

Potentially Toxicogenic (PTOX) Cyanobacteria Screen

*Project: California Department of Water Resources
Southern Field Division*

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Sample Receipt Date: 27 April 2022
Sample Condition: 2.3 °C upon arrival
Report#: 220425_PTOX_DWR-Southern
Date Prepared: 27 April 2022
Prepared by: Amanda Foss

<u>Sample ID</u>	<u>Site</u>	<u>Collected</u>
S15428	PE002 – Surface	25 April 2022
S15428	PE002 Outlet – 1 Meter	25 April 2022
	Lake Perris Swim Beach	25 April 2022
	Lake Perris Moreno Swim Beach	25 April 2022
S15429	SI002 – Outlet Tunnel 1 meter	26 April 2022

Method

A one mL aliquot of each live sample was transferred to a Sedgewick Rafter cell. The samples were scanned at 50X and 100X for the presence of potentially toxicogenic (PTOX) cyanobacteria using a Nikon TE200 Inverted Microscope equipped with phase contrast optics. Higher magnification was used as necessary for identification and micrographs.

Results**PE002 – Surface**

The potentially toxicogenic (PTOX) cyanobacterium *Woronichinia naegeliana* (2 colonies per mL) was observed. The non-PTOX cyanobacterium *Limnoraphis* sp., green algae (Chlorophyta), and the chrysophyte *Dinobryon* sp. were also observed.

Perris Outlet – 1 Meter

PTOX cyanobacteria were not observed. The non-PTOX cyanobacterium *Limnoraphis* sp., green algae (Chlorophyta), and the chrysophyte *Dinobryon* sp. were also observed.

Lake Perris Swim Beach

PTOX cyanobacteria were not observed. The non-PTOX cyanobacterium *Limnoraphis* sp., green algae (Chlorophyta), and the chrysophyte *Dinobryon* sp. were also observed.

Lake Perris Moreno Swim Beach

The PTOX cyanobacterium *Dolichospermum* sp. (1 filament per mL) was observed. The non-PTOX cyanobacterium *Limnoraphis* sp. was also observed.

SI002 – Outlet Tunnel 1 meter

The PTOX cyanobacterium *Dolichospermum* sp. (>15 filaments per mL) was observed.

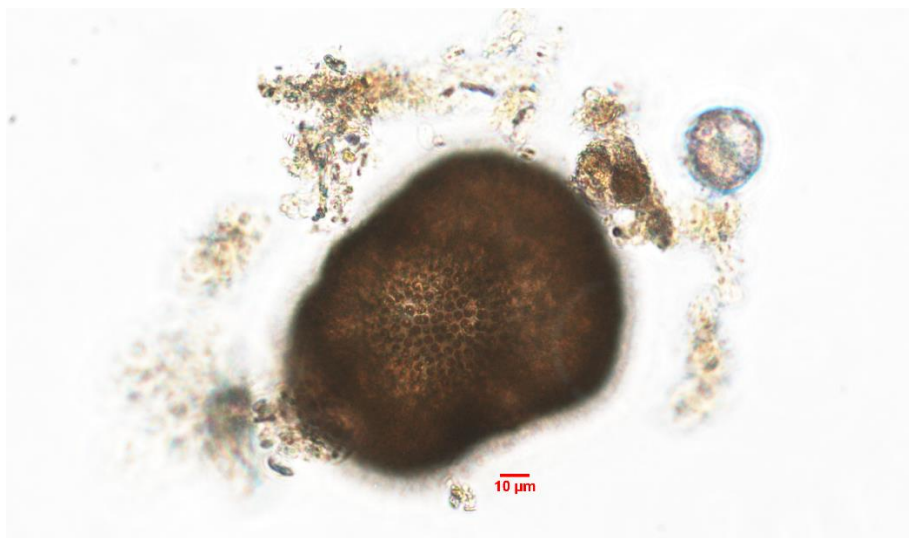
Potential toxin producing genera observed include:

Microcystins	Saxitoxins	Anatoxin-a	Cylindrospermopsin
<i>Woronichinia</i>	<i>Dolichospermum</i>	<i>Dolichospermum</i>	<i>Dolichospermum</i>
<i>Dolichospermum</i>			

Recommendations:

Based on limited cyanobacterial presence and previous toxin analysis data for Lake Perris, analyses are not recommended. Analyses (microcystin, anatoxin-a, cylindrospermopsin, saxitoxin) are recommended for the Silverwood sample (SI002).

Micrographs



Woronichinia naegeliana at 400X (PE002 – Surface)



Dolichospermum sp. at 400X (Moreno Swim Beach)



Dolichospermum sp. at 400X (SI002 – Outlet Tunnel 1 meter)

Submitted by:

Amanda Foss

Amanda Foss, M.S.

Date:

April 27, 2022

The results in this report relate only to the samples listed above.

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