# Water quality results

The following tables summarise current water quality results at Romsey RWP compared to Class B standards under the Victorian guideline for water recycling (EPA Victoria).

## Contents

## pH results

| Date | Sampling Point 1 | Sampling Point 2 | Sampling Point 3 | Sampling Point 5 | Sampling Point 6 | Sampling Point 7 | Sampling Point 8 |
|---|---|---|---|---|---|---|---|
| 24/07/2023 | 7.4 | 7.5 | Testing the release pipe. No release to creek. | 7.4 | 7.0 | 7.6 | 7.7 |
| 25/07/2023 | 7.2 | 7.7 | Release to the creek commenced late afternoon. No data available. | 7.7 | 7.6 | 7.5 | 7.8 |
| 26/07/2023 | 7.3 | 7.7 | 7.9 | 7.9 | 7.5 | 7.8 | 7.5 |
| 27/07/2023 | 7.5 | 7.6 | 8.0 | 7.9 | 7.6 | 7.9 | 7.9 |
| 28/07/2023 | 7.4 | 7.3 | 8.1 | 7.4 | 7.5 | 7.6 | 7.7 |
| 29/07/2023 | 7.7 | 7.4 | 8.1 | 7.9 | 7.4 | 7.8 | 7.8 |
| 30/07/2023 | 7.4 | 7.6 | 8.1 | 7.7 | 7.5 | 7.7 | 7.8 |
| 31/07/2023 | 7.5 | 7.5 | 8.1 | 7.8 | 7.6 | 7.6 | 7.8 |
| 1/08/2023 | 7.4 | 7.7 | 8.0 | 7.8 | 7.6 | 7.5 | 7.8 |
| 2/08/2023 | 7.3 | 7.9 | 7.8 | 7.8 | 7.1 | 7.6 | 8.0 |
| 3/08/2023 | 6.6 | 6.3 | 8.0 | 7.3 | 7.3 | 8.4 | 7.6 |
| 4/08/2023 | 7.4 | 7.7 | 8.2 | 7.9 | 7.6 | 7.6 | 7.7 |
| 5/08/2023 | 7.4 | 7.5 | 8.0 | 7.8 | 7.5 | 7.4 | 7.7 |
| 6/08/2023 | 7.5 | 7.3 | 8.1 | 7.8 | 7.3 | 7.5 | 7.8 |
| 7/08/2023 | 7.6 | 7.7 | 8.1 | 7.9 | 7.4 | 7.9 | 7.9 |
| 8/08/2023 | 7.5 | 7.8 | 8.2 | 8.0 | 7.7 | 7.7 | 8.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9/08/2023 | 7.5 | 7.4 | 7.8 | 7.9 | 7.4 | 7.7 | 7.7 |
| 10/08/2023 | 7.7 | 7.7 | 8.3 | 8.1 | 7.9 | 8.0 | 7.2 |
| 11/08/2023 | * | * | * | * | * | * | * |
| 12/08/2023 | * | * | * | * | * | * | * |
| 13/08/2023 | 7.4 | 7.5 | 7.3 | 7.9 | 7.7 | 7.8 | 7.8 |

* Result pending
#No sampling due to restricted access
** No sampling due to flooding

## BOD (Biological Oxygen Demand) results

| Date | Sampling Point 1 | Sampling Point 2 | Sampling Point 3 | Sampling Point 5 | Sampling Point 6 | Sampling Point 7 | Sampling Point 8 |
|---|---|---|---|---|---|---|---|
| 24/07/2023 | < 2 | < 2 | Testing the release pipe. No release to creek. | < 2 | < 2 | < 2 | < 2 |
| 25/07/2023 | < 2 | < 2 | Release to the creek commenced late afternoon. No data available. | 2.50 | < 2 | < 2 | < 2 |
| 26/07/2023 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| 27/07/2023 | < 2 | 2.10 | < 2 | < 2 | < 2 | < 2 | < 2 |
| 28/07/2023 | < 2 | 2.80 | < 2 | 2.20 | < 2 | < 2 | < 2 |
| 29/07/2023 | < 2 | 3.50 | < 2 | 2.20 | < 2 | < 2 | < 2 |
| 30/07/2023 | < 2 | < 2 | 5.10 | 2.00 | < 2 | < 2 | < 2 |
| 31/07/2023 | < 2 | < 2 | 2.00 | < 2 | < 2 | < 2 | < 2 |
| 1/08/2023 | < 2 | < 2 | 4.00 | < 2 | < 2 | < 2 | < 2 |
| 2/08/2023 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| 3/08/2023 | < 2 | < 2 | 4.60 | < 2 | < 2 | < 2 | < 2 |
| 4/08/2023 | * | * | * | * | * | * | * |
| 5/08/2023 | * | * | * | * | * | * | * |
| 6/08/2023 | * | * | * | * | * | * | * |
| 7/08/2023 | * | * | * | * | * | * | * |
| 8/08/2023 | * | * | * | * | * | * | * |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9/08/2023 | * | * | * | * | * | * | * |
| 10/08/2023 | * | * | * | * | * | * | * |
| 11/08/2023 | * | * | * | * | * | * | * |
| 12/08/2023 | * | * | * | * | * | * | * |
| 13/08/2023 | * | * | * | * | * | * | * |

* Result pending – testing completed over 5 days
#No sampling done due to restricted access
** No sampling due to flooding

## E. coli results

| Date | Sampling Point 1 | Sampling Point 2 | Sampling Point 3 | Sampling Point 5 | Sampling Point 6 | Sampling Point 7 | Sampling Point 8 |
|---|---|---|---|---|---|---|---|
| 24/07/2023 | 13 | 38 | Testing the release pipe. No release to creek. | 37 | 50 | 12 | 45 |
| 25/07/2023 | 18 | 170 | Release to the creek commenced late afternoon. No data available. | 44 | 40 | 17 | 63 |
| 26/07/2023 | 23 | 14 | 13 | 23 | 26 | 36 | 59 |
| 27/07/2023 | 41 | 20 | 10 | 10 | 63 | 15 | 85 |
| 28/07/2023 | 55 | > 2400 | 6 | 2,000 | 47 | 39 | 52 |
| 29/07/2023 | < 10 | 160 | 10 | 140 | 140 | 10 | 40 |
| 30/07/2023 | 27 | 86 | 1 | 24 | 71 | 28 | 88 |
| 31/07/2023 | 26 | 24 | 5 | 20 | 93 | 42 | 110 |
| 1/08/2023 | 22 | 22 | 10 | 20 | 36 | 29 | 53 |
| 2/08/2023 | 31 | 11 | 4 | 16 | 55 | 31 | 46 |
| 3/08/2023 | 22 | < 10 | 1 | 21 | 36 | 35 | 44 |
| 4/08/2023 | 20 | 21 | 6 | 24 | 51 | 17 | 56 |
| 5/08/2023 | 15 | 990 | 10 | 160 | 100 | 34 | 79 |
| 6/08/2023 | 19 | 35 | 5 | 14 | 59 | 74 | 65 |
| 7/08/2023 | 20 | 15 | 7 | 25 | 61 | 35 | 86 |
| 8/08/2023 | 16 | 10 | 5 | 12 | 40 | 15 | 44 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9/08/2023 | 18 | 9 | 5 | 7 | 72 | 35 | 72 |
| 10/08/2023 | 23 | 93 | 7 | 10 | 29 | 17 | 78 |
| 11/08/2023 | 5 | 20 | 82 | 7 | 20 | 82 | 15 |
| 12/08/2023 | 18 | 36 | 4 | 8 | 78 | 28 | 99 |
| 13/08/2023 | 15 | 1,200 | 44 | 460 | 120 | 36 | 74 |

* Result Pending
#No sampling due to restricted access
** No sampling due to flooding

## Suspended solids results

| Date | Sampling Point 1 | Sampling Point 2 | Sampling Point 3 | Sampling Point 5 | Sampling Point 6 | Sampling Point 7 | Sampling Point 8 |
|---|---|---|---|---|---|---|---|
| 24/07/2023 | < 1 | 5.9 | Testing the release pipe. No release to creek. | 3.8 | 3.9 | < 1 | 1.6 |
| 25/07/2023 | 1.0 | 5.6 | Release to the creek commenced late afternoon. No data available. | 8.3 | < 1 | < 1 | < 1 |
| 26/07/2023 | 2.5 | 2.9 | 5.6 | 5.3 | 1.6 | 1.0 | 1.0 |
| 27/07/2023 | 3.9 | 31.0 | 4.6 | 5.3 | 1.5 | 1.1 | 9.6 |
| 28/07/2023 | 1.7 | 16.0 | 4.8 | 14.0 | 1.5 | 2.6 | 1.6 |
| 29/07/2023 | 3.2 | 39.0 | 5.1 | 12.0 | 3.1 | 1.7 | 24.0 |
| 30/07/2023 | 2.2 | 29.0 | 11.0 | 13.0 | 2.1 | 1.4 | 1.2 |
| 31/07/2023 | 1.3 | 12.0 | 4.6 | 7.8 | 2.6 | < 1 | 1.6 |
| 1/08/2023 | 2.0 | 5.9 | 10.0 | 7.2 | 1.2 | < 1 | 1.1 |
| 2/08/2023 | 2.2 | 4.8 | 4.6 | 4.8 | 1.8 | 2.8 | 1.2 |
| 3/08/2023 | 2.6 | 24.0 | 14.0 | 6.0 | 3.7 | 6.9 | 1.7 |
| 4/08/2023 | 1.6 | 13.0 | 5.7 | 6.1 | 1.1 | < 1 | < 1 |
| 5/08/2023 | 2.4 | 40.0 | 4.5 | 11.0 | 2.3 | 1.3 | 1.3 |
| 6/08/2023 | 1.8 | 14.0 | 3.9 | 6.0 | 2.1 | 1.1 | 1.7 |
| 7/08/2023 | 2.2 | 12.0 | 4.2 | 5.1 | 2.5 | 2.5 | 2.2 |
| 8/08/2023 | 1.7 | 14.0 | 3.4 | 4.8 | 1.3 | < 1 | < 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9/08/2023 | 1.1 | 5.8 | 4.4 | 3.7 | 1.3 | < 1 | < 1 |
| 10/08/2023 | 8.2 | 9.6 | 5.2 | 7.2 | 2.0 | 1.1 | 8.8 |
| 11/08/2023 | * | * | * | * | * | * | * |
| 12/08/2023 | * | * | * | * | * | * | * |
| 13/08/2023 | 1.2 | 14.0 | 6.5 | 8.7 | 1.8 | 1.6 | 1.2 |

* Result Pending
#No sampling due to restricted access
** No sampling due to flooding

| Glossary | |
|---|---|
| Biological Oxygen Demand (BOD) | BOD measures the amount of dissolved oxygen used by aerobic microorganisms to break down organic material present in water. It's an important water quality measure as BOD directly affects the amount of dissolved oxygen in rivers and streams. The higher the BOD is, the more rapidly oxygen is depleted in the stream, which means there is less oxygen available to aquatic life. |
| Class B | A high grade of recycled water acceptable for a number of uses including for certain human food crops, livestock grazing and fodder, and irrigation of public spaces such as sporting ovals and golf courses. Class B recycled water is suitable for sheep, goats, cattle, horses and poultry drinking water. It's not suitable for pigs to drink. |
| Escherichia coli (E. coli) | E. coli are common bacteria, normally found in the gut of warm-blooded animals. There are many types of E. coli bacteria, most of which are harmless. However, some types of E. coli produce toxins (poisons) that can cause gastroenteritis (gastro). Source: betterhealth.vic.gov.au |
| Dilution ratio | The dilution ratio is a measure of recycled water to creek water. The recycled water must be mixed well with the water in the creek to achieve dilution and this occurs through the normal flow of the waterway. |
| Discharge point | This is the point where we release treated recycled water from the recycled water plant into the waterway. |
| Flow rate | This is the volume of water passing through a section of the creek for a specified period of time. Each day we measure the flow rate of the creek and adjust the flow rate of the recycled water release to ensure the highest possible dilution rate. |
| Helminth | Helminths are parasitic worms that can infect humans and other animals. The *Livestock Disease Control Act 1994* outlines requirements for livestock drinking and grazing land irrigated with recycled water to protect stock and human health. A requirement for helminth control is a key part of this Act, that requires specific treatment processes to reduce pathogens, including helminth, to acceptable levels. This is to prevent helminth infections in cattle ('beef measles' or Cysticercus bovis) caused by the helminth Taenia saginata, a human tapeworm in cattle which can impact meat quality. Source: epa.vic.gov.au |

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|---|---|
| pH | pH is a scale of acidity from 0 to 14. It tells us how acidic or alkaline the water is. More acidic water will have lower pH while more alkaline solutions have higher pH. Neutral solutions (that aren't acidic or alkaline usually have a pH of 7. |
| Recycled water | Water that has been derived from sewerage systems or industry processes and treated to a standard that is appropriate for its intended use. Source: epa.vic.gov.au |
| Suspended solids | Small solid particles that remain in suspension in water. This is an indicator of water quality. The more solids present in the water, the less clear the water will be. |