

## Central Davis Sewer District Algal ID and Enumeration Report

Prepared: October 14, 2022

Prepared By: GreenWater Laboratories

Samples: 2 (Collected on 8/3/22)

1. FB1
2. FB4

### Sample 1: FB1

Total cell numbers in the FB1 sample collected on 8/3/22 were 517,556 cells/mL. Diatoms (Bacillariophyta; 437,063 cells/mL) was the most abundant algal group in the sample accounting for 84.4% of total cell numbers. Other algal groups in the sample were green algae (Chlorophyta; 4,367 cells/mL), cryptophytes (Cryptophyta; 418 cells/mL), blue-green algae (Cyanobacteria; 66,998 cells/mL), dinoflagellates (Dinophyceae; 836 cells/mL), euglenoids (Euglenozoa; 20 cells/mL) and unknown algae (Unknown; 7,854 cells/mL). The most abundant alga in the sample was the diatom *Chaetoceros* sp. (422,541 cells/mL; Fig. 1). A total of 36 species were observed in the sample with diatoms the most diverse group with 19 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 16,817 cells/mL (3.2% of total cell numbers). PTOX Cyano species observed in the sample included *Phormidium* sp. (13,700 cells/mL; Fig. 2), *Pseudanabaena* sp. (2,507 cells/mL) and *Phormidium* sp. (610 cells/mL; Fig. 3).

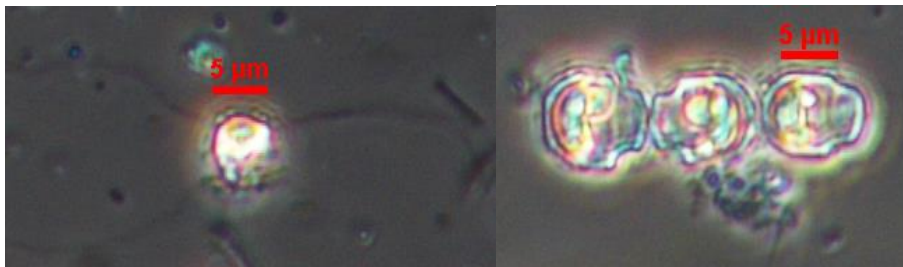


Fig. 1 *Chaetoceros* sp. 400X (scale bar = 5 $\mu$ m)



Fig. 2 *Phormidium* sp. 400X (scale bar = 5 $\mu$ m)



Fig. 3 *Phormidium* sp. 400X (scale bar = 5µm)

### Sample 2: FB4

Total cell numbers in the FB4 sample collected on 8/3/22 were 52,842 cells/mL. Blue-green algae (Cyanobacteria; 44,205 cells/mL) was the most abundant algal group in the sample accounting for 83.7% of total cell numbers. Other algal groups in the sample were diatoms (Bacillariophyta; 1,293 cells/mL), desmids (Charophyta; 1 cell/mL), green algae (Chlorophyta; 6,547 cells/mL), cryptophytes (Cryptophyta; 157 cells/mL), dinoflagellates (Dinophyceae; 1 cell/mL), euglenoids (Euglenozoa; 124 cells/mL) and unknown algae (Unknown; 513 cells/mL). The most abundant alga in the sample was the cyanophyte *Merismopedia punctata* (10,210 cells/mL; Fig. 4). A total of 58 species were observed in the sample with green algae and blue-green algae the most diverse groups each with 19 taxa.

Total cell numbers of potentially toxigenic cyanobacteria (PTOX Cyano) were 16,395 cells/mL (37.1% of total cell numbers). PTOX Cyano species observed in the sample included *Pseudanabaena* sp. (6,283 cells/mL; Fig. 5), *Anagnostidinema/Jaaginema* sp. (4,762 cells/mL; Fig. 6), *Anabaena* sp. (2,356 cells/mL; Fig. 7), *Pseudanabaena* sp. (2,172 cells/mL; Fig. 8), *Pseudanabaena* sp. (460 cells/mL; Fig. 9), *Phormidium* sp. (280 cells/mL) and *Oscillatoria* sp. (82 cells/mL; Fig. 10).

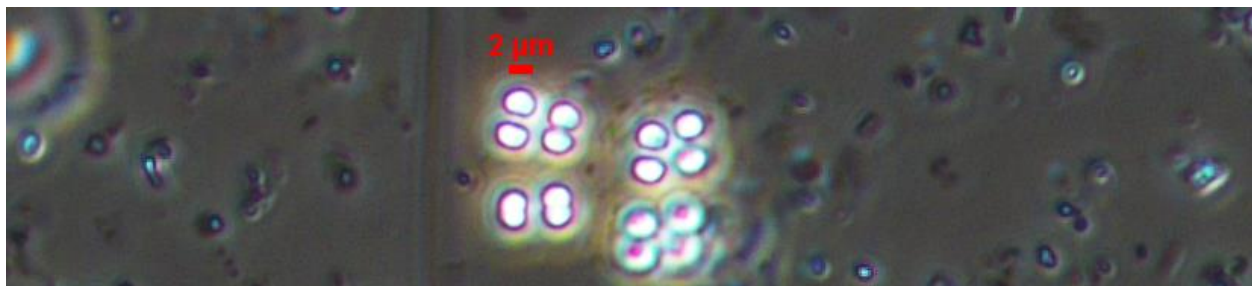


Fig. 4 *Merismopedia punctata* 400X (scale bar = 2µm)



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

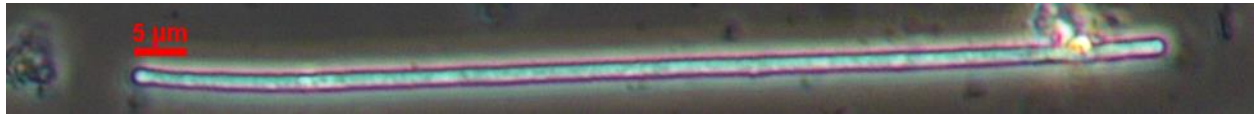


Fig. 6 *Anagnostidinema/Jaaginema* sp. 400X (scale bar = 5µm)

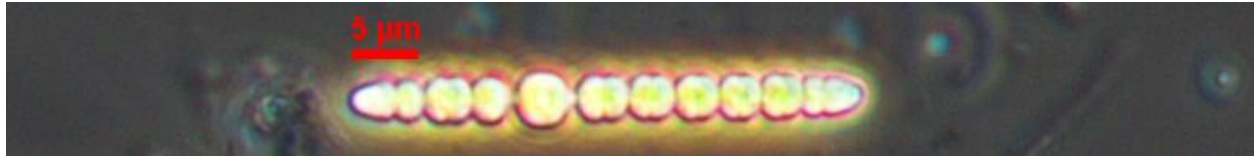


Fig. 7 *Anabaena* sp. 400X (scale bar = 5µm)



Fig. 8 *Pseudanabaena* sp. 400X (scale bar = 2µm)

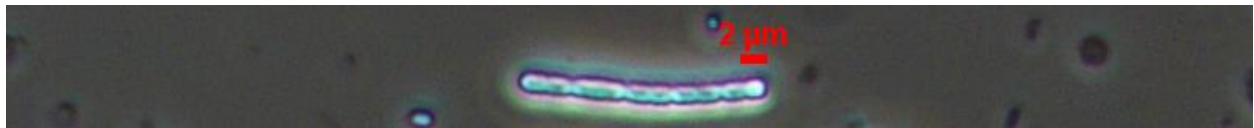


Fig. 9 *Pseudanabaena* sp. 400X (scale bar = 2µm)

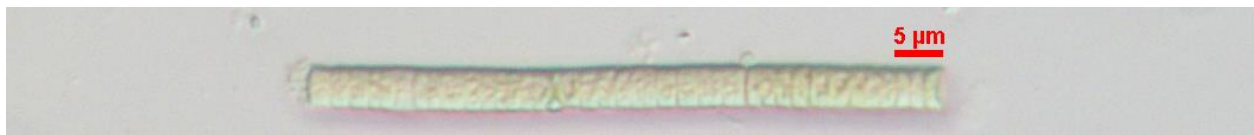


Fig. 10 *Oscillatoria* sp. 400X (scale bar = 5µm)