



DEW - Department of Environment and Water  
ATTN: Claire Sims  
81-95 Waymouth Street

SA 5000 AUSTRALIA

12/04/2023

Dear Claire

Please find attached the Final Analytical Report for

**Customer Service Request:** 143419-2022-CSR-8

**Account:** 143419

**Project:**

AWQC-180173 DEW - Healthy Coorong Healthy Basin - Non Routine Event 6- 22/23

This report has also been sent to: Tim Branford

**AWQC Sample Receipt hours are Monday and Tuesday 8:30am to 8pm and Wednesday, Thursday and Friday 8:30am to 4:30pm.**

Yours sincerely,

Scott Kraft  
Customer Services Officer  
[Scott.Kraft@sawater.com.au](mailto:Scott.Kraft@sawater.com.au)  
+61 8 7424 1250





## FINAL REPORT: 359513

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This report supercedes the following issued reports: 358592

## Report Information

Project Name	AWQC-180173
Customer	DEW - Department of Environment and Water
CSR_ID	143419-2022-CSR-8

## Analytical Results

Sampling Point	351213-EPA - Murray Mouth
Sampled Date	14/03/2023 12:00:00PM
Sample Received Date	16/03/2023 9:17:18AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0328
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Algal Identification T0393(ADEL)</b>			
Other Organisms		5500 cells/mL	
<b>BLUE GREEN ALGAE</b>			
Cyanogranis		59700 cells/mL	
Snowella		490 cells/mL	
Limnothrix		12000 cells/mL	
Cyanodictyon		42500 cells/mL	
Cylindrospermopsis raciborskii		40 cells/mL	
Microcystis aeruginosa		200 cells/mL	
Dolichospermum (coiled)		206 cells/mL	
Anabaena		1140 cells/mL	
Dolichospermum (straight)		840 cells/mL	
Anabaenopsis		102 cells/mL	
Planktolyngbya		117000 cells/mL	
Sphaerospermopsis		2370 cells/mL	
Cuspidothrix		1620 cells/mL	
Planktothrix		74 cells/mL	
Dolichospermum planctonicum		32 cells/mL	
Phormidium		581 cells/mL	
Pseudanabaena		7120 cells/mL	
<b>DIATOMS</b>			
Aulacoseira		635 cells/mL	
<b>GREEN ALGAE</b>			
Gonatozygon		2310 cells/mL	
Planctonema		9260 cells/mL	



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## Analytical Results

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Sampled Date	14/03/2023 12:00:00PM
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*Sample temperature at time of receipt 11.3°C*

### Algal Biovolume T0393(ADEL)

14/03/2023

#### BLUE GREEN ALGAE

Phormidium	0.06 mm3/L
Dolichospermum planctonicum	0.01 mm3/L
Planktothrix	0.02 mm3/L
Cuspidothrix	0.09 mm3/L
Sphaerospermopsis	0.22 mm3/L
Planktolyngbya	0.58 mm3/L
Anabaenopsis	0.01 mm3/L
Dolichospermum (straight)	0.23 mm3/L
Anabaena	0.09 mm3/L
Dolichospermum (coiled)	0.05 mm3/L
Microcystis aeruginosa	0.02 mm3/L
Cylindrospermopsis raciborskii	<0.01 mm3/L
Cyanodictyon	0.02 mm3/L
Pseudanabaena	0.09 mm3/L
Limnothrix	0.14 mm3/L
Snowella	<0.01 mm3/L
Cyanogranis	0.03 mm3/L

#### DIATOMS

Aulacoseira	1.82 mm3/L
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#### GREEN ALGAE

Gonatozygon	9.48 mm3/L
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# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	1.66 mm3/L
# Total Diatom Biovolume	1.82 mm3/L



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Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.02 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	258000 cells/mL
Blue Green Algae - Total	246000 cells/mL
Diatoms - Total	635 cells/mL
Geosmin-MIB producing BGA - Total	7730 cells/mL
Green Algae - Total	11600 cells/mL
Toxin producing BGA - Total	240 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	33.8 µg/L
Phaeophytin a	0.1	12.9 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	<1 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	115 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	2.2 µg/L	
# Nitrate + Nitrite as NO3	2.3	9.75 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.80 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	17.641 µg/L	
Phosphorus-Filterable Reactive as P	0.5	5.9 µg/L	



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Sample ID	*2023-001-0328
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<b>Phosphorus - Total T0109-44(ADEL)</b>			23/03/2023
Phosphorus - Total	0.005	0.109 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	0.69 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			23/03/2023
TKN as Nitrogen	0.05	1.80 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Dissolved Organic Carbon	1	11.0 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Total Organic Carbon	1	15.5 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			20/03/2023
Alkalinity as Calcium Carbonate		121 mg/L	
Bicarbonate		147 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			20/03/2023
Conductivity	2	652 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	361 mg/L	
<b>pH T0010-01(ADEL)</b>			20/03/2023
pH		8.3 pH units	
Temperature at which pH is measured		22.1 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	22 NTU	



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Sample ID	*2023-001-0328
Status	Endorsed
Collection Type	Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			22/03/2023
Suspended Solids	1.0	29 mg/L	





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## Analytical Results

Sampling Point	11505-DEW - Mundoo Downstream
Sampled Date	14/03/2023 12:35:00PM
Sample Received Date	16/03/2023 9:13:21AM
Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0325
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

### Algal Identification T0393(ADEL)

Other Organisms	2650 cells/mL
<b>BLUE GREEN ALGAE</b>	
Cyanodictyon	41400 cells/mL
Cyanogranis	39800 cells/mL
Planktolynbya	138000 cells/mL
Limnothrix	10600 cells/mL
Snowella	2290 cells/mL
Pseudanabaena	15700 cells/mL
Anabaenopsis	82 cells/mL
Dolichospermum (coiled)	364 cells/mL
Planktothrix	120 cells/mL
Cylindrospermopsis raciborskii	72 cells/mL
Dolichospermum (straight)	394 cells/mL
Dolichospermum circinale	290 cells/mL
Anabaena	2280 cells/mL
Sphaerospermopsis	1600 cells/mL
Phormidium	2000 cells/mL
Cuspidothrix	748 cells/mL
<b>DIATOMS</b>	
Nitzschia	312 cells/mL
Cyclotella	88 cells/mL
Aulacoseira	885 cells/mL
<b>GREEN ALGAE</b>	
Crucigenia	550 cells/mL
Scenedesmus	462 cells/mL
Gonatozygon	3220 cells/mL
Planctonema	3600 cells/mL

**Sample temperature at time of receipt 11.3°C**



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Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0325
Status	Endorsed
Collection Type	Customer Collected

## Algal Biovolume T0393(ADEL)

14/03/2023

### BLUE GREEN ALGAE

Cuspidothrix	0.04 mm3/L
Phormidium	0.20 mm3/L
Sphaerospermopsis	0.15 mm3/L
Anabaena	0.18 mm3/L
Dolichospermum circinale	0.07 mm3/L
Dolichospermum (straight)	0.11 mm3/L
Cylindrospermopsis raciborskii	<0.01 mm3/L
Planktothrix	0.03 mm3/L
Dolichospermum (coiled)	0.09 mm3/L
Anabaenopsis	<0.01 mm3/L
Pseudanabaena	0.20 mm3/L
Snowella	0.02 mm3/L
Limnothrix	0.13 mm3/L
Planktolyngbya	0.69 mm3/L
Cyanogranis	0.02 mm3/L
Cyanodictyon	0.02 mm3/L

### DIATOMS

Aulacoseira	2.53 mm3/L
Cyclotella	0.04 mm3/L
Nitzschia	0.43 mm3/L

### GREEN ALGAE

Gonatozygon	13.2 mm3/L
Scenedesmus	0.12 mm3/L
Crucigenia	0.02 mm3/L

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume

Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume

1.95 mm3/L





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Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0325
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

# Total Diatom Biovolume	3.00 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.07 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	265000 cells/mL
Blue Green Algae - Total	256000 cells/mL
Diatoms - Total	1280 cells/mL
Geosmin-MIB producing BGA - Total	18000 cells/mL
Green Algae - Total	7830 cells/mL
Toxin producing BGA - Total	362 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	46.8 µg/L
Phaeophytin a	0.1	16.6 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N T0100-01(ADEL)</b>			24/03/2023
Ammonia as N	0.005	0.349 mg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	61 mg/L	
<b>Nitrate + Nitrite as N T0161-01(ADEL)</b>			03/04/2023
Nitrate + Nitrite as N	0.003	0.010 mg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		2.27 mg/L	
<b>Phosphorus - Filterable Reactive as P T0108-01(ADEL)</b>			03/04/2023
Phosphorus - Filterable Reactive as P	0.003	0.004 mg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			23/03/2023



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Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0325
Status	Endorsed
Collection Type	Customer Collected

<b>Phosphorus - Total T0109-44(ADEL)</b>			23/03/2023
Phosphorus - Total	0.005	0.134 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	0.41 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			23/03/2023
TKN as Nitrogen	0.05	2.26 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Dissolved Organic Carbon	1	12.5 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Total Organic Carbon	1	16.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		129 mg/L	
Bicarbonate		153 mg/L	
Carbonate		2 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	489 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	270 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.3 pH units	
Temperature at which pH is measured		21.8 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	30 NTU	



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Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0325
Status	Endorsed
Collection Type	Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			
Suspended Solids	1.0	43 mg/L	22/03/2023





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## Analytical Results

Sampling Point	11504-DEW - Mundoo Upstream
Sampled Date	14/03/2023 12:35:00PM
Sample Received Date	16/03/2023 9:13:34AM
Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0326
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

### Algal Identification T0393(ADEL)

Other Organisms	5950 cells/mL
<b>BLUE GREEN ALGAE</b>	
Cyanogranis	59000 cells/mL
Snowella	1590 cells/mL
Limnothrix	8950 cells/mL
Dolichospermum (straight)	210 cells/mL
Anabaenopsis	24 cells/mL
Cuspidothrix	967 cells/mL
Pseudanabaena	12400 cells/mL
Cylindrospermopsis raciborskii	80 cells/mL
Dolichospermum circinale	118 cells/mL
Anabaena	988 cells/mL
Dolichospermum planctonicum	64 cells/mL
Sphaerospermopsis	3030 cells/mL
Phormidium	2150 cells/mL
Microcystis aeruginosa	200 cells/mL
Dolichospermum (coiled)	260 cells/mL
Cyanodictyon	38700 cells/mL
Planktolynghya	131000 cells/mL
<b>DIATOMS</b>	
Aulacoseira	554 cells/mL
<b>GREEN ALGAE</b>	
Planctonema	7060 cells/mL
Gonatozygon	2770 cells/mL

*Sample temperature at time of receipt 11.3°C*

### Algal Biovolume T0393(ADEL)

14/03/2023

#### BLUE GREEN ALGAE

Phormidium	0.22 mm <sup>3</sup> /L
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Sample Received Date	16/03/2023 9:13:34AM
Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0326
Status	Endorsed
Collection Type	Customer Collected

## Algal Biovolume T0393(ADEL)

14/03/2023

Sphaerospermopsis	0.28 mm3/L
Dolichospermum planctonicum	0.03 mm3/L
Anabaena	0.08 mm3/L
Dolichospermum circinale	0.03 mm3/L
Dolichospermum (coiled)	0.07 mm3/L
Cylindrospermopsis raciborskii	<0.01 mm3/L
Pseudanabaena	0.16 mm3/L
Cuspidothrix	0.06 mm3/L
Anabaenopsis	<0.01 mm3/L
Planktolingbya	0.66 mm3/L
Dolichospermum (straight)	0.06 mm3/L
Microcystis aeruginosa	0.02 mm3/L
Cyanodictyon	0.02 mm3/L
Limnothrix	0.11 mm3/L
Snowella	0.01 mm3/L
Cyanogranis	0.03 mm3/L

### DIATOMS

Aulacoseira	1.58 mm3/L
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### GREEN ALGAE

Gonatozygon	11.4 mm3/L
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# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	1.84 mm3/L
# Total Diatom Biovolume	1.58 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.05 mm3/L

**Sample temperature at time of receipt 11.3°C**



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Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0326
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	270000 cells/mL
Blue Green Algae - Total	260000 cells/mL
Diatoms - Total	554 cells/mL
Geosmin-MIB producing BGA - Total	14700 cells/mL
Green Algae - Total	9830 cells/mL
Toxin producing BGA - Total	398 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	50.0 µg/L
Phaeophytin a	0.1	20.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N T0100-01(ADEL)</b>			24/03/2023
Ammonia as N	0.005	0.037 mg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	56 mg/L	
<b>Nitrate + Nitrite as N T0161-01(ADEL)</b>			03/04/2023
Nitrate + Nitrite as N	0.003	0.005 mg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		2.28 mg/L	
<b>Phosphorus - Filterable Reactive as P T0108-01(ADEL)</b>			03/04/2023
Phosphorus - Filterable Reactive as P	0.003	<0.003 mg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			23/03/2023
Phosphorus - Total	0.005	0.128 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	0.39 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			23/03/2023
TKN as Nitrogen	0.05	2.27 mg/L	



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## Analytical Results

Sampling Point	11504-DEW - Mundoo Upstream
Sampled Date	14/03/2023 12:35:00PM
Sample Received Date	16/03/2023 9:13:34AM
Sample Analysis Completed	5/04/2023 3:45:57PM
Sample ID	*2023-001-0326
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Dissolved Organic Carbon	1	13.0 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Total Organic Carbon	1	16.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		124 mg/L	
Bicarbonate		141 mg/L	
Carbonate		5 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	451 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	249 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.5 pH units	
Temperature at which pH is measured		21.8 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	30 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			22/03/2023
Suspended Solids	1.0	42 mg/L	



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## Analytical Results

Sampling Point	353179-EPA - Tauwichee Barrage Upstream
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:52AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0331
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

### Algal Identification T0393(ADEL)

Other Organisms	750 cells/mL
<b>BLUE GREEN ALGAE</b>	
Cyanonephron	3200 cells/mL
Dolichospermum (straight)	236 cells/mL
Anabaenopsis	320 cells/mL
Planktolyngbya	135000 cells/mL
Snowella	340 cells/mL
Dolichospermum circinale	1100 cells/mL
Phormidium	1020 cells/mL
Cuspidothrix	2990 cells/mL
Anabaena	684 cells/mL
Sphaerospermopsis	5530 cells/mL
Cyanogranis	19200 cells/mL
Cylindrospermopsis raciborskii	710 cells/mL
Cyanocatenula	20300 cells/mL
Dolichospermum (coiled)	590 cells/mL
Pseudanabaena	1860 cells/mL
Cyanodictyon	150000 cells/mL
Limnospira	750 cells/mL
<b>DIATOMS</b>	
Nitzschia	180 cells/mL
Aulacoseira	680 cells/mL
<b>GREEN ALGAE</b>	
Crucigenia	320 cells/mL
Tetrastrum	280 cells/mL
Scenedesmus	467 cells/mL
Oocystis	517 cells/mL
Gonatozygon	1010 cells/mL
Planctonema	5850 cells/mL



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## Analytical Results

Sampling Point	353179-EPA - Tauwitschere Barrage Upstream
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:52AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0331
Status	Endorsed
Collection Type	Customer Collected

*Sample temperature at time of receipt 11.3°C*

### Algal Biovolume T0393(ADEL)

14/03/2023

#### BLUE GREEN ALGAE

Limnothrix	<0.01 mm3/L
Cyanodictyon	0.08 mm3/L
Pseudanabaena	0.02 mm3/L
Dolichospermum (coiled)	0.15 mm3/L
Cyanocatena	<0.01 mm3/L
Cylindrospermopsis raciborskii	0.03 mm3/L
Cyanogranis	<0.01 mm3/L
Sphaerospermopsis	0.51 mm3/L
Anabaena	0.05 mm3/L
Cuspidothrix	0.17 mm3/L
Phormidium	0.10 mm3/L
Dolichospermum circinale	0.28 mm3/L
Snowella	<0.01 mm3/L
Planktolyngbya	0.68 mm3/L
Anabaenopsis	0.03 mm3/L
Dolichospermum (straight)	0.06 mm3/L
Cyanonephron	0.02 mm3/L

#### DIATOMS

Aulacoseira	1.94 mm3/L
Nitzschia	0.25 mm3/L

#### GREEN ALGAE

Gonatozygon	4.15 mm3/L
Oocystis	0.16 mm3/L
Scenedesmus	0.12 mm3/L
Crucigenia	<0.01 mm3/L



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## Analytical Results

Sampling Point	353179-EPA - Tauwichee Barrage Upstream
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:52AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0331
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

# Algal Biovolume Comment	Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.
# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	2.18 mm3/L
# Total Diatom Biovolume	2.19 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.31 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	353000 cells/mL
Blue Green Algae - Total	344000 cells/mL
Diatoms - Total	860 cells/mL
Geosmin-MIB producing BGA - Total	3980 cells/mL
Green Algae - Total	8440 cells/mL
Toxin producing BGA - Total	1810 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	41.3 µg/L
Phaeophytin a	0.1	13.0 µg/L

## Inorganic Chemistry - Nutrients

### Sample temperature at time of receipt 11.3°C

### Ammonia as N (ADEL)

04/04/2023

# Ammonia as N	1	2 µg/L
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### Chloride T0104-02(ADEL)

16/03/2023

Chloride	4.0	149 mg/L
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## Analytical Results

Sampling Point	353179-EPA - Tauwichee Barrage Upstream
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:52AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0331
Status	Endorsed
Collection Type	Customer Collected

<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	1.7 µg/L	
# Nitrate + Nitrite as NO3	2.3	7.53 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.40 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	19.734 µg/L	
Phosphorus-Filterable Reactive as P	0.5	6.6 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.049 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	0.64 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	1.40 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Dissolved Organic Carbon	1	11.3 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Total Organic Carbon	1	15.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			20/03/2023
Alkalinity as Calcium Carbonate		113 mg/L	
Bicarbonate		133 mg/L	
Carbonate		2 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			20/03/2023



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## Analytical Results

Sampling Point	353179-EPA - Tauwitschere Barrage Upstream
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:52AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0331
Status	Endorsed
Collection Type	Customer Collected

### Conductivity & Total Dissolved Solids T0016-01(ADEL)

20/03/2023

Conductivity	2	771 $\mu$ S/cm
Note		Conductivity measurement is corrected to 25°C
Total Dissolved Solids (by EC)	1	427 mg/L

### pH T0010-01(ADEL)

20/03/2023

pH	8.3 pH units
Temperature at which pH is measured	22.1 °C

### Turbidity T0018-01(ADEL)

17/03/2023

Turbidity	0.1	23 NTU
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### Inorganic Chemistry - Waste Water

LOR

Result

Test Start Date

*Sample temperature at time of receipt 11.3°C*

### Suspended Solids T0160-01(ADEL)

23/03/2023

Suspended Solids	1.0	41 mg/L
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## Analytical Results

Sampling Point	353177-EPA - Tauwitschere Barrage DS
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:36AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0332
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

### Algal Identification T0393(ADEL)

Other Organisms	1320 cells/mL
<b>BLUE GREEN ALGAE</b>	
Snowella	590 cells/mL
Planktolynghya	205000 cells/mL
Cylindrospermopsis raciborskii	1400 cells/mL
Anabaena	4460 cells/mL
Sphaerospermopsis	3630 cells/mL
Anabaenopsis	208 cells/mL
Dolichospermum (coiled)	532 cells/mL
Phormidium	566 cells/mL
Dolichospermum circinale	1200 cells/mL
Planktothrix perornata_f_attenuata	88 cells/mL
Dolichospermum (straight)	186 cells/mL
Cyanodictyon	140000 cells/mL
Cyanodictyon	55800 cells/mL
Cyanogranis	37200 cells/mL
Pseudanabaena	3000 cells/mL
<b>DIATOMS</b>	
Nitzschia	325 cells/mL
Aulacoseira	250 cells/mL
<b>GREEN ALGAE</b>	
Tetrastrum	160 cells/mL
Dictyosphaerium	150 cells/mL
Pediastrum	260 cells/mL
Crucigenia	520 cells/mL
Oocystis	1080 cells/mL
Scenedesmus	650 cells/mL
Gonatozygon	1680 cells/mL
Planctonema	7450 cells/mL



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## Analytical Results

Sampling Point	353177-EPA - Tauwichee Barrage DS
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:36AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0332
Status	Endorsed
Collection Type	Customer Collected

*Sample temperature at time of receipt 11.3°C*

### Algal Biovolume T0393(ADEL)

14/03/2023

#### BLUE GREEN ALGAE

Cyanodictyon	0.07 mm3/L
Cyanogranis	0.02 mm3/L
Dolichospermum (straight)	0.05 mm3/L
Planktothrix perornata_f_attenuata	0.03 mm3/L
Dolichospermum circinale	0.30 mm3/L
Phormidium	0.06 mm3/L
Dolichospermum (coiled)	0.14 mm3/L
Anabaenopsis	0.02 mm3/L
Sphaerospermopsis	0.34 mm3/L
Anabaena	0.34 mm3/L
Cylindrospermopsis raciborskii	0.06 mm3/L
Pseudanabaena	0.04 mm3/L
Planktolyngbya	1.02 mm3/L
Snowella	<0.01 mm3/L

#### DIATOMS

Aulacoseira	0.72 mm3/L
Nitzschia	0.45 mm3/L

#### GREEN ALGAE

Gonatozygon	6.90 mm3/L
Scenedesmus	0.16 mm3/L
Oocystis	0.32 mm3/L
Crucigenia	0.02 mm3/L
Pediastrum	0.31 mm3/L
Dictyosphaerium	<0.01 mm3/L

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.



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## Analytical Results

Sampling Point	353177-EPA - Tauwichee Barrage DS
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:36AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0332
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	2.49 mm3/L
# Total Diatom Biovolume	1.17 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.36 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	466000 cells/mL
Blue Green Algae - Total	454000 cells/mL
Diatoms - Total	575 cells/mL
Geosmin-MIB producing BGA - Total	4850 cells/mL
Green Algae - Total	12000 cells/mL
Toxin producing BGA - Total	2600 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	37.8 µg/L
Phaeophytin a	0.1	13.1 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	6 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	245 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	19.8 µg/L	
# Nitrate + Nitrite as NO3	2.3	87.7 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.42 mg/L	



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## Analytical Results

Sampling Point	353177-EPA - Tauwitschere Barrage DS
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:36AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0332
Status	Endorsed
Collection Type	Customer Collected

<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	15.249 µg/L	
Phosphorus-Filterable Reactive as P	0.5	5.1 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.119 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	0.66 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	1.40 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Dissolved Organic Carbon	1	12.3 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			21/03/2023
Total Organic Carbon	1	17.5 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		117 mg/L	
Bicarbonate		125 mg/L	
Carbonate		9 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	1160 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	644 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.9 pH units	



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## Analytical Results

Sampling Point	353177-EPA - Tauwitschere Barrage DS
Sampled Date	14/03/2023 1:15:00PM
Sample Received Date	16/03/2023 9:17:36AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0332
Status	Endorsed
Collection Type	Customer Collected

<b>pH T0010-01(ADEL)</b>			16/03/2023
Temperature at which pH is measured		22.3 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	23 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
Suspended Solids	1.0	41 mg/L	



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**Analytical Results**

Sampling Point	31522-EPA - Mark Point
Sampled Date	14/03/2023 2:00:00PM
Sample Received Date	16/03/2023 9:15:44AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0327
Status	Endorsed
Collection Type	Customer Collected

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Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

**Algal Identification T0393(ADEL)**

Other Organisms	1820 cells/mL
<b>BLUE GREEN ALGAE</b>	
Anabaenopsis	940 cells/mL
Sphaerospermopsis	1920 cells/mL
Cylindrospermopsis raciborskii	180 cells/mL
Cuspidothrix	3180 cells/mL
Pseudanabaena	2080 cells/mL
Aphanocapsa	54300 cells/mL
Anabaena	1040 cells/mL
Planktolyngbya	20500 cells/mL
<b>GREEN ALGAE</b>	
Crucigenia	900 cells/mL
Monoraphidium sp_2_(short)	6000 cells/mL
Phytoflagellates small_spp	44700 cells/mL
Chlorella	17000 cells/mL
Oocystis sp_1_(small_cells)	3400 cells/mL
Oocystis	220 cells/mL
Scenedesmus	180 cells/mL
Planctonema	11300 cells/mL
Monoraphidium	770 cells/mL

**Sample temperature at time of receipt 11.3°C**

**Algal Biovolume T0393(ADEL)**

14/03/2023

<b>BLUE GREEN ALGAE</b>	
Anabaenopsis	0.09 mm3/L
Sphaerospermopsis	0.18 mm3/L
Cylindrospermopsis raciborskii	<0.01 mm3/L
Cuspidothrix	0.18 mm3/L
Pseudanabaena	0.03 mm3/L



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## Analytical Results

Sampling Point	31522-EPA - Mark Point
Sampled Date	14/03/2023 2:00:00PM
Sample Received Date	16/03/2023 9:15:44AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0327
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

Planktolyngbya	0.10 mm3/L
Anabaena	0.08 mm3/L
Aphanocapsa	0.03 mm3/L

#### GREEN ALGAE

Monoraphidium	0.69 mm3/L
Scenedesmus	0.04 mm3/L
Oocystis	0.07 mm3/L
Oocystis sp_1_(small_cells)	0.59 mm3/L
Chlorella	0.76 mm3/L
Phytoplankton small_spp	3.50 mm3/L
Monoraphidium sp_2_(short)	0.32 mm3/L
Crucigenia	0.03 mm3/L

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.69 mm3/L
# Total Diatom Biovolume	0.00 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	<0.01 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	169000 cells/mL
Blue Green Algae - Total	84100 cells/mL
Diatoms - Total	0 cells/mL
Geosmin-MIB producing BGA - Total	2080 cells/mL
Green Algae - Total	84500 cells/mL
Toxin producing BGA - Total	180 cells/mL



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## Analytical Results

Sampling Point	31522-EPA - Mark Point
Sampled Date	14/03/2023 2:00:00PM
Sample Received Date	16/03/2023 9:15:44AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0327
Status	Endorsed
Collection Type	Customer Collected

### Sample temperature at time of receipt 11.3°C

#### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	17.5 µg/L
Phaeophytin a	0.1	12.8 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	4 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	4800 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	3.2 µg/L	
# Nitrate + Nitrite as NO3	2.3	14.2 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.27 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	13.156 µg/L	
Phosphorus-Filterable Reactive as P	0.5	4.4 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.036 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	1.48 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	1.27 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	13.2 mg/L	



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## Analytical Results

Sampling Point	31522-EPA - Mark Point
Sampled Date	14/03/2023 2:00:00PM
Sample Received Date	16/03/2023 9:15:44AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0327
Status	Endorsed
Collection Type	Customer Collected

<b>Total Organic Carbon T0158-07(ADEL)</b>		31/03/2023
Total Organic Carbon	1	15.2 mg/L

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		136 mg/L	
Bicarbonate		156 mg/L	
Carbonate		5 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	14300 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	8500 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.4 pH units	
Temperature at which pH is measured		22.3 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	7.6 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Suspended Solids T0160-01(ADEL)</b>			22/03/2023
Suspended Solids	1.0	2 mg/L	



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## Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	14/03/2023 3:05:00PM
Sample Received Date	16/03/2023 9:15:57AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0314
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

### Algal Identification T0393(ADEL)

Other Organisms	360 cells/mL
<b>BLUE GREEN ALGAE</b>	
Phormidium narrow spp	21 cells/mL
Anabaenopsis	31 cells/mL
Pseudanabaena	35 cells/mL
Planktolyngbya	860 cells/mL
<b>DIATOMS</b>	
Synedra	2 cells/mL
<b>DINOFLAGELLATES</b>	
Protoperdinium	2 cells/mL
PERIDINIACEAE	3 cells/mL
<b>GREEN ALGAE</b>	
Planctonema	168 cells/mL
Scenedesmus	8 cells/mL
Crucigenia	14 cells/mL
Phytoflagellates small_spp	13000 cells/mL
Chlorella	6000 cells/mL

*Sample temperature at time of receipt 11.3°C*

### Algal Biovolume T0393(ADEL)

14/03/2023

<b>BLUE GREEN ALGAE</b>	
Phormidium narrow spp	<0.01 mm3/L
Anabaenopsis	<0.01 mm3/L
Pseudanabaena	<0.01 mm3/L
Planktolyngbya	<0.01 mm3/L
<b>DIATOMS</b>	
Synedra	<0.01 mm3/L
<b>GREEN ALGAE</b>	
Scenedesmus	<0.01 mm3/L



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## Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	14/03/2023 3:05:00PM
Sample Received Date	16/03/2023 9:15:57AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0314
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

Crucigenia	<0.01 mm3/L
Phytoflagellates small_spp	1.02 mm3/L
Chlorella	0.27 mm3/L
# Algal Biovolume Comment	Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.
# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	<0.04 mm3/L
# Total Diatom Biovolume	<0.01 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### Sample temperature at time of receipt 11.3°C

#### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	20100 cells/mL
Blue Green Algae - Total	947 cells/mL
Diatoms - Total	2 cells/mL
Geosmin-MIB producing BGA - Total	56 cells/mL
Green Algae - Total	19200 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

#### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	11.8 µg/L
Phaeophytin a	0.1	9.90 µg/L

## Inorganic Chemistry - Nutrients

LOR

Result

Test Start Date

### Sample temperature at time of receipt 11.3°C

#### Ammonia as N (ADEL)

04/04/2023



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## Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	14/03/2023 3:05:00PM
Sample Received Date	16/03/2023 9:15:57AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0314
Status	Endorsed
Collection Type	Customer Collected

<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	60 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	9190 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	6.0 µg/L	
# Nitrate + Nitrite as NO3	2.3	26.6 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.39 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	12.259 µg/L	
Phosphorus-Filterable Reactive as P	0.5	4.1 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.042 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	1.24 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	1.38 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	15.3 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	16.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		153 mg/L	



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## Analytical Results

Sampling Point	31523-EPA - Long Point
Sampled Date	14/03/2023 3:05:00PM
Sample Received Date	16/03/2023 9:15:57AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0314
Status	Endorsed
Collection Type	Customer Collected

### Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 17/03/2023

Bicarbonate	154 mg/L
Carbonate	16 mg/L
Hydroxide	0 mg/L

### Conductivity & Total Dissolved Solids T0016-01(ADEL) 17/03/2023

Conductivity	2	25600 µS/cm
Note		Conductivity measurement is corrected to 25°C
Total Dissolved Solids (by EC)	1	16100 mg/L

### pH T0010-01(ADEL) 17/03/2023

pH	8.6 pH units
Temperature at which pH is measured	21.9 °C

### Turbidity T0018-01(ADEL) 17/03/2023

Turbidity	0.1	3.1 NTU
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### Inorganic Chemistry - Waste Water LOR Result Test Start Date

*Sample temperature at time of receipt 11.3°C*

### Suspended Solids T0160-01(ADEL) 22/03/2023

Suspended Solids	1.0	<1 mg/L
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**Analytical Results**

Sampling Point	53032-EPA - Nooneameena
Sampled Date	14/03/2023 3:45:00PM
Sample Received Date	16/03/2023 9:18:07AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0334
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

**Algal Identification T0393(ADEL)**

<b>DIATOMS</b>			
Synedra		154 cells/mL	
Meridion		12 cells/mL	
Amphiprora_(= _Entomoneis)		2 cells/mL	
Nitzschia		60 cells/mL	
Navicula		10 cells/mL	
<b>GREEN ALGAE</b>			
Tetraselmis		40 cells/mL	
Phytoflagellates		20 cells/mL	
Chlorella		2800 cells/mL	

**Sample temperature at time of receipt 11.3°C**

**Algal Biovolume T0393(ADEL)**

14/03/2023

<b>DIATOMS</b>			
Synedra		0.11 mm3/L	
Amphiprora_(= _Entomoneis)		0.03 mm3/L	
Nitzschia		0.08 mm3/L	
Navicula		0.01 mm3/L	
<b>GREEN ALGAE</b>			
Chlorella		0.13 mm3/L	
# Algal Biovolume Comment		Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.	
# Total Algae Biovolume		Not Calculated	mm3/L
# Total Blue_Green Algae Biovolume		0.00	mm3/L
# Total Diatom Biovolume		Not Calculated	mm3/L
# Total Green Algae Biovolume		Not Calculated	mm3/L





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## Analytical Results

Sampling Point	53032-EPA - Nooneameena
Sampled Date	14/03/2023 3:45:00PM
Sample Received Date	16/03/2023 9:18:07AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0334
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

Total Toxic BGA Biovolume 0.00 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	3100 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	238 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	2860 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	1.09 µg/L
Phaeophytin a	0.1	0.71 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	6 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	16700 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	1.7 µg/L	
# Nitrate + Nitrite as NO3	2.3	7.53 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.52 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	22.425 µg/L	
Phosphorus-Filterable Reactive as P	0.5	7.5 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023



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## Analytical Results

Sampling Point	53032-EPA - Nooneameena
Sampled Date	14/03/2023 3:45:00PM
Sample Received Date	16/03/2023 9:18:07AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0334
Status	Endorsed
Collection Type	Customer Collected

<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.016 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	0.85 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	1.52 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	16.6 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	16.9 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		161 mg/L	
Bicarbonate		190 mg/L	
Carbonate		3 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	47100 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	32600 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.3 pH units	
Temperature at which pH is measured		22.2 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	1.7 NTU	



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**Analytical Results**

Sampling Point	53032-EPA - Nooneena
Sampled Date	14/03/2023 3:45:00PM
Sample Received Date	16/03/2023 9:18:07AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0334
Status	Endorsed
Collection Type	Customer Collected

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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<hr/>			
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
Suspended Solids	1.0	6 mg/L	



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## Analytical Results

Sampling Point	31524-EPA - Bonneys
Sampled Date	14/03/2023 4:10:00PM
Sample Received Date	16/03/2023 9:16:09AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0329
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

### Algal Identification T0393(ADEL)

#### CRYPTOPHYTES

Cryptomonads	30 cells/mL
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#### DIATOMS

Navicula	20 cells/mL
Thalassiosira	260 cells/mL
Pennate diatoms	170 cells/mL
Nitzschia small_spp	130 cells/mL
Meridion	6 cells/mL
Amphiprora_(= _Entomoneis)	4 cells/mL
Nitzschia	2 cells/mL

#### DINOFLAGELLATES

Oxyrrhis	10 cells/mL
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#### GREEN ALGAE

Phytoflagellates	40 cells/mL
Tetraselmis	10 cells/mL

Organism - Comment	Thalassiosira - The identification for this organism is tentative only.
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**Sample temperature at time of receipt 11.3°C**

### Algal Biovolume T0393(ADEL)

14/03/2023

#### CRYPTOPHYTES

Cryptomonads	<0.01 mm3/L
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#### DIATOMS

Nitzschia	<0.01 mm3/L
Amphiprora_(= _Entomoneis)	0.06 mm3/L
Nitzschia small_spp	0.02 mm3/L
Navicula	0.02 mm3/L



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## Analytical Results

Sampling Point	31524-EPA - Bonneys
Sampled Date	14/03/2023 4:10:00PM
Sample Received Date	16/03/2023 9:16:09AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0329
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

14/03/2023

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	Not Calculated mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

*Sample temperature at time of receipt 11.3°C*

### Algal Count - Total T0393(ADEL)

14/03/2023

Algae - Total	682 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	592 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	50 cells/mL
Toxin producing BGA - Total	0 cells/mL

*Sample temperature at time of receipt 11.3°C*

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	4.25 µg/L
Phaeophytin a	0.1	3.05 µg/L

### Inorganic Chemistry - Nutrients

LOR

Result

Test Start Date

*Sample temperature at time of receipt 11.3°C*

### Ammonia as N (ADEL)

04/04/2023

# Ammonia as N	1	79 µg/L
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### Chloride T0104-02(ADEL)

16/03/2023

Chloride	4.0	19500 mg/L
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## Analytical Results

Sampling Point	31524-EPA - Bonneys
Sampled Date	14/03/2023 4:10:00PM
Sample Received Date	16/03/2023 9:16:09AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0329
Status	Endorsed
Collection Type	Customer Collected

<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	13.8 µg/L	
# Nitrate + Nitrite as NO3	2.3	61.1 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		2.07 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	26.611 µg/L	
Phosphorus-Filterable Reactive as P	0.5	8.9 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.050 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	0.52 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	2.06 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	18.3 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	18.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		195 mg/L	
Bicarbonate		238 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023



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## Analytical Results

Sampling Point	31524-EPA - Bonneys
Sampled Date	14/03/2023 4:10:00PM
Sample Received Date	16/03/2023 9:16:09AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0329
Status	Endorsed
Collection Type	Customer Collected

### Conductivity & Total Dissolved Solids T0016-01(ADEL)

17/03/2023

Conductivity	2	52600 $\mu$ S/cm
Note		Conductivity measurement is corrected to 25°C
Total Dissolved Solids (by EC)	1	37300 mg/L

### pH T0010-01(ADEL)

17/03/2023

pH	8.0 pH units
Temperature at which pH is measured	21.9 °C

### Turbidity T0018-01(ADEL)

17/03/2023

Turbidity	0.1	2.6 NTU
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### Inorganic Chemistry - Waste Water

LOR

Result

Test Start Date

*Sample temperature at time of receipt 11.3°C*

### Suspended Solids T0160-01(ADEL)

23/03/2023

Suspended Solids	1.0	<1 mg/L
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**Analytical Results**

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	14/03/2023 4:50:00PM
Sample Received Date	16/03/2023 9:14:12AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0321
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

**Algal Identification T0393(ADEL)**

<b>CRYPTOPHYTES</b>			
Cryptomonas		17 cells/mL	
<b>DIATOMS</b>			
PENNALES		550 cells/mL	
Nitzschia		33 cells/mL	
Navicula		67 cells/mL	
<b>GREEN ALGAE</b>			
Chlorella		444000 cells/mL	
Unicellular green algae		34000 cells/mL	

*Sample temperature at time of receipt 11.3°C*

**Algal Biovolume T0393(ADEL)**

14/03/2023

<b>CRYPTOPHYTES</b>			
Cryptomonas		0.02 mm3/L	
<b>DIATOMS</b>			
PENNALES		0.16 mm3/L	
Nitzschia		0.05 mm3/L	
Navicula		0.08 mm3/L	
<b>GREEN ALGAE</b>			
Chlorella		20.0 mm3/L	
# Algal Biovolume Comment		Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.	
# Total Algae Biovolume		Not Calculated mm3/L	
# Total Blue_Green Algae Biovolume		0.00 mm3/L	
# Total Diatom Biovolume		0.29 mm3/L	
# Total Green Algae Biovolume		Not Calculated mm3/L	





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## Analytical Results

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	14/03/2023 4:50:00PM
Sample Received Date	16/03/2023 9:14:12AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0321
Status	Endorsed
Collection Type	Customer Collected

<b>Algal Biovolume T0393(ADEL)</b>	14/03/2023
Total Toxic BGA Biovolume	0.00 mm3/L

*Sample temperature at time of receipt 11.3°C*

<b>Algal Count - Total T0393(ADEL)</b>	14/03/2023
Algae - Total	479000 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	650 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	478000 cells/mL
Toxin producing BGA - Total	0 cells/mL

*Sample temperature at time of receipt 11.3°C*

<b>Chlorophyll a &amp; Phaeophytin a T0380-02(ADEL)</b>	16/03/2023
Chlorophyll a	0.1 25.1 µg/L
Phaeophytin a	0.1 12.4 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	67 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	32300 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	10.8 µg/L	
# Nitrate + Nitrite as NO3	2.3	47.8 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		2.84 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	9.867 µg/L	
Phosphorus-Filterable Reactive as P	0.5	3.3 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023



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## Analytical Results

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	14/03/2023 4:50:00PM
Sample Received Date	16/03/2023 9:14:12AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0321
Status	Endorsed
Collection Type	Customer Collected

<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.066 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	1.60 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	2.83 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	20.1 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	22.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		196 mg/L	
Bicarbonate		239 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	76300 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	59600 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.1 pH units	
Temperature at which pH is measured		22.3 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	7.0 NTU	



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**Analytical Results**

Sampling Point	31512-EPA - McGrath Flat North
Sampled Date	14/03/2023 4:50:00PM
Sample Received Date	16/03/2023 9:14:12AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0321
Status	Endorsed
Collection Type	Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			
Suspended Solids	1.0	<1 mg/L	22/03/2023





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**Analytical Results**

Sampling Point	31528-EPA - Salt Creek Outlet
Sampled Date	15/03/2023 9:00:00AM
Sample Received Date	16/03/2023 9:16:58AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0330
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

**Algal Identification T0393(ADEL)**

<b>DIATOMS</b>			
Amphiprora_(=Entomoneis)		2 cells/mL	
<b>DINOFLAGELLATES</b>			
PERIDINIACEAE		32 cells/mL	
Gymnodinioids		6 cells/mL	
Heterocapsa		300 cells/mL	
Oxyrrhis		100 cells/mL	
<b>GREEN ALGAE</b>			
Unicellular green algae		323000 cells/mL	
Chlorella		662000 cells/mL	
Phytoflagellates		9670 cells/mL	

*Sample temperature at time of receipt 11.3°C*

**Algal Biovolume T0393(ADEL)**

15/03/2023

<b>DIATOMS</b>			
Amphiprora_(=Entomoneis)		0.03 mm3/L	
<b>GREEN ALGAE</b>			
Chlorella		29.8 mm3/L	
# Algal Biovolume Comment		Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.	
# Total Algae Biovolume		Not Calculated	mm3/L
# Total Blue_Green Algae Biovolume		0.00	mm3/L
# Total Diatom Biovolume		0.03	mm3/L
# Total Green Algae Biovolume		Not Calculated	mm3/L
Total Toxic BGA Biovolume		0.00	mm3/L





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## Analytical Results

Sampling Point	31528-EPA - Salt Creek Outlet
Sampled Date	15/03/2023 9:00:00AM
Sample Received Date	16/03/2023 9:16:58AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0330
Status	Endorsed
Collection Type	Customer Collected

### Sample temperature at time of receipt 11.3°C

#### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	995000 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	2 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	995000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

#### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	76.7 µg/L
Phaeophytin a	0.1	25.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	46 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	40600 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	6.3 µg/L	
# Nitrate + Nitrite as NO3	2.3	27.9 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		4.45 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	3.887 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.3 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.148 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	5.95 mg/L	



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## Analytical Results

Sampling Point	31528-EPA - Salt Creek Outlet
Sampled Date	15/03/2023 9:00:00AM
Sample Received Date	16/03/2023 9:16:58AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0330
Status	Endorsed
Collection Type	Customer Collected

<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	4.44 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			28/03/2023
Dissolved Organic Carbon	1	23.0 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			28/03/2023
Total Organic Carbon	1	29.1 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			16/03/2023
Alkalinity as Calcium Carbonate		238 mg/L	
Bicarbonate		290 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			16/03/2023
Conductivity	2	98000 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	82900 mg/L	
<b>pH T0010-01(ADEL)</b>			16/03/2023
pH		8.1 pH units	
Temperature at which pH is measured		22.3 °C	
<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	14 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			



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**Analytical Results**

Sampling Point	31528-EPA - Salt Creek Outlet
Sampled Date	15/03/2023 9:00:00AM
Sample Received Date	16/03/2023 9:16:58AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0330
Status	Endorsed
Collection Type	Customer Collected

**Suspended Solids T0160-01(ADEL)**

23/03/2023

Suspended Solids	1.0	5 mg/L
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**Analytical Results**

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	15/03/2023 9:05:00AM
Sample Received Date	16/03/2023 9:13:59AM
Sample Analysis Completed	6/04/2023 5:08:21PM
Sample ID	*2023-001-0318
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*  
**Algal Identification T0393(ADEL)**

<b>DIATOMS</b>			
Synedra		60 cells/mL	
Pennate diatoms		10 cells/mL	
Navicula		10 cells/mL	
Amphiprora_(= _Entomoneis)		6 cells/mL	
<b>DINOFLAGELLATES</b>			
Heterocapsa		610 cells/mL	
Oxyrrhis		220 cells/mL	
PERIDINIACEAE		30 cells/mL	
<b>GREEN ALGAE</b>			
Unicellular green algae		220000 cells/mL	
Chlorella		411000 cells/mL	
Phytoflagellates		9800 cells/mL	

*Sample temperature at time of receipt 11.3°C*  
**Algal Biovolume T0393(ADEL)**

15/03/2023

<b>DIATOMS</b>			
Synedra		0.04 mm3/L	
Amphiprora_(= _Entomoneis)		0.09 mm3/L	
Navicula		0.01 mm3/L	
<b>GREEN ALGAE</b>			
Chlorella		18.5 mm3/L	
# Algal Biovolume Comment		Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.	
# Total Algae Biovolume		Not Calculated	mm3/L
# Total Blue_Green Algae Biovolume		0.00	mm3/L





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## Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	15/03/2023 9:05:00AM
Sample Received Date	16/03/2023 9:13:59AM
Sample Analysis Completed	6/04/2023 5:08:21PM
Sample ID	*2023-001-0318
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

15/03/2023

# Total Diatom Biovolume	Not Calculated mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	642000 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	86 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	641000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	39.4 µg/L
Phaeophytin a	0.1	12.4 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N T0100-01(ADEL)</b>			
Ammonia as N	0.005	0.039 mg/L	
<b>Chloride T0104-02(ADEL)</b>			
Chloride	4.0	48800 mg/L	20/03/2023
<b>Nitrate + Nitrite as N (ADEL)</b>			
# Nitrate + Nitrite as N	0.5	14.2 µg/L	04/04/2023
# Nitrate + Nitrite as NO3	2.3	62.9 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			
Nitrogen - Total		5.79 mg/L	16/03/2023
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			
# Phosphorus -Filterable Reactive as PO4	1.5	4.186 µg/L	04/04/2023



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## FINAL REPORT: 359513

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This report supercedes the following issued reports: 358592

## Analytical Results

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	15/03/2023 9:05:00AM
Sample Received Date	16/03/2023 9:13:59AM
Sample Analysis Completed	6/04/2023 5:08:21PM
Sample ID	*2023-001-0318
Status	Endorsed
Collection Type	Customer Collected

<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
Phosphorus-Filterable Reactive as P	0.5	1.4 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			23/03/2023
Phosphorus - Total	0.005	0.060 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	8.81 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			23/03/2023
TKN as Nitrogen	0.05	5.78 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			28/03/2023
Dissolved Organic Carbon	1	25.0 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			28/03/2023
Total Organic Carbon	1	32.7 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		254 mg/L	
Bicarbonate		310 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	109000 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	95800 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		7.8 pH units	
Temperature at which pH is measured		21.9 °C	



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Email: [awqc@sawater.com.au](mailto:awqc@sawater.com.au)

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**Analytical Results**

Sampling Point	31511-EPA - 3.2km South Salt Creek
Sampled Date	15/03/2023 9:05:00AM
Sample Received Date	16/03/2023 9:13:59AM
Sample Analysis Completed	6/04/2023 5:08:21PM
Sample ID	*2023-001-0318
Status	Endorsed
Collection Type	Customer Collected

<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
Turbidity	0.1	14 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
Suspended Solids	1.0	40 mg/L	





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## Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	15/03/2023 9:20:00AM
Sample Received Date	16/03/2023 9:15:03AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0319
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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### *Sample temperature at time of receipt 11.3°C*

#### Algal Identification T0393(ADEL)

##### DINOFLAGELLATES

PERIDINIACEAE	410 cells/mL
Gymnodinioids	18 cells/mL
Oxyrrhis	22 cells/mL
Heterocapsa	120 cells/mL

##### GREEN ALGAE

Chlorella	1330000 cells/mL
Unicellular green algae	423000 cells/mL

### *Sample temperature at time of receipt 11.3°C*

#### Algal Biovolume T0393(ADEL)

15/03/2023

##### GREEN ALGAE

Chlorella	59.8 mm3/L
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##### # Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	0.00 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### *Sample temperature at time of receipt 11.3°C*

#### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	1750000 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	0 cells/mL



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## Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	15/03/2023 9:20:00AM
Sample Received Date	16/03/2023 9:15:03AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0319
Status	Endorsed
Collection Type	Customer Collected

<b>Algal Count - Total T0393(ADEL)</b>	15/03/2023
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	1750000 cells/mL
Toxin producing BGA - Total	0 cells/mL

<b>Sample temperature at time of receipt 11.3°C</b>	
<b>Chlorophyll a &amp; Phaeophytin a T0380-02(ADEL)</b>	16/03/2023
Chlorophyll a	0.1 75.9 µg/L
Phaeophytin a	0.1 25.8 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	43 µg/L	
<b>Chloride T0104-02(ADEL)</b>			23/03/2023
Chloride	4.0	40700 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	8.4 µg/L	
# Nitrate + Nitrite as NO <sub>3</sub>	2.3	37.2 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		4.30 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO <sub>4</sub>	1.5	4.784 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.6 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.015 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	8.73 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	4.29 mg/L	



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## Analytical Results

Sampling Point	31517-EPA - 1.8km West Salt Creek
Sampled Date	15/03/2023 9:20:00AM
Sample Received Date	16/03/2023 9:15:03AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0319
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			28/03/2023
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Dissolved Organic Carbon	1	23.1 mg/L
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<b>Total Organic Carbon T0158-07(ADEL)</b>			28/03/2023
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Total Organic Carbon	1	31.5 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
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Alkalinity as Calcium Carbonate		236 mg/L
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Bicarbonate		288 mg/L
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Carbonate		0 mg/L
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Hydroxide		0 mg/L
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<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
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Conductivity	2	98300 µS/cm
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Note		Conductivity measurement is corrected to 25°C
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Total Dissolved Solids (by EC)	1	83200 mg/L
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<b>pH T0010-01(ADEL)</b>			17/03/2023
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pH		8.1 pH units
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Temperature at which pH is measured		22.0 °C
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<b>Turbidity T0018-01(ADEL)</b>			17/03/2023
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Turbidity	0.1	12 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
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Suspended Solids	1.0	24 mg/L
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## Analytical Results

Sampling Point	315191-EPA - Morella Creek @ guage
Sampled Date	15/03/2023 9:25:00AM
Sample Received Date	16/03/2023 9:15:31AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0323
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

### Algal Identification T0393(ADEL)

#### BLUE GREEN ALGAE

Merismopedia 240 cells/mL

#### CRYPTOPHYTES

Cryptomonas 10 cells/mL

#### DIATOMS

Synedra 510 cells/mL

Nitzschia 20 cells/mL

#### DINOFLAGELLATES

Protoperdinium 16 cells/mL

PERIDINIACEAE 40 cells/mL

Oxyrrhis 20 cells/mL

Prorocentrum lima 18 cells/mL

#### GREEN ALGAE

Chlorella 3100 cells/mL

Phytoflagellates 450 cells/mL

Monoraphidium sp\_2\_(short) 450 cells/mL

Oocystis 60 cells/mL

Organism - Comment Prorocentrum lima - The identification for this organism is tentative only.

**Sample temperature at time of receipt 11.3°C**

### Algal Biovolume T0393(ADEL)

15/03/2023

#### BLUE GREEN ALGAE

Merismopedia <0.01 mm3/L

#### CRYPTOPHYTES

Cryptomonas 0.01 mm3/L

#### DIATOMS

Synedra 0.35 mm3/L

Nitzschia 0.03 mm3/L



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## Analytical Results

Sampling Point	315191-EPA - Morella Creek @ guage
Sampled Date	15/03/2023 9:25:00AM
Sample Received Date	16/03/2023 9:15:31AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0323
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

15/03/2023

#### GREEN ALGAE

Chlorella	0.14 mm3/L
Monoraphidium sp_2_(short)	0.02 mm3/L
Oocystis	0.02 mm3/L
# Algal Biovolume Comment	Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.
# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	<0.01 mm3/L
# Total Diatom Biovolume	0.38 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### Sample temperature at time of receipt 11.3°C

#### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	4930 cells/mL
Blue Green Algae - Total	240 cells/mL
Diatoms - Total	530 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	4060 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

#### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	4.54 µg/L
Phaeophytin a	0.1	1.78 µg/L

### Inorganic Chemistry - Nutrients

LOR

Result

Test Start Date

### Sample temperature at time of receipt 11.3°C



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## Analytical Results

Sampling Point	315191-EPA - Morella Creek @ guage
Sampled Date	15/03/2023 9:25:00AM
Sample Received Date	16/03/2023 9:15:31AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0323
Status	Endorsed
Collection Type	Customer Collected

<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	6 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	8550 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	8.6 µg/L	
# Nitrate + Nitrite as NO3	2.3	38.1 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.27 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	8.372 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.8 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			23/03/2023
Phosphorus - Total	0.005	<0.005 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	7.06 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			23/03/2023
TKN as Nitrogen	0.05	1.26 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	15.0 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	15.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		270 mg/L	



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## Analytical Results

Sampling Point	315191-EPA - Morella Creek @ guage
Sampled Date	15/03/2023 9:25:00AM
Sample Received Date	16/03/2023 9:15:31AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0323
Status	Endorsed
Collection Type	Customer Collected

### Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 17/03/2023

Bicarbonate	179 mg/L
Carbonate	74 mg/L
Hydroxide	0 mg/L

### Conductivity & Total Dissolved Solids T0016-01(ADEL) 17/03/2023

Conductivity	2	25100 µS/cm
Note		Conductivity measurement is corrected to 25°C
Total Dissolved Solids (by EC)	1	15700 mg/L

### pH T0010-01(ADEL) 17/03/2023

pH	9.2 pH units
Temperature at which pH is measured	22.0 °C

### Turbidity T0018-01(ADEL) 17/03/2023

Turbidity	0.1	7.2 NTU
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### Inorganic Chemistry - Waste Water LOR Result Test Start Date

*Sample temperature at time of receipt 11.3°C*

### Suspended Solids T0160-01(ADEL) 23/03/2023

Suspended Solids	1.0	8 mg/L
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**Analytical Results**

Sampling Point	31515-EPA - Snipe Point
Sampled Date	15/03/2023 9:40:00AM
Sample Received Date	16/03/2023 9:14:49AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0316
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**  
**Algal Identification T0393(ADEL)**

<b>DINOFLAGELLATES</b>	
Gymnodinioids	6 cells/mL
PERIDINIACEAE	8 cells/mL
Oxyrrhis	50 cells/mL
Heterocapsa	290 cells/mL
<b>GREEN ALGAE</b>	
Chlorella	1050000 cells/mL
Unicellular green algae	356000 cells/mL
Phytoflagellates	6500 cells/mL

**Sample temperature at time of receipt 11.3°C**  
**Algal Biovolume T0393(ADEL)**

15/03/2023

<b>GREEN ALGAE</b>	
Chlorella	47.2 mm3/L
# Algal Biovolume Comment	Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.
# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	0.00 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

**Sample temperature at time of receipt 11.3°C**  
**Algal Count - Total T0393(ADEL)**

15/03/2023

Algae - Total	1410000 cells/mL
Blue Green Algae - Total	0 cells/mL





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## Analytical Results

Sampling Point	31515-EPA - Snipe Point
Sampled Date	15/03/2023 9:40:00AM
Sample Received Date	16/03/2023 9:14:49AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0316
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL) 15/03/2023

Diatoms - Total	0 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	1410000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL) 16/03/2023

Chlorophyll a	0.1	84.8 µg/L
Phaeophytin a	0.1	28.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	37 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	44100 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	6.9 µg/L	
# Nitrate + Nitrite as NO3	2.3	30.6 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		4.30 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.681 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.9 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.079 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	9.80 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	4.29 mg/L	



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## Analytical Results

Sampling Point	31515-EPA - Snipe Point
Sampled Date	15/03/2023 9:40:00AM
Sample Received Date	16/03/2023 9:14:49AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0316
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

**Dissolved Organic Carbon T0158-07(ADEL)** 31/03/2023

Dissolved Organic Carbon	1	22.3 mg/L
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**Total Organic Carbon T0158-07(ADEL)** 31/03/2023

Total Organic Carbon	1	27.8 mg/L
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Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

**Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)** 17/03/2023

Alkalinity as Calcium Carbonate		235 mg/L
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Bicarbonate		287 mg/L
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Carbonate		0 mg/L
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Hydroxide		0 mg/L
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**Conductivity & Total Dissolved Solids T0016-01(ADEL)** 17/03/2023

Conductivity	2	97600 µS/cm
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Note		Conductivity measurement is corrected to 25°C
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Total Dissolved Solids (by EC)	1	82400 mg/L
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**pH T0010-01(ADEL)** 17/03/2023

pH		8.1 pH units
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Temperature at which pH is measured		22.0 °C
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**Turbidity T0018-01(ADEL)** 20/03/2023

Turbidity	0.1	12 NTU
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Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
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*Sample temperature at time of receipt 11.3°C*

**Suspended Solids T0160-01(ADEL)** 23/03/2023

Suspended Solids	1.0	30 mg/L
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## Analytical Results

Sampling Point	31519-EPA - Morella Basin at Outlet Regulator
Sampled Date	15/03/2023 9:45:00AM
Sample Received Date	16/03/2023 9:15:18AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0322
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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### Sample temperature at time of receipt 11.3°C

#### Algal Identification T0393(ADEL)

##### DIATOMS

Synedra	108 cells/mL
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##### DINOFLAGELLATES

Oxyrrhis	170 cells/mL
Peridinium	170 cells/mL

##### GREEN ALGAE

Phytoflagellates	917 cells/mL
Unicellular green algae	2000 cells/mL
Monoraphidium sp_2_(short)	1920 cells/mL

### Sample temperature at time of receipt 11.3°C

#### Algal Biovolume T0393(ADEL)

15/03/2023

##### DIATOMS

Synedra	0.07 mm3/L
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##### DINOFLAGELLATES

Peridinium	6.80 mm3/L
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##### GREEN ALGAE

Monoraphidium sp_2_(short)	0.10 mm3/L
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# Algal Biovolume Comment  
Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	0.07 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L



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## Analytical Results

Sampling Point	31519-EPA - Morella Basin at Outlet Regulator
Sampled Date	15/03/2023 9:45:00AM
Sample Received Date	16/03/2023 9:15:18AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0322
Status	Endorsed
Collection Type	Customer Collected

### Sample temperature at time of receipt 11.3°C

#### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	5280 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	108 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	4840 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

#### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	3.84 µg/L
Phaeophytin a	0.1	1.22 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	54 µg/L	
<b>Chloride T0104-02(ADEL)</b>			16/03/2023
Chloride	4.0	8150 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	9.2 µg/L	
# Nitrate + Nitrite as NO3	2.3	40.8 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		1.09 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	8.671 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.9 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	<0.005 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	8.50 mg/L	



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## Analytical Results

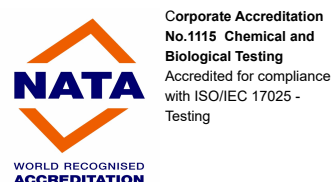
Sampling Point	31519-EPA - Morella Basin at Outlet Regulator
Sampled Date	15/03/2023 9:45:00AM
Sample Received Date	16/03/2023 9:15:18AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0322
Status	Endorsed
Collection Type	Customer Collected

<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	1.08 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	15.1 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	17.3 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		266 mg/L	
Bicarbonate		170 mg/L	
Carbonate		76 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	24800 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	15500 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		9.1 pH units	
Temperature at which pH is measured		22.0 °C	
<b>Turbidity T0018-01(ADEL)</b>			20/03/2023
Turbidity	0.1	2.4 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			





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**Analytical Results**

Sampling Point	31519-EPA - Morella Basin at Outlet Regulator
Sampled Date	15/03/2023 9:45:00AM
Sample Received Date	16/03/2023 9:15:18AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0322
Status	Endorsed
Collection Type	Customer Collected

<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
Suspended Solids	1.0	11 mg/L	



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## Analytical Results

Sampling Point	531012-EPA - Sth Policeman Point
Sampled Date	15/03/2023 10:05:00AM
Sample Received Date	16/03/2023 9:18:20AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0333
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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### *Sample temperature at time of receipt 11.3°C*

#### Algal Identification T0393(ADEL)

##### DINOFLAGELLATES

Gymnodinioids	8 cells/mL
PERIDINIACEAE	220 cells/mL
Heterocapsa	160 cells/mL
Oxyrrhis	20 cells/mL

##### GREEN ALGAE

Unicellular green algae	259000 cells/mL
Chlorella	907000 cells/mL
Phytoflagellates	8500 cells/mL

### *Sample temperature at time of receipt 11.3°C*

#### Algal Biovolume T0393(ADEL)

##### GREEN ALGAE

Chlorella	40.8 mm3/L
# Algal Biovolume Comment	Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.
# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	0.00 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### *Sample temperature at time of receipt 11.3°C*

#### Algal Count - Total T0393(ADEL)

Algae - Total	1170000 cells/mL
Blue Green Algae - Total	0 cells/mL



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## Analytical Results

Sampling Point	531012-EPA - Sth Policeman Point
Sampled Date	15/03/2023 10:05:00AM
Sample Received Date	16/03/2023 9:18:20AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0333
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL)

Diatoms - Total	0 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	1170000 cells/mL
Toxin producing BGA - Total	0 cells/mL

**Sample temperature at time of receipt 11.3°C**

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	90.0 µg/L
Phaeophytin a	0.1	32.4 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	39 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	43000 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	11.0 µg/L	
# Nitrate + Nitrite as NO3	2.3	48.7 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		4.17 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.382 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.8 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.119 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	7.20 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	4.16 mg/L	



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## Analytical Results

Sampling Point	531012-EPA - Sth Policeman Point
Sampled Date	15/03/2023 10:05:00AM
Sample Received Date	16/03/2023 9:18:20AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0333
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	22.1 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	31.0 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		235 mg/L	
Bicarbonate		286 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	95600 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	80200 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		8.1 pH units	
Temperature at which pH is measured		22.0 °C	
<b>Turbidity T0018-01(ADEL)</b>			20/03/2023
Turbidity	0.1	12 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
Suspended Solids	1.0	20 mg/L	



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## Analytical Results

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:16:39AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0315
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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### Sample temperature at time of receipt 11.3°C

#### Algal Identification T0393(ADEL)

##### DIATOMS

Pennate diatoms	10 cells/mL
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##### DINOFLAGELLATES

Gymnodinioids	10 cells/mL
PERIDINIACEAE	70 cells/mL
Heterocapsa	100 cells/mL
Oxyrrhis	20 cells/mL

##### GREEN ALGAE

Unicellular green algae	291000 cells/mL
Phytoflagellates	5360 cells/mL
Chlorella	1000000 cells/mL

### Sample temperature at time of receipt 11.3°C

#### Algal Biovolume T0393(ADEL)

15/03/2023

##### GREEN ALGAE

Chlorella	45.0 mm3/L
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# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	Not Calculated mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### Sample temperature at time of receipt 11.3°C

#### Algal Count - Total T0393(ADEL)

15/03/2023



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## Analytical Results

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:16:39AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0315
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	297000 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	10 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	296000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	92.0 µg/L
Phaeophytin a	0.1	29.4 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	26 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	34800 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	6.6 µg/L	
# Nitrate + Nitrite as NO3	2.3	29.2 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		3.76 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	4.186 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.4 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.079 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	4.68 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023



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## Analytical Results

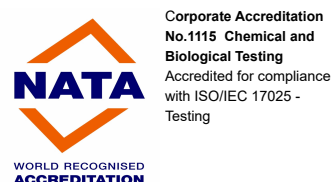
Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:16:39AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0315
Status	Endorsed
Collection Type	Customer Collected

<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	3.75 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	21.0 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	29.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		229 mg/L	
Bicarbonate		279 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	87700 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	71500 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		8.2 pH units	
Temperature at which pH is measured		22.0 °C	
<b>Turbidity T0018-01(ADEL)</b>			20/03/2023
Turbidity	0.1	10 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			





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**Analytical Results**

Sampling Point	31526-EPA - Nth Jack Point
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:16:39AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0315
Status	Endorsed
Collection Type	Customer Collected

**Suspended Solids T0160-01(ADEL)**

23/03/2023

Suspended Solids	1.0	24 mg/L
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**Analytical Results**

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:13:46AM
Sample Analysis Completed	6/04/2023 5:08:20PM
Sample ID	*2023-001-0324
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Algal Identification T0393(ADEL)</b>			
Other Organisms		40 cells/mL	
<b>CRYPTOPHYTES</b>			
Cryptomonas		12 cells/mL	
<b>DIATOMS</b>			
Cyclotella		70 cells/mL	
<b>DINOFLAGELLATES</b>			
Gymnodinioids		2 cells/mL	
PERIDINIACEAE		22 cells/mL	
PERIDINIALES		2 cells/mL	
<b>GREEN ALGAE</b>			
Chlorella		1150 cells/mL	
Monoraphidium sp_2_(short)		300 cells/mL	
MESOTAENIACEAE		2 cells/mL	
Unicellular green algae		217 cells/mL	
Organism - Comment		PERIDINIALES - This was Parvodinium.	
Organism - Comment		MESOTAENIACEAE - This was Netrium.	

**Sample temperature at time of receipt 11.3°C**

<b>Algal Biovolume T0393(ADEL)</b>			15/03/2023
<b>CRYPTOPHYTES</b>			
Cryptomonas		0.01 mm3/L	
<b>DIATOMS</b>			
Cyclotella		0.04 mm3/L	
<b>GREEN ALGAE</b>			
Chlorella		0.05 mm3/L	
Monoraphidium sp_2_(short)		0.02 mm3/L	





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## Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:13:46AM
Sample Analysis Completed	6/04/2023 5:08:20PM
Sample ID	*2023-001-0324
Status	Endorsed
Collection Type	Customer Collected

### Algal Biovolume T0393(ADEL)

15/03/2023

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	0.04 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

### Sample temperature at time of receipt 11.3°C

### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	1780 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	70 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	1670 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	2.53 µg/L
Phaeophytin a	0.1	0.63 µg/L

## Inorganic Chemistry - Nutrients

### Sample temperature at time of receipt 11.3°C

### Ammonia as N T0100-01(ADEL)

Ammonia as N	0.005	0.157 mg/L
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### Chloride T0104-02(ADEL)

16/03/2023

Chloride	4.0	2670 mg/L
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## Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:13:46AM
Sample Analysis Completed	6/04/2023 5:08:20PM
Sample ID	*2023-001-0324
Status	Endorsed
Collection Type	Customer Collected

<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	5.8 µg/L	
# Nitrate + Nitrite as NO3	2.3	25.7 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		0.49 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	9.867 µg/L	
Phosphorus-Filterable Reactive as P	0.5	3.3 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.032 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	12.1 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	0.48 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	7.1 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	7.4 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		376 mg/L	
Bicarbonate		458 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023



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## Analytical Results

Sampling Point	300713-Tilley Swamp Drain D/S Northern Outlet
Sampled Date	15/03/2023 10:30:00AM
Sample Received Date	16/03/2023 9:13:46AM
Sample Analysis Completed	6/04/2023 5:08:20PM
Sample ID	*2023-001-0324
Status	Endorsed
Collection Type	Customer Collected

### Conductivity & Total Dissolved Solids T0016-01(ADEL)

17/03/2023

Conductivity	2	8620 $\mu$ S/cm
Note		Conductivity measurement is corrected to 25°C
Total Dissolved Solids (by EC)	1	4980 mg/L

### pH T0010-01(ADEL)

17/03/2023

pH	8.2 pH units
Temperature at which pH is measured	22.0 °C

### Turbidity T0018-01(ADEL)

20/03/2023

Turbidity	0.1	2.2 NTU
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### Inorganic Chemistry - Waste Water

LOR

Result

Test Start Date

*Sample temperature at time of receipt 11.3°C*

### Suspended Solids T0160-01(ADEL)

23/03/2023

Suspended Solids	1.0	6 mg/L
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**Analytical Results**

Sampling Point	31514-EPA - Stoney Well
Sampled Date	15/03/2023 11:00:00AM
Sample Received Date	16/03/2023 9:14:37AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0320
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

**Algal Identification T0393(ADEL)**

<b>DIATOMS</b>	
PENNALES	20 cells/mL
<b>DINOFLAGELLATES</b>	
PERIDINIACEAE	18 cells/mL
Gymnodinioids	12 cells/mL
<b>GREEN ALGAE</b>	
Chlorella	912000 cells/mL
Unicellular green algae	96000 cells/mL

**Sample temperature at time of receipt 11.3°C**

**Algal Biovolume T0393(ADEL)**

15/03/2023

<b>DIATOMS</b>	
PENNALES	<0.01 mm3/L
<b>GREEN ALGAE</b>	
Chlorella	41.0 mm3/L
# Algal Biovolume Comment	Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.
# Total Algae Biovolume	Not Calculated mm3/L
# Total Blue_Green Algae Biovolume	0.00 mm3/L
# Total Diatom Biovolume	<0.01 mm3/L
# Total Green Algae Biovolume	Not Calculated mm3/L
Total Toxic BGA Biovolume	0.00 mm3/L

**Sample temperature at time of receipt 11.3°C**

**Algal Count - Total T0393(ADEL)**

15/03/2023

Algae - Total	1010000 cells/mL
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## Analytical Results

Sampling Point	31514-EPA - Stoney Well
Sampled Date	15/03/2023 11:00:00AM
Sample Received Date	16/03/2023 9:14:37AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0320
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL)

15/03/2023

Blue Green Algae - Total	0 cells/mL
Diatoms - Total	20 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	1010000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	76.6 µg/L
Phaeophytin a	0.1	30.7 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	26 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	35900 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	7.6 µg/L	
# Nitrate + Nitrite as NO3	2.3	33.7 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		3.83 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	3.887 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.3 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.049 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	2.67 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	3.82 mg/L	



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## Analytical Results

Sampling Point	31514-EPA - Stoney Well
Sampled Date	15/03/2023 11:00:00AM
Sample Received Date	16/03/2023 9:14:37AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0320
Status	Endorsed
Collection Type	Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	20.5 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	24.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		213 mg/L	
Bicarbonate		260 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	79000 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	62300 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		8.0 pH units	
Temperature at which pH is measured		22.0 °C	
<b>Turbidity T0018-01(ADEL)</b>			20/03/2023
Turbidity	0.1	10 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<i>Sample temperature at time of receipt 11.3°C</i>			
<b>Suspended Solids T0160-01(ADEL)</b>			23/03/2023
Suspended Solids	1.0	10 mg/L	



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**Analytical Results**

Sampling Point	31514-EPA - Stoney Well
Sampled Date	15/03/2023 11:00:00AM
Sample Received Date	16/03/2023 9:14:37AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0320
Status	Endorsed
Collection Type	Customer Collected





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**Analytical Results**

Sampling Point	31525-EPA - Villa de Yumpa
Sampled Date	15/03/2023 11:25:00AM
Sample Received Date	16/03/2023 9:16:23AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0313
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

**Algal Identification T0393(ADEL)**

<b>CRYPTOPHYTES</b>			
Cryptomonads		10 cells/mL	
<b>DIATOMS</b>			
Gyrosigma		2 cells/mL	
<b>GREEN ALGAE</b>			
Unicellular green algae		108000 cells/mL	
Phytoflagellates		20 cells/mL	
Chlorella		968000 cells/mL	

**Sample temperature at time of receipt 11.3°C**

**Algal Biovolume T0393(ADEL)**

15/03/2023

<b>CRYPTOPHYTES</b>			
Cryptomonads		<0.01 mm3/L	
<b>DIATOMS</b>			
Gyrosigma		<0.01 mm3/L	
<b>GREEN ALGAE</b>			
Chlorella		43.6 mm3/L	
# Algal Biovolume Comment		Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.	
# Total Algae Biovolume		Not Calculated mm3/L	
# Total Blue_Green Algae Biovolume		0.00 mm3/L	
# Total Diatom Biovolume		<0.01 mm3/L	
# Total Green Algae Biovolume		Not Calculated mm3/L	
Total Toxic BGA Biovolume		0.00 mm3/L	

**Sample temperature at time of receipt 11.3°C**





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## Analytical Results

Sampling Point	31525-EPA - Villa de Yumpa
Sampled Date	15/03/2023 11:25:00AM
Sample Received Date	16/03/2023 9:16:23AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0313
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	1080000 cells/mL
Blue Green Algae - Total	0 cells/mL
Diatoms - Total	2 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL
Green Algae - Total	1080000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/03/2023

Chlorophyll a	0.1	68.1 µg/L
Phaeophytin a	0.1	26.4 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	26 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	32500 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	8.8 µg/L	
# Nitrate + Nitrite as NO3	2.3	39.0 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		3.33 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	<1.5 µg/L	
Phosphorus-Filterable Reactive as P	0.5	0.5 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.037 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			20/03/2023
Silica - Reactive	0.05	0.74 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023



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## Analytical Results

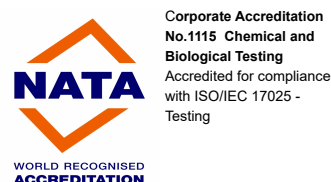
Sampling Point	31525-EPA - Villa de Yumpa
Sampled Date	15/03/2023 11:25:00AM
Sample Received Date	16/03/2023 9:16:23AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0313
Status	Endorsed
Collection Type	Customer Collected

<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	3.32 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	20.5 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	25.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		207 mg/L	
Bicarbonate		253 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	76800 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	60100 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		8.1 pH units	
Temperature at which pH is measured		21.9 °C	
<b>Turbidity T0018-01(ADEL)</b>			20/03/2023
Turbidity	0.1	11 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			





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**Analytical Results**

Sampling Point	31525-EPA - Villa de Yumpa
Sampled Date	15/03/2023 11:25:00AM
Sample Received Date	16/03/2023 9:16:23AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0313
Status	Endorsed
Collection Type	Customer Collected

**Suspended Solids T0160-01(ADEL)**

23/03/2023

Suspended Solids	1.0	10 mg/L
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## Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	15/03/2023 12:20:00PM
Sample Received Date	16/03/2023 9:14:24AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0317
Status	Endorsed
Collection Type	Customer Collected

Biology Operations	LOR	Result	Test Start Date
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**Sample temperature at time of receipt 11.3°C**

### Algal Identification T0393(ADEL)

#### DIATOMS

Naviculoids	12 cells/mL
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#### DINOFLAGELLATES

PERIDINIACEAE	4 cells/mL
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#### GREEN ALGAE

Chlorella	881000 cells/mL
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Unicellular green algae	126000 cells/mL
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**Sample temperature at time of receipt 11.3°C**

### Algal Biovolume T0393(ADEL)

15/03/2023

#### GREEN ALGAE

Chlorella	39.6 mm3/L
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# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around how they calculate.

# Total Algae Biovolume	Not Calculated mm3/L
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# Total Blue_Green Algae Biovolume	0.00 mm3/L
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# Total Diatom Biovolume	Not Calculated mm3/L
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# Total Green Algae Biovolume	Not Calculated mm3/L
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Total Toxic BGA Biovolume	0.00 mm3/L
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**Sample temperature at time of receipt 11.3°C**

### Algal Count - Total T0393(ADEL)

15/03/2023

Algae - Total	1010000 cells/mL
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Blue Green Algae - Total	0 cells/mL
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Diatoms - Total	12 cells/mL
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Geosmin-MIB producing BGA - Total	0 cells/mL
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## Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	15/03/2023 12:20:00PM
Sample Received Date	16/03/2023 9:14:24AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0317
Status	Endorsed
Collection Type	Customer Collected

### Algal Count - Total T0393(ADEL) 15/03/2023

Green Algae - Total	1010000 cells/mL
Toxin producing BGA - Total	0 cells/mL

### Sample temperature at time of receipt 11.3°C

### Chlorophyll a & Phaeophytin a T0380-02(ADEL) 16/03/2023

Chlorophyll a	0.1	53.4 µg/L
Phaeophytin a	0.1	26.0 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Ammonia as N (ADEL)</b>			04/04/2023
# Ammonia as N	1	28 µg/L	
<b>Chloride T0104-02(ADEL)</b>			20/03/2023
Chloride	4.0	33400 mg/L	
<b>Nitrate + Nitrite as N (ADEL)</b>			04/04/2023
# Nitrate + Nitrite as N	0.5	9.2 µg/L	
# Nitrate + Nitrite as NO3	2.3	40.8 µg/L	
<b>Nitrogen - Total TMZ-M06(ADEL)</b>			16/03/2023
Nitrogen - Total		2.70 mg/L	
<b>Phosphorus - Filterable Reactive as P (ADEL)</b>			04/04/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.681 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.9 µg/L	
<b>Phosphorus - Total T0109-44(ADEL)</b>			22/03/2023
Phosphorus - Total	0.005	0.063 mg/L	
<b>Silica - Reactive T0111-01(ADEL)</b>			16/03/2023
Silica - Reactive	0.05	2.64 mg/L	
<b>TKN as N T0112-01(ADEL)</b>			22/03/2023
TKN as Nitrogen	0.05	2.69 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
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## Analytical Results

Sampling Point	31513-EPA - Parnka Point Boat Ramp
Sampled Date	15/03/2023 12:20:00PM
Sample Received Date	16/03/2023 9:14:24AM
Sample Analysis Completed	6/04/2023 2:42:55PM
Sample ID	*2023-001-0317
Status	Endorsed
Collection Type	Customer Collected

### Sample temperature at time of receipt 11.3°C

<b>Dissolved Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Dissolved Organic Carbon	1	20.2 mg/L	
<b>Total Organic Carbon T0158-07(ADEL)</b>			31/03/2023
Total Organic Carbon	1	20.5 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)</b>			17/03/2023
Alkalinity as Calcium Carbonate		206 mg/L	
Bicarbonate		251 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
<b>Conductivity &amp; Total Dissolved Solids T0016-01(ADEL)</b>			17/03/2023
Conductivity	2	77800 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	61100 mg/L	
<b>pH T0010-01(ADEL)</b>			17/03/2023
pH		8.0 pH units	
Temperature at which pH is measured		22.0 °C	
<b>Turbidity T0018-01(ADEL)</b>			20/03/2023
Turbidity	0.1	10 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
<b>Sample temperature at time of receipt 11.3°C</b>			
<b>Suspended Solids T0160-01(ADEL)</b>			24/03/2023
Suspended Solids	1.0	31 mg/L	



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#### **AWQC Signatories**

Gehan Agalawatta - Supervisor Organic Chemistry  
Dzung Bui - Supervisor Metals and Physical  
Thuy Diep - Technical Officer Chemistry  
David Evans - Technical Officer Chemistry  
Andrew Ford - Acting Method Development Specialist  
Kerrie Jooste - Manager Chemistry Services  
John Martini - Method Development Specialist  
Dean Newman - Senior Technical Officer Biology  
Melissa Phillips - Technical Officer Chemistry  
Gayle Polley - Supervisor Nutrients and Waste



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### Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	pH	Test not processed within holding time
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0313	31525	EPA - Villa de Yumpa	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	pH	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0314	31523	EPA - Long Point	14/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	pH	Test not processed within holding time
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time



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### Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-0315	31526	EPA - Nth Jack Point	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	pH	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0316	31515	EPA - Snipe Point	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0317	31513	EPA - Parnka Point Boat Ramp	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0317	31513	EPA - Parnka Point Boat Ramp	15/03/2023	pH	Test not processed within holding time
2023-001-0317	31513	EPA - Parnka Point Boat Ramp	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0317	31513	EPA - Parnka Point Boat Ramp	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0317	31513	EPA - Parnka Point Boat Ramp	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0317	31513	EPA - Parnka Point Boat Ramp	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	pH	Test not processed within holding time
2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time



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2023-001-0318	31511	EPA - 3.2km South Salt Creek	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	pH	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0319	31517	EPA - 1.8km West Salt Creek	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0320	31514	EPA - Stoney Well	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0320	31514	EPA - Stoney Well	15/03/2023	pH	Test not processed within holding time
2023-001-0320	31514	EPA - Stoney Well	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0320	31514	EPA - Stoney Well	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0320	31514	EPA - Stoney Well	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0320	31514	EPA - Stoney Well	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	pH	Test not processed within holding time
2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	Dissolved Organic Carbon	Test not processed within holding time



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2023-001-0321	31512	EPA - McGrath Flat North	14/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	pH	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0322	31519	EPA - Morella Basin at Outlet Regulator	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	pH	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0323	315191	EPA - Morella Creek @ guage	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0324	300713	Tilley Swamp Drain D/S Northern Outlet	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0324	300713	Tilley Swamp Drain D/S Northern Outlet	15/03/2023	pH	Test not processed within holding time
2023-001-0324	300713	Tilley Swamp Drain D/S Northern Outlet	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0324	300713	Tilley Swamp Drain D/S Northern Outlet	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0324	300713	Tilley Swamp Drain D/S Northern Outlet	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time



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2023-001-0324	300713	Tilley Swamp Drain D/S Northern Outlet	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0325	11505	DEW - Mundoo Downstream	14/03/2023	pH	Test not processed within holding time
2023-001-0325	11505	DEW - Mundoo Downstream	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0325	11505	DEW - Mundoo Downstream	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0325	11505	DEW - Mundoo Downstream	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0326	11504	DEW - Mundoo Upstream	14/03/2023	pH	Test not processed within holding time
2023-001-0326	11504	DEW - Mundoo Upstream	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0326	11504	DEW - Mundoo Upstream	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0326	11504	DEW - Mundoo Upstream	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	pH	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0327	31522	EPA - Mark Point	14/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0328	351213	EPA - Murray Mouth	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0328	351213	EPA - Murray Mouth	14/03/2023	pH	Test not processed within holding time
2023-001-0328	351213	EPA - Murray Mouth	14/03/2023	pH	Test not processed within holding time
2023-001-0328	351213	EPA - Murray Mouth	14/03/2023	Turbidity	Test not processed within holding time



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2023-001-0328	351213	EPA - Murray Mouth	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0328	351213	EPA - Murray Mouth	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0329	31524	EPA - Bonneys	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0329	31524	EPA - Bonneys	14/03/2023	pH	Test not processed within holding time
2023-001-0329	31524	EPA - Bonneys	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0329	31524	EPA - Bonneys	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0329	31524	EPA - Bonneys	14/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0329	31524	EPA - Bonneys	14/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0330	31528	EPA - Salt Creek Outlet	15/03/2023	pH	Test not processed within holding time
2023-001-0330	31528	EPA - Salt Creek Outlet	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0330	31528	EPA - Salt Creek Outlet	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0330	31528	EPA - Salt Creek Outlet	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0330	31528	EPA - Salt Creek Outlet	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0330	31528	EPA - Salt Creek Outlet	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0331	353179	EPA - Tauwiche Barrage Upstream	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0331	353179	EPA - Tauwiche Barrage Upstream	14/03/2023	pH	Test not processed within holding time
2023-001-0331	353179	EPA - Tauwiche Barrage Upstream	14/03/2023	pH	Test not processed within holding time
2023-001-0331	353179	EPA - Tauwiche Barrage Upstream	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0331	353179	EPA - Tauwiche Barrage Upstream	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0331	353179	EPA - Tauwiche Barrage Upstream	14/03/2023	Suspended Solids	Test not processed within holding time



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### Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-001-0332	353177	EPA - Tauwichee Barrage DS	14/03/2023	pH	Test not processed within holding time
2023-001-0332	353177	EPA - Tauwichee Barrage DS	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0332	353177	EPA - Tauwichee Barrage DS	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0332	353177	EPA - Tauwichee Barrage DS	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0332	353177	EPA - Tauwichee Barrage DS	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	pH	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	Turbidity	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0333	531012	EPA - Sth Policeman Point	15/03/2023	Total Organic Carbon	Test not processed within holding time
2023-001-0334	53032	EPA - Nooneena	14/03/2023	pH	Test not processed within holding time
2023-001-0334	53032	EPA - Nooneena	14/03/2023	Silica - Reactive	Test not processed within holding time
2023-001-0334	53032	EPA - Nooneena	14/03/2023	Turbidity	Test not processed within holding time
2023-001-0334	53032	EPA - Nooneena	14/03/2023	Suspended Solids	Test not processed within holding time
2023-001-0334	53032	EPA - Nooneena	14/03/2023	Dissolved Organic Carbon	Test not processed within holding time
2023-001-0334	53032	EPA - Nooneena	14/03/2023	Total Organic Carbon	Test not processed within holding time



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### Analytical Method

Analytical Method Code	Description	Reference Method
T0010-01	Determination of pH	AP4500HB
T0016-01	Determination of Conductivity - Corrected to 25C	AP2510B
T0018-01	Turbidity - Nephelometric Measurement	APAWWA-WEF
T0100-01	Ammonia/Ammonium - Automated Flow Colorimetry	AP4500NH3G
T0101-01	Alkalinity - Automated Acidimetric Titration	AP2320B
T0104-02	Chloride - Discrete Analyser	AP4500CLE
T0108-01	Filterable Reactive Phosphorus - Automated Flow Colorimetry	AP4500PG
T0109-44	Phosphorous -total Kjeldahl for seawater by automated flow colorimetry	AP4500PF
T0111-01	Silica by automated fow colorimetry	AP4500SI02
T0112-01	Nitrogen- Total Kjeldahl by discrete analyser	AP4500NORGA
T0158-07	Total and Dissolved Organic Carbon (OI Analytical)	SM5310C
T0160-01	Suspended Solids 103C to 105C	AP4500
T0161-01	Nitrate + Nitrate (NOx) - Automated Flow Colorimetry	AP4500NO3I
T0380-02	Chlorophyll a & b and phaeophytin	ISO10260
T0393	Microalgae & Cyanobacteria - Scan & Identification	
T0393	Microalgae & Cyanobacteria - Scan & Identification	Hotzel1999
TMZ-M06	Derived Results and Data Checks	AP4500NORGA

### Laboratory Information

Laboratory	NATA accreditation ID
Inorganic Chemistry - Physical	1115
Inorganic Chemistry - Waste Water	1115
Inorganic Chemistry - Nutrients	1115
Organic Chemistry	1115
Biology Operations	1115



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- Notes
1. The last figure of the result value is a significant figure.
  2. # determination of the component is not covered by NATA Accreditation.
  3. ^ indicates result is out of specification according to the reference guideline. Refer to report footer.
  4. \* indicates an incident has been recorded against the sample. Refer to report footer.
  5. & Indicates the results have changed since the last issued report.
  6. Where a result is required to meet compliance limits the associated measurement uncertainty must be considered. Measurement uncertainty is available at <https://www.awqc.com.au/our-services/Water-quality-testing-and-analysis/measurement-uncertainty>
  7. Uncertainty of Measurement is reported with a coverage factor of 2 providing approximately 95% confidence interval
  8. The Limit of Reporting (LOR) is the lowest concentration of analyte which is reported at the AWQC and is based on the LOQ rounded up to a more readily used value. The Limit of Quantitation (LOQ) is the lowest concentration of analyte for which quantitative results may be obtained within a specified degree of confidence.
  9. Where collection type is AWQC Collect, NATA has confirmed that due to a robust system in place for maintaining the temperature integrity for samples collected by AWQC's Field Laboratory Services, the recording of temperature when samples arrive at the AWQC is out of scope.
  10. If pH has been tested then the pH will be outside of its holding time unless measured in the field.
  11. (ADEL) indicates analysed in Adelaide, (MELB) indicates analysed in Melbourne.
  12. AWQC Melbourne Laboratory are only NATA accredited for sampling of potable waters by inhouse method W 09-023.