

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



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