

Central Davis Sewer District Algal ID and Enumeration Report

Prepared: June 3, 2019

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Samples: 2 (Collected on 4/23/19)

1. FB1
2. FB4

Sample 1: FB1

Total cell numbers in the FB1 sample collected on 4/23/19 were 107,232 cells/mL. Green algae (Chlorophyta; 78,523 cells/mL) were the dominant algal group in the sample accounting for 73.2% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 15,269 cells/mL), desmids (Charophyta; 308 cells/mL), cryptophytes (Cryptophyta; 224 cells/mL), blue-green algae (Cyanobacteria; 7,355 cells/mL) euglenophytes (Euglenophyta; 167 cells/mL), haptophytes (Haptophyta; 4,039 cells/mL) and unknown flagellates (Miscellaneous; 1,346 cells/mL). The most abundant algae in the sample were small spherical (13,464 cells/mL; Fig. 1) and oval (12,342 cells/mL; Fig. 2) chlorophyte unicells and centric diatoms (10,771 cells/mL; Fig. 3). A total of 64 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 623 cells/mL (0.6% of total cell numbers). PTOX Cyano species observed in the sample included *Nodularia spumigena* (456 cells/mL; Fig. 4) and *Pseudanabaena* sp. (167 cells/mL).

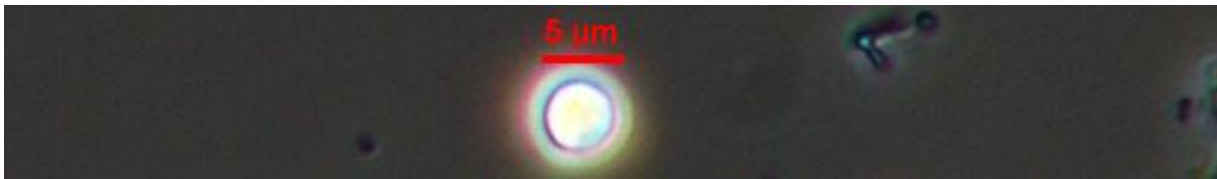


Fig. 1 chlorophyte unicell 400X (scale bar = 5μm)

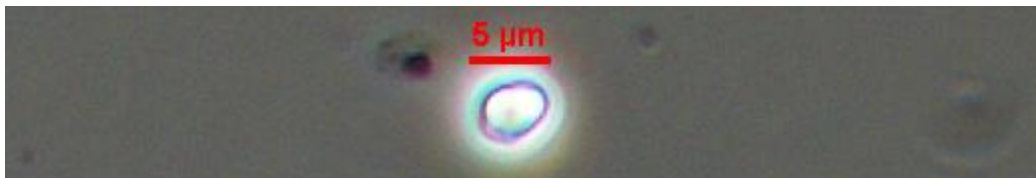


Fig. 2 chlorophyte unicell 400X (scale bar = 5μm)

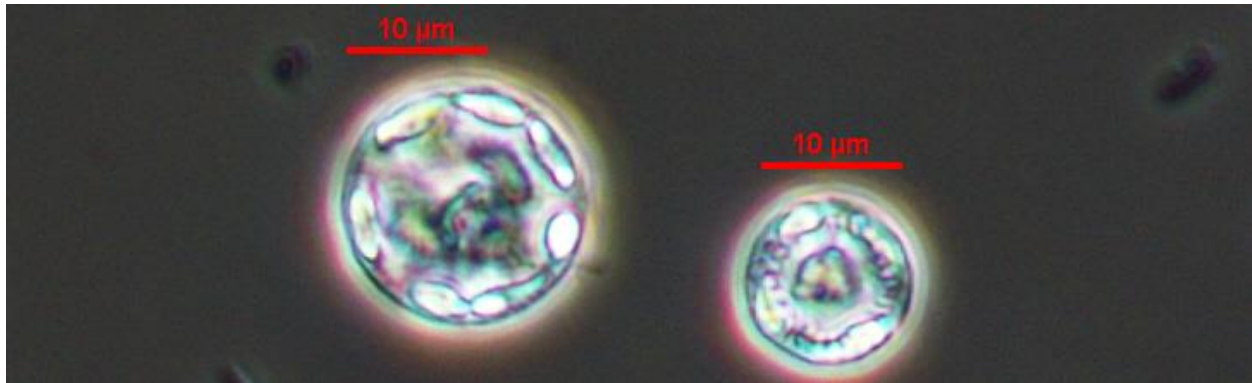


Fig. 3 centric diatom spp. 400X (scale bar = 10 μ m)



Fig. 4 *Nodularia spumigena* germinating akinete 400X (scale bar = 10 μ m)

Sample 2: FB4

Total cell numbers in the FB4 sample collected on 4/23/19 were 56,784 cells/mL. Green algae (Chlorophyta; 47,823 cells/mL) were the dominant algal group in the sample accounting for 84.2% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyceae; 6,847 cells/mL), desmids (Charophyta; 2 cells/mL), cryptophytes (Cryptophyta; 157 cells/mL), blue-green algae (Cyanobacteria; 988 cells/mL), euglenophytes (Euglenophyta; 181 cells/mL), haptophytes (Haptophyta; 157 cells/mL), unknown flagellates and unicells (Miscellaneous; 628 cells/mL) and yellow-green algae (Xanthophyceae; 1 cell/mL). The most abundant alga in the sample was the colonial chlorophyte *Pseudopediastrum boryanum* (9,024 cells/mL; Fig. 5). A total of 63 species were observed in the sample.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 360 cells/mL (0.6% of total cell numbers). PTOX Cyano species observed in the sample included *Nodularia spumigena* (360 cells/mL).



Fig. 5 *Pseudopediastrum boryanum* 400X (scale bar = 10μm)