

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: August 31, 2020

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Samples: 2 (Collected on 7/28/20)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 7/28/20 were 4,714,949 cells/mL. Blue-green algae (Cyanobacteria; 4,578,873 cells/mL) were the most abundant algal group in the sample accounting for 97.1% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 122,524 cells/mL), green algae (Chlorophyta; 5,648 cells/mL), dinoflagellates (Dinophyceae; 50 cells/mL) and unknown flagellates (Unknown; 7,854 cells/mL). The most abundant algae in the sample were the filamentous cyanophytes *Pseudanabaena* sp. (2,513,254 cells/mL; Fig. 1) and *Pseudanabaena catenata* (1,558,218 cells/mL; Fig. 2). A total of 23 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 4,495,321 cells/mL (95.3% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (2,513,254 cells/mL), *Pseudanabaena catenata* (1,558,218 cells/mL), *Nodularia spumigena* (213,180 cells/mL; Fig. 3), *Pseudanabaena* sp. (197,919 cells/mL; Fig. 4) and *Planktothrix* sp. (12,750 cells/mL; Fig. 5).

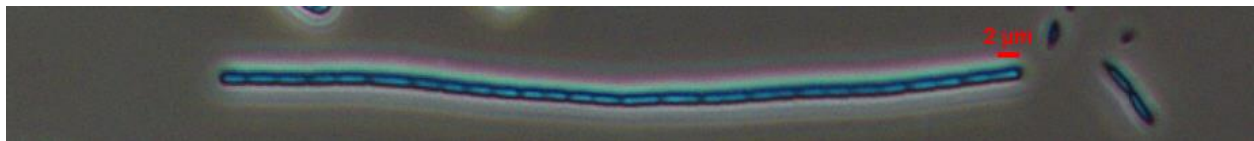


Fig. 1 *Pseudanabaena* sp. 400X (scale bar = 2 μ m)

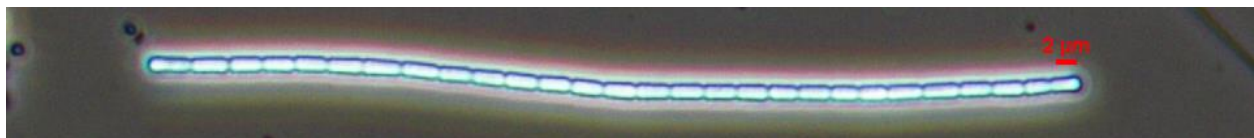


Fig. 2 *Pseudanabaena catenata* 400X (scale bar = 2 μ m)

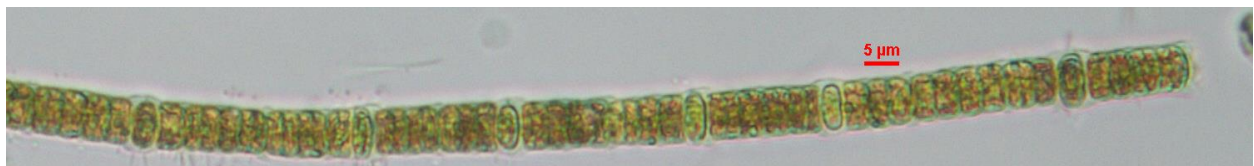


Fig. 3 *Nodularia spumigena* 400X (scale bar = 5 μ m)

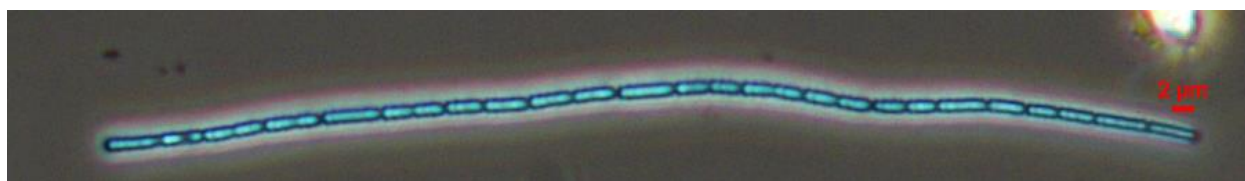


Fig. 4 *Pseudanabaena* sp. 400X (scale bar = 2µm)



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

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 7/28/20 were 6,725,995 cells/mL. Blue-green algae (Cyanobacteria; 6,484,116 cells/mL) were the most abundant algal group in the sample accounting for 96.4% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 62,828 cells/mL), green algae (Chlorophyta; 160,161 cells/mL), dinoflagellates (Dinophyceae; 40 cells/mL) and unknown flagellates (Unknown; 18,849 cells/mL). The most abundant alga in the sample was the colonial cyanophyte *Aphanocapsa* sp. (5,089,340 cells/mL; Fig. 6). A total of 40 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 965,685 cells/mL (14.4% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (614,177 cells/mL; Fig. 7), *Pseudanabaena catenata* (175,928 cells/mL; Fig. 8), *Nodularia spumigena* (173,160 cells/mL; Fig. 9) and *Anabaena* sp. (2,420 cells/mL; Fig. 10).

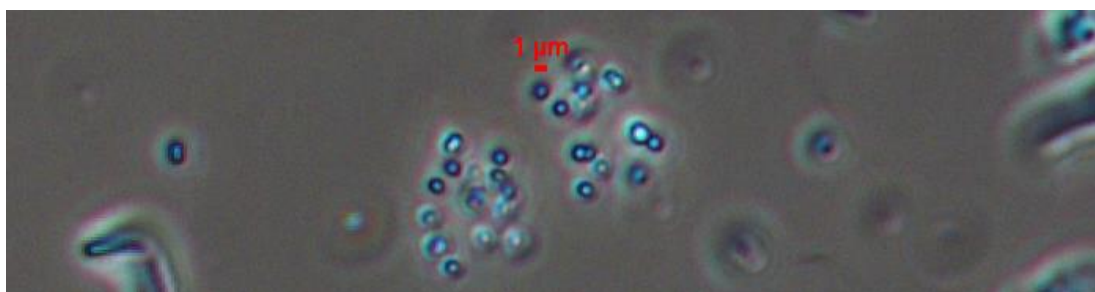


Fig. 6 *Aphanocapsa* sp. 400X (scale bar = 1µm)



Fig. 7 *Pseudanabaena* sp. 400X (scale bar = 2µm)

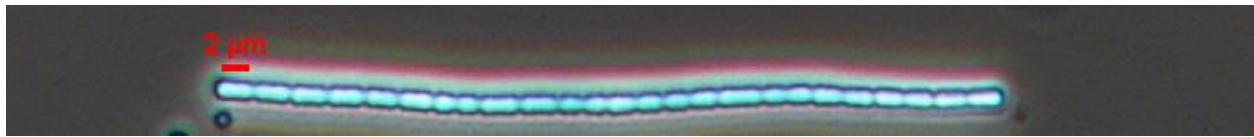


Fig. 8 *Pseudanabaena catenata* 400X (scale bar = 2 μ m)



Fig. 9 *Nodularia spumigena* 400X (scale bar = 5 μ m)

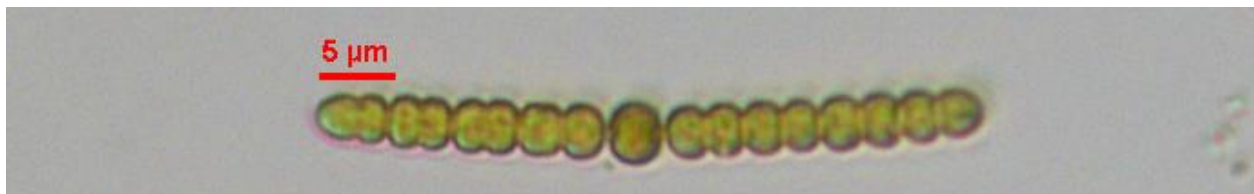


Fig. 10 *Anabaena* sp. 400X (scale bar = 5 μ m)