

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: June 20, 2022

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Samples: 2 (Collected on 3/3/22)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 3/3/22 were 62,494 cells/mL. Diatoms (Bacillariophyta; 50,480 cells/mL) were the most abundant algal group in the sample accounting for 80.8% of total cell numbers. Other algal groups in the sample were green algae (Chlorophyta; 7,913 cells/mL), blue-green algae (Cyanobacteria; 568 cells/mL), euglenophytes (Euglenozoa; 392 cells/mL) and unknown unicells and flagellates (Unknown; 3.142 cells/mL). The most abundant algae in the sample were centric diatoms (48,869 cells/mL; Fig. 1). A total of 43 species were observed in the sample with green algae the most diverse group with 23 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 30 cells/mL (0.05% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (30 cells/mL; Fig. 2).

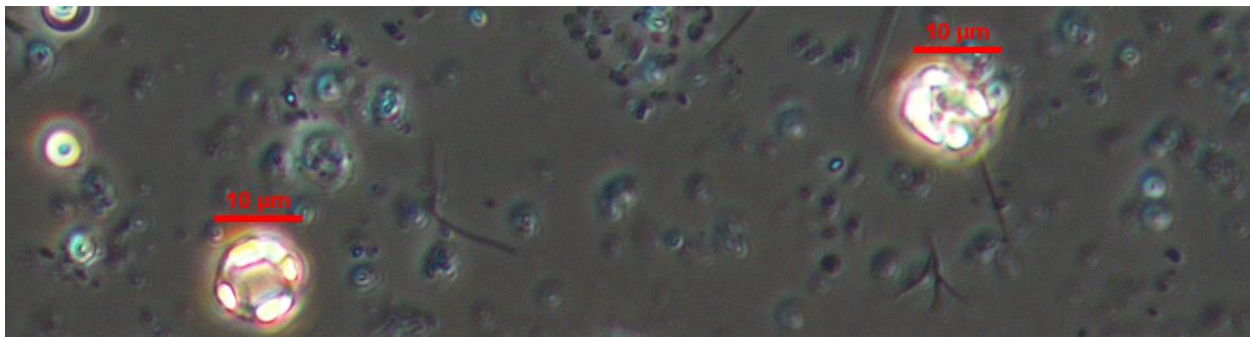


Fig. 1 centric diatom sp. 400X (scale bar = 10 μ m)



Fig. 2 *Pseudanabaena* sp. 400X (scale bar = 5 μ m)

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 3/3/22 were 44,251 cells/mL. Diatoms (Bacillariophyta; 25,319 cells/mL) were the most abundant algal group in the sample accounting for 57.2% of total cell numbers. Other algal groups in the sample were green algae (Chlorophyta; 11,642 cells/mL), cryptophytes (Cryptophyta; 157 cells/mL), blue-green algae (Cyanobacteria; 6,028 cells/mL), euglenophytes (Euglenozoa; 163 cells/mL) and unknown unicells and flagellates (Unknown; 942 cells/mL). The most abundant algae in the sample were centric diatoms (11,781 cells/mL; Fig. 3) and the pennate diatom *Nitzschia* sp. (10,995 cells/mL; Fig. 4). A total of 64 species were observed in the sample with green algae the most diverse group with 31 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 914 cells/mL (2.1% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (836 cells/mL; Fig. 5), *Pseudanabaena* sp. (33 cells/mL; Fig. 6), cf. *Oscillatoria* sp. (23 cells/mL; Fig. 7) and cf. *Phormidium* sp. (22 cells/mL; Fig. 8).

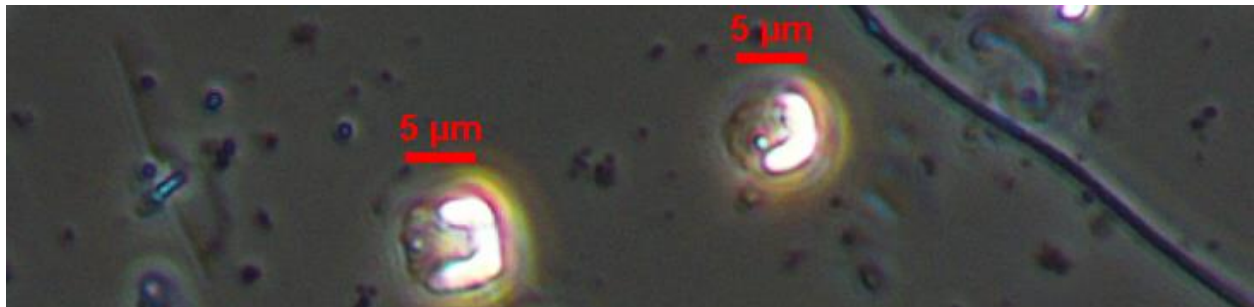


Fig. 3 centric diatom sp. 400X (scale bar = 5 μ m)



Fig. 4 *Nitzschia* sp. 400X (scale bar = 5 μ m)

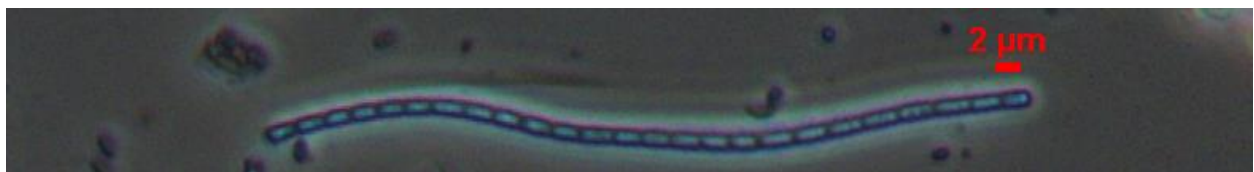


Fig. 5 *Pseudanabaena* sp. 400X (scale bar = 2 μ m)

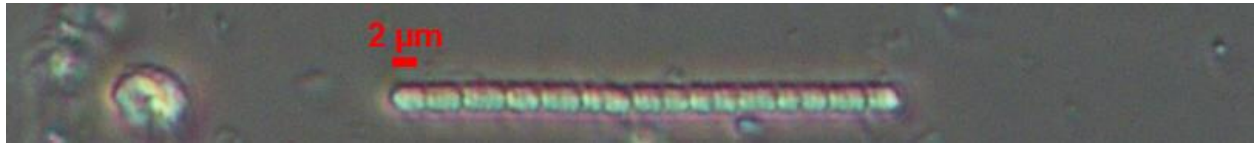


Fig. 6 *Pseudanabaena* sp. 400X (scale bar = 2μm)

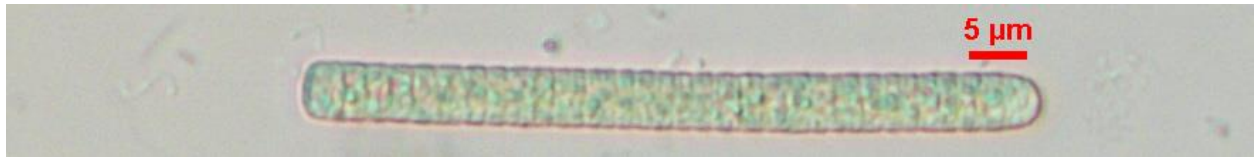


Fig. 7 cf. *Oscillatoria* sp. 400X (scale bar = 5μm)

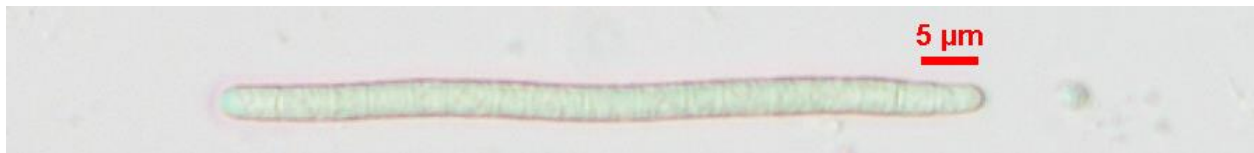


Fig. 8 cf. *Phormidium* sp. 400X (scale bar = 5μm)