

**Appendix 3.1: Summary and statistical analysis of monitoring data for sampling locality K14-1 in the Klip River (Improvement / Deterioration)**

Klip River Monitoring Program: Monitoring Locality K14-1														
Number of samples	662	Data Period: 1973/08/13 to 2001/06/30									Percentage compliance			
Chemical Variable	Number of records	Last recorded value	Percentage change from average value	Average value	Minimum value	Maximum value	5 Percentile value	50 Percentile value	95 Percentile value	Linear slope	Aquatic Environment	Domestic	Livestock	Irrigation
pH	662	6.33	37.35	4.61	2.9	9.6	3.20	3.91	6.90	0.00		25.53		16.31
Electrical Conductivity (mS/m)	638	12	-63.49	32.87	9.6	175	12.00	26.00	84.90	-0.05				
Turbidity (NTU)	637	56	514.73	9.11	0.18	275	0.44	2.20	35.20	0.03		23.86		
Temperature (°C)	1	13	0.00	13.00	13	13	13.00	13.00	13.00					
Total Dissolved Solids (mg/l)	1	750	0.00	750.00	750	750	750.00	750.00	750.00			0.00		0.00
Alkalinity (mg/l)	263	16	-26.38	21.73	0	265	0.00	11.00	90.90	0.08				
Total Hardness (mg/l)	565	24	-69.37	78.35	1	1680	27.00	52.00	210.00	-0.18				
Calcium (mg/l)	565	6.2	-68.75	19.84	0.05	530	7.00	14.00	49.20	-0.04		90.27	100.00	
Magnesium (mg/l)	566	2	-72.23	7.20	1.5	86	2.23	4.00	24.75	-0.02		96.47	100.00	
Sodium (mg/l)	394	2.4	-80.03	12.02	0.05	110	4.57	9.20	28.00	0.01		99.75		98.98
Potassium (mg/l)	394	0.42	-76.92	1.82	0.05	21	0.05	1.10	5.70	0.00		100.00		
Sulphate (mg/l)	655	15	-85.62	104.30	5	850	17.70	77.00	310.00	-0.32		90.99	100.00	
Chloride (mg/l)	432	<10		13.52	5	270	5.00	10.00	39.50	-0.01		99.54	100.00	99.54
Fluoride (mg/l)	17	0.09	-92.14	1.15	0.05	18	0.05	0.09	3.84	-0.36	94.12	94.12	94.12	94.12
Ammonia (mg/l)	651	<0.05		1.31	0.015	29	0.02	0.65	5.35	0.00	0.00	67.74		
Nitrate (mg/l)	530	0	-100.00	0.40	0	10	0.05	0.20	1.00	0.00		99.25	100.00	
Nitrite (mg/l)	393	<0.05		0.09	0.015	10	0.02	0.05	0.13	0.00				
Orto-phospate	437	<.05		0.22	0.015	7.5	0.02	0.03	0.85	0.00				
Aluminium (mg/l)	365	<0.10		1.37	0.05	65	0.05	0.32	4.82	-0.01	0.00	37.81	95.07	95.07
Manganese (mg/l)	391	<0.05		0.41	0.025	4	0.05	0.33	0.88	0.00	34.02	9.46	100.00	0.00
Iron (mg/l)	392	0.05	-98.21	2.79	0.025	66	0.03	1.20	10.45	-0.01		10.97	94.90	88.78
Copper (mg/l)	388	<0.05		0.06	0.025	0.68	0.05	0.05	0.10	0.00	0.00	100.00		98.20
Cadmium (mg/l)	391	<0.05		0.03	0.025	0.06	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00
Chromium (mg/l)	391	<0.05		0.03	0.025	0.25	0.03	0.03	0.08	0.00	0.00	92.07	100.00	96.42
Cobalt (mg/l)	389	<0.06		0.09	0.03	2.9	0.05	0.05	0.18	0.00			98.71	79.43
Mercury (mg/l)	54	<0.20		0.50	0.1	1	0.50	0.50	0.50	0.00	0.00	0.00	100.00	
Cyanide (mg/l)	17	<0.03		0.01	0	0.015	0.01	0.02	0.02	0.00	5.88			
Lead (mg/l)	388	<0.05		0.09	0.025	1.2	0.05	0.05	0.15	0.00	0.00	0.00	74.74	97.42
Zinc (mg/l)	389	<0.05		0.49	0.025	47	0.05	0.14	1.10	0.00	0.00	97.69	99.74	94.60
Nickel (mg/l)	390	<0.05		0.17	0.025	7.3	0.05	0.05	0.38	0.00			97.95	84.62
Chemical Oxygen Demand (mg/l)	381	20	35.66	14.74	5	110	5.00	12.00	36.00	0.01				