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

BOD (Biological Oxygen Demand) results

Date	Sampling Point 1	Sampling Point 2	Sampling Point 3	Sampling Point 4	Sampling Point 5	Sampling Point 6	Sampling Point 7	Sampling Point 8
29/9	2	<2	<2	<2	3	<2	<2	<2
30/9	4	<2	<2	<2	3	2	4	<2
1/10	2	3	<2	<2	<2	<2	<2	<2
2/10	4	3	3	4	3	4	4	4
3/10	<2	<2	<2	<2	4	<2	<2	<2
4/10	<2	<2	<2	<2	<2	<2	<2	<2
5/10	<2	<2	<2	<2	3	<2	<2	<2
6/10	<2	<2	<2	<2	3	<2	<2	<2
7/10	2	3	2	<2	4	<2	3	2
8/10	3	<2	<2	<2	<2	2	<2	3
9/10	3	< 2	< 2	< 2	< 2	2	3	< 2
10/10	< 2	< 2	6	< 2	< 2	3	< 3	< 3
11/10	< 3	< 2	3	< 2	< 3	< 3	< 3	< 3
12/10	< 2	< 2	6	3	4	2	2	< 2
13/10*	*	*	*	*	*	*	*	*
14/10	3	3	6	3	3	*	<7	*
15/10	<2	<2	5	<2	2	<2	<2	*
16/10	<2	2	6	3	<3	<3	<3	*
17/10	<3	<3	7	4	3	<3	<3	<3
18/10	<2	<2	5	3	2	<2	<2	<3
19/10	<2	<2	8	5	3	<2	<2	2
20/10	<2	<3	6	5	<3	<2	<2	<2
21/10	<2	<2	6	6	5	2	<2	<2
22/10	<2	3	4	5	6	*	3	2

23/10	<2	<2	2	6	2	<2	<2	<2
24/10	<2	<2	<2	5	4	<3	<3	<3
25/10	<3	4	22	4	9	<3	<3	<3
26/10	2	2	<2	3	4	<2	<2	2
27/10	<3	<3	2	3	<3	<3	<3	<3
28/10	<2	<2	<2	3	2	<2	<2	<3
29/10	<2	<2	<2	2	<3	<3	<3	<3
30/10	<3	<3	<2	2	<3	<3	<3	<3
31/10	<3	<3	3	3	<3	<3	<2	<3
02/11	<2	<2	4	2	2	<2	<2	<2
04/11	<3	<2	4	3	4	<3	<2	<2
06/11	2	<3	3	3	4	4	<2	<2
07/11	<2	<2	2	8	3	<3	<3	<3
08/11	<3	<3	<2	<2	2	<3	<3	<3
09/11	<2	<2	2	<2	4	<2	<2	<2
10/11	<2	<7	4	<2	3	<2	<2	<2
11/11	<2	<2	<2	<2	<2	<3	<3	<3
12/11	<3	<2	<2	<2	2	<3	<3	<2
13/11	<3	4	<2	<2	3	<3	<3	<3
14/11	<3	<3	4	<2	<3	<3	<3	<3
15/11	<3	<3	3	2	<3	<3	<3	<3
16/11	<3	<2	3	2	<3	<3	<3	<3
18/11	<2	<2	2	<2	<2	<2	<2	<2
19/11	<3	3	2	<2	<3	<3	<3	<3
15/12	<2	<2	<2	<2	<2	#	<2	<2
16/12	<2	<2	<2	<2	<2	#	<2	<2
17/12	<2	<2	<2	<2	<2	#	<2	<2
18/12	<2	<2	<2	<2	<2	#	<2	<2

19/12	<2	<2	<2	<2	<2	#	2	<2
20/12	*	*	*	*	*	#	*	*
21/12	<2	<2	<2	<2	<2	#	<2	<2
22/12	<2	<2	<2	<2	<2	#	<2	<2
23/12	<2	<2	<2	<2	<2	#	<2	<2

*No sampling due to flooding
No sampling done due to restricted access

Suspended solids results

Date	Sampling Point 1	Sampling Point 2	Sampling Point 3	Sampling Point 4	Sampling Point 5	Sampling Point 6	Sampling Point 7	Sampling Point 8
29/9	11	9	<2	<2	10	11	15	13
30/9	9	5	<2	<2	5	7	25	15
1/10	6	9	<2	<2	3	5	<2	7
2/10	3	6	4	<2	<2	3	5	2
3/10	3	4	<2	<2	<2	<2	4	5
4/10	2	<2	<2	<2	4	<2	3	4
5/10	<2	4	<2	<2	<2	<2	<2	<2
6/10	6	8	2	<2	8	<2	3	<2
7/10	11	28	6	3	49	21	97	99
8/10	26	16	<2	2	26	28	36	59
9/10	23	10	2	<2	4	20	9	26
10/10	6	4	8	<2	4	9	6	11
11/10	6	6	6	<2	<2	<2	<2	8
12/10	6	4	8	4	9	2	36	6
13/10*	*	*	*	*	*	*	*	*
14/10	50	20	<2	<2	21	*	190	*
15/10	10	5	6	4	15	12	16	*
16/10	4	6	8	2	6	9	11	*
17/10	4	4	10	6	< 2	10	10	6
18/10	3	2	8	8	6	5	6	12
19/10	6	2	<2	8	8	4	5	4
20/10	4	6	11	4	11	6	4	7
21/10	2	<2	5	6	7	<2	<2	3
22/10	100	14	8	7	30	*	51	230

23/10	7	8	6	8	6	5	10	26
24/10	10	17	6	7	18	4	12	11
25/10	19	20	<2	6	27	19	35	31
26/10	7	18	<2	3	14	13	14	34
27/10	8	<2	<2	3	12	5	6	37
28/10	6	10	6	2	5	9	3	10
29/10	8	5	<2	<2	4	2	8	12
30/10	<2	3	3	<2	2	3	2	12
31/10	<2	6	4	2	5	<2	4	7
02/11	6	2	<2	5	9	4	4	5
04/11	4	4	2	<2	4	2	3	4
06/11	14	6	<2	2	2	16	<2	3
07/11	3	3	<2	<2	3	6	2	3
08/11	4	2	4	2	2	<2	4	5
09/11	4	8	4	4	8	<2	4	6
10/11	14	29	6	4	3	<2	4	4
11/11	5	6	<2	2	5	<2	2	<2
12/11	<2	13	<2	2	<2	3	2	6
13/11	38	25	<2	2	24	21	7	34
14/11	9	11	13	4	15	15	14	37
15/11	10	8	<2	2	8	7	12	16
16/11	7	7	<2	6	10	6	9	60
18/11	<2	8	<2	<2	8	6	4	7
19/11	<2	13	<2	<2	7	8	4	4
15/12	3	14	< 2	4	14	3	<2	2
16/12	2	3	< 2	< 2	4	#	2	6
17/12	2	4	< 2	< 2	10	#	<2	4
18/12	< 2	6	< 2	3	24	#	<2	2

19/12	< 2	5	< 2	< 2	5	#	3	2
20/12	*	*	*	*	*	#	*	*
21/12	2	7	2	2	8	#	4	3
22/12	2	8	2	2	5	#	2	2
23/12	3	14	2	2	8	#	2	2

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

E. coli results

Date	Sampling Point 1	Sampling Point 2	Sampling Point 3	Sampling Point 4	Sampling Point 5	Sampling Point 6	Sampling Point 7	Sampling Point 8
29/9	2,400	>2,400	16	12	590	4,400	2,400	3,300
30/9	930	720	1	2	57	620	700	880
1/10	200	390	6	1	10	160	52	230
2/10	52	1,000	1	2	<10	86	31	20
3/10	86	31	<10	<10	20	41	31	41
4/10	10	86	<10	<10	41	41	41	51
5/10	74	10	20	<10	10	<10	10	41
6/10	440	820	23	6	310	100	460	100
7/10	3,400	4,400	120	2	4,100	2,600	6,900	7,300
8/10	11,000	1,100	41	11	1,900	7,300	6,900	4,900
9/10	1,300	170	20	<10	330	1,400	1,800	3,800
10/10	110	120	1	5	41	140	200	390
11/10	53	61	1	1	31	91	38	120
12/10	20	930	<10	<10	360	52	2,900	85
13/10*	*	*	*	*	*	*	*	*
14/10	10,000	4,100	37	7	5,500	*	9,200	*
15/10	1,500	390	74	< 10	640	1800	1,400	*
16/10	350	230	10	< 10	120	390	340	*
17/10	130	85	20	< 10	10	150	200	190
18/10	110	86	< 10	3	10	160	130	270
19/10	180	52	20	1	10	130	98	72
20/10	41	86	10	<10	63	170	63	97
21/10	110	41	63	<10	10	86	41	150
22/10	26,000	17,000	20	20	260	*	6,400	12,000
23/10	1,100	240	23	26	20	600	880	2,200

24/10	430	14,000	44	12	630	210	330	230
25/10	1,700	2,800	<10	10	3,100	1,800	1,330	1,200
26/10	440	1,200	5	11	230	560	330	1,700
27/10	74	120	5	2	20	52	63	230
28/10	220	110	4	2	20	130	41	160
29/10	480	63	10	<10	10	290	390	260
30/10	41	31	<10	<10	20	74	85	350
31/10	63	52	160	3	<10	84	41	130
02/11	61	25	51	3	10	97	42	86
04/11	77	1	11	1	7	39	38	96
06/11	120	<10	10	<10	10	1,400	52	140
07/11	110	340	6	5	50	62	31	99
08/11	290	88	35	1	20	250	140	190
09/11	190	39	6	18	3	250	190	170
10/11	69	48	340	80	7	64	41	100
11/11	88	140	74	12	11	89	53	120
12/11	96	390	86	110	31	120	74	590
13/11	4,400	24,000	74	240	>24,000	11,000	1,400	8,200
14/11	11,000	1,200	490	45	480	820	5,500	2,500
15/11	830	120	55	62	120	640	1,100	1,400
16/11	170	20	44	79	31	120	110	310
18/11	98	52	7	17	30	63	41	41
19/11	74	20	85	200	10	30	<10	120
15/12	79	2400	83	310	72	120	54	180
16/12	91	1400	15	91	56	#	57	160
17/12	100	730	16	31	38	#	44	260
18/12	100	240	6	23	34	#	28	190
19/12	68	34	12	27	26	#	31	260

20/12	*	*	*	*	*	#	*	*
21/12	70	9	15	15	17	#	43	330
22/12	75	9	59	120	22	#	77	210
23/12	100	2400	56	100	410	#	120	190

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

pH results

Date	Sampling Point 1	Sampling Point 2	Sampling Point 3	Sampling Point 4	Sampling Point 5	Sampling Point 6	Sampling Point 7	Sampling Point 8
29/9	6.8	7.3	8.4	8	7.6	7.1	7.2	7.4
30/9	7.2	7.3	8.1	8.1	7.8	7.4	7.4	7.6
1/10	7.2	7	8	8	7.7	7.5	7.4	7.6
2/10	7.3	7.3	8.1	8	7.8	7.4	7.6	7.7
3/10	7.4	7.4	8.1	8.1	7.9	7.5	7.6	7.8
4/10	7.4	7.4	8	7.2	7.8	7.5	7.6	7.7
5/10	7.4	7.5	8	8.1	7.8	7.6	7.7	7.8
6/10	7.9	7.8	8.3	8.3	8.1	8	8	8.1
7/10	7.2	7.2	8	8.1	7.5	7.4	7.4	7.6
8/10	6.8	7.3	7.9	8	7.4	7.1	7	7.2
9/10	7	7.4	8	8.1	7.7	7.3	7.3	7.4
10/10	7.3	7.4	8.1	8.1	7.8	7.4	7.5	7.6
11/10	7.3	7.5	8.2	8.1	7.8	7.5	7.6	7.6
12/10	7.4	7.5	8.2	8.1	7.7	7.3	7.4	7.7
13/10*	*	*	*	*	*	*	*	*
14/10	6.8	6.8	8	8	7.3	*	6.9	*
15/10	7	7.4	8	8.1	7.4	7.2	7.2	*
16/10	7.2	7.5	8.3	8.1	7.6	7.3	7.4	*
17/10	7.3	7.3	8.5	8.1	7.8	7.4	7.4	7.5
18/10	7.2	7.4	8.6	8.2	7.8	7.4	7.5	7.5
19/10	7.4	7.6	8.6	8.5	7.8	7.4	7.6	7.6
20/10	7.3	7.4	8.8	8.8	7.9	7.5	7.6	7.6
21/10	7.3	7.6	8.7	8.7	7.8	7.4	7.6	7.6
22/10	7.1	7	8.5	8.3	7.5	*	7.5	7.3
23/10	7.2	7.2	8.1	8.9	7.6	7.5	7.5	7.6

24/10	7.3	7	8	8.6	7.6	7.5	7.6	7.7
25/10	7.1	6.8	7.8	8.5	7.4	7.4	7.5	7.5
26/10	7.2	7.2	7.8	8.1	7.4	7.4	7.4	7.5
27/10	7.2	7.4	7.8	8.1	7.6	7.5	7.6	7.7
28/10	7.3	7.5	7.8	8	7.6	7.5	7.6	7.7
29/10	7.2	7.4	7.7	7.7	7.6	7.3	7.4	7.6
30/10	7.3	7.5	7.8	7.8	7.6	7.5	7.6	7.7
31/10	7.4	7.5	7.9	8	7.7	7.5	7.6	7.7
02/11	7.5	7.6	8	8	7.7	7.6	7.8	7.8
04/11	7.5	7.6	8	8	7.7	7.5	7.6	7.8
06/11	7.5	7.4	8.2	7.8	7.6	7.5	7.6	7.6
07/11	7.5	7.5	8.2	7.9	7.8	7.6	7.8	7.8
08/11	7.6	7.4	8.3	8	7.6	7.6	7.8	7.9
09/11	7.5	7.4	8.3	8.2	7.8	7.6	7.8	7.8
10/11	7.3	6.8	8.2	7.9	7.5	7.4	7.5	7.6
11/11	7.4	7.3	8.4	8.3	7.6	7.5	7.6	7.6
12/11	7.3	7.3	7.9	8.1	7.5	7.4	7.6	7.6
13/11	7.4	7.2	8	8.1	7.2	7.5	7.7	7.9
14/11	7.2	7.5	8	8.2	7.6	7.4	7.6	7.8
15/11	7.3	7.4	8	8.2	7.6	7.4	7.6	7.7
16/11	7.5	7.7	8.1	8.3	7.8	7.5	7.7	7.8
18/11	7.4	7.5	8.4	8.2	7.7	7.6	7.7	7.7
19/11	7.3	7.1	8	8.3	7.6	7.4	7.5	7.6
15/12	7.5	7.4	9.2	9	7.8	7.8	7.9	7.9
16/12	7.6	7.3	9.1	8.7	8	#	8.1	8.1
17/12	7.7					#	7.9	
18/12	7.6	7.4	9.1	8.8	7.9	#	7.9	7.9
19/12	7.2	7.4	9.2	8.8	8	#	8	8

20/12	*	*	*	*	*	*#	*	*
21/12	7.7	7.4	9.5	8.5	8	#	8	7.9
22/12	7.4	7.1	9.8	9.1	7.8	#	7.8	7.7
23/12	7.5	7.3	9.7	9.1	7.9	#	7.9	7.8

* No sampling due to flooding

#No sampling due to restricted access

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
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.