

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



*Notes regarding Licence Limits

A single number denotes a maximum value that should not be exceeded.

Two numbers separated by a slash " / " denote a 90% limit and a maximum limit.

Two numbers separated by a dash " - " denote minimum and maximum limits.

90 percentiles explained

Within a licence for each pollutant listed by the EPA, it will have a limit value. This value may be a 100 percentile limit where samples must meet the limit value 100% of the time. Lower limits may also be assigned.

Where there are limit values lower than a 100% limit a sample or samples test results can exceed the limit value. For example, if a 90 percentile limit is assigned to a pollutant, this means 90% of collected samples should meet the limit value. If 10 samples are required in a year only one sample of the ten samples for the year is allowed to exceed the 90 percentile limit value. If more than one sample exceeds this value this would be a non-compliance of the licence conditions.

Treatment Plant: Murwillumbah

EPA Licence Number: 582

License Year: 01 November to 31 October

Monitoring Point: MWWTP/Effluent EPA Point: Point 1

Summary Period	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
1/11/2011 to 31/10/2012 Published: 12 Nov	Ammonia	mg/L	15	0.03	0.61	0.43	0.592	2 / 5	No
	BOD5	mg/L	15	1.5	11.0	3.11	4.74	10 / 20	No
	Oil & Grease	mg/L	15	<2	4	2	3.6	5 / 10	No
	pH	pH units	15	7.0	7.8	7.31	7.56	6.5-8.5	No
	Suspended Solids	mg/L	15	3.4	17.0	7.69	15.6	15 / 30	Yes
	Thermotolerant Coliforms	cfu/100 ml	15	2	260	71	143.4	200 / 600	No
	Total Nitrogen	mg/L	15	0.8	6.7	5.3	6.2	10 / 20	No
	Total Phosphorus	mg/L	15	0.02	0.22	0.14	0.202	0.5 / 1	No
Summary Period	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
1/11/2011 to 31/10/2012 Published: 13 Nov	Ammonia	mg/L	27	0.06	1.43	0.4	0.608	2 / 5	No
	BOD5	mg/L	27	1.2	6.6	3.44	6.4	10 / 20	No
	Oil & Grease	mg/L	27	<2	<2	<2.0	0.0	5 / 10	No
	pH	pH units	27	6.6	7.8	7.21	7.5	6.5-8.5	No
	Suspended Solids	mg/L	27	3.4	22.0	8.91	14.4	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	27	<1	312	57	183.6	200 / 600	No
	Total Nitrogen	mg/L	27	3.84	7.18	5.76	6.74	10 / 20	No
	Total Phosphorus	mg/L	27	0.08	0.19	0.14	0.184	0.5 / 1	No

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



Summary Period	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
1/11/2013 to 31/10/2014 Published: 10 Nov	Ammonia	mg/L	26	0.07	9.0	0.97	1.27	2 / 5	Yes
	BOD5	mg/L	26	1.8	7.6	3.93	6.9	10 / 20	No
	Oil & Grease	mg/L	26	<2	3	2	0.0	5 / 10	No
	pH	pH units	26	7.0	8.2	7.4	7.65	6.5-8.5	No
	Suspended Solids	mg/L	26	3.4	34.0	9.53	14.0	15 / 30	Yes
	Thermotolerant Coliforms	cfu/100 ml	26	<1	176	30	80.0	200 / 600	No
	Total Nitrogen	mg/L	26	4.82	13.6	7.92	9.99	10 / 20	No
	Total Phosphorus	mg/L	26	<0.02	0.39	0.15	0.23	0.5 / 1	No
1/11/2014 to 31/10/2015 Published: 21 Jan	Ammonia	mg/L	26	0.12	1.09	0.47	0.75	2 / 5	No
	BOD5	mg/L	26	<1.0	6.0	2.63	4.8	10 / 20	No
	Oil & Grease	mg/L	26	<2	5	2	3.0	5 / 10	No
	pH	pH units	26	6.7	7.8	7.18	7.6	6.5-8.5	No
	Suspended Solids	mg/L	26	3.0	20.0	8.07	14.0	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	28	4	1400	100	138.0	200 / 600	Yes
	Total Nitrogen	mg/L	26	2.19	8.54	5.71	7.335	10 / 20	No
	Total Phosphorus	mg/L	26	0.09	0.29	0.14	0.18	0.5 / 1	No
1/11/2015 to 31/10/2016 Published: 03 Nov	Ammonia	mg/L	26	0.06	0.75	0.35	0.62	2 / 5	No
	BOD5	mg/L	26	1.0	5.6	2.55	3.6	10 / 20	No
	Oil & Grease	mg/L	26	<2	5	2	0.0	5 / 10	No
	pH	pH units	26	6.9	8.0	7.26	7.55	6.5-8.5	No
	Suspended Solids	mg/L	26	2.4	18.0	7.27	14.15	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	26	<1	13600	591	258.0	200 / 600	Yes
	Total Nitrogen	mg/L	26	2.83	7.56	5.29	7.11	10 / 20	No
	Total Phosphorus	mg/L	26	0.03	0.21	0.12	0.17	0.5 / 1	No
1/11/2016 to 31/10/2017 Published: 06 Nov	Ammonia	mg/L	26	0.02	0.91	0.42	0.73	2 / 5	No
	BOD5	mg/L	26	<1.0	5.6	2.32	3.2	10 / 20	No
	Oil & Grease	mg/L	26	<2	2	2	0.0	5 / 10	No

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



Summary Period 1/11/2016 to 31/10/2017 Published: 06 Nov	pH	pH units	26	6.8	7.7	7.28	7.55	6.5-8.5	No
	Suspended Solids	mg/L	26	2.2	27.0	7.25	11.35	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	26	<1	172	34	97.5	200 / 600	No
	Total Nitrogen	mg/L	26	1.88	8.52	5.42	7.44	10 / 20	No
	Total Phosphorus	mg/L	26	0.08	0.47	0.15	0.25	0.5 / 1	No
Summary Period 1/11/2017 to 31/10/2018 Published: 13 Dec	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	26	0.09	1.45	0.5	0.895	2 / 5	No
	BOD5	mg/L	26	1.0	4.0	2.32	3.5	10 / 20	No
	Oil & Grease	mg/L	26	<2.0	2.8	2.05	1.0	5 / 10	No
	pH	pH units	26	6.8	7.68	7.21	7.4	6.5-8.5	No
	Suspended Solids	mg/L	26	1.6	16.0	5.62	10.3	15 / 30	No
	Suspended Solids Corrected	mg/L	1	2.8	2.8	2.8	2.8	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	26	<1.0	440.0	95.43	244.8	200 / 600	Yes
	Total Nitrogen	mg/L	26	3.63	8.43	5.64	7.225	10 / 20	No
	Total Phosphorus	mg/L	26	0.07	0.24	0.14	0.195	0.5 / 1	No
Summary Period 1/11/2018 to 31/10/2019 Published: 04 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	26	<0.02	0.73	0.32	0.585	2 / 5	No
	BOD5	mg/L	26	<1.0	10.4	2.82	5.05	10 / 20	No
	Oil & Grease	mg/L	26	<2.0	2.3	2.02	0.0	5 / 10	No
	pH	pH units	26	7.0	8.0	7.46	7.75	6.5-8.5	No
	Suspended Solids	mg/L	26	1.2	20.0	7.92	16.0	15 / 30	Yes
	Thermotolerant Coliforms	cfu/100 ml	26	<1	188	12	16.0	200 / 600	No
	Total Nitrogen	mg/L	26	3.49	8.55	5.77	6.66	10 / 20	No
Total Phosphorus	mg/L	26	0.06	0.36	0.14	0.21	0.5 / 1	No	

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



Summary Period 1/11/2019 to 31/10/2020	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceed ance
Published: 08 Apr	Ammonia	mg/L	13	<0.02	1.09	0.26	0.662	2 / 5	No
	BOD5	mg/L	13	<1.0	9.3	3.34	5.64	10 / 20	No
	Oil & Grease	mg/L	13	<2	5	2	2.4	5 / 10	No
	pH	pH units	13	7.0	9.4	7.62	7.96	6.5-8.5	Yes
	Suspended Solids	mg/L	13	<1.0	28.0	9.22	16.2	15 / 30	Yes
	Thermotoleran t Coliforms	cfu/100 ml	13	<1	9700	766	105.6	200 / 600	Yes
	Total Nitrogen	mg/L	13	2.39	7.37	5.48	7.234	10 / 20	No
	Total Phosphorus	mg/L	13	0.08	0.2	0.16	0.19	0.5 / 1	No

Monitoring Point: MWWTP/Reuse EPA Point: Point 6

Summary Period 1/11/2011 to 31/10/2012	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceed ance
Published: 12 Nov	Ammonia	mg/L	9	<0.02	0.38	0.19	0.38	2 / 5	No
	BOD5	mg/L	9	<1.0	3.2	1.93	2.88	10 / 20	No
	Oil & Grease	mg/L	9	<2	5	2	1.0	5 / 10	No
	pH	pH units	9	7.3	7.9	7.64	7.82	6.5-8.5	No
	Suspended Solids	mg/L	9	<1	<1	<1.0	0.0	15 / 30	No
	Thermotoleran t Coliforms	cfu/100 ml	9	<1	<1	<1	0.0	200 / 600	No
	Total Nitrogen	mg/L	9	4.32	5.73	5.26	5.69	10 / 20	No
	Total Phosphorus	mg/L	9	0.02	0.06	0.04	0.06	0.5 / 1	No
Summary Period 1/11/2011 to 31/10/2012	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceed ance
Published: 13 Nov	Ammonia	mg/L	13	<0.02	0.28	0.07	0.162	2 / 5	No
	BOD5	mg/L	13	<1.0	5.7	2.19	4.88	10 / 20	No
	Oil & Grease	mg/L	13	<2	<2	<2.0	0.0	5 / 10	No
	pH	pH units	13	7.3	8.1	7.53	7.78	6.5-8.5	No
	Suspended Solids	mg/L	13	<1.0	4.6	1.28	1.0	15 / 30	No
	Thermotoleran t Coliforms	cfu/100 ml	13	<1	10	2	0.0	200 / 600	No
	Total Nitrogen	mg/L	13	3.71	6.14	5.26	6.024	10 / 20	No
	Total Phosphorus	mg/L	13	0.02	0.04	0.03	0.038	0.5 / 1	No

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



Summary Period 1/11/2013 to 31/10/2014 Published: 10 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	14	0.06	9.11	1.23	1.237	2 / 5	Yes
	BOD5	mg/L	14	<1.0	12.0	4.03	6.86	10 / 20	No
	Oil & Grease	mg/L	14	<2	<2	2	0.0	5 / 10	No
	pH	pH units	14	7.4	7.8	7.63	7.8	6.5-8.5	No
	Suspended Solids	mg/L	14	<1.0	1.2	1.01	0.0	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	14	<1	14	2	0.0	200 / 600	No
	Total Nitrogen	mg/L	14	4.89	12.6	6.97	8.317	10 / 20	No
Total Phosphorus	mg/L	14	0.02	0.11	0.05	0.06	0.5 / 1	No	
Summary Period 1/11/2014 to 31/10/2015 Published: 19 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	16	<0.02	0.81	0.19	0.605	2 / 5	No
	BOD5	mg/L	16	<1.0	7.0	2.71	4.1	10 / 20	No
	Oil & Grease	mg/L	16	<2	6	2	0.0	5 / 10	No
	pH	pH units	16	7.0	7.8	7.52	7.75	6.5-8.5	No
	Suspended Solids	mg/L	16	<1	<1	<1.0	0.0	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	16	<1	<1	<1	0.0	200 / 600	No
	Total Nitrogen	mg/L	16	1.75	8.14	4.74	6.825	10 / 20	No
Total Phosphorus	mg/L	16	0.02	0.09	0.03	0.05	0.5 / 1	No	
Summary Period 1/11/2015 to 31/10/2016 Published: 03 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	23	<0.02	0.49	0.1	0.25	2 / 5	No
	BOD5	mg/L	23	<1.0	3.6	1.53	2.36	10 / 20	No
	Oil & Grease	mg/L	23	<2	<5	2	0.0	5 / 10	No
	pH	pH units	23	7.0	7.8	7.4	7.6	6.5-8.5	No
	Suspended Solids	mg/L	23	<1.0	4.2	1.18	1.36	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	23	<1	<1	<1	0.0	200 / 600	No
	Total Nitrogen	mg/L	23	2.01	7.24	4.81	6.54	10 / 20	No
Total Phosphorus	mg/L	23	<0.02	0.06	0.03	0.048	0.5 / 1	No	
Summary Period 1/11/2016 to 31/10/2017 Published: 06 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	26	<0.02	0.78	0.19	0.595	2 / 5	No
	BOD5	mg/L	26	<1.0	12.8	1.89	3.0	10 / 20	No
	Oil & Grease	mg/L	26	<2	2	2	0.0	5 / 10	No

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



Summary Period 1/11/2016 to 31/10/2017 Published: 06 Nov	pH	pH units	26	6.9	7.8	7.51	7.75	6.5-8.5	No
	Suspended Solids	mg/L	26	<1	1	1	0.0	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	26	<1	<1	<1	0.0	200 / 600	No
	Total Nitrogen	mg/L	26	1.56	7.9	4.86	6.96	10 / 20	No
	Total Phosphorus	mg/L	26	0.02	0.3	0.05	0.11	0.5 / 1	No
Summary Period 1/11/2017 to 31/10/2018 Published: 05 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	25	<0.02	0.63	0.09	0.322	2 / 5	No
	BOD5	mg/L	25	<1.0	4.2	1.6	2.56	10 / 20	No
	Oil & Grease	mg/L	25	<2	3	2	0.0	5 / 10	No
	pH	pH units	25	7.1	7.8	7.51	7.7	6.5-8.5	No
	Suspended Solids	mg/L	25	<1	<1	<1.0	0.0	15 / 30	No
	Suspended Solids Corrected	mg/L	1	<1	<1	<1	0.5	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	25	<1	1	1	0.0	200 / 600	No
	Total Nitrogen	mg/L	25	2.22	7.8	4.85	6.612	10 / 20	No
	Total Phosphorus	mg/L	25	0.02	0.11	0.04	0.06	0.5 / 1	No
Summary Period 1/11/2018 to 31/10/2019 Published: 04 Nov	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
	Ammonia	mg/L	24	<0.02	0.08	0.02	0.02	2 / 5	No
	BOD5	mg/L	24	<1.0	6.0	2.05	4.14	10 / 20	No
	Oil & Grease	mg/L	24	<2	2	2	0.0	5 / 10	No
	pH	pH units	25	7.3	8.0	7.67	7.9	6.5-8.5	No
	Suspended Solids	mg/L	24	<1	1	1	0.0	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	24	<1	<1	<1	0.0	200 / 600	No
	Total Nitrogen	mg/L	24	2.77	7.49	5.07	6.113	10 / 20	No
Total Phosphorus	mg/L	24	0.02	0.05	0.03	0.047	0.5 / 1	No	

WWTP Effluent Monitoring

Annual Summary

31/03/2012 to 30/04/2020



Summary Period	Pollutant	Units	Count	Min	Max	Mean	90% Value	Limits*	Exceedance
1/11/2019 to 31/10/2020	Ammonia	mg/L	12	<0.02	0.42	0.13	0.375	2 / 5	No
Published: 08 Apr	BOD5	mg/L	12	<1.0	5.6	1.79	3.57	10 / 20	No
	Oil & Grease	mg/L	12	<2	2	2	0.0	5 / 10	No
	pH	pH units	12	7.4	9.2	7.83	7.9	6.5-8.5	Yes
	Suspended Solids	mg/L	12	<1	<1	<1.0	0.0	15 / 30	No
	Thermotolerant Coliforms	cfu/100 ml	12	<1	<1	<1	0.0	200 / 600	No
	Total Nitrogen	mg/L	12	1.69	6.69	4.9	6.153	10 / 20	No
	Total Phosphorus	mg/L	12	0.02	0.66	0.1	0.107	0.5 / 1	No