

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: January 16, 2024

Prepared By: GreenWater Laboratories

Samples: 2 (Collected on 8/2/23)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 8/2/23 were 57,722 cells/mL. Green algae (Chlorophyta; 47,207 cells/mL) was the most abundant algal group in the sample accounting for 81.8% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyta; 1,319 cells/mL), cryptophytes (Cryptophyta; 42 cells/mL), blue-green algae (Cyanobacteria; 7,426 cells/mL) and unknown algae (Unknown; 1,728 cells/mL). The most abundant algae in the sample were unicells of the green alga *Oocystis* (27,175 cells/mL; Fig. 1). A total of 37 species were observed in the sample with green algae the most diverse group with 21 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 6,786 cells/mL (11.8% of total cell numbers). PTOX Cyano species observed in the sample included *Nodularia spumigena* (3,844 cells/mL; Fig. 2), *Limnothrix/Pseudanabaena* sp. (2,827 cells/mL; Fig. 3), *Kamptonema/Phormidium* sp. (92 cells/mL; Fig. 4) and *Oscillatoria/Phormidium* sp. (23 cells/mL; Fig. 5).

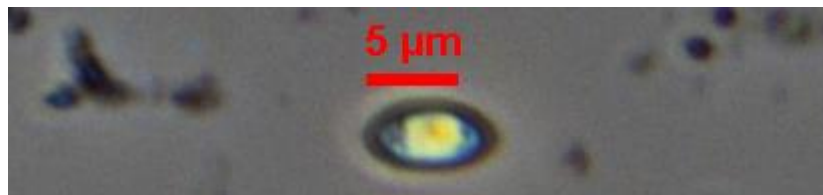


Fig. 1 *Oocystis* sp. unicell 400X (scale bar = 5 μ m)

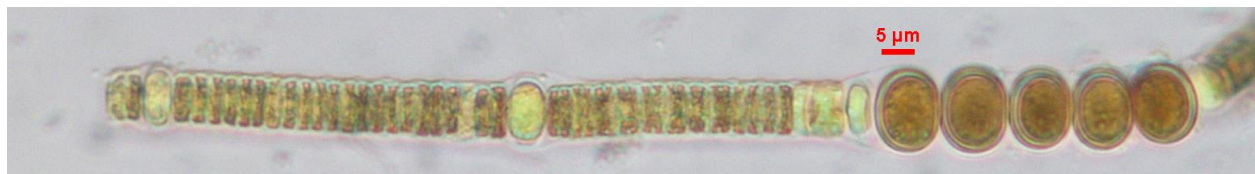


Fig. 2 *Nodularia spumigena* 400X (scale bar = 5 μ m)



Fig. 3 *Limnothrix/Pseudanabaena* sp. 400X (scale bar = 5 μ m)

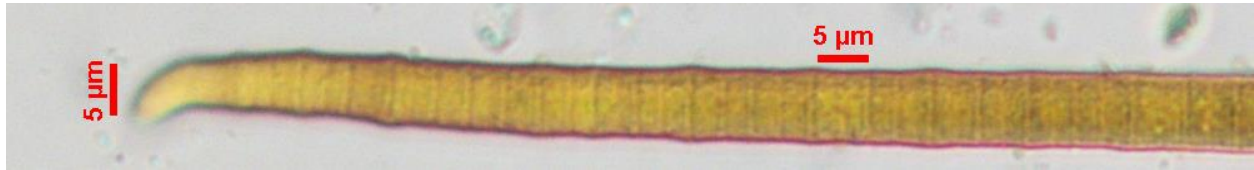


Fig. 4 *Kamptonema/Phormidium* sp. 400X (scale bar = 5µm)



Fig. 5 *Oscillatoria/Phormidium* sp. 400X (scale bar = 5µm)

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 8/2/23 were 69,551 cells/mL. Green algae (Chlorophyta; 60,676 cells/mL) was the most abundant algal group in the sample accounting for 87.2% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyta; 1,599 cells/mL), desmids (Charophyta; 1 cell/mL), cryptophytes (Cryptophyta; 450 cells/mL), blue-green algae (Cyanobacteria; 6,168 cells/mL), euglenoids (Euglenozoa; 3 cells/mL) and unknown algae (Unknown; 654 cells/mL). The most abundant algae in the sample were small, spherical chlorophyte unicells (34,361 cells/mL; Fig. 6). A total of 65 species were observed in the sample with green algae the most diverse group with 39 taxa observed.

No potentially toxigenic cyanobacteria (PTOX Cyano) were observed in the sample.



Fig. 6 chlorophyte unicell 400X (scale bar = 5µm)

Submitted by:

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Date:

1/16/2024

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