relative abundance and biomass for each sample time. Samples were collected prior to treatment (Pre-Treat), the week after treatment (Post-Treat), during May of the following spring (Recovery), and again during mid-June of each year following treatment for three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Butterfield Pond was a control pond during this study; therefore, Butterfield Pond was not chemically reclaimed.

	2002	Short Term			Long Term		
	Pre-Treat	Post-Treat	Recovery	Year 1	Year 2	Year 3	
Species Richness							
<i>Overall</i>	6	6	6	6	7	5	
Relative Abundance							
Copepoda	196.6	48.2	49.1	308.0	676.1	270.4	
Nauplii	110.2	28.5	12.5	120.2	611.0	79.6	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	18.8	10.6	8.1	38.8	12.5	145.9	
Cyclopoida	67.6	9.1	28.5	149.0	52.6	674.2	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	293.0	91.4	71.7	1,071.7	686.1	434.4	
Daphniidae	7.5	6.6	2.2	174.0	195.3	403.1	
Chydoridae	45.1	1.3	63.5	508.3	275.4	338.1	
Bosminidae	240.4	83.6	5.9	389.4	212.8	426.8	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	2.5	0.6	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	489.5	139.6	120.8	1,379.7	1,362.1	704.9	
Biomass							
Copepoda	340.7	116.3	99.5	799.4	899.7	886.4	
Nauplii	21.0	5.0	3.1	21.4	55.1	11.2	
Harpacticoida	0.0	0.0	0.0	0.0	0.0	0.0	
Calanoida	130.6	87.0	44.0	387.8	113.9	627.5	
Cyclopoida	189.1	24.3	52.4	390.1	101.4	247.7	
Ergasilidae	0.0	0.0	0.0	0.0	0.0	0.0	
Cladocera	450.4	150.4	83.9	1,128.1	1,168.6	548.7	
Daphniidae	28.0	26.2	21.9	187.0	83.9	157.7	
Chydoridae	44.5	0.9	52.5	503.0	0.0	0.0	
Bosminidae	377.9	123.2	9.5	438.1	350.5	391.0	
Leptodoridae	0.0	0.0	0.0	0.0	0.0	0.0	
Sididae	0.0	0.0	0.0	0.0	0.0	0.0	
Macrothricidae	0.0	0.0	0.0	0.0	0.0	0.0	
Moinidae	0.0	0.0	0.0	0.0	0.0	0.0	
<i>Overall</i>	791.1	266.7	183.4	1,927.5	2,068.3	1,435.0	

Appendix 5.1. Macroinvertebrate composition in Clear Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Clear Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Clear Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	6	10	11	8	7	11	9	10	8	11	12	11
Relative Abundance												
Amphipoda	0.5	6.5	4.3	2.3	0.4	9.1	7.3	6.1	0.4	7.8	5.8	4.2
Chaoboridae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Chironomidae	0.5	0.1	0.3	0.1	0.5	0.9	0.1	0.1	0.5	0.5	0.2	0.1
Corixidae	0.1	0.5	1.9	8.4	0.1	0.3	0.8	0.7	0.1	0.4	1.3	4.6
Dytiscidae	0.0	0.1	2.6	0.3	0.0	0.8	1.4	0.4	0.0	0.4	2.0	0.4
Ephemeroptera	0.0	0.9	0.1	0.0	1.0	0.9	0.9	0.1	0.5	0.9	0.5	0.1
Haliplidae	0.0	2.3	1.3	1.0	0.0	1.5	4.9	0.1	0.0	1.9	3.1	0.6
Hirunidae	0.0	0.5	0.3	0.0	0.0	0.3	0.0	0.1	0.0	0.4	0.1	0.1
Hydracarina	3.1	7.6	11.5	657.6	4.0	2.6	58.9	60.6	3.6	5.1	35.2	359.1
Hydrophilidae	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0
Notonectidae	0.1	2.9	0.0	0.7	0.0	3.0	0.3	2.1	0.1	2.9	0.1	1.4
Odonata	0.1	1.9	0.9	0.1	0.4	1.6	0.0	0.0	0.3	1.8	0.4	0.1
Trichoptera	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0
<i>Overall</i>	4.5	23.3	23.3	670.6	6.5	21.0	74.5	70.7	5.5	22.1	48.9	370.6

Appendix 5.2. Macroinvertebrate composition in Clear (Dundee) Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Clear (Dundee) Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Clear (Dundee) Pond was a control pond during this study; therefore, Clear (Dundee) Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	6	6	3	4	8	7	4	5	9	7	6	6
Relative Abundance												
Amphipoda	0.9	0.1	0.0	0.0	1.5	0.1	0.0	0.0	1.2	0.1	0.0	0.0
Chaoboridae	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0
Chironomidae	1.8	0.4	0.0	0.4	1.8	0.5	0.4	0.0	1.8	0.4	0.2	0.2
Corixidae	0.0	0.1	0.0	0.4	0.3	0.1	0.0	0.1	0.1	0.1	0.0	0.3
Dytiscidae	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Ephemeroptera	0.8	0.3	0.0	0.4	0.8	0.6	0.0	0.1	0.8	0.4	0.0	0.3
Halplidae	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Hydracarina	4.9	0.4	1.0	0.5	3.3	0.6	0.3	1.0	4.1	0.5	0.6	0.7
Hydrophilidae	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Notonectidae	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
Odonata	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.6	0.0	0.2	0.1	0.3
Simuliidae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Trichoptera	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
<i>Overall</i>	8.6	1.5	1.3	1.6	8.0	2.5	1.0	2.0	8.3	2.0	1.1	1.8

Appendix 5.3. Macroinvertebrate composition in County 13 Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from County 13 Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. County 13 Pond was a control pond during this study; therefore, County 13 Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	6	8	7	---	6	5	4	---	7	9	7
Relative Abundance												
Amphipoda	---	0.0	0.0	1.4	---	0.3	0.8	2.4	---	0.1	0.4	1.9
Chaoboridae	---	0.1	0.0	0.1	---	0.3	0.0	0.0	---	0.2	0.0	0.1
Chironomidae	---	0.4	1.9	1.3	---	0.9	3.5	1.5	---	0.6	2.7	1.4
Corixidae	---	0.1	0.8	1.3	---	0.1	1.1	1.0	---	0.1	0.9	1.1
Culicidae	---	0.0	0.1	0.0	---	0.0	0.0	0.0	---	0.0	0.1	0.0
Ephemeroptera	---	0.1	0.4	0.4	---	0.5	0.0	0.0	---	0.3	0.2	0.2
Haliplidae	---	0.0	0.3	0.0	---	0.0	0.0	0.0	---	0.0	0.1	0.0
Hydracarina	---	0.4	2.4	1.4	---	0.5	14.0	1.8	---	0.4	8.2	1.6
Notonectidae	---	0.3	0.0	0.0	---	0.0	0.0	0.0	---	0.1	0.0	0.0
Odonata	---	0.0	0.0	0.1	---	0.0	0.0	0.0	---	0.0	0.0	0.1
Poduridae	---	0.0	0.3	0.0	---	0.0	0.3	0.0	---	0.0	0.3	0.0
Trichoptera	---	0.0	0.3	0.0	---	0.0	0.0	0.0	---	0.0	0.1	0.0
<i>Overall</i>	---	1.4	6.3	5.9	---	2.5	19.6	6.6	---	1.9	12.9	6.3

Appendix 5.4. Macroinvertebrate composition in Boot Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Boot Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Boot Pond was a control pond during this study; therefore, Boot Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	8	5	7	4	8	5	3	4	10	7	8	6
Relative Abundance												
Amphipoda	0.8	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Chaoboridae	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Chironomidae	0.8	0.0	0.3	0.0	0.8	0.1	0.0	0.1	0.8	0.1	0.1	0.1
Corixidae	0.1	0.3	0.0	1.1	0.3	0.1	0.1	0.0	0.2	0.2	0.1	0.6
Dytiscidae	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Ephemeroptera	0.5	0.0	0.3	0.3	0.8	0.0	0.0	0.3	0.6	0.0	0.1	0.3
Haliplidae	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
Hirunidae	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Hydracarina	3.3	6.9	17.4	11.9	8.6	14.4	13.6	16.5	5.9	10.6	15.5	14.2
Hydrophilidae	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Notonectidae	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0
Odonata	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0
Trichoptera	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1
<i>Overall</i>	5.9	7.8	18.4	13.4	11.0	14.9	13.9	17.0	8.4	11.3	16.1	15.2

Appendix 5.5. Macroinvertebrate composition in Oak Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Oak Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Oak Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	12	12	13	9	12	10	9	10	14	13	14	13
Relative Abundance												
Amphipoda	18.9	8.1	2.0	7.5	10.5	10.1	4.8	6.1	14.4	9.1	3.4	6.8
Belostomatidae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Chaoboridae	0.0	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Chironomidae	0.7	2.4	0.4	0.1	4.5	1.4	0.5	0.0	2.7	1.9	0.4	0.1
Corixidae	2.9	2.9	0.0	2.1	2.1	2.6	1.0	1.4	2.5	2.8	0.5	1.8
Curculionidae	0.3	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.3	0.1	0.0	0.0
Dytiscidae	0.4	3.4	2.0	2.8	2.8	1.6	2.5	2.6	1.7	2.5	2.3	2.7
Ephemeroptera	6.9	0.5	0.1	0.0	17.8	0.8	0.8	0.0	12.7	0.6	0.4	0.0
Gyrinidae	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Haliplidae	5.9	8.1	0.9	8.3	2.0	1.9	0.6	3.1	3.8	5.0	0.8	5.7
Hirunidae	0.7	0.1	0.1	0.3	0.1	0.0	0.0	0.5	0.4	0.1	0.1	0.4
Hydracarina	4.7	12.4	3.8	4.4	3.4	4.4	2.6	1.5	4.0	8.4	3.2	2.9
Hydrophilidae	1.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1	0.0
Nepidae	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Notonectidae	0.0	0.4	0.6	0.4	0.9	0.5	0.3	0.0	0.5	0.4	0.4	0.2
Odonata	0.1	1.6	1.0	0.0	1.3	0.3	1.4	0.5	0.7	0.9	1.2	0.3
Simuliidae	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
Trichoptera	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.1
<i>Overall</i>	42.7	40.1	11.6	26.0	45.8	23.6	14.4	16.3	44.3	31.9	13.0	21.1

Appendix 5.6. Macroinvertebrate composition in Bohemian Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Bohemian Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Bohemian Pond was a control pond during this study; therefore, Bohemian Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	9	8	7	8	12	9	8	7	12	10	8	9
Relative Abundance												
Amphipoda	14.6	0.3	0.4	4.0	27.6	0.6	0.4	0.9	21.1	0.4	0.4	2.2
Chironomidae	0.0	0.6	2.2	0.0	0.5	0.5	1.3	2.1	0.3	0.6	1.6	1.2
Corixidae	68.1	0.0	1.0	0.2	18.6	0.0	1.0	0.6	43.4	0.0	1.0	0.4
Dytiscidae	0.3	0.0	0.8	0.3	0.4	0.0	0.1	0.3	0.3	0.0	0.4	0.3
Ephemeroptera	0.1	0.4	0.0	0.0	3.1	0.1	0.4	0.0	1.6	0.3	0.2	0.0
Gyrinidae	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Haliplidae	2.5	0.9	11.6	1.2	0.3	0.5	7.9	6.9	1.4	0.7	9.3	4.4
Hirunidae	0.4	0.0	0.0	0.3	0.1	0.8	0.0	0.0	0.3	0.4	0.0	0.1
Hydracarina	21.9	0.1	5.4	1.3	4.1	0.3	5.5	0.9	13.0	0.2	5.5	1.1
Notonectidae	0.1	0.8	0.2	0.0	1.3	0.4	0.9	0.0	0.7	0.6	0.6	0.0
Odonata	0.4	0.8	0.0	0.2	0.8	0.5	0.0	1.9	0.6	0.6	0.0	1.1
Poduridae	0.0	0.1	0.0	0.0	4.8	0.0	0.0	0.0	2.4	0.1	0.0	0.0
Trichoptera	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
<i>Overall</i>	108.4	3.9	21.6	7.7	61.6	3.8	17.4	13.5	85.0	3.8	19.0	11.0

Appendix 5.7. Macroinvertebrate composition in Clam Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Clam Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Clam Pond was a control pond during this study; therefore, Clam Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	6	7	6	---	6	8	6	---	7	10	7
Relative Abundance												
Amphipoda	---	0.0	1.4	0.1	---	0.0	0.6	0.0	---	0.0	1.0	0.1
Ceratopogonidae	---	0.0	0.0	0.0	---	0.1	0.0	0.0	---	0.1	0.0	0.0
Chaoboridae	---	0.1	0.0	0.1	---	0.1	0.1	0.1	---	0.1	0.1	0.1
Chironomidae	---	0.3	0.5	0.4	---	0.1	0.8	0.3	---	0.2	0.6	0.3
Corixidae	---	0.1	0.1	0.6	---	0.0	0.0	0.5	---	0.1	0.1	0.6
Ephemeroptera	---	0.3	0.1	0.0	---	0.1	0.3	0.0	---	0.2	0.2	0.0
Hirunidae	---	0.0	0.3	0.3	---	0.0	0.6	0.4	---	0.0	0.4	0.3
Hydracarina	---	3.8	3.6	3.4	---	4.9	3.4	2.3	---	4.3	3.5	2.8
Odonata	---	0.1	0.0	0.0	---	0.1	0.3	0.0	---	0.1	0.1	0.0
Simuliidae	---	0.0	0.1	0.0	---	0.0	0.0	0.0	---	0.0	0.1	0.0
Trichoptera	---	0.0	0.0	0.0	---	0.0	0.1	0.3	---	0.0	0.1	0.1
<i>Overall</i>	---	4.6	6.1	4.9	---	5.5	6.1	3.8	---	5.1	6.1	4.3

Appendix 5.8. Macroinvertebrate composition in Little Twin Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Little Twin Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Little Twin Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	10	15	11	---	12	13	10	---	13	15	11
Relative Abundance												
Amphipoda	---	5.4	61.8	10.8	---	18.1	36.6	32.5	---	11.8	49.2	21.6
Belostomatidae	---	0.0	0.3	0.0	---	0.0	0.0	0.0	---	0.0	0.1	0.0
Chaoboridae	---	0.3	0.3	0.0	---	0.4	0.8	0.0	---	0.3	0.5	0.0
Chironomidae	---	0.9	0.6	4.1	---	0.3	3.0	1.4	---	0.6	1.8	2.8
Corixidae	---	1.5	0.4	2.3	---	0.0	0.5	0.9	---	0.8	0.4	1.6
Culicidae	---	0.0	0.1	0.0	---	0.0	0.0	0.0	---	0.0	0.1	0.0
Dytiscidae	---	0.4	0.4	0.5	---	5.1	0.3	1.4	---	2.8	0.3	0.9
Ephemeroptera	---	12.4	2.1	0.1	---	7.9	0.9	0.1	---	10.1	1.5	0.1
Gyrinidae	---	0.0	0.0	0.0	---	0.5	0.0	0.0	---	0.3	0.0	0.0
Haliplidae	---	0.3	0.3	0.9	---	0.3	0.3	0.3	---	0.3	0.3	0.6
Hirunidae	---	0.0	0.6	1.4	---	0.3	1.1	1.3	---	0.1	0.9	1.3
Hydracarina	---	4.9	5.6	9.4	---	1.0	1.6	1.9	---	2.9	3.6	5.6
Hydrophilidae	---	0.0	0.3	0.0	---	0.0	0.3	0.0	---	0.0	0.3	0.0
Navcoridae	---	0.0	0.0	0.0	---	0.1	0.0	0.0	---	0.1	0.0	0.0
Notonectidae	---	2.8	0.5	6.4	---	0.5	0.1	5.4	---	1.6	0.3	5.9
Odonata	---	0.4	3.9	3.0	---	1.9	1.0	2.0	---	1.1	2.4	2.5
Trichoptera	---	0.0	0.1	0.3	---	0.0	0.3	0.0	---	0.0	0.2	0.1
<i>Overall</i>	---	29.0	77.1	39.0	---	36.3	46.6	47.0	---	32.6	61.9	43.0

Appendix 5.9. Macroinvertebrate composition in South Wilson Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from South Wilson Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. South Wilson Pond was a control pond during this study; therefore, South Wilson Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	7	8	8	---	8	9	8	---	9	10	9
Relative Abundance												
Amphipoda	---	0.5	7.1	1.4	---	0.3	5.9	1.1	---	0.4	6.5	1.3
Aphididae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Ceratopogonidae	---	0.3	0.0	0.0	---	0.0	0.0	0.0	---	0.1	0.0	0.0
Chironomidae	---	0.1	1.9	0.4	---	1.1	0.9	3.5	---	0.6	1.4	1.9
Cicadellidae	---	0.0	0.0	0.0	---	0.0	0.4	0.0	---	0.0	0.2	0.0
Corixidae	---	3.0	4.5	13.1	---	1.5	7.3	6.4	---	2.3	5.9	9.8
Dytiscidae	---	0.0	0.0	0.0	---	0.0	0.0	0.4	---	0.0	0.0	0.2
Ephemeroptera	---	0.1	0.3	0.3	---	1.9	0.5	0.1	---	1.0	0.4	0.2
Haliplidae	---	0.1	0.0	0.3	---	0.4	0.0	0.3	---	0.3	0.0	0.3
Hirunidae	---	0.0	0.1	0.0	---	0.3	0.3	0.0	---	0.1	0.2	0.0
Hydracarina	---	0.0	11.3	1.5	---	0.0	4.6	0.9	---	0.0	7.9	1.2
Notonectidae	---	0.0	0.0	0.1	---	0.0	0.0	0.0	---	0.0	0.0	0.1
Odonata	---	0.1	0.6	0.4	---	0.4	0.3	1.0	---	0.3	0.4	0.7
Trichoptera	---	0.0	0.1	0.0	---	0.4	0.0	0.0	---	0.2	0.1	0.0
<i>Overall</i>	---	4.3	25.9	17.4	---	6.1	20.1	13.6	---	5.2	23.0	15.5

Appendix 5.10. Macroinvertebrate composition in Oak Leaf Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Oak Leaf Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Oak Leaf Pond was a control pond during this study; therefore, Oak Leaf Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	7	7	7	5	6	9	5	6	8	10	7	7
Relative Abundance												
Amphipoda	0.4	0.3	0.1	0.0	0.1	0.3	0.0	0.0	0.3	0.3	0.1	0.0
Chaoboridae	0.5	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.5	0.1	0.0	0.0
Chironomidae	1.3	1.5	0.1	0.3	0.4	2.5	0.1	0.3	0.8	2.0	0.1	0.3
Corixidae	0.3	1.0	0.0	0.0	0.8	0.6	0.0	0.0	0.5	0.8	0.0	0.0
Dytiscidae	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.1	0.0	0.4	0.0	0.1
Ephemeroptera	0.6	0.3	0.1	0.2	1.0	0.0	0.1	0.0	0.8	0.1	0.1	0.1
Haliplidae	0.0	0.9	0.1	0.0	0.0	0.4	0.1	0.0	0.0	0.6	0.1	0.0
Hirunidae	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Hydracarina	0.0	0.0	1.3	0.2	0.4	0.5	0.9	0.6	0.2	0.3	1.1	0.4
Notonectidae	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.1	0.0	0.1
Odonata	0.1	0.3	0.1	0.2	0.0	0.6	0.1	0.5	0.1	0.4	0.1	0.4
Trichoptera	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.2
<i>Overall</i>	3.3	4.5	2.0	1.0	3.1	5.6	1.4	1.9	3.2	5.1	1.7	1.5

Appendix 5.11. Macroinvertebrate composition in Kinbrae Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Kinbrae Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Kinbrae Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	8	11	10	---	8	13	10	---	10	13	11
Relative Abundance												
Amphipoda	---	6.3	9.1	5.1	---	8.8	12.4	2.6	---	7.5	10.8	3.9
Chaoboridae	---	0.0	0.1	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Chironomidae	---	0.3	1.4	0.9	---	0.0	0.8	0.9	---	0.1	1.1	0.9
Corixidae	---	5.0	6.9	0.1	---	1.4	1.4	0.4	---	3.2	4.1	0.3
Dytiscidae	---	1.6	0.1	0.0	---	0.4	1.6	0.8	---	1.0	0.9	0.4
Elimidae	---	0.0	0.0	0.3	---	0.0	0.0	0.0	---	0.0	0.0	0.1
Ephemeroptera	---	0.0	2.0	1.0	---	0.0	3.8	2.0	---	0.0	2.9	1.5
Gyrinidae	---	0.0	0.0	0.0	---	1.0	0.0	0.0	---	0.5	0.0	0.0
Haliplidae	---	1.3	0.3	1.1	---	0.3	0.5	0.8	---	0.8	0.4	0.9
Hirunidae	---	0.0	0.3	0.3	---	0.8	1.9	0.1	---	0.4	1.1	0.2
Hydracarina	---	3.0	1.0	0.5	---	0.0	2.3	1.3	---	1.5	1.6	0.9
Hydrophilidae	---	0.0	0.0	0.0	---	0.0	0.3	0.0	---	0.0	0.1	0.0
Notonectidae	---	3.5	1.5	0.6	---	1.9	1.0	0.3	---	2.7	1.3	0.4
Odonata	---	1.3	0.8	3.1	---	2.3	1.0	3.0	---	1.8	0.9	3.1
Tettigoniidae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
<i>Overall</i>	---	22.1	23.4	13.0	---	16.6	27.0	12.0	---	19.4	25.2	12.5

Appendix 5.12. Macroinvertebrate composition in Toners Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Toners Pond during 2004 through 2007. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Toners Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2004.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	5	9	10	10	9	13	11	8	9	13	12	11
Relative Abundance												
Amphipoda	0.0	14.5	3.6	0.3	5.6	13.0	5.9	0.6	4.3	13.8	4.7	0.4
Belostomatidae	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.7	0.0	0.1	0.0	0.3
Chaoboridae	0.4	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Chironomidae	0.0	0.0	1.3	0.1	1.4	0.3	0.6	0.0	0.7	0.1	0.9	0.1
Corixidae	0.3	0.4	9.6	1.3	0.1	0.8	5.3	1.4	0.2	0.6	7.6	1.3
Dytiscidae	0.0	0.1	0.9	0.3	0.0	0.3	3.0	0.9	0.0	0.2	1.9	0.5
Ephemeroptera	0.1	1.9	0.4	0.4	0.4	1.0	0.0	0.4	0.3	1.4	0.2	0.4
Gyrinidae	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0
Haliplidae	0.0	0.4	1.1	0.1	0.1	0.4	1.7	0.7	0.1	0.4	1.4	0.4
Hirunidae	0.0	0.0	1.1	0.4	0.0	0.3	0.6	0.3	0.0	0.1	0.9	0.3
Hydracarina	12.5	1.4	0.4	0.0	13.0	0.4	1.0	0.0	12.8	0.9	0.7	0.0
Hydrophilidae	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Notonectidae	0.0	0.4	0.8	0.8	0.0	0.3	0.3	0.0	0.0	0.3	0.5	0.4
Odonata	0.1	1.4	0.9	1.6	0.1	1.3	0.9	0.3	0.1	1.3	0.9	1.0
Poduridae	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0
Simuliidae	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Trichoptera	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
<i>Overall</i>	16.3	20.6	20.0	5.4	21.1	18.3	20.3	5.3	18.7	19.4	20.1	5.3

Appendix 5.13. Macroinvertebrate composition in Upper Case Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Upper Case Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Upper Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	8	9	9	---	8	12	13	---	10	12	13
Relative Abundance												
Amphipoda	---	7.3	11.3	5.3	---	5.0	32.5	9.4	---	6.1	21.9	7.3
Aphididae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Ceratopogonidae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Chaoboridae	---	0.5	0.0	0.0	---	0.8	0.0	0.0	---	0.6	0.0	0.0
Chironomidae	---	0.1	2.3	9.4	---	0.0	0.8	8.6	---	0.1	1.5	9.0
Corixidae	---	0.6	2.0	0.3	---	0.3	1.3	0.5	---	0.4	1.6	0.4
Culicidae	---	0.0	0.0	0.0	---	0.1	0.0	0.0	---	0.1	0.0	0.0
Dytiscidae	---	0.4	0.0	0.0	---	1.3	0.1	1.5	---	0.8	0.1	0.8
Ephemeroptera	---	9.4	0.4	2.8	---	7.3	0.4	1.1	---	8.3	0.4	1.9
Gyrinidae	---	0.0	0.0	0.1	---	0.0	0.0	0.1	---	0.0	0.0	0.1
Haliplidae	---	0.0	0.0	0.3	---	0.0	0.0	0.1	---	0.0	0.0	0.2
Hirunidae	---	0.0	1.4	0.0	---	0.4	1.8	0.6	---	0.2	1.6	0.3
Hydracarina	---	0.0	0.5	0.3	---	0.0	0.3	0.3	---	0.0	0.4	0.3
Notonectidae	---	1.1	0.1	0.1	---	0.0	0.4	0.9	---	0.6	0.3	0.5
Odonata	---	0.9	1.8	2.3	---	1.5	2.0	2.3	---	1.2	1.9	2.3
Poduridae	---	0.0	0.0	0.0	---	0.0	0.0	0.1	---	0.0	0.0	0.1
Trichoptera	---	0.0	0.5	0.0	---	0.0	0.5	0.1	---	0.0	0.5	0.1
<i>Overall</i>	---	20.3	20.1	20.6	---	16.5	40.1	25.6	---	18.4	30.1	23.1

Appendix 5.14. Macroinvertebrate composition in Lower Case Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Lower Case Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Lower Case Pond was a treatment pond during this study and was chemically reclaimed using powdered rotenone in fall of 2002.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	5	7	10	---	6	10	10	---	7	10	11
Relative Abundance												
Amphipoda	---	0.0	0.0	4.1	---	0.0	0.9	2.1	---	0.0	0.4	3.1
Chaoboridae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Chironomidae	---	4.1	2.3	3.5	---	4.8	6.5	3.9	---	4.4	4.4	3.7
Corixidae	---	0.5	0.6	0.0	---	0.3	1.1	0.8	---	0.4	0.9	0.4
Dytiscidae	---	0.1	0.0	0.1	---	0.4	0.0	0.5	---	0.3	0.0	0.3
Ephemeroptera	---	0.0	0.5	2.3	---	0.0	2.1	1.3	---	0.0	1.3	1.8
Gyrinidae	---	0.0	0.0	0.1	---	0.0	0.0	0.0	---	0.0	0.0	0.1
Haliplidae	---	0.0	0.0	0.8	---	0.1	0.0	0.4	---	0.1	0.0	0.6
Hirunidae	---	0.0	0.5	0.3	---	0.1	1.1	1.5	---	0.1	0.8	0.9
Hydracarina	---	0.4	0.4	1.5	---	0.0	1.8	0.8	---	0.2	1.1	1.1
Hydrophilidae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Notonectidae	---	0.3	1.4	0.6	---	0.1	0.5	1.0	---	0.2	0.9	0.8
Odonata	---	0.0	0.5	2.6	---	0.0	1.0	3.3	---	0.0	0.8	2.9
<i>Overall</i>	---	5.4	6.1	15.9	---	5.8	15.3	15.4	---	5.6	10.7	15.6

Appendix 5.15. Macroinvertebrate composition in Butterfield Pond based on species richness (number of species encountered) and numbers (Relative Abundance; number/net) for macroinvertebrates collected from Butterfield Pond during 2002 through 2004. Samples were collected from eight locations in each pond including four pelagic set off shore and suspended vertically in the water column and four littoral set horizontally near aquatic vegetation along shore. Three replicate samples were analyzed in the lab. Sampling was conducted twice during August of each sample year. A replicate average was calculated to represent the mean number per net for each sample time. Samples were collected prior to treatment (Pre), and following treatment three years (Year 1, Year 2, and Year 3). Overall values represent the average (standard error) over all species. Butterfield Pond was a control pond during this study; therefore, Butterfield Pond was not chemically reclaimed.

	Vertical				Horizontal				Combined			
	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3	Pre	Year 1	Year 2	Year 3
Species Richness												
<i>Overall</i>	---	8	7	7	---	7	7	7	---	10	8	7
Relative Abundance												
Amphipoda	---	0.0	2.0	0.4	---	0.1	1.0	0.5	---	0.1	1.5	0.4
Ceratopogonidae	---	0.3	0.0	0.0	---	0.0	0.0	0.0	---	0.1	0.0	0.0
Chaoboridae	---	0.4	0.0	0.0	---	0.1	0.0	0.0	---	0.3	0.0	0.0
Chironomidae	---	0.1	2.1	0.5	---	1.0	3.5	1.4	---	0.6	2.8	0.9
Corixidae	---	0.1	0.9	1.0	---	0.3	0.4	1.0	---	0.2	0.6	1.0
Ephemeroptera	---	0.5	0.3	0.1	---	0.1	0.6	0.1	---	0.3	0.4	0.1
Gyrinidae	---	0.0	0.0	0.0	---	0.0	0.1	0.0	---	0.0	0.1	0.0
Hirunidae	---	0.0	0.3	0.0	---	0.0	0.5	0.0	---	0.0	0.4	0.0
Hydracarina	---	0.3	3.1	0.1	---	0.5	1.9	0.3	---	0.4	2.5	0.2
Notonectidae	---	0.1	0.0	0.4	---	0.0	0.0	0.4	---	0.1	0.0	0.4
Odonata	---	0.0	0.1	0.1	---	0.1	0.0	0.3	---	0.1	0.1	0.2
Simuliidae	---	0.1	0.0	0.0	---	0.0	0.0	0.0	---	0.1	0.0	0.0
<i>Overall</i>	---	1.9	8.8	2.6	---	2.3	8.0	3.9	---	2.1	8.4	3.3

Appendix 6.1. Waterfowl usage in study ponds based on species richness (number of species encountered) and relative abundance (total number observed) for waterfowl observed with fixed location counts in study ponds during 2005 through 2007. Sampling was conducted using a fixed location visual count. The proportion of each pond visible from the fixed site was determined and waterfowl counts extrapolated to the entire surface area of each pond. Counts were conducted during the end of March and beginning of April each year.

	Number (n)		
	2005	2006	2007
Species Richness			
<i>Treatment</i>			
Clear	2	5	17
Kinbrae Slough	11	---	---
Little Twin	8	---	---
Lower Case	8	---	---
Oak	6	5	15
Toners	6	18	19
Upper Case	10	---	---
<i>Control</i>			
Bohemian	13	12	21
Boot	9	5	21
Butterfield	5	---	---
Clam	3	---	---
Clear – Dundee	16	12	20
County 13	9	---	---
Oak Leaf	11	3	13
South Wilson	12	---	---
Relative Abundance			
<i>Treatment</i>			
Clear	4	31	393
Kinbrae Slough	7,002	---	---
Little Twin	725	---	---
Lower Case	379	---	---
Oak	39	16	360
Toners	75	1,432	3,226
Upper Case	4,533	---	---
<i>Control</i>			
Bohemian	603	383	3,129
Boot	491	38	937
Butterfield	33	---	---
Clam	16	---	---
Clear – Dundee	2,714	185	3,017
County 13	291	---	---
Oak Leaf	287	43	631
South Wilson	2,779	---	---