

REPORT

Report no: 284006 Depth : N/A
 Supercedes Report No: Chlorophyll a: NA
 Microcystin equivalents: NA
 Date analysed: 5/05/2023
 Analyst: [REDACTED]

Lims No: L23034937

Date Sampled: 24/04/2023

Client ID: 232614

Address: [REDACTED]

Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water
 Laboratory Services
 Issued On : 05/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<u>Cyanophyta (Blue green)</u>				
<i>Anabaena</i>	208	Taste & Odour	30.57	0.022
<i>Anabaenopsis</i>	3042	Potentially toxic	209.89	0.360
<i>Anagnostidinema</i>	278		8.39	0.004
<i>Aphanocapsa</i>	35102		133.38	0.045
<i>Cyanocatena</i>	1237439		4,702.26	1.752
<i>Cyanogranis</i>	16223		48.66	0.011
<i>Cyanonephron</i>	21385		47.04	0.008
<i>Dolichospermum</i>	1457	Potentially toxic, taste & odour	133.16	0.236
<i>Merismopedia</i>	16260		16.26	0.136
<i>Microcystis</i>	2904	Potentially toxic, taste & odour	81.60	0.080
<i>Myxobaktron</i>	1475		25.96	0.007
<i>Pseudanabaena</i>	13274		106.19	0.132
<i>Sphaerospermopsis reniformis</i>	1145	Taste & Odour	45.91	0.053
<i>Spirulina</i>	737		11.05	0.002
<i>Synechococcus cf</i>	737		9.06	0.004
Subtotal	1351666		5,609.38	2.852
<u>Bacillariophyta (Diatom)</u>				
<i>Aulacoseira</i>	1041	Filter clogging	423.68	0.625
<i>Cyclotella</i>	12905	Filter clogging	877.54	1.006
<i>Cyclotella species 4</i>	35	Filter clogging	54.63	0.493
<i>Cyclotella/Stephanodiscus</i>	3687	Filter clogging	197.25	0.292
<i>Cylindrotheca closterium</i>	104		34.30	0.025
<i>Nitzschia</i>	1214		262.22	0.122
<i>Skeletonema</i>	2212	Filter clogging	1,659.00	0.145
<i>Synedra</i>	208		123.55	0.114

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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Subtotal	21406		3,632.17	2.822
<u>Euglenophyta (Euglenoid)</u>				
<i>Euglena</i>	694	Discolouration of water	1,226.99	1.605
<i>Phacus</i>	35		221.83	0.121
<i>Trachelomonas</i>	278	Common after flood	780.06	0.628
Subtotal	1007		2,228.88	2.354
<u>Chlorophyta (Green)</u>				
<i>Actinastrum</i>	369		23.24	0.007
<i>Ankistrodesmus</i>	2212		831.71	0.298
<i>Carteria</i>	369		54.98	0.022
<i>Chlamydomonas</i>	2212	Taste & Odour	176.96	0.188
<i>Crucigenia</i>	7743		61.94	0.147
<i>Dictyosphaerium</i>	5199		374.32	0.077
<i>Elakatothrix</i>	69		6.00	0.002
<i>Kirchneriella</i>	2950		147.50	0.056
<i>Koliella</i>	1106	Filter clogging	16.59	0.001
<i>Lagerheimia</i>	369		71.21	0.088
<i>Micractinium</i>	173		2.24	0.002
<i>Monoraphidium cf</i>	4793		128.45	0.093
<i>Oocystis</i>	7079		672.50	0.722
<i>Pediastrum</i>	697		83.64	0.032
<i>Scenedesmus species 1</i>	19468		1,518.50	1.068
<i>Schroederia</i>	1844		374.33	0.252
<i>Selenastrum</i>	737		500.42	0.481
<i>Sphaerocystis</i>	2950		333.35	0.085
<i>Tetraedron</i>	1106		470.05	0.110

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	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<i>Tetrastrum</i>	2950		404.15	0.507
Subtotal	64395		6,252.08	4.238
<u>Cryptophyta (Monad)</u>				
<i>Chroomonas</i>	737	Common after flood	176.88	0.182
<i>Cryptomonas</i>	2581	Common after flood, Taste & Odour	1,393.74	2.451
Subtotal	3318		1,570.62	2.633

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	1352000	5609.00	2.850
* Potentially Toxic Blue Green	7400	424.70	0.676
* Potentially Toxic Algae	7400	424.70	0.676
Total Algae	1442000	19290.00	14.900

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.

ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Coccolid Blue Green Picoplankton: *Aphanocapsa*; *Aphanothece*; *Cyanogranis*; *Cyanonephron*; *Cyanocatena*; *Gloeocapsa*; *Gloeothece* ; *Cyanodictyon*

Phycology

Sydney Water Approved Signatory:



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Lims No: L23034938 Date Sampled: 24/04/2023 Analyst: [REDACTED]

Client ID: 232615 Address: [REDACTED]
 Site: [REDACTED]

Client: Department of Planning and Environment

Method: MA70CENT Issued By : Sydney Water Laboratory Services
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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<u>Cyanophyta (Blue green)</u>				
<i>Anabaenopsis</i>	937	Potentially toxic	64.65	0.111
<i>Aphanizomenonaceae</i>	312	Potentially toxic, taste & odour	20.90	0.032
<i>Aphanocapsa</i>	20574		78.18	0.026
<i>Cyanocatena</i>	566897		2,154.20	0.802
<i>Cyanodictyon</i>	5899		12.97	0.003
<i>Cyanonephron</i>	14011		30.82	0.005
<i>Merismopedia</i>	27285		27.28	0.229
<i>Microcystis</i>	1977	Potentially toxic, taste & odour	55.55	0.054
<i>Planktolyngbya</i>	37977	Filter clogging	379.77	3.038
<i>Pseudanabaena</i>	17035		136.28	0.170
<i>Raphidiopsis</i>	659		39.73	0.044
<i>Raphidiopsis raciborskii</i>	1145	Potentially toxic, taste & odour	43.28	0.033
<i>Sphaerospermopsis reniformis</i>	2289	Taste & Odour	91.78	0.106
<i>Spirulina</i>	3687		55.30	0.013
<i>Synechococcus cf</i>	2950		36.28	0.019
Subtotal	703634		3,226.97	4.685
<u>Chrysophyta (Golden brown)</u>				
<i>Chrysochromulina</i>	3687	potentially ichthyotoxic - (?) toxic to fish	107.66	0.094
Subtotal	3687		107.66	0.094
<u>Bacillariophyta (Diatom)</u>				
<i>Aulacoseira</i>	728	Filter clogging	296.29	0.437
<i>Cyclotella</i>	10693	Filter clogging	727.12	0.834
<i>Cyclotella/Stephanodiscus</i>	2655	Filter clogging	142.04	0.210
<i>Navicula</i>	369		496.30	0.623

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Client ID: 232615

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	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<i>Nitzschia</i>	1249		269.78	0.126
Subtotal	15694		1,931.53	2.230
<u>Euglenophyta (Euglenoid)</u>				
<i>Euglena</i>	139	Discolouration of water	245.75	0.321
<i>Trachelomonas</i>	35	Common after flood	98.21	0.079
Subtotal	174		343.96	0.400
<u>Chlorophyta (Green)</u>				
<i>Ankistrodesmus</i>	1106		415.85	0.149
<i>Chlamydomonas</i>	1475	Taste & Odour	118.00	0.125
<i>Crucigenia</i>	5162		41.29	0.098
<i>Dictyosphaerium</i>	11799		849.52	0.176
<i>Kirchneriella</i>	6637		331.85	0.126
<i>Koliella</i>	1438	Filter clogging	21.57	0.002
<i>Monoraphidium cf</i>	2581		69.17	0.050
<i>Pediastrum</i>	1110		133.20	0.052
<i>Planctonema</i>	659		54.69	0.074
<i>Scenedesmus species 1</i>	6637		517.68	0.364
<i>Spermatozopsis</i>	737		14.00	0.028
<i>Tetraedron</i>	737		313.22	0.073
<i>Tetrastrum</i>	4093		560.74	0.703
<i>Treubaria</i>	369		23.24	0.030
Subtotal	44540		3,464.02	2.050
<u>Miscellaneous</u>				
<i>Haptophyte</i>	737		71.26	0.118
Subtotal	737		71.26	0.118

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Lims No: L23034938 Date Sampled: 24/04/2023
 Client ID: 232615 Address: [REDACTED]
 Site:
 Client: Department of Planning and Environment

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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cryptophyta (Monad)				
<i>Chroomonas</i>	2581	Common after flood	619.44	0.640
<i>Cryptomonas</i>	2581	Common after flood, Taste & Odour	1,393.74	2.451
Subtotal	5162		2,013.18	3.091

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	703600	3227.00	4.690
* Potentially Toxic Blue Green	4370	184.40	0.230
* Potentially Toxic Algae	8060	292.00	0.324
Total Algae	773600	11160.00	12.670

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.

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Coccolid Blue Green Picoplankton: *Aphanocapsa*; *Aphanothece*; *Cyanogranis*; *Cyanonephron*; *Cyanocatena*; *Gloeocapsa*; *Gloeothece* ; *Cyanodictyon*

Phycology

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REPORT

Report no: 284006

Depth : N/A

Supercedes Report No:

Chlorophyll a: NA

Microcystin equivalents: NA

Date analysed: 5/05/2023

Lims No: L23034939

Date Sampled: 24/04/2023

Analyst: [REDACTED]

Client ID: 232616

Address: [REDACTED]

Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water

Laboratory Services

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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<u>Cyanophyta (Blue green)</u>				
<i>Anabaenopsis</i>	2151	Potentially toxic	148.41	0.255
<i>Aphanocapsa</i>	11799		44.83	0.015
<i>Cyanocatena</i>	510189		1,938.71	0.722
<i>Merismopedia</i>	5863		5.86	0.049
<i>Microcystis</i>	1991	Potentially toxic, taste & odour	55.94	0.055
<i>Pseudanabaena</i>	27432		219.45	0.274
<i>Raphidiopsis raciborskii</i>	208	Potentially toxic, taste & odour	7.86	0.006
<i>Sphaerospermopsis reniformis</i>	971	Taste & Odour	38.93	0.045
<i>Spirulina</i>	13716		205.74	0.051
Subtotal	574320		2,665.73	1.472
<u>Bacillariophyta (Diatom)</u>				
<i>Aulacoseira</i>	278	Filter clogging	113.14	0.167
<i>Cyclotella</i>	5531	Filter clogging	376.10	0.431
<i>Nitzschia</i>	874		188.78	0.088
<i>Synedra</i>	139		82.56	0.076
Subtotal	6822		760.58	0.762
<u>Euglenophyta (Euglenoid)</u>				
<i>Euglena</i>	737	Discolouration of water	1,303.01	1.704
Subtotal	737		1,303.01	1.704
<u>Chlorophyta (Green)</u>				
<i>Actinastrum</i>	1475		92.92	0.030
<i>Ankistrodesmus</i>	737		277.11	0.099
<i>Chodatella</i>	369		71.21	0.036

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Lims No: L23034939

Date Sampled: 24/04/2023

Analyst: [REDACTED]

Client ID: 232616

Address: [REDACTED]

Site:

Client: Department of Planning and Environment

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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<i>Crucigenia</i>	6637		53.09	0.126
<i>Dictyosphaerium</i>	9623		692.85	0.144
<i>Kirchneriella</i>	2544		127.20	0.048
<i>Koliella</i>	737	Filter clogging	11.05	0.001
<i>Monoraphidium cf</i>	1475		39.53	0.028
<i>Oocystis</i>	369		35.05	0.037
<i>Pediastrum</i>	833		99.96	0.039
<i>Scenedesmus species 1</i>	22123		1,725.59	1.213
<i>Spermatozopsis</i>	369		7.01	0.014
<i>Tetraedron</i>	1844		783.70	0.184
<i>Treubaria</i>	737		46.43	0.061
Subtotal	49872		4,062.70	2.060
<u>Cryptophyta (Monad)</u>				
<i>Chroomonas</i>	1475	Common after flood	354.00	0.365
Subtotal	1475		354.00	0.365

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	574300	2666.00	1.470
* Potentially Toxic Blue Green	4350	212.20	0.316
* Potentially Toxic Algae	4350	212.20	0.316
Total Algae	633200	9146.00	6.360

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.

ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)

Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.

Cocoid Blue Green Picoplankton: *Aphanocapsa*; *Aphanothece*; *Cyanogranis*; *Cyanonephron*; *Cyanocatena*; *Gloeocapsa*; *Gloeothece* ; *Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[REDACTED]



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Lims No: L23034940 Date Sampled: 24/04/2023 Analyst: [REDACTED]

Client ID: 232617 Address: [REDACTED]

Site:

Client: Department of Planning and Environment

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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
<u>Cyanophyta (Blue green)</u>				
<i>Anagnostidinema</i>	590		17.81	0.010
<i>Cyanocatena</i>	913119		3,469.85	1.292
<i>Cyanodictyon</i>	2950		6.49	0.001
<i>Cyanogranis</i>	23616		70.84	0.016
<i>Dolichospermum flos-aquae</i>	624	Taste & Odour	67.76	0.144
<i>Merismopedia</i>	13274		13.27	0.111
<i>Microcystis</i>	1438	Potentially toxic, taste & odour	40.40	0.040
<i>Myxobaktron</i>	2065		36.34	0.010
<i>Planktolyngbya</i>	8112	Filter clogging	81.12	0.648
<i>Pseudanabaena</i>	6176		49.40	0.061
<i>Spirulina</i>	184		2.76	0.000
<i>Synechococcus cf</i>	5328		65.53	0.035
Subtotal	977476		3,921.57	2.368
<u>Chrysophyta (Golden brown)</u>				
<i>Dichotomococcus</i>	1106		13.82	0.009
Subtotal	1106		13.82	0.009
<u>Bacillariophyta (Diatom)</u>				
<i>Aulacoseira</i>	753	Filter clogging	306.47	0.452
<i>Cyclotella</i>	4425	Filter clogging	300.90	0.345
<i>Fragilaria</i>	35		11.83	0.012
<i>Nitzschia</i>	1450		313.20	0.146
<i>Skeletonema</i>	1475	Filter clogging	1,106.25	0.097
<i>Synedra</i>	87		51.67	0.047
<i>Urosolenia</i>	17	Filter clogging	11.98	0.015

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Subtotal	8242		2,102.30	1.114
<u>Euglenophyta (Euglenoid)</u>				
<i>Euglena</i>	87	Discolouration of water	153.81	0.201
<i>Phacus</i>	17		107.74	0.059
Subtotal	104		261.55	0.260
<u>Chlorophyta (Green)</u>				
<i>Ankistrodesmus</i>	1659		623.78	0.223
<i>Chlamydomonas</i>	737	Taste & Odour	58.96	0.062
<i>Chodatella</i>	737		142.24	0.073
<i>Crucigenia</i>	10951		87.60	0.208
<i>Kirchneriella</i>	737		36.85	0.014
<i>Koliella</i>	184	Filter clogging	2.76	0.000
<i>Monoraphidium cf</i>	4978		133.41	0.097
<i>Oocystis</i>	737		70.01	0.075
<i>Pediastrum</i>	191		22.92	0.008
<i>Planctonema</i>	52		4.31	0.005
<i>Scenedesmus species 1</i>	5254		409.81	0.288
<i>Staurastrum</i>	17		89.94	0.035
<i>Tetraedron</i>	184		78.20	0.018
Subtotal	26418		1,760.79	1.106
<u>Cryptophyta (Monad)</u>				
<i>Chroomonas</i>	1475	Common after flood	354.00	0.365
Subtotal	1475		354.00	0.365

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	977500	3922.00	2.370
* Potentially Toxic Blue Green	1440	40.40	0.040
* Potentially Toxic Algae	1440	40.40	0.040
Total Algae	1015000	8414.00	5.220

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.

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Cocoid Blue Green Picoplankton: *Aphanocapsa*; *Aphanothece*; *Cyanogranis*; *Cyanonephron*; *Cyanocatena*; *Gloeocapsa*; *Gloeothece* ; *Cyanodictyon*

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