

Waikato District Council Wastewater Treatment Monitoring Result:
 Site: Huntly
 Consent number: 951126
 Report Period: July 2009 to June 2010

Discharge Transgressor	
Discharge Limit Exceeded	
nr = no recorded data	
Values < number shown	

1 Discharge Limits - Monthly Tests from Wetland/Rockfilter Outle

Parameter	Unit	Consent value	90 Percentile	Consent value Maximum	Median	10 Percentile	90 Percentile	Average	Maximum	Jul 09	Aug 09	Sep 09	Oct 09	Nov 09	Dec 09	Jan 10	8 Feb 10	25-Feb-10	2-Mar-10	10-Mar-10	16-Mar-10	24-Mar-10	31-Mar-10	Apr 10	May 10	Jun 10
pH between 6 - 9					7.26	7.14	7.38	7.27	7.42	7.26	7.1	7.12	7.34	7.15	7.25	7.23	7.24	7.42	7.24	7.37	7.31	7.33	7.3	7.39	7.38	7.2
Ammonia NH4-N (median from 10)	g/cum	10	15	4.10	1.92	13.80	5.56	16.0	1.5	0.93	5	15	13	16	3.6	3.4	4.6	4.9	3.6	4.1	4.4	4.1	4.1	4.1	4.1	2.2
Nitrate NO3-N (median from 10)	g/cum	5	8	0.01	0.00	1.86	0.52	3.70	3.7	1.1	0.41	0.43	0.02	0.11	0.036	0.0024	0.002	0.0037	0.0044	0.002	0.0024	0.002	0.0083	0.0083	3	3
DRP	g/cum	5	10	5.2	2.84	6.20	4.82	6.30	3	2.6	3.6	3.6	2.3	4.9	4.7	5.2	5.8	5.6	5.8	5.9	6.3	5.9	6.2	6.2	4.4	4.4
cBOD5 (median from 10)	g/cum	20	50	12.3	7.20	14.94	11.99	17.0	13	11	3.8	6.9	7.4	11	12	12	14	13	14	17	15.9	14.3	12.3	12.3	14	14
SS (median from 10)	g/cum	30	50	45.0	13.4	57.60	38.94	67.0	32	20	11	11	11	15	27	37	35	49	54	67	46	60	52	45	45	56
FC (median from 5)	MPN/100ml	3000		2400	686	3660	2412	7000	3900	7000	470	2000	100	830	3100	1700	3200	2500	2700	1300	2300	2400	2400	3500	1600	1600

2 Characterisation Values - Monthly Tests from Wetland/Rock Filter Outle

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	8-Feb-10	25-Feb-10	2-Mar-10	10-Mar-10	16-Mar-10	24-Mar-10	31-Mar-10	8-Apr-10	5-May-10	2-Jun-10
Total P	g/cum	5.6	3.4	6.7	5.4	6.8	3.7	3	3.9	4.1	2.8	5.5	5.6	5.6	6.4	6.7	6.5	6.3	6.7	6.2	6.8	6.8	5.1
TKN	g/cum	9.8	6.7	15.0	10.3	17.0	5.7	3.8	7.4	15	15	17	7.9	8.8	13	12	8.7	11	10.9	10.2	9.8	9.8	9.8
Temp	°C	17.4	9.9	21.9	16.5	24.9	6.9	9.8	13	10	17.4	18.9	21.2	24.9	22.7	21.4	19.3	19.3	18.7	15.7	13.4	13.4	14.5
EC	MPN/100ml	2200	686	2520	2035	7000	2200	7000	470	2000	100	830	2300	1700	2200	2300	2700	1200	1500	2400	2400	2200	1100

3 Characterisation Values - Weekly Sample from Oxidation Ponds Outlet - Grab Sample

Parameter	Units	02/07/09 @ 11.30am	4/08/09 @ 10.30am	2/09/09 @ 9.45am	6/10/09 @ 11.15am	4/11/09 @ 10.45am	1/12/09 @ 11.00am	11/01/10 @ 14.15pm	8/02/10 @ 14.20pm	25/2/10 @ 11.40am	2/03/2010 @ 8.45am	10/3/10 @ 10.40am	16/3/10 @ 14.00pm	24/03/10 @ 11.50am	31/03/10 @ 10.30am	8/04/10 @ 9.15am	5/05/10 @ 1.00pm	2/6/10 @ 12.50pm
DO		10.49	9.78	4.53	10.7	7.62	5.31	14.32	13.92	7.34	6.43	9.44	11.21	2.41	6.12	5.1	13.3	8.25

4 Characterisation Values - Quarterly Tests from Oxidation Ponds Outle

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	8-Feb-10	25-Feb-10	2-Mar-10	10-Mar-10	16-Mar-10	24-Mar-10	31-Mar-10	8-Apr-10	5-May-10	2-Jun-10
Zinc	g/cum	0.008	0.005	0.016	0.027	0.280	0.015	0.0079	0.014	0.01	0.01	0.02		0.0053	0.28	0.0043	0.0048	0.0043	0.0071	0.28	0.006	0.0056	0.0139
Iron	g/cum	0.300	0.214	0.976	0.486	1.100	0.64	0.42	1.00	0.94	0.89	1.1		0.28	0.0053	0.22	0.21	0.27	0.22	0.005	0.30	0.3	0.49
PCB's	g/cum	0.0040	0.0040	0.0061	0.0044	0.0070			0.004	0.004	0.004	0.004		0.007	0.007	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
cBOD5	g/cum	17.9	10.5	23.6	17.55	27.0	26	20	9.4	9.8	11	17	22	15	19	20	17	22	18.3	27	17.9	17.9	15
SS	g/cum	86.0	34.6	110.4	74.85	130.0	49	45	8.5	34	40	67	86	35	100	110	130	110	111	99	92	92	64
DRP	g/cum	4.9	2.5	7.1	4.44	5.8	2.7	2.1	3.4	3.4	2	4.9	4.6	4.8	5.4	5.3	5	5.3	5.6	5.4	5.8	5.8	3.9
TP	g/cum	6.5	3.3	7.1	5.60	7.3	3.5	3	3.8	4	2.7	7.3	6	5.1	6.5	6.7	7	6.7	7	6.7	7.1	7.1	5
Ammonia NH4-N	g/cum	0.3	0.0	15.2	3.65	17.0	0.59	0.26	6.2	17	14	17	0.026	5	0.22	0.85	0.02	0.02	0.31	0.03	0.22	0.22	0.016
TKN	g/cum	11.0	7.6	18.4	12.04	23.0	6.8	4.9	9.7	19	17	23	8.3	9.3	10	12	18	14	11.6	10.8	11	11	8.2
Nitrate NO3-N	g/cum	0.5	0.0	3.3	1.21	7.1	3.7	3.1	1.2	0.47	0.12	0.11	0.027	0.003	0.044	0.026	0.006	0.21	0.47	1.33	1.36	1.36	7.1
pH	units	7.8	7.5	9.2	8.11	9.3	7.89	7.59	7.34	8.29	7.8	7.58	9.2	9.27	8.65	7.83	9.3	8.31	7.54	7.68	7.65	8.66	7.36
Temp	°C	18.9	11.6	23.0	17.7	26.0	8.4	10.1	14.9	12.6	19.3	19.6	22.2	26	23.7	22.5	21	19.7	18.9	17.3	14.3	15.6	14.3
FC	MPN/100ml	3200	304	8000	3545	13000	13000	8000	560	8000	130	220	3800	3200	3900	3200	800	1500	1500	6800	360	2000	3300
E Coli	MPN/100ml	1700	304	7280	2663	8000	4300	8000	560	8000	130	220	2800	3200	1700	3000	800	1500	700	6800	360	1200	2000

5 Characterisation Values - Annual Tests from Wetland/Rock Filter Outle

Parameter	Units	Median	25-Feb-10	2-Mar-10	10-Mar-10	16-Mar-10	24-Mar-10	31-Mar-10
cBOD5	g/cum	14.15	14	13	14	17	15.9	14.3
SS	g/cum	53	49	54	67	46	60	52
DRP	g/cum	5.85	5.8	5.6	5.8	5.9	6.3	5.9
TP	g/cum	6.45	6.4	6.7	6.5	6.3	6.7	6.2
Ammonia	g/cum	4.25	4.6	4.9	3.6	4.1	4.4	4.1
TKN	g/cum	10.95	13	12	8.7	11	10.9	10.2
Nitrate NO3	g/cum	0.002	0.002	0.0037	0.0044	0.002	0.0024	<0.0020
pH	units	7.32	7.42	7.24	7.37	7.31	7.33	7.3
Temp	°C	19.15	22.7	21.4	19	19.3	18.7	15.7
FC	MPN/100ml	2450	3200	2500	2700	1300	2300	2400
EC	MPN/100ml	2250	2200	2300	2700	1200	1500	2400

6 Characterisation Values - Daily Total In Flows

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
Minimum Daily In Flow		1911	1539	2298	1941	2600	2600	2307	2012	2080	1974	1847	1499	1798	1519	1715	1723	2215
Average Daily In Flow		2581	1853	4072	2837	4340	3586	2665	2889	4099	2361	2496	1963	4340	1841	1802	2181	3824
Maximum Daily In Flow		5499	2230	7924	5295	10000	6032	3206	6291	7377	2783	7985	4563	5920	2135	2169	5078	10000
Monthly Total In Flow		80002	57440	120833	85781	127074	111163	82620	86657	127074	70825	77383	60854	121514	57061	51892	67618	114708

7 Characterisation Values - Daily Total Out Flows

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
Minimum Daily Out Flow		1159	964	1909	1329	2888	2888	1937	1652	1035	1352	1210	997	1107	559	1013	960	1238
Average Daily Out Flow		2171	1321	3592	2419	4201	4201	2807	2814	3599	1989	2353	1465	1872	1152	1305	1940	3524
Maximum Daily Out Flow		4042	2040	5810	4086	5879	5816	4333	5879	4458	3131	5753	3542	3542	1669	1919	3751	5242
Monthly Total Out Flow		66743	38060	110988	73577	130242	130242	87029	84427	111575	59681	72955	45421	52408	35706	37242	60530	105706

7 Characterisation Values - Average Nutrient Loading Discharged to Waikato River

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-08	Aug-08	Sep-08	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
Total Nitrogen	g/cum	9.63	7.87	15.49	10.72	17.09	9.40	5.03	7.86	15.54	15.03	17.09	7.98	8.81	10.58	9.85	8.64	12.85
Total Phosphorous	g/cum	5.30	3.07	6.45	4.88	6.80	3.70	3.00	3.90	4.10	2.80	5.50	5.60	6.50	6.50	6.00	5.10	
Total Nitrogen	kg/day	19.51	12.95	44.77	26.56	65.93	39.49	14.03	22.15	55.93	29.84	40.24	11.69	16.50	13.82	12.86	16.87	45.3
Total Phosphorous	kg/day	10.73	7.77	15.47	11.09	17.97	15.55	8.37	10.98	14.76	5.57	12.94	8.2					