

2010 Burr Oak State Park – Lake Algal Toxin Sampling Data

Ohio EPA, Division of Surface Water

ppb = parts per billion

World Health Organization Provisional Guidelines for Microcystin Toxin:

- Recreational Contact = 20 ppb (upper end of moderate risk range)
- Public Drinking Water = 1 ppb

There are no national standards or benchmarks for Anatoxin-a, Cylindrospermopsin or Saxitoxin.

Ohio Harmful Algae Bloom Websites:

- Ohio Environmental Protection Agency – www.epa.ohio.gov/dsw/HAB.aspx and www.epa.ohio.gov/pic/glsm_algae.aspx
- Ohio Department of Natural Resources – www.ohiodnr.com/tabid/22957/Default.aspx
- Ohio Department of Health – www.odh.ohio.gov/features/odhfeatures/algalblooms.aspx

Sample Collection Date	Collected By / Analyzed By	Toxin Tested	Raw Water (ppb)	Finished Water (ppb)	Beach (ppb)	Lodge Boat Ramp (ppb)	Dock 1 (ppb)	Dock 4 (ppb)
9/7/10	Ohio DNR / Green Water	Anatoxin-a	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Cylindrospermopsin	-	-	Non-detect	-	-	-
	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Saxitoxin	-	-	Non-detect	-	-	-
8/30/10	Ohio DNR / Green Water	Anatoxin-a	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Cylindrospermopsin	-	-	Non-detect	-	-	-
	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Saxitoxin	-	-	Non-detect	-	-	-
8/23/10	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
8/16/10	Ohio DNR / Green Water	Anatoxin-a	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Cylindrospermopsin	-	-	Non-detect	-	-	-
	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Saxitoxin	-	-	0.04	-	-	-
8/9/10	Ohio DNR / Green Water	Anatoxin-a	-	-	0.05-0.1	-	-	-
	Ohio DNR / Green Water	Cylindrospermopsin	-	-	Non-detect	-	-	-
	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Saxitoxin	-	-	0.05	-	-	-
8/2/10	Ohio DNR / Green Water	Anatoxin-a	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Cylindrospermopsin	-	-	Non-detect	-	-	-

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	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Saxitoxin	-	-	Non-detect	-	-	-
7/28/10	Ohio DNR / Green Water	Anatoxin-a	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Cylindrospermopsin	-	-	Non-detect	-	-	-
	Ohio DNR / Celina-PWS	Microcystins	-	-	Non-detect	-	-	-
	Ohio DNR / Green Water	Saxitoxin	-	-	0.03	-	-	-
7/26/10	Ohio EPA / Celina-PWS	Microcystins	-	-	0.2	-	-	-
7/15/10	Ohio DNR / Celina-PWS	Microcystins	Non-detect	Non-detect	-	Non-detect	Non-detect	Non-detect

The initial bloom was determined to be caused by *Anabaena*. A subsequent sample collected on 7/28/10 showed the most abundant species were *Cylindrospermopsis raciborskii*, *Planktolyngbya f. limnetica* and *Aphanizomenon sp.* Potentially toxigenic species observed in the sample included *Cylindrospermopsis raciborskii*, *Aphanizomenon sp.* and *Anabaena sp.*

A sample collected on 8/8/10 was also analyzed by Green Water labs. The most abundant species were *Cylindrospermopsis raciborskii* and *Planktolyngbya f. limnetica*.