

Summary Report for Grindstone 1



	4/26	6/21	7/22	9/1	9/20				Mean*
Temperature (F)	64	82	84	81	77				78
Secchi (feet)	1.3	2	1.6	1.6	1.3				1.6
Phosphorus (µg/L)	105	109	207	172	174				153
Nitrogen (µg/L)	1640	2775	2380	1675	1920				2078
Ammonium (µg/L)	47	52	<10	12	13				26
Nitrate (µg/L)	560	1729	7	<5	<5				460
Chlorophyll (µg/L)	51.8	25.3	118.5	106.1	157.7				91.9
Susp. Sediment (mg/L)	13.4	3.9	7.4	3.6	8.4				7.3
Microcystin (µg/L)	0.13	<0.10	2.44	5.08	3.04				2.15
Cylindrospermopsin (µg/L)	<0.04	<0.04	0.04	<0.04	<0.04				<0.04

Trophic State: Based on the mean phosphorus concentration, this lake site is Hypereutrophic

Interpreting the Data

Trophic State Categories

- Oligotrophic: (Phosphorus <10 µg/L) Low productivity (measured by phytoplankton biomass and nutrients), clear water.
- Mesotrophic: (Phosphorus 10-24 µg/L) Moderate productivity, water often slightly greenish.
- Eutrophic: (Phosphorus 25-99 µg/L) High productivity, water green or brown.
- Hypereutrophic: (Phosphorus >100 µg/L) Extreme productivity, water very green or brown. Aquatic life may struggle to survive.

Description of Measured Parameters

- Temperature: Water temperature, degrees Fahrenheit.
- Secchi: Measure of water clarity, feet.
- Phosphorus and Nitrogen: Nutrients required for phytoplankton growth, µg/L or parts per billion.
- Ammonium and Nitrate: Forms of dissolved nitrogen favored by phytoplankton, µg/L or parts per billion.
- Chlorophyll: Photosynthetic pigment in phytoplankton used to estimate biomass, µg/L or parts per billion.
- Suspended Sediment: Particulate inorganic matter suspended in water column, µg/L or parts per million.
- Microcystin and Cylindrospermopsin: Cyanotoxins produced by cyanobacteria, µg/L or parts per billion.

Limit of Detection Values

This table shows our limit of detection values for each laboratory-measured parameter. If results are below the limit of detection, graphs will show 1/2 the limit of detection, rounded up.

Parameter	Detection Limit
Phosphorus (µg/L)	1
Nitrogen (µg/L)	35
Ammonium (µg/L)	10
Nitrate (µg/L)	5
Chlorophyll (µg/L)	0.3
Suspended Sediment (mg/L)	0.1
Microcystin (µg/L)	0.10
Cylindrospermopsin (µg/L)	0.04

EPA Health Advisories for Cyanotoxins

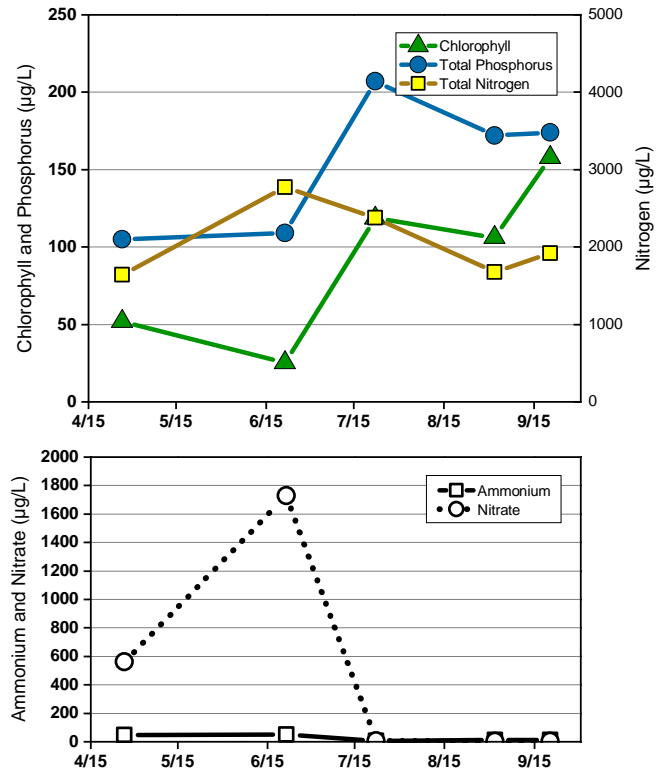
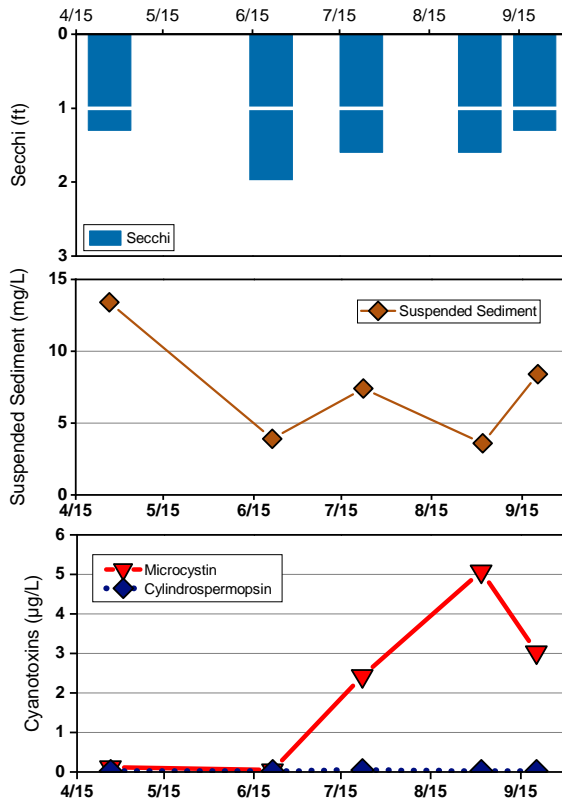
The table below shows EPA health advisories for cyanotoxin exposure.

	Drinking Water Guidelines		Recreational Guidelines
	Bottle-fed infants and pre-school children	School-age children and adults	
Microcystin	0.3 µg/L	1.6 µg/L	8.0 µg/L
Cylindrospermopsin	0.7 µg/L	3.0 µg/L	15.0 µg/L

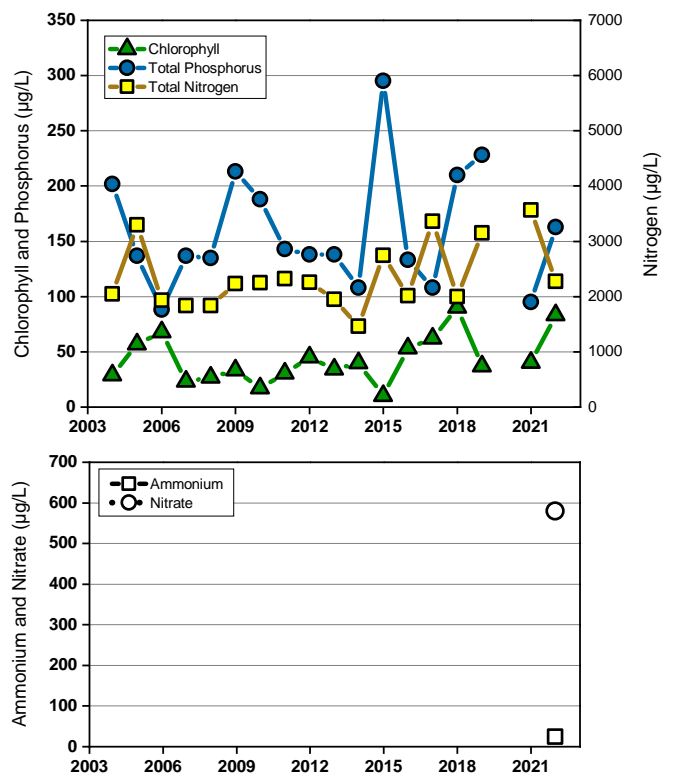
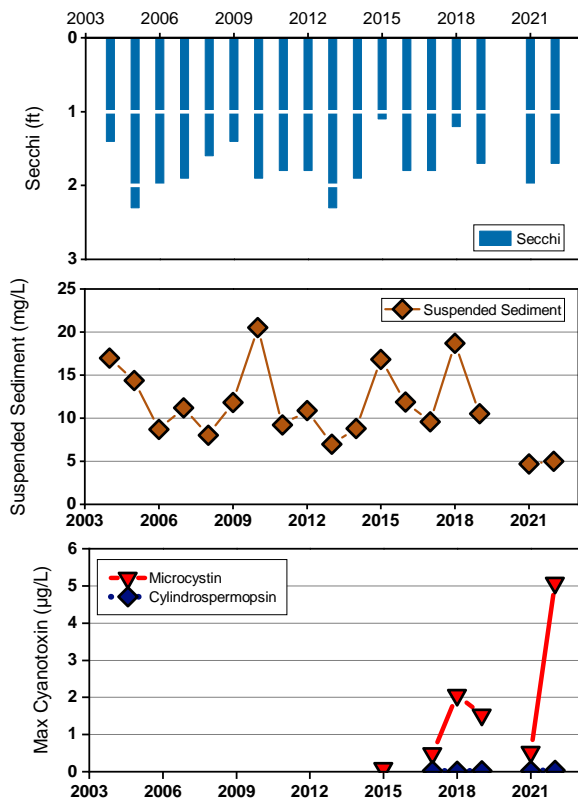
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2022 Data for Grindstone 1



Trend Data for Grindstone 1



Trend data graphs show annual arithmetic means from May 15 through September 15. Prior to this year we showed geometric means. Cyanotoxin graph shows maximum seasonal values, not arithmetic means.