

An aerial photograph of a large nursery or greenhouse facility. The ground is covered in dark gravel, and rows of various plants in black pots are arranged in neat patterns. Three men in high-visibility work clothes are walking through the nursery, accompanied by two dogs. The background shows a dense forest of tall trees.

# Recycled Water Performance Report 2023-24



Image credit – Caleb Nichols-Mansell

Since creation, the palawa have lived in Iutruwita / Tasmania. More than 2,000 generations of Aboriginal families have cared for this Country, looking after its lands, seas, skies and waterways.

In the spirit of respect and gratitude, TasWater acknowledges the Tasmanian Aboriginal community as the traditional and ongoing custodians. We pay our respects to them, their culture and to elders past and present.

TasWater commits to working collaboratively and respectfully with the Tasmanian Aboriginal community to protect and sustain the precious resources on this ancient land for future generations.

# Introduction

We are pleased to present our inaugural Recycled Water Performance Report, which provides an overview of our recycled water schemes, highlighting the benefits of reducing wastewater discharge, conserving drinking water, and recycling nutrients.

We understand a healthy environment is essential to supporting a thriving Tasmania. That is why we are committed to enhancing our natural environment and embedding sustainable practices across all our activities. That is also why one of our four key outcomes in our Strategy is to create a 'healthier environment.'

As the statewide water and sewerage provider, we have a unique relationship with the environment that involves taking water from rivers, lakes and aquifers and later discharging treated wastewater from our sewage treatment plants (STP) back to the environment. We are committed to improving our services through sustainable practices.

The report also includes performance metrics for 2023-24, outlines the regulatory framework for recycled water in Tasmania, and presents data on the quality of water supplied from various sewage treatment plants to ensure compliance with environmental standards.

Recycled water (or sometimes referred to as reuse water) is wastewater that has been treated to remove solids and pathogens. Use of recycled water offers a range of environmental benefits. These include:

- reduced discharge of nutrient-rich treated wastewater to waterways
- reduced demand on drinking water and inland waterways for irrigation

- beneficial recycling of nutrients in wastewater (in particular nitrogen and phosphorus) which reduces fertiliser demand.

TasWater supplies 30 recycled water schemes across the state. Depending upon the level of treatment, customers use recycled water for a variety of non-domestic purposes including irrigation of farmland, golf courses, vineyards, horticulture and nurseries.

This report provides a summary of our annual recycled water quality performance. If you would like more information on recycled water at TasWater, please visit [here](#).

# Year at a glance



30

Number of schemes across the state there are supplied with recycled water from TasWater treatment plants



72

Number of recycled water customers across our schemes



5,760 ML

Volume of recycled water produced during the year



38

Number of treatment plants which supply recycled water into the 30 schemes



3,716 ML

Volume used for agricultural irrigation



11

Number of treatment plants that are classified as 'full reuse', with all discharges diverted into the local recycled water scheme



890 ML

Volume used on golf course irrigation



27

Number of treatment plants seasonally discharge to recycled water schemes, keeping summer wastewater flows out of local waterways



1,154 ML

Volume remaining in storages for future irrigation



11.9%

Percentage of total treated wastewater produced, redirected away from waterways to recycled water schemes



187 tonnes

Total nitrogen amount diverted to reuse and out of waterways



40 tonnes

Total phosphorus amount diverted to reuse and out of waterways



# Regulation of recycled water in Tasmania

Regulation of recycled water schemes in Tasmania is primarily the responsibility of local government. However, if the wastewater comes from a treatment plant regulated by the Environment Protection Authority (EPA), authorisation from the EPA is required for that plant to discharge to the recycled water scheme.

Tasmania has its own guidelines<sup>1</sup> which define the class and management requirements for the approved uses of recycled water. There are three classes of recycled water quality recognised in Tasmania: Class A, B and C as defined in the table below – TasWater only guarantees the supply of Class B quality.

<sup>1</sup> Environmental Guidelines for the Use of Recycled Water in Tasmania, December 2002

**Table 1: Recycled water class based on Tasmanian guidelines**

Recycled water class	Mandatory treatment requirement	Mandatory quality requirement <sup>A</sup>
A <sup>1</sup>	Advanced treatment with disinfection	E. coli median < 10 organisms per 100ml pH 5.5 – 9.0 BOD <10mg/l Nutrient, toxicant and salinity controls
B	Secondary treatment with disinfection	E. coli Median <sup>2</sup> < 1,000 organisms per 100ml E. coli Maximum <sup>3</sup> <10,000 MPN per 100ml pH 5.5 – 9.0 BOD < 50mg/l Nutrient, toxicant and salinity controls
C	Secondary treatment	E. coli median < 10,000 organisms per 100ml pH 5.5 – 9.0 BOD < 80mg/l Nutrient, toxicant and salinity controls

Table notes:

1. Tasmanian Class A requires management methods in accordance with the National Guidelines, note in Tasmania there are only grades A-C.
2. E coli median < 100 organisms per 100ml in special cases
3. TasWater received approval for variation to regulatory limits for pH and E. coli

**Table 2: Approved uses for Class B recycled water which TasWater supply**

Use	Class B
Agricultural – Pasture irrigation for grazing animals <sup>1</sup>	✓
Agricultural – Crops which have been cooked or processed prior to sale	✓
Agriculture – Crops irrigated with drip irrigation e.g. viticulture, orchards	✓
Agriculture – Non-edible cropping e.g. plant nursery, forestry, cotton	✓
Golf courses	✓

Table notes:

1. Some restrictions and withholding periods apply

# Recycled water performance summary

TasWater supplies recycled water to three multi-user schemes in the south of the state. These schemes are supplied by more than one STP and have multiple users connected. The remaining 27 schemes are referred to as single-user schemes where one STP supplies one reuse customer.

The following tables provide the FY2024 median data for the parameters most commonly required to assess recycled water land use suitability. This information can be used by landowners to assess suitability of recycled water for irrigation applications.

## Region – South

### Brighton multi-user scheme

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Brighton STP	204.5	39.5	1251.0	10.0	10.4	104.6	7.0	20.1	63.2	2.6	43.0
Green Point STP	27.0	21.7	857.0	1544.0	6.0	56.2	6.9	8.4	64.1	3.2	13.1

### Clarence (Coal Valley) multi-user scheme

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Cambridge STP	5.0	22.2	760.0	10.0	9.2	12.2	7.4	0.2	90.7	4.2	4.0
Duckhole Dam*	6.0	29.1	911.5	83.0	29.5	4.8	8.3	1.2	99.3	3.1	15.5
Richmond STP	32.0	30.9	941.5	345.5	13.4	18.8	7.8	12.1	112.0	4.3	45.0
Rokeby STP	5.0	21.2	515.0	10.0	11.0	3.8	6.8	2.8	51.6	2.3	4.0
Rosny STP	99.0	23.6	1160.0	6131.0	52.7	40.0	7.1	3.5	72.7	1.9	4.9

\*Duckhole Dam is TasWater's recycled water storage dam which stores recycled water from Rokeby and Rosny STPs for supply to the scheme.

### Penna multi-user scheme

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Penna RWS TP	5.0	21.6	569.5	142.5	6.4	4.1	8.0	6.3	70.5	3.5	6.5

Note: Penna RWS TP (Recycled Water Treatment Plant) further treats and stores the treated wastewater from Sorell, Midway Point and Barwick's Lagoon STPs prior to supply to customers on the Penna Scheme.



### Southern single user schemes

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Bagdad STP	84.5	24.1	670.0	1305.0	5.4	22.8	8.3	8.4	78.9	3.8	66.0
Bicheno STP	41.5	16.0	651.5	779.5	8.6	14.9	8.4	7.3	89.4	4.6	30.5
Bothwell STP	11.0	33.7	1045.0	20.0	27.0	6.5	8.4	3.7	121.0	3.7	11.5
Cameron Bay STP	5.0	24.1	853.5	10.0	44.3	29.7	7.1	6.3	64.7	1.8	5.9
Campania STP	28.5	22.1	689.5	240.5	7.9	24.2	7.8	9.6	67.6	3.1	24.1
Collinsvale STP	14.0	37.6	501.5	10.0	6.0	8.5	8.0	1.7	50.5	2.2	10.4
Kempton STP	25.0	29.0	857.5	312.5	18.8	10.4	8.0	6.9	95.1	3.3	40.8
Oatlands STP	19.0	18.9	637.0	112.0	10.6	10.6	7.6	2.5	83.2	3.5	44.0
Swansea STP	10.0	29.2	1213.0	238.5	24.2	15.4	8.2	4.7	162.0	5.5	6.6
Triabunna STP	5.0	27.7	1057.5	41.5	17.8	3.8	8.2	4.6	143.5	5.2	4.4

### Region – North

#### Northern single-user schemes

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Beaconsfield STP	17.0	33.2	508.0	508.5	8.4	14.3	7.8	3.4	47.0	1.9	10.7
Beauty Point STP	5.0	22.4	1674.5	12.5	27.5	4.1	8.0	3.1	234.0	7.9	4.1
Bridport STP	35.0	18.9	1217.5	86.0	11.2	39.0	7.4	9.5	152.0	6.8	14.2
Campbell Town STP	6.0	35.5	1276.5	70.0	41.5	3.6	8.6	3.6	194.0	5.2	11.3
Carrick STP	6.0	21.7	576.5	166.0	24.2	9.0	7.9	6.8	50.1	1.8	9.1
Cressy STP	22.0	19.5	647.5	841.5	10.5	8.6	8.2	3.7	84.9	4.1	47.0
Evandale STP	127.0	21.8	690.0	3076.0	8.4	29.5	7.6	10.5	67.7	3.2	100.0

### Northern single-user schemes (continued)

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Exeter STP	29.5	29.8	615.0	441.5	9.7	26.8	7.7	5.6	54.1	2.2	16.0
Legana STP	31.0	23.9	718.0	1483.0	11.9	27.2	8.3	5.7	65.7	2.7	51.0
Lilydale STP	8.0	10.7	278.5	253.0	6.4	3.9	8.7	1.4	32.8	1.9	11.1
Perth STP	91.5	20.4	701.0	720.0	8.0	27.9	7.8	8.3	67.5	3.0	40.5
Scamander STP	5.0	13.6	537.0	104.0	7.1	4.9	7.7	5.4	65.1	3.6	5.1
St Marys STP	5.0	40.2	673.0	41.5	8.8	4.7	7.9	2.0	67.4	2.5	26.7
Stieglitz STP	16.0	18.1	850.5	458.0	8.9	9.5	7.8	10.1	102.0	5.0	16.5

### Region – North West

#### North-West single-user schemes

STP	Biochemical oxygen Demand (mg/L)	Calcium (total) (mg/L)	Conductivity (µS/cm)	E. coli (MPN /100ml)	Magnesium (total) (mg/L)	Nitrogen (Total) (mg/L)	pH O (pH Units)	Phosphorus (total) (mg/L)	Sodium (total) (mg/L)	Sodium Absorption Ratio	Total Suspended Solids (mg/L)
Cradle Valley STP	5.0	8.1		1.0	3.0	3.0	7.0	0.0	66.8	5.1	4.0
Railton STP	15.5	31.1	324.5	181.0	4.4	4.5	9.2	4.5	25.2	1.4	41.0
Smithton STP	52.0	24.3	2108.0	1137.0	16.7	43.6	8.8	14.9	216.0	8.3	108.0

#### TasWater's commitment

Increasing water recycling is an important step in protecting ecosystem health and supporting agriculture. By increasing water recycling, we are minimising the quantity of nutrient rich water sent to waterways, which also means more water stays in ecosystems.

Recycled water is also a valuable resource for agriculture as it can reduce the impacts of water scarcity and is generally a cost-effective resource.

We have committed to increase recycled water supply to 100 per cent of flows by 2050.

If you have a future recycled water initiative or partnership opportunity, please contact us [here](#).



© TasWater 2024  
ABN 47 162 220 653  
E: [enquiries@taswater.com.au](mailto:enquiries@taswater.com.au)  
P: 13 6992  
GPO Box 1393,  
Hobart, Tasmania 7001  
[taswater.com.au](http://taswater.com.au)