

Waikato District Council Wastewater Treatment Monitoring Results
 Site Raglan
 Consent number 971390
 Report date July 2010-June 2011

Discharge Transgression or Limit Exceeded	
suspect data or no data recorded	
Value actually < number shown i.e. <2 MPN/100mL	

1 Discharge Limits - Monthly Tests from Outlet

Parameter	Unit	Consent value		Monthly Data																					
		Median	90 Percentile	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	15-Dec-10	20-Dec-10	29-Dec-10	6-Jan-11	11-Jan-11	19-Jan-11	28-Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
SS (median from 12)	g/cum	20	30	42.0	17.2	63.0	41.9	97.0	12	18	16	39	50	59	45	43	42	23	69	49	97	39	42	27	42
CBOD5 (median from 12)	g/cum	10	20	7.4	2.9	11.80	7.7	14.0	1.6	2.1	3.5	7.4	8	9	7.2	6.7	10	11	13	11	14	5.7	1.1	5.5	4.5
FC (median from 12)	MPN/100ml	14	43	2.0	2.0	10.0	5.8	40.0	2	2	2	2	2	2	2	10	2	10	2	2	2	10	2	40	4
Enterococci (17 Dec - 30 Jan)	MPN/100ml	35	5 of 6 consecutive weekly samples	2	2	221	77	460										460	2			62			

2 Characterisation Values - Monthly Tests from Outlet Post UV

Parameter	Units	Monthly Data																							
		Median	10 Percentile	90 Percentile	Average	Maximum	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	15-Dec-11	20-Dec-11	29-Dec-11	06-Jan-11	11-Jan-11	19-Jan-11	28-Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11		
E Coli	MPN/100ml																								
Total Ammoniacal Nitrogen	g/cum	0.1	0.0	0.2	0.1	0.3							0.129	0.161	0.161						0.14	0.32	0.01	0.015	
TKN	g/cum	4.2	3.1	4.7	4.1	4.8							4.8	4.6	4.6						4.2	4.2	3.2	3	
Nitrate NO3-N	g/cum	2.9	1.4	11.1	5.0	12.9							0.93	2.9	2.9						1.77	3.7	9.9	12.9	
Nitrite NO2-N	g/cum	0.1	0.1	0.4	0.2	0.6							0.046	0.137	0.137						0.28	0.088	0.183	0.62	
Total Nitrogen	g/cum	7.6	6.1	14.6	9.3	16.5							5.776	7.637	7.637						6.25	7.99	13.28	16.52	
DRP	g/cum	3.8	3.2	4.5	3.8	4.5							3.3	4.5	4.5						3.8	4.7	3.8	3.1	
TP	g/cum	4.5	3.8	5.1	4.4	5.1							4.1	4.5	4.5						5.1	5.1	3.9	3.6	
Temp	°C	19.3	14.6	25.2	19.5	25.8	12	14.7	17.1	16	19.3	22.2	21.9	21.9	25.5	25.8				24.7	20.8	18	18.1	14.6	
Dissolved Oxygen		6.3	4.6	8.1	6.1	10.0	8.22	6.76	7.83	7.81	4.54	5.62	6.33	6.33	4.7	4.6				5.2	6.58	0.38	7.31	10	
Alkalinity	g/cum	130	92	132	117	132		78				114	130	132	132										
pH		8.4	7.6	9.2	8.4	9.5	7.41	7.66	7.58	8.74	8.07	8.88	8.43	8.43	9.05	8.78				9.27	9.5	7.66	8.31	7.96	
Conductivity	uS	459	414	561	503	1120	443	465	436	422	453	444	473	473	487	467				592	1120		355	410	
UV Transmittance	%T, 1 cm cell	37.0	27.2	51.6	38.1	56.0	56	50	54	42	39	28	30	30	34	28				26	32	19.5	37	49	
UV Absorbance	AU, 1 cm cell	0.432	0.287	0.568	0.438	0.711	0.256	0.300	0.268	0.379	0.432	0.545	0.523	0.523	0.474	0.552	0.593	0.491	0.711	0.429	0.309	0.311	0.358		

3 Characterisation Values - Daily Total In Flows (From Marine Parade Pump Station)

Date	Flow cum/day	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
Minimum Daily In Flow	cum/day	782	692	928	772	943	819	943	933	712	489	690	878	717	710	765	798	808
Average Daily In Flow	cum/day	1040	867	1414	1109	1442	1025	1312	1442	928	727	1009	1303	860	993	1055	1233	1426
Maximum Daily In Flow	cum/day	2541	1156	3524	2472	4041	1540	2064	2675.00	2356	853	2458	3544	1113	3054	4041	2623	3343
Total Monthly In Flow	cum/day	31745	24185	42559	33538	43248	31770	40664	43248	27851	21813	31719	38783	23778	30363	31464	38231	42770

4 Characterisation Values - Daily Total Out Flows

Consent limit cum/day	2600																		
Date	Flow cum/day	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	
Minimum Daily Out Flow	cum/day	25	2	860	209	917	917	895	1	27	2	14	545	22	28	3	7	50	
Average Daily Out Flow	cum/day	1101	799	1437	1119	1445	1404	1445	1439	954	569	1088	1113	781	1002	1009	1204	1425	
Maximum Daily Out Flow	cum/day	2145	1779	2625	2143	2706	1776	1809	1894	2706	1308	2328	2632	2021	2264	2561	2025	2394	
Total Monthly Out Flow	cum/day	31522	22454	43445	32619	44786	43524	44786	35965	27661	17076	29386	32774	21875	28052	30270	37324	42738	
Number of Days Discharged Outside Tides (maximum 20)																			
11 hrs max pumping																			

At end of Sept 2010 we installed a new outfall pipeline from treatment ponds to harbour. This was an HDPE line with improved flow characteristics. The formula in spreadsheet was changed to reflect this from 1 Oct. Flow rate for pump 1 increased to 70 l/sec and pump 2 increased to 28.5 l/sec.

5 Characterisation Values - UV Discharge Outlet Comparison 2008-09 to 2009-2010 to 2010-11 Results

Parameter	Unit	Consent value	Median 2007-08	Median 2008-09	Median 2009-10	Median 2010-11
SS	g/cum	20	61.75	58.50	74	23
CBOD5	g/cum	10	13	11	12	5.5
FC	MPN/100ml	14	1425	2	2	2.0
Enterococci (17 Dec - 30 Jan)	MPN/100ml	35	570	20	6	