

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: May 11, 2018

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Samples: 2 (Collected on 4/19/18)

1. FB1
2. FB2

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 4/19/18 were 354,861 cells/mL. Diatoms (Bacillariophyceae; 266,411 cells/mL) were the dominant algal group in the sample accounting for 75.1% of total cell numbers. Other algal groups in the sample were green algae (Chlorophyta; 28,010 cells/mL), cryptophytes (Cryptophyta; 42 cells/mL), blue-green algae (Cyanobacteria; 46,258 cells/mL), euglenophytes (Euglenophyta; 2 cells/mL), haptophytes (Hepatophyceae; 785 cells/mL) and unknown algae (Miscellaneous; 13,352 cells/mL). The most abundant algae in the sample were the diatoms *Chaetoceros* sp. (182,211 cells/mL; Fig. 1) and *Phaeodactylum tricornutum* (79,325 cells/mL; Fig. 2). A total of 65 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 7,850 cells/mL (2.2% of total cell numbers). PTOX Cyano species observed in the sample included cf. *Pseudanabaena* sp. (6,983 cells/mL; Fig. 3), *Nodularia spumigena* (603 cells/mL; Fig. 4) and *Planktothrix* sp. (354 cells/mL; Fig. 5).

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 4/19/18 were 607,879 cells/mL. Diatoms (Bacillariophyceae; 293,439 cells/mL) and blue-green algae (Cyanobacteria; 207,393 cells/mL) were the dominant algal groups in the sample accounting for 48.3% and 34.1% of total cell numbers respectively. Other algal groups in the sample were desmids (Charophyta; 2 cells/mL), green algae (Chlorophyta; 85,744 cells/mL), euglenophytes (Euglenophyta; 12 cells/mL) and unknown algae (Miscellaneous; 21,289 cells/mL). The most abundant algae in the sample were the diatoms *Chaetoceros* sp. (208,914 cells/mL) and the colonial cyanophyte *Cyanodictyon planctonicum* (136,658 cells/mL; Fig. 6). A total of 60 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 4,821 cells/mL (0.8% of total cell numbers). PTOX Cyano species observed in the sample included cf. *Pseudanabaena* sp. (4,345 cells/mL), *Oscillatoria* sp. (220 cells/mL; Fig. 7), *Planktothrix* sp. (200 cells/mL) and *Nodularia spumigena* (56 cells/mL).

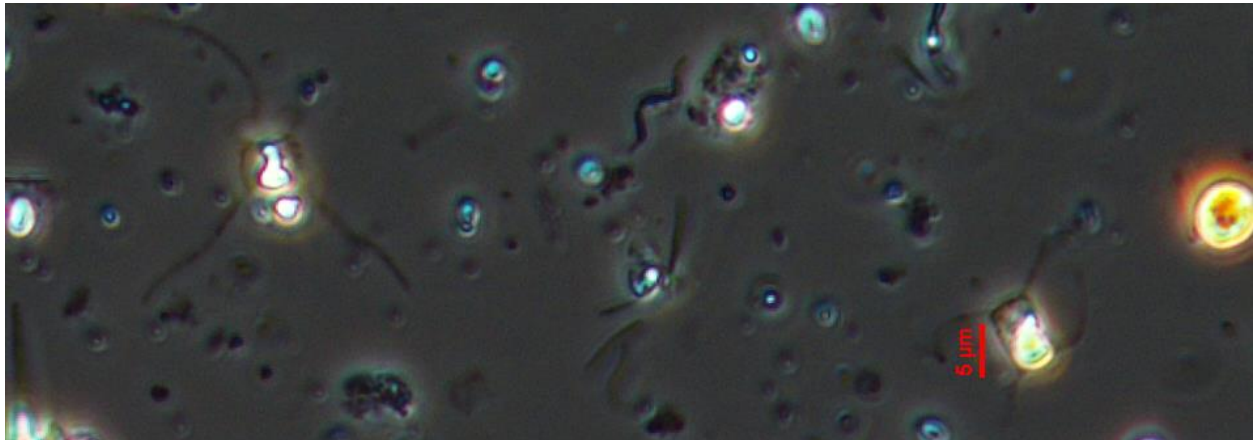


Fig. 1 *Chaetoceros* sp. 400X (scale bar = 5 μ m)

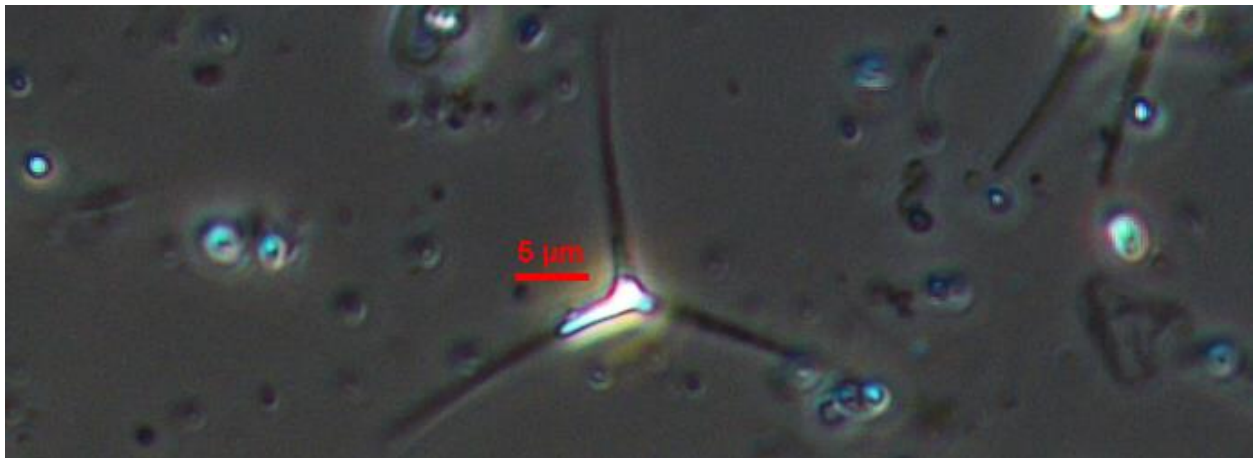


Fig. 2 *Phaeodactylum tricornutum* 400X (scale bar = 5 μ m)

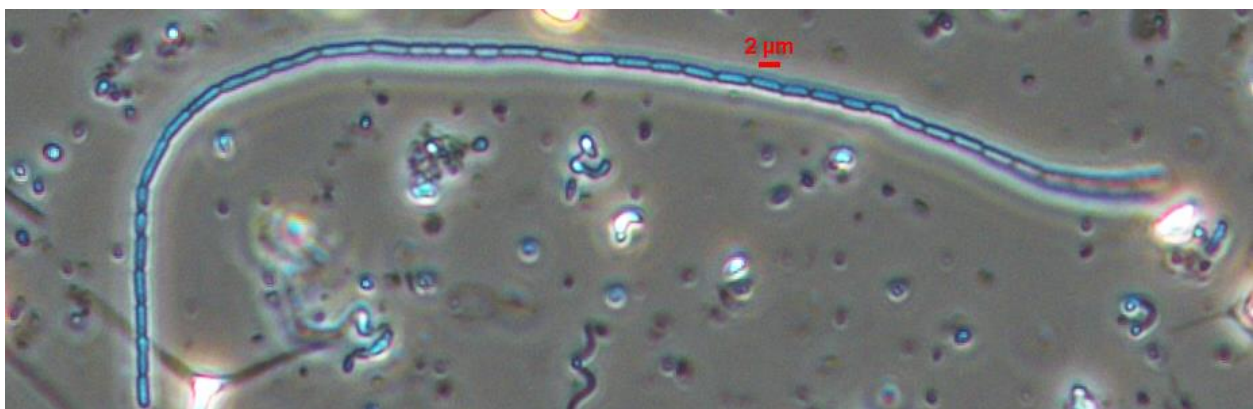


Fig. 3 cf. *Pseudanabaena* sp. 400X (scale bar = 2 μ m)

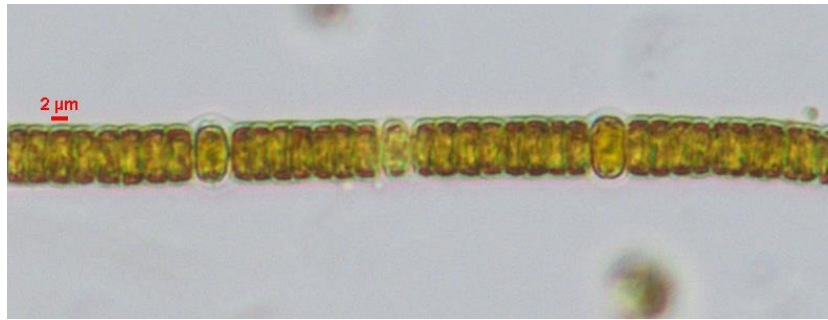


Fig. 4 *Nodularia spumigena* 400X (scale bar = 2 μ m)

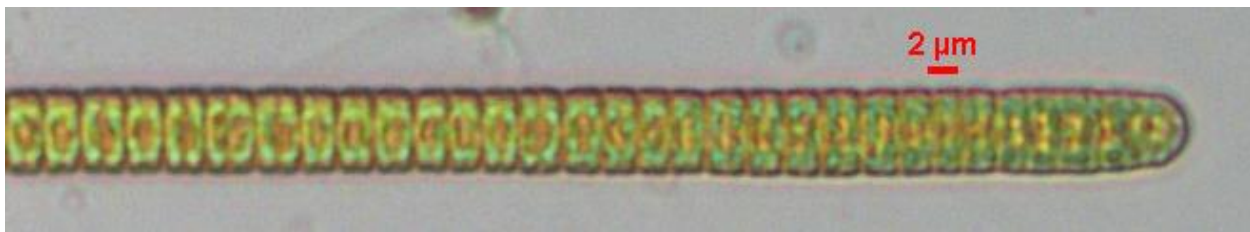


Fig. 5 *Planktothrix* sp. 400X (scale bar = 2 μ m)

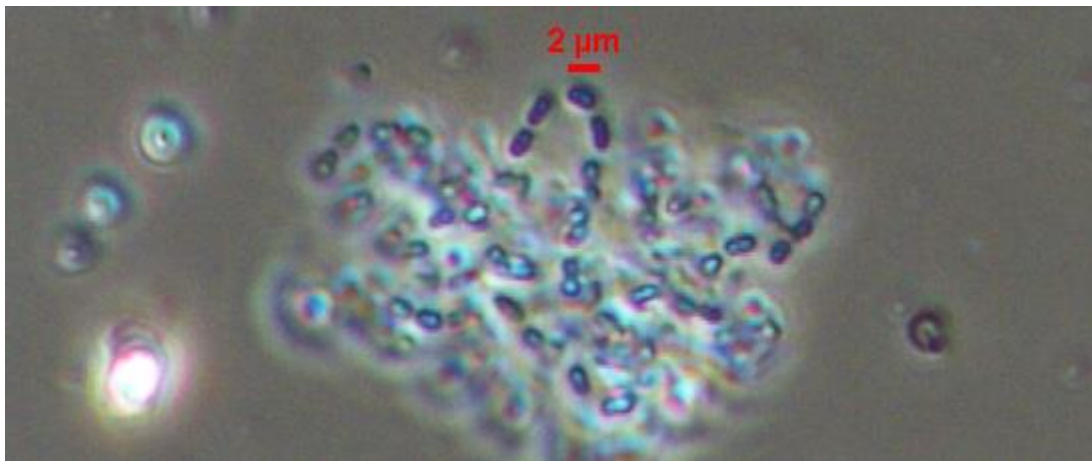


Fig. 6 *Cyanodictyon planctonicum* 400X (scale bar = 2 μ m)

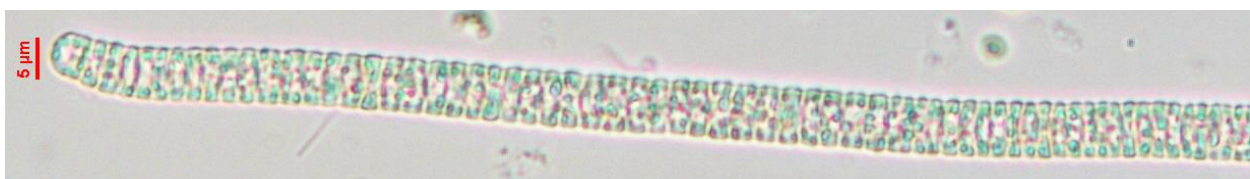


Fig. 7 *Oscillatoria* sp. 400X (scale bar = 5 μ m)