

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: September 14, 2018

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Samples: 2 (Collected on 8/1/18)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 8/1/18 were 9,950,824 cells/mL. Blue-green algae (Cyanobacteria; 9,929,314 cells/mL) were the dominant algal group in the sample accounting for 99.8% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 6,726 cells/mL), green algae (Chlorophyta; 6,716 cells/mL), dinoflagellates (Dinophyta; 214 cells/mL) and unknown flagellates and unicells (Miscellaneous; 7,854 cells/mL). The most abundant algae in the sample were species of the filamentous cyanophyte *Pseudanabaena*: *Pseudanabaena* sp. 1 (7,652,860 cells/mL; Fig. 1), *Pseudanabaena* sp. 2 (1,789,123 cells/mL; Fig. 2) and *Pseudanabaena catenata* (252,896 cells/mL Fig. 3). A total of 27 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 9,783,653 cells/mL (98.3% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (7,652,860 cells/mL), *Pseudanabaena* sp. (1,789,123 cells/mL), *Pseudanabaena catenata* (252,896 cells/mL) and *Nodularia spumigena* (88,774 cells/mL; Fig. 4).

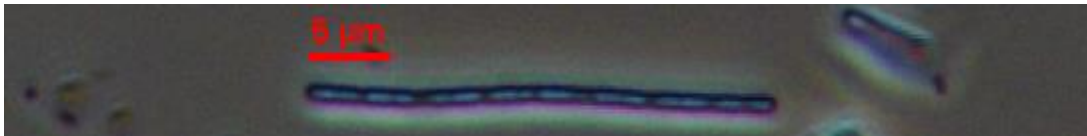


Fig. 1 *Pseudanabaena* sp. 1 400X (scale bar = 5 μ m)



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

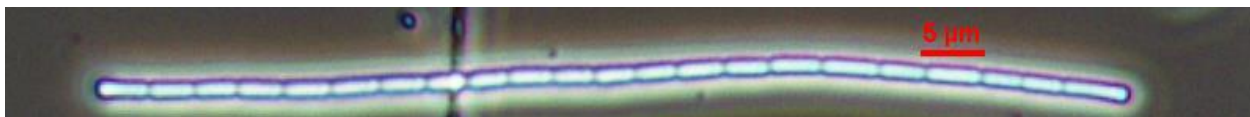


Fig. 3 *Pseudanabaena catenata* 400X (scale bar = 5 μ m)

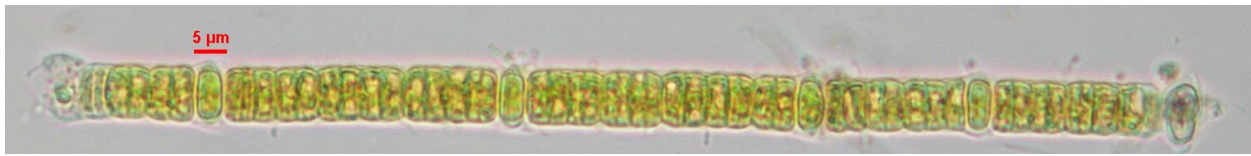


Fig. 4 *Nodularia spumigena* 400X (scale bar = 5 μ m)

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 8/1/18 were 11,398,618 cells/mL. Diatoms Blue-green algae (Cyanobacteria; 11,296,863 cells/mL) were the dominant algal group in the sample accounting for 99.1% of total cell numbers. Other algal groups in the sample were (Bacillariophyceae; 47,100 cells/mL), green algae (Chlorophyta; 32,246 cells/mL), dinoflagellates (Dinophyta; 3,559 cells/mL) and unknown flagellates (Miscellaneous; 18,849 cells/mL). The most abundant alga in the sample was the filamentous cyanophyte *Pseudanabaena* sp. (7,476,932 cells/mL; Fig. 5). A total of 39 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 8,894,113 cells/mL (78.0% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (7,476,932 cells/mL), *Pseudanabaena catenata* (735,127 cells/mL; Fig. 6), *Pseudanabaena* sp. (571,765 cells/mL; Fig. 7) and *Nodularia spumigena* (110,289 cells/mL; Fig. 8).

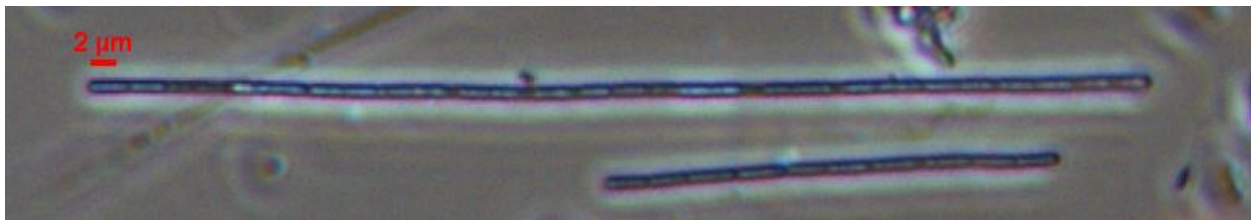


Fig. 5 *Pseudanabaena* sp. 400X (scale bar = 2 μ m)



Fig. 6 *Pseudanabaena catenata* 400X (scale bar = 2 μ m)

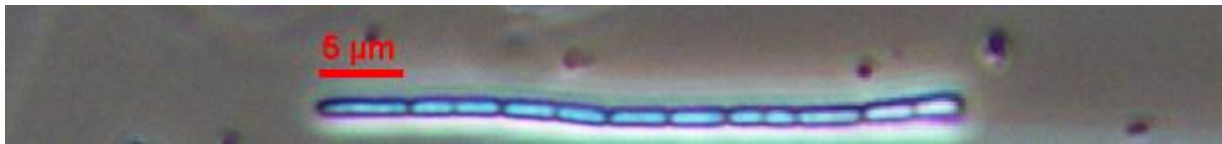


Fig. 7 *Pseudanabaena* sp. 400X (scale bar = 5µm)



Fig. 8 *Nodularia spumigena* 400X (scale bar = 5µm)