

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: September 21, 2022

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Samples: 2 (Collected on 6/22/22)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 6/22/22 were 2,738,487 cells/mL. Blue-green algae (Cyanobacteria; 1,366,454 cells/mL) and diatoms (Bacillariophyta; 949,659 cells/mL) were the most abundant algal groups in the sample accounting for 49.9% and 34.7% of total cell numbers respectively. Other algal groups in the sample were green algae (Chlorophyta; 415,165 cells/mL), euglenophytes (Euglenozoa; 916 cells/mL), eustigmatophytes (Eustigmatophyceae; 10 cells/mL) and unknown algae (Unknown; 6,283 cells/mL). The most abundant algae in the sample were the cyanophyte *Merismopedia tenuissima* (1,266,052 cells/mL; Fig. 1) and a small pennate diatom species (870,214 cells/mL; Fig. 2). A total of 56 species were observed in the sample with green algae the most diverse group with 34 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 87,234 cells/mL (3.2% of total cell numbers). PTOX Cyano species observed in the sample included cf. *Phormidium* sp. (86,894 cells/mL; Fig. 3) and *Oscillatoria* sp. (340 cells/mL; Fig. 4).

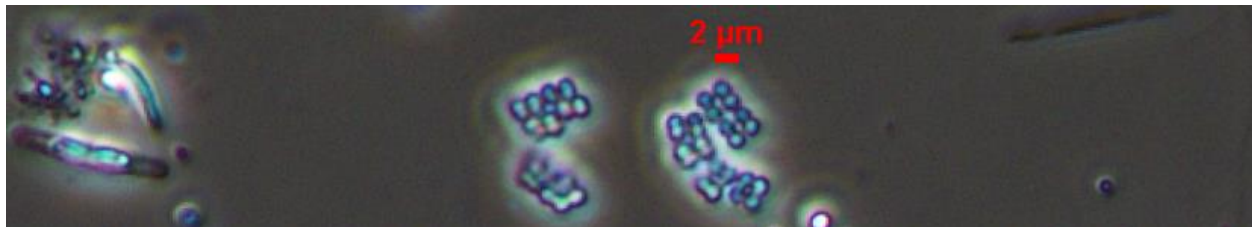


Fig. 1 *Merismopedia tenuissima* 400X (scale bar = 2 μ m)

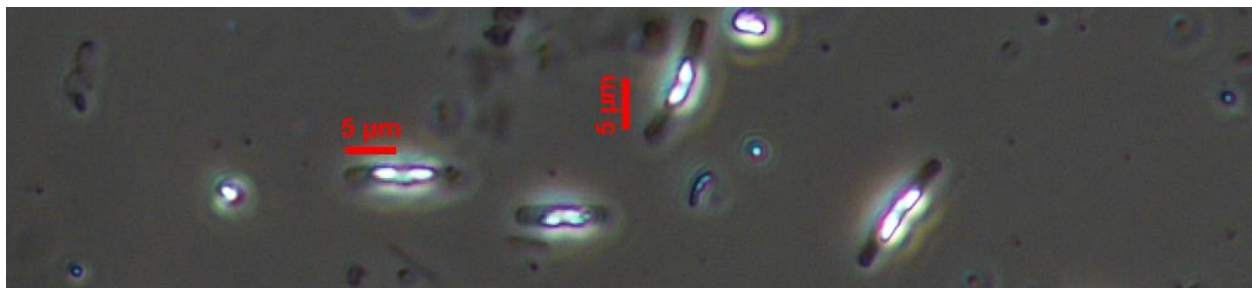


Fig. 2 pennate diatom sp. 400X (scale bar = 5 μ m)



Fig. 3 cf. *Phormidium* sp. 400X (scale bar = 5µm)

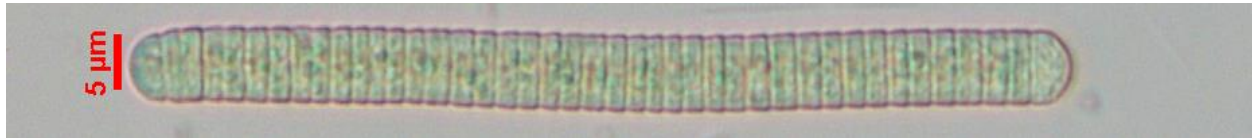


Fig. 4 *Oscillatoria* sp. 400X (scale bar = 5µm)

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 6/22/22 were 269,922 cells/mL. Blue-green algae (Cyanobacteria; 134,135 cells/mL) and green algae (Chlorophyta; 105,150 cells/mL) were the most abundant algal groups in the sample accounting for 49.7% and 39.0% of total cell numbers respectively. Other algal groups in the sample were diatoms (Bacillariophyta; 25,874 cells/mL), golden-brown algae (Chrysophyceae; 418 cells/mL), euglenophytes (Euglenozoa; 994 cells/mL) and unknown algae (Unknown; 3,350 cells/mL). The most abundant algae in the sample were the chlorophyte *Monoraphidium* sp. (43,982 cells/mL; Fig. 5) and the cyanophyte *Pseudanabaena* sp. (42,411 cells/mL; Fig. 6). A total of 62 species were observed in the sample with green algae the most diverse group with 27 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 54,108 cells/mL (20.0% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (42,411 cells/mL), cf. *Phormidium* sp. (8,773 cells/mL) and *Pseudanabaena* sp. (2,924 cells/mL; Fig. 7).

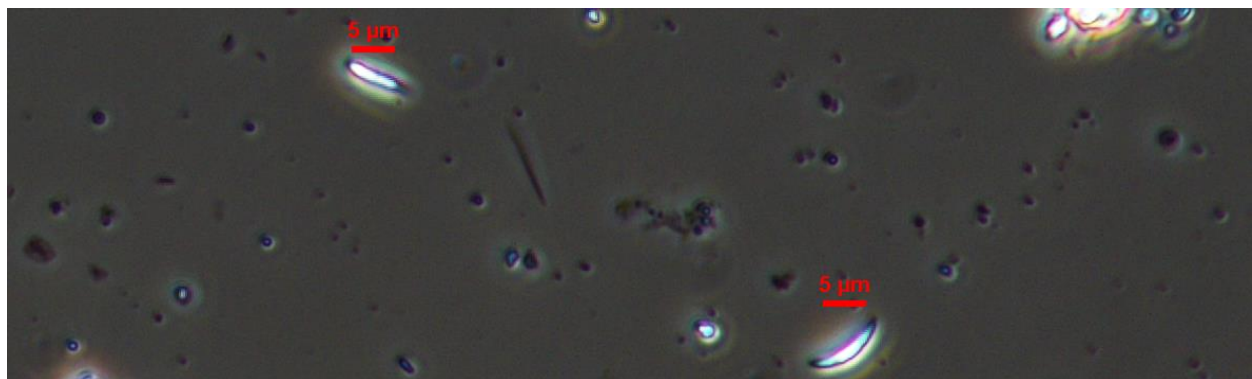


Fig. 5 *Monoraphidium* sp. 400X (scale bar = 5µm)

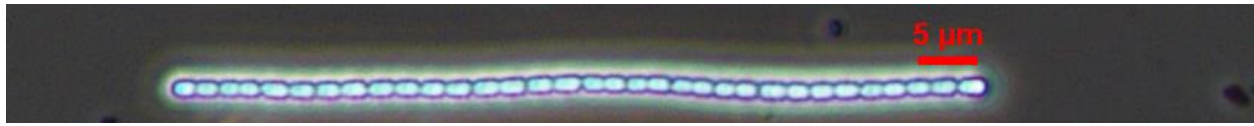


Fig. 6 *Pseudanabaena* sp. 400X (scale bar = 5 μ m)

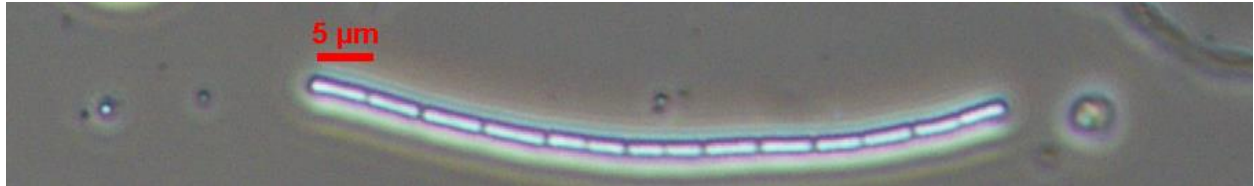


Fig. 5 *Pseudanabaena* sp. 400X (scale bar = 5 μ m)