

2007 study done on Sacheen Lake by the U.S. EPA. Maggie Bell-Mckinnon is the biologist that led the group that actually did the "lake study" on Sacheen. Her comments regarding the data collected are included.

May 28, 2009 06:08:24 PM, [mbel461@ECY.WA.GOV](mailto:mbel461@ecy.wa.gov) wrote:

Here are my observations on the data for Lake Sacheen:

- There were no *Enterococci* bacteria present in the sample.
- The algae cell counts were all on the low side.
- With regard to water chemistry – turbidity was low (anything less than 25 NTU is considered good); total nitrogen was low (anything less than 1.0 ppm is good); total phosphorus was low (anything less than 25 ppb is good); chlorophyll-a was low (anything below 2.0 ug/L shows low algal densities); and the Secchi depth reading was good – over 18 feet.

I can't really tell you anything about the zooplankton data – I will have to learn about those results as I write the final report.

To answer your question about blue-green algae, yes they can be a problem when they produce toxins. Not all blue-green algae species produce toxins and even the species that do, don't always produce the toxins. It still hasn't been determined what conditions cause a blue-green algae to produce toxins.

Ecology currently has a blue-green algae sampling program where they will pay for toxin analysis on water samples collected from a lake. Here is a link to a website explaining the program.....

<http://www.ecy.wa.gov/programs/wq/plants/algae/index.html>

On this day, your lake looked good. But it is very important to remember this is only a single snapshot in time. The only way to determine the state of your lake is to collect results over a period of time.

Please let me know if you have any additional questions.

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DATATYPE

Date Collected

DEPTH_COLLECTED

RESULT

Enterococcus
Bacteria 9/6/2007 0.3 meter 0

DATATYPE	Date Collected	cells/mL	GENUS	SPECIES	TAXA TYPE
Algae	9/6/2007	1707	Anabaena	circinalis	Blue-Green Algae
Algae	9/6/2007	134	Ceratium	hirundinella	Dinoflagellate
Algae	9/6/2007	100	Dinobryon	eurystoma	Yello-Green Algae
Algae	9/6/2007	745	Komma		Cryptomonads
Algae	9/6/2007	42	Mallomonas		Yello-Green Algae
Algae	9/6/2007	376	Ochromonas		Yello-Green Algae
Algae	9/6/2007	803	Sphaerocystis	schroeteri	Green Algae

DATATYPE

Water Chemistry	Date collected	pH in the field	pH in the lab	Conductivity (uS/cm)	Acid Neutralizing Capacity (ueq/L)	Turbidity - NTU
	9/6/2007		8.6	7.86	89.9	719.8
						0.45

DATATYPE

Zooplankton	Date Collected	Net mesh size (um)	Depth of Tow - meters' DEPTH_OF_TOW	Genus	Species	Abundance
	9/6/2007	243		21Ceriodaphnia		9
	9/6/2007	243		21Chaoborus	punctipennis	4
	9/6/2007	243		21Diacyclops		6
	9/6/2007	243		21Mesocyclops		15
	9/6/2007	243		21Daphnia	pulex	148
	9/6/2007	80		21Ascomorpha		5
	9/6/2007	80		21Asplanchna		1
	9/6/2007	80		21Filinia		111
	9/6/2007	80		21Gastropus		2
	9/6/2007	80		21Hexarthra		1
	9/6/2007	80		21Kellicottia	bostonensis	1
	9/6/2007	80		21Kellicottia	longispina	22
	9/6/2007	80		21Keratella	hiemalis	1
	9/6/2007	80		21Monostyla		1
	9/6/2007	80		21Polyarthra		5
	9/6/2007	80		21Pompholyx		5