

Annual Recycled Water Performance Report

July 2016 - June 2017



Unitywater

Serving you today,
investing in tomorrow.



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Message from the CEO

Dear Customers,

Recycled water has become an important part of our urban water cycle as we look for ways to conserve our precious water sources. Unitywater supports the community and businesses by providing access to recycled water across our service area while we continue to meet the requirements of the Water Supply (Safety & Reliability) Act 2008 as we provide this service.

I hope you find the information related to your recycled water quality useful. This information can assist you to plan the most beneficial way to use this important resource.



George Theo
Chief Executive Officer
Unitywater

Introduction

Recycled water is supplied for customer reuse throughout the Unitywater supply region. Customers may use recycled water for a number of approved residential, commercial, municipal and industrial purposes.

Unitywater monitors the water quality of each recycled water scheme. This performance summary of monitoring results is provided to assist our customers to manage their onsite activities.

If you have any further questions regarding recycled water, please visit www.unitywater.com/business/recycled-water

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Schemes Supplying Recycled Water

A+, A, B, C, D

Classes supplied

35

Fixed site commercial, industrial and municipal customers

127

Tanker carrier customers

1,208

Residential customers

Approved uses of recycled water

Unitywater supplies five classes of recycled water: Class A+, Class A, Class B, Class C and Class D. Each class is of a different quality and is restricted to certain uses.

Below is a summary list of approved uses by classification.

For further information on approved uses, please visit www.unitywater.com/business/recycled-water

Use	Class A+	Class A	Class B	Class C	Class D
Irrigation of residential gardens and lawns - above ground	✓	✗	✗	✗	✗
Irrigation of residential gardens and lawns - below ground	✓	✓	✗	✗	✗
Filling or topping up of residential "non-drinking water" rainwater tanks - NOT PERMITTED	✗	✗	✗	✗	✗
Dust suppression, compaction	✓	✓	✓ ^a	✗	✗
Watering parks, playing fields, footpaths and roadside plants	✓	✓	✓ ^a	✓ ^a	✗
Filling fenced ponds, lagoons and dams (not used for recreational purposes)	✓	✓	✗	✗	✗
Filling non-fenced ponds, lagoons and dams (not used for recreational purposes)	✓	✗	✗	✗	✗
Road works	✓	✓	✓ ^a	✗	✗
Washing cars	✓	✗	✗	✗	✗
Washing animals (except pigs)	✓	✗	✗	✗	✗
Hydraulic testing of sewer infrastructure	✓	✓	✓	✓	✗
Irrigation of landscaping on construction sites	✓	✓	✓ ^a	✗	✗
Filling or topping up of swimming pools or spas NOT PERMITTED	✗	✗	✗	✗	✗
Irrigating sugar cane destined for non-edible purposes (fixed site users only)	✓	✓	✓	✓ ^a	✓ ^a
Irrigating turf (fixed site users only)	✓	✓	✓	✓ ^a	✓ ^a

✓ listed use is approved for this class of recycled water

✗ listed use not approved for this class of recycled water

^a use is accepted only under strict site controls including site management plans

Recycled water scheme general information

Scheme	Class Available Fixed-Site Customers	Class Available Tanker Fill Station	Tanker Fill Station Location
Brendale	Class B	Class B	3/26 Cribb Road
Coolum	Class B	Class B	Lot 2 Marsh Road
Kawana	Class B	Class B	Lot 101 Main Drive
Landsborough	Not supplied	Class B	Lot 10 Forestry Road
Maleny	Class B	Not supplied	Not supplied
Maroochydore	Class B / Class D	Class B	38 Commercial Road
Murrumba Downs	Class B	Class B	Lot 2 Bickle Road
Nambour	Class B / Class D	Class B	Lot 1 Bli Bli Road
Noosa	Class A	Class A	Lot 14 Wallum Lane
Redcliffe	Class C	Not supplied	Not Supplied
South Caboolture	Class A+	Class A+	<ul style="list-style-type: none"> 67 Weier Rd, Morayfield Mewett St, Caboolture Caboolture Regional Aquatic Centre Burpengary
Woodford	Class A	Class A	Neurum Road, adjacent Woodford Showgrounds

Definitions

Units/Parameter	Definition
MPN/100mL	Most Probable Number per 100 millilitre
CFU/mL	Colony Forming Units per millilitre
mg/L	milligrams per litre
µS/cm	Microsiemens per centimetre
pH units	pH units
NTU	Nephelometric Turbidity Units
Nitrogen (Ammonia)	Ammoniacal nitrogen (NH ₃ -N) is a measure for the amount of ammonia found in effluent.
Nitrogen (Oxidised)	The sum of nitrate-nitrogen (NO ₃ -N) and nitrite-nitrogen (NO ₂ -N) only
Nitrogen (total)	The sum of nitrate-nitrogen (NO ₃ -N), nitrite-nitrogen (NO ₂ -N), ammonia-nitrogen (NH ₃ -N) and organically bound nitrogen (N _{org} -N).
Phosphorous (total)	The sum of three forms of phosphorous species: reactive, condensed and organic.
Median	The middle value of the dataset. <i>E.coli</i> results are reported as a median in this performance report.

Brendale STP

Irrigator & tanker customers - Class B

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	54 ^(b)	<1*
Conductivity	µS/cm	51	688
Nitrogen (Ammonia)	mg/L	52	0.8
Nitrogen (Oxidised)	mg/L	52	2.2
Nitrogen (Total)	mg/L	52	4.3
pH	pH Units	51	7.1
Phosphorous (Total)	mg/L	52	0.5
Suspended Solids	mg/L	52	6.6

^(b) As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Coolum STP

Irrigator & tanker customers - Class B

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	52 ^(b)	2*
Conductivity	µS/cm	50	828
Nitrogen (Ammonia)	mg/L	50	0.2
Nitrogen (Oxidised)	mg/L	50	1.8
Nitrogen (Total)	mg/L	50	2.7
pH	pH Units	50	7.6
Phosphorous (Total)	mg/L	50	0.8
Suspended Solids	mg/L	50	2.1

^(b) As per Public Health Regulation 2005, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Kawana STP

Irrigator and concrete factory - Class B

Tanker customers - Class B

Parameter	Units	Number of tests	Average	Number of tests	Average
E.coli	MPN/100mL	50 ^(b)	4*	49 ^(b)	<1*
Conductivity	µS/cm	49	1264	48	1268
Nitrogen (Ammonia)	mg/L	49	4.6	48	3.2
Nitrogen (Oxidised)	mg/L	49	2.3	48	3.8
Nitrogen (Total)	mg/L	49	8.8	48	8.5
pH	pH units	49	7.0	48	7.1
Phosphorous (Total)	mg/L	49	4.3	48	3.6
Suspended Solids	mg/L	49	4.1	Not Tested	Not Tested

^(b) As per Public Health Regulation 2005, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Not Tested = parameter is not tested at this sample site

Landsborough STP

Tanker customers - Class B

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	52 ^[b]	1*
Conductivity	µS/cm	51	587
Nitrogen (Ammonia)	mg/L	51	0.7
Nitrogen (Oxidised)	mg/L	51	1.6
Nitrogen (Total)	mg/L	51	3.3
pH	pH Units	51	7.6
Phosphorous (Total)	mg/L	51	2.2
Suspended Solids	mg/L	51	4.5

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Maleny STP

Irrigator customers - Class B

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	54 ^[b]	<1*
Conductivity	µS/cm	53	538
Nitrogen (Ammonia)	mg/L	53	<0.05
Nitrogen (Oxidised)	mg/L	53	1.6
Nitrogen (Total)	mg/L	53	2.1
pH	pH Units	53	7.0
Phosphorous (Total)	mg/L	53	0.3
Suspended Solids	mg/L	53	1.6

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Maroochydore STP

Cane Irrigator - Class D

Irrigator & tanker customers - Class B

Parameter	Units	Number of tests	Average	Number of tests	Average
E.coli	MPN/100mL	50 ^[b]	245*	51 ^[b]	1*
Conductivity	µS/cm	48	2239	48	2239
Nitrogen (Ammonia)	mg/L	48	0.5	48	0.5
Nitrogen (Oxidised)	mg/L	48	3.5	48	3.5
Nitrogen (Total)	mg/L	48	4.8	48	4.8
pH	pH units	48	7.1	48	7.1
Phosphorous (Total)	mg/L	48	0.6	48	0.6
Suspended Solids	mg/L	48	6.3	48	6.3

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Murrumba Downs STP

Irrigator & tanker customers - Class B

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	53 ^[b]	<1*
Conductivity	µS/cm	51	705
Nitrogen (Ammonia)	mg/L	51	0.1
Nitrogen (Oxidised)	mg/L	51	0.8
Nitrogen (Total)	mg/L	51	1.7
pH	pH Units	51	7.7
Phosphorous (Total)	mg/L	51	0.4
Suspended Solids	mg/L	51	1.7

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Nambour STP

Irrigator & tanker customers - Class B

Turf irrigator customer - Class D

Parameter	Units	Number of tests	Average	Number of tests	Average
E.coli	MPN/100mL	53 ^[b]	<1*	53 ^[b]	190*
Conductivity	µS/cm	52	872	52	872
Nitrogen (Ammonia)	mg/L	52	0.2	52	0.2
Nitrogen (Oxidised)	mg/L	52	0.7	52	0.7
Nitrogen (Total)	mg/L	52	1.8	52	1.8
pH	pH units	52	7.6	52	7.6
Phosphorous (Total)	µg/L	52	0.6	52	0.6
Suspended Solids	mg/L	52	2.4	52	2.4

^[b] As per Public Health Regulation 2005, E.coli is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Noosa STP

Irrigator & tanker customers - Class A

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	53 ^[b]	<1*
Conductivity	µS/cm	52	1698
Nitrogen (Ammonia)	mg/L	51	0.1
Nitrogen (Oxidised)	mg/L	51	2.8
Nitrogen (Total)	mg/L	52	3.9
pH	pH Units	52	7.7
Phosphorous (Total)	µg/L	52	0.3
Suspended Solids	mg/L	52	1.9

^[b] As per Public Health Regulation 2005, E.coli is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Redcliffe STP

Irrigator customers - Class C

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	43 ^[b]	2*
Conductivity	µS/cm	44	1645
Nitrogen (Ammonia)	mg/L	42	0.8
Nitrogen (Oxidised)	mg/L	42	1.5
Nitrogen (Total)	mg/L	42	3.3
pH	pH Units	44	7.2
Phosphorous (Total)	mg/L	42	0.2
Suspended Solids	mg/L	42	3.1

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

Woodford STP

Irrigator & tanker customers - Class A

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	47 ^[b]	<1*
Conductivity	µS/cm	51	726
Nitrogen (Ammonia)	mg/L	48	0.1
Nitrogen (Oxidised)	mg/L	48	3.6
Nitrogen (Total)	mg/L	48	4.4
pH	pH Units	51	7.5
Phosphorous (Total)	mg/L	48	0.6
Suspended Solids	mg/L	48	1.4

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

*Median Value

South Caboolture recycled water network

Commercial, industrial, municipal & residential customers - Class A+

Parameter	Units	Number of tests	Average
E.coli	MPN/100mL	52 ^[b]	<1 [*]
Free Chlorine	mg/L	255	0.2
Total Chlorine	mg/L	255	0.8
Conductivity	µS/cm	245	288
Turbidity	NTU	255	0.1

^[b] As per *Public Health Regulation 2005*, *E.coli* is sampled weekly, unless the recycled water scheme is isolated (e.g. due to planned maintenance)

^{*}Median Value





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Unitywater has certification to:

OH&S ISO 4801:2001 Reg No 4260

Environmental ISO 14001:2004 Reg No 4259

Quality Systems ISO 9001:2008 Reg No 4258

Food Safety Management ISO 22000

