

Waikato District Council Wastewater Treatment Monitoring Results
 Site **Huntly**
 Consent number **951126**
 Report Period July 2008 to June 2009

Discharge Transgression		
Discharge Limit Exceeded		
nr = no recorded data		
suspect/interpolated data		

1 Discharge Limits - Monthly Tests from Wetland/Rockfilter Outlet

Parameter	Unit	Consent value 90 Percentile	Consent value Maximum	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09								
pH between 6 - 9				7.23	6.82	7.41	7.17	7.55	7.4	6.73	6.81	6.82	6.87	6.96	7.00	7.01	7.24	7.36	7.26	7.35	7.51	7.39	7.55	7.24	7.33	7.21		
Total Ammonia (median from 10)	g/m3	10	15	3.80	1.59	8.78	4.49	12.0	1.6	2.5	0.69	1.5	2.4	2.10	6.50	3.90	3.70	6.5	7.4	5.5	8.7	12	4.2	2.60	1.7	4.1		
Nitrate NO3-N (median from 10)	g/m3	5	8	0.03	0.002	1.00	0.42	2.30	0.86	0.59	1	1	0.018	0.34	0.97	0.00	0.03	0.01	0.002	0.001	0.0021	0.0053	0.034	0.001	0.021	0.02	2.3	0.75
DRP	g/m3	5	10	4.85	2.42	6.31	4.45	6.40	5	4.9	1.3	1.7	2.5	2.7	2.60	3.40	3.80	4.80	6.7	6.4	8.4	6.1	5.4	6.3	5.9	6.00	4.1	3.9
BOD (median from 10)	g/m3	20	50	14.5	9.36	24.0	16.1	26.0	17	11	7.3	8.1	9.7	14	10.0	11.0	15.0	24.0	26	24	22	21	13	23	24.0	9.5	11.0	
SS (median from 10)	g/m3	30	50	43.0	22.8	65.3	43.7	81.0	37	26	21	9.6	32	42.0	23.0	57.0	81.0	60	61	44	32	63	50	65	66.0	52.0	25.0	
FC (median from 5)	MPN/100ml	3000		1600	280	5120	2376	7200	700	100	280	280	1100	760	4700	4500	7200	5000	3300	1600	1800	3100	1500	5600	2400	510		

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

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09								
Total P	g/m3	5.4	2.7	6.9	5.1	7.4	5.5	5.4	1.6	2.1	2.8	3.8	3.20	3.80	4.30	5.40	6.6	7.4	6.8	6.8	6.2	6.3	6.7	7.30	4.80	4.60
TKN	g/m3	10.5	5.3	15.1	10.2	19.0	8.8	6.5	2.9	3.5	5.5	6.6	7.80	10.00	11.00	14.00	14	16	14	12	15	19	12	12.00	7.00	8.90
Temp	°C	15.3	10.4	23.1	16.6	25.2	10.5	12.4	10.9	12	13.3	10.8	13.90	16.70	22.40	22.80	23.8	25.2	21.9	23	23	19.2	17.4	13.50	9.80	9.20
EC	MPN/100ml	1000	268	5040	3558	36000	700	100	280	720	220	1000	280	2000	4500	7200	36000	2800	800	910	2700	1100	3600	2400	300	

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

Parameter	Units	10/07/07 10:25am	5/8/08 11:15am	4/9/08 09:55am	9/10/08 11:00am	5/11/08 10:30am	4/12/08 12:15am	8/01/09 11:50am	04/02/09 10:55am	04/03/09 13:45am	02/04/09 10:50am	21/05/09 10:20am	09/06/09 10:30am
DO		4.61	8.88	5.74	7.06	4.05	8.68	11.91	5.24	13.06	7.86	9.83	10

4 Characterisation Values - Quarterly Tests from Oxidation Ponds Outlet

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	July 2008	Aug 2008	Sep 2008	Oct 2008	Nov 2008	Dec 2008	Jan 2009	Feb 2009	Mar-09	Mar-09	Mar-09	Apr 2009	May 2009	Jun-2009				
Zinc	g/m3								Values not sampled			Values not sampled			Values not sampled						0.012			
Iron	g/m3								Values not sampled			Values not sampled			Values not sampled						0.42			
PCBs	g/m3								Values not sampled			Values not sampled			Values not sampled						Values not sampled			
BOD	g/m3	23	16	34	25	58	28	22	16	23	16	16	34	23	16	28	31	29	18	20	Values not sampled			
SS	g/m3	87	45	149	93	170	68	58	43	75	45	87	170	75	45	87	170	120	110	87	67			
DRP	g/m3	3.5	2.2	5.1	3.6	5.4	4.5	2.2	1.7	2.2	2.9	3.1	4	2.2	2.9	3.1	4	5	4.9	5.2	3.6	3.3		
TP	g/m3	4.8	3.4	6.8	5.0	6.9	5.7	3.3	2.4	3.4	3.7	4.5	6.1	3.4	3.7	4.5	6.1	6.8	6.9	6.8	5.1	4.5		
Total Ammonia	g/m3	0.059	0.008	5.0	1.324	6.0	0.24	0.01	0.49	0.09	4.7	0.003	0.019	0.09	4.7	0.003	0.019	1.6	5.8	6	0.016	0.012	0.018	0.028
TKN	g/m3	11.0	7.1	17.4	11.8	22.0	7.4	5.7	5.5	8.1	11	9	15	8.1	11	9	15	17	22	18	13	14	9.9	9.3
Nitrate NO3-N	g/m3	0.9	0.010	5.5	2.0	5.9	4	4.2	2.6	5.5	0.64	1.1	0.01	5.5	0.64	1.1	0.01	0.0026	0.014	0.09	0.01	0.14	4.9	5.9
pH	units	7.88	7.22	9.26	7.96	9.5	7.26	7.31	7.12	7.34	7.22	8.11	9.5	7.34	7.22	8.11	9.5	7.96	9.16	8.49	8.17	7.91	7.84	7.65
Temp	°C	18.0	11.2	23.2	17.5	23.4	11.1	11.5	13.7	16.1	18	23.4	21.7	16.1	18	23.4	21.7	23.1	19.4	18.6	15.7	11.2	9.2	
FC	MPN/100ml	3600	1200	6450	3933	13000	3600	2300	530	1600	6100	3600	1600	6100	3600	2400	4700	1100	1300	13000	6800	4600		
E Coli	MPN/100ml	1950	700	3900	2244	6800	3600	2300	500	800	1700	3200	800	1700	3200	600	2500	800	1000	4200	6800	2200		

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

Parameter	Units	Median	4-Feb-09	12-Feb-09	17-Feb-09	23-Feb-09	4-Mar-09
BOD	g/m3	24	26	24	22	22	28
SS	g/m3	60	60	61	44	32	110
DRP	g/m3	6	5.7	6	6.4	6.1	4.9
TP	g/m3	7	6.6	7	6.8	6.8	6.7
Total Ammonia	g/m3	7	6.5	7.4	5.5	9.5	5.8
TKN	g/m3	14	14	16	14	12	22
Nitrate NO3	g/m3	0.002	0.002	0.001	0.0021	0.0053	0.014
pH	units	7	7.36	7.26	7.2	7.35	7.51
Temp	°C	23	23.8	25.2	21.9	23	23
FC	MPN/100ml	3300	7200	5000	3300	1600	1800
EC	MPN/100ml	2800	7200	36000	2800	800	910

6 Characterisation Values - Daily Total Out Flows

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09
Minimum Daily Flow	m3/day	1068	3	2504	1366	4311	2525	4311	2208	2312	1245	1120	817	802	0	33	1015	0
Average Daily Flow	m3/day	2358	1421	3744	2711	6184	3777	6184	3446	3402	1853	1747	1372	1781	1397	1637	2862	3073
Maximum Daily Flow	m3/day	4145	2957	6474	4421	7152	6541	7152	4898	4479	2955	2973	2039	3636	3810	3392	5305	5868
Monthly Total	m3/day	70014	43893	115997	82268	191697	117096	191697	103394	106103	51862	54163	42547	49864	43312	49119	85864	92176

7 Characterisation Values - Average Nutrient Loading Discharged to Waikato Rive

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09
Total Nitrogen	kg/day	21.5	18.8	27.7	22.8	29.6	27.9	26.0	21.5	18.8	18.5	19.3	19.2	24.9	21.4	19.7	26.6	29.6
Total Phosphorous	kg/day	11.4	7.4	14.1	11.3	20.6	20.6	11.4	11.4	9.5	7.0	7.5	7.4	12.3	8.6	12.0	13.7	14.1

8 Characterisation Values - Oxidation Ponds Outlet Comparison 2007-08 to 2008-2009 Result:

Parameter	Units	2007-08 Median	2008-09 Median	2007-08 90 Percentile	2008-09 90 Percentile	2007-08 Average	2008-09 Average
BOD	g/m3	19	21	30.2	34	20.25	25
SS	g/m3	85.5	89	150	146	92.17	95
DRP	g/m3	5.9	4.3	9	5.8	6.2	4.3
TP	g/m3	7.5	5.9	10	7.5	7.6	5.6
Total Ammonia	g/m3	0.05	0.045	7.4	5.0	2.2	1.296
TKN	g/m3	14.5	12.0	18.9	18.4	14.6	12.6
Nitrate NO3-N	g/m3	1.3	0.9	4.8	5.1	2.11	1.9