

IDEM 2019 SAMPLING RESULTS
Cyanobacteria Cell Counts, Identification, and Cyanotoxin Results

Date	Location	Cells/ml	Dominant Species 1	Dominant Species 2	Dominant Species 3	¹ Microcystin ug/l	² Anatoxina ug/l	³ Saxitoxin ug/l	⁴ Cylindrospermopsin ug/l
8/26	Mississinewa Lake - Miami SRA	365,000	<i>Aphanocapsa sp.</i>	<i>Microcystis sp.</i>	<i>Planktolyngbya limnetica</i>	12.91	ND	ND	ND
8/26	Worster Lake - Potato Creek SP	360,000	<i>Pseudanabaena sp.</i>	<i>Cylindrospermopsis raciborskii</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	ND
8/19	Cecil M Harden Lake - Raccoon Lake SRA	750,000	<i>Merismopedia sp.</i>	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	ND
8/19	Monroe Lake - Paynetown SRA	590,000	Planktolyngbya limnetica	Cylindrospermopsis raciborskii	Aphanizomenon sp.	ND	ND	0.16	ND
8/19	Monroe Lake - Fairfax SRA	680,000	<i>Planktolyngbya limnetica</i>	<i>Aphanocapsa sp.</i>	<i>Cylindrospermopsis raciborskii</i>	ND	ND	0.20	ND
8/19	Mississinewa Lake - Miami SRA	340,000	Pseudanabaena sp.	Aphanocapsa sp.	Merismopedia sp.	13.48	ND	ND	ND
8/20	Hardy Lake - Hardy Lake SRA	590,000	<i>Planktolyngbya limnetica</i>	<i>Aphanocapsa sp.</i>	<i>Chroococcus sp.</i>	ND	1.12	0.062	ND
8/20	Brookville Lake - Mounds SRA	810,000	<i>Pseudanabaena sp.</i>	<i>Raphidiopsis sp.</i>	Picoplankton	ND	ND	ND	ND
8/20	Brookville Lake - Quakertown SRA	840,000	<i>Pseudanabaena sp.</i>	Picoplankton	<i>Merismopedia sp.</i>	ND	ND	ND	ND
8/20	Whitewater Lake - Whitewater Memorial SP	1,000,000	<i>Planktolyngbya limnetica</i>	<i>Aphanocapsa sp.</i>	<i>Pseudanabaena sp.</i>	ND	ND	ND	ND
8/12	Kunkel Lake- Ouabache SP	79,000	<i>Aphanocapsa sp.</i>	<i>Aphanizomenon sp.</i>	<i>Cylindrospermopsis raciborskii</i>	ND	ND	ND	ND
8/12	Lake James - Pokagon SP	57,000	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Aphanothece sp.</i>	ND	ND	ND	ND
8/12	Lake James - Pokagon SP Inn	28,000	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Aphanothece sp.</i>	ND	ND	ND	ND
8/12	Sand Lake - Chain O'Lakes SP	7,000	<i>Aphanizomenon sp.</i>	<i>Aphanocapsa sp.</i>	Picoplankton	ND	ND	0.069	ND
8/13	Salamonie Lake - Lost Bridge West SRA	36,000	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Dolichospermum sp.</i>	ND	ND	ND	ND
8/13	Mississinewa Lake - Miami SRA	271,500	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	<i>Microcystis sp.</i>	9.21	ND	ND	ND
8/13	Worster Lake - Potato Creek SP	640,000	<i>Cylindrospermopsis raciborskii</i>	<i>Aphanocapsa sp.</i>	<i>Pseudanabaena sp.</i>	ND	ND	ND	ND
8/6	Deam Lake - Deam Lake SRA	16,000	Picoplankton	<i>Merismopedia sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	ND
8/6	Brookville Lake - Mounds SRA	680,000	Picoplankton	<i>Pseudanabaena sp.</i>	<i>Merismopedia sp.</i>	ND	ND	ND	ND
8/6	Brookville Lake - Quakertown SRA	510,000	<i>Merismopedia sp.</i>	Picoplankton	<i>Pseudanabaena sp.</i>	ND	ND	ND	ND
8/6	Whitewater Lake - Whitewater Memorial SP	950,000	<i>Planktolyngbya limnetica</i>	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	ND
8/6	Hardy Lake - Hardy Lake SRA	670,000	<i>Planktolyngbya limnetica</i>	<i>Aphanizomenon sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	ND
8/5	Monroe Lake - Fairfax SRA	410,000	<i>Planktolyngbya limnetica</i>	<i>Aphanizomenon sp.</i>	Picoplankton	ND	ND	0.075	ND
8/5	Monroe Lake - Paynetown SRA	510,000	<i>Planktolyngbya limnetica</i>	<i>Aphanizomenon sp.</i>	<i>Cylindrospermopsis raciborskii</i>	ND	ND	0.068	ND
8/5	Starve Hollow Lake - Starve Hollow SRA	34,000	<i>Aphanocapsa sp.</i>	<i>Dolichospermum sp.</i>	<i>Aphanizomenon sp.</i>	ND	ND	0.064	ND
8/5	Cecil M Harden Lake - Raccoon Lake SRA	1,250,000	<i>Pseudanabaena sp.</i>	<i>Merismopedia sp.</i>	<i>Planktolyngbya limnetica</i>	0.455	ND	ND	ND

7/29	Salamonie Lake - Lost Bridge West SRA	19,000	Picoplankton	<i>Aphanocapsa sp.</i>	<i>Dolichospermum sp.</i>	ND	ND	ND	ND
7/29	Kunkel Lake– Ouabache SP	190,000	<i>Aphanizomenon sp.</i>	<i>Cylindrospermopsis raciborskii</i>	<i>Dolichospermum sp.</i>	ND	ND	0.086	ND
7/29	Worster Lake - Potato Creek SP	590,000	<i>Planktolyngbya limnetica</i>	<i>Pseudanabaena sp.</i>	<i>Merismopedia sp.</i>	ND	ND	ND	ND
7/29	Mississinewa Lake - Miami SRA	130,000	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	Picoplankton	0.69	ND	ND	ND
7/23	Salamonie Lake - Lost Bridge West SRA	78,500	<i>Microcystis sp.</i>			0.034	ND	ND	ND
7/22	Brookville Lake - Mounds SRA	400,000	Picoplankton	<i>Pseudanabaena sp.</i>	<i>Merismopedia sp.</i>	ND	ND	ND	ND
7/22	Brookville Lake - Quakertown SRA	100,000	<i>Pseudanabaena sp.</i>	Picoplankton	<i>Merismopedia sp.</i>	ND	ND	ND	ND
7/22	Whitewater Lake - Whitewater Memorial SP	640,000	<i>Pseudanabaena sp.</i>	<i>Planktolyngbya limnetica</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	ND
7/22	Hardy Lake - Hardy Lake SRA	150,000	<i>Planktolyngbya limnetica</i>	<i>Aphanocapsa sp.</i>	<i>Aphanizomenon flos-aquae</i>	ND	0.46	0.088	ND
7/22	Cecil M Harden Lake - Raccoon Lake SRA	890,000	<i>Pseudanabaena sp.</i>	<i>Planktolyngbya limnetica</i>	Picoplankton	ND	ND	ND	ND
7/16	Kunkel Lake– Ouabache SP	250,000	<i>Aphanizomenon sp.</i>	<i>Cylindrospermopsis raciborskii</i>	<i>Pseudanabaena sp.</i>	ND	ND	0.12	NR
7/16	Lake James - Pokagon SP	41,000	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Pseudanabaena sp.</i>	ND	ND	ND	NR
7/16	Lake James - Pokagon SP Inn	31,000	Picoplankton	<i>Aphanocapsa sp.</i>	<i>Pseudanabaena sp.</i>	ND	ND	ND	NR
7/16	Sand Lake - Chain O'Lakes SP	8,700	<i>Aphanizomenon sp.</i>	Picoplankton	<i>Dolichospermum sp.</i>	ND	ND	0.20	NR
7/15	Salamonie Lake - Lost Bridge West SRA	190,000	<i>Microcystis sp.</i>	<i>Dolichospermum sp.</i>	<i>Aphanizomenon sp.</i>	8.75	ND	ND	NR
7/15	Mississinewa Lake - Miami SRA	90,100	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Pseudanabaena sp.</i>	ND	ND	ND	NR
7/15	Worster Lake - Potato Creek SP	170,000	<i>Planktolyngbya limnetica</i>	<i>Aphanocapsa sp.</i>	<i>Pseudanabaena sp.</i>	ND	ND	ND	NR
7/8	Deam Lake - Deam Lake SRA	53,000	<i>Merismopedia sp.</i>	<i>Aphanothece sp.</i>	Picoplankton	ND	ND	ND	NR
7/8	Brookville Lake - Mounds SRA	980,000	Picoplankton	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
7/8	Brookville Lake - Quakertown SRA	190,000	<i>Pseudanabaena sp.</i>	Picoplankton	<i>Chroococcus sp.</i>	ND	ND	ND	NR
7/8	Whitewater Lake - Whitewater Memorial SP	230,000	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	<i>Raphidiopsis sp.</i>	ND	ND	ND	NR
7/8	Hardy Lake - Hardy Lake SRA	210,000	<i>Aphanizomenon flos-aquae</i>	<i>Aphanizomenon sp.</i>	<i>Aphanocapsa sp.</i>	ND	0.45	.064	NR
7/8	Monroe Lake - Fairfax SRA	FLOODED	NO SAMPLE						
7/8	Monroe Lake - Paynetown SRA	FLOODED	NO SAMPLE						
7/8	Starve Hollow Lake - Starve Hollow SRA	17,000	Picoplankton	<i>Dolichospermum sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	NR
7/8	Cecil M Harden Lake - Raccoon Lake SRA	1,015,000	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	Picoplankton	ND	ND	ND	NR
7/1	Kunkel Lake– Ouabache SP	505,000	<i>Aphanizomenon sp.</i>	<i>Aphanocapsa sp.</i>	Picoplankton	ND	ND	0.130	NR
6/24	Hardy Lake - Hardy Lake SRA	120,000	<i>Aphanizomenon sp.</i>	<i>Woronichinia sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	NR
6/24	Cecil M Harden Lake - Raccoon Lake SRA	255,000	Picoplankton	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
6/24	Whitewater Lake - Whitewater Memorial SP	590,000	<i>Pseudanabaena sp.</i>	<i>Chroococcus sp.</i>	<i>Raphidiopsis sp.</i>	ND	ND	ND	NR
6/24	Brookville Lake - Quakertown SRA	96,000	<i>Pseudanabaena sp.</i>	<i>Chroococcus sp.</i>	Picoplankton	ND	ND	ND	NR
6/17	Kunkel Lake– Ouabache SP	1,250,000	<i>Aphanizomenon sp.</i>	<i>Aphanocapsa sp.</i>	<i>Aphanizomenon flos-aquae</i>	ND	ND	ND	NR
6/17	Lake James - Pokagon SP	12,000	Picoplankton			ND	ND	ND	NR

6/17	Lake James - Pokagon SP Inn	10,000	Picoplankton			ND	ND	ND	NR
6/17	Sand Lake - Chain O'Lakes SP	75,000	<i>Aphanizomenon sp.</i>	<i>Aphanizomenon flos-aquae</i>	<i>Limnithrix sp.</i>	ND	ND	ND	NR
6/17	Salamonie Lake - Lost Bridge West SRA	3,900	Picoplankton			ND	ND	ND	NR
6/17	Mississinewa Lake - Miami SRA	22,000	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Merismopedia sp.</i>	ND	ND	ND	NR
6/17	Worster Lake - Potato Creek SP	50,000	<i>Coelosphaerium sp.</i>	<i>Merismopedia sp.</i>	Picoplankton	ND	ND	ND	NR
6/11	Deam Lake - Deam Lake SRA	18,000	Picoplankton	<i>Merismopedia sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	NR
6/11	Brookville Lake - Mounds SRA	23,000	Picoplankton	<i>Chroococcus sp.</i>		ND	ND	ND	NR
6/11	Brookville Lake - Quakertown SRA	110,000	<i>Pseudanabaena sp.</i>	Picoplankton	<i>Chroococcus sp.</i>	ND	ND	ND	NR
6/11	Whitewater Lake - Whitewater Memorial SP	590,000	<i>Pseudanabaena sp.</i>	<i>Chroococcus sp.</i>	<i>Raphidiopsis sp.</i>	ND	ND	ND	NR
6/11	Hardy Lake - Hardy Lake SRA	98,000	<i>Pseudanabaena sp.</i>	<i>Chroococcus sp.</i>	<i>Planktolyngbya limnetica</i>	ND	ND	ND	NR
6/10	Monroe Lake - Fairfax SRA	27,000	Picoplankton	<i>Chroococcus sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
6/10	Monroe Lake - Paynetown SRA	42,000	Picoplankton	<i>Chroococcus sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
6/10	Starve Hollow Lake - Starve Hollow SRA	75,000	Picoplankton	<i>Aphanocapsa sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	NR
6/10	Cecil M Harden Lake - Raccoon Lake SRA	730,000	<i>Romeria sp.</i>	<i>Pseudanabaena sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
5/28	Hardy Lake - Hardy Lake SRA	66,500	Picoplankton	<i>Aphanizomenon flos-aquae</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
5/20	Kunkel Lake – Ouabache SP	76,000	Picoplankton	<i>Aphanocapsa sp.</i>	<i>Raphidiopsis sp.</i>	ND	ND	ND	NR
5/20	Lake James - Pokagon SP	2,400	Picoplankton	<i>Chroococcus sp.</i>		ND	ND	ND	NR
5/20	Lake James - Pokagon SP Inn	8,300	Picoplankton	<i>Raphidiopsis sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	NR
5/20	Sand Lake - Chain O'Lakes SP	13,000	Picoplankton	<i>Limnithrix sp.</i>		ND	ND	ND	NR
5/21	Salamonie Lake - Lost Bridge West SRA	11,000	Picoplankton	<i>Coelosphaerium sp.</i>	<i>Aphanocapsa sp.</i>	ND	ND	ND	NR
5/21	Mississinewa Lake - Miami SRA	17,000	Picoplankton	<i>Aphanocapsa sp.</i>		ND	ND	ND	NR
5/21	Worster Lake - Potato Creek SP	37,000	Picoplankton	<i>Aphanocapsa sp.</i>	<i>Pseudanabaena sp.</i>	ND	ND	ND	NR
5/14	Deam Lake - Deam Lake SRA	3,400	Picoplankton	<i>Chroococcus sp.</i>		ND	ND	ND	NR
5/14	Brookville Lake - Mounds SRA	1,400	<i>Chroococcus sp.</i>	Picoplankton		ND	ND	ND	NR
5/14	Brookville Lake - Quakertown SRA	5,100	<i>Raphidiopsis sp.</i>	<i>Chroococcus sp.</i>	Picoplankton	ND	ND	ND	NR
5/14	Whitewater Lake - Whitewater Memorial SP	24,000	<i>Raphidiopsis sp.</i>	<i>Aphanocapsa sp.</i>	<i>Chroococcus sp.</i>	ND	ND	ND	NR
5/14	Hardy Lake - Hardy Lake SRA	94,000	<i>Aphanizomenon flos-aquae</i>	<i>Aphanizomenon sp.</i>	Picoplankton	ND	ND	ND	NR
5/13	Monroe Lake - Fairfax SRA	3,950	Picoplankton	<i>Chroococcus sp.</i>	<i>Aphanizomenon sp.</i>	ND	ND	ND	NR
5/13	Monroe Lake - Paynetown SRA	FLOODED	NO SAMPLE COLLECTED			ND	ND	ND	NR
5/13	Starve Hollow Lake - Starve Hollow SRA	23,000	<i>Microcystis sp.</i>	<i>Chroococcus sp.</i>	Picoplankton	ND	ND	ND	NR
5/13	Cecil M Harden Lake - Raccoon Lake SRA	27,000	<i>Aphanocapsa sp.</i>	Picoplankton	<i>Romeria sp.</i>	ND	ND	ND	NR

¹Microcystin detection and reporting limit is 0.30 ug/l.

²Anatoxin-a detection and reporting limit is 0.40 ug/l.

³Saxitoxin reporting limit is 0.06 ug/l.

⁴Cylindrospermopsin detection and reporting limit is 0.05 ug/l. Will be run on samples that contain the toxin producing species, generally later in the summer.

NR-Not run

ND-Not detected