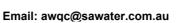
Adelaide SA 5001

Internet: www.awqc.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

13/06/2023

Dear Claire

Please find attached the Final Analytical Report for

**Customer Service Request:** 143419-2022-CSR-10

Account: 143419

Project:

AWQC-182234 DEW - Healthy Coorong Healthy Basin - Non Routine Event 8- 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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Email: awqc@sawater.com.au



FINAL REPORT: 363976

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#### **Report Information**

Project Name AWQC-182234

Customer DEW - Department of Environment and Water

**CSR\_ID** 143419-2022-CSR-10

#### **Analytical Results**

**Collection Type** 

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 17/05/2023 12:25:00PM

 Sample Received Date
 19/05/2023 9:59:32AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1059

 Status
 Endorsed

Biology Operations LOR Result Test Start Date

**Customer Collected** 

## Sample temperature at time of receipt 9.1°C

• ,	
Other Organisms	2400 cells/mL
BLUE GREEN ALGAE	
Cuspidothrix	250 cells/mL
Cylindrospermopsis raciborskii	1770 cells/mL
Phormidium	320 cells/mL
Dolichospermum circinale	276 cells/mL
Anabaenopsis	68 cells/mL
Dolichospermum (straight small)	88 cells/mL
Dolichospermum (coiled small)	178 cells/mL
Pseudanabaena	23600 cells/mL
Planktolyngbya	32200 cells/mL
Geitlerinema	15300 cells/mL
Cyanogranis	65000 cells/mL
Anabaena	24300 cells/mL
Sphaerospermopsis	2290 cells/mL
Snowella	440 cells/mL
DIATOMS	
Guinardia	18 cells/mL
Aulacoseira	116 cells/mL
Nitzschia	1100 cells/mL
GREEN ALGAE	
Gonatozygon	1390 cells/mL
Planctonema	1270 cells/mL

800 cells/mL



ABN 69336525019

Monoraphidium

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#### **Analytical Results**

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 17/05/2023 12:25:00PM

 Sample Received Date
 19/05/2023 9:59:32AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1059

 Status
 Endorsed

Collection Type Customer Collected

#### Algal Identification T0393(ADEL)

Actinastrum 50 cells/mL

# Sample temperature at time of receipt 9.1°C

Algal Biovolume T0393(ADEL)

#### **BLUE GREEN ALGAE**

Cuspidothrix	0.01 mm3/L
Cylindrospermopsis raciborskii	0.07 mm3/L
Phormidium	0.03 mm3/L
Dolichospermum circinale	0.07 mm3/L
Anabaenopsis	<0.01 mm3/L
Dolichospermum (straight small)	<0.01 mm3/L
Dolichospermum (coiled small)	<0.01 mm3/L
Pseudanabaena	0.31 mm3/L
Planktolyngbya	0.16 mm3/L
Geitlerinema	0.38 mm3/L
Cyanogranis	0.03 mm3/L
Anabaena	1.87 mm3/L
Sphaerospermopsis	0.21 mm3/L
Snowella	<0.01 mm3/L

#### **DIATOMS**

 Aulacoseira
 0.33 mm3/L

 Nitzschia
 1.52 mm3/L

#### **GREEN ALGAE**

 Gonatozygon
 5.71 mm3/L

 Monoraphidium
 0.72 mm3/L

 Actinastrum
 <0.01 mm3/L</td>

# 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 Algae Biovolume



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#### **Analytical Results**

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 17/05/2023 12:25:00PM

 Sample Received Date
 19/05/2023 9:59:32AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1059

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 17/05/2023

# Total Blue\_Green Algae Biovolume 3.14 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.14 mm3/L

#### Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL)

 Algae - Total
 171000 cells/mL

 Blue Green Algae - Total
 166000 cells/mL

 Diatoms - Total
 1230 cells/mL

 Geosmin-MIB producing BGA - Total
 39500 cells/mL

 Green Algae - Total
 3510 cells/mL

 Toxin producing BGA - Total
 2050 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 35.9  $\mu g/L$  Phaeophytin a 0.1 9.18  $\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	20 μg/L	
Chloride T0104-02(ADEL)			
Chloride	4.0	1110 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	4.7 µg/L	
# Nitrate + Nitrite as NO3	2.3	20.8 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.08 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		06/06/2023



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Analytical I	Results
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 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 17/05/2023 12:25:00PM

 Sample Received Date
 19/05/2023 9:59:32AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1059

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Physical	LOR	Result	Test Start Date	
Total Organic Carbon T0158-07(ADEL)  Total Organic Carbon	1	14.5 mg/L	2555222	
Dissolved Organic Carbon T0158-07(ADE Dissolved Organic Carbon		12.7 mg/L	26/05/2023 26/05/2023	
Organic Chemistry  Sample temperature at time of receipt 9.	LOR	Result	Test Start Date	
TKN as Nitrogen	0.05	2.08 mg/L		
TKN as N T0112-01(ADEL)			23/05/2023	
Silica - Reactive	0.05	0.18 mg/L		
Silica - Reactive T0111-01(ADEL)		3	22/05/2023	
Phosphorus - Total T0109-44(ADEL) Phosphorus - Total	0.005	<0.005 mg/L	23/03/2023	
Phosphorus-Filterable Reactive as P	0.5	1.7 μg/L	23/05/2023	
# Phosphorus -Filterable Reactive as PO4	1.5	5.083 μg/L		
Phosphorus - Filterable Reactive as P (Al	DEL)		06/06/2023	
Collection Type	Customer Co	ollected		

23/05/2023
23/05/2023
<u>&gt;</u> :

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 2550 mg/L

pH T0010-01(ADEL) 23/05/2023

pH 8.4 pH units



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22/05/2023

23/05/2023

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**Analytical Results** 

 Sampling Point
 351213-EPA - Murray Mouth

 Sampled Date
 17/05/2023 12:25:00PM

 Sample Received Date
 19/05/2023 9:59:32AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1059

Status Endorsed

Collection Type Customer Collected

pH T0010-01(ADEL) 23/05/2023

Temperature at which pH is measured 21.8 °C

**Turbidity T0018-01(ADEL)** 

Turbidity 0.1 6.8 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 9.1°C Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 <1 mg/L



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#### **Analytical Results**

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:35AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1056

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1	°C		
Algal Identification T0393(ADEL)			
Other Organisms		1700 cells/mL	
BLUE GREEN ALGAE			
Dolichospermum (coiled small)		642 cells/mL	
Cylindrospermopsis raciborskii		1260 cells/mL	
Phormidium		268 cells/mL	
Anabaenopsis		104 cells/mL	
Dolichospermum circinale		152 cells/mL	
Cuspidothrix		958 cells/mL	
Sphaerospermopsis		6340 cells/mL	
Anabaena		18600 cells/mL	
Pseudanabaena		17000 cells/mL	
Geitlerinema		8070 cells/mL	
Planktolyngbya		41600 cells/mL	
Snowella		410 cells/mL	
Cyanogranis		51500 cells/mL	
DIATOMS			
Aulacoseira		390 cells/mL	
Nitzschia		850 cells/mL	
Cyclotella		10 cells/mL	
Synedra		10 cells/mL	
GREEN ALGAE			
Gonatozygon		2370 cells/mL	
Planctonema		1270 cells/mL	
Monoraphidium		600 cells/mL	
Actinastrum		820 cells/mL	
Scenedesmus		370 cells/mL	

# Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

17/05/2023



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#### **Analytical Results**

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

17/05/2023 1:10:00PM **Sampled Date** 19/05/2023 9:55:35AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1056

Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

#### Algal Biovolume T0393(ADEL)

17/05/2023

BLUE	GREEN A	ALGAE
------	---------	-------

Dolichospermum (coiled small)	0.03 mm3/L
Cylindrospermopsis raciborskii	0.05 mm3/L
Phormidium	0.03 mm3/L
Anabaenopsis	0.01 mm3/L
Dolichospermum circinale	0.04 mm3/L
Cuspidothrix	0.05 mm3/L
Sphaerospermopsis	0.59 mm3/L
Anabaena	1.43 mm3/L
Pseudanabaena	0.22 mm3/L
Geitlerinema	0.20 mm3/L
Planktolyngbya	0.21 mm3/L
Snowella	<0.01 mm3/L
Cyanogranis	0.03 mm3/L

#### **DIATOMS**

Aulacoseira 1.12 mm3/L Nitzschia 1.18 mm3/L Cyclotella <0.01 mm3/L Synedra <0.01 mm3/L

#### **GREEN ALGAE**

Gonatozygon 9.73 mm3/L Monoraphidium 0.54 mm3/L Actinastrum 0.06 mm3/L Scenedesmus 0.09 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

2.89 mm3/L

2.30 mm3/L

# Total Algae Biovolume

# Total Diatom Biovolume

# Total Blue\_Green Algae Biovolume

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#### **Analytical Results**

**Status** 

Sampling Point 11504-DEW - Mundoo Upstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:35AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1056

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 17/05/2023

# Total Green Algae Biovolume Not Calculated mm3/L

Endorsed

Total Toxic BGA Biovolume 0.09 mm3/L

#### Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 17/05/2023

 Algae - Total
 154000 cells/mL

 Blue Green Algae - Total
 147000 cells/mL

 Diatoms - Total
 1260 cells/mL

 Geosmin-MIB producing BGA - Total
 25500 cells/mL

 Green Algae - Total
 5430 cells/mL

 Toxin producing BGA - Total
 1410 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 41.2  $\,\mu g/L$  Phaeophytin a 0.1 13.8  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	38 µg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	72 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	9.4 µg/L	
# Nitrate + Nitrite as NO3	2.3	41.6 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.29 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)	-	06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	9.867 µg/L	
Phosphorus-Filterable Reactive as P	0.5	3.3 µa/L	



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Analytical Results			
Sampling Point Sampled Date Sample Received Date Sample Analysis Completed Sample ID Status Collection Type	11504-DEW 17/05/2023 19/05/2023 7/06/2023 *2023-003-1 Endorsed Customer Co	9:55:35AM 2:08:15PM 056	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	0.093 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	0.08 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	2.28 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Dissolved Organic Carbon T0158-07(ADEL)			26/05/2023
Dissolved Organic Carbon	1	12.8 mg/L	
Total Organic Carbon T0158-07(ADEL) Total Organic Carbon	1	15.0 mg/L	26/05/2023
		10.0 1119/2	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Alkalinity Carbonate Bicarbonate and Hydrox	kide T0101-0	` ,	23/05/2023
Alkalinity as Calcium Carbonate		151 mg/L	
Bicarbonate  Carbonate		174 mg/L	
Hydroxide		5 mg/L	
•	01/ADEL\	0 mg/L	23/05/2023
Conductivity & Total Dissolved Solids T0016- Conductivity	01(ADEL) 2	565 μS/cm	20,00/2020
Note	-	Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	313 mg/L	
pH T0010-01(ADEL)		- · · · · · · · · · · · ·	23/05/2023
pH		8.6 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	9.7 NTU	



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#### **Analytical Results**

 Sampling Point
 11504-DEW - Mundoo Upstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:35AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1056

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°0 Suspended Solids T0160-01(ADEL)	C		23/05/2023
Suspended Solids	1.0	17 mg/L	



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#### **Analytical Results**

Cylindrospermopsis raciborskii

**Status** 

Sampling Point 11505-DEW - Mundoo Downstream

Endorsed

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1057

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C Algal Identification T0393(ADEL)			
Other Organisms		1350 cells/mL	
BLUE GREEN ALGAE			
Cuspidothrix		504 cells/mL	

1120 cells/mL

832 cells/mL

Dolichospermum (coiled small)	736 cells/mL
Anabaenopsis	28 cells/mL
Dolichospermum circinale	312 cells/mL
Phormidium	70 cells/mL
Pseudanabaena	15100 cells/mL
Planktolyngbya	35800 cells/mL
Geitlerinema	14100 cells/mL
Snowella	370 cells/mL
Cyanogranis	71000 cells/mL
D.170110	

**DIATOMS**Aulacoseira

 Nitzschia
 417 cells/mL

 Cyclotella
 20 cells/mL

 GREEN ALGAE
 Sonatozygon

 Gonatozygon
 2060 cells/mL

 Planctonema
 1110 cells/mL

 Planctonema
 1110 cells/ml

 Pediastrum
 260 cells/mL

 Monoraphidium
 80 cells/mL

 Actinastrum
 210 cells/mL

Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

17/05/2023

**BLUE GREEN ALGAE** 

Cuspidothrix 0.03 mm3/L Cylindrospermopsis raciborskii 0.05 mm3/L



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#### **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1057

**Status** Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 17/05/2023

Dolichospermum (coiled small) 0.04 mm3/L Anabaenopsis <0.01 mm3/L Dolichospermum circinale 0.08 mm3/L Phormidium <0.01 mm3/L Pseudanabaena 0.20 mm3/L Planktolyngbya 0.18 mm3/L Geitlerinema 0.35 mm3/l Snowella <0.01 mm3/L Cyanogranis 0.04 mm3/L

DIATOMS

 Aulacoseira
 2.38 mm3/L

 Nitzschia
 0.58 mm3/L

 Cyclotella
 0.01 mm3/L

**GREEN ALGAE** 

 Gonatozygon
 8.46 mm3/L

 Pediastrum
 0.31 mm3/L

 Monoraphidium
 0.07 mm3/L

 Actinastrum
 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.

Not Calculated mm3/L

# Total Algae Biovolume Not Calculated mm3

# Total Blue\_Green Algae Biovolume 0.97 mm3/L # Total Diatom Biovolume 2.97 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.13 mm3/L

#### Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 17/05/2023

Algae - Total 144000 cells/mL



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19/05/2023

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#### **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1057

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)		17/05/2023
Blue Green Algae - Total	139000 cells/mL	
Diatoms - Total	1270. collo/ml	

 Diatoms - Total
 1270 cells/mL

 Geosmin-MIB producing BGA - Total
 29600 cells/mL

 Green Algae - Total
 3720 cells/mL

 Toxin producing BGA - Total
 1430 cells/mL

Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 41.0  $\,\mu g/L$  Phaeophytin a 0.1 11.5  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

06/06/2023 22/05/2023
22/05/2023
22/05/2023
06/06/2023
19/05/2023
06/06/2023
23/05/2023
22/05/2023
23/05/2023



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#### **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1057

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	).1°C		
Dissolved Organic Carbon T0158-07(ADI	EL)		26/05/2023
Dissolved Organic Carbon	1	12.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	15.4 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9			
Alkalinity Carbonate Bicarbonate and H	ydroxide T0101-0	1(ADEL)	23/05/2023
Alkalinity as Calcium Carbonate		152 mg/L	
Bicarbonate		178 mg/L	
Carbonate		4 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids TO	0016-01(ADEL)		23/05/2023
Conductivity	2	585 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	324 mg/L	
pH T0010-01(ADEL)			23/05/2023
pH		8.5 pH units	
Temperature at which pH is measured		21.7 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	9.6 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	).1°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	21 mg/L	



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#### **Analytical Results**

Sampling Point 11505-DEW - Mundoo Downstream

 Sampled Date
 17/05/2023
 1:10:00PM

 Sample Received Date
 19/05/2023
 9:55:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1057

Status Endorsed

Collection Type Customer Collected



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#### **Analytical Results**

Dolichospermum circinale

Anabaenopsis

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

17/05/2023 4:15:00PM **Sampled Date** Sample Received Date 19/05/2023 9:59:58AM 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1062 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	.1°C		
Algal Identification T0393(ADEL)			
Other Organisms		4250 cells/mL	
BLUE GREEN ALGAE			
Cylindrospermopsis raciborskii		2440 cells/mL	
Cuspidothrix		1050 cells/mL	

242 cells/ml

64 cells/ml

· · · · · · · · · · · · · · · · · · ·	OT OCIIO/IIIL
Planktothrix	1060 cells/mL
Dolichospermum (coiled small)	48 cells/mL
Microcystis flos-aquae	1110 cells/mL
Nodularia spumigena	138 cells/mL
Anabaena	26000 cells/mL
Planktolyngbya	93200 cells/mL
Pseudanabaena	16200 cells/mL
Geitlerinema	9080 cells/mL
Cyanogranis	92700 cells/mL
Merismopedia	1800 cells/mL

**DIATOMS** Aulacoseira 40 cells/ml Nitzschia 110 cells/mL **GREEN ALGAE** 3320 cells/mL

Gonatozygon Planctonema 995 cells/mL Monoraphidium 100 cells/mL

Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

0.10 mm3/L

**BLUE GREEN ALGAE** 

Cylindrospermopsis raciborskii Cuspidothrix 0.06 mm3/L



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#### **Analytical Results**

**Status** 

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

Endorsed

 Sampled Date
 17/05/2023
 4:15:00PM

 Sample Received Date
 19/05/2023
 9:59:58AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1062

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 17/05/2023

Dolichospermum circinale 0.06 mm3/L Anabaenopsis <0.01 mm3/L Planktothrix 0.27 mm3/L Dolichospermum (coiled small) <0.01 mm3/L Microcystis flos-aquae 0.02 mm3/L Nodularia spumigena 0.03 mm3/L Anabaena 2.00 mm3/L Planktolyngbya 0.47 mm3/L Pseudanabaena 0.21 mm3/L Geitlerinema 0.23 mm3/L Cyanogranis 0.05 mm3/L Merismopedia <0.01 mm3/L

**DIATOMS** 

 Aulacoseira
 0.11 mm3/L

 Nitzschia
 0.15 mm3/L

**GREEN ALGAE** 

Gonatozygon 13.6 mm3/L Monoraphidium 0.09 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 3.50 mm3/L # Total Diatom Biovolume 0.26 mm3/L

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.21 mm3/L

## Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 17/05/2023

Algae - Total 250000 cells/mL



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19/05/2023

06/06/2023

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#### **Analytical Results**

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

17/05/2023 4:15:00PM **Sampled Date** 19/05/2023 9:59:58AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1062 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Algal Count - Total T0393(ADEL)	17/05/2023
Blue Green Algae - Total	245000 cells/mL
Diatoms - Total	150 cells/mL

Geosmin-MIB producing BGA - Total 25500 cells/mL Green Algae - Total 4420 cells/mL Toxin producing BGA - Total 3930 cells/mL

Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

0.1 Chlorophyll a 33.8 µg/L Phaeophytin a 0.1 10.5 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	3 µg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	127 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023

# Nitrate + Nitrite as N	0.5	11.3 µg/L	
# Nitrate + Nitrite as NO3	2.3	50.1 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.22 mg/L	

•	` '		
# Phosphorus -Filterable Reactive as PO4	1.5	17.94 μg/L	
		. •	
Phosphorus-Filterable Reactive as P	0.5	6.0 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
. ,			

Phosphorus - Total	0.005	0.157 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	0.08 mg/L	

23/05/2023 TKN as N T0112-01(ADEL) TKN as Nitrogen 0.05 2.21 mg/L



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Phosphorus - Filterable Reactive as P (ADEL)

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#### **Analytical Results**

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

17/05/2023 4:15:00PM **Sampled Date** 19/05/2023 9:59:58AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1062 Sample ID Endorsed Status

Customer Collected **Collection Type** 

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
<b>Dissolved Organic Carbon T0158-07(AD</b>	EL)		26/05/2023
Dissolved Organic Carbon	1	13.1 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	16.0 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
Alkalinity Carbonate Bicarbonate and F	lydroxide T0101-0	1(ADEL)	24/05/2023
Alkalinity as Calcium Carbonate		149 mg/L	
Bicarbonate		168 mg/L	
Carbonate		7 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T	0016-01(ADEL)		24/05/2023
Conductivity	2	747 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	414 mg/L	
pH T0010-01(ADEL)			24/05/2023
pH		8.6 pH units	
Temperature at which pH is measured		21.6 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	7.1 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	15 mg/L	



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#### **Analytical Results**

Sampling Point 353179-EPA - Tauwitchere Barrage Upstream

 Sampled Date
 17/05/2023
 4:15:00PM

 Sample Received Date
 19/05/2023
 9:59:58AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

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#### **Analytical Results**

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 17/05/2023
 4:15:00PM

 Sample Received Date
 19/05/2023
 9:59:44AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1063

 Status
 Endorsed

Collection Type Customer Collected

# Biology Operations LOR Result Test Start Date Sample temperature at time of receipt 9.1°C Algal Identification T0393(ADEL) Other Organisms 850 cells/mL BLUE GREEN ALGAE Phormidium 280 cells/mL

300 cells/mL

Dollchospermum planctonicum	50 cells/mL
Dolichospermum (coiled)	122 cells/mL
Dolichospermum circinale	198 cells/mL
Dolichospermum (coiled small)	50 cells/mL
Microcystis aeruginosa	800 cells/mL
Cuspidothrix	784 cells/mL
Anabaena	26200 cells/mL
Pseudanabaena	27700 cells/mL
Planktolyngbya	123000 cells/mL
Cylindrospermopsis raciborskii	2030 cells/mL
Geitlerinema	4490 cells/mL
Cyanogranis	49800 cells/mL
Merismopedia	1200 cells/mL
Snowella	160 cells/mL
DIATOMS	

**GREEN ALGAE** 

Nitzschia

 Gonatozygon
 2400 cells/mL

 Planctonema
 3910 cells/mL

 Actinastrum
 740 cells/mL

 Monoraphidium
 400 cells/mL

Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

**BLUE GREEN ALGAE** 

Phormidium 0.03 mm3/L



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#### **Analytical Results**

353177-EPA - Tauwitchere Barrage DS **Sampling Point** 

17/05/2023 4:15:00PM **Sampled Date** 19/05/2023 9:59:44AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1063 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

#### Algal Biovolume T0393(ADEL)

17/05/2023

• , ,	
Dolichospermum planctonicum	0.02 mm3/L
Dolichospermum (coiled)	0.03 mm3/L
Dolichospermum circinale	0.05 mm3/L
Dolichospermum (coiled small)	<0.01 mm3/L
Microcystis aeruginosa	0.07 mm3/L
Cuspidothrix	0.04 mm3/L
Anabaena	2.02 mm3/L
Pseudanabaena	0.36 mm3/L
Planktolyngbya	0.62 mm3/L
Cylindrospermopsis raciborskii	0.09 mm3/L
Geitlerinema	0.11 mm3/L
Cyanogranis	0.02 mm3/L
Merismopedia	<0.01 mm3/L
Snowella	<0.01 mm3/L

DIATOMS

Nitzschia 0.42 mm3/L

#### **GREEN ALGAE**

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue Green Algae Biovolume

Gonatozygon 9.85 mm3/L Actinastrum 0.05 mm3/L Monoraphidium 0.36 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

3.46 mm3/L 0.42 mm3/l

Not Calculated mm3/L

0.21 mm3/L

#### Sample temperature at time of receipt 9.1°C



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#### **Analytical Results**

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 17/05/2023
 4:15:00PM

 Sample Received Date
 19/05/2023
 9:59:44AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1063

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)	17/05/2023
Algae - Total	245000 cells/mL
Blue Green Algae - Total	237000 cells/mL
Diatoms - Total	300 cells/mL

 Diatoms - Total
 300 cells/mL

 Geosmin-MIB producing BGA - Total
 32700 cells/mL

 Green Algae - Total
 7450 cells/mL

 Toxin producing BGA - Total
 3030 cells/mL

Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 39.0  $\,\mu g/L$  Phaeophytin a 0.1 15.3  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			

Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	39 µg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	124 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	11.9 µg/L	
# Nitrate + Nitrite as NO3	2.3	52.7 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		4.25 mg/L	
Phosphorus - Filterable Reactive as P (AD	EL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	15.249 μg/L	
Phosphorus-Filterable Reactive as P	0.5	5.1 μg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	0.145 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023

0.09 mg/L

0.05

TKN as N T0112-01(ADEL)



Silica - Reactive

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#### **Analytical Results**

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 17/05/2023
 4:15:00PM

 Sample Received Date
 19/05/2023
 9:59:44AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1063

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 23/05/2023

TKN as Nitrogen 0.05 4.24 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	.1°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		26/05/2023
Dissolved Organic Carbon	1	13.0 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	16.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	.1°C		
Alkalinity Carbonate Bicarbonate and Hy	ydroxide T0101-0	I(ADEL)	24/05/2023
Alkalinity as Calcium Carbonate		152 mg/L	
Bicarbonate		169 mg/L	
Carbonate		8 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		24/05/2023
Conductivity	2	745 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	413 mg/L	
pH T0010-01(ADEL)			24/05/2023
pH		8.6 pH units	
Temperature at which pH is measured		21.4 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	11 NTU	

Result

LOR

Sample temperature at time of receipt 9.1°C

**Inorganic Chemistry - Waste Water** 



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**Analytical Results** 

Sampling Point 353177-EPA - Tauwitchere Barrage DS

 Sampled Date
 17/05/2023
 4:15:00PM

 Sample Received Date
 19/05/2023
 9:59:44AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1063

 Status
 Endorsed

Status Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

23/05/2023

Suspended Solids 1.0 24 mg/L



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#### **Analytical Results**

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 17/05/2023 5:00:00PM

 Sample Received Date
 19/05/2023 9:58:13AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1058

 Status
 Endorsed

Collection Type Customer Collected

<b>Biology Operations</b>	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
Algal Identification T0393(ADEL)			
Other Organisms		70 cells/mL	
BLUE GREEN ALGAE			
Cylindrospermopsis raciborskii		250 cells/mL	
Anabaenopsis		84 cells/mL	
Anabaena		1080 cells/mL	
Nodularia spumigena		210 cells/mL	
Pseudanabaena		2530 cells/mL	
Planktolyngbya		900 cells/mL	
Cyanogranis		6190 cells/mL	
DIATOMS			
Guinardia		420 cells/mL	
Chaetoceros		7250 cells/mL	
Pseudo-nitzschia		12 cells/mL	
Nitzschia		40 cells/mL	
DINOFLAGELLATES			
Protoperidinium		2 cells/mL	
Oxyrrhis		110 cells/mL	
Prorocentrum		10 cells/mL	
EUGLENOPHYTES			
EUGLENACEAE		60 cells/mL	
GREEN ALGAE			
Gonatozygon		36 cells/mL	
Monoraphidium		360 cells/mL	
Scenedesmus		40 cells/mL	
Planctonema		208 cells/mL	

Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)
BLUE GREEN ALGAE

17/05/2023



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#### **Analytical Results**

31522-EPA - Mark Point **Sampling Point** 17/05/2023 5:00:00PM Sampled Date 19/05/2023 9:58:13AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1058 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

17/05/2023 Algal Biovolume T0393(ADEL)

Cylindrospermopsis raciborskii 0.01 mm3/L <0.01 mm3/L Nodularia spumigena 0.15 mm3/L Pseudanabaena 0.32 mm3/L Planktolyngbya 0.06 mm3/L Cyanogranis 0.01 mm3/L

**DIATOMS** 

Nitzschia 0.03 mm3/L

**GREEN ALGAE** 

Gonatozygon 0.08 mm3/L Monoraphidium 0.05 mm3/L Scenedesmus <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.

# Total Algae Biovolume Not Calculated mm3/L

# Total Blue Green Algae Biovolume 0.17 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.06 mm3/L

# Sample temperature at time of receipt 9.1°C

17/05/2023 Algal Count - Total T0393(ADEL)

460 cells/ml

Algae - Total 19800 cells/mL Blue Green Algae - Total 11200 cells/ml Diatoms - Total 7720 cells/mL Geosmin-MIB producing BGA - Total 2530 cells/mL Green Algae - Total 644 cells/mL Toxin producing BGA - Total



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19/05/2023

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#### **Analytical Results**

**Collection Type** 

**Sampling Point** 31522-EPA - Mark Point 17/05/2023 5:00:00PM **Sampled Date** 19/05/2023 9:58:13AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1058 Sample ID Endorsed Status **Customer Collected** 

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 16.6 µg/L Phaeophytin a 0.1 5.36 µg/L

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	6 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	7060 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		1.71 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.98 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.0 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	0.37 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	1.71 mg/L	
Organic Chemistry	LOR	Result	Test Start Date

13.2 mg/L



Dissolved Organic Carbon

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#### **Analytical Results**

 Sampling Point
 31522-EPA - Mark Point

 Sampled Date
 17/05/2023 5:00:00PM

 Sample Received Date
 19/05/2023 9:58:13AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1058

 Status
 Endorsed

Collection Type Customer Collected

Total Organic Carbon T0158-07(ADEL)

26/05/2023

Total Organic Carbon 1 14.4 mg/L

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	1°C		
Alkalinity Carbonate Bicarbonate and Hy	droxide T0101-0	1(ADEL)	23/05/2023
Alkalinity as Calcium Carbonate		151 mg/L	
Bicarbonate		184 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		23/05/2023
Conductivity	2	22200 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	13700 mg/L	
pH T0010-01(ADEL)			23/05/2023
pH		8.2 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	1.3 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	1°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	<1 mg/L	



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#### **Analytical Results**

31512-EPA - McGrath Flat North **Sampling Point** 18/05/2023 7:20:00AM Sampled Date 19/05/2023 9:56:35AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1052 Sample ID Endorsed

**Customer Collected Collection Type** 

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

#### Sample temperature at time of receipt 9.1°C

#### Algal Identification T0393(ADEL)

**DIATOMS** 

**Status** 

Naviculoids 28 cells/ml Pennate diatoms 10 cells/mL

**DINOFLAGELLATES** 

PERIDINIACEAE 140 cells/mL

**GREEN ALGAE** 

Chlorella 616000 cells/mL Unicellular green algae 131000 cells/mL

### Sample temperature at time of receipt 9.1°C

#### Algal Biovolume T0393(ADEL)

**GREEN ALGAE** 

Chlorella 27.7 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

# Total Blue\_Green Algae Biovolume 0.00 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) Algae - Total

Blue Green Algae - Total

# Total Algae Biovolume

Diatoms - Total

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747000 cells/mL 0 cells/mL 38 cells/mL

18/05/2023

18/05/2023

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19/05/2023

**Test Start Date** 

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#### **Analytical Results**

 Sampling Point
 31512-EPA - McGrath Flat North

 Sampled Date
 18/05/2023
 7:20:00AM

 Sample Received Date
 19/05/2023
 9:56:35AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1052

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)

Geosmin-MIB producing BGA - Total 0 cells/mL

Green Algae - Total 747000 cells/mL

Toxin producing BGA - Total 0 cells/mL

LOR

Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

**Inorganic Chemistry - Nutrients** 

Chlorophyll a 0.1 54.3  $\,\mu g/L$  Phaeophytin a 0.1 20.0  $\,\mu g/L$ 

Result

Sample temperature at time of receipt 9	).1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	38 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	33200 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		4.09 mg/L	
Phosphorus - Filterable Reactive as P (A	(DEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	<1.5 µg/L	
Phosphorus-Filterable Reactive as P	0.5	<0.5 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	0.029 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	3.46 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	4.09 mg/L	



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#### **Analytical Results**

 Sampling Point
 31512-EPA - McGrath Flat North

 Sampled Date
 18/05/2023
 7:20:00AM

 Sample Received Date
 19/05/2023
 9:56:35AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1052

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	1°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		26/05/2023
Dissolved Organic Carbon	1	19.7 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	22.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	.1°C		
Alkalinity Carbonate Bicarbonate and Hy		1(ADEL)	23/05/2023
Alkalinity as Calcium Carbonate	•	204 mg/L	
Bicarbonate		249 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			23/05/2023
Conductivity	2	75700 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	59000 mg/L	
pH T0010-01(ADEL)		,	23/05/2023
pH		7.9 pH units	
Temperature at which pH is measured		21.8 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	7.3 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	.1°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	7 mg/L	



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#### **Analytical Results**

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

Endorsed

18/05/2023 7:45:00AM Sampled Date 19/05/2023 9:56:51AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1048 Sample ID

**Customer Collected Collection Type** 

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

#### Sample temperature at time of receipt 9.1°C

#### Algal Identification T0393(ADEL)

**BLUE GREEN ALGAE** 

Phormidium 58 cells/mL

DIATOMS

**Status** 

Naviculoids 10 cells/ml

**DINOFLAGELLATES** 

**PERIDINIACEAE** 10 cells/mL

**GREEN ALGAE** 

Chlorella 1000000 cells/mL Unicellular green algae 133000 cells/mL

#### Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

**BLUE GREEN ALGAE** 

Phormidium <0.01 mm3/L

**GREEN ALGAE** 

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue Green Algae Biovolume

Chlorella 45.0 mm3/L

# Algal Biovolume Comment Biovolumes for taxa reported at genus level are

> approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

<0.01 mm3/L

Not Calculated mm3/L Not Calculated mm3/L

0.00 mm3/L

Sample temperature at time of receipt 9.1°C Algal Count - Total T0393(ADEL)

18/05/2023

18/05/2023



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19/05/2023

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#### **Analytical Results**

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 18/05/2023
 7:45:00AM

 Sample Received Date
 19/05/2023
 9:56:51AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1048

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)	18/05/2023
Algae - Total	1130000 cells/mL

# Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 60.7  $\,\mu g/L$  Phaeophytin a 0.1 22.3  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date	
Sample temperature at time of receipt 9.1°C				
Ammonia as N (ADEL)			06/06/2023	

33 ua/l

<0.5 µg/L

Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	30300 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023

1

0.5

# Nitrate + Nitrite as NO3 2.3 <2.3 µg/L

Nitrogen - Total TMZ-M06(ADEL) 19/05/2023

Nitrogen - Total 4.64 mg/L

Phosphorus - Filterable Reactive as P (ADEL)

# Phosphorus - Filterable Reactive as PO4

1.5

2.691 µg/L

 Phosphorus - Total T0109-44(ADEL)
 0.5
 0.9 μg/L

 Phosphorus - Total T0109-44(ADEL)
 23/05/2023

 Phosphorus - Total
 0.005
 0.215 mg/L

Silica - Reactive T0111-01(ADEL) 22/05/2023

Silica - Reactive 0.05 5.79 mg/L **TKN as N T0112-01(ADEL)** 23/05/2023



# Ammonia as N

# Nitrate + Nitrite as N

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#### **Analytical Results**

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 18/05/2023
 7:45:00AM

 Sample Received Date
 19/05/2023
 9:56:51AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1048

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 23/05/2023

TKN as Nitrogen 0.05 4.64 mg/L

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	.1°C		
<b>Dissolved Organic Carbon T0158-07(ADI</b>	≣L)		26/05/2023
Dissolved Organic Carbon	1	20.0 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	23.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	.1°C		
Alkalinity Carbonate Bicarbonate and H	ydroxide T0101-01	I(ADEL)	23/05/2023
Alkalinity as Calcium Carbonate		211 mg/L	
Bicarbonate		257 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)			23/05/2023
Conductivity	2	75400 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	58700 mg/L	
pH T0010-01(ADEL)			23/05/2023
pH		7.9 pH units	
Temperature at which pH is measured		21.7 °C	
Turbidity T0018-01(ADEL)			22/05/2023

9.8 NTU

Result

0.1

LOR

Sample temperature at time of receipt 9.1°C

**Inorganic Chemistry - Waste Water** 



Turbidity

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**Analytical Results** 

Sampling Point 31513-EPA - Parnka Point Boat Ramp

 Sampled Date
 18/05/2023
 7:45:00AM

 Sample Received Date
 19/05/2023
 9:56:51AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1048

**Status** Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

22/05/2023

Suspended Solids 1.0 17 mg/L



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18/05/2023

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### **Analytical Results**

 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 18/05/2023 8:50:00AM

 Sample Received Date
 19/05/2023 9:59:18AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1061

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

### Sample temperature at time of receipt 9.1°C

### Algal Identification T0393(ADEL)

### DIATOMS

Naviculoids 4 cells/mL
Nitzschia 10 cells/mL

### **DINOFLAGELLATES**

 Gymnodinioids
 36 cells/mL

 PERIDINIACEAE
 6 cells/mL

 Oxyrrhis
 120 cells/mL

 Heterocapsa
 60 cells/mL

### **GREEN ALGAE**

Chlorella 687000 cells/mL Unicellular green algae 159000 cells/mL

## Sample temperature at time of receipt 9.1°C

## Algal Biovolume T0393(ADEL)

### **DIATOMS**

Nitzschia 0.01 mm3/L

### **GREEN ALGAE**

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Chlorella 30.9 mm3/L

# Algal Biovolume Comment

Biovolumes for taxa reported at genus level are approximate values. Reported taxa and

calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00. -----

0.00 mm3/L

Not Calculated mm3/L
Not Calculated mm3/L

0.00 mm3/L



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## **Analytical Results**

 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 18/05/2023 8:50:00AM

 Sample Received Date
 19/05/2023 9:59:18AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1061

 Status
 Endorsed

Collection Type Customer Collected

### Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 846000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 14 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 846000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

# Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

19/05/2023

Chlorophyll a 0.1 56.5  $\,\mu g/L$  Phaeophytin a 0.1 16.8  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	30 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	39100 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		5.15 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	3.887 µg/L	
Phosphorus-Filterable Reactive as P	0.5	1.3 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	0.061 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	6.46 mg/L	



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 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 18/05/2023 8:50:00AM

 Sample Received Date
 19/05/2023 9:59:18AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1061

 Status
 Endorsed

Collection Type Customer Collected

TKN as N T0112-01(ADEL) 23/05/2023

TKN as Nitrogen 0.05 5.15 mg/L

LOR	Result	Test Start Date
		26/05/2023
1	21.0 mg/L	
		26/05/2023
1	26.8 mg/L	
LOR	Result	Test Start Date
xide T0101-01	(ADEL)	23/05/2023
	236 mg/L	
	287 mg/L	
	0 mg/L	
	0 mg/L	
Conductivity & Total Dissolved Solids T0016-01(ADEL)		
2	87900 μS/cm	
	Conductivity measurement is corrected to 25°C	
1	71700 mg/L	
		23/05/2023
		23/03/2023
	1 LOR exide T0101-01	1 21.0 mg/L  1 26.8 mg/L  LOR Result  Example 236 mg/L 287 mg/L 0 mg/L 0 mg/L 0 mg/L 0 mg/L Conductivity measurement is corrected to 25°C

Inorganic Chemistry - Waste Water LOR Result Test Start Date

0.1

21.7 °C

7.6 NTU

Sample temperature at time of receipt 9.1°C

Temperature at which pH is measured

**Turbidity T0018-01(ADEL)** 



Turbidity

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**Analytical Results** 

 Sampling Point
 31528-EPA - Salt Creek Outlet

 Sampled Date
 18/05/2023 8:50:00AM

 Sample Received Date
 19/05/2023 9:59:18AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1061

**Status** Endorsed

Collection Type Customer Collected

Suspended Solids T0160-01(ADEL)

23/05/2023

Suspended Solids 1.0 10 mg/L



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### **Analytical Results**

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

Endorsed

18/05/2023 9:00:00AM **Sampled Date** 19/05/2023 9:56:17AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1049 Sample ID

**Customer Collected Collection Type** 

biology Operations Lon Result lest Statt Da	Biology Operations	LOR	Result	Test Start Date
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### Sample temperature at time of receipt 9.1°C

## Algal Identification T0393(ADEL)

### **BLUE GREEN ALGAE**

Phormidium 60 cells/mL

#### **CHRYSOPHYTES**

Mallomonas 30 cells/ml

### DIATOMS

**Status** 

Pennate diatoms 20 cells/mL Pennate diatoms small spp 3270 cells/mL

### **DINOFLAGELLATES**

Oxyrrhis 210 cells/mL PERIDINIACEAE 170 cells/mL Gymnodinioids 50 cells/mL Heterocapsa 110 cells/mL

### **GREEN ALGAE**

Chlorella 480000 cells/mL Unicellular green algae small\_spp 285000 cells/mL Phytoflagellates small\_spp 25100 cells/mL

## Sample temperature at time of receipt 9.1°C

18/05/2023 Algal Biovolume T0393(ADEL)

### **BLUE GREEN ALGAE**

Phormidium <0.01 mm3/L

### **CHRYSOPHYTES**

Mallomonas 0.20 mm3/l

### **GREEN ALGAE**

Chlorella 21.6 mm3/L Unicellular green algae small\_spp 4.02 mm3/L Phytoflagellates small\_spp 1.96 mm3/L



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## **Analytical Results**

**Status** 

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

18/05/2023 9:00:00AM Sampled Date 19/05/2023 9:56:17AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1049 Sample ID

**Customer Collected Collection Type** 

Algal	Biovolume	T0393(ADEL)
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18/05/2023

# 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.

Endorsed

Biovolume totals have specific criteria around

how they calculate. Not Calculated mm3/L

# Total Algae Biovolume # Total Blue\_Green Algae Biovolume <0.01 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L

# Total Green Algae Biovolume 27.6 mm3/L Total Toxic BGA Biovolume 0.00 mm3/L

### Sample temperature at time of receipt 9.1°C Algal Count - Total T0393(ADEL)

18/05/2023

Algae - Total 794000 cells/ml Blue Green Algae - Total 60 cells/mL Diatoms - Total 3290 cells/mL Geosmin-MIB producing BGA - Total 60 cells/mL Green Algae - Total 790000 cells/mL

Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

19/05/2023

Chlorophyll a 0 1 34.2 µg/L Phaeophytin a 0.1 9.35 µg/L

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

Sample temperature at time of receipt 9.1°C 06/06/2023 Ammonia as N (ADEL) # Ammonia as N 26 µg/L

22/05/2023 Chloride T0104-02(ADEL)

Chloride 4.0 42700 mg/L



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Analytical Res	ults
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Sampling Point 31511-EPA - 3.2km South Salt Creek

 Sampled Date
 18/05/2023
 9:00:00AM

 Sample Received Date
 19/05/2023
 9:56:17AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1049

StatusEndorsedCollection TypeCustomer Collected

Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		5.45 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		06/06/2023
# 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)			23/05/2023
Phosphorus - Total	0.005	0.133 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	5.05 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	5.45 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C Dissolved Organic Carbon T0158-07(ADEL) Dissolved Organic Carbon	1	23.3 mg/L	26/05/2023
Total Organic Carbon T0158-07(ADEL) Total Organic Carbon	1	29.3 mg/L	26/05/2023

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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Sample temperature at time of receipt 9.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) 23/05/2023

Alkalinity as Calcium Carbonate 232 mg/L
Bicarbonate 284 mg/L
Carbonate 0 mg/L
Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)



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## **Analytical Results**

Sampling Point 31511-EPA - 3.2km South Salt Creek

 Sampled Date
 18/05/2023
 9:00:00AM

 Sample Received Date
 19/05/2023
 9:56:17AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1049

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids T0016-01(ADEL)			23/05/2023
Conductivity	2	96300 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	80900 mg/L	
pH T0010-01(ADEL)			23/05/2023
рН		8.0 pH units	
Temperature at which pH is measured		21.7 °C	
Turbidity T0019 01/ADEL)			22/05/2023

**Turbidity T0018-01(ADEL)**22/05/20
Turbidity
0.1
8.6 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 9.1°C

Suspended Solids T0160-01(ADEL)

22/05/2023

Suspended Solids 1.0 <1 mg/L



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### **Analytical Results**

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 18/05/2023
 9:05:00AM

 Sample Received Date
 19/05/2023
 9:57:34AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1050

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date

### Sample temperature at time of receipt 9.1°C

### Algal Identification T0393(ADEL)

### **BLUE GREEN ALGAE**

Anabaena 110 cells/mL

**DIATOMS** 

 Urosolenia
 30 cells/mL

 Gyrosigma
 10 cells/mL

 Pennate diatoms small\_spp
 5450 cells/mL

**DINOFLAGELLATES** 

 Oxyrrhis
 40 cells/mL

 PERIDINIACEAE
 590 cells/mL

 Gymnodinioids
 30 cells/mL

 Heterocapsa
 70 cells/mL

**GREEN ALGAE** 

Chlorella 1460000 cells/mL Unicellular green algae small\_spp 282000 cells/mL

Sample temperature at time of receipt 9.1°C
Algal Biovolume T0393(ADEL)

18/05/2023

### BLUE GREEN ALGAE

Anabaena <0.01 mm3/L

**DIATOMS** 

Urosolenia 0.03 mm3/L Gyrosigma 0.02 mm3/L

**GREEN ALGAE** 

Chlorella 65.7 mm3/L Unicellular green algae small\_spp 3.98 mm3/L



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## **Analytical Results**

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 18/05/2023
 9:05:00AM

 Sample Received Date
 19/05/2023
 9:57:34AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1050

Status Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)

18/05/2023

# Algal Biovolume Comment Biovolumes for taxa reported at genus level are

approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

# Total Algae Biovolume Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume <0.01 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L

# Total Green Algae Biovolume 69.7 mm3/L
Total Toxic BGA Biovolume 0.00 mm3/L

## Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 1750000 cells/mL

 Blue Green Algae - Total
 110 cells/mL

 Diatoms - Total
 5490 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 1740000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 56.7  $\,\mu g/L$  Phaeophytin a 0.1 15.1  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
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Sample temperature at time of receipt 9.1°C

Ammonia as N (ADEL)

# Ammonia as N

1 16 µg/L

# Ammonia as N 1 16 µg/L **Chloride T0104-02(ADEL)** 22/05/2023

Chloride 4.0 40400 mg/L



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Analytical R	Results
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Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 18/05/2023
 9:05:00AM

 Sample Received Date
 19/05/2023
 9:57:34AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1050

Status Endorsed
Collection Type Customer Collected

Collection Type	Customer Co		
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		1.79 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		06/06/2023
# 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)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	7.35 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	1.79 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receip	ot 9.1°C		
Dissolved Organic Carbon T0158-07(A	ADEL)		26/05/2023
Dissolved Organic Carbon	1	21.3 mg/L	
Total Organic Carbon T0158-07(ADEL	)		26/05/2023
Total Organic Carbon	1	28.0 mg/L	

Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 9.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 234  $\,$  mg/L Bicarbonate 286  $\,$  mg/L Carbonate 0  $\,$  mg/L Hydroxide 0  $\,$  mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)



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### **Analytical Results**

Turbidity

Sampling Point 31517-EPA - 1.8km West Salt Creek

 Sampled Date
 18/05/2023
 9:05:00AM

 Sample Received Date
 19/05/2023
 9:57:34AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1050

 Status
 Endorsed

Collection Type Customer Collected

Conductivity & Total Dissolved Solids T0016-01(ADEL)			23/05/2023
Conductivity	2	90300 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	74300 mg/L	
pH T0010-01(ADEL)			23/05/2023
pH		8.1 pH units	
Temperature at which pH is measured		21.7 °C	

Turbidity T0018-01(ADEL) 22/05/2023

8.9 NTU

0.1

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 9.1°C
Suspended Solids T0160-01(ADEL)
Suspended Solids 1.0 <1 mg/L



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### **Analytical Results**

Sampling Point 315191-EPA - Morella Creek @ guage

Endorsed

 Sampled Date
 18/05/2023
 9:20:00AM

 Sample Received Date
 19/05/2023
 9:58:00AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1054

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

### Sample temperature at time of receipt 9.1°C

### Algal Identification T0393(ADEL)

### **CRYPTOPHYTES**

Chroomonas 60 cells/mL

DIATOMS

**Status** 

Pennate diatoms 46 cells/mL Amphiprora\_(=\_Entomoneis) 8 cells/mL

**DINOFLAGELLATES** 

Protoperidinium 8 cells/mL
PERIDINIACEAE 12 cells/mL

**EUGLENOPHYTES** 

EUGLENACEAE 12 cells/mL

**GREEN ALGAE** 

Monoraphidium sp\_2\_(short) 1850 cells/mL Phytoflagellates 210 cells/mL

### Sample temperature at time of receipt 9.1°C

## Algal Biovolume T0393(ADEL)

**CRYPTOPHYTES** 

Chroomonas <0.01 mm3/L

**DIATOMS** 

Amphiprora\_(=\_Entomoneis) 0.12 mm3/L

**GREEN ALGAE** 

Monoraphidium sp\_2\_(short) 0.10 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



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## **Analytical Results**

Sampling Point 315191-EPA - Morella Creek @ guage

 Sampled Date
 18/05/2023
 9:20:00AM

 Sample Received Date
 19/05/2023
 9:58:00AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1054

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 18/05/2023

# Total Blue\_Green Algae Biovolume 0.00 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 2210 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 54 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 2060 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 9.1°C

Inorganic Chamietry Nutriente

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 1.26  $\,\mu g/L$ 

Phaeophytin a 0.1 0.64  $\mu$ g/L

IOD

inorganic Chemistry - Nutrients	LUK	Result	iest Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	46 µg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	6740 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.17 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		06/06/2023

Dogult



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### **Analytical Results**

Sampling Point 315191-EPA - Morella Creek @ guage

 Sampled Date
 18/05/2023
 9:20:00AM

 Sample Received Date
 19/05/2023
 9:58:00AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1054

 Status
 Endorsed

Collection Type Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
TKN as Nitrogen	0.05	2.17 mg/L	
TKN as N T0112-01(ADEL)	0.05		23/05/2023
Silica - Reactive	0.05	6.98 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus-Filterable Reactive as P	0.5	0.6 µg/L	
# Phosphorus -Filterable Reactive as PO4	1.5	1.794 µg/L	
Phosphorus - Filterable Reactive as P (A	DEL)		06/06/2023

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of recei	pt 9.1°C		
Dissolved Organic Carbon T0158-07(	ADEL)		01/06/2023
Dissolved Organic Carbon	1	11.9 mg/L	
Total Organic Carbon T0158-07(ADEL	-)		01/06/2023
Total Organic Carbon	1	12.3 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
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## Sample temperature at time of receipt 9.1°C

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

265 mg/L 181 mg/L

9.1 pH units

 Bicarbonate
 181 mg/L

 Carbonate
 70 mg/L

 Hydroxide
 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) 23/05/2023

Conductivity 2 19300  $\mu$ S/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC)

1 11800 mg/L

pH T0010-01(ADEL) 23/05/2023

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Alkalinity as Calcium Carbonate

Testing

with ISO/IEC 17025 -



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22/05/2023

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**Analytical Results** 

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

18/05/2023 9:20:00AM **Sampled Date** 19/05/2023 9:58:00AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1054 Sample ID

Endorsed **Status** 

**Customer Collected Collection Type** 

23/05/2023 pH T0010-01(ADEL)

Temperature at which pH is measured 21.7 °C

**Turbidity T0018-01(ADEL)** 

Turbidity 0.1 2.0 NTU

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

Sample temperature at time of receipt 9.1°C

23/05/2023 Suspended Solids T0160-01(ADEL) Suspended Solids 1.0 <1 mg/L

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## **Analytical Results**

 Sampling Point
 31515-EPA - Snipe Point

 Sampled Date
 18/05/2023
 9:25:00AM

 Sample Received Date
 19/05/2023
 9:57:20AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1047

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

### Sample temperature at time of receipt 9.1°C

### Algal Identification T0393(ADEL)

### **DIATOMS**

Nitzschia 10 cells/mL
Pennate diatoms small\_spp 4250 cells/mL

### **DINOFLAGELLATES**

PERIDINIACEAE 160 cells/mL Heterocapsa 175 cells/mL Gymnodinioids 120 cells/mL Oxyrrhis 95 cells/mL

### **GREEN ALGAE**

Chlorella481000 cells/mLPhytoflagellates small\_spp13000 cells/mLUnicellular green algae small\_spp156000 cells/mL

### Sample temperature at time of receipt 9.1°C

## Algal Biovolume T0393(ADEL)

## DIATOMS

Nitzschia 0.01 mm3/L

### **GREEN ALGAE**

 Chlorella
 21.6 mm3/L

 Phytoflagellates small\_spp
 1.02 mm3/L

 Unicellular green algae small\_spp
 2.20 mm3/L

# Algal Biovolume Comment Biovolumes for taxa reported at genus level are

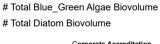
approximate values. Reported taxa and calculated biovolume includes only those with taxon cell volume and associated cell count data. Biovolume totals have specific criteria around

how they calculate.

Not Calculated mm3/L

0.00 mm3/L

Not Calculated mm3/L



# Total Algae Biovolume

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## **Analytical Results**

 Sampling Point
 31515-EPA - Snipe Point

 Sampled Date
 18/05/2023
 9:25:00AM

 Sample Received Date
 19/05/2023
 9:57:20AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1047

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 18/05/2023

# Total Green Algae Biovolume 24.8 mm3/L
Total Toxic BGA Biovolume 0.00 mm3/L

## Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 655000 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 4260 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 650000 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 61.0  $\,\mu g/L$  Phaeophytin a 0.1 16.7  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	43 µg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	41700 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		<0.05 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.093 μg/L	

0.7 µg/L

0.5



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Phosphorus-Filterable Reactive as P

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Conductivity measurement is corrected to 25°C

76300 mg/L

7.9 pH units

21.7 °C

8.1 NTU



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Analytical Results			
Sampling Point	31515-EPA -	Snipe Point	
Sampled Date	18/05/2023		
Sample Received Date	19/05/2023		
Sample Analysis Completed	7/06/2023 2		
Sample ID	*2023-003-1	047	
Status Collection Tune	Endorsed Customer Co	allastad	
Collection Type	Customer Co	Dilected	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	7.04 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	<0.05 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Dissolved Organic Carbon T0158-07(ADEL)			26/05/2023
Dissolved Organic Carbon	1	21.6 mg/L	
Total Organic Carbon T0158-07(ADEL)		· ·	26/05/2023
Total Organic Carbon	1	28.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Sample temperature at time of receipt 9.1°C  Alkalinity Carbonate Bicarbonate and Hydro:	kide T0101-0	1(ADEL)	23/05/2023
Sample temperature at time of receipt 9.1°C  Alkalinity Carbonate Bicarbonate and Hydrox  Alkalinity as Calcium Carbonate	kide T0101-0	1(ADEL) 227 mg/L	23/05/2023
Alkalinity Carbonate Bicarbonate and Hydrox	kide T0101-0 <sup>.</sup>	•	23/05/2023
Alkalinity Carbonate Bicarbonate and Hydrox Alkalinity as Calcium Carbonate	xide T0101-0 <sup>.</sup>	227 mg/L	23/05/2023
Alkalinity Carbonate Bicarbonate and Hydrox Alkalinity as Calcium Carbonate Bicarbonate	xide T0101-0 <sup>,</sup>	227 mg/L 277 mg/L	23/05/2023
Alkalinity Carbonate Bicarbonate and Hydrox Alkalinity as Calcium Carbonate Bicarbonate Carbonate Hydroxide		227 mg/L 277 mg/L 0 mg/L	23/05/2023 23/05/2023
Alkalinity Carbonate Bicarbonate and Hydrox Alkalinity as Calcium Carbonate Bicarbonate Carbonate		227 mg/L 277 mg/L 0 mg/L	

1

0.1



Turbidity

Note

рΗ

Total Dissolved Solids (by EC)

**Turbidity T0018-01(ADEL)** 

Temperature at which pH is measured

pH T0010-01(ADEL)

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### **Analytical Results**

 Sampling Point
 31515-EPA - Snipe Point

 Sampled Date
 18/05/2023
 9:25:00AM

 Sample Received Date
 19/05/2023
 9:57:20AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1047

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°	С		
Suspended Solids T0160-01(ADEL)			22/05/2023
Suspended Solids	1.0	<1 mg/L	



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### **Analytical Results**

Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 18/05/2023
 9:40:00AM

 Sample Received Date
 19/05/2023
 9:57:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1053

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations	LOR	Result	Test Start Date
Sample temperature at time of rece	ipt 9.1°C		
Algal Identification T0393(ADEL)			
BLUE GREEN ALGAE			
Pseudanabaena		160 cells/mL	
DIATOMS			

20 cells/mL

Amphiprora (= Entomoneis) 4 cells/mL

DINOFLAGELLATES

PERIDINIACEAE 10 cells/mL

Heterocapsa 10 cells/mL

Protoperidinium 16 cells/mL

GREEN ALGAE

Phytoflagellates 190 cells/mL

Chlorella 650 cells/mL

 Phytoflagellates
 190 cells/mL

 Chlorella
 650 cells/mL

 Monoraphidium sp\_2\_(short)
 2050 cells/mL

 Oocystis sp\_1\_(small\_cells)
 283 cells/mL

## Sample temperature at time of receipt 9.1°C

Algal Biovolume T0393(ADEL)

## BLUE GREEN ALGAE

Pseudanabaena <0.01 mm3/L

DIATOMS

Pennate diatoms

Amphiprora\_(=\_Entomoneis) 0.06 mm3/L

**GREEN ALGAE** 

 Chlorella
 0.03 mm3/L

 Monoraphidium sp\_2\_(short)
 0.11 mm3/L

 Occystis sp\_1\_(small\_cells)
 0.05 mm3/L



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## **Analytical Results**

Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 18/05/2023
 9:40:00AM

 Sample Received Date
 19/05/2023
 9:57:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1053

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume	T0393(	(ADEL)
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18/05/2023

# 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 Algae Biovolume Not Calculated mr # 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 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 3390 cells/mL

 Blue Green Algae - Total
 160 cells/mL

 Diatoms - Total
 24 cells/mL

 Geosmin-MIB producing BGA - Total
 160 cells/mL

 Green Algae - Total
 3170 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 9.1°C

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 1.16  $\,\mu g/L$  Phaeophytin a 0.1 0.27  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date

 Ammonia as N (ADEL)
 06/06/2023

 # Ammonia as N
 1
 47 μg/L

Chloride T0104-02(ADEL) 22/05/2023

Chloride 4.0 6430 mg/L



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Analy	tical/	Results
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Sampling Point 31519-EPA - Morella Basin at Outlet Regulator

 Sampled Date
 18/05/2023
 9:40:00AM

 Sample Received Date
 19/05/2023
 9:57:47AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1053

 Status
 Endorsed

Collection Type Customer Collected

	0.001011101		
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	2.4 µg/L	
# Nitrate + Nitrite as NO3	2.3	10.6 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		1.61 mg/L	
Phosphorus - Filterable Reactive as P (A	(DEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.392 μg/L	
Phosphorus-Filterable Reactive as P	0.5	0.8 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	7.23 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	1.61 mg/L	
Owners Chamieter	100	<b>D</b> 11	T . O D .

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receip	ot 9.1°C		
Dissolved Organic Carbon T0158-07(A	ADEL)		26/05/2023
Dissolved Organic Carbon	1	12.0 mg/L	
Total Organic Carbon T0158-07(ADEL	)		26/05/2023
Total Organic Carbon	1	12.1 mg/L	

Inorganic Chemistry - Physical LOR Result Test Start Date

Sample temperature at time of receipt 9.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

 Alkalinity as Calcium Carbonate
 268 mg/L

 Bicarbonate
 170 mg/L

 Carbonate
 77 mg/L

 Hydroxide
 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)



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### **Analytical Results**

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

18/05/2023 9:40:00AM **Sampled Date** 19/05/2023 9:57:47AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1053 Sample ID Endorsed Status

**Customer Collected Collection Type** 

<b>Conductivity &amp; Total Dissolved Solids</b>	T0016-01(ADEL)		23/05/2023
Conductivity	2	19200 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	11700 mg/L	
pH T0010-01(ADEL)			23/05/2023
рН		9.2 pH units	
Temperature at which pH is measured		21.5 °C	
Turbidity T0018-01(ADEL)			22/05/2023

**Turbidity T0018-01(ADEL)** Turbidity 0.1 1.7 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** Sample temperature at time of receipt 9.1°C 23/05/2023 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** 

18/05/2023 9:50:00AM Sampled Date 19/05/2023 10:00:23AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1064 Sample ID

Endorsed **Status** 

**Customer Collected Collection Type** 

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

### Sample temperature at time of receipt 9.1°C

### Algal Identification T0393(ADEL)

**DIATOMS** 

Pennate diatoms small\_spp 2000 cells/ml

**DINOFLAGELLATES** 

**GYMNODINIALES** 72 cells/ml Heterocapsa 120 cells/ml Oxyrrhis 220 cells/mL PERIDINIACEAE 76 cells/mL

**GREEN ALGAE** 

Phytoflagellates small\_spp 29000 cells/mL Unicellular green algae small\_spp 14300 cells/mL Chlorella 803000 cells/mL

## Sample temperature at time of receipt 9.1°C

## Algal Biovolume T0393(ADEL)

### **DINOFLAGELLATES**

**GYMNODINIALES** 0.14 mm3/L

**GREEN ALGAE** 

Phytoflagellates small\_spp 2.27 mm3/L Unicellular green algae small\_spp 0.20 mm3/L Chlorella 36.1 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

38.6 mm3/L

# Total Algae Biovolume # Total Blue\_Green Algae Biovolume # Total Diatom Biovolume

# Total Green Algae Biovolume



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## **Analytical Results**

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

Sampled Date 18/05/2023 9:50:00AM 19/05/2023 10:00:23AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1064 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

18/05/2023 Algal Biovolume T0393(ADEL)

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 9.1°C

18/05/2023 Algal Count - Total T0393(ADEL)

Algae - Total 849000 cells/mL Blue Green Algae - Total 0 cells/mL Diatoms - Total 2000 cells/ml Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 846000 cells/mL

Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 9.1°C

Phosphorus-Filterable Reactive as P

19/05/2023 Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 60.5 µg/L Phaeophytin a 0.1 19.3 µg/L

0.5

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	42 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	40400 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	45.1 μg/L	
# Nitrate + Nitrite as NO3	2.3	200 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023

Nitrogen - Total TMZ-M06(ADEL) Nitrogen - Total 2.79 mg/L 06/06/2023 Phosphorus - Filterable Reactive as P (ADEL) # Phosphorus -Filterable Reactive as PO4 1.5 16.744 µg/L

5.6 µg/L 23/05/2023 Phosphorus - Total T0109-44(ADEL)



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Analyt	ical	Resul	ts
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531012-EPA - Sth Policeman Point **Sampling Point** 

18/05/2023 9:50:00AM **Sampled Date** 19/05/2023 10:00:23AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1064 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	6.62 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	2.74 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Dissolved Organic Carbon T0158-07(ADEL)			26/05/2023
Dissolved Organic Carbon	1	21.2 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	26.9 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date

## Sample temperature at time of receipt 9.1°C

23/05/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 225 mg/L Bicarbonate 274 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL) Conductivity 91000 μS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 75000 mg/L

23/05/2023 pH T0010-01(ADEL)

8.0 pH units Temperature at which pH is measured 21.4 °C

22/05/2023 **Turbidity T0018-01(ADEL)** 

Turbidity 0.1 9.3 NTU



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### **Analytical Results**

Status

Sampling Point 531012-EPA - Sth Policeman Point

Endorsed

 Sampled Date
 18/05/2023
 9:50:00AM

 Sample Received Date
 19/05/2023
 10:00:23AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1064

Collection Type Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°	°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	12 mg/L	



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### **Analytical Results**

31526-EPA - Nth Jack Point **Sampling Point** 18/05/2023 10:15:00AM Sampled Date 19/05/2023 9:59:05AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1046 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

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

### Sample temperature at time of receipt 9.1°C

## Algal Identification T0393(ADEL)

**DIATOMS** 

Pennate diatoms small\_spp 2000 cells/ml

**DINOFLAGELLATES** 

Gymnodinioids 45 cells/ml Oxyrrhis 120 cells/mL Heterocapsa 20 cells/mL **GREEN ALGAE** 

Chlorella

1170000 cells/mL Unicellular green algae small\_spp 140000 cells/mL

### Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

### **GREEN ALGAE**

# Total Algae Biovolume

# Total Diatom Biovolume

Total Toxic BGA Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Chlorella 52 6 mm3/l Unicellular green algae small\_spp 1.97 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

54.6 mm3/l 0.00 mm3/L

Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL)

Algae - Total

1310000 cells/mL



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19/05/2023

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## **Analytical Results**

31526-EPA - Nth Jack Point **Sampling Point** 18/05/2023 10:15:00AM **Sampled Date** 19/05/2023 9:59:05AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1046 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

18/05/2023 Algal Count - Total T0393(ADEL)

Blue Green Algae - Total 0 cells/mL Diatoms - Total 2000 cells/mL Geosmin-MIB producing BGA - Total 0 cells/mL Green Algae - Total 1310000 cells/mL Toxin producing BGA - Total 0 cells/mL

Sample temperature at time of receipt 9.1°C Chlorophyll a & Phaeophytin a T0380-02(ADEL)

0.1 Chlorophyll a 101 µg/L

29.4 μg/L Phaeophytin a 0.1

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	18 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	36000 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		4.75 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	<1.5 µg/L	
Phosphorus-Filterable Reactive as P	0.5	<0.5 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	6.49 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	4.75 mg/L	



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## **Analytical Results**

**Sampling Point** 31526-EPA - Nth Jack Point 18/05/2023 10:15:00AM **Sampled Date** 19/05/2023 9:59:05AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1046 Sample ID Endorsed Status

**Customer Collected Collection Type** 

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	.1°C		
Dissolved Organic Carbon T0158-07(ADE	EL)		26/05/2023
Dissolved Organic Carbon	1	20.3 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	26.3 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.			
Alkalinity Carbonate Bicarbonate and Hy	ydroxide T0101-0	1(ADEL)	23/05/2023
Alkalinity as Calcium Carbonate		219 mg/L	
Bicarbonate		267 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		23/05/2023
Conductivity	2	85700 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	69300 mg/L	
pH T0010-01(ADEL)			23/05/2023
pH		8.0 pH units	
Temperature at which pH is measured		21.7 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	10 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	.1°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	12 mg/L	



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### **Analytical Results**

 Sampling Point
 31526-EPA - Nth Jack Point

 Sampled Date
 18/05/2023 10:15:00AM

 Sample Received Date
 19/05/2023 9:59:05AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1046

 Status
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Collection Type Customer Collected



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## **Analytical Results**

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

 Sampled Date
 18/05/2023
 10:15:00AM

 Sample Received Date
 19/05/2023
 9:56:03AM

 Sample Analysis Completed
 8/06/2023
 3:43:23PM

 Sample ID
 \*2023-003-1055

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result	Test Start Date
-------------------------------	-----------------

### Sample temperature at time of receipt 9.1°C

### Algal Identification T0393(ADEL)

### **BLUE GREEN ALGAE**

Merismopedia	68 cells/mL
Aphanocapsa	54 cells/mL

### **DIATOMS**

 Pennate diatoms
 28 cells/mL

 Pennate diatoms small\_spp
 120 cells/mL

 Cyclotella small\_spp
 100 cells/mL

### **DINOFLAGELLATES**

Protoperidinium 4 cells/mL

### **GREEN ALGAE**

 Tetrastrum
 60 cells/mL

 Tetraselmis
 20 cells/mL

 Phytoflagellates
 70 cells/mL

### Sample temperature at time of receipt 9.1°C

## Algal Biovolume T0393(ADEL)

### **BLUE GREEN ALGAE**

# Total Algae Biovolume

# Total Diatom Biovolume

# Total Blue\_Green Algae Biovolume

Merismopedia <0.01 mm3/L Aphanocapsa <0.01 mm3/L

### **DIATOMS**

Cyclotella 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

<0.02 mm3/L

Not Calculated mm3/L



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## **Analytical Results**

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

 Sampled Date
 18/05/2023
 10:15:00AM

 Sample Received Date
 19/05/2023
 9:56:03AM

 Sample Analysis Completed
 8/06/2023
 3:43:23PM

 Sample ID
 \*2023-003-1055

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)	18/05/2023
-----------------------------	------------

# Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

## Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 524 cells/mL

 Blue Green Algae - Total
 122 cells/mL

 Diatoms - Total
 248 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 150 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 1.41  $\,\mu g/L$  Phaeophytin a 0.1 0.53  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	23 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	2670 mg/L	
Nitrate + Nitrite as N T0161-01(ADEL)			08/06/2023
Nitrate + Nitrite as N	0.003	0.170 mg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		1.21 mg/L	
Phosphorus - Filterable Reactive as P (ADEL)			06/06/2023
# 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)			23/05/2023



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

18/05/2023 10:15:00AM **Sampled Date** 19/05/2023 9:56:03AM **Sample Received Date** 8/06/2023 3:43:23PM Sample Analysis Completed \*2023-003-1055 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	13.3 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	1.04 mg/L	

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°	c		
Dissolved Organic Carbon T0158-07(ADEL)	)		01/06/2023
Dissolved Organic Carbon	1	4.6 mg/L	
Total Organic Carbon T0158-07(ADEL)			01/06/2023
Total Organic Carbon	1	5.0 mg/L	

Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL) Alkalinity as Calcium Carbonate 399 mg/L Bicarbonate 486 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

23/05/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 8850 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 5120 mg/L

23/05/2023 pH T0010-01(ADEL)

8.3 pH units Temperature at which pH is measured

21.7 °C 22/05/2023 **Turbidity T0018-01(ADEL)** 

Turbidity 0.1 1.9 NTU



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**Analytical Results** 

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

 Sampled Date
 18/05/2023
 10:15:00AM

 Sample Received Date
 19/05/2023
 9:56:03AM

 Sample Analysis Completed
 8/06/2023
 3:43:23PM

 Sample ID
 \*2023-003-1055

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1 Suspended Solids T0160-01(ADEL)	°C		23/05/2023
Suspended Solids	1.0	6 mg/L	



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# **Analytical Results**

31514-EPA - Stoney Well **Sampling Point** 18/05/2023 10:50:00AM Sampled Date 19/05/2023 9:57:06AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1051 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

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

### Sample temperature at time of receipt 9.1°C

#### Algal Identification T0393(ADEL)

#### **BLUE GREEN ALGAE**

Microcystis flos-aquae 1700 cells/ml

DIATOMS

Pennate diatoms 8 cells/ml Pennate diatoms small spp 12000 cells/mL

**DINOFLAGELLATES** 

Gymnodinioids 12 cells/mL PERIDINIACEAE 8 cells/mL Heterocapsa 6 cells/mL

**GREEN ALGAE** 

Chlorella 1780000 cells/mL Unicellular green algae small\_spp 218000 cells/mL Phytoflagellates small spp 19600 cells/mL

### Sample temperature at time of receipt 9.1°C

# Algal Biovolume T0393(ADEL)

#### **BLUE GREEN ALGAE**

Microcystis flos-aquae 0.04 mm3/L

**GREEN ALGAE** 

Chlorella 80.1 mm3/L Unicellular green algae small\_spp 3.07 mm3/L 1.53 mm3/L

Phytoflagellates small\_spp

# 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

0.04 mm3/L

# Total Algae Biovolume

# Total Blue\_Green Algae Biovolume



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# **Analytical Results**

 Sampling Point
 31514-EPA - Stoney Well

 Sampled Date
 18/05/2023 10:50:00AM

 Sample Received Date
 19/05/2023 9:57:06AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1051

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL) 18/05/2023

# Total Diatom Biovolume Not Calculated mm3/L

# Total Green Algae Biovolume 84.7 mm3/L
Total Toxic BGA Biovolume 0.04 mm3/L

# Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 2030000 cells/mL

 Blue Green Algae - Total
 1700 cells/mL

 Diatoms - Total
 12000 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 2020000 cells/mL

 Toxin producing BGA - Total
 1700 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)
Chlorophyll a 0.1 97.3 µg/l

Chlorophyll a 0.1 97.3  $\,\mu g/L$  Phaeophytin a 0.1 29.5  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			

Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	25 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	33700 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	3.4 µg/L	
# Nitrate + Nitrite as NO3	2.3	15.1 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		4.75 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		06/06/2023

Phosphorus - Filterable Reactive as P (ADEL)

# Phosphorus - Filterable Reactive as PO4

terable Reactive as PO4 1.5 <1.5 µg/L



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Analytical R	esults
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31514-EPA - Stoney Well **Sampling Point** Sampled Date 18/05/2023 10:50:00AM 19/05/2023 9:57:06AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1051 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

Phosphorus - Filterable Reactive as P	(ADEL)		06/06/2023
Phosphorus-Filterable Reactive as P	0.5	<0.5 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	0.040 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	6.02 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	4.75 mg/L	

LOR	Result	Test Start Date
		26/05/2023
1	20.1 mg/L	
		26/05/2023
1	26.0 mg/L	
		1 20.1 mg/L

Inorganic Chemistry - Physical	LOR	Result	Test Start Date

### Sample temperature at time of receipt 9.1°C

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

Alkalinity as Calcium Carbonate 210 mg/L Bicarbonate 256 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

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

Conductivity 80200 µS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 63500 mg/L

pH T0010-01(ADEL) рΗ 8.0 pH units

Temperature at which pH is measured 21.7 °C



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**Analytical Results** 

Suspended Solids T0160-01(ADEL)

**Collection Type** 

31514-EPA - Stoney Well **Sampling Point** 18/05/2023 10:50:00AM **Sampled Date** 19/05/2023 9:57:06AM Sample Received Date 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1051 Sample ID

Endorsed **Status Customer Collected** 

22/05/2023 **Turbidity T0018-01(ADEL)** 

Turbidity 0.1 10 NTU

**Inorganic Chemistry - Waste Water** LOR Result **Test Start Date** Sample temperature at time of receipt 9.1°C

Suspended Solids 1.0 10 mg/L



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# **Analytical Results**

31525-EPA - Villa de Yumpa **Sampling Point** 18/05/2023 11:10:00AM Sampled Date 19/05/2023 9:58:53AM Sample Received Date 7/06/2023 2:14:07PM Sample Analysis Completed \*2023-003-1044 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

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

Sample temperature at time of receipt 9.1°C

Algal Identification T0393(ADEL)

**DINOFLAGELLATES** 

Gymnodinioids 2 cells/mL

**GREEN ALGAE** 

Chlorella 1160000 cells/mL Unicellular green algae 166000 cells/mL

Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

**GREEN ALGAE** 

# Total Algae Biovolume

# Total Diatom Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Chlorella 52.2 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.

Not Calculated mm3/L

0.00 mm3/L

0.00 mm3/l

Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 9.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Blue Green Algae - Total Diatoms - Total

Geosmin-MIB producing BGA - Total

Green Algae - Total Toxin producing BGA - Total

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1330000 cells/mL

0 cells/ml 0 cells/mL

0 cells/mL

1330000 cells/mL

0 cells/mL

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# **Analytical Results**

 Sampling Point
 31525-EPA - Villa de Yumpa

 Sampled Date
 18/05/2023 11:10:00AM

 Sample Received Date
 19/05/2023 9:58:53AM

 Sample Analysis Completed
 7/06/2023 2:14:07PM

 Sample ID
 \*2023-003-1044

 Status
 Endorsed

Collection Type Customer Collected

# Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

19/05/2023

Chlorophyll a 0.1 95.9  $\,\mu g/L$  Phaeophytin a 0.1 33.3  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	23 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	34100 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# 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)			19/05/2023
Nitrogen - Total		4.93 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	<1.5 µg/L	
Phosphorus-Filterable Reactive as P	0.5	0.5 μg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	0.025 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	6.16 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	4.92 mg/L	
Organic Chemistry	LOR	Result	Test Start Date

Sample temperature at time of receipt 9.1°C Dissolved Organic Carbon T0158-07(ADEL)

26/05/2023



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26/05/2023

22/05/2023

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# **Analytical Results**

**Sampling Point** 31525-EPA - Villa de Yumpa 18/05/2023 11:10:00AM Sampled Date 19/05/2023 9:58:53AM Sample Received Date 7/06/2023 2:14:07PM Sample Analysis Completed \*2023-003-1044 Sample ID Endorsed

**Status** 

**Customer Collected Collection Type** 

26/05/2023 **Dissolved Organic Carbon T0158-07(ADEL)** 

Dissolved Organic Carbon 1 20.2 mg/L

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

Total Organic Carbon 1 26.6 mg/L

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

# Sample temperature at time of receipt 9.1°C

23/05/2023 Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

Alkalinity as Calcium Carbonate 215 mg/L Bicarbonate 262 mg/L Carbonate 0 mg/L Hydroxide 0 mg/L

23/05/2023 Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 80500 μS/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 63900 mg/L

23/05/2023 pH T0010-01(ADEL)

pН 8.0 pH units Temperature at which pH is measured 21.7 °C

**Turbidity T0018-01(ADEL)** Turbidity 0.1 11 NTU

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

Result

Sample temperature at time of receipt 9.1°C 23/05/2023 Suspended Solids T0160-01(ADEL)

Suspended Solids 1.0 10 mg/L



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18/05/2023

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# **Analytical Results**

**Sampling Point** 31524-EPA - Bonneys 18/05/2023 12:30:00PM Sampled Date 19/05/2023 9:58:40AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1060 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

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

### Sample temperature at time of receipt 9.1°C

#### Algal Identification T0393(ADEL)

#### **CRYPTOPHYTES**

Chroomonas 30 cells/ml

#### **GREEN ALGAE**

Phytoflagellates 70 cells/mL Tetraselmis 20 cells/ml

# Sample temperature at time of receipt 9.1°C Algal Biovolume T0393(ADEL)

**CRYPTOPHYTES** 

# Total Algae Biovolume

# Total Diatom Biovolume

# Total Green Algae Biovolume

# Total Blue\_Green Algae Biovolume

Chroomonas <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

120 cells/mL

0 cells/ml

0 cells/mL

0 cells/mL

90 cells/mL

0 cells/ml

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 9.1°C Algal Count - Total T0393(ADEL)

Algae - Total

Blue Green Algae - Total Diatoms - Total

Geosmin-MIB producing BGA - Total

Green Algae - Total

Toxin producing BGA - Total

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# **Analytical Results**

31524-EPA - Bonneys **Sampling Point** 18/05/2023 12:30:00PM **Sampled Date** 19/05/2023 9:58:40AM **Sample Received Date** 7/06/2023 2:08:15PM Sample Analysis Completed \*2023-003-1060 Sample ID Endorsed **Status Customer Collected Collection Type** 

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

1.46 µg/L

Chlorophyll a 0.1 1.26 µg/L Phaeophytin a 0.1

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	).1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	13 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	21400 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.37 mg/L	
Phosphorus - Filterable Reactive as P (A	(DEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	5.98 µg/L	
Phosphorus-Filterable Reactive as P	0.5	2.0 µg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)		· ·	22/05/2023
Silica - Reactive	0.05	2.07 mg/L	
TKN as N T0112-01(ADEL)		ű	23/05/2023
TKN as Nitrogen	0.05	2.37 mg/L	
Organic Chemistry	LOR	Result	Test Start Date

Sample temperature at time of receipt 9.1°C **Dissolved Organic Carbon T0158-07(ADEL)** 

26/05/2023

19/05/2023



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26/05/2023

26/05/2023

23/05/2023

22/05/2023

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# **Analytical Results**

Dissolved Organic Carbon

 Sampling Point
 31524-EPA - Bonneys

 Sampled Date
 18/05/2023 12:30:00PM

 Sample Received Date
 19/05/2023 9:58:40AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1060

 Status
 Endorsed

Collection Type Customer Collected

Dissolved Organic Carbon T0158-07(ADEL)

1 16.9 mg/L

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

Total Organic Carbon 1 17.1 mg/L

Inorganic Chemistry - Physical LOR Result Test Start Date

#### Sample temperature at time of receipt 9.1°C

Alkalinity Carbonate Bicarbonate and Hydroxide T0101-01(ADEL)

23/05/2023

 Alkalinity as Calcium Carbonate
 181 mg/L

 Bicarbonate
 220 mg/L

 Carbonate
 0 mg/L

 Hydroxide
 0 mg/L

Conductivity & Total Dissolved Solids T0016-01(ADEL)

Conductivity 2 56000  $\mu$ S/cm

Note Conductivity measurement is corrected to 25°C

Total Dissolved Solids (by EC) 1 40300 mg/L

pH T0010-01(ADEL)

pH 8.1 pH units
Temperature at which pH is measured 21.5 °C

Turbidity T0018-01(ADEL)

Turbidity 0.1 2.2 NTU

Inorganic Chemistry - Waste Water LOR Result Test Start Date

Sample temperature at time of receipt 9.1°C

Suspended Solids T0160-01(ADEL) 23/05/2023

Suspended Solids 1.0 6 mg/L



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# **Analytical Results**

53032-EPA - Noonameena **Sampling Point** 18/05/2023 12:45:00PM Sampled Date 19/05/2023 10:00:11AM **Sample Received Date** 7/06/2023 2:34:21PM Sample Analysis Completed \*2023-003-1065 Sample ID Endorsed **Status** 

**Customer Collected Collection Type** 

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

Sample temperature at time of receipt 9.1°C

Algal Identification T0393(ADEL)

**CRYPTOPHYTES** 

Cryptomonas 10 cells/mL

DIATOMS

Pennate diatoms 8 cells/ml

**DINOFLAGELLATES** 

**PERIDINIACEAE** 10 cells/mL

**GREEN ALGAE** 

Phytoflagellates 50 cells/mL

Sample temperature at time of receipt 9.1°C

**CRYPTOPHYTES** 

Algal Biovolume T0393(ADEL)

Cryptomonas 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. # Total Algae Biovolume Not Calculated mm3/L

# Total Blue\_Green Algae Biovolume 0.00 mm3/L

# Total Diatom Biovolume Not Calculated mm3/L # Total Green Algae Biovolume Not Calculated mm3/L

Total Toxic BGA Biovolume 0.00 mm3/L

Sample temperature at time of receipt 9.1°C

18/05/2023 Algal Count - Total T0393(ADEL)

8 cells/mL

Algae - Total 78 cells/ml Blue Green Algae - Total 0 cells/mL Diatoms - Total



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# **Analytical Results**

Toxin producing BGA - Total

 Sampling Point
 53032-EPA - Noonameena

 Sampled Date
 18/05/2023 12:45:00PM

 Sample Received Date
 19/05/2023 10:00:11AM

 Sample Analysis Completed
 7/06/2023 2:34:21PM

 Sample ID
 \*2023-003-1065

 Status
 Endorsed

Collection Type Customer Collected

Algal Count - Total T0393(ADEL)		18/05/2023
Geosmin-MIB producing BGA - Total	0 cells/mL	
Green Algae - Total	50 cells/ml	

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

0 cells/mL

Chlorophyll a 0.1 13.4  $\,\mu g/L$  Phaeophytin a 0.1 10.3  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	27 μg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	18200 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	<0.5 µg/L	
# Nitrate + Nitrite as NO3	2.3	<2.3 µg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.22 mg/L	
Phosphorus - Filterable Reactive as P (	ADEL)		06/06/2023
# Phosphorus -Filterable Reactive as PO4	1.5	2.392 µg/L	
Phosphorus-Filterable Reactive as P	0.5	0.8 μg/L	
Phosphorus - Total T0109-44(ADEL)			23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	
Silica - Reactive T0111-01(ADEL)			22/05/2023
Silica - Reactive	0.05	0.86 mg/L	
TKN as N T0112-01(ADEL)			23/05/2023
TKN as Nitrogen	0.05	2.22 mg/L	



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# **Analytical Results**

 Sampling Point
 53032-EPA - Noonameena

 Sampled Date
 18/05/2023 12:45:00PM

 Sample Received Date
 19/05/2023 10:00:11AM

 Sample Analysis Completed
 7/06/2023 2:34:21PM

 Sample ID
 \*2023-003-1065

 Status
 Endorsed

 Collection Type
 Customer Collected

Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	1°C		
Dissolved Organic Carbon T0158-07(ADE	:L)		26/05/2023
Dissolved Organic Carbon	1	14.9 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	15.8 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.	1°C		
Alkalinity Carbonate Bicarbonate and Hy		1(ADFL)	23/05/2023
Alkalinity as Calcium Carbonate		160 mg/L	
Bicarbonate		196 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0	016-01(ADEL)		23/05/2023
Conductivity	2	47800 μS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	33200 mg/L	
pH T0010-01(ADEL)			23/05/2023
pH		8.0 pH units	
Temperature at which pH is measured		21.7 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	1.3 NTU	
Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9. Suspended Solids T0160-01(ADEL)	1°C		23/05/2023

<1 mg/L



Suspended Solids

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# **Analytical Results**

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 18/05/2023
 1:20:00PM

 Sample Received Date
 19/05/2023
 9:58:27AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1045

 Status
 Endorsed

Collection Type Customer Collected

Biology Operations LOR Result Test Start Date

### Sample temperature at time of receipt 9.1°C

#### Algal Identification T0393(ADEL)

#### **CRYPTOPHYTES**

Cryptomonas 375 cells/mL

**DIATOMS** 

Guinardia 12 cells/mL
Chaetoceros 475 cells/mL

**GREEN ALGAE** 

 Planctonema
 8 cells/mL

 Phytoflagellates
 30 cells/mL

 Monoraphidium
 30 cells/mL

 Phytoflagellates small\_spp
 308 cells/mL

 Chlorella
 8150 cells/mL

# Sample temperature at time of receipt 9.1°C

# Algal Biovolume T0393(ADEL)

# **CRYPTOPHYTES**

Cryptomonas 0.41 mm3/L

**GREEN ALGAE** 

 Monoraphidium
 0.03 mm3/L

 Phytoflagellates small\_spp
 0.02 mm3/L

 Chlorella
 0.37 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

# Total Algae Biovolume

# Total Blue\_Green Algae Biovolume

# Total Diatom Biovolume # Total Green Algae Biovolume

NATA

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# **Analytical Results**

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 18/05/2023
 1:20:00PM

 Sample Received Date
 19/05/2023
 9:58:27AM

 Sample Analysis Completed
 7/06/2023
 2:08:15PM

 Sample ID
 \*2023-003-1045

 Status
 Endorsed

Collection Type Customer Collected

Algal Biovolume T0393(ADEL)	18/05/2023
-----------------------------	------------

Total Toxic BGA Biovolume 0.00 mm3/L

# Sample temperature at time of receipt 9.1°C

Algal Count - Total T0393(ADEL) 18/05/2023

 Algae - Total
 9390 cells/mL

 Blue Green Algae - Total
 0 cells/mL

 Diatoms - Total
 487 cells/mL

 Geosmin-MIB producing BGA - Total
 0 cells/mL

 Green Algae - Total
 8530 cells/mL

 Toxin producing BGA - Total
 0 cells/mL

Sample temperature at time of receipt 9.1°C

Chlorophyll a & Phaeophytin a T0380-02(ADEL)

Chlorophyll a 0.1 4.61  $\,\mu g/L$  Phaeophytin a 0.1 1.34  $\,\mu g/L$ 

Inorganic Chemistry - Nutrients	LOR	Result	Test Start Date
Sample temperature at time of receipt 9	9.1°C		
Ammonia as N (ADEL)			06/06/2023
# Ammonia as N	1	31 µg/L	
Chloride T0104-02(ADEL)			22/05/2023
Chloride	4.0	10000 mg/L	
Nitrate + Nitrite as N (ADEL)			06/06/2023
# Nitrate + Nitrite as N	0.5	8.7 µg/L	
# Nitrate + Nitrite as NO3	2.3	38.5 μg/L	
Nitrogen - Total TMZ-M06(ADEL)			19/05/2023
Nitrogen - Total		2.24 mg/L	
Phosphorus - Filterable Reactive as P (A	ADEL)		06/06/2023
# 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)			23/05/2023



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Analytical Results			
Sampling Point	31523-EPA - L	Long Point	
Sampled Date	18/05/2023 1		
Sample Received Date	19/05/2023 9		
Sample Analysis Completed 7/06/2023 2:08:15PM			
Sample ID	*2023-003-10	45	
Status Collection Type	Endorsed Customer Col	lected	
——————————————————————————————————————		10000	
Phosphorus - Total T0109-44(ADEL)	0.005	20 005	23/05/2023
Phosphorus - Total	0.005	<0.005 mg/L	20/05/2002
Silica - Reactive T0111-01(ADEL)	0.05		22/05/2023
Silica - Reactive	0.05	1.13 mg/L	00/05/0000
TKN as N T0112-01(ADEL)	2.25		23/05/2023
TKN as Nitrogen	0.05	2.23 mg/L	
Organic Chemistry	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Dissolved Organic Carbon T0158-07(ADEL)			26/05/2023
Dissolved Organic Carbon	1	13.6 mg/L	
Total Organic Carbon T0158-07(ADEL)			26/05/2023
Total Organic Carbon	1	14.2 mg/L	
Inorganic Chemistry - Physical	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1°C			
Alkalinity Carbonate Bicarbonate and Hydro	xide T0101-01(	(ADEL)	23/05/2023
Alkalinity as Calcium Carbonate		148 mg/L	
Bicarbonate		181 mg/L	
Carbonate		0 mg/L	
Hydroxide		0 mg/L	
Conductivity & Total Dissolved Solids T0016-	01(ADEL)	-	23/05/2023
Conductivity	2	32400 µS/cm	
Note		Conductivity measurement is corrected to 25°C	
Total Dissolved Solids (by EC)	1	21000 mg/L	
pH T0010-01(ADEL)			23/05/2023
рН		8.0 pH units	
Temperature at which pH is measured		21.9 °C	
Turbidity T0018-01(ADEL)			22/05/2023
Turbidity	0.1	1.7 NTU	



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# **Analytical Results**

 Sampling Point
 31523-EPA - Long Point

 Sampled Date
 18/05/2023 1:20:00PM

 Sample Received Date
 19/05/2023 9:58:27AM

 Sample Analysis Completed
 7/06/2023 2:08:15PM

 Sample ID
 \*2023-003-1045

 Status
 Endorsed

Collection Type Customer Collected

Inorganic Chemistry - Waste Water	LOR	Result	Test Start Date
Sample temperature at time of receipt 9.1	°C		
Suspended Solids T0160-01(ADEL)			23/05/2023
Suspended Solids	1.0	<1 ma/L	



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# **AWQC Signatories**

Thuy Diep - Technical Officer Chemistry

Andrew Ford - Acting Method Development Specialist

Sharon Helgeson - Technical Officer Life Sciences

Ryan Hefferan - Technical Officer Life Sciences

Kerrie Jooste - Manager Chemistry Services

John Martini - Method Development Specialist

Dean Newman - Senior Technical Officer Biology

Melissa Phillips - Technical Officer Chemistry

Gayle Polley - Supervisor Nutrients and Waste



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# Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-003-1044	31525	EPA - Villa de Yumpa	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1044	31525	EPA - Villa de Yumpa	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1044	31525	EPA - Villa de Yumpa	18/05/2023	pН	Test not processed within holding time
2023-003-1045	31523	EPA - Long Point	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1045	31523	EPA - Long Point	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1045	31523	EPA - Long Point	18/05/2023	pН	Test not processed within holding time
2023-003-1046	31526	EPA - Nth Jack Point	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1046	31526	EPA - Nth Jack Point	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1046	31526	EPA - Nth Jack Point	18/05/2023	pН	Test not processed within holding time
2023-003-1047	31515	EPA - Snipe Point	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1047	31515	EPA - Snipe Point	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1047	31515	EPA - Snipe Point	18/05/2023	pН	Test not processed within holding time
2023-003-1048	31513	EPA - Parnka Point Boat Ramp	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1048	31513	EPA - Parnka Point Boat Ramp	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1048	31513	EPA - Parnka Point Boat Ramp	18/05/2023	рН	Test not processed within holding time
2023-003-1049	31511	EPA - 3.2km South Salt Creek	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1049	31511	EPA - 3.2km South Salt Creek	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1049	31511	EPA - 3.2km South Salt Creek	18/05/2023	рН	Test not processed within holding time
2023-003-1050	31517	EPA - 1.8km West Salt Creek	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1050	31517	EPA - 1.8km West Salt Creek	18/05/2023	Turbidity	Test not processed within holding time



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# Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-003-1050	31517	EPA - 1.8km West Salt Creek	18/05/2023	рН	Test not processed within holding time
023-003-1051	31514	EPA - Stoney Well	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1051	31514	EPA - Stoney Well	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1051	31514	EPA - Stoney Well	18/05/2023	pН	Test not processed within holding time
023-003-1052	31512	EPA - McGrath Flat North	18/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1052	31512	EPA - McGrath Flat North	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1052	31512	EPA - McGrath Flat North	18/05/2023	pН	Test not processed within holding time
023-003-1053	31519	EPA - Morella Basin at Outlet Regulator	18/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1053	31519	EPA - Morella Basin at Outlet Regulator	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1053	31519	EPA - Morella Basin at Outlet Regulator	18/05/2023	pН	Test not processed within holding time
2023-003-1054	315191	EPA - Morella Creek @ guage	18/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1054	315191	EPA - Morella Creek @ guage	18/05/2023	Turbidity	Test not processed within holding time
2023-003-1054	315191	EPA - Morella Creek @ guage	18/05/2023	pН	Test not processed within holding time
023-003-1054	315191	EPA - Morella Creek @ guage	18/05/2023	Total Organic Carbon	Test not processed within holding time
2023-003-1054	315191	EPA - Morella Creek @ guage	18/05/2023	Dissolved Organic Carbon	Test not processed within holding time
023-003-1055	300713	Tilley Swamp Drain D/S Northern Outlet	18/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1055	300713	Tilley Swamp Drain D/S Northern Outlet	18/05/2023	Turbidity	Test not processed within holding time
023-003-1055	300713	Tilley Swamp Drain D/S Northern Outlet	18/05/2023	рН	Test not processed within holding time
023-003-1055	300713	Tilley Swamp Drain D/S Northern Outlet	18/05/2023	Total Organic Carbon	Test not processed within holding time
2023-003-1055	300713	Tilley Swamp Drain D/S Northern Outlet	18/05/2023	Dissolved Organic Carbon	Test not processed within holding time



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# Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
2023-003-1056	11504	DEW - Mundoo Upstream	17/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1056	11504	DEW - Mundoo Upstream	17/05/2023	Turbidity	Test not processed within holding time
2023-003-1056	11504	DEW - Mundoo Upstream	17/05/2023	рН	Test not processed within holding time
2023-003-1057	11505	DEW - Mundoo Downstream	17/05/2023	Silica - Reactive	Test not processed within holding time
2023-003-1057	11505	DEW - Mundoo Downstream	17/05/2023	Turbidity	Test not processed within holding time
023-003-1057	11505	DEW - Mundoo Downstream	17/05/2023	pН	Test not processed within holding time
023-003-1058	31522	EPA - Mark Point	17/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1058	31522	EPA - Mark Point	17/05/2023	Turbidity	Test not processed within holding time
023-003-1058	31522	EPA - Mark Point	17/05/2023	pН	Test not processed within holding time
023-003-1059	351213	EPA - Murray Mouth	17/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1059	351213	EPA - Murray Mouth	17/05/2023	Turbidity	Test not processed within holding time
023-003-1059	351213	EPA - Murray Mouth	17/05/2023	рН	Test not processed within holding time
023-003-1060	31524	EPA - Bonneys	18/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1060	31524	EPA - Bonneys	18/05/2023	Turbidity	Test not processed within holding time
023-003-1060	31524	EPA - Bonneys	18/05/2023	рН	Test not processed within holding time
023-003-1061	31528	EPA - Salt Creek Outlet	18/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1061	31528	EPA - Salt Creek Outlet	18/05/2023	Turbidity	Test not processed within holding time
023-003-1061	31528	EPA - Salt Creek Outlet	18/05/2023	рН	Test not processed within holding time
023-003-1062	353179	EPA - Tauwitchere Barrage Upstream	17/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1062	353179	EPA - Tauwitchere Barrage Upstream	17/05/2023	Turbidity	Test not processed within holding time



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# Incidents

Sample ID	S.Point	Description	Sampled Date	Analysis (where Applicable)	Incident Description
023-003-1062	353179	EPA - Tauwitchere Barrage Upstream	17/05/2023	pН	Test not processed within holding time
023-003-1062	353179	EPA - Tauwitchere Barrage Upstream	17/05/2023	рН	Test not processed within holding time
23-003-1063	353177	EPA - Tauwitchere Barrage DS	17/05/2023	Silica - Reactive	Test not processed within holding time
023-003-1063	353177	EPA - Tauwitchere Barrage DS	17/05/2023	Turbidity	Test not processed within holding time
023-003-1063	353177	EPA - Tauwitchere Barrage DS	17/05/2023	pН	Test not processed within holding time
)23-003-1063	353177	EPA - Tauwitchere Barrage DS	17/05/2023	рН	Test not processed within holding time
)23-003-1064	531012	EPA - Sth Policeman Point	18/05/2023	Silica - Reactive	Test not processed within holding time
)23-003-1064	531012	EPA - Sth Policeman Point	18/05/2023	Turbidity	Test not processed within holding time
)23-003-1064	531012	EPA - Sth Policeman Point	18/05/2023	pН	Test not processed within holding time
023-003-1065	53032	EPA - Noonameena	18/05/2023	Silica - Reactive	Test not processed within holding time
)23-003-1065	53032	EPA - Noonameena	18/05/2023	Turbidity	Test not processed within holding time
023-003-1065	53032	EPA - Noonameena	18/05/2023	pН	Test not processed within holding time



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# **Analytical Method**

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

# **Sampling Method**

Sampling Method Code	Description
W09-023	Sampling Method for Chemical Analyses
W09-024	Sampling Method for Biological Analyses
	Sampling point and date sampled are provided when collected by customers. Validity of results are based on information and samples supplied by customers. Unless it is reported that sampling has been performed by AWQC, the samples have been analysed as received.

# **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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- 2. # determination of the component is not covered by NATA Accreditation.
- 3. ^ indicates result is out of specification according to the reference guideline. Refer to report footer.
- 4. \* indicates an incident has been recorded against the sample. Refer to report footer.
- 5. & Indicates the results have changed since the last issued report.
- 6. Where a result is required to meet compliance limits the associated measurement uncertainty must be considered. Measurement uncertainty is available at <a href="https://www.awqc.com.au/our-services/Water-quality-testing-and-analysis/measurement-uncertainty">https://www.awqc.com.au/our-services/Water-quality-testing-and-analysis/measurement-uncertainty</a>
- 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.