

## *Appendix E*

### *Southeast, Southwest, and Northwest Anderson Lake Biological Data*

## 1988 and 1991 PHYTOPLANKTON IDENTIFICATION SUMMARY (units/mL)

### LAKE: Southeast Anderson

From:

1988-1991 Lake Water Quality Inventory and Historical Water Quality Trend Analysis

Anderson, Birch Island, Bryant, Bush, Glen, Lone, Minnetoga, Mirror, Normandale, Penn, Shady Oak, and Smetana Lakes

February 1993

DIVISION	SAMPLE DATE							
	units / mL							
	6/23/88	7/21/88	8/24/88	9/13/88	6/19/91	7/17/91	8/14/91	9/3/91
CHLOROPHYTA (GREEN ALGAE) TOTAL	900	2,741	9,749	3,531	18,362	72,130	43,115	107,763
CYANOPHYTA (BLUE-GREEN ALGAE) TOTAL	21,276	33,667	42,430	60,421	1,311	1,967	75,016	60,450
BACILLARIOPHYTA (DIATOMS) TOTAL	43	2,133	3,000	3,938	0	110	0	1,036
CRYPTOPHYTA (CRYPTOMONADS) TOTAL	86	457	214	543	1,167	611	820	0
EUGLENOPHYTA TOTAL	0	0	107	0	0	0	164	607
PYRRHOPHYTA (DINOFLAGELLATES) TOTAL	0	0	0	0	82	0	0	0
TOTAL PHYTOPLANKTON	22,305	38,998	55,500	68,433	20,922	74,818	119,115	169,856

# 1996 SOUTHEAST ANDERSON LAKE PHYTOPLANKTON IDENTIFICATION SUMMARY (units/ml)

SAMPLE: 0-2 METERS (INT. TUBE)

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:/23/27/003/LAKES/1996/SEANDER/SE96PHYTOP.xls

DIVISION	TAXON	6/18/1996 units/mL	7/15/1996 units/mL	8/5/1996 units/mL	8/19/1996 units/mL	9/3/1996 units/mL
<b>CHLOROPHYTA (GREEN ALGAE)</b>	<i>Ankistrodesmus falcatus</i>	0	117	195	77	109
	<i>Chlamydomonas globosa</i>	781	1,601	625	2,317	2,186
	<i>Closterium</i> sp.	0	39	39	0	109
	<i>Micractinium</i> sp.	0	39	0	0	0
	<i>Oocystis parva</i>	0	0	39	232	109
	<i>Scenedesmus dimorphus</i>	0	0	0	0	219
	<i>Scenedesmus quadricauda</i>	0	78	39	77	0
	<i>Schroederia Judayi</i>	156	78	0	0	0
	<i>Selenastrum minutum</i>	0	234	117	386	109
	<i>Selenastrum</i> sp.	39	0	0	0	0
	<i>Sphaerocystis Schroeteri</i>	0	0	0	0	109
	<i>Staurastrum</i> sp.	0	0	0	77	0
	<i>Tetraedron</i> sp.	0	39	0	77	0
	<i>Treubaria setigerum</i>	0	0	0	77	0
	<b>CHLOROPHYTA TOTAL</b>		<b>976</b>	<b>2,225</b>	<b>1,054</b>	<b>3,321</b>
<b>CYANOPHYTA (BLUE-GREEN ALGAE)</b>	<i>Anabaena affinis</i>	0	0	1,444	772	437
	<i>Anabaena flos-aquae</i>	0	39	312	0	0
	<i>Anabaenopsis raciborski</i>	0	39	15,460	20,235	22,846
	<i>Aphanizomenon flos-aquae</i>	0	0	1,210	1,699	2,842
	<i>Aphanocapsa delicatissima</i>	0	468	0	0	765
	<i>Coelosphaerium Naegelianum</i>	0	0	195	0	0
	<i>Gomphosphaerium Naegelianum</i>	0	468	0	77	0
	<i>Lyngbya limnetica</i>	0	156	5,856	9,499	9,838
	<i>Merismopedia tenuissima</i>	0	39	39	232	874
	<i>Microcystis aeruginosa</i>	0	429	390	309	2,296
	<i>Microcystis incerta</i>	156	586	664	618	1,312
	<i>Oscillatoria limnetica</i>	0	39	0	0	0
	<i>Phormidium mucicola</i>	39	0	0	0	8,526
	<i>Spirulina</i> sp.	0	0	0	309	656
	<b>CYANOPHYTA TOTAL</b>		<b>195</b>	<b>2,264</b>	<b>25,571</b>	<b>33,750</b>
<b>BACILLARIOPHYTA (DIATOMS)</b>	<i>Cocconeis placentula</i>	0	39	0	0	0
	<i>Cymbella</i> sp.	39	0	0	0	0
	<i>Fragilaria crotonensis</i>	0	3,631	0	309	874
	<i>Melosira granulata</i>	195	508	0	77	547
	<i>Navicula</i> sp.	39	0	0	0	0
	<i>Stephanodiscus Hantzschii</i>	0	0	0	154	0
	<i>Synedra ulna</i>	0	0	0	0	109
	<b>BACILLARIOPHYTA TOTAL</b>		<b>273</b>	<b>4,177</b>	<b>0</b>	<b>541</b>
<b>CRYPTOPHYTA (CRYPTOMONADS)</b>	<i>Cryptomonas erosa</i>	390	3,592	0	1,236	1,312
	<b>CRYPTOPHYTA TOTAL</b>		<b>390</b>	<b>3,592</b>	<b>0</b>	<b>1,236</b>
<b>PYRRHOPHYTA (DINOFAGELLATES)</b>	<i>Ceratium hirundinella</i>	0	39	0	0	0
	<i>Peridinium cinctum</i>	0	0	0	0	0
	<b>PYRRHOPHYTA TOTAL</b>		<b>0</b>	<b>39</b>	<b>0</b>	<b>0</b>
<b>TOTALS</b>		<b>1,835</b>	<b>12,298</b>	<b>26,625</b>	<b>38,847</b>	<b>56,186</b>
DIVISION		<b>6/18/1996</b>	<b>7/15/1996</b>	<b>8/5/1996</b>	<b>8/19/1996</b>	<b>9/3/1996</b>
CHLOROPHYTA		976	2,225	1,054	3,321	2,951
CYANOPHYTA		195	2,264	25,571	33,750	50,393
BACILLARIOPHYTA		273	4,177	0	541	1,530
CRYPTOPHYTA		390	3,592	0	1,236	1,312
PYRRHOPHYTA		0	39	0	0	0
TOTALS		1,835	12,298	26,625	38,847	56,186

## 2000 Southeast Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKE\2000\NORTHANDERSON\PHYTOSEAN.xls

DIVISION	TAXON	6/19/2000 units/mL	7/18/2000 units/mL	8/7/2000 units/mL	8/21/2000 units/mL	9/6/2000 units/mL	
CHLOROPHYTA (GREEN ALGAE)	<i>Actinastrum Hantzschii-</i>	0	0	0	0	0	
	<i>Ankistrodesmus falcatus</i>	42	78	0	0	39	
	<i>Ankistrodesmus Brauni</i>	84	117	39	0	39	
	<i>Chlamydomonas globosa</i>	801	976	2,538	625	1,054	
	<i>Closterium sp.</i>	0	78	195	39	117	
	<i>Coelastrum microporum</i>	0	117	78	78	78	
	<i>Cosmarium sp.</i>	0	117	78	78	0	
	<i>Crucigenia quadrata</i>	0	39	117	0	39	
	<i>Elakotothrix gelatinosa</i>	0	0	0	0	0	
	<i>Golenkinia sp.</i>	0	0	0	0	0	
	<i>Lagerheimia sp.</i>	0	78	0	0	39	
	<i>Oocystis parva</i>	1,138	1,288	78	273	351	
	<i>Pandorina morum</i>	0	0	0	0	0	
	<i>Pediastrum boryanum</i>	0	0	0	0	39	
	<i>Pediastrum duplex v. clathratum</i>	0	39	0	78	78	
	<i>Pediastrum simplex</i>	0	0	78	0	0	
	<i>Quadrigula sp.</i>	84	0	78	0	0	
	<i>Rhizoclonium hieroglyphicum</i>	42	0	0	0	0	
	<i>Schroederia Judayi</i>	0	78	703	117	78	
	<i>Scenedesmus dimorphus</i>	0	0	0	0	0	
	<i>Scenedesmus quadricauda</i>	337	234	351	39	39	
	<i>Scenedesmus sp.</i>	337	117	156	0	39	
	<i>Selenastrum minutum</i>	0	39	0	0	0	
	<i>Selenastrum sp.</i>	0	0	78	0	0	
	<i>Sphaerocystis Schroeteri (Colony)</i>	126	39	0	0	0	
	<i>Staurastrum sp.</i>	759	195	39	0	39	
	<i>Tetraedron minimum</i>	126	117	195	0	0	
	<i>Tetraedron muticum</i>	0	39	0	0	0	
	<i>Tetraedron sp.</i>	0	39	0	0	0	
	<i>Treubaria setigerum</i>	0	0	0	0	0	
	<b>CHLOROPHYTA TOTAL</b>		<b>3,877</b>	<b>3,826</b>	<b>4,802</b>	<b>1,327</b>	<b>2,069</b>
	CHRYSTOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	0	0	0	0	0
		<b>CHRYSTOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	0	0	0	39	195	
	<i>Anabaena flos-aquae</i>	0	0	351	78	0	
	<i>Anabaena spiroides v. crassa</i>	0	0	0	0	0	
	<i>Anabaenopsis raciborski</i>	0	0	0	937	742	
	<i>Aphanizomenon flos-aquae</i>	0	78	1,132	5,270	625	
	<i>Coelosphaerium Naegelianum</i>	0	0	0	0	0	
	<i>Lyngbya limnetica</i>	0	0	0	0	0	
	<i>Merismopedia tenuissima</i>	0	0	390	39	78	
	<i>Merismopedia sp.</i>	0	195	273	0	0	
	<i>Microcystis aeruginosa</i>	2,444	2,928	781	898	273	
	<i>Microcystis incerta</i>	1,264	0	625	1,718	547	
	<i>Oscillatoria limnetica</i>	0	0	156	39	117	
	<i>Oscillatoria Agardhii</i>	0	0	0	0	0	
	<i>Phormidium mucicola</i>	0	0	0	0	0	
	<b>CYANOPHYTA TOTAL</b>	<b>3,708</b>	<b>3,201</b>	<b>3,709</b>	<b>9,018</b>	<b>2,577</b>	
	BACILLARIOPHYTA (DIATOMS)	<i>Asterionella formosa</i>	84	0	0	0	0
<i>Cocconeis placentula</i>		0	0	0	0	0	
<i>Cymbella sp.</i>		0	0	0	0	0	
<i>Fragilaria capucina</i>		0	0	0	0	0	
<i>Fragilaria crotonensis</i>		590	78	0	78	0	
<i>Gomphonema sp.</i>		0	0	0	0	0	
<i>Melosira granulata</i>		0	0	0	117	781	
<i>Rhizosolenia sp.</i>		0	0	0	0	0	
<i>Stephanodiscus Hantzschii</i>		84	39	78	0	39	
<i>Stephanodiscus sp.</i>		0	0	0	0	0	
<i>Synedra acus</i>		0	0	0	0	0	
<i>Synedra ulna</i>		0	0	0	0	0	
<b>BACILLARIOPHYTA TOTAL</b>		<b>759</b>	<b>117</b>	<b>78</b>	<b>195</b>	<b>820</b>	
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	253	234	5,856	195	390	
	<b>CRYPTOPHYTA TOTAL</b>	<b>253</b>	<b>234</b>	<b>5,856</b>	<b>195</b>	<b>390</b>	
EUGLENOPHYTA (EUGLENOIDS)	<i>Euglena sp.</i>	0	0	0	0	0	
	<b>EUGLENOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
PYRRHOPHYTA (DINOFAGELLATES)	<i>Ceratium hirundinella</i>	42	0	39	0	0	
	<i>Peridinium cinctum</i>	0	0	0	0	0	
	<b>PYRRHOPHYTA TOTAL</b>	<b>42</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>0</b>	
<b>TOTALS</b>		<b>8,639</b>	<b>7,379</b>	<b>14,484</b>	<b>10,736</b>	<b>5,856</b>	
DIVISION		<b>6/19/2000</b>	<b>7/18/2000</b>	<b>8/7/2000</b>	<b>8/21/2000</b>	<b>9/6/2000</b>	
CHLOROPHYTA		3,877	3,826	4,802	1,327	2,069	
CHRYSTOPHYTA		0	0	0	0	0	
CYANOPHYTA		3,708	3,201	3,709	9,018	2,577	
BACILLARIOPHYTA		759	117	78	195	820	
CRYPTOPHYTA		253	234	5,856	195	390	
EUGLENOPHYTA		0	0	0	0	0	
PYRRHOPHYTA		42	0	39	0	0	
TOTALS		8,639	7,379	14,484	10,736	5,856	

## 2001 Southeast Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\2001\NORTHANDERSON\PHYSEAND.xls

DIVISION	TAXON	4/24/2001 units/mL	6/11/2001 units/mL	7/18/2001 units/mL	8/7/2001 units/mL	8/23/2001 units/mL	9/5/2001 units/mL
CHLOROPHYTA (GREEN ALGAE)	<i>Ankistrodesmus falcatus</i>	506	0	0	0	0	0
	<i>Ankistrodesmus Brauni</i>	0	117	78	0	0	0
	<i>Chlamydomonas globosa</i>	2,571	24,673	1,249	468	78	195
	<i>Closterium</i> sp.	0	0	39	39	78	0
	<i>Coelastrum microporum</i>	0	0	0	20	39	78
	<i>Lagerheimia</i> sp.	0	0	0	0	39	0
	<i>Oocystis parva</i>	0	39	664	20	0	117
	<i>Pediastrum Boryanum</i>	0	0	39	0	0	39
	<i>Pediastrum duplex</i> var. <i>clathratum</i>	0	0	0	39	78	0
	<i>Pediastrum simplex</i> var. <i>duodenarium</i>	0	0	0	0	0	0
	<i>Schroederia Judayi</i>	0	195	351	78	78	78
	<i>Scenedesmus dimorphus</i>	0	0	0	0	0	0
	<i>Scenedesmus quadricauda</i>	21	0	78	0	0	39
	<i>Scenedesmus</i> sp.	42	0	78	0	39	0
	<i>Selenastrum minutum</i>	0	39	0	0	0	0
	<i>Selenastrum</i> sp.	0	0	0	0	0	78
	<i>Staurastrum</i> sp.	0	0	0	20	39	0
	<i>Tetraedron minimum</i>	0	39	0	117	0	39
	<i>Tetraedron muticum</i>	0	0	0	0	0	39
	<i>Tetraedron</i> sp.	0	0	0	0	0	39
<b>CHLOROPHYTA TOTAL</b>		<b>3,139</b>	<b>25,103</b>	<b>2,577</b>	<b>800</b>	<b>468</b>	<b>742</b>
CHRYSOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	42	0	0	0	0	0
	<b>CHRYSOPHYTA TOTAL</b>		<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	0	0	429	1,386	1,210	781
	<i>Anabaena flos-aquae</i>	0	0	39	0	0	0
	<i>Anabaenopsis raciborski</i>	0	0	39	3,065	742	4,412
	<i>Aphanizomenon flos-aquae</i>	21	0	1,640	1,191	625	508
	<i>Coelosphaerium Naegelianum</i>	0	39	78	0	39	78
	<i>Lyngbya limnetica</i>	21	0	0	0	0	0
	<i>Merismopedia tenuissima</i>	105	0	39	20	0	0
	<i>Microcystis aeruginosa</i>	0	0	898	1,054	1,640	1,601
	<i>Microcystis incerta</i>	0	0	78	20	0	39
	<i>Oscillatoria limnetica</i>	0	0	39	0	0	0
	<i>Phormidium mucicola</i>	0	0	78	20	0	0
<b>CYANOPHYTA TOTAL</b>		<b>147</b>	<b>39</b>	<b>3,357</b>	<b>6,754</b>	<b>4,255</b>	<b>7,418</b>
BACILLARIOPHYTA (DIATOMS)	<i>Asterionella formosa</i>	21	0	0	0	0	0
	<i>Fragilaria capucina</i>	21	0	0	0	0	0
	<i>Fragilaria crotonensis</i>	21	0	39	20	0	0
	<i>Navicula</i> sp.	21	0	0	0	0	0
	<i>Synedra ulna</i>	105	0	0	0	0	0
<b>BACILLARIOPHYTA TOTAL</b>		<b>190</b>	<b>0</b>	<b>39</b>	<b>20</b>	<b>0</b>	<b>0</b>
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	2,528	1,601	468	371	234	39
	<b>CRYPTOPHYTA TOTAL</b>		<b>2,528</b>	<b>1,601</b>	<b>468</b>	<b>371</b>	<b>234</b>
EUGLENOPHYTA (EUGLENOIDS)	<b>EUGLENOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PYRRHOPHYTA (DINOFAGELLATES)	<i>Ceratium hirundinella</i>	0	0	0	39	0	78
	<b>PYRRHOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>0</b>
<b>TOTALS</b>		<b>6,047</b>	<b>26,742</b>	<b>6,442</b>	<b>7,984</b>	<b>4,958</b>	<b>8,276</b>
DIVISION		4/24/2001	6/11/2001	7/18/2001	8/7/2001	8/23/2001	9/5/2001
CHLOROPHYTA		3,139	25,103	2,577	800	468	742
CHRYSOPHYTA		42	0	0	0	0	0
CYANOPHYTA		147	39	3,357	6,754	4,255	7,418
BACILLARIOPHYTA		190	0	39	20	0	0
CRYPTOPHYTA		2,528	1,601	468	371	234	39
EUGLENOPHYTA		0	0	0	0	0	0
PYRRHOPHYTA		0	0	0	39	0	78
TOTALS		6,047	26,742	6,442	7,984	4,958	8,276

# 1988 and 1991 PHYTOPLANKTON IDENTIFICATION SUMMARY (units/mL)

## LAKE: Southwest Anderson

From:

1988-1991 Lake Water Quality Inventory and Historical Water Quality Trend Analysis

Anderson, Birch Island, Bryant, Bush, Glen, Lone, Minnetoga, Mirror, Normandale, Penn, Shady Oak, and Smetana Lakes

February 1993

DIVISION	SAMPLE DATE							
	units / mL							
	6/23/88	7/21/88	8/24/88	9/13/88	6/24/91	7/17/91	8/13/91	9/3/91
CHLOROPHYTA (GREEN ALGAE) TOTAL	13,343	456	4,729	10,064	0	0	390	1,110
CYANOPHYTA (BLUE-GREEN ALGAE) TOTAL	744	304	802	1,589	1,460	56,192	110	100
BACILLARIOPHYTA (DIATOMS) TOTAL	2,018	179	780	761	110	0	40	200
CRYPTOPHYTA (CRYPTOMONADS) TOTAL	2,337	1,746	3,432	4,436	1,120	120	490	0
EUGLENOPHYTA TOTAL	0	0	0	0	20	0	0	0
CHRYSOPHYTA (YELLOW-BROWN ALGAE) TOTAL	0	51	0	0	40	0	0	0
PYRRHOPHYTA (DINOFLAGELLATES) TOTAL	0	13	0	0	20	0	0	0
TOTAL PHYTOPLANKTON	18,442	2,749	9,743	16,850	2,770	56,312	1,030	1,410

# 1996 SOUTHWEST ANDERSON LAKE PHYTOPLANKTON IDENTIFICATION SUMMARY (units/mL)

SAMPLE: 0-2 METERS (INT. TUBE)

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:/23/27/003/LAKES/1996/SWANDER/SW96PHYTOP.xls

DIVISION	TAXON	6/18/1996 units/mL	7/15/1996 units/mL	8/5/1996 units/mL	8/19/1996 units/mL	9/5/1996 units/mL
<b>CHLOROPHYTA (GREEN ALGAE)</b>	<i>Actinastrum Hantzschii</i>	0	42	0	0	0
	<i>Ankistrodesmus Brauni</i>	20	0	0	0	0
	<i>Ankistrodesmus falcatus</i>	0	0	0	63	0
	<i>Chlamydomonas globosa</i>	1,308	2,739	964	33,829	4,255
	<i>Dictyosphaerium Ehrenbergianum</i>	0	169	40	0	0
	<i>Oocystis parva</i>	0	169	0	0	0
	<i>Pandorina morum</i>	0	0	0	63	0
	<i>Scenedesmus quadricauda</i>	0	0	0	63	0
	<i>Scenedesmus sp.</i>	0	84	40	0	39
	<i>Schroederia sp.</i>	0	0	40	0	0
	<i>Selenastrum minutum</i>	0	4,003	6,829	3,207	312
	<i>Sphaerocystis Schroeteri</i>	0	126	40	0	78
	<i>Tetraedron sp.</i>	0	0	40	0	39
	<i>Treubaria setigerum</i>	0	42	0	0	0
	<b>CHLOROPHYTA TOTAL</b>		<b>1,327</b>	<b>7,374</b>	<b>7,994</b>	<b>37,224</b>
<b>CYANOPHYTA (BLUE-GREEN ALGAE)</b>	<i>Anabaena affinis</i>	59	337	161	0	0
	<i>Anabaena flos-aquae</i>	0	42	0	0	0
	<i>Aphanizomenon flos-aquae</i>	176	126	603	189	0
	<i>Aphanocapsa delicatissima</i>	0	0	8,034	0	0
	<i>Coelosphaerium Naegelianum</i>	0	0	0	0	78
	<i>Gomphosphaerium Naegelianum</i>	0	0	0	63	0
	<i>Merismopedia sp.</i>	0	0	0	189	0
	<i>Merismopedia tenuissima</i>	0	0	40	189	78
	<i>Microcystis aeruginosa</i>	0	295	442	503	1,288
	<i>Microcystis incerta</i>	20	1,981	1,567	1,320	859
	<i>Oscillatoria limnetica</i>	20	126	241	0	0
	<i>Phormidium mucicola</i>	117	0	40	0	0
	<b>CYANOPHYTA TOTAL</b>		<b>390</b>	<b>2,908</b>	<b>11,127</b>	<b>2,452</b>
<b>BACILLARIOPHYTA (DIATOMS)</b>	<i>Cocconeis placentula</i>	20	84	0	0	0
	<i>Fragilaria crotonensis</i>	0	42	0	0	0
	<i>Navicula sp.</i>	20	84	0	0	0
	<i>Stephanodiscus Hantzschii</i>	0	0	121	0	0
	<i>Synedra ulna</i>	20	0	40	0	0
	<i>Synedra sp.</i>	0	42	0	0	0
	<b>BACILLARIOPHYTA TOTAL</b>		<b>59</b>	<b>253</b>	<b>161</b>	<b>0</b>
<b>CRYPTOPHYTA (CRYPTOMONADS)</b>	<i>Cryptomonas erosa</i>	2,069	0	2,491	2,767	3,318
	<b>CRYPTOPHYTA TOTAL</b>		<b>2,069</b>	<b>0</b>	<b>2,491</b>	<b>2,767</b>
<b>EUGLENOPHYTA (EUGLENOIDS)</b>	<i>Phacus sp.</i>	0	0	0	63	0
	<b>EUGLENOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>
<b>PYRRHOPHYTA (DINOFLAGELLATES)</b>	<i>Peridinium cinctum</i>	0	0	0	63	0
	<b>PYRRHOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>
<b>TOTALS</b>		<b>3,845</b>	<b>10,535</b>	<b>21,772</b>	<b>42,569</b>	<b>10,346</b>
DIVISION		<b>6/18/1996</b>	<b>7/15/1996</b>	<b>8/5/1996</b>	<b>8/19/1996</b>	<b>9/5/1996</b>
CHLOROPHYTA		1,327	7,374	7,994	37,224	4,724
CYANOPHYTA		390	2,908	11,127	2,452	2,303
BACILLARIOPHYTA		59	253	161	0	0
CRYPTOPHYTA		2,069	0	2,491	2,767	3,318
EUGLENOPHYTA		0	0	0	63	0
PYRRHOPHYTA		0	0	0	63	0
TOTALS		3,845	10,535	21,772	42,569	10,346

# 1996 SOUTHWEST ANDERSON LAKE PHYTOPLANKTON IDENTIFICATION SUMMARY (units/mL)

SAMPLE: 0-2 METERS (INT. TUBE)

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\1996\SWANDER\SW96PHYTOP.xls

DIVISION	TAXON	6/18/1996 units/mL	7/15/1996 units/mL	8/5/1996 units/mL	8/19/1996 units/mL	9/5/1996 units/mL
<b>CHLOROPHYTA (GREEN ALGAE)</b>	<i>Actinastrum Hantzschii</i>	0	42	0	0	0
	<i>Ankistrodesmus Brauni</i>	20	0	0	0	0
	<i>Ankistrodesmus falcatus</i>	0	0	0	63	0
	<i>Chlamydomonas globosa</i>	1,308	2,739	964	33,829	4,255
	<i>Dictyosphaerium Ehrenbergianum</i>	0	169	40	0	0
	<i>Oocystis parva</i>	0	169	0	0	0
	<i>Pandorina morum</i>	0	0	0	63	0
	<i>Scenedesmus quadricauda</i>	0	0	0	63	0
	<i>Scenedesmus sp.</i>	0	84	40	0	39
	<i>Schroederia sp.</i>	0	0	40	0	0
	<i>Selenastrum minutum</i>	0	4,003	6,829	3,207	312
	<i>Sphaerocystis Schroeteri</i>	0	126	40	0	78
	<i>Tetraedron sp.</i>	0	0	40	0	39
	<i>Treubaria setigerum</i>	0	42	0	0	0
	<b>CHLOROPHYTA TOTAL</b>		<b>1,327</b>	<b>7,374</b>	<b>7,994</b>	<b>37,224</b>
<b>CYANOPHYTA (BLUE-GREEN ALGAE)</b>	<i>Anabaena affinis</i>	59	337	161	0	0
	<i>Anabaena flos-aquae</i>	0	42	0	0	0
	<i>Aphanizomenon flos-aquae</i>	176	126	603	189	0
	<i>Aphanocapsa delicatissima</i>	0	0	8,034	0	0
	<i>Coelosphaerium Naegelianum</i>	0	0	0	0	78
	<i>Gomphosphaerium Naegelianum</i>	0	0	0	63	0
	<i>Merismopedia sp.</i>	0	0	0	189	0
	<i>Merismopedia tenuissima</i>	0	0	40	189	78
	<i>Microcystis aeruginosa</i>	0	295	442	503	1,288
	<i>Microcystis incerta</i>	20	1,981	1,567	1,320	859
	<i>Oscillatoria limnetica</i>	20	126	241	0	0
	<i>Phormidium mucicola</i>	117	0	40	0	0
	<b>CYANOPHYTA TOTAL</b>		<b>390</b>	<b>2,908</b>	<b>11,127</b>	<b>2,452</b>
<b>BACILLARIOPHYTA (DIATOMS)</b>	<i>Cocconeis placentula</i>	20	84	0	0	0
	<i>Fragilaria crotonensis</i>	0	42	0	0	0
	<i>Navicula sp.</i>	20	84	0	0	0
	<i>Stephanodiscus Hantzschii</i>	0	0	121	0	0
	<i>Synedra ulna</i>	20	0	40	0	0
	<i>Synedra sp.</i>	0	42	0	0	0
	<b>BACILLARIOPHYTA TOTAL</b>		<b>59</b>	<b>253</b>	<b>161</b>	<b>0</b>
<b>CRYPTOPHYTA (CRYPTOMONADS)</b>	<i>Cryptomonas erosa</i>	2,069	0	2,491	2,767	3,318
	<b>CRYPTOPHYTA TOTAL</b>		<b>2,069</b>	<b>0</b>	<b>2,491</b>	<b>2,767</b>
<b>EUGLENOPHYTA (EUGLENOIDS)</b>	<i>Phacus sp.</i>	0	0	0	63	0
	<b>EUGLENOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>
<b>PYRRHOPHYTA (DINOFLAGELLATES)</b>	<i>Peridinium cinctum</i>	0	0	0	63	0
	<b>PYRRHOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>
<b>TOTALS</b>		<b>3,845</b>	<b>10,535</b>	<b>21,772</b>	<b>42,569</b>	<b>10,346</b>
DIVISION		<b>6/18/1996</b>	<b>7/15/1996</b>	<b>8/5/1996</b>	<b>8/19/1996</b>	<b>9/5/1996</b>
CHLOROPHYTA		1,327	7,374	7,994	37,224	4,724
CYANOPHYTA		390	2,908	11,127	2,452	2,303
BACILLARIOPHYTA		59	253	161	0	0
CRYPTOPHYTA		2,069	0	2,491	2,767	3,318
EUGLENOPHYTA		0	0	0	63	0
PYRRHOPHYTA		0	0	0	63	0
TOTALS		3,845	10,535	21,772	42,569	10,346

## 2000 Southwest Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\2000\NORTHANDERSON\PHYTOSWAN.xls

DIVISION	TAXON	6/19/2000 units/mL	7/18/2000 units/mL	8/7/2000 units/mL	8/21/2000 units/mL	9/6/2000 units/mL	
CHLOROPHYTA (GREEN ALGAE)	<i>Actinastrum Hantzschii-</i>	20	0	0	0	0	
	<i>Ankistrodesmus falcatus</i>	137	0	0	0	0	
	<i>Ankistrodesmus Brauni</i>	0	0	20	20	0	
	<i>Chlamydomonas globosa</i>	2,284	150	249	98	39	
	<i>Closterium sp.</i>	0	0	0	0	0	
	<i>Coelastrum microporum</i>	0	0	0	0	0	
	<i>Cosmarium sp.</i>	0	0	0	0	39	
	<i>Elakotothrix gelatinosa</i>	20	0	21	0	0	
	<i>Golenkinia sp.</i>	195	0	0	0	0	
	<i>Oocystis parva</i>	59	152	20	20	0	
	<i>Pandorina morum</i>	20	0	0	0	0	
	<i>Pediastrum duplex v. clathratum</i>	0	0	20	0	0	
	<i>Quadrigula sp.</i>	20	0	0	0	0	
	<i>Rhizoclonium hieroglyphicum</i>	0	0	0	0	0	
	<i>Schroederia Judayi</i>	59	0	0	20	0	
	<i>Scenedesmus dimorphus</i>	0	0	0	0	0	
	<i>Scenedesmus quadricauda</i>	254	0	0	0	0	
	<i>Scenedesmus sp.</i>	39	0	0	0	0	
	<i>Selenastrum minutum</i>	1,484	0	0	0	0	
	<i>Selenastrum sp.</i>	0	0	0	0	0	
	<i>Sphaerocystis Schroeteri (Colony)</i>	156	0	20	0	0	
	<i>Staurastrum sp.</i>	39	0	0	0	0	
	<i>Tetraedron minimum</i>	0	0	0	0	0	
	<i>Tetraedron muticum</i>	39	11	0	0	0	
	<i>Tetraedron sp.</i>	0	0	0	0	0	
	<i>Treubaria setigerum</i>	0	0	0	0	0	
	<b>CHLOROPHYTA TOTAL</b>		<b>4,821</b>	<b>313</b>	<b>349</b>	<b>156</b>	<b>78</b>
	CHRYSOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	0	0	0	0	0
		<b>CHRYSOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	20	0	0	0	0
		<i>Anabaena flos-aquae</i>	0	0	11	117	0
		<i>Anabaena spiroides v. crassa</i>	0	39	20	39	0
		<i>Anabaenopsis raciborski</i>	0	0	0	0	0
<i>Aphanizomenon flos-aquae</i>		0	20	0	0	0	
<i>Coelosphaerium Naegelianum</i>		98	0	0	98	39	
<i>Lyngbya limnetica</i>		0	0	0	0	0	
<i>Merismopedia tenuissima</i>		20	0	0	0	0	
<i>Merismopedia sp.</i>		0	0	21	0	0	
<i>Microcystis aeruginosa</i>		390	451	347	1,230	1,093	
<i>Microcystis incerta</i>		78	0	0	0	39	
<i>Oscillatoria limnetica</i>		0	0	0	0	0	
<i>Oscillatoria Agardhii</i>		0	0	0	0	0	
<i>Phormidium mucicola</i>		0	0	0	0	0	
<b>CYANOPHYTA TOTAL</b>		<b>605</b>	<b>509</b>	<b>398</b>	<b>1,484</b>	<b>1,171</b>	
BACILLARIOPHYTA (DIATOMS)		<i>Asterionella formosa</i>	0	0	0	0	0
	<i>Cocconeis placentula</i>	39	0	0	0	0	
	<i>Cymbella sp.</i>	0	0	0	0	0	
	<i>Fragilaria capucina</i>	20	0	0	0	0	
	<i>Fragilaria crotonensis</i>	117	0	0	0	0	
	<i>Gomphonema sp.</i>	20	0	0	0	0	
	<i>Melosira granulata</i>	254	0	0	0	0	
	<i>Rhizosolenia sp.</i>	0	0	0	0	0	
	<i>Stephanodiscus Hantzschii</i>	4,548	11	0	0	0	
	<i>Stephanodiscus sp.</i>	0	0	0	0	0	
	<i>Synedra acus</i>	39	0	0	0	0	
	<i>Synedra ulna</i>	78	0	0	0	0	
<b>BACILLARIOPHYTA TOTAL</b>	<b>5,114</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>		
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	3,182	93	60	547	39	
	<b>CRYPTOPHYTA TOTAL</b>	<b>3,182</b>	<b>93</b>	<b>60</b>	<b>547</b>	<b>39</b>	
EUGLENOPHYTA (EUGLENOIDS)	<i>Euglena sp.</i>	0	0	0	0	0	
	<b>EUGLENOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
PYRRHOPHYTA (DINOFAGELLATES)	<i>Ceratium hirundinella</i>	117	0	0	0	0	
	<i>Peridinium cinctum</i>	78	50	0	0	0	
	<b>PYRRHOPHYTA TOTAL</b>	<b>195</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>TOTALS</b>		<b>13,918</b>	<b>975</b>	<b>807</b>	<b>2,186</b>	<b>1,288</b>	
DIVISION		<b>6/19/2000</b>	<b>7/18/2000</b>	<b>8/7/2000</b>	<b>8/21/2000</b>	<b>9/6/2000</b>	
CHLOROPHYTA		4,821	313	349	156	78	
CHRYSOPHYTA		0	0	0	0	0	
CYANOPHYTA		605	509	398	1,484	1,171	
BACILLARIOPHYTA		5,114	11	0	0	0	
CRYPTOPHYTA		3,182	93	60	547	39	
EUGLENOPHYTA		0	0	0	0	0	
PYRRHOPHYTA		195	50	0	0	0	
TOTALS		13,918	975	807	2,186	1,288	

## 2000 Southwest Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\2000\NORTHANDERSON\PHYTOSWAN.xls

DIVISION	TAXON	6/19/2000 units/mL	7/18/2000 units/mL	8/7/2000 units/mL	8/21/2000 units/mL	9/6/2000 units/mL	
CHLOROPHYTA (GREEN ALGAE)	<i>Actinastrum Hantzschii-</i>	20	0	0	0	0	
	<i>Ankistrodesmus falcatus</i>	137	0	0	0	0	
	<i>Ankistrodesmus Brauni</i>	0	0	20	20	0	
	<i>Chlamydomonas globosa</i>	2,284	150	249	98	39	
	<i>Closterium sp.</i>	0	0	0	0	0	
	<i>Coelastrum microporum</i>	0	0	0	0	0	
	<i>Cosmarium sp.</i>	0	0	0	0	39	
	<i>Elakotothrix gelatinosa</i>	20	0	21	0	0	
	<i>Golenkinia sp.</i>	195	0	0	0	0	
	<i>Oocystis parva</i>	59	152	20	20	0	
	<i>Pandorina morum</i>	20	0	0	0	0	
	<i>Pediastrum duplex v. clathratum</i>	0	0	20	0	0	
	<i>Quadrigula sp.</i>	20	0	0	0	0	
	<i>Rhizoclonium hieroglyphicum</i>	0	0	0	0	0	
	<i>Schroederia Judayi</i>	59	0	0	20	0	
	<i>Scenedesmus dimorphus</i>	0	0	0	0	0	
	<i>Scenedesmus quadricauda</i>	254	0	0	0	0	
	<i>Scenedesmus sp.</i>	39	0	0	0	0	
	<i>Selenastrum minutum</i>	1,484	0	0	0	0	
	<i>Selenastrum sp.</i>	0	0	0	0	0	
	<i>Sphaerocystis Schroeteri (Colony)</i>	156	0	20	0	0	
	<i>Staurastrum sp.</i>	39	0	0	0	0	
	<i>Tetraedron minimum</i>	0	0	0	0	0	
	<i>Tetraedron muticum</i>	39	11	0	0	0	
	<i>Tetraedron sp.</i>	0	0	0	0	0	
	<i>Treubaria setigerum</i>	0	0	0	0	0	
	<b>CHLOROPHYTA TOTAL</b>		<b>4,821</b>	<b>313</b>	<b>349</b>	<b>156</b>	<b>78</b>
	CHRYSOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	0	0	0	0	0
		<b>CHRYSOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	20	0	0	0	0
		<i>Anabaena flos-aquae</i>	0	0	11	117	0
		<i>Anabaena spiroides v. crassa</i>	0	39	20	39	0
		<i>Anabaenopsis raciborski</i>	0	0	0	0	0
<i>Aphanizomenon flos-aquae</i>		0	20	0	0	0	
<i>Coelosphaerium Naegelianum</i>		98	0	0	98	39	
<i>Lyngbya limnetica</i>		0	0	0	0	0	
<i>Merismopedia tenuissima</i>		20	0	0	0	0	
<i>Merismopedia sp.</i>		0	0	21	0	0	
<i>Microcystis aeruginosa</i>		390	451	347	1,230	1,093	
<i>Microcystis incerta</i>		78	0	0	0	39	
<i>Oscillatoria limnetica</i>		0	0	0	0	0	
<i>Oscillatoria Agardhii</i>		0	0	0	0	0	
<i>Phormidium mucicola</i>		0	0	0	0	0	
<b>CYANOPHYTA TOTAL</b>		<b>605</b>	<b>509</b>	<b>398</b>	<b>1,484</b>	<b>1,171</b>	
BACILLARIOPHYTA (DIATOMS)		<i>Asterionella formosa</i>	0	0	0	0	0
	<i>Cocconeis placentula</i>	39	0	0	0	0	
	<i>Cymbella sp.</i>	0	0	0	0	0	
	<i>Fragilaria capucina</i>	20	0	0	0	0	
	<i>Fragilaria crotonensis</i>	117	0	0	0	0	
	<i>Gomphonema sp.</i>	20	0	0	0	0	
	<i>Melosira granulata</i>	254	0	0	0	0	
	<i>Rhizosolenia sp.</i>	0	0	0	0	0	
	<i>Stephanodiscus Hantzschii</i>	4,548	11	0	0	0	
	<i>Stephanodiscus sp.</i>	0	0	0	0	0	
	<i>Synedra acus</i>	39	0	0	0	0	
	<i>Synedra ulna</i>	78	0	0	0	0	
<b>BACILLARIOPHYTA TOTAL</b>	<b>5,114</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>		
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	3,182	93	60	547	39	
	<b>CRYPTOPHYTA TOTAL</b>	<b>3,182</b>	<b>93</b>	<b>60</b>	<b>547</b>	<b>39</b>	
EUGLENOPHYTA (EUGLENOIDS)	<i>Euglena sp.</i>	0	0	0	0	0	
	<b>EUGLENOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
PYRRHOPHYTA (DINOFAGELLATES)	<i>Ceratium hirundinella</i>	117	0	0	0	0	
	<i>Peridinium cinctum</i>	78	50	0	0	0	
	<b>PYRRHOPHYTA TOTAL</b>	<b>195</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>TOTALS</b>		<b>13,918</b>	<b>975</b>	<b>807</b>	<b>2,186</b>	<b>1,288</b>	
DIVISION		<b>6/19/2000</b>	<b>7/18/2000</b>	<b>8/7/2000</b>	<b>8/21/2000</b>	<b>9/6/2000</b>	
CHLOROPHYTA		4,821	313	349	156	78	
CHRYSOPHYTA		0	0	0	0	0	
CYANOPHYTA		605	509	398	1,484	1,171	
BACILLARIOPHYTA		5,114	11	0	0	0	
CRYPTOPHYTA		3,182	93	60	547	39	
EUGLENOPHYTA		0	0	0	0	0	
PYRRHOPHYTA		195	50	0	0	0	
TOTALS		13,918	975	807	2,186	1,288	

## 2001 Southwest Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\2001\NORTHANDERSON\PHYSWAND.xls

DIVISION	TAXON	4/24/2001 units/mL	6/11/2001 units/mL	7/14/2001 units/mL	8/6/2001 units/mL	8/28/2001 units/mL	9/5/2001 units/mL
CHLOROPHYTA (GREEN ALGAE)	<i>Ankistrodesmus Brauni</i>	0	0	0	0	39	0
	<i>Chlamydomonas globosa</i>	1,210	2,011	468	1,132	1,874	0
	<i>Coelastrum microporum</i>	0	0	39	0	0	0
	<i>Oocystis parva</i>	0	20	0	0	0	0
	<i>Schroederia Judayi</i>	0	20	39	39	0	0
	<i>Selenastrum sp.</i>	39	0	0	0	0	0
	<i>Staurastrum sp.</i>	39	0	0	0	0	0
	<i>Tetraedron sp.</i>	0	0	0	0	39	0
	<b>CHLOROPHYTA TOTAL</b>		<b>1,288</b>	<b>2,050</b>	<b>547</b>	<b>1,171</b>	<b>1,952</b>
CHRYSOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	39	20	0	0	0	0
	<b>CHRYSOPHYTA TOTAL</b>	<b>39</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	0	0	117	0	0	0
	<i>Anabaena spiroides v. crassa</i>	0	0	39	0	0	78
	<i>Anabaenopsis raciborski</i>	156	0	78	156	0	0
	<i>Aphanizomenon flos-aquae</i>	0	0	0	39	39	0
	<i>Coelosphaerium Naegelianum</i>	0	0	0	0	312	2,186
	<i>Merismopedia tenuissima</i>	0	0	39	0	0	0
	<i>Microcystis aeruginosa</i>	0	0	39	0	39	390
	<i>Oscillatoria limnetica</i>	39	0	0	0	0	0
	<b>CYANOPHYTA TOTAL</b>	<b>195</b>	<b>0</b>	<b>312</b>	<b>195</b>	<b>390</b>	<b>2,655</b>
BACILLARIOPHYTA (DIATOMS)	<i>Fragilaria capucina</i>	39	0	0	39	0	0
	<i>Navicula sp.</i>	156	0	39	78	39	0
	<i>Synedra ulna</i>	976	0	117	39	78	39
<b>BACILLARIOPHYTA TOTAL</b>	<b>1,171</b>	<b>0</b>	<b>156</b>	<b>156</b>	<b>117</b>	<b>39</b>	
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	3,357	1,620	1,444	3,787	1,913	273
<b>CRYPTOPHYTA TOTAL</b>	<b>3,357</b>	<b>1,620</b>	<b>1,444</b>	<b>3,787</b>	<b>1,913</b>	<b>273</b>	
EUGLENOPHYTA (EUGLENOIDS)	<b>EUGLENOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PYRRHOPHYTA (DINOFAGELLATES)	<i>Peridinium cinctum</i>	0	20	0	0	0	0
<b>PYRRHOPHYTA TOTAL</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>TOTALS</b>		<b>6,051</b>	<b>3,709</b>	<b>2,460</b>	<b>5,309</b>	<b>4,372</b>	<b>2,967</b>
DIVISION		<b>4/24/2001</b>	<b>6/11/2001</b>	<b>7/14/2001</b>	<b>8/6/2001</b>	<b>8/28/2001</b>	<b>9/5/2001</b>
CHLOROPHYTA		1,288	2,050	547	1,171	1,952	0
CHRYSOPHYTA		39	20	0	0	0	0
CYANOPHYTA		195	0	312	195	390	2,655
BACILLARIOPHYTA		1,171	0	156	156	117	39
CRYPTOPHYTA		3,357	1,620	1,444	3,787	1,913	273
EUGLENOPHYTA		0	0	0	0	0	0
PYRRHOPHYTA		0	20	0	0	0	0
TOTALS		6,051	3,709	2,460	5,309	4,372	2,967

## 1988 and 1991 PHYTOPLANKTON IDENTIFICATION SUMMARY (units/mL)

### LAKE: Northwest Anderson

From:

1988-1991 Lake Water Quality Inventory and Historical Water Quality Trend Analysis

Anderson, Birch Island, Bryant, Bush, Glen, Lone, Minnetoga, Mirror, Normandale, Penn, Shady Oak, and Smetana Lakes

February 1993

DIVISION	SAMPLE DATE							
	units / mL							
	6/23/88	7/21/88	8/24/88	9/13/88	6/24/91	7/17/91	8/14/91	9/3/91
CHLOROPHYTA (GREEN ALGAE) TOTAL	1,731	2,840	1,401	2,141	1,311	1,639	328	18,443
CYANOPHYTA (BLUE-GREEN ALGAE) TOTAL	10,864	151,887	43,932	7,763	212,047	260,738	200,027	104,713
BACILLARIOPHYTA (DIATOMS) TOTAL	506	1,988	240	245	574	82	0	7,577
CRYPTOPHYTA (CRYPTOMONADS) TOTAL	426	1,420	200	45	0	0	0	615
EUGLENOPHYTA TOTAL	0	0	0	0	164	0	164	0
TOTAL PHYTOPLANKTON	13,527	158,135	45,773	10,194	214,096	262,459	200,519	131,348

# 1996 NORTHWEST ANDERSON LAKE PHYTOPLANKTON IDENTIFICATION SUMMARY (units/m

SAMPLE: 0-2 METERS (INT. TUBE)

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\1996\NOANDER\NA96PHYTOP.xls

DIVISION	TAXON	6/18/1996 units/mL	7/15/1996 units/mL	8/5/1996 units/mL	8/19/1996 units/mL	9/3/1996 units/mL
CHLOROPHYTA (GREEN ALGAE)	<i>Ankistrodesmus falcatus</i>	117	78	0	74	0
	<i>Chlamydomonas globosa</i>	11,946	937	1,292	592	2,186
	<i>Closterium</i> sp.	39	39	0	74	0
	<i>Coelastrum microporum</i>	0	0	0	74	0
	<i>Dictyosphaerium Ehrenbergianum</i>	0	78	129	0	0
	<i>Oocystis parva</i>	39	0	129	74	109
	<i>Pediastrum duplex</i>	39	39	0	0	109
	<i>Scenedesmus dimorphus</i>	0	0	129	0	109
	<i>Scenedesmus quadricauda</i>	0	39	258	222	109
	<i>Schroederia Judayi</i>	586	0	0	0	0
	<i>Scenedesmus</i> sp.	0	0	0	74	0
	<i>Schroederia</i> sp.	0	0	0	74	0
	<i>Sphaerocystis Schroeteri</i>	78	0	0	0	0
	<i>Selenastrum</i> sp.	0	0	258	0	0
	<i>Staurastrum</i> sp.	0	0	0	74	219
	<i>Treubaria setigerum</i>	78	0	0	0	0
<b>CHLOROPHYTA TOTAL</b>		<b>12,844</b>	<b>1,210</b>	<b>2,196</b>	<b>1,332</b>	<b>2,842</b>
CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	0	39	388	370	0
	<i>Anabaenopsis raciborski</i>	0	7,808	39,014	35,082	34,870
	<i>Aphanizomenon flos-aquae</i>	0	1,444	5,555	3,627	6,777
	<i>Aphanocapsa delicatissima</i>	0	234	1,292	444	547
	<i>Coelosphaerium Naegelianum</i>	0	0	0	148	328
	<i>Lyngbya limnetica</i>	0	7,457	13,177	1,036	328
	<i>Merismopedia tenuissima</i>	0	351	5,167	2,738	5,247
	<i>Microcystis aeruginosa</i>	0	390	388	2,516	3,935
	<i>Microcystis incerta</i>	156	820	2,067	592	1,421
	<i>Oscillatoria limnetica</i>	78	0	0	0	0
	<i>Phormidium mucicola</i>	0	0	0	0	547
<b>CYANOPHYTA TOTAL</b>		<b>234</b>	<b>18,544</b>	<b>67,048</b>	<b>46,554</b>	<b>54,000</b>
BACILLARIOPHYTA (DIATOMS)	<i>Fragilaria crotonensis</i>	156	390	1,292	370	219
	<i>Melosira granulata</i>	273	312	904	74	1,749
	<i>Navicula</i> sp.	117	0	0	0	0
	<i>Stephanodiscus Hantzschii</i>	0	39	129	0	0
	<i>Synedra ulna</i>	156	0	0	0	0
<b>BACILLARIOPHYTA TOTAL</b>		<b>547</b>	<b>742</b>	<b>2,325</b>	<b>444</b>	<b>1,968</b>
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	5,153	937	3,746	1,406	1,421
	<b>CRYPTOPHYTA TOTAL</b>		<b>5,153</b>	<b>937</b>	<b>3,746</b>	<b>1,406</b>
EUGLENOPHYTA (EUGLENOIDS)	<i>Euglena</i> sp.	0	0	129	0	0
	<b>EUGLENOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>129</b>	<b>0</b>
PYRRHOPHYTA (DINOFLAGELLATES)	<i>Peridinium cinctum</i>	0	0	0	74	0
	<b>PYRRHOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>
<b>TOTALS</b>		<b>18,778</b>	<b>21,433</b>	<b>75,445</b>	<b>49,811</b>	<b>60,231</b>
DIVISION		<b>6/18/1996</b>	<b>7/15/1996</b>	<b>8/5/1996</b>	<b>8/19/1996</b>	<b>9/3/1996</b>
CHLOROPHYTA		12,844	1,210	2,196	1,332	2,842
CYANOPHYTA		234	18,544	67,048	46,554	54,000
BACILLARIOPHYTA		547	742	2,325	444	1,968
CRYPTOPHYTA		5,153	937	3,746	1,406	1,421
EUGLENOPHYTA		0	0	129	0	0
PYRRHOPHYTA		0	0	0	74	0
TOTALS		18,778	21,433	75,445	49,811	60,231

## 2000 Northwest Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

6/19/2000

from P:\23\27\003\LAKE\2000\NORTHANDERSON\PHYTONOAN.xls

DIVISION	TAXON	6/19/2000 units/mL	7/18/2000 units/mL	8/7/2000 units/mL	8/21/2000 units/mL	9/6/2000 units/mL
CHLOROPHYTA (GREEN ALGAE)	<i>Actinastrum Hantzschii-</i>	0	0	0	0	0
	<i>Ankistrodesmus falcatus</i>	0	0	0	0	0
	<i>Ankistrodesmus Brauni</i>	78	104	70	0	63
	<i>Chlamydomonas globosa</i>	2,303	5,015	2,717	2,842	3,426
	<i>Closterium sp.</i>	0	0	0	0	0
	<i>Coelastrum microporum</i>	117	209	348	622	571
	<i>Cosmarium sp.</i>	156	0	0	0	190
	<i>Crucigenia quadrata</i>	0	0	0	0	0
	<i>Elakotothrix gelatinosa</i>	0	0	0	0	0
	<i>Golenkinia sp.</i>	156	0	70	89	0
	<i>Lagerheimia sp.</i>	0	0	0	89	317
	<i>Oocystis parva</i>	2,069	7,628	9,613	1,954	317
	<i>Pandorina morum</i>	0	0	0	0	0
	<i>Pediastrum boryanum</i>	0	104	139	0	190
	<i>Pediastrum duplex v. clathratum</i>	0	0	279	0	0
	<i>Pediastrum simplex</i>	0	0	0	0	0
	<i>Quadrigula sp.</i>	39	0	0	0	0
	<i>Rhizoclonium hieroglyphicum</i>	39	0	0	0	0
	<i>Schroederia Judayi</i>	117	0	0	0	381
	<i>Scenedesmus dimorphus</i>	0	0	0	0	0
	<i>Scenedesmus quadricauda</i>	1,171	836	2,159	3,553	1,586
	<i>Scenedesmus sp.</i>	0	0	0	0	63
	<i>Selenastrum minutum</i>	0	0	209	0	63
	<i>Selenastrum sp.</i>	0	0	0	0	0
	<i>Sphaerocystis Schroeteri (Colony)</i>	195	0	0	89	0
	<i>Staurastrum sp.</i>	195	0	0	0	63
	<i>Tetraedron minimum</i>	273	1,463	1,045	1,066	1,332
	<i>Tetraedron muticum</i>	0	0	70	89	0
	<i>Tetraedron sp.</i>	0	0	0	0	63
	<i>Treubaria setigerum</i>	0	0	0	0	0
<b>CHLOROPHYTA TOTAL</b>		<b>6,910</b>	<b>15,360</b>	<b>16,718</b>	<b>10,391</b>	<b>8,628</b>
CHRYSTOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	0	0	0	0	0
	<b>CHRYSTOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	117	627	418	1,865	571
	<i>Anabaena flos-aquae</i>	39	0	0	0	0
	<i>Anabaena spiroides v. crassa</i>	0	0	0	0	0
	<i>Anabaenopsis raciborski</i>	0	0	13,375	31,441	34,702
	<i>Aphanizomenon flos-aquae</i>	1,757	30,093	279	178	0
	<i>Coelosphaerium Naegelianum</i>	0	0	0	178	444
	<i>Lyngbya limnetica</i>	0	0	0	0	0
	<i>Merismopedia tenuissima</i>	0	209	139	0	63
	<i>Merismopedia sp.</i>	195	0	139	0	190
	<i>Microcystis aeruginosa</i>	1,366	731	766	1,066	1,205
	<i>Microcystis incerta</i>	11,048	6,792	1,950	977	634
	<i>Oscillatoria limnetica</i>	0	0	0	0	190
	<i>Oscillatoria Agardhii</i>	0	0	0	0	0
	<i>Phormidium mucicola</i>	0	0	0	0	0
	<b>CYANOPHYTA TOTAL</b>	<b>14,523</b>	<b>38,452</b>	<b>17,067</b>	<b>35,704</b>	<b>38,000</b>
	BACILLARIOPHYTA (DIATOMS)	<i>Asterionella formosa</i>	0	0	0	0
<i>Cocconeis placentula</i>		0	0	0	0	0
<i>Cymbella sp.</i>		0	0	0	0	0
<i>Fragilaria capucina</i>		0	0	0	0	0
<i>Fragilaria crotonensis</i>		2,381	104	70	178	0
<i>Gomphonema sp.</i>		0	0	0	0	0
<i>Melosira granulata</i>		117	104	627	3,020	3,806
<i>Rhizosolenia sp.</i>		0	0	0	0	0
<i>Stephanodiscus Hantzschii</i>		0	0	70	0	0
<i>Stephanodiscus sp.</i>		0	0	0	0	0
<i>Synedra acus</i>		0	0	0	0	0
<i>Synedra ulna</i>		0	0	139	0	0
<b>BACILLARIOPHYTA TOTAL</b>		<b>2,499</b>	<b>209</b>	<b>906</b>	<b>3,197</b>	<b>3,806</b>
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	1,718	418	836	444	825
	<b>CRYPTOPHYTA TOTAL</b>	<b>1,718</b>	<b>418</b>	<b>836</b>	<b>444</b>	<b>825</b>
EUGLENOPHYTA (EUGLENOIDS)	<i>Euglena sp.</i>	0	0	0	0	0
	<b>EUGLENOPHYTA TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PYRRHOPHYTA (DINOFAGELLATES)	<i>Ceratium hirundinella</i>	0	0	0	0	0
	<i>Peridinium cinctum</i>	39	0	0	0	0
	<b>PYRRHOPHYTA TOTAL</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTALS</b>		<b>25,688</b>	<b>54,439</b>	<b>35,526</b>	<b>49,737</b>	<b>51,259</b>
DIVISION		<b>6/19/2000</b>	<b>7/18/2000</b>	<b>8/7/2000</b>	<b>8/21/2000</b>	<b>9/6/2000</b>
CHLOROPHYTA		6,910	15,360	16,718	10,391	8,628
CHRYSTOPHYTA		0	0	0	0	0
CYANOPHYTA		14,523	38,452	17,067	35,704	38,000
BACILLARIOPHYTA		2,499	209	906	3,197	3,806
CRYPTOPHYTA		1,718	418	836	444	825
EUGLENOPHYTA		0	0	0	0	0
PYRRHOPHYTA		39	0	0	0	0
TOTALS		25,688	54,439	35,526	49,737	51,259

## 2001 Northwest Anderson Lake Phytoplankton Identification Summary (units/mL)

SAMPLE: 0-2 METERS

STANDARD INVERTED MICROSCOPE ANALYSIS METHOD

from P:\23\27\003\LAKES\2001\NORTHANDERSON\PHYNOAND.xls

DIVISION	TAXON	4/24/2001 units/mL	6/11/2001 units/mL	7/19/2001 units/mL	8/6/2001 units/mL	8/22/2001 units/mL	9/5/2001 units/mL
CHLOROPHYTA (GREEN ALGAE)	<i>Ankistrodesmus falcatus</i>	84	0	0	0	0	0
	<i>Ankistrodesmus Brauni</i>	0	0	0	78	0	0
	<i>Chlamydomonas globosa</i>	843	3,006	547	234	405	1,550
	<i>Closterium sp.</i>	0	0	0	39	0	0
	<i>Coelastrum microporum</i>	0	0	39	0	162	517
	<i>Cosmarium sp.</i>	0	0	39	0	0	129
	<i>Elakotrix gelatinosa</i>	0	0	78	0	0	0
	<i>Elakotrix sp.</i>	0	39	0	0	0	0
	<i>Oocystis parva</i>	0	117	195	156	243	258
	<i>Pediastrum Boryanum</i>	21	0	0	39	0	0
	<i>Quadrigula sp.</i>	0	0	0	39	81	0
	<i>Schroederia Judayi</i>	0	39	0	0	0	0
	<i>Scenedesmus quadricauda</i>	211	39	117	156	0	0
	<i>Scenedesmus sp.</i>	0	39	156	78	81	0
	<i>Selenastrum minutum</i>	42	0	0	39	0	0
	<i>Schroederia Judayi</i>	0	0	390	312	0	0
	<i>Sphaerocystis Schroeteri (Colony)</i>	42	0	0	0	0	0
	<i>Staurastrum sp.</i>	0	0	0	78	81	0
	<i>Tetraedron minimum</i>	0	0	39	39	81	388
	<i>Tetraedron sp.</i>	0	0	0	39	0	0
<b>CHLOROPHYTA TOTAL</b>		<b>1,243</b>	<b>3,279</b>	<b>1,601</b>	<b>1,327</b>	<b>1,135</b>	<b>2,842</b>
CHRYSOPHYTA (YELLOW-BROWN ALGAE)	<i>Dinobryon sociale</i>	147	898	0	0	0	0
	<b>CHRYSOPHYTA TOTAL</b>		<b>147</b>	<b>898</b>	<b>0</b>	<b>0</b>	<b>0</b>
CYANOPHYTA (BLUE-GREEN ALGAE)	<i>Anabaena affinis</i>	0	0	4,568	5,153	8,596	7,880
	<i>Anabaena flos-aquae</i>	0	0	117	0	0	0
	<i>Anabaenopsis raciborski</i>	0	0	1,874	24,361	35,521	48,703
	<i>Aphanizomenon flos-aquae</i>	0	0	2,381	117	2,920	3,100
	<i>Coelosphaerium Naegelianum</i>	0	0	234	898	2,838	1,550
	<i>Merismopedia tenuissima</i>	0	0	39	0	0	0
	<i>Merismopedia sp.</i>	0	0	39	39	0	0
	<i>Microcystis aeruginosa</i>	0	39	976	0	487	129
	<i>Microcystis incerta</i>	42	0	664	39	0	0
	<i>Oscillatoria limnetica</i>	0	0	78	0	0	0
<b>CYANOPHYTA TOTAL</b>		<b>42</b>	<b>39</b>	<b>10,970</b>	<b>30,607</b>	<b>50,362</b>	<b>61,364</b>
BACILLARIOPHYTA (DIATOMS)	<i>Asterionella formosa</i>	1,707	0	0	0	0	0
	<i>Fragilaria capucina</i>	42	0	0	0	0	0
	<i>Fragilaria crotonensis</i>	190	0	312	39	0	0
	<i>Melosira granulata</i>	1,370	39	468	0	243	517
	<i>Navicula sp.</i>	42	0	0	0	0	0
	<i>Synedra ulna</i>	147	0	0	39	0	0
<b>BACILLARIOPHYTA TOTAL</b>		<b>3,498</b>	<b>39</b>	<b>781</b>	<b>78</b>	<b>243</b>	<b>517</b>
CRYPTOPHYTA (CRYPTOMONADS)	<i>Cryptomonas erosa</i>	15,255	742	2,069	547	811	1,292
	<b>CRYPTOPHYTA TOTAL</b>		<b>15,255</b>	<b>742</b>	<b>2,069</b>	<b>547</b>	<b>811</b>
EUGLENOPHYTA (EUGLENOIDS)	<b>EUGLENOPHYTA TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PYRRHOPHYTA (DINOFAGELLATES)	<i>Ceratium hirundinella</i>	0	39	0	39	0	0
	<i>Peridinium cinctum</i>	42	0	39	0	0	0
<b>PYRRHOPHYTA TOTAL</b>		<b>42</b>	<b>39</b>	<b>39</b>	<b>39</b>	<b>0</b>	<b>0</b>
<b>TOTALS</b>		<b>20,227</b>	<b>5,036</b>	<b>15,460</b>	<b>32,598</b>	<b>52,552</b>	<b>66,014</b>
DIVISION		<b>4/24/2001</b>	<b>6/11/2001</b>	<b>7/19/2001</b>	<b>8/6/2001</b>	<b>8/22/2001</b>	<b>9/5/2001</b>
CHLOROPHYTA		1,243	3,279	1,601	1,327	1,135	2,842
CHRYSOPHYTA		147	898	0	0	0	0
CYANOPHYTA		42	39	10,970	30,607	50,362	61,364
BACILLARIOPHYTA		3,498	39	781	78	243	517
CRYPTOPHYTA		15,255	742	2,069	547	811	1,292
EUGLENOPHYTA		0	0	0	0	0	0
PYRRHOPHYTA		42	39	39	39	0	0
TOTALS		20,227	5,036	15,460	32,598	52,552	66,014

# 1988 and 1991 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)

## LAKE: Southeast Anderson

From:

1988-1991 Lake Water Quality Inventory and Historical Water Quality Trend Analysis

Anderson, Birch Island, Bryant, Bush, Glen, Lone, Minnetoga, Mirror, Normandale, Penn, Shady Oak, and Smetana Lakes  
February 1993

		SAMPLE DATE							
		# / m <sup>2</sup>							
DIVISION	TAXON	6/23/88	7/21/88	8/24/88	9/13/88	6/19/91	7/17/91	8/14/91	9/3/91
	CLADOCERA TOTAL	520,070	1,017,085	528,507	267,907	476,957	81,220	155,884	277,554
	COPEPODA TOTAL	581,772	254,271	147,289	143,522	205,959	162,440	51,961	170,496
	ROTIFERA TOTAL	1,507,318	442,619	727,779	755,882	1,167,101	44,671	79,940	567,002
	TOTAL ZOOPLANKTON	2,609,160	1,713,975	1,403,575	1,167,311	1,850,017	288,331	287,785	1,015,052

# 1996 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)

## LAKE: SE Anderson Lake

from P:/23/27/003/LAKES/1996/SEANDER/ZP-SEAND.xls

DIVISION	TAXON	SAMPLE DATE				
		6/18/96	7/15/96	8/5/96	8/19/96	9/3/96
CLADOCERA						
	<i>Daphnia galeata mendotae</i>	21,131	300			
	<i>Diaphanosoma leuchtenbergianum</i>		3,600	8,750	8,492	2,800
	<i>Bosmina sp.</i>		4,800	72,450	275,292	79,800
	<i>Chydorus sp.</i>	2,523	300		354	1,400
	<i>Ceriodaphnia sp.</i>	631	900		1,062	3,500
	<b>Total Cladocera</b>	<b>24,285</b>	<b>9,900</b>	<b>81,200</b>	<b>285,200</b>	<b>87,500</b>
COPEPODA						
	<i>Nauplii</i>	23,338	27,900	31,500	36,092	55,650
	<i>Cyclops sp.</i>		300			
	<i>Mesocyclops sp.</i>	1,262	23,100	700	8,846	3,150
	<i>Diaptomus sp.</i>	5,362	14,400	11,550	13,092	9,100
	<b>Total Copepoda</b>	<b>29,962</b>	<b>65,700</b>	<b>43,750</b>	<b>58,031</b>	<b>67,900</b>
ROTIFERA						
	<i>Keratella cochlearis</i>	6,623	3,300	76,650	14,154	30,450
	<i>Conochilus sp.</i>		1,081,500	5,600		
	<i>Polyarthra vulgaris</i>	27,123	42,000	9,450	14,508	25,200
	<i>Asplanchna sp.</i>	8,515	1,200	3,150	1,415	350
	<i>Keratella quadrata</i>	315				
	<i>Kellicottia longispina</i>			4,550	4,246	4,200
	<i>Brachionus sp.</i>			5,950	6,015	1,400
	<i>Filinia longiseta</i>			9,450	16,985	2,450
	<b>Total Rotifera</b>	<b>42,577</b>	<b>1,128,000</b>	<b>114,800</b>	<b>57,323</b>	<b>64,050</b>
	<b>TOTAL ZOOPLANKTON</b>	<b>96,823</b>	<b>1,203,600</b>	<b>239,750</b>	<b>400,554</b>	<b>219,450</b>

**2000 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)  
SE ANDERSON**

		DATE				
from P:/23/27/634/zoonmcwd.xls		6/19/2000	7/18/2000	8/7/2000	8/21/2000	9/6/2000
<b>DIVISION</b>	<b>TAXON</b>					
<b>CLADOCERA</b>						
1	<i>Daphnia retrocurva</i>	0	0	0	2,100	2,078
2	<i>Diaphanosoma sp.</i>	27,543	47,172	48,808	60,899	4,156
	<i>Daphnia ambigua</i>	0	0	0	0	0
3	<i>Bosmina sp.</i>	100,334	310,905	449,436	300,294	35,324
4	<i>Chydorus sp.</i>	649,220	55,748	67,110	109,198	261,810
5	<i>Ceriodaphnia sp.</i>	499,702	92,199	4,067	132,298	199,474
<b>TOTAL CLADOCERA</b>		<b>1,276,798</b>	<b>506,024</b>	<b>569,421</b>	<b>604,789</b>	<b>502,841</b>
<b>COPEPODA</b>						
				0	0	0
6	<i>Nauplii</i>	267,557	72,902	260,307	37,799	81,036
7	<i>Cyclops sp.</i>	118,040	10,721	16,269	2,100	2,078
8	<i>Mesocyclops sp.</i>	0	8,577	2,034	21,000	2,078
9	<i>Diaptomus sp.</i>	31,477	23,586	6,101	29,399	41,557
<b>TOTAL COPEPODA</b>		<b>417,074</b>	<b>115,785</b>	<b>284,711</b>	<b>90,298</b>	<b>126,749</b>
<b>ROTIFERA</b>						
		0	0	0	0	0
1	<i>Kellicottia sp.</i>	1,263,027	12,865	8,135	6,300	49,869
2	<i>Conochilus sp.</i>	21,641	0	40,673	62,999	14,545
3	<i>Keratella cochlearis</i>	956,123	235,859	528,748	371,693	172,462
4	<i>Keratella quadrata</i>	17,706	0	0	0	0
5	<i>Polyarthra vulgaris</i>	120,007	0	2,034	4,200	33,246
6	<i>Brachionus sp.</i>	0	2,144	0	0	0
7	<i>Filinia longiseta</i>	43,281	2,144	0	6,300	4,156
8	<i>Aplanchna sp.</i>	3,935	2,144	4,067	4,200	8,311
9	<i>Trichocerca sp.</i>	94,432	8,577	14,236	33,599	12,467
<b>TOTAL ROTIFERA</b>		<b>2,520,152</b>	<b>263,733</b>	<b>597,892</b>	<b>489,291</b>	<b>295,056</b>

**2001 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)**

**SE ANDERSON**

from P:\23\27\003\LAKES\2001\Z01-NINE.xls

DIVISION TAXON	DATE					
	4/24/2001	6/11/2001	7/18/2001	8/6/2001	8/22/2001	9/5/2001
<b>CLADOCERA</b>						
<i>Daphnia galeata mendotae</i>	0	36,837	8,915	0	0	0
<i>Diaphanosoma sp.</i>	0	0	37,891	28,804	24,101	23,709
<i>Daphnia retrocurva</i>	2,057	9,209	0	0	0	0
<i>Bosmina sp.</i>	4,115	297,001	144,876	338,443	628,635	153,032
<i>Chydorus sp.</i>	2,057	133,535	173,851	117,615	170,716	47,418
<i>Ceriodaphnia sp.</i>	0	0	37,891	28,804	24,101	23,709
<b>TOTAL CLADOCERA</b>	<b>8,230</b>	<b>476,583</b>	<b>403,423</b>	<b>513,665</b>	<b>847,553</b>	<b>247,868</b>
<b>COPEPODA</b>						
Nauplii	0	151,954	115,900	172,822	96,404	56,040
<i>Cyclops sp.</i>	129,616	25,326	11,144	26,403	2,008	6,466
<i>Mesocyclops sp.</i>	0	46,047	8,915	0	0	2,155
<i>Diaptomus sp.</i>	0	25,326	11,144	14,402	20,084	6,466
<b>TOTAL COPEPODA</b>	<b>129,616</b>	<b>248,652</b>	<b>147,104</b>	<b>213,627</b>	<b>118,497</b>	<b>71,127</b>
<b>ROTIFERA</b>						
<i>Kellicottia sp.</i>	0	257,861	26,746	2,400	0	0
<i>Conochilus sp.</i>	20,574	142,745	20,060	2,400	0	0
<i>Keratella cochlearis</i>	12,344	315,420	222,886	151,219	20,084	96,992
<i>Keratella quadrata</i>	8,230	0	2,229	0	0	0
<i>Polyarthra vulgaris</i>	526,696	43,744	15,602	4,801	0	0
<i>Brachionus sp.</i>	12,344	0	71,323	2,400	0	2,155
<i>Filinia longiseta</i>	53,493	2,302	0	0	0	2,155
<i>Aplanchna sp.</i>	267,463	0	6,687	7,201	2,008	0
<i>Trichocerca sp.</i>	6,172	0	0	33,604	18,076	23,709
<b>TOTAL ROTIFERA</b>	<b>907,315</b>	<b>762,072</b>	<b>365,532</b>	<b>204,026</b>	<b>40,168</b>	<b>125,012</b>

# 1988 and 1991 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)

## LAKE: Southwest Anderson

From:

1988-1991 Lake Water Quality Inventory and Historical Water Quality Trend Analysis

Anderson, Birch Island, Bryant, Bush, Glen, Lone, Minnetoga, Mirror, Normandale, Penn, Shady Oak, and Smetana Lakes  
February 1993

		SAMPLE DATE							
		#/m2							
DIVISION	TAXON	6/23/88	7/21/88	8/24/88	9/13/88	6/24/91	7/17/91	8/31/91	9/3/91
	CLADOCERA TOTAL	527,376	613,038	563,163	493,399	66,511	142,135	47,580	84,609
	COPEPODA TOTAL	555,630	426,799	233,929	108,715	49,883	121,830	142,742	44,319
	ROTIFERA TOTAL	207,184	38,800	43,320	8,363	232,788	16,244	43,615	100,725
	TOTAL ZOOPLANKTON	1,290,190	1,078,637	840,412	610,477	349,182	280,209	233,937	229,653

# 1996 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)

## LAKE: SW Anderson Lake

from P:/23/27/003/LAKES/1996/SWANDER/ZP-SWAND.xls

DIVISION	TAXON	SAMPLE DATE				
		6/18/96	7/15/96	8/5/96	8/19/96	9/3/96
CLADOCERA						
	<i>Diaphanosoma leuchtenbergianum</i>		292	354		1,323
	<i>Bosmina sp.</i>	981	2,338	44,938	89,885	61,854
	<i>Chydorus sp.</i>	327	292	354	365	1,323
	<i>Ceriodaphnia sp.</i>		1,754	1,769	1,462	5,623
	<b>Total Cladocera</b>	<b>1,308</b>	<b>4,677</b>	<b>47,415</b>	<b>91,712</b>	<b>70,123</b>
COPEPODA						
	<i>Nauplii</i>	11,442	52,615	57,677	32,519	46,308
	<i>Cyclops sp.</i>		585	2,477		992
	<i>Mesocyclops sp.</i>		585	354	731	9,262
	<i>Diaptomus sp.</i>	327	877			992
	<b>Total Copepoda</b>	<b>11,769</b>	<b>54,662</b>	<b>60,508</b>	<b>33,250</b>	<b>57,554</b>
ROTIFERA						
	<i>Keratella cochlearis</i>	3,596	41,508	5,662	9,500	12,569
	<i>Conochilus sp.</i>	654	52,908	72,892	447,231	10,915
	<i>Asplanchna sp.</i>		292			
	<i>Lecane sp.</i>		1,462	6,015	365	
	<i>Trichocerca sp.</i>	327		2,123		
	<i>Brachionus sp.</i>			4,954	365	
	<i>Filinia longiseta</i>					662
	<b>Total Rotifera</b>	<b>4,577</b>	<b>96,169</b>	<b>91,646</b>	<b>457,462</b>	<b>24,146</b>
	<b>TOTAL ZOOPLANKTON</b>	<b>17,654</b>	<b>155,508</b>	<b>199,569</b>	<b>582,423</b>	<b>151,823</b>

**2000 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)  
SW ANDERSON**

from P:/23/27/634/zoonmcwd.xls

	DATE				
	6/19/2000	7/18/2000	8/7/2000	8/21/2000	9/6/2000

**DIVISION TAXON**

**CLADOCERA**

1 <i>Daphnia galeata mendotae</i>	0	0	0	0	0
2 <i>Diaphanosoma sp.</i>	11,605	47,525	62,247	54,024	8,709
<i>Daphnia ambigua/parvula</i>	0	0	0	0	0
<i>Daphnia retrocurva</i>	0	0	0	0	0
3 <i>Bosmina sp.</i>	7,737	431,531	85,590	251,421	34,837
4 <i>Chydorus sp.</i>	110,248	38,020	17,507	76,881	50,079
5 <i>Ceriodaphnia sp.</i>	44,486	112,160	116,714	180,773	100,157
<b>TOTAL CLADOCERA</b>	<b>174,076</b>	<b>629,237</b>	<b>282,058</b>	<b>563,099</b>	<b>193,782</b>

**COPEPODA**

6 <i>Nauplii</i>	42,552	300,361	157,563	234,798	150,236
7 <i>Cyclops sp.</i>	15,473	34,218	9,726	27,012	28,305
8 <i>Mesocyclops sp.</i>	1,934	0	1,945	16,623	2,177
9 <i>Diaptomus sp.</i>	0	3,802	31,124	49,869	4,355
<b>TOTAL COPEPODA</b>	<b>59,959</b>	<b>338,381</b>	<b>200,358</b>	<b>328,301</b>	<b>185,073</b>

**ROTIFERA**

1 <i>Kellicottia sp.</i>	75,433	0	0	0	0
2 <i>Conochilus sp.</i>	65,762	0	1,945	0	2,177
3 <i>Keratella cochlearis</i>	972,890	418,224	208,139	182,851	230,797
4 <i>Keratella quadrata</i>	0	0	0	0	0
<i>Lecane sp.</i>	0	0	0	0	0
5 <i>Polyarthra vulgaris</i>	808,485	621,633	23,343	201,552	23,951
6 <i>Brachionus sp.</i>	0	1,901	3,890	22,856	54,433
7 <i>Filinia longiseta</i>	1,934	0	0	2,078	0
8 <i>Aplanchna sp.</i>	5,803	1,901	0	0	0
9 <i>Trichocerca sp.</i>	9,671	32,317	85,590	39,479	10,887
<b>TOTAL ROTIFERA</b>	<b>1,939,977</b>	<b>1,075,976</b>	<b>322,908</b>	<b>448,817</b>	<b>322,245</b>

**2001 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)**

**SW ANDERSON**

location of this data not known as of 4/24/03

# 1988 and 1991 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)

## LAKE: Northwest Anderson

From:

1988-1991 Lake Water Quality Inventory and Historical Water Quality Trend Analysis

Anderson, Birch Island, Bryant, Bush, Glen, Lone, Minnetoga, Mirror, Normandale, Penn, Shady Oak, and Smetana Lake  
February 1993

DIVISION	SAMPLE DATE							
	#/m2							
	6/23/88	7/21/88	8/24/88	9/13/88	6/24/91	7/17/91	8/14/91	9/3/91
CLADOCERA TOTAL	69,086	147,816	645,511	593,752	85,281	73,098	49,467	12,087
COPEPODA TOTAL	503,344	558,417	180,363	225,792	52,793	48,732	49,467	12,087
ROTIFERA TOTAL	1,766,638	854,049	806,887	284,333	56,853	170,562	209,286	890,410
TOTAL ZOOPLANKTON	2,339,068	1,560,282	1,632,761	1,103,877	194,927	292,392	308,220	914,584

# 1996 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)

## LAKE: Northwest Anderson

from P:/23/27/003/LAKES/1996/NOANDER/ZP-NAND.xls

DIVISION	TAXON	SAMPLE DATE				
		6/18/96	7/15/96	8/5/96	8/19/96	9/3/96
CLADOCERA						
	<i>Daphnia galeata mendotae</i>	677	312	358	673	338
	<i>Diaphanosoma leuchtenbergianum</i>		4,985	3,577	5,385	4,400
	<i>Bosmina</i> sp.	2,031	12,462	46,858	125,865	13,877
	<i>Chydorus</i> sp.	2,369			673	677
	<i>Ceriodaphnia</i> sp.	2,031	312	358	2,356	4,738
	<b>Total Cladocera</b>	<b>7,108</b>	<b>18,069</b>	<b>51,150</b>	<b>134,952</b>	<b>24,031</b>
COPEPODA						
	<i>Nauplii</i>	42,985	39,254	61,523	45,769	55,169
	<i>Cyclops</i> sp.	1,692		358		677
	<i>Mesocyclops</i> sp.	2,708	20,562	21,819	11,442	11,169
	<i>Diaptomus</i> sp.	8,462	16,512	6,081	1,683	1,692
	<b>Total Copepoda</b>	<b>55,846</b>	<b>76,327</b>	<b>89,781</b>	<b>58,894</b>	<b>68,708</b>
ROTIFERA						
	<i>Keratella cochlearis</i>	102,554	4,362	7,154	11,106	16,923
	<i>Keratella quadrata</i>	8,123	60,438	31,119		
	<i>Conochilus</i> sp.				20,192	13,200
	<i>Polyarthra vulgaris</i>		13,708	38,988	33,990	19,969
	<i>Asplanchna</i> sp.	338	1,246	358		
	<i>Filinia longiseta</i>		8,100	3,577	4,038	4,400
	<i>Brachionus</i> sp.		1,869	10,731	2,019	2,369
	<i>Trichocerca</i> sp.			358	673	338
	<b>Total Rotifera</b>	<b>111,015</b>	<b>89,723</b>	<b>92,285</b>	<b>72,019</b>	<b>57,200</b>
	<b>TOTAL ZOOPLANKTON</b>	<b>173,969</b>	<b>184,119</b>	<b>233,215</b>	<b>265,865</b>	<b>149,938</b>

**2000 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)  
NW ANDERSON**

		DATE				
from P:/23/27/634/zoonmcwd.xls		6/19/2000	7/18/2000	8/7/2000	8/21/2000	9/6/2000
DIVISION	TAXON					
<b>CLADOCERA</b>						
1	<i>Daphnia galeata mendotae</i>	55,505	18,900	11,384	18,900	8,842
2	<i>Diaphanosoma sp.</i>	0	0	29,598	41,999	22,105
	<i>Daphnia retrocurva/ambigua</i>	0	0	0	0	0
3	<i>Bosmina sp.</i>	215,854	581,689	553,262	545,990	439,887
4	<i>Chydorus sp.</i>	394,704	142,797	184,421	403,193	364,730
5	<i>Ceriodaphnia sp.</i>	88,397	37,799	182,144	216,296	108,314
<b>TOTAL CLADOCERA</b>		<b>754,461</b>	<b>781,186</b>	<b>960,810</b>	<b>1,226,377</b>	<b>943,877</b>
<b>COPEPODA</b>						
6	Nauplii	0	0	0	0	0
6	Nauplii	195,296	291,895	273,216	340,194	150,313
7	<i>Cyclops sp.</i>	10,279	23,100	38,706	33,599	22,105
8	<i>Mesocyclops sp.</i>	20,558	90,298	68,304	41,999	2,210
9	<i>Diaptomus sp.</i>	0	6,300	4,554	0	0
<b>TOTAL COPEPODA</b>		<b>226,133</b>	<b>411,592</b>	<b>384,779</b>	<b>415,792</b>	<b>174,628</b>
<b>ROTIFERA</b>						
1	<i>Kellicottia sp.</i>	127,457	2,100	0	0	0
2	<i>Conochilus sp.</i>	18,502	6,300	97,902	125,998	198,944
3	<i>Keratella cochlearis</i>	378,258	138,597	47,813	172,197	203,365
4	<i>Ascomorpha sp.</i>	0	0	36,429	149,097	258,627
5	<i>Polyarthra vulgaris</i>	111,011	44,099	11,384	41,999	6,631
6	<i>Brachionus sp.</i>	0	0	0	0	0
7	<i>Filinia longiseta</i>	0	161,697	31,875	144,897	61,894
8	<i>Aplanchna sp.</i>	0	0	9,107	10,500	19,894
9	<i>Trichocerca sp.</i>	45,227	6,300	13,661	41,999	170,207
<b>TOTAL ROTIFERA</b>		<b>680,454</b>	<b>359,093</b>	<b>248,171</b>	<b>686,687</b>	<b>919,562</b>

**2001 ZOOPLANKTON IDENTIFICATION SUMMARY (#/sq. m)**

**NW ANDERSON**

from P:\23\27\003\LAKES\2001\Z01-NINE.xls

DIVISION TAXON	DATE					
	4/24/2001	6/11/2001	7/18/2001	8/6/2001	8/22/2001	9/5/2001
<b>CLADOCERA</b>						
<i>Daphnia galeata mendotae</i>	4,654	95,522	17,831	16,288	2,131	8,328
<i>Diaphanosoma sp.</i>	0	0	0	18,615	31,963	18,737
<i>Bosmina sp.</i>	0	31,841	109,532	321,102	396,344	759,893
<i>Chydorus sp.</i>	0	110,218	73,871	179,166	351,596	266,483
<i>Ceriodaphnia sp.</i>	0	0	0	18,615	31,963	18,737
<b>TOTAL CLADOCERA</b>	<b>4,654</b>	<b>237,581</b>	<b>201,234</b>	<b>553,785</b>	<b>813,997</b>	<b>1,072,177</b>
<b>COPEPODA</b>						
<i>Nauplii</i>	232,683	139,610	86,607	344,370	183,256	204,026
<i>Cyclops sp.</i>	6,980	19,594	7,642	30,249	4,262	18,737
<i>Mesocyclops sp.</i>	2,327	12,246	7,642	30,249	8,524	12,491
<i>Diaptomus sp.</i>	0	7,348	7,642	4,654	4,262	4,164
<b>TOTAL COPEPODA</b>	<b>241,990</b>	<b>178,798</b>	<b>109,532</b>	<b>409,521</b>	<b>200,303</b>	<b>239,418</b>
<b>ROTIFERA</b>						
<i>Kellicottia sp.</i>	0	2,449	0	0	0	0
<i>Conochilus sp.</i>	2,327	0	5,095	2,327	76,712	20,819
<i>Keratella cochlearis</i>	4,654	835,208	22,925	23,268	31,963	31,228
<i>Keratella quadrata</i>	9,307	0	0	0	0	0
<i>Polyarthra vulgaris</i>	6,980	391,887	33,114	9,307	12,785	14,573
<i>Brachionus sp.</i>	4,654	0	10,189	6,980	44,749	6,246
<i>Filinia longiseta</i>	6,980	0	5,095	34,902	272,753	95,767
<i>Aplanchna sp.</i>	244,317	19,594	0	0	2,131	0
<i>Trichocerca sp.</i>	0	2,449	91,701	41,883	19,178	14,573
<b>TOTAL ROTIFERA</b>	<b>279,219</b>	<b>1,251,588</b>	<b>168,119</b>	<b>118,668</b>	<b>460,271</b>	<b>183,207</b>