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Ontario

June 18, 2020

MEMORANDUM

TO: Nathalie Matthews
Kingston District Office

FROM: Kaoru Utsumi
Phytoplankton Specialist

RE: **Algal identification of sample collected on June 17, 2020 from Troy Lake (SW061720) (C265066)**

Analysis of the sample was indicative of a bloom of blue-green algae (specifically: Anabaena (aka Dolichospermum), Microcystis) and golden-brown algae (specifically: Dinobryon). Many species of blue-green algae (also called cyanobacteria) have the potential to produce toxins that are harmful to the health of humans and animals. This determination was based on the amount of algal material present in the submitted sample.

Small amounts of the following types of algae were observed in the sample, at levels considered too low to contribute to a bloom:

- blue-green algae (specifically Woronichinia, Oscillatoria, Lyngbya)
- diatoms (specifically Tabellaria, Fragilaria)
- dinoflagellates (specifically Ceratium)
- golden-brown algae (specifically Chrysosphaerella)
- green algae (specifically Spirogyra, Pediastrum)

Observations included particles that were not identified as algae: debris, pine pollen, zooplankton.

The sample was submitted with the submission # C265066 for algal toxin analysis. Inquiries about algal toxin analysis should be directed to lasbcustomerservice@ontario.ca. Product code MCYST3469 will return ELISA results and MCYST3450 will return mass spectrometry results.

ELISA is a screening test for total microcystins, a group of algal toxins. Mass spectrometry measures individual variants of common algal toxins, including microcystin-LR. The Ontario Drinking Water Quality Standard for microcystin-LR is a maximum acceptable concentration of 1.5 micrograms per litre.

The information in this memo was intended for the individual and/or entity to which it is addressed. If you are the intended recipient and would like more information about this analysis, please contact Kaoru Utsumi at Kaoru.Utsumi@ontario.ca. If you are not the intended recipient, please contact Nathalie Matthews for more information.