

Appendix 2
Monitoring Results

Waiholo Oxidation Pond Effluent							
Date	pH	BOD5	Total Phosphorus	F. coli	Ammoniacal Nitrogen	Total Nitrogen	SS
10-Feb-98		11	8.63	130	14		13
12-May-98		23	8.9	130,000	21.2		13
11-Aug-98		60	8.31	210,000	29.6		39
10-Nov-98		30	7.58	80,000	18.4		18
4-Feb-99		82	11.3	8,000	14		77
19-May-99		58	11.2	8,000	35.2	0.025	70
24-Aug-99		26	6.54	50,000	18.1		110
10-Nov-99		33	7.52	130,000	16.7		54
8-Feb-00	8.20	65	7.6	6,800	11	20	80
16-Feb-00		54	7.02	50,000	11.2		120
16-May-00		42	7.86	130,000	23.4		61
10-Aug-00		39	6.77	30,000	20.3		46
7-Nov-00		45	5.69	30,000	13.7		81
12-Feb-01		54	8.74	82,000	22		58
8-May-01		45	8.48	1,700	21.7		41
9-Aug-01		30	5.73	95,000	15		63
13-Feb-02	7.39	38	7	5,600	8.19		110
12-Sep-02	7.30	27	5.39	210,000	15.3		35
11-Feb-03	8.41	57	9.44	320,000	5.55		160
6-May-03	7.92	130	10.2	240,000	18	38.2	200
23-May-03		51					100
13-Aug-03	7.96	28	7.93	46,000	22.9	33.1	55
8-Dec-03	8.56	48	8.99	110,000	27.2	39	74
18-Feb-04	8.12	78	11	960,000	20.9	47.1	150
17-May-05	7.41	32	8.72	24,000	30.3	42.4	59
9-Aug-05	7.12	36	7.49	72,000	25.5	35	73
9-Nov-05	7.33	86	9.55	270,000	21.4	42	100
15-Feb-06	8.40	31	10.8	310,000	15.6	36.6	150
11-May-06	7.17	29	5.9	130,000	18.3	27	43
10-Aug-06	7.50	39	6.53	89,000	20.8	32	86
12-Feb-07	7.36	88	10.5	100,000	20	38	140
15-May-07	7.52	80	11.6	250,000	33.7	46	88
9-Aug-07	8.62	49	4.46	75,000	13.4	23	85
6-Nov-07	7.78	76	6.91	46,000	12.4	33	160
13-Feb-08	8.88	55	11.3	70,000	14.8	31	72
12-May-08	7.70	57	8.51	49,000	24.9	36	80
19-Aug-08	7.89	17	3.1	31,000	9.64	12	54
11-Nov-08	9.13	50	7.24	34,000	15.9	31	96
3-Feb-09	9.04	95	11.8	82,000	25.5	43	100
19-May-09	7.50	44	5.47	31,000	20.3	27	58
4-Aug-09	7.46	35	4.29	23,000	21.3	29	76
11-Nov-09	8.74	87	6.93	81,000	17.6	38	150
3-Feb-10	8.70	190	10.3	26,000	16.9	43	280
10-May-10	7.46	51	8.56	400,000	31.5	43	56
5-Aug-10	7.27	86	5.77	580,000	20.5	34	110
10-Nov-10	8.95	40	5.15	94,000	15.5	21	33
2-Feb-11	8.81	58	7.38	88,000	15.3	33	140
17-May-11	7.67	13	3.76	48,000	20.4	25	46
2-Aug-11	7.47	27	5.04	44,000	24.3	36	85
1-Nov-11	8.63	190	7.46	72,000	12.9	40	340
9-Feb-12	7.48	49	8.31	320	22.4	33	74
8-May-12	7.57	57	6.22	140,000	22.3	37	87
1-Aug-12	7.44	64	4.71	420,000	20.2	32	100
1-Nov-12	8.25	28	5.4	100,000	23.6	34	100
5-Feb-13	7.55	70	7.32	310,000	18.7	36	130
6-Jun-13	7.59	59	4.77	220,000	21.9	40	70
9-Aug-13	7.33	34	3.49	120,000	16.3	27	72
5-Nov-13	8.58	34	5.83	26,000	17.8	39	130
4-Feb-14	8.90	19	7.3	79,000	14.6	31	110
7-May-14	7.28	47	5.9	720,000	28.9	37	41
4-Nov-14	8.66	90	6.1	15,000	15.9	32	120
11-Dec-14		70			17.8	38	82
17-Dec-14		44			12.1	27	130
11-Feb-15	8.09	60	6.9	60,000	22	39	87
7-May-15	7.48	140	7.67	51,000	24.4	39	160
6-Aug-15	7.37	59	3.85	210,000	17	43	72
5-Nov-15	8.72	91	5.35	300,000	19.6	34	96
Geomean	7.93	48.9	7.04	63,844	18.4	29.0	79.6
90th Percentile	8.82	88.6	10.68	310,000	26.2	43.0	150.0

Waihola Wetland Effluent							
Date	pH	BOD5	Total Phosphorus	F coli	Ammoniacal Nitrogen	Total Nitrogen	SS
4-May-04	9.03	96	7.93	6800	14.8	34.1	210
11-Aug-04	7.9	36	4.48	6300	15.8	26.2	110
16-Nov-04	7.99	27	7.66	28000	19.4	31.7	92
9-Feb-05	7.5	120	10.8	3200	4.44	17.4	810
17-Mar-05		14					
17-May-05	7.34	10	5.29	2500	15.3	21.2	57
9-Aug-05	7.28	32	6.37	31000	21.4	32	77
9-Nov-05	8.56	70	8.59	9300	15.9	35	82
15-Feb-06	7.39	58	11.1	23000	9.21	31.3	1100
11-May-06	7.13	35	5.3	7500	15.8	20	33
10-Aug-06	6.69	19	2.3	6900	6.01	10.6	42
9-Nov-06	7.15	50	5.65	4600	14.7	22	85
12-Feb-07	7.03	66	9.87	4300	22.9	31	190
15-May-07	7.19	23	11.1	25000	34.5	41	28
9-Aug-07	8.34	49	4.94	3300	7.76	17	110
6-Nov-07	7.01	40	5.48	46000	9.08	17	77
13-Feb-08	7.75	86	14.7	1800	24.4	52	500
12-May-08	7.41	31	8.14	5900	23.7	34	70
19-Aug-08	7.23	7	2.23	100	7.85	12	17
11-Nov-08	7.08	22	6.63	10000	14.4	19	36
3-Feb-09	7.8	43	12.7	220	30	41	68
19-May-09	7.08	71	4.17	2200	19.2	20	32
4-Aug-09	7.21	15	3.41	140	19	23	71
11-Nov-09	8.24	100	6.52	4400	13.3	32	120
26-Nov-09		30					54
3-Feb-10	7.42	120	11	4200	11.2	31	170
24-Feb-10		67					64
10-May-10	7.51	17	8.38	11000	31.2	40	76
5-Aug-10	6.72	9	1.76	370	7.12	8.8	19
10-Nov-10	8.34	99	6.89	4000	12.9	26	140
2-Feb-11	8	48	6.95	6100	13.6	28	110
17-May-11	7.32	9	4.23	4500	19.1	19.3	24
2-Aug-11	7.48	57	5.02	11000	21.8	34	110
1-Nov-11	8.46	90	5.69	1600	14.2	26	190
9-Feb-12	7.32	300	14.9	220000	33.1	70	1300
15-Mar-12	7.2	21	5.19	23000	21	30	42
8-May-12	7.19	37	6.17	75000	19.6	30	79
1-Aug-12	7.26	13	3.88	33000	17	22	54
1-Nov-12	7.03	18	4.82	9700	20.3	28	35
5-Feb-13	7.51	38	5.34	3900	20.8	25	72
2-May-13	7.52	16	6.95	58000	29	41	43
9-Aug-13	7.03	30	2.83	56000	14.5	23	49
5-Nov-13	7.07	60	6.16	18000	25.6	42	73
4-Feb-14	7.11	20	6.4	35000	18	29	18
7-May-14	7.17	26	5.5	34000	23.9	37	23
4-Nov-14	7.42	90	5.2	2100	11.3	23	110
11-Dec-14		190			22.2	44	620
17-Dec-14		50			16.3	27	68
11-Feb-15	7.36	60	7.7	4000	24.5	38	90
7-May-15	7.2	200	5.99	930	24.6	32	81
19-Jun-15	6.95	8	3.12	9500	14.2	17	29
6-Aug-15	7.06	28	3.11	55000	15	26	37
5-Nov-15	8.10	70	5.43	11000	18.8	30	120
Geomean	7.44	38.8	5.90	7,006	16.5	27.0	80.8
90th Percentile	8.27	99.8	11.03	48,700	25.9	41.0	208.0

Lake Waihola Outlet Channel 20m Upstream of Outfall				
Date	BOD5	F coli	Enterococci	SS
10-Feb-98	2	1300	90	116
11-Aug-98	1	40	1	10
04-Feb-99	3	230	11	86
24-Aug-99	3	20	3	17
12-Feb-01	1	150	15	31
09-Aug-01	1	49.5	10	9
13-Feb-02	1	130	7.5	15
12-Sep-02	1	41	10	15
Geomean	1.4	99	9	23.9
Standard Deviation	0.86	404	27	38.01

Lake Waihola Outlet Channel 20m Downstream of Outfall				
Date	BOD5	F coli	Enterococci	SS
10-Feb-98	3	1100	95	256
11-Aug-98	1	40	4	9
04-Feb-99	3	110	9	45
24-Aug-99	3	20	1	14
12-Feb-01	1	50	8.3	30
09-Aug-01	1	35	5	15
13-Feb-02	2	96	6	34
12-Sep-02	1	55	10	15
Geomean	1.6	74	7	27.6
Standard Deviation	0.93	346	30	77.86