

Waikato District Council Wastewater Treatment Monitoring Results  
 Site Maramarua  
 Consent number 101961  
 Report Period July 2009 to June 2010

Discharge Transgression	
Discharge Limit Exceeded	
nr = no recorded data	
suspect/interpolated data	
Value < number shown	

1 Characterisation Values - Monthly Tests from Treated Waste Discharge Tank

Parameter	Units	Median	10 Percentile	90 Percentile	Average	Maximum	08-Jul-09	14-Jul-09	22-Jul-09	3-Aug-09	12-Aug-09	17-Aug-09	11-Sep-09	15-Sep-09	24-Sep-09	07-Oct-09	13-Oct-09	22-Oct-09	10-Nov-09	02-Dec-09	08-Dec-09	07-Jan-10	15-Jan-10	29-Jan-10	03-Feb-10	12-Feb-10	08-Mar-10	18-Mar-10	07-Apr-10	16-Apr-10	18-May-10	24-May-10	04-Jun-10	08-Jun-10
Suspended Solids	g/m3	4.9	4.0	18.2	9.6	20.0	4				5			5.7			3		8.6		4	9.2			12	20			18.5		15.9		10	
Ammoniacal-N	g/m3	4.2	3.2	6.5	4.3	7.5	4.2				7.5			6.6			1		4.3		3.5	3.2			4.3	3.6			4.2		5.2		3.4	
Total Kjeldahl Nitrogen	g/m3	11.5	2.7	17.9	10.7	18.0	11				15			14			1.3		4.3		18	2.5			18	12			16.7		8.7		6.4	
Nitrate	g/m3	11.0	5.3	17.9	11.3	19.0	10				16			13			1.4		7		18	5.1			17	12			19		8		8.8	
Nitrite	g/m3	29.5	17.3	57.9	35.1	62.0	17				9			25			34		20		23	42			55	62			57		58		19.5	
Total nitrogen	g/m3	0.150	0.096	0.508	0.276	1.000	0.11				0.23			0.16			0.06		0.14		1	0.38			0.4	0.12			0.095		0.52		0.1	
DRP	g/m3	40.1	27.1	73.9	46.7	76.1	27.11				25.23			38.16			35.46		27.14		42	47.48			42	72.4			76.10		66.52		28.4	
Total Phosphorus	g/m3	6.2	4.1	8.9	6.5	9.4	6				4			5.1			2.7		5.6		6.4	8.6			6.4	8.6			7.7		7.8		5.5	
Faecal coliforms	MPN/100ml	6.9	5.6	9.9	7.2	10.6	6				6			6			2.8		6.2		7	8.9			10	8.1			8.5		10.6		6.7	
E coli	MPN/100ml	1100	270	3900	1675	6000	2100				6000			300			890		1200		570	270			200	470			2000		3900		1100	
pH (field)	units	890	180	3900	1587	6000	2100				6000			180			890		1200		510	70			200	470			2000		3900		450	
alkalinity	g/m3	6.4	6.0	6.8	6.4	6.9	6.39				6.85			6.7			5.15		6.52		6.91	6.05			6.37	6.36			6.68		6.04		6.37	
Conductivity(field)	uS/cm	100.0	88.0	100.0	96	100.0	100	100	100	100	100	100	80	80			624		614		590	692			679	638			657		657		401	
Temperature	°C	624.0	449.8	309.8	648	956.0	500	462	407		553	574	574	624	911	451	448	520	614	685	590	692	815	956	679	912	638	885	657	909	657	872	530	401
Dissolved Oxygen	°C	17.0	13.4	21.8	17.6	22.3	12.6				13.3			14.5			15.5		17.6		19.7	21.4			22.3	21.8			20.8		16.4		15.1	
		4.7	4.5	5.6	5.0	6.5	4.67				4.62			5.08			6.51		5.39		5.64	4.51			4.08	4.57			4.5		4.69		5.22	

2 Daily Discharge Volume

Parameter	2009-10	Limit	Median	10 Percentile	90 Percentile	Average	Maximum	08-Jul-09	14-Jul-09	22-Jul-09	03-Aug-09	12-Aug-09	17-Aug-09	11-Sep-09	15-Sep-09	24-Sep-09	07-Oct-09	13-Oct-09	22-Oct-09	09-Nov-09	10-Nov-09	02-Dec-09	08-Dec-09	18-Dec-09	07-Jan-10	15-Jan-10	29-Jan-10	03-Feb-10	08-Mar-10	18-Mar-10	01-Apr-10	07-Apr-10	16-Apr-10	18-May-10	24-May-10	04-Jun-10	08-Jun-10
Avg Daily Flow	m3/day	6.0	3.0	2.0	5.6	3.5	7.4	5.1	6.7	7.4	3.3	3.2	7.4	3.3	3.0	2.4	5.5	5.1	4.9	3.7	2.7	2.3	3.0	3.8	2.3	2.1	2.0	2.2	2.1	2.0	2.0	1.9	1.9	2.0	2.2	4.6	5.4

3 Comparison of Previous Winter Discharge Volumes

Parameter	2008-09	Limit	Median	10 Percentile	90 Percentile	Average	Maximum
Avg Daily Flow	m3/day	6.0	3.1	2.1	8.5	4.4	15.9

4 Characterisation Values - Monthly Tests from Treated Waste Discharge Tank

Parameter	Units	2007-08		2008-09		2009-10 Qtr 1		2009-10 Qtr 2		2009-10 Qtr 3		2009-10 Qtr 4		2007-08		2008-09		2009-10 Qtr 1		2009-10 Qtr 2		2009-10 Qtr 3		2009-10 Qtr 4	
		Median	90 Percentile	Median	90 Percentile	Median	90 Percentile	Median	90 Percentile	Median	90 Percentile	Median	90 Percentile	Average	90 Percentile	Average	90 Percentile	Average	90 Percentile	Average	90 Percentile	Average	90 Percentile	Average	90 Percentile
Suspended Solids	g/m3	13.5	7.4	5	4	12	15.5	47.1	10.8	5.56	7.68	18.4	17.9	28.2	7.6	4.9	5.2	13.7	14.67						
Ammoniacal-N	g/m3	9.5	2.4	6.6	3.5	3.6	4.2	38.9	5.4	7.32	4.14	4.16	5	16.5	2.9	6.1	2.9	3.7	4.27						
Total Kjeldahl Nitrogen	g/m3	14	3.3	14	4.3	12	8.7	31.2	7.1	14.8	15.26	16.8	15.1	17.4	3.8	13.3	7.9	10.8	10.60						
Nitrate	g/m3	15.5	5.9	13	7	12	8.8	32.6	6.9	15.4	15.8	16	16.96	19.9	5.6	13	8.8	11.4	11.93						
Nitrite	g/m3	51	33.5	17	23	55	57	67.8	48	23.4	31.8	60.6	44.4	34.8	17	25.7	53	44.83							
Total nitrogen	g/m3	4.50	0.11	0.16	0.14	0.38	0.1	4.50	0.11	0.216	0.828	0.396	0.436	4.50	0.11	0.2	0.4	0.3	0.24						
DRP	g/m3	53.5	38.7	27.11	35.46	72.4	66.52	90.3	56.1	35.95	40.69	73.78	74.18	61.3	39.9	30.2	34.9	64.7	57.01						
Total Phosphorus	g/m3	7.5	6.6	6	6.2	8.9	8.5	10.9	7.8	6	6.84	9.78	8	6	5.9	5.3	9	8.60							
Faecal coliforms	MPN/100ml	9950	615	2100	1045	270	2000	393000	11700	5220	1169	430	3520	275751	4993	2800	1045	313.3	2333						
E coli	MPN/100ml	370	600	2100	1045	200	2000	73200	12000	5220	1169	416	3520	26699	4096	2760	1045	246.7	2117						
pH (field)	units	6.5	5.6	6.7	6.36	6.37	7	6	6.82	6.83	6.368	6.618	6.5	5.5	6.6	6.2	6.3	6.36							
alkalinity	g/m3	81	6	100		233	32	100		112	14	96													
Conductivity(field)	uS/cm	811	582	550	555	815	657	1190	775	710	650	930	891	893	561	572	551	670	572						
Temperature	°C	18.5	17.6	13.3	17.6	21.8	16.4	22.4	14.26	19.28	22.2	19.92	18.0	17.7	13.5	17.6	21.8	17.43							
Dissolved Oxygen		4.1	5.7	4.67	5.64	4.51	4.69	6.8	6.8	5	6.34	4.56	5.114	4.7	5.6	4.8	5.8	4.4	4.80						