

## Central Davis Sewer District Algal ID and Enumeration Report

Prepared: October 10, 2018

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Samples: 2 (Collected on 8/22/18)

1. FB1
2. FB4

### Sample 1: FB1

Total cell numbers in the FB1 sample collected on 8/22/18 were 9,514,168 cells/mL. Blue-green algae (Cyanobacteria; 9,450,201 cells/mL) were the dominant algal group in the sample accounting for 99.3% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 29,072 cells/mL), green algae (Chlorophyta; 19,107 cells/mL), dinoflagellates (Dinophyta; 80 cells/mL) and unknown unicells and flagellates (Miscellaneous; 15,708 cells/mL). The most abundant alga in the sample was the filamentous cyanophyte *Pseudanabaena* sp. (6,113,491 cells/mL; Fig. 1). A total of 34 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 7,552,043 cells/mL (79.4% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (6,113,491 cells/mL), *Pseudanabaena* sp. (1,187,513 cells/mL; Fig. 2), *Pseudanabaena catenata* (197,919 cells/mL; Fig. 3), *Nodularia spumigena* (50,960 cells/mL; Fig. 4) and cf. *Phormidium* sp. (2,160 cells/mL).

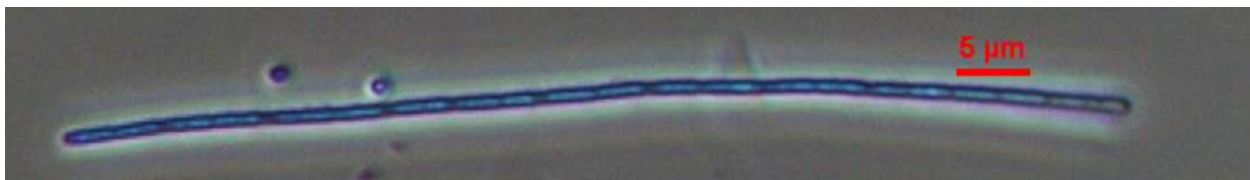


Fig. 1 *Pseudanabaena* sp. 1 400X (scale bar = 5µm)

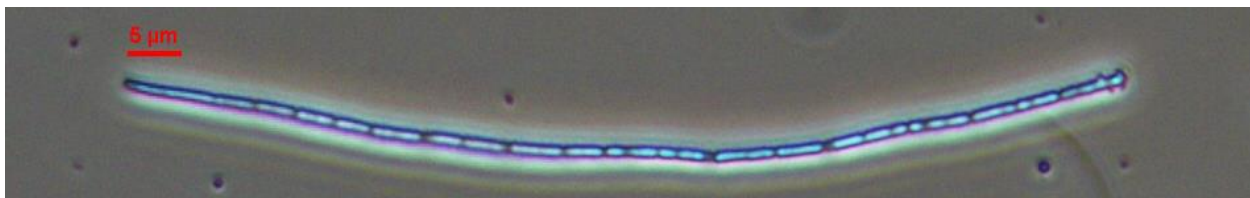


Fig. 2 *Pseudanabaena* sp. 2 400X (scale bar = 5µm)

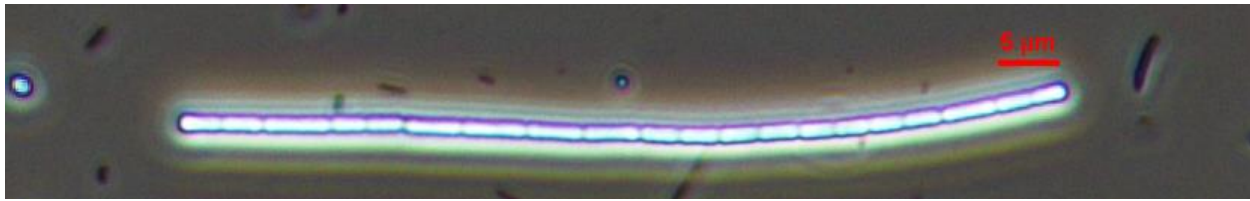


Fig. 3 *Pseudanabaena catenata* 400X (scale bar = 5µm)

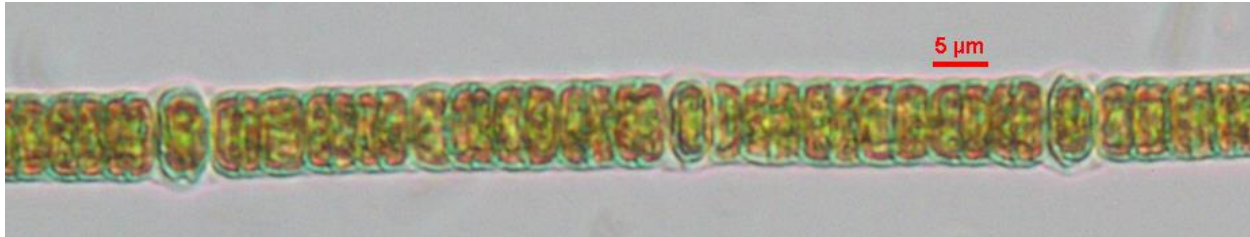


Fig. 4 *Nodularia spumigena* 400X (scale bar = 5µm)

### Sample 2: FB4

Total cell numbers in the FB4 sample collected on 8/22/18 were 1,396,235 cells/mL. Blue-green algae (Cyanobacteria; 1,044,932 cells/mL) were the dominant algal group in the sample accounting for 74.8% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 58,139 cells/mL), green algae (Chlorophyta; 161,108 cells/mL), cryptophytes (Cryptophyta; 39,270 cells/mL), dinoflagellates (Dinophyta; 1,253 cells/mL), euglenophytes (Euglenophyta; 10 cells/mL), unknown unicells, cell pairs and flagellates (Miscellaneous; 91,105 cells/mL) and yellow-green algae (Xanthophyceae; 418 cells/mL). The most abundant alga in the sample was the filamentous cyanophyte *Spirulina meneghiana* (447,673 cells/mL; Fig. 5). A total of 61 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 53,156 cells/mL (3.8% of total cell numbers). PTOX Cyano species observed in the sample included *Anabaena* sp. (26,703 cells/mL; Fig. 6), *Pseudanabaena* sp. (25,133 cells/mL) and *Nodularia spumigena* (1,320 cells/mL).

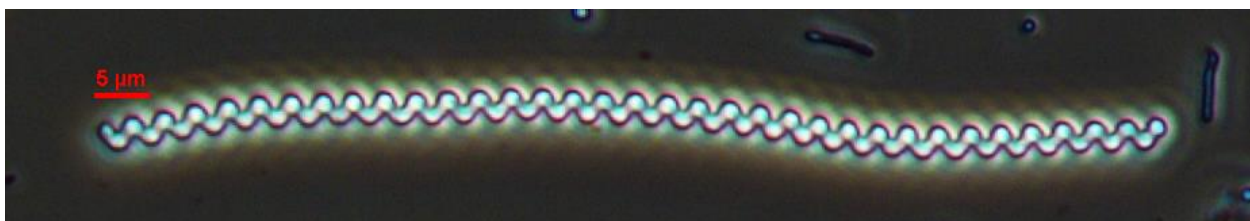


Fig. 5 *Spirulina meneghiana* 400X (scale bar = 5µm)

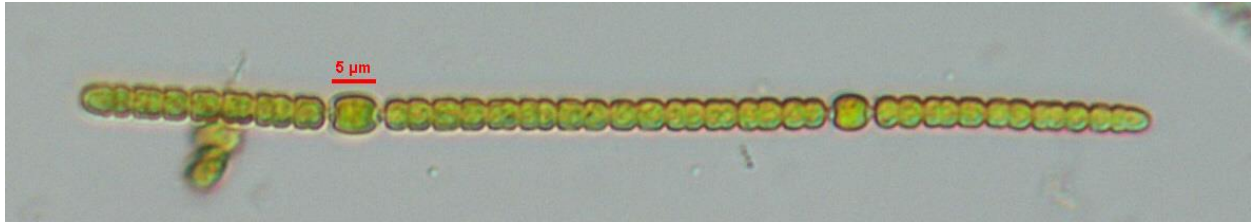


Fig. 6 *Anabaena* sp. 400X (scale bar = 5µm)