Adelaide SA 5001

Internet: www.awqc.com.au

Email: awqc@sawater.com.au

Tel: 1300 653 366

Fax: 1300 883 171



**DEW - Department of Environment and Water** 

ATTN: Claire Sims 81-95 Waymouth Street

SA 5000 AUSTRALIA

23/03/2023

Dear Claire

Please find attached the Final Analytical Report for

**Customer Service Request:** 143419-2022-CSR-7

Account: 143419

Project:

AWQC-179284 DEW - Healthy Coorong Healthy Basin - Non Routine Event 5- 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

Justo

+61 8 7424 1250



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#### **Report Information**

**Project Name** AWQC-179284

Customer DEW - Department of Environment and Water

CSR\_ID 143419-2022-CSR-7

#### **Analytical Results**

**Collection Type** 

**Sampling Point** 351213-EPA - Murray Mouth Sampled Date 14/02/2023 12:35:00PM Sample Received Date 15/02/2023 5:01:58PM Sample Analysis Completed 2/03/2023 5:42:33PM Sample ID \*2023-000-0672 Status Endorsed

**Customer Collected** 

LOR **Biology Operations** Result **Test Start Date** 

31400 cells/mL

9800 cells/mL

#### Sample temperature at time of receipt 17.1°C Algal Identification T0393(ADEL)

Other Organisms

3650 cells/mL **BLUE GREEN ALGAE** 

Aphanizomenon

530 cells/ml Dolichospermum (coiled) 130 cells/mL Woronichinia 380 cells/mL Cuspidothrix 390 cells/ml Phormidium 84 cells/mL Snowella 23000 cells/mL Aphanocapsa 25000 cells/ml

Cyanodictyon Planktolyngbya

DIATOMS Aulacoseira 480 cells/mL

Fragilaria

1200 cells/mL **GREEN ALGAE** Planctonema 9720 cells/mL Gonatozygon 340 cells/mL Closterium 40 cells/mL Pediastrum 180 cells/mL

Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

**BLUE GREEN ALGAE** 

Aphanizomenon 0.03 mm3/L

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#### **Analytical Results**

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 14/02/2023 12:35:00PM

 Sample Received Date
 15/02/2023 5:01:58PM

 Sample Analysis Completed
 2/03/2023 5:42:33PM

 Sample ID
 \*2023-000-0672

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 14/02/2023

 Dolichospermum (coiled)
 0.03 mm3/L

 Cuspidothrix
 0.02 mm3/L

 Phormidium
 <0.01 mm3/L</td>

 Snowella
 0.21 mm3/L

 Aphanocapsa
 0.01 mm3/L

 Cyanodictyon
 0.02 mm3/L

 Planktolyngbya
 0.05 mm3/L

**DIATOMS** 

 Aulacoseira
 1.37 mm3/L

 Fragilaria
 0.77 mm3/L

**GREEN ALGAE** 

 Gonatozygon
 1.40 mm3/L

 Closterium
 0.21 mm3/L

 Pediastrum
 0.22 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 Not Calculated mm3/L

# Total Diatom Biovolume 2.14 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

## Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 14/02/2023

 Algae - Total
 103000 cells/mL

 Blue Green Algae - Total
 90700 cells/mL

 Diatoms - Total
 1680 cells/mL

Geosmin-MIB producing BGA - Total 84 cells/mL
Green Algae - Total 10300 cells/mL



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#### **Analytical Results**

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 14/02/2023 12:35:00PM

 Sample Received Date
 15/02/2023 5:01:58PM

 Sample Analysis Completed
 2/03/2023 5:42:33PM

 Sample ID
 \*2023-000-0672

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL) Toxin producing BGA - Total		0 cells/mL	14/02/2023
Sample temperature at time of re Chlorophyll a & Phaeophytin a T0	•		16/02/2023
Chlorophyll a	0.1	37.2 μg/L	
Phaeophytin a	0.1	26.6 μg/L	

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt to	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	<1 µg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	54 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	3.0 µg/L	
# Nitrate + Nitrite as NO3	2.3	13.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		3.10 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	35.282 μg/L	
Phosphorus-Filterable Reactive as P	0.5	11.8 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.335 mg/L	
Silica - Reactive T0111-01(ADEL)		· ·	16/02/2023
Silica - Reactive	0.05	0.45 mg/L	
TKN as N T0112-01(ADEL)		5	01/03/2023
TKN as Nitrogen	0.05	3.10 mg/L	
Organic Chemistry	LOR	Result	Test Start Date



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16/02/2023

16/02/2023

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#### **Analytical Results**

**Sampling Point** 351213-EPA - Murray Mouth 14/02/2023 12:35:00PM Sampled Date 15/02/2023 5:01:58PM Sample Received Date 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0672 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Sample temperature at time of receipt 17.1°C

16/02/2023 **Dissolved Organic Carbon T0158-07(ADEL)** 

Dissolved Organic Carbon 1 13.3 mg/L

**Total Organic Carbon T0158-07(ADEL)** Total Organic Carbon 1 20.2 mg/L

**Inorganic Chemistry - Physical** LOR Result **Test Start Date** 

## Sample temperature at time of receipt 17.1°C

16/02/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 105 mg/L Bicarbonate 128 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

16/02/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 341 µS/cm

Note Conductivity measurement is corrected to 25°C

LOR

Total Dissolved Solids (by EC) 1 188 mg/L

16/02/2023 pH T0010-01(ADEL)

8.1 pH units Temperature at which pH is measured 22.6 °C

**Turbidity T0018-01(ADEL)** Turbidity 0.1 70 NTU

**Inorganic Chemistry - Waste Water** Result **Test Start Date** 

Sample temperature at time of receipt 17.1°C

16/02/2023 Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 47 mg/L



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#### **Analytical Results**

11505-DEW - Mundoo Downstream **Sampling Point** 

14/02/2023 1:25:00PM **Sampled Date** 16/02/2023 1:13:45PM **Sample Received Date** 3/03/2023 4:27:05PM Sample Analysis Completed \*2023-000-0669 Sample ID

Endorsed **Status** 

**Customer Collected Collection Type** 

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receip	ot 21.0°C		
Algal Identification T0393(ADEL)			
Other Organisms		1250 cells/mL	
BLUE GREEN ALGAE			
Aphanothece		4150 cells/mL	
Planktolyngbya		7600 cells/mL	

Snowella 18200 cells/ml Cuspidothrix 38 cells/mL Phormidium 26 cells/mL DIATOMS Aulacoseira 720 cells/mL

Fragilaria 300 cells/mL

**GREEN ALGAE** Closterium 10 cells/mL Planctonema 5580 cells/mL Gonatozygon 230 cells/mL Crucigenia 200 cells/mL Tetrastrum 400 cells/mL Scenedesmus 800 cells/mL

## Sample temperature at time of receipt 21.0°C

Algal Biovolume T0393(ADEL) 14/02/2023

250 cells/mL

**BLUE GREEN ALGAE** 

Oocystis

Aphanothece <0.01 mm3/L Planktolyngbya 0.04 mm3/L Snowella 0.16 mm3/L Cuspidothrix <0.01 mm3/L Phormidium <0.01 mm3/L DIATOMS Aulacoseira 2.06 mm3/L



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### **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 14/02/2023
 1:25:00PM

 Sample Received Date
 16/02/2023
 1:13:45PM

 Sample Analysis Completed
 3/03/2023
 4:27:05PM

 Sample ID
 \*2023-000-0669

Status Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 14/02/2023

Fragilaria 0.19 mm3/L

**GREEN ALGAE** 

 Closterium
 0.05 mm3/L

 Gonatozygon
 0.94 mm3/L

 Crucigenia
 <0.01 mm3/L</td>

 Scenedesmus
 0.20 mm3/L

 Oocystis
 0.08 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 0.20 mm3/L # Total Diatom Biovolume 2.25 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

## Sample temperature at time of receipt 21.0°C

Algal Count - Total T0393(ADEL) 14/02/2023

 Algae - Total
 38500 cells/mL

 Blue Green Algae - Total
 30000 cells/mL

 Diatoms - Total
 1020 cells/mL

 Geosmin-MIB producing BGA - Total
 26 cells/mL

 Green Algae - Total
 7470 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 21.0°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 29.4  $\mu$ g/L Phaeophytin a 0.1 18.3  $\mu$ g/L



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## **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 14/02/2023
 1:25:00PM

 Sample Received Date
 16/02/2023
 1:13:45PM

 Sample Analysis Completed
 3/03/2023
 4:27:05PM

 Sample ID
 \*2023-000-0669

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 2	1.0°C		
Ammonia as N T0100-01(ADEL)			24/02/2023
Ammonia as N	0.005	0.016 mg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	30 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			02/03/2023
Nitrate + Nitrite as N	0.003	<0.003 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.18 mg/L	
Phosphorus - Filterable Reactive as P T0	108-01(ADEL)		02/03/2023
Phosphorus - Filterable Reactive as P	0.003	0.004 mg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.297 mg/L	
Silica - Reactive T0111-01(ADEL)			20/02/2023
Silica - Reactive	0.05	0.38 mg/L	
TKN as N T0112-01(ADEL)		-	01/03/2023
TKN as Nitrogen	0.05	2.18 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 2			47/00/0000
Dissolved Organic Carbon T0158-07(ADE	•		17/02/2023
Dissolved Organic Carbon	1	13.4 mg/L	
Total Organic Carbon T0158-07(ADEL)			17/02/2023
Total Organic Carbon	1	16.9 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date

Sample temperature at time of receipt 21.0°C



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## **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 14/02/2023
 1:25:00PM

 Sample Received Date
 16/02/2023
 1:13:45PM

 Sample Analysis Completed
 3/03/2023
 4:27:05PM

 Sample ID
 \*2023-000-0669

 Status
 Endorsed

Collection Type Customer Collected

Alkalinity Carbonate Bicarbonate an	d Hydroxide T0101-0	1(ADEL)	17/02/2023
Alkalinity as Calcium Carbonate		108 mg/L	
Bicarbonate		131 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solid	s T0016-01(ADEL)		17/02/2023
Conductivity	2	339 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	187 mg/L	
pH T0010-01(ADEL)			17/02/2023
pH		8.1 pH units	

Temperature at which pH is measured 22.7 °C

Turbidity T0018-01(ADEL)

Turbidity 0.1 44 NTU

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 2	1.0°C		
Suspended Solids T0160-01(ADEL)			20/02/2023
Suspended Solids	1.0	62 mg/L	



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#### **Analytical Results**

11504-DEW - Mundoo Upstream **Sampling Point** 14/02/2023 1:25:00PM **Sampled Date** 16/02/2023 1:13:59PM **Sample Received Date** 3/03/2023 4:27:05PM Sample Analysis Completed \*2023-000-0670 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

#### LOR **Biology Operations** Result **Test Start Date** Sample temperature at time of receipt 21.0°C Algal Identification T0393(ADEL) Other Organisms 1950 cells/mL **BLUE GREEN ALGAE** Pseudanahaena 190 cells/mL

Planktolyngbya	2520 cells/mL
Snowella	8050 cells/mL
Dolichospermum (coiled)	80 cells/mL
Aphanocapsa	11000 cells/mL
Cuspidothrix	134 cells/mL
Phormidium	142 cells/mL
Cyanodictyon	15400 cells/mL
Cyanocatena	31200 cells/mL

DIATOMS Fragilaria 275 cells/mL Aulacoseira 530 cells/mL

**GREEN ALGAE** Pediastrum 1500 cells/mL Dictyosphaerium 250 cells/mL Scenedesmus 1000 cells/mL Tetrastrum 300 cells/mL Crucigenia 1000 cells/mL Gonatozygon 560 cells/mL Planctonema 3700 cells/mL Closterium 16 cells/mL

Sample temperature at time of receipt 21.0°C Algal Biovolume T0393(ADEL)

**BLUE GREEN ALGAE** 

Pseudanabaena <0.01 mm3/L Planktolyngbya 0.01 mm3/L



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### **Analytical Results**

Sampling Point 11504-DEW - Mundoo Upstream

 Sampled Date
 14/02/2023
 1:25:00PM

 Sample Received Date
 16/02/2023
 1:13:59PM

 Sample Analysis Completed
 3/03/2023
 4:27:05PM

 Sample ID
 \*2023-000-0670

Status Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 14/02/2023

 Snowella
 0.07 mm3/L

 Dolichospermum (coiled)
 0.02 mm3/L

 Aphanocapsa
 <0.01 mm3/L</td>

 Cuspidothrix
 <0.01 mm3/L</td>

 Phormidium
 0.01 mm3/L

 Cyanodictyon
 <0.01 mm3/L</td>

 Cyanocatena
 <0.01 mm3/L</td>

**DIATOMS** 

 Aulacoseira
 1.52 mm3/L

 Fragilaria
 0.18 mm3/L

**GREEN ALGAE** 

 Closterium
 0.09 mm3/L

 Gonatozygon
 2.30 mm3/L

 Crucigenia
 0.03 mm3/L

 Scenedesmus
 0.25 mm3/L

 Dictyosphaerium
 <0.01 mm3/L</td>

 Pediastrum
 1.80 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 0.11 mm3/L # Total Diatom Biovolume 1.70 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 21.0°C Algal Count - Total T0393(ADEL)

Algal Count - Total T0393(ADEL)

 Algae - Total
 77800 cells/mL

 Blue Green Algae - Total
 68700 cells/mL



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#### **Analytical Results**

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 14/02/2023 1:25:00PM

 Sample Received Date
 16/02/2023 1:13:59PM

 Sample Analysis Completed
 3/03/2023 4:27:05PM

 Sample ID
 \*2023-000-0670

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL) 14/02/2023

 Diatoms - Total
 805 cells/mL

 Geosmin-MIB producing BGA - Total
 332 cells/mL

 Green Algae - Total
 8330 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 21.0°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 42.8  $\,\mu g/L$  Phaeophytin a 0.1 19.6  $\,\mu g/L$ 

LOR	Result	Test Start Date
21.0°C		
		24/02/2023
0.005	0.012 mg/L	
		20/02/2023
4.0	34 mg/L	
		02/03/2023
0.003	<0.003 mg/L	
		16/02/2023
	2.39 mg/L	
0108-01(ADEL)		02/03/2023
0.003	0.005 mg/L	
		01/03/2023
0.005	0.250 mg/L	
		20/02/2023
0.05	0.39 mg/L	
		01/03/2023
0.05	2.39 mg/L	
	0.005 4.0 0.003 0108-01(ADEL) 0.003 0.005	0.005  0.012 mg/L  4.0  34 mg/L  0.003  <0.003 mg/L  2.39 mg/L  0108-01(ADEL)  0.003  0.005 mg/L  0.005  0.250 mg/L  0.05  0.39 mg/L

Organic Chemistry LOR Result Test Start Date



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### **Analytical Results**

11504-DEW - Mundoo Upstream **Sampling Point** 

14/02/2023 1:25:00PM Sampled Date 16/02/2023 1:13:59PM Sample Received Date 3/03/2023 4:27:05PM Sample Analysis Completed \*2023-000-0670

Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

San	ıple	tempe	eratu	re at	time	of re	ceipt 2	1.0°C
					_			\

**Dissolved Organic Carbon T0158-07(ADEL)** 17/02/2023 Dissolved Organic Carbon

14.0 mg/L

**Total Organic Carbon T0158-07(ADEL)** 

Total Organic Carbon 1 18.4 mg/L

#### **Inorganic Chemistry - Physical** LOR **Test Start Date** Result

## Sample temperature at time of receipt 21.0°C

17/02/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 108 mg/L Bicarbonate 132 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

17/02/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 331 µS/cm

Note Conductivity measurement is corrected to 25°C

1

Total Dissolved Solids (by EC) 1 183 mg/L

pH T0010-01(ADEL) 17/02/2023

8.1 pH units Temperature at which pH is measured 22.7 °C

17/02/2023 **Turbidity T0018-01(ADEL)** 

Turbidity 0.1 35 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** 

Sample temperature at time of receipt 21.0°C

20/02/2023 Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 42 mg/L



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## **Analytical Results**

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:24PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0675

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of recei	ipt 17.1°C		
Algal Identification T0393(ADEL)			
Pseudodidymocystis		1400 cells/mL	
Other Organisms		6900 cells/mL	
BLUE GREEN ALGAE			
Phormidium		318 cells/mL	
Cuspidothrix		1110 cells/mL	
Dolichospermum (straight)		380 cells/mL	
Aphanizomenon		1480 cells/mL	
Dolichospermum circinale		440 cells/mL	
Woronichinia		144 cells/mL	
Dolichospermum (coiled)		86 cells/mL	
Pseudanabaena		122 cells/mL	
Dolichospermum planctonicum		74 cells/mL	
Anabaena		58 cells/mL	
Snowella		26000 cells/mL	
Microcystis flos-aquae		1010 cells/mL	
Planktolyngbya		19200 cells/mL	
Romeria		2150 cells/mL	
Cyanocatena		67500 cells/mL	
Cyanodictyon		79000 cells/mL	
Aphanocapsa		32500 cells/mL	
DIATOMS			
Aulacoseira		740 cells/mL	
Fragilaria		280 cells/mL	
GREEN ALGAE			
Planctonema		4100 cells/mL	
Gonatozygon		370 cells/mL	
Pediastrum		1300 cells/mL	
Crucigenia		4200 cells/mL	
Oocystis		1100 cells/mL	



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#### **Analytical Results**

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:24PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0675

 Status
 Endorsed

Collection Type Customer Collected

## Sample temperature at time of receipt 17.1°C

Algal Biovolume T0393(ADEL)

Pseudodidymocystis	0.06 mm3/L
BLUE GREEN ALGAE	
Phormidium	0.03 mm3/L
Cuspidothrix	0.06 mm3/L
Dolichospermum (straight)	0.10 mm3/L
Aphanizomenon	0.07 mm3/L
Dolichospermum circinale	0.11 mm3/L
Dolichospermum (coiled)	0.02 mm3/L
Pseudanabaena	<0.01 mm3/L
Dolichospermum planctonicum	0.03 mm3/L
Anabaena	<0.01 mm3/L
Snowella	0.23 mm3/L
Microcystis flos-aquae	0.02 mm3/L
Planktolyngbya	0.10 mm3/L
Romeria	0.03 mm3/L
Cyanocatena	<0.01 mm3/L
Cyanodictyon	0.04 mm3/L
Aphanocapsa	0.02 mm3/L
DIATOMS	
Aulacoseira	2.12 mm3/L
Fragilaria	0.18 mm3/L
GREEN ALGAE	
Gonatozygon	1.52 mm3/L
Pediastrum	1.56 mm3/L
Crucigenia	0.13 mm3/L
Oocystis	0.33 mm3/L



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#### **Analytical Results**

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:24PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0675

 Status
 Endorsed

Collection Type Customer Collected

LanlΔ	<b>Biovolume</b>	T0393	(ADFI)
Aluai	DIOVOIGING	10000	

# Total Blue\_Green Algae Biovolume

# Total Algae Biovolume

14/02/2023

# 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.

Not Calculated mm3/L

Not Calculated mm3/l

# Total Diatom Biovolume 2.30 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.13 mm3/L

## Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 14/02/2023

 Algae - Total
 244000 cells/mL

 Blue Green Algae - Total
 232000 cells/mL

 Diatoms - Total
 1020 cells/mL

 Geosmin-MIB producing BGA - Total
 954 cells/mL

 Green Algae - Total
 11100 cells/mL

 Toxin producing BGA - Total
 1450 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/02/2023

Chlorophyll a 0.1 54.3  $\,\mu g/L$  Phaeophytin a 0.1 28.3  $\,\mu g/L$ 

## Inorganic Chemistry - Nutrients LOR Result Test Start Date

Sample temperature at time of receipt 17.1°C

Ammonia as N (ADEL)

# Ammonia as N

1 <1 \mu g/L

Chloride T0104-02(ADEL) 16/02/2023

Chloride 4.0 62 mg/L



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**Status** 

353179-EPA - Tauwitchere Barrage Upstream **Sampling Point** 

14/02/2023 2:15:00PM **Sampled Date** 15/02/2023 5:02:24PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0675 Sample ID Endorsed

**Customer Collected Collection Type** 

Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	3.0 µg/L	
# Nitrate + Nitrite as NO3	2.3	13.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.78 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	25.415 μg/L	
Phosphorus-Filterable Reactive as P	0.5	8.5 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.259 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	0.40 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	2.78 mg/L	

LOR	Result	Test Start Date
eipt 17.1°C		
(ADEL)		16/02/2023
1	14.4 mg/L	
EL)		16/02/2023
1	18.9 mg/L	
	ript 17.1°C '(ADEL)	#ipt 17.1°C '(ADEL)  1 14.4 mg/L

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
--------------------------------	-----	--------	-----------------

Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 16/02/2023

Alkalinity as Calcium Carbonate 105 mg/L Bicarbonate 128 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 16/02/2023



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#### **Analytical Results**

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:24PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0675

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids	T0016-01(ADEL)		16/02/2023
Conductivity	2	332 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	183 mg/L	
pH T0010-01(ADEL)			16/02/2023
рН		7.9 pH units	
Temperature at which pH is measured		22.6 °C	
Turbidity T0018-01(ADEL)			16/02/2023
Turbidity	0.1	53 NTU	

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		
Suspended Solids T0160-01(ADEL)			16/02/2023

68 mg/L

1.0



Suspended Solids

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## **Analytical Results**

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:11PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0676

 Status
 Endorsed

Collection Type Customer Collected

<b>Biology Operations</b>	LOR	Result	Test Start Date
Sample temperature at time of recei	ipt 17.1°C		
Algal Identification T0393(ADEL)			
Other Organisms		1700 cells/mL	
BLUE GREEN ALGAE			
Cuspidothrix		1280 cells/mL	
Dolichospermum planctonicum		70 cells/mL	
Sphaerospermopsis		1240 cells/mL	
Dolichospermum		412 cells/mL	
Anabaena		386 cells/mL	
Aphanizomenon		262 cells/mL	
Pseudanabaena		106 cells/mL	
Planktothrix perornata_f_attenuata		288 cells/mL	
Anabaenopsis		22 cells/mL	
Phormidium		196 cells/mL	
Dolichospermum circinale		58 cells/mL	
Microcystis wesenbergii		186 cells/mL	
Snowella		12000 cells/mL	
Aphanocapsa		60000 cells/mL	
Cyanodictyon		22200 cells/mL	
Cyanocatena		20600 cells/mL	
DIATOMS			
Fragilaria		2600 cells/mL	
Aulacoseira		2900 cells/mL	
GREEN ALGAE			
Planctonema		6000 cells/mL	
Gonatozygon		400 cells/mL	
Scenedesmus		1250 cells/mL	
Dictyosphaerium		1200 cells/mL	

# Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

14/02/2023



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### **Analytical Results**

**Status** 

Sampling Point 353177-EPA - Tauwitchere Barrage DS

Endorsed

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:11PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0676

Collection Type Customer Collected

# Algal Biovolume T0393(ADEL) BLUE GREEN ALGAE

14/02/2023

 Cuspidothrix
 0.07 mm3/L

 Dolichospermum planctonicum
 0.03 mm3/L

 Sphaerospermopsis
 0.11 mm3/L

 Dolichospermum
 0.10 mm3/L

 Anabaena
 0.03 mm3/L

 Aphanizomenon
 0.01 mm3/L

 Pseudanabaena
 <0.01 mm3/L</td>

 Planktothrix perornata\_f\_attenuata
 0.08 mm3/L

 Anabaenopsis
 <0.01 mm3/L</td>

 Phormidium
 0.02 mm3/L

 Dolichospermum circinale
 0.01 mm3/L

 Microcystis wesenbergii
 0.02 mm3/L

 Snowella
 0.11 mm3/L

 Aphanocapsa
 0.03 mm3/L

 Cyanodictyon
 0.01 mm3/L

 Cyanocatena
 <0.01 mm3/L</td>

Fragilaria 1.66 mm3/L Aulacoseira 8.29 mm3/L

**GREEN ALGAE** 

**DIATOMS** 

 Gonatozygon
 1.64 mm3/L

 Scenedesmus
 0.31 mm3/L

 Dictyosphaerium
 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 0.63 mm3/L
# Total Diatom Biovolume 9.95 mm3/L



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#### **Analytical Results**

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:11PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0676

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 14/02/2023

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.01 mm3/L

### Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 14/02/2023

 Algae - Total
 134000 cells/mL

 Blue Green Algae - Total
 119000 cells/mL

 Diatoms - Total
 5500 cells/mL

 Geosmin-MIB producing BGA - Total
 718 cells/mL

 Green Algae - Total
 8850 cells/mL

 Toxin producing BGA - Total
 58 cells/mL

Sample temperature at time of receipt 17.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 49.5  $\,\mu g/L$  Phaeophytin a 0.1 27.9  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	38 μg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	35 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	4.2 μg/L	
# Nitrate + Nitrite as NO3	2.3	18.6 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.48 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	26.91 μg/L	
Phosphorus-Filterable Reactive as P	0.5	9.0 μg/L	



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Analyt	ical	Resul	ts
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Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:11PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0676

 Status
 Endorsed

Collection Type Customer Collected

Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.317 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	0.38 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	2.48 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 17.	.1°C		
Dissolved Organic Carbon T0158-07(ADEI	_)		16/02/2023
Dissolved Organic Carbon	1	14.2 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	21.8 mg/L	

Inorganic Chemistry - Physical LOR	Result	Test Start Date
------------------------------------	--------	-----------------

## Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 105  $\,$  mg/L Bicarbonate 129  $\,$  mg/L Carbonate 0  $\,$  mg/L Hydroxide 0  $\,$  mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 2 331 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 183 mg/L

pH T0010-01(ADEL) 16/02/2023

pH 8.0 pH units

Temperature at which pH is measured 22.6 °C **Turbidity T0018-01(ADEL)**16/02/2023

Turbidity 0.1 62 NTU



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**Analytical Results** 

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 14/02/2023
 2:15:00PM

 Sample Received Date
 15/02/2023
 5:02:11PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0676

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 17.1°C Suspended Solids T0160-01(ADEL)

16/02/2023

Suspended Solids 1.0 102 mg/L



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## **Analytical Results**

**Sampling Point** 31522-EPA - Mark Point 14/02/2023 3:00:00PM **Sampled Date** Sample Received Date 15/02/2023 5:00:39PM 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0671 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

<b>Biology Operations</b>	LOR	Result	Test Start Date
Sample temperature at time of rece	eipt 17.1°C		
Algal Identification T0393(ADEL)			
Pseudodidymocystis		1300 cells/mL	
Other Organisms		1150 cells/mL	
BLUE GREEN ALGAE			
Pseudanabaena		164 cells/mL	

Anabaena	176 cells/mL
Aphanocapsa	130000 cells/mL
Cyanodictyon	53500 cells/mL
Cyanocatena	23400 cells/mL
Planktolyngbya	2300 cells/mL
Anabaenopsis	28 cells/mL
Cuspidothrix	350 cells/mL
Sphaerospermopsis	164 cells/mL
Aphanizomenon	640 cells/mL
DIATOMS	

## **DIATOMS**

Cyclotella 2550 cells/mL

#### **GREEN ALGAE**

Closterium 34 cells/mL Dictyosphaerium 800 cells/mL Crucigenia 7200 cells/mL Oocystis 300 cells/mL Coelastrum 750 cells/mL Scenedesmus 800 cells/mL Monoraphidium 600 cells/mL Planctonema 4550 cells/mL

#### Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

0.06 mm3/L

Pseudodidymocystis

## **BLUE GREEN ALGAE**



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### **Analytical Results**

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 14/02/2023
 3:00:00PM

 Sample Received Date
 15/02/2023
 5:00:39PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0671

 Status
 Endorsed

Collection Type Customer Collected

#### Algal Biovolume T0393(ADEL)

14/02/2023

Aphanizomenon 0.03 mm3/L Sphaerospermopsis 0.02 mm3/L Cuspidothrix 0.02 mm3/L Anabaenopsis <0.01 mm3/L Pseudanabaena <0.01 mm3/L Anabaena 0.01 mm3/L Planktolyngbya 0.01 mm3/L Aphanocapsa 0.06 mm3/L Cyanodictyon 0.03 mm3/L Cyanocatena <0.01 mm3/L

**DIATOMS** 

Cyclotella 1.30 mm3/L

#### **GREEN ALGAE**

 Closterium
 0.18 mm3/L

 Monoraphidium
 0.54 mm3/L

 Dictyosphaerium
 0.02 mm3/L

 Crucigenia
 0.22 mm3/L

 Oocystis
 0.09 mm3/L

 Coelastrum
 0.05 mm3/L

 Scenedesmus
 0.20 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 0.18 mm3/L # Total Diatom Biovolume 1.30 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

#### Sample temperature at time of receipt 17.1°C



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## **Analytical Results**

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 14/02/2023 3:00:00PM

 Sample Received Date
 15/02/2023 5:00:39PM

 Sample Analysis Completed
 2/03/2023 5:42:33PM

 Sample ID
 \*2023-000-0671

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)	14/02/2023
---------------------------------	------------

 Algae - Total
 228000 cells/mL

 Blue Green Algae - Total
 211000 cells/mL

 Diatoms - Total
 2550 cells/mL

 Geosmin-MIB producing BGA - Total
 164 cells/mL

 Green Algae - Total
 15000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

# Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 56.5  $\,\mu g/L$  Phaeophytin a 0.1 26.6  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

Sample temperature at time of receipt 1	7.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	<1 µg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	293 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	2.0 µg/L	
# Nitrate + Nitrite as NO3	2.3	8.86 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.94 mg/L	
Phosphorus - Filterable Reactive as P (A	(DEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	64.584 μg/L	
Phosphorus-Filterable Reactive as P	0.5	21.6 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.386 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	2.97 mg/L	
TKN as N T0112-01(ΔDFI )			01/03/2023

TKN as N T0112-01(ADEL)



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Analytical R	esults
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31522-EPA - Mark Point **Sampling Point** 14/02/2023 3:00:00PM **Sampled Date** 15/02/2023 5:00:39PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0671 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

01/03/2023 TKN as N T0112-01(ADEL)

TKN as Nitrogen 0.05 2.94 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt	t 17.1°C		
Dissolved Organic Carbon T0158-07(A	DEL)		16/02/2023
Dissolved Organic Carbon	1	13.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	22.0 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date

Sample temperature at time of receipt	17.1°C	

#### Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity Carbonate Bicarbonate and Hydroxide T	16/02/2023	
Alkalinity as Calcium Carbonate	110 mg/L	
Bicarbonate	134 mg/L	

Carbonate 0 mg/L Hydroxide 0 mg/L

16/02/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL) Conductivity

1220 µS/cm Note

Conductivity measurement is corrected to 25°C Total Dissolved Solids (by EC) 1 678 mg/L

16/02/2023 pH T0010-01(ADEL)

8.3 pH units Temperature at which pH is measured 22.6 °C

16/02/2023 **Turbidity T0018-01(ADEL)** Turbidity 0.1 83 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** 

Sample temperature at time of receipt 17.1°C



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**Analytical Results** 

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 14/02/2023 3:00:00PM

 Sample Received Date
 15/02/2023 5:00:39PM

 Sample Analysis Completed
 2/03/2023 5:42:33PM

 Sample ID
 \*2023-000-0571

**Status** Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

16/02/2023

Suspended Solids 1.0 40 mg/L



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## **Analytical Results**

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 14/02/2023 3:45:00PM

 Sample Received Date
 15/02/2023 5:00:53PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0658

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		
Algal Identification T0393(ADEL)			14/02/2023
Pseudodidymocystis		1600 cells/mL	
Other Organisms		75 cells/mL	
BLUE GREEN ALGAE			
Cyanodictyon		1850 cells/mL	
Aphanocapsa		93500 cells/mL	
Merismopedia		800 cells/mL	
Cyanogranis		2450 cells/mL	
Anabaena		14 cells/mL	
DIATOMS			
Cyclotella		57300 cells/mL	
GREEN ALGAE			
Oocystis sp_1_(small_cells)		1100 cells/mL	
Colonial green algae		3480 cells/mL	
Tetrastrum		1420 cells/mL	
Monoraphidium sp_2_(short)		325 cells/mL	
Ankyra		25 cells/mL	
Crucigenia		1420 cells/mL	
Scenedesmus		250 cells/mL	
Monoraphidium		150 cells/mL	
Schroederia		175 cells/mL	
Planctonema		108 cells/mL	
Closterium		4 cells/mL	
Organism - Comment		Cyclotella - The identification for this organism is	

tentative only.

# Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

Pseudodidymocystis 0.43 mm3/L

BLUE GREEN ALGAE



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#### **Analytical Results**

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 14/02/2023
 3:45:00PM

 Sample Received Date
 15/02/2023
 5:00:53PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0658

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 14/02/2023

 Cyanodictyon
 0.01 mm3/L

 Aphanocapsa
 <0.01 mm3/L</td>

 Merismopedia
 0.05 mm3/L

 Cyanogranis
 <0.01 mm3/L</td>

**DIATOMS** 

Cyclotella <0.01 mm3/L

**GREEN ALGAE** 

Closterium 0.02 mm3/L Oocystis sp\_1\_(small\_cells) 29.2 mm3/L Colonial green algae 0.19 mm3/L Monoraphidium sp\_2\_(short) 0.07 mm3/L Ankyra 0.02 mm3/L Crucigenia <0.01 mm3/l Scenedesmus 0.04 mm3/L Monoraphidium 0.06 mm3/L Schroederia 0.14 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 0.05 mm3/L # Total Diatom Biovolume 29.2 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total 10393(ADEL)

164000 cells/mL

Blue Green Algae - Total 98600 cells/mL
Diatoms - Total 57300 cells/mL



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16/02/2023

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#### **Analytical Results**

31523-EPA - Long Point **Sampling Point** 14/02/2023 3:45:00PM **Sampled Date** 15/02/2023 5:00:53PM Sample Received Date 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0658 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

14/02/2023 Algal Count - Total T0393(ADEL)

Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 8460 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a

103 µg/L Phaeophytin a 0.1 22.5 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	31 μg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	1080 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	8.2 µg/L	
# Nitrate + Nitrite as NO3	2.3	36.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.62 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	19.136 μg/L	
Phosphorus-Filterable Reactive as P	0.5	6.4 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.208 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	0.14 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	2.61 mg/L	



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## **Analytical Results**

 Sampling Point
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 Sampled Date
 14/02/2023 3:45:00PM

 Sample Received Date
 15/02/2023 5:00:53PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0658

 Status
 Endorsed

 Collection Type
 Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 17	7.1°C		
Dissolved Organic Carbon T0158-07(ADE	iL)		16/02/2023
Dissolved Organic Carbon	1	15.5 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	22.9 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 17	7.1°C		
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	16/02/2023
Alkalinity as Calcium Carbonate		123 mg/L	
Bicarbonate		119 mg/L	
Carbonate		15 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		16/02/2023
Conductivity	2	3890 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	2190 mg/L	
pH T0010-01(ADEL)			16/02/2023
pH		8.9 pH units	
Temperature at which pH is measured		22.6 °C	
Turbidity T0018-01(ADEL)			16/02/2023
Turbidity	0.1	53 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 17	7.1°C		
Suspended Solids T0160-01(ADEL)			16/02/2023
Suspended Solids	1.0	65 mg/L	



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#### **Analytical Results**

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

#### Sample temperature at time of receipt 17.1°C

#### Algal Identification T0393(ADEL)

#### **DIATOMS**

 Pennate diatoms
 125 cells/mL

 Chaetoceros
 175 cells/mL

 Naviculoids
 25 cells/mL

 Cyclotella
 103000 cells/mL

**DINOFLAGELLATES** 

Protoperidinium 25 cells/mL

**GREEN ALGAE** 

 Phytoflagellates
 25 cells/mL

 Unicellular green algae
 50 cells/mL

 Pteromonas
 25 cells/mL

Organism - Comment Cyclotella - The identification for this organism is

tentative only.

# Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

#### **DIATOMS**

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Cyclotella 52.5 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. Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L

Not Calculated mm3/L

0.00 mm3/L



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## **Analytical Results**

Collection Type Customer Collected

## Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 14/02/2023

 Algae - Total
 103000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 103000 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 100 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

## Sample temperature at time of receipt 17.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 113  $\,\mu g/L$  Phaeophytin a 0.1 32.0  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	16 μg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	6040 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	7.6 µg/L	
# Nitrate + Nitrite as NO3	2.3	33.7 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		1.31 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)			21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	29.601 μg/L	
Phosphorus-Filterable Reactive as P	0.5	9.9 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.566 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	0.22 mg/L	



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Analy	/tical	Results
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 Sampling Point
 53032-EPA - Noonameena

 Sampled Date
 14/02/2023 4:05:00PM

 Sample Received Date
 15/02/2023 5:02:36PM

 Sample Analysis Completed
 2/03/2023 5:42:33PM

 Sample ID
 \*2023-000-0678

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 01/03/2023

TKN as Nitrogen 0.05 1.30 mg/L

22/02/2023
22/02/2023
22/02/2023
Test Start Date
_

Sample temperature at time of receip	ot 17.1°C		
Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)			17/02/2023
Alkalinity as Calcium Carbonate		136 mg/L	
Bicarbonate		160 mg/L	
Carbonate		3 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			17/02/2023
Conductivity	2	17800 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	10800 mg/L	
pH T0010-01(ADEL)			17/02/2023
pH		8.4 pH units	
Temperature at which pH is measured		21.9 °C	
Turbidity T0018-01(ADEL)			16/02/2023

Inorganic Chemistry - Waste Water LOR Result Test Start Date

71 NTU

0.1

Sample temperature at time of receipt 17.1°C



Turbidity

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**Analytical Results** 

**Collection Type** 

**Sampling Point** 53032-EPA - Noonameena 14/02/2023 4:05:00PM **Sampled Date** 15/02/2023 5:02:36PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0678 Sample ID

Endorsed Status Customer Collected

Suspended Solids T0160-01(ADEL)

16/02/2023

Suspended Solids 1.0 110 mg/L



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# **Analytical Results**

 Sampling Point
 31524-EPA - Bonneys

 Sampled Date
 14/02/2023 5:05:00PM

 Sample Received Date
 15/02/2023 5:01:06PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0673

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

#### Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **BLUE GREEN ALGAE**

Merismopedia 1600 cells/mL

#### **CRYPTOPHYTES**

Cryptomonas 33 cells/mL
Chroomonas 275 cells/mL

# DIATOMS

 PENNALES
 500 cells/mL

 Chaetoceros
 2550 cells/mL

 Cocconeis
 500 cells/mL

 Navicula
 25 cells/mL

#### **GREEN ALGAE**

Microspora 50 cells/mL
Tetraselmis 25 cells/mL

#### Sample temperature at time of receipt 17.1°C

BLUE GREEN ALGAE

Merismopedia <0.01 mm3/L

#### **CRYPTOPHYTES**

Algal Biovolume T0393(ADEL)

Cryptomonas 0.04 mm3/L Chroomonas 0.02 mm3/L

# **DIATOMS**

 PENNALES
 0.15 mm3/L

 Navicula
 0.03 mm3/L

# Algal Biovolume Comment Biovolumes for taxa reported at genus level are approximate values. Reported taxa and

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

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# **Analytical Results**

31524-EPA - Bonneys **Sampling Point** 14/02/2023 5:05:00PM **Sampled Date** 15/02/2023 5:01:06PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0673 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

14/02/2023 Algal Biovolume T0393(ADEL)

# Total Algae Biovolume Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume <0.01 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 17.1°C

14/02/2023 Algal Count - Total T0393(ADEL)

Algae - Total 5560 cells/mL Blue Green Algae - Total 1600 cells/mL Diatoms - Total 3580 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 75 cells/mL

Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 17.1°C

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

Chlorophyll a 25.0 µg/L Phaeophytin a 0.1 17.6 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N T0100-01(ADEL)			24/02/2023
Ammonia as N	0.005	0.193 mg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	9680 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	11.8 µg/L	

11.8 µg/L

# Nitrate + Nitrite as NO3 23 52.3 µg/L Nitrogen - Total TMZ-M06(ADEL) Nitrogen - Total 2.77 mg/L



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Analytical R	esults
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 Sampling Point
 31524-EPA - Bonneys

 Sampled Date
 14/02/2023 5:05:00PM

 Sample Received Date
 15/02/2023 5:01:06PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0673

 Status
 Endorsed

Collection Type Customer Collected

Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	11.362 μg/L	
Phosphorus-Filterable Reactive as P	0.5	3.8 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.174 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	1.71 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	2.76 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of rece	eipt 17.1°C		
Dissolved Organic Carbon T0158-07	(ADEL)		16/02/2023
Dissolved Organic Carbon	1	15.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	17.9 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
--------------------------------	-----	--------	-----------------

# Sample temperature at time of receipt 17.1°C

<b>Alkalinity Carbonate</b>	Bicarbonate and Hydroxide	T0101-01(ADEL)
-----------------------------	---------------------------	----------------

17/02/2023

Alkalinity as Calcium Carbonate 150  $\,$  mg/L Bicarbonate 183  $\,$  mg/L Carbonate 0  $\,$  mg/L Hydroxide 0  $\,$  mg/L

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

17/02/2023

Conductivity 2
Note

25200  $\,\mu\text{S/cm}$  Conductivity measurement is corrected to 25°C

15800 mg/L

Total Dissolved Solids (by EC)

17/02/2023

**pH T0010-01(ADEL)**pH 8.2 pH units

1



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**Analytical Results** 

 Sampling Point
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 Sampled Date
 14/02/2023 5:05:00PM

 Sample Received Date
 15/02/2023 5:01:06PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0673

Status Endorsed

Collection Type Customer Collected

pH T0010-01(ADEL) 17/02/2023

Temperature at which pH is measured 21.9 °C

**Turbidity T0018-01(ADEL)** 

Turbidity 0.1 6.6 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 17.1°C

 Suspended Solids T0160-01(ADEL)

 Suspended Solids
 1.0
 15 mg/L

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# **Analytical Results**

31512-EPA - McGrath Flat North **Sampling Point** 14/02/2023 5:48:00PM Sampled Date 15/02/2023 4:59:08PM Sample Received Date 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0665 Sample ID

Endorsed **Status** 

**Customer Collected Collection Type** 

LOR **Biology Operations** Result **Test Start Date** 

Sample temperature at time of receipt 17.1°C

Algal Identification T0393(ADEL)

**DIATOMS** 

**PENNALES** 70 cells/mL

**GREEN ALGAE** 

Chlorella 250000 cells/mL Unicellular green algae 39700 cells/mL

Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

**PENNALES** 0.02 mm3/L

**GREEN ALGAE** 

**DIATOMS** 

Chlorella 11.2 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.

0 cells/mL

70 cells/mL

0 cells/mL

# Total Algae Biovolume Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume 0.00 mm3/L # Total Diatom Biovolume 0.02 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total 290000 cells/mL

Blue Green Algae - Total Diatoms - Total

Geosmin-MIB producing BGA - Total

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# **Analytical Results**

**Sampling Point** 31512-EPA - McGrath Flat North 14/02/2023 5:48:00PM **Sampled Date** 15/02/2023 4:59:08PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0665 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

14/02/2023 Algal Count - Total T0393(ADEL)

Green Algae - Total 290000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 17.1°C

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

Chlorophyll a 0.1 12.5 µg/L Phaeophytin a 0.1 6.15 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	86 µg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	27300 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	24.2 μg/L	
# Nitrate + Nitrite as NO3	2.3	107 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		3.49 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	18.239 μg/L	
Phosphorus-Filterable Reactive as P	0.5	6.1 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.151 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	0.43 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	3.47 mg/L	

Result

LOR

Corporate Accreditation No.1115 Chemical and **Biological Testing** Accredited for compliance with ISO/IEC 17025 -



**Organic Chemistry** 

**Test Start Date** 

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17/02/2023

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# **Analytical Results**

 Sampling Point
 31512-EPA - McGrath Flat North

 Sampled Date
 14/02/2023 5:48:00PM

 Sample Received Date
 15/02/2023 4:59:08PM

 Sample Analysis Completed
 2/03/2023 5:42:33PM

 Sample ID
 \*2023-000-0665

**Status** Endorsed

Collection Type Customer Collected

Sample temperature at time of receipt 17.1°C
Dissolved Organic Carbon T0158-07(ADEL)

Dissolved Organic Carbon 1 19.3 mg/L

**Total Organic Carbon T0158-07(ADEL)** 

Total Organic Carbon 1 22.4 mg/L

Inorganic Chemistry - Physical LOR Result Test Start Date

# Sample temperature at time of receipt 17.1°C

# Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 181  $\,$  mg/L Bicarbonate 221  $\,$  mg/L Carbonate 0  $\,$  mg/L Hydroxide 0  $\,$  mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 2 62400 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 46100 mg/L

pH T0010-01(ADEL) 17/02/2023

pH 8.1 pH units
Temperature at which pH is measured 22.0 °C

Turbidity T0018-01(ADEL)

Turbidity 0.1 4.5 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 17.1°C

Suspended Solids T0160-01(ADEL) 16/02/2023

Suspended Solids 1.0 3 mg/L



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# **Analytical Results**

31528-EPA - Salt Creek Outlet **Sampling Point** 15/02/2023 9:20:00AM Sampled Date 15/02/2023 5:01:46PM Sample Received Date 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0674 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

LOR **Biology Operations** Result **Test Start Date** 

#### Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **DINOFLAGELLATES**

PERIDINIACEAE 10 cells/ml Heterocapsa 120 cells/mL Gymnodinioids 4 cells/mL

#### **GREEN ALGAE**

Unicellular green algae 300000 cells/mL Chlorella 818000 cells/mL

# Sample temperature at time of receipt 17.1°C

# Algal Biovolume T0393(ADEL)

# **GREEN ALGAE**

Chlorella 36.8 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 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Geosmin-MIB producing BGA - Total

1120000 cells/mL Blue Green Algae - Total 0 cells/mL Diatoms - Total 0 cells/mL 0 cells/ml



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15/02/2023

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Took Chart Date

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# **Analytical Results**

 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 15/02/2023 9:20:00AM

 Sample Received Date
 15/02/2023 5:01:46PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0674

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)

Green Algae - Total 1120000 cells/mL
Toxin producing BGA - Total 0 cells/mL

IOD

LOR

Sample temperature at time of receipt 17.1°C

Ingraphia Chamistry Nutriento

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Daguile

Chlorophyll a 0.1 52.0  $\,\mu g/L$  Phaeophytin a 0.1 16.7  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	40 μg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	36000 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	5.6 μg/L	
# Nitrate + Nitrite as NO3	2.3	24.8 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		4.33 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)			21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	4.186 μg/L	
Phosphorus-Filterable Reactive as P	0.5	1.4 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.129 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	6.86 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	4.32 mg/L	

Result



**Organic Chemistry** 

Corporate Accreditation No.1115 Chemical and Biological Testing Accredited for compliance with ISO/IEC 17025 -Testing **Test Start Date** 

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16/02/2023

17/02/2023

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# **Analytical Results**

31528-EPA - Salt Creek Outlet **Sampling Point** 15/02/2023 9:20:00AM Sampled Date 15/02/2023 5:01:46PM Sample Received Date 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0674 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Sample temperature at time of receipt 17.1°C

**Dissolved Organic Carbon T0158-07(ADEL)** 16/02/2023 Dissolved Organic Carbon

18.8 mg/L

**Total Organic Carbon T0158-07(ADEL)** 

Total Organic Carbon 1 29.0 mg/L

**Inorganic Chemistry - Physical** LOR **Test Start Date** Result

Sample temperature at time of receipt 17.1°C

17/02/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 233 mg/L Bicarbonate 284 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 89900 µS/cm

Note Conductivity measurement is corrected to 25°C

1

Total Dissolved Solids (by EC) 1 73800 mg/L

pH T0010-01(ADEL) 17/02/2023

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

16/02/2023 **Turbidity T0018-01(ADEL)** 

Turbidity 0.1 9.3 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** 

Sample temperature at time of receipt 17.1°C

16/02/2023 Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 15 mg/L



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# **Analytical Results**

31511-EPA - 3.2km South Salt Creek **Sampling Point** 

Endorsed

15/02/2023 9:28:00AM Sampled Date 15/02/2023 4:58:55PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0662 Sample ID

**Status Customer Collected Collection Type** 

LOR **Biology Operations** Result **Test Start Date** 

#### Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **CRYPTOPHYTES**

Cryptomonas 10 cells/mL

#### **DINOFLAGELLATES**

Oxyrrhis 50 cells/mL PERIDINIACEAE 20 cells/mL Heterocapsa 240 cells/mL

#### **EUGLENOPHYTES**

Trachelomonas 10 cells/mL

#### **GREEN ALGAE**

Unicellular green algae 510000 cells/mL Chlorella 907000 cells/mL

# Sample temperature at time of receipt 17.1°C

Algal Biovolume T0393(ADEL)

#### **CRYPTOPHYTES**

Cryptomonas 0.01 mm3/L

#### **EUGLENOPHYTES**

# Total Algae Biovolume

# Total Diatom Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Trachelomonas 0.03 mm3/L

# **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.

Not Calculated mm3/L

0.00 mm3/L

0.00 mm3/L

Not Calculated mm3/L



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# **Analytical Results**

Sampling Point 31511-EPA - 3.2km South Salt Creek

 Sampled Date
 15/02/2023
 9:28:00AM

 Sample Received Date
 15/02/2023
 4:58:55PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0662

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)	15/02/2023
-----------------------------	------------

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 15/02/2023

 Algae - Total
 1420000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 0 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1420000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

16/02/2023

Chlorophyll a 0.1 49.2  $\,\mu g/L$  Phaeophytin a 0.1 14.8  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	86 µg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	38800 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	6.3 μg/L	
# Nitrate + Nitrite as NO3	2.3	27.9 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		6.18 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)			21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	7.176 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.4 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023



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01/03/2023

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Analytica	l Results
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Sampling Point 31511-EPA - 3.2km South Salt Creek

 Sampled Date
 15/02/2023
 9:28:00AM

 Sample Received Date
 15/02/2023
 4:58:55PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0662

 Status
 Endorsed

Collection Type Customer Collected

Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.188 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	6.66 mg/L	

TKN as N T0112-01(ADEL)

TKN as Nitrogen 0.05 6.17 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 17.1	°C		
Dissolved Organic Carbon T0158-07(ADEL)			16/02/2023
Dissolved Organic Carbon	1	21.8 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	30.8 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
--------------------------------	-----	--------	-----------------

# Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

17/02/2023

Alkalinity as Calcium Carbonate 231  $\,$  mg/L Bicarbonate 281  $\,$  mg/L Carbonate 0  $\,$  mg/L Hydroxide 0  $\,$  mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 17/02/2023

Conductivity 2 98300  $\mu$ S/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 83200 mg/L

pH T0010-01(ADEL)

pH 8.0 pH units Temperature at which pH is measured 21.9  $^{\circ}$ C

Turbidity T0018-01(ADEL) 16/02/2023

Turbidity 0.1 10 NTU



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# **Analytical Results**

Suspended Solids T0160-01(ADEL)

**Sampling Point** 31511-EPA - 3.2km South Salt Creek

15/02/2023 9:28:00AM **Sampled Date** 15/02/2023 4:58:55PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0662 Sample ID Endorsed Status

Customer Collected **Collection Type** 

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 17	7.1°C		
Suspended Solids T0160-01(ADFL)			16/02/2023

Suspended Solids 1.0 20 mg/L



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# **Analytical Results**

**Status** 

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 15/02/2023
 9:30:00AM

 Sample Received Date
 15/02/2023
 5:00:00PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0663

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

#### Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **DINOFLAGELLATES**

PERIDINIACEAE 19 cells/mL
Heterocapsa 74 cells/mL
Gymnodinioids 6 cells/mL
Oxyrrhis 4 cells/mL

#### **GREEN ALGAE**

Chlorella 976000 cells/mL Unicellular green algae 473000 cells/mL

# Sample temperature at time of receipt 17.1°C

#### Algal Biovolume T0393(ADEL)

# **GREEN ALGAE**

Chlorella 43.9 mm3/L

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and calculated biovolume includes only those with

Endorsed

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 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Blue Green Algae - Total

Diatoms - Total

1450000 cells/mL 0 cells/mL



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16/02/2023

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# **Analytical Results**

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 15/02/2023
 9:30:00AM

 Sample Received Date
 15/02/2023
 5:00:00PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0663

 Status
 Endorsed

Collection Type Customer Collected

# Algal Count - Total T0393(ADEL)

Geosmin-MIB producing BGA - Total 0 cells/mL

Green Algae - Total 1450000 cells/mL

Toxin producing BGA - Total 0 cells/mL

# Sample temperature at time of receipt 17.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)
Chlorophyll a 0.1

Chlorophyll a 0.1 66.1  $\,\mu g/L$  Phaeophytin a 0.1 19.4  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	52 μg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	42300 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	4.8 μg/L	
# Nitrate + Nitrite as NO3	2.3	21.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		3.34 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	3.588 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.2 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.143 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	6.25 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	3.34 mg/L	



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# **Analytical Results**

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 15/02/2023
 9:30:00AM

 Sample Received Date
 15/02/2023
 5:00:00PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0663

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		_
Dissolved Organic Carbon T0158-07(ADE	EL)		16/02/2023
Dissolved Organic Carbon	1	20.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	27.6 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 1			
Alkalinity Carbonate Bicarbonate and Hy	ydroxide T0101-0	1(ADEL)	17/02/2023
Alkalinity as Calcium Carbonate		226 mg/L	
Bicarbonate		276 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		17/02/2023
Conductivity	2	94400 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	78800 mg/L	
pH T0010-01(ADEL)			17/02/2023
pH		8.1 pH units	
Temperature at which pH is measured		22.0 °C	
Turbidity T0018-01(ADEL)			16/02/2023
Turbidity	0.1	11 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		16/02/2023
Suspended Solids T0160-01(ADEL) Suspended Solids	1.0	20 mg/L	10/02/2023



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# **Analytical Results**

Sampling Point 315191-EPA - Morella Creek @ guage

 Sampled Date
 15/02/2023
 9:46:00AM

 Sample Received Date
 15/02/2023
 5:00:26PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0667

 Status
 Endorsed

Collection Type Customer Collected

<b>Biology Operations</b>	LOR	Result	Test Start Date
Sample temperature at time of re	eceipt 17.1°C		
Algal Identification T0393(ADEL)			
BLUE GREEN ALGAE			
Cyanogranis		5700 cells/mL	
Cyanodictyon		1200 cells/mL	
DIATOMS			
Synedra		46 cells/mL	
DINOFLAGELLATES			
PERIDINIACEAE		42 cells/mL	
Oxyrrhis		4 cells/mL	
GDEEN ALGAE			

GREEN ALGAE	
Phytoflagellates	950 cells/mL
Monoraphidium sp_2_(short)	1600 cells/mL
Oocystis sp_1_(small_cells)	900 cells/mL
Chlorella	3560 cells/mL
Unicellular green algae	1000 cells/mL
Chodatella_(Lagerheimia)	225 cells/mL

# Sample temperature at time of receipt 17.1°C Algal Biovolume T0393(ADEL)

15/02/2023

#### **BLUE GREEN ALGAE**

Cyanogranis	<0.01 mm3/L
Cyanodictyon	<0.01 mm3/L
DIATOMS	
Synedra	0.03 mm3/L
GREEN ALGAE	
Monoraphidium sp_2_(short)	0.08 mm3/L
Oocystis sp_1_(small_cells)	0.16 mm3/L
Chlorella	0.16 mm3/L



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# **Analytical Results**

# Total Algae Biovolume

Sampling Point 315191-EPA - Morella Creek @ guage

 Sampled Date
 15/02/2023
 9:46:00AM

 Sample Received Date
 15/02/2023
 5:00:26PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0667

Status Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)

15/02/2023

# 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.

Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume <0.02 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

# Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 15/02/2023

 Algae - Total
 15200 cells/mL

 Blue Green Algae - Total
 6900 cells/mL

 Diatoms - Total
 46 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 8240 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Sample temperature at time of receipt 17.1°C

16/02/2023

Chlorophyll a 0.1 2.71  $\mu$ g/L Phaeophytin a 0.1 0.82  $\mu$ g/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

 Ammonia as N (ADEL)
 21/02/2023

 # Ammonia as N
 1
 62 μg/L

Chloride T0104-02(ADEL) 16/02/2023

Chloride 4.0 8800 mg/L



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21/02/2023

21/02/2023

01/03/2023

**Test Start Date** 

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Analytic	cal Resul	ts
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Nitrate + Nitrite as N (ADEL)

**Collection Type** 

315191-EPA - Morella Creek @ guage **Sampling Point** 

15/02/2023 9:46:00AM **Sampled Date** 15/02/2023 5:00:26PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0667 Sample ID

Endorsed **Status Customer Collected** 

# Nitrate + Nitrite as N	0.5	5.2 μg/L	
# Nitrate + Nitrite as NO3	2.3	23.0 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		1.50 mg/L	

Phosphorus - Filterable Reactive as P (Al	DEL)	
# Phosphorus -Filterable Reactive as PO4	1.5	11.96 μg/L
Phosphorus-Filterable Reactive as P	0.5	4.0 μg/L
Phosphorus - Total T0109-44(ADEL)		

Phosphorus - Total	0.005	0.061 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023

Silica - Reactive	0.05	14.5 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	1.49 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of re	ceipt 17.1°C		
Dissolved Organic Carbon T0158-	-07(ADEL)		22/02/2023
Dissolved Organic Carbon	1	13.9 mg/L	
Total Organic Carbon T0158-07(Al	DEL)		22/02/2023

16.8 mg/L

Result

1

LOR

**Inorganic Chemistry - Physical** 

Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 17/02/2023

Alkalinity as Calcium Carbonate 300 mg/L Bicarbonate 256 mg/L Carbonate 54 mg/L Hydroxide 0 mg/L

17/02/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL)



Total Organic Carbon

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# **Analytical Results**

Sampling Point 315191-EPA - Morella Creek @ guage

 Sampled Date
 15/02/2023
 9:46:00AM

 Sample Received Date
 15/02/2023
 5:00:26PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0667

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids	T0016-01(ADEL)		17/02/2023
Conductivity	2	23400 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	14600 mg/L	
pH T0010-01(ADEL)			17/02/2023
рН		8.9 pH units	
Temperature at which pH is measured		22.0 °C	
Turbidity T0018-01(ADEL)			16/02/2023

Turbidity 10018-01(ADEL)

Turbidity 0.1 1.9 NTU

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		
Suspended Solids T0160-01(ADEL)			16/02/2023
Suspended Solids	1.0	<1 ma/L	



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# **Analytical Results**

31515-EPA - Snipe Point **Sampling Point** 15/02/2023 9:50:00AM Sampled Date 15/02/2023 4:59:46PM Sample Received Date 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0660 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

LOR **Biology Operations** Result **Test Start Date** 

#### Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **DINOFLAGELLATES**

Gymnodinioids 4 cells/ml Oxyrrhis 30 cells/mL Heterocapsa 30 cells/mL

**GREEN ALGAE** 

Chlorella 1140000 cells/mL Unicellular green algae 471000 cells/mL

# Sample temperature at time of receipt 17.1°C

# Algal Biovolume T0393(ADEL)

**GREEN ALGAE** 

Chlorella 51.3 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.

0 cells/ml

# 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 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Diatoms - Total

Geosmin-MIB producing BGA - Total

1610000 cells/mL Blue Green Algae - Total 0 cells/mL 0 cells/mL



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15/02/2023

16/02/2023

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# **Analytical Results**

**Collection Type** 

31515-EPA - Snipe Point **Sampling Point** 15/02/2023 9:50:00AM **Sampled Date** 15/02/2023 4:59:46PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0660 Sample ID Endorsed **Status Customer Collected** 

Algal Count - Total T0393(ADEL)

Green Algae - Total 1610000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 67.0 µg/L

Phaeophytin a 0.1 21.9 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	41 μg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	47500 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	4.4 µg/L	
# Nitrate + Nitrite as NO3	2.3	19.5 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		5.18 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.093 μg/L	
Phosphorus-Filterable Reactive as P	0.5	0.7 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.236 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	6.17 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	5.18 mg/L	

Result

LOR



**Organic Chemistry** 

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**Test Start Date** 

16/02/2023

17/02/2023

17/02/2023

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# **Analytical Results**

31515-EPA - Snipe Point **Sampling Point** 15/02/2023 9:50:00AM Sampled Date 15/02/2023 4:59:46PM Sample Received Date 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0660 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Sample temperature at time of receipt 17.1°C

**Dissolved Organic Carbon T0158-07(ADEL)** 16/02/2023 Dissolved Organic Carbon

20.4 mg/L

**Total Organic Carbon T0158-07(ADEL)** 

Total Organic Carbon 28.0 mg/L

**Inorganic Chemistry - Physical** LOR **Test Start Date** Result

Sample temperature at time of receipt 17.1°C

17/02/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 226 mg/L Bicarbonate 276 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 94100 µS/cm

1

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 78500 mg/L

pH T0010-01(ADEL)

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

16/02/2023 **Turbidity T0018-01(ADEL)** 

Turbidity 0.1 10 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** 

Sample temperature at time of receipt 17.1°C

16/02/2023 Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 20 mg/L



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# **Analytical Results**

Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 15/02/2023
 10:03:00AM

 Sample Received Date
 15/02/2023
 5:00:13PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0666

 Status
 Endorsed

Collection Type Customer Collected

<b>Biology Operations</b>	LOR	Result	Test Start Date
Sample temperature at time of receip	ot 17.1°C		
Algal Identification T0393(ADEL)			
BLUE GREEN ALGAE			
Merismopedia		1400 cells/mL	
Aphanocapsa		3900 cells/mL	
DIATOMS			
Synedra		450 cells/mL	
Chaetoceros		2 cells/mL	
DINOFLAGELLATES			
PERIDINIACEAE		112 cells/mL	
GREEN ALGAE			
Oocystis sp_1_(small_cells)		3500 cells/mL	
Phytoflagellates		1900 cells/mL	
Chodatella_(Lagerheimia)		1600 cells/mL	
Monoraphidium sp_2_(short)		3600 cells/mL	
Chlorella		2200 cells/mL	
Sample temperature at time of receip	ot 17.1°C		
Algal Biovolume T0393(ADEL)			15/02/2023
BLUE GREEN ALGAE			
Merismopedia		<0.01 mm3/L	
Aphanocapsa		<0.01 mm3/L	
DIATOMS			
Synedra		0.31 mm3/L	
GREEN ALGAE			
Oocystis sp_1_(small_cells)		0.60 mm3/L	
Monoraphidium sp_2_(short)		0.19 mm3/L	
Chlorella		0.10 mm3/L	



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# **Analytical Results**

# Total Algae Biovolume

Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 15/02/2023
 10:03:00AM

 Sample Received Date
 15/02/2023
 5:00:13PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0666

 Status
 Endorsed

Collection Type Customer Collected

Δlαal	<b>Biovolume</b>	T0393	(ADFI)
Aluai	DIOVOIUITE	10333	AULLI

15/02/2023

# 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.

Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume <0.02 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 17.1°C

Algal Count - Total T0393(ADEL) 15/02/2023

 Algae - Total
 18700 cells/mL

 Blue Green Algae - Total
 5300 cells/mL

 Diatoms - Total
 452 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 12800 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 17.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 2.87  $\,\mu g/L$  Phaeophytin a 0.1 0.55  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

 Sample temperature at time of receipt 17.1°C

 Ammonia as N (ADEL)
 21/02/2023

 # Ammonia as N
 1
 109 μg/L

Chloride T0104-02(ADEL) 16/02/2023

Chloride 4.0 8690 mg/L



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**Status** 

31519-EPA - Morella Basin at Outlet Regulator **Sampling Point** 

15/02/2023 10:03:00AM **Sampled Date** 15/02/2023 5:00:13PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0666 Sample ID Endorsed

**Customer Collected Collection Type** 

Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	5.3 µg/L	
# Nitrate + Nitrite as NO3	2.3	23.5 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		1.69 mg/L	
Phosphorus - Filterable Reactive as P (A	(DEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	10.166 μg/L	
Phosphorus-Filterable Reactive as P	0.5	3.4 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.058 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	14.6 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	1.68 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of rece	eipt 17.1°C		
<b>Dissolved Organic Carbon T0158-0</b>	7(ADEL)		22/02/2023
Dissolved Organic Carbon	1	13.7 mg/L	
Total Organic Carbon T0158-07(ADI	EL)		22/02/2023
Total Organic Carbon	1	16.1 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
--------------------------------	-----	--------	-----------------

0 mg/L

# Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 300 mg/L Bicarbonate 254 mg/L Carbonate 55 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

17/02/2023

17/02/2023



Hydroxide

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# **Analytical Results**

31519-EPA - Morella Basin at Outlet Regulator **Sampling Point** 

15/02/2023 10:03:00AM **Sampled Date** 15/02/2023 5:00:13PM Sample Received Date 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0666 Sample ID Endorsed Status

**Customer Collected Collection Type** 

Conductivity & Total Dissolved Solids T0016-01(ADEL)			17/02/2023
Conductivity	2	23400 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	14600 mg/L	
pH T0010-01(ADEL)			17/02/2023
pH		8.9 pH units	
Temperature at which pH is measured		22.0 °C	
Turbidity T0018-01(ADFL)			16/02/2023

Turbidity T0018-01(ADEL) Turbidity 0.1 1.3 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** Sample temperature at time of receipt 17.1°C 16/02/2023 Suspended Solids T0160-01(ADEL) Suspended Solids 1.0 <1 mg/L



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# **Analytical Results**

531012-EPA - Sth Policeman Point **Sampling Point** 

15/02/2023 10:10:00AM Sampled Date 15/02/2023 5:02:49PM Sample Received Date 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0677 Sample ID

Endorsed **Status** 

**Customer Collected Collection Type** 

LOR **Biology Operations** Result **Test Start Date** 

#### Sample temperature at time of receipt 17.1°C

#### Algal Identification T0393(ADEL)

#### **DINOFLAGELLATES**

Heterocapsa 20 cells/ml Oxyrrhis 40 cells/mL Gymnodinioids 20 cells/mL

#### **GREEN ALGAE**

Chlorella 1190000 cells/mL Unicellular green algae 343000 cells/mL Phytoflagellates 50 cells/ml Phytoflagellates small\_spp 40 cells/mL

# Sample temperature at time of receipt 17.1°C

Algal Biovolume T0393(ADEL)

**GREEN ALGAE** 

Chlorella 53.6 mm3/L Phytoflagellates small\_spp <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. Not Calculated mm3/L

0.00 mm3/l

0.00 mm3/L Not Calculated mm3/L

1530000 cells/ml

0.00 mm3/L

# Total Green Algae Biovolume

Total Toxic BGA Biovolume

# Total Blue\_Green Algae Biovolume

# Total Algae Biovolume

# Total Diatom Biovolume

Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL)

Algae - Total

15/02/2023

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16/02/2023

**Test Start Date** 

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# **Analytical Results**

Sampling Point 531012-EPA - Sth Policeman Point

 Sampled Date
 15/02/2023
 10:10:00AM

 Sample Received Date
 15/02/2023
 5:02:49PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0677

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 0 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1530000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

**Inorganic Chemistry - Nutrients** 

Chlorophyll a 0.1 76.4  $\mu$ g/L Phaeophytin a 0.1 25.4  $\mu$ g/L

Result

LOR

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Sample temperature at time of receipt 1	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	38 μg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	38500 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	7.9 µg/L	
# Nitrate + Nitrite as NO3	2.3	35.0 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		4.55 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	12.259 μg/L	
Phosphorus-Filterable Reactive as P	0.5	4.1 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.140 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	5.44 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	4.54 mg/L	



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# **Analytical Results**

Sampling Point 531012-EPA - Sth Policeman Point

 Sampled Date
 15/02/2023
 10:10:00AM

 Sample Received Date
 15/02/2023
 5:02:49PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0677

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		16/02/2023
Dissolved Organic Carbon	1	19.8 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	26.1 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 1			_
Alkalinity Carbonate Bicarbonate and Hy	ydroxide T0101-0	1(ADEL)	17/02/2023
Alkalinity as Calcium Carbonate		220 mg/L	
Bicarbonate		269 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		17/02/2023
Conductivity	2	91000 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	75000 mg/L	
pH T0010-01(ADEL)			17/02/2023
pH		8.0 pH units	
Temperature at which pH is measured		21.9 °C	
Turbidity T0018-01(ADEL)			16/02/2023
Turbidity	0.1	9.8 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		16/02/2023
Suspended Solids T0160-01(ADEL) Suspended Solids	1.0	40 mg/L	10/02/2023



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# **Analytical Results**

Sampling Point 531012-EPA - Sth Policeman Point

 Sampled Date
 15/02/2023
 10:10:00AM

 Sample Received Date
 15/02/2023
 5:02:49PM

 Sample Analysis Completed
 2/03/2023
 5:42:34PM

 Sample ID
 \*2023-000-0677

Status Endorsed

Collection Type Customer Collected



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# **Analytical Results**

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 15/02/2023 10:35:00AM

 Sample Received Date
 15/02/2023 5:01:32PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0659

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

# Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **GREEN ALGAE**

Phytoflagellates small\_spp 9000 cells/mL
Unicellular green algae 216000 cells/mL
Chlorella 1300000 cells/mL

# Sample temperature at time of receipt 17.1°C

# Algal Biovolume T0393(ADEL)

#### **GREEN ALGAE**

Chlorella 58.5 mm3/L Phytoflagellates small\_spp 0.70 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.

Not Calculated mm3/L

0.00 mm3/L

0.00 mm3/L

Not Calculated mm3/L

1520000 cells/mL

0 cells/mL

0 cells/ml

0.00 mm3/L

# Sample temperature at time of receipt 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Blue Green Algae - Total Diatoms - Total

Geosmin-MIB producing BGA - Total

Green Algae - Total

Toxin producing BGA - Total

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ACCREDITATION

0 cells/mL 1520000 cells/mL 0 cells/mL 15/02/2023

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# **Analytical Results**

31526-EPA - Nth Jack Point **Sampling Point** 15/02/2023 10:35:00AM **Sampled Date** 15/02/2023 5:01:32PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0659 Sample ID Endorsed **Status Customer Collected Collection Type** 

Sample temperature at time of receipt 17.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

102 μg/L

Chlorophyll a Phaeophytin a 0.1 34.3 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	35 μg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	36500 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	6.9 µg/L	
# Nitrate + Nitrite as NO3	2.3	30.6 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		4.51 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	20.033 μg/L	
Phosphorus-Filterable Reactive as P	0.5	6.7 µg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.146 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	3.18 mg/L	
TKN as N T0112-01(ADEL)		-	01/03/2023
TKN as Nitrogen	0.05	4.50 mg/L	
Organic Chemistry	LOR	Result	Test Start Date

Sample temperature at time of receipt 17.1°C **Dissolved Organic Carbon T0158-07(ADEL)** 

16/02/2023

16/02/2023



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16/02/2023

16/02/2023

16/02/2023

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# **Analytical Results**

Dissolved Organic Carbon

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 15/02/2023 10:35:00AM

 Sample Received Date
 15/02/2023 5:01:32PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0659

 Status
 Endorsed

Collection Type Customer Collected

Dissolved Organic Carbon T0158-07(ADEL)

1 18.8 mg/L

**Total Organic Carbon T0158-07(ADEL)** 

Total Organic Carbon 1 25.9 mg/L

Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 220  $\,$  mg/L Bicarbonate 268  $\,$  mg/L Carbonate 0  $\,$  mg/L Hydroxide 0  $\,$  mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 2 83000  $\mu$ S/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 66500 mg/L

pH T0010-01(ADEL) 17/02/2023

pH 8.1 pH units Temperature at which pH is measured 21.9  $^{\circ}$ C

Turbidity T0018-01(ADEL)

Turbidity 0.1 12 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 17.1°C

Suspended Solids T0160-01(ADEL) 16/02/2023

Suspended Solids 1.0 55 mg/L



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# **Analytical Results**

300713-Tilley Swamp Drain D/S Northern Outlet **Sampling Point** 

15/02/2023 10:55:00AM Sampled Date 15/02/2023 4:58:42PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0668 Sample ID Endorsed

**Customer Collected Collection Type** 

LOR **Biology Operations** Result **Test Start Date** 

#### Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **DIATOMS**

**Status** 

Pennate diatoms 4 cells/ml Cyclotella 850 cells/mL Synedra 2 cells/mL

#### **DINOFLAGELLATES**

PERIDINIACEAE 20 cells/mL

#### **GREEN ALGAE**

Chlorella 8800 cells/mL Monoraphidium sp\_2\_(short) 7000 cells/mL Phytoflagellates 70 cells/mL Oocystis sp\_1\_(small\_cells) 525 cells/mL

# Sample temperature at time of receipt 17.1°C

Algal Biovolume T0393(ADEL)

# **DIATOMS**

Synedra <0.01 mm3/L Cyclotella 0.43 mm3/L

#### **GREEN ALGAE**

Oocystis sp\_1\_(small\_cells) 0.09 mm3/L Monoraphidium sp\_2\_(short) 0.37 mm3/L Chlorella 0.40 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. Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L

# Total Diatom Biovolume

# Total Algae Biovolume

# Total Blue\_Green Algae Biovolume

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# **Analytical Results**

Sampling Point 300713-Tilley Swamp Drain D/S Northern Outlet

 Sampled Date
 15/02/2023
 10:55:00AM

 Sample Received Date
 15/02/2023
 4:58:42PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0668

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 15/02/2023

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 17.1°C

Algal Count - Total T0393(ADEL) 15/02/2023

 Algae - Total
 17300 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 856 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 16400 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 17.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 2.42  $\,\mu g/L$  Phaeophytin a 0.1 0.97  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	41 µg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	6270 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	5.7 μg/L	
# Nitrate + Nitrite as NO3	2.3	25.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		1.41 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	13.156 µg/L	
Phosphorus-Filterable Reactive as P	0.5	4.4 µg/L	



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Sampling Point 300713-Tilley Swamp Drain D/S Northern Outlet

 Sampled Date
 15/02/2023
 10:55:00AM

 Sample Received Date
 15/02/2023
 4:58:42PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0668

 Status
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Collection Type Customer Collected

Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.024 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	17.1 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	1.40 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 17.1	°C		
Dissolved Organic Carbon T0158-07(ADEL)	ı		22/02/2023
Dissolved Organic Carbon	1	14.8 mg/L	
Total Organic Carbon T0158-07(ADEL)			22/02/2023
Total Organic Carbon	1	16.6 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date

# Sample temperature at time of receipt 17.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

16/02/2023

Alkalinity as Calcium Carbonate 386  $\,$  mg/L Bicarbonate 468  $\,$  mg/L Carbonate 1  $\,$  mg/L Hydroxide 0  $\,$  mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 2 18000 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC)

1 10900 mg/L

pH T0010-01(ADEL) 16/02/2023

pH 8.3 pH units Temperature at which pH is measured 23.2  $^{\circ}$ C

Turbidity T0018-01(ADEL) 16/02/2023

Turbidity 0.1 2.4 NTU



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**Analytical Results** 

Status

**Sampling Point** 300713-Tilley Swamp Drain D/S Northern Outlet

15/02/2023 10:55:00AM **Sampled Date** 15/02/2023 4:58:42PM **Sample Received Date** 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0668 Sample ID Endorsed

**Customer Collected Collection Type** 

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** 

Sample temperature at time of receipt 17.1°C Suspended Solids T0160-01(ADEL)

16/02/2023

Suspended Solids 1.0 4 mg/L



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# **Analytical Results**

 Sampling Point
 31514-EPA - Stoney Well

 Sampled Date
 15/02/2023 11:05:00AM

 Sample Received Date
 15/02/2023 4:59:33PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0664

 Status
 Endorsed

Biology Operations LOR Result Test Start Date

**Customer Collected** 

## Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **DINOFLAGELLATES**

PERIDINIACEAE 10 cells/mL Oxyrrhis 10 cells/mL

### **GREEN ALGAE**

**Collection Type** 

Phytoflagellates small\_spp360 cells/mLPhytoflagellates90 cells/mLChlorella994000 cells/mLUnicellular green algae151000 cells/mL

## Sample temperature at time of receipt 17.1°C

# Algal Biovolume T0393(ADEL)

## **GREEN ALGAE**

Chlorella 44.7 mm3/L
Phytoflagellates small spp 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 0.00 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 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Blue Green Algae - Total

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15/02/2023

15/02/2023

1150000 cells/mL

0 cells/ml

16/02/2023

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# **Analytical Results**

**Collection Type** 

**Sampling Point** 31514-EPA - Stoney Well 15/02/2023 11:05:00AM **Sampled Date** 15/02/2023 4:59:33PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0664 Sample ID Endorsed Status **Customer Collected** 

Algal Count - Total T0393(ADEL)		15/02/2023
Diatoms - Total	0 cells/mL	
Geosmin-MIB producing BGA - Total	0 cells/mL	
Green Algae - Total	1150000 cells/mL	
Toxin producing BGA - Total	0 cells/mL	

# Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 58.6 µg/L Phaeophytin a 0.1 20.2 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	24 μg/L	
Chloride T0104-02(ADEL)			20/02/2023
Chloride	4.0	26900 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	3.9 µg/L	
# Nitrate + Nitrite as NO3	2.3	17.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		3.38 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	3.289 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.1 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.088 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	1.53 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	3.38 mg/L	
		·	



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# **Analytical Results**

 Sampling Point
 31514-EPA - Stoney Well

 Sampled Date
 15/02/2023 11:05:00AM

 Sample Received Date
 15/02/2023 4:59:33PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0664

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 17	7.1°C		_
Dissolved Organic Carbon T0158-07(ADE	EL)		16/02/2023
Dissolved Organic Carbon	1	17.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	22.2 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 12	7.1°C		
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	17/02/2023
Alkalinity as Calcium Carbonate		200 mg/L	
Bicarbonate		244 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		17/02/2023
Conductivity	2	68600 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	52000 mg/L	
pH T0010-01(ADEL)			17/02/2023
pH		8.1 pH units	
Temperature at which pH is measured		22.0 °C	
Turbidity T0018-01(ADEL)			16/02/2023
Turbidity	0.1	8.7 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 17	7.1°C		40/00/2020
Suspended Solids T0160-01(ADEL) Suspended Solids	1.0	5 mg/L	16/02/2023



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# **Analytical Results**

 Sampling Point
 31525-EPA - Villa de Yumpa

 Sampled Date
 15/02/2023 11:40:00AM

 Sample Received Date
 15/02/2023 5:01:19PM

 Sample Analysis Completed
 2/03/2023 5:42:34PM

 Sample ID
 \*2023-000-0657

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

## Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

**DINOFLAGELLATES** 

Heterocapsa 10 cells/mL

**GREEN ALGAE** 

 Chlorella
 497000 cells/mL

 Unicellular green algae
 108000 cells/mL

 Tetraselmis
 30 cells/mL

 Phytoflagellates
 60 cells/mL

 Phytoflagellates small\_spp
 2200 cells/mL

Sample temperature at time of receipt 17.1°C

Algal Biovolume T0393(ADEL)

**GREEN ALGAE** 

Chlorella 22.4 mm3/L
Phytoflagellates small spp 0.17 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 17.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Blue Green Algae - Total

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607000 cells/mL 0 cells/mL 15/02/2023

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15/02/2023

16/02/2023

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# **Analytical Results**

**Collection Type** 

**Sampling Point** 31525-EPA - Villa de Yumpa 15/02/2023 11:40:00AM **Sampled Date** 15/02/2023 5:01:19PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0657 Sample ID Endorsed **Status Customer Collected** 

Algal Count - Total T0393(ADEL)	
Diatoms - Total	0 cells/mL
Geosmin-MIB producing BGA - Total	0 cells/mL

Green Algae - Total 607000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 25.3 µg/L Phaeophytin a 0.1 10.3 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	36 μg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	27400 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	5.1 μg/L	
# Nitrate + Nitrite as NO3	2.3	22.6 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.00 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.691 µg/L	
Phosphorus-Filterable Reactive as P	0.5	0.9 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.074 mg/L	
Silica - Reactive T0111-01(ADEL)		-	16/02/2023
Silica - Reactive	0.05	0.71 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023
TKN as Nitrogen	0.05	1.99 mg/L	



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# **Analytical Results**

**Sampling Point** 31525-EPA - Villa de Yumpa 15/02/2023 11:40:00AM **Sampled Date** 15/02/2023 5:01:19PM **Sample Received Date** 2/03/2023 5:42:34PM Sample Analysis Completed \*2023-000-0657 Sample ID Endorsed Status Customer Collected **Collection Type** 

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		_
Dissolved Organic Carbon T0158-07(ADE	EL)		16/02/2023
Dissolved Organic Carbon	1	18.0 mg/L	
Total Organic Carbon T0158-07(ADEL)			16/02/2023
Total Organic Carbon	1	20.5 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		
Alkalinity Carbonate Bicarbonate and H	ydroxide T0101-0	1(ADEL)	17/02/2023
Alkalinity as Calcium Carbonate		183 mg/L	
Bicarbonate		224 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids To	016-01(ADEL)		17/02/2023
Conductivity	2	62800 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	46500 mg/L	
pH T0010-01(ADEL)			17/02/2023
рН		8.0 pH units	
Temperature at which pH is measured		22.0 °C	
Turbidity T0018-01(ADEL)			17/02/2023
Turbidity	0.1	6.5 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 1	7.1°C		16/02/2022
Suspended Solids T0160-01(ADEL)	4.0		16/02/2023
Suspended Solids	1.0	5 mg/L	



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## **Analytical Results**

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 15/02/2023
 12:30:00PM

 Sample Received Date
 15/02/2023
 4:59:20PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0661

Status Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

## Sample temperature at time of receipt 17.1°C

# Algal Identification T0393(ADEL)

#### **DIATOMS**

 Navicula
 2 cells/mL

 Thalassionema
 30 cells/mL

 Nitzschia
 10 cells/mL

### **GREEN ALGAE**

 Chlorella
 225000 cells/mL

 Unicellular green algae
 48500 cells/mL

 Tetraselmis
 20 cells/mL

 Phytoflagellates
 30 cells/mL

## Sample temperature at time of receipt 17.1°C

# Algal Biovolume T0393(ADEL)

### **DIATOMS**

Navicula <0.01 mm3/L Nitzschia 0.01 mm3/l

## **GREEN ALGAE**

Chlorella

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

# 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.

Not Calculated mm3/L

0.00 mm3/l

10.1 mm3/l

Not Calculated mm3/L
Not Calculated mm3/L

0.00 mm3/L

# Sample temperature at time of receipt 17.1°C



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16/02/2023

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# **Analytical Results**

31513-EPA - Parnka Point Boat Ramp **Sampling Point** 

15/02/2023 12:30:00PM **Sampled Date** 15/02/2023 4:59:20PM Sample Received Date 2/03/2023 5:42:33PM Sample Analysis Completed \*2023-000-0661 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

15/02/2023 Algal Count - Total T0393(ADEL)

Algae - Total 274000 cells/mL Blue Green Algae - Total 0 cells/mL Diatoms - Total 42 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 274000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 17.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 12.0 µg/L

Phaeophytin a 0.1 7.01 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	17.1°C		
Ammonia as N (ADEL)			21/02/2023
# Ammonia as N	1	30 μg/L	
Chloride T0104-02(ADEL)			16/02/2023
Chloride	4.0	24300 mg/L	
Nitrate + Nitrite as N (ADEL)			21/02/2023
# Nitrate + Nitrite as N	0.5	6.4 μg/L	
# Nitrate + Nitrite as NO3	2.3	28.4 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			16/02/2023
Nitrogen - Total		2.89 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		21/02/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.99 μg/L	
Phosphorus-Filterable Reactive as P	0.5	1.0 μg/L	
Phosphorus - Total T0109-44(ADEL)			01/03/2023
Phosphorus - Total	0.005	0.087 mg/L	
Silica - Reactive T0111-01(ADEL)			16/02/2023
Silica - Reactive	0.05	1.28 mg/L	
TKN as N T0112-01(ADEL)			01/03/2023





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**Test Start Date** 

17/02/2023

**Test Start Date** 

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# **Analytical Results**

**Organic Chemistry** 

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 15/02/2023
 12:30:00PM

 Sample Received Date
 15/02/2023
 4:59:20PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0661

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 01/03/2023

Result

TKN as Nitrogen 0.05 2.88 mg/L

LOR

0.1

LOR

1°C		
)		16/02/2023
1	17.3 mg/L	
		16/02/2023
1	20.0 mg/L	
LOR	Result	Test Start Date
roxide T0101-01	I(ADEL)	17/02/2023
	178 mg/L	
	217 mg/L	
	0 mg/L	
	0 mg/L	
16-01(ADEL)		17/02/2023
2	60700 μS/cm	
	Conductivity measurement is corrected to 25°C	
1	44500 mg/L	
		17/02/2023
	7.9 pH units	
	22.3 °C	
	) 1 LOR 1°C Iroxide T0101-0′	1 17.3 mg/L  1 20.0 mg/L  LOR Result  1°C  Iroxide T0101-01(ADEL)  178 mg/L  217 mg/L  0 mg/L  0 mg/L  16-01(ADEL)  2 60700 µS/cm  Conductivity measurement is corrected to 25°C  1 44500 mg/L  7.9 pH units

8.1 NTU

Result

Sample temperature at time of receipt 17.1°C

**Inorganic Chemistry - Waste Water** 



Turbidity

**Turbidity T0018-01(ADEL)** 

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**Analytical Results** 

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 15/02/2023
 12:30:00PM

 Sample Received Date
 15/02/2023
 4:59:20PM

 Sample Analysis Completed
 2/03/2023
 5:42:33PM

 Sample ID
 \*2023-000-0661

Status Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

21/02/2023

Suspended Solids 1.0 3 mg/L



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## **AWQC Signatories**

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

Aji John - Technical Officer Chemistry

Timothy Krix - Technical Officer Chemistry

John Martini - Method Development Specialist

Dean Newman - Senior Technical Officer Biology

Melissa Phillips - Technical Officer Chemistry

Gayle Polley - Supervisor Nutrients and Waste

Lyudmila Tsymbal - Technical Officer Life Sciences



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# Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-000-0657	31525	EPA - Villa de Yumpa	15/02/2023	рН	Test not processed within holding time
2023-000-0658	31523	EPA - Long Point	14/02/2023	pН	Test not processed within holding time
2023-000-0658	31523	EPA - Long Point	14/02/2023	Silica - Reactive	Test not processed within holding time
2023-000-0659	31526	EPA - Nth Jack Point	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0659	31526	EPA - Nth Jack Point	15/02/2023	рН	Test not processed within holding time
023-000-0660	31515	EPA - Snipe Point	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0660	31515	EPA - Snipe Point	15/02/2023	pН	Test not processed within holding time
023-000-0661	31513	EPA - Parnka Point Boat Ramp	15/02/2023	pН	Test not processed within holding time
023-000-0662	31511	EPA - 3.2km South Salt Creek	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0662	31511	EPA - 3.2km South Salt Creek	15/02/2023	рН	Test not processed within holding time
023-000-0663	31517	EPA - 1.8km West Salt Creek	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0663	31517	EPA - 1.8km West Salt Creek	15/02/2023	рН	Test not processed within holding time
023-000-0664	31514	EPA - Stoney Well	15/02/2023	рН	Test not processed within holding time
023-000-0665	31512	EPA - McGrath Flat North	14/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0665	31512	EPA - McGrath Flat North	14/02/2023	рН	Test not processed within holding time
023-000-0665	31512	EPA - McGrath Flat North	14/02/2023	Turbidity	Test not processed within holding time
023-000-0666	31519	EPA - Morella Basin at Outlet Regulator	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0666	31519	EPA - Morella Basin at Outlet Regulator	15/02/2023	рН	Test not processed within holding time
023-000-0667	315191	EPA - Morella Creek @ guage	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0667	315191	EPA - Morella Creek @ guage	15/02/2023	рН	Test not processed within holding time



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# Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-000-0668	300713	Tilley Swamp Drain D/S Northern Outlet	15/02/2023	pН	Test not processed within holding time
2023-000-0668	300713	Tilley Swamp Drain D/S Northern Outlet	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0669	11505	DEW - Mundoo Downstream	14/02/2023	рН	Test not processed within holding time
023-000-0669	11505	DEW - Mundoo Downstream	14/02/2023	Turbidity	Test not processed within holding time
023-000-0669	11505	DEW - Mundoo Downstream	14/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0669	11505	DEW - Mundoo Downstream	14/02/2023	Chlorophyll a & Phaeophytin a	Test not processed within holding time
023-000-0670	11504	DEW - Mundoo Upstream	14/02/2023	рН	Test not processed within holding time
023-000-0670	11504	DEW - Mundoo Upstream	14/02/2023	Turbidity	Test not processed within holding time
023-000-0670	11504	DEW - Mundoo Upstream	14/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0670	11504	DEW - Mundoo Upstream	14/02/2023	Chlorophyll a & Phaeophytin a	Test not processed within holding time
023-000-0671	31522	EPA - Mark Point	14/02/2023	pH	Test not processed within holding time
023-000-0671	31522	EPA - Mark Point	14/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0672	351213	EPA - Murray Mouth	14/02/2023	рН	Test not processed within holding time
023-000-0672	351213	EPA - Murray Mouth	14/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0673	31524	EPA - Bonneys	14/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0673	31524	EPA - Bonneys	14/02/2023	рН	Test not processed within holding time
023-000-0674	31528	EPA - Salt Creek Outlet	15/02/2023	Silica - Reactive	Test not processed within holding time
023-000-0674	31528	EPA - Salt Creek Outlet	15/02/2023	рН	Test not processed within holding time
023-000-0675	353179	EPA - Tauwitchere Barrage Upstream	14/02/2023	рН	Test not processed within holding time
023-000-0675	353179	EPA - Tauwitchere Barrage Upstream	14/02/2023	Silica - Reactive	Test not processed within holding time



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## Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-000-0676	353177	EPA - Tauwitchere Barrage DS	14/02/2023	рН	Test not processed within holding time
2023-000-0676	353177	EPA - Tauwitchere Barrage DS	14/02/2023	Silica - Reactive	Test not processed within holding time
2023-000-0677	531012	EPA - Sth Policeman Point	15/02/2023	Silica - Reactive	Test not processed within holding time
2023-000-0677	531012	EPA - Sth Policeman Point	15/02/2023	pH	Test not processed within holding time
2023-000-0678	53032	EPA - Noonameena	14/02/2023	Silica - Reactive	Test not processed within holding time
2023-000-0678	53032	EPA - Noonameena	14/02/2023	pН	Test not processed within holding time

# **Analytical Method**

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



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## **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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Testing

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  $\textbf{available at} \underline{<} \underline{\texttt{https://www.awqc.com.au/our-services/Water-quality-testing-and-analysis/measurement-uncertainty} \\ \textbf{available at} \underline{<} \underline{\texttt{https://www.awqc.com.au/our-services/Water-quality-testing-analysis/measurement-uncertainty} \\ \textbf{available at} \underline{<} \underline{\texttt{https://www.awqc.com.au/our-services/Water-quality-testing-analysis$
- 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.