

Waikato District Council Wastewater Treatment Monitoring Results
 Site Meremere WWTP
 Consent number 105031
 Report Period July 2011 - June 2012

Discharge Limit Exceeded	
nr = no recorded data	
values < number shown	

1 Discharge Quality limits - Monthly tests post UV rock filter

Parameter	Unit	Consent value		Median	10 Percentile	90 Percentile	AVG	Maximum	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
		Median (from 10)	90 Percentile																	
TKN	g/cum	12	15	11.7	8.58	14.84	11.5	15.6	8.5	13.9	15.6	3.2	14.2	10.2	9.3	11	10.8	14.3	14.9	12.4
Ammonia NH4-N (median from	g/cum	8	10	7.45	6.03	11.97	8.7	14.3	6.3	11.1	14.3	11.5	12	6	6.8	6.7	3	11.7	7.3	7.6
Total P	g/cum	5	7	3.45	1.677	6.5	3.63	6.7	1.48	2.1	3	1.63	3.9	6.7	3	6.7	4.7	3.9	3.9	2.6
cBOD5	g/cum	15	20	10.5	3.76	17.9	12	30.0	7	10	3.4	3.2	12	17	10	15	30	7	18	11
SS	g/cum	20	30	47.5	23.1	344.7	112	490	26	11	23	25	53	490	24	370	100	42	117	65
EC	MPN/100ml	3500	17000	700	4	1800	823	3900	3900	2		8	4	700	900	900	1800	120	700	20

data missed off chain of custody

2 Characterisation Values - Post UV rock filter

Parameter	Units	Median	10 Percentile	90 Percentile	AVG	Maximum	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
Nitrate NO3-N	g/cum	0.3	0.0	1.6	0.5	1.7	1.7	0.4	0.88	1.63	0.31	0.02	0.019	0.02	0.06	0.083	0.31	0.96
Nitrite NO2-N	g/cum	0.047	0.015	0.150	0.064	0.161	0.153	0.045	0.068	0.161	0.049	0.017	0.015	0.011	0.03	0.026	0.08	0.12
Total Nitrogen	g/cum	10.96	7.73	14.45	10.61	15.25	8.15	11.56	15.25	3.42	14.56	10.20	9.33	11.03	10.89	11.81	7.69	13.48
DRP	g/cum	2.90	1.87	3.95	2.87	4.40	1.06	1.86	2.60	2.8	3.2	4	2.7	4.4	3.5	3.3	3	1.97
Temp	°C	17.1	12.1	21.30	16.68	21.70	12.1	11.6	16.0	18.2	18.6	18.5	21.7	21.6	15.8	18.5	15.2	12.4
Dissolved Oxygen		6.17	4.92	9.35	6.62	10.20	8.1	5.2	6.49	5.26	9.41	5.47	3.23	8.81	4.89	6.22	10.2	6.12
pH		7.52	7.34	7.73	7.53	7.89	7.56	7.26	7.40	7.5	7.62	7.52	7.34	7.73	7.46	7.54	7.89	7.54
Conductivity	uS	423	362	453	414	455	314	394	434	449	435	412	358	453	406	455	451	412

3 Characterisation Values - Main Pond Outlet

Parameter	Units	Median	10 Percentile	90 Percentile	AVG	Maximum	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
EC	MPN/100ml	11500	131	24900	12231	32000	11000	470	130	30	9000	32000	16000	17000	12000	140	25000	24000
SS	g/cum	28	9	86	42	94	28	8	8	14	27	94	28	52	88	19	68	71
Total Ammonia	g/cum	11.00	6.00	17.60	13.78	53.00	10	6.0	4.30	12	18	14	9	7	53	6	14	12
cBOD5	g/cum	8.05	6.43	15.94	10.03	19.20	6	12.4	19.2	7.2	15.4	6.7	7	16	2.2	11.7	8.1	8
TKN	g/cum	12.90	10.01	19.02	13.43	19.40	9.40	13.2	19.4	14.1	19.4	10.2	10.1	12.6	12	15.20	15.6	10
Nitrate NO3-N	g/cum	0.39	0.09	1.15	0.51	1.33	1.19	0.4	0.38	1.33	0.51	0.083	0.141	0.039	0.33	0.23	0.78	0.7
Nitrite NO2-N	g/cum	0.107	0.033	0.216	0.115	0.230	0.134	0.062	0.079	0.23	0.167	0.038	0.032	0.028	0.175	0.10	0.22	0.12
Total Nitrogen	g/cum	13.16	10.34	19.53	14.06	20.08	10.72	13.66	19.86	15.66	20.077	10.30	10.27	12.67	12.51	15.53	16.60	10.82
DRP	g/cum	2.85	1.98	3.40	2.80	3.90	1.1	1.95	2.9	2.7	2.8	3.4	2.6	3.9	3.4	3.40	3.3	2.2
TP	g/cum	3.20	2.35	4.58	3.36	4.60	1.54	2.30	3.2	3	3.2	4.4	2.9	4.6	4.6	3.8	4	2.8
Temp	°C	18.70	12.65	21.87	18.04	22.00	12.6	13.10	18.0	21.2	21.6	19.8	21.9	22	17.8	19.4	16.6	12.5
Dissolved Oxygen		8.58	6.37	13.73	9.47	18.20	7.83	6.24	5.52	11.33	18.2	7.5	8	8.5	8.71	8.65	14	9.13
pH		7.73	7.51	8.63	7.89	8.85	7.55	7.5	7.47	7.98	8.85	7.75	7.66	8.05	7.76	7.66	8.69	7.7
Conductivity	uS	421	365	459	415	459	310	394	459	432	423	418	362	448	402	457	459	415

4 Discharge Volume Limits

Flow	Dry weather	Wet weather
	limit	maximum
Minimum Daily Out Flow		
Average Daily Out Flow		
Maximum Daily Out Flow	160	480
Total Monthly Out Flow		
Days Pumped Outside Times?		

Median	10 Percentile	90 Percentile	AVG	Maximum	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
36	4	93	45	125	55	95	47	21	14	25	74	9	3	1	67	125
187	88	256	196	459	459	176	182	219	85	174	260	77	194	113	192	223
397	294	455	446	1310	1310	296	450	456	156	402	371	294	441	392	407	381
5447	2545	6749	5678	13774	13774	5442	5452	6690	2477	4688	6755	1612	5432	3152	5967	6699

*In July there was construction work being carried out which meant the pumps were running outside the normal hours

5 Characterisation Values - Average Nutrient Loading Discharged to Waikato River

	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
Total Nitrogen	2.27	0.89	3.01	2.25	4.75	4.75	2.52	3.01	0.75	1.24	1.77	2.42	0.85	2.11	1.62	2.94	3.01
Total Phosphorous	0.56	0.36	0.90	0.62	1.16	0.68	0.37	0.55	0.36	0.33	1.16	0.78	0.51	0.91	0.44	0.75	0.58

6 Characterisation Values - Discharge Outlet Comparison 2008-09 to 2009-2010 to 2010-2011 to 2011-2012 Results

Parameter	Units	Consent value	2008-09	2009-10	2010-11	2011-12
			Median	Median	Median	Median
TKN	g/cum	12	9	11.5	7.9	11.7
Ammonia NH4-N (median from	g/cum	8	2	7.95	1.2	7.45
Total P	g/cum	5	16.0	3.6	1.84	3.45
cBOD5	g/cum	15	3.5	8.25	16	10.5
SS	g/cum	20	61	37	68	47.5
EC	MPN/100ml	3500	1800	570	3000	700