

**Rand Water**  
**Quarterly Water Quality Status of the Klip River Catchment**

01 Jan 2012 - 31 Dec 2012



Sample Points	Sample Point Description	Aluminium	Ammonia	Chemical Oxygen Demand	Chloride	Conductivity	Daphnia Toxicity	Dissolved Oxygen	E.coli	Fluoride	Iron	Magnesium	Manganese	Nitrate	pH	Phosphate	Sodium	Sulphate	Suspended Solids
K1	Klip River @ Lido Hotel S26.326 E27.988	0.02	0.76		34	53		4.8		0.33	0.02	12	0.22	2.90	6.5	0.33	32	95	
		<0.01	<0.24		40	55		6.1		0.22	0.02	12	0.20	4.30	7.5	0.21	41	73	
		<0.01	0.43		42	49		6.1		0.24	0.03	14	0.36	3.80	7.2	0.37	41	80	
K10	Klip River @ Everite S26.421 E28.095	<0.01	1.40		33	52		4.3		0.20	1.20	12	0.44	2.00	7.2	0.54	32	100	
		0.03	0.50		33	50		5.7		0.24	0.02	12	0.11	2.80	6.6	0.30	31	93	
		0.02	<0.24		44	49		6.8		0.22	0.01	14	0.08	4.00	7.6	0.26	44	73	
K11	Klip River from Roodepoort @ R41 Bridge S26.169 E27.833	<0.01	0.33		37	53		6.2		0.21	0.03	14	0.26	3.40	7.3	0.36	42	86	
		0.01	0.96		32	53		5.2		0.24	0.05	12	0.22	2.30	7.3	0.54	31	91	
		0.06	0.12		12	28		8.0		0.73	0.07	8	0.08	1.00	6.3	<0.05	9.8	70	
K14	Klip River from Witpoortjie @ R41 Bridge S26.176 E27.818	0.03	<0.24		16	39		8.1		0.14	0.03	10	0.10	0.82	7.1	<0.05	16	120	
		<0.01	0.12		16	43		9.8		0.14	0.02	10	0.11	0.94	6.0	<0.05	15	120	
		<0.01	0.11		11	42		6.3		0.19	0.52	8	0.35	0.54	6.9	<0.05	12	175	
K18	Klip River Weir @ Henley-On-Klip S26.549 E28.064	0.02	0.12		14	17		7.3		0.11	0.05	3	0.06	1.50	6.1	<0.05	11	52	
		<0.01	<0.24		22	16		7.8		0.28	0.03	5	0.02	1.00	7.1	0.17	20	25	
		<0.01	0.12		24	20		8.0		0.12	0.04	3	0.13	1.10	6.6	<0.05	16	34	
K19	Klip River Weir @ Redan Train Bridge S26.620 E27.981	<0.01	0.11		16	25		6.9		0.14	0.04	5	0.02	0.65	7.0	<0.05	16	42	
		0.02	0.44		43	59		5.3	17,530	0.28	0.02	15	0.14	2.40	6.7	0.38	36	125	
		<0.01	<0.24		41	63		7.3	1,970	0.42	0.01	13	0.15	3.40	7.6	0.14	47	58	
K21	Klip River Weir @ Zwartkopjes Farm S26.380 E28.071	0.01	0.51		58	67		7.0	760	0.29	0.03	17	0.26	4.50	7.4	0.30	52	110	
		0.01	0.62		42	62		4.4	4,450	0.26	0.05	14	0.20	2.40	7.3	0.42	37	120	
		0.04	0.24	27	43	59	100	6.8	4,340	0.24	0.02	14	0.05	2.70	6.8	0.41	38	105	76
K25	Klip River downstream of Rietspruit Confluence S26.456 E28.085	<0.01	0.30	24	53	64	100	7.2	3,320	0.20	0.01	14	0.09	4.90	7.6	0.27	46	85	25
		<0.01	0.27	35	56	66	100	7.5	7,550	0.28	0.02	16	0.20	3.90	7.2	0.38	50	100	60
		0.02	0.32	25	41	62	100	7.0	18,350	0.24	0.27	14	0.16	2.80	7.4	0.58	39	90	33
K3	Harringtonspruit @ Nancefield Industrial Area S26.310 E27.912	0.05	0.45	27	37	51	100	5.8	14,140	0.28	0.02	12	0.10	2.70	6.7	0.25	31	87	57
		<0.01	0.27	24	41	55	100	7.1	4,080	0.20	0.02	12	0.15	4.50	7.5	0.23	39	77	23
		<0.01	0.41	25	45	55	100	7.0	2,280	0.23	0.02	14	0.26	3.60	7.2	0.34	42	88	22
K4	Klip River @ Olifantsvlei Sewage Works S26.337 E27.903	0.01	1.20	23	32	55	99	6.0	14,560	0.21	0.07	12	0.22	2.00	7.4	0.70	33	85	21
		0.01	0.41		44	59		5.1	15,380	0.27	0.02	14	0.15	3.70	6.8	0.41	37	120	
		<0.01	0.31		51	63		6.0	5,500	0.24	0.01	14	0.22	3.80	7.6	0.22	48	80	
K5	Klipspruit @ Kliptown S26.290 E27.886	<0.01	0.67		56	57		5.7	1,410	0.25	0.02	16	0.28	3.70	7.3	0.33	51	100	
		<0.01	0.58		45	61		5.4	8,130	0.27	0.05	14	0.19	2.60	7.3	0.42	36	160	
		0.01	0.21		44	49		4.8		0.18	0.02	8	0.01	2.20	6.7	0.40	42	53	
K6	Klip River @ Soweto N12 Highway S26.295 E27.837	<0.01	0.44		42	52		6.1		0.23	0.02	11	0.02	3.30	7.5	0.34	45	59	
		<0.01	0.95		46	54		5.8		0.22	0.02	10	0.04	2.90	7.3	0.84	49	54	
		<0.01	1.90		43	54		5.3		0.24	0.04	10	0.29	3.10	7.4	0.69	37	74	
K7	Klip River @ Olifantsvlei Sewage Works S26.337 E27.903	0.01	0.52		26	48		5.0	550	0.35	0.02	12	0.88	2.50	6.6	0.18	25	99	
		<0.01	0.60		32	52		7.2	3,680	0.26	0.01	14	0.44	3.70	7.5	0.21	35	77	
		<0.01	0.55		34	52		6.4	345	0.21	0.02	14	0.48	2.70	7.4	0.27	38	92	
K8	Klipspruit @ Kliptown S26.290 E27.886	<0.01	0.44		32	52		6.2	4,090	0.21	0.04	11	0.67	1.50	7.3	0.17	29	86	
		0.01	7.60		28	59		4.6		0.38	0.04	14	1.40	0.78	6.7	0.17	27	135	
		<0.01	9.80		33	63		6.3		0.28	0.05	15	1.60	1.20	7.3	0.13	39	120	
K9	Klipspruit @ Kliptown S26.290 E27.886	<0.01	8.60		33	67		7.2		0.26	0.05	16	1.90	1.20	7.4	0.07	34	160	
		<0.01	5.50		29	62		5.7		0.23	0.08	12	1.80	0.76	7.3	0.08	24	155	
		0.01	0.99		20	48		4.5		0.27	0.02	15	0.46	0.98	6.7	0.30	21	85	
K10	Klip River @ Everite S26.421 E28.095	<0.01	1.30		24	58		4.7		0.21	0.02	24	0.55	1.80	7.5	0.29	32	115	
		<0.01	0.99		37	63		5.4		0.25	0.02	24	1.20	1.60	7.4	0.26	31	140	
		<0.01	0.47		15	52		4.8		0.20	0.03	17	0.47	0.76	7.3	0.23	21	145	
K11	Klip River from Roodepoort @ R41 Bridge S26.169 E27.833	0.02	2.80		83	85		1.8	55,140	0.74	0.11	18	1.40	0.81	6.6	0.17	49	200	
		0.02	7.08		68	105		2.0	112,100	1.10	0.35	20	1.90	1.50	6.9	0.23	49	250	
		<0.01	5.30		115	110		4.5	217,760	0.59	0.12	25	1.60	0.84	7.1	0.17	77	290	
K12	Elsburgspruit @ Heidelberg Road S26.250 E28.204	0.01	3.40		33	78		2.9	9,340	0.40	0.05	22	1.10	0.44	7.0	0.06	36	290	
		0.05	3.20		22	68		3.3		0.46	0.29	8	0.20	0.38	6.6	0.57	23	120	
		0.21	4.70		30	110		5.4		0.29	0.07	8	0.21	0.95	7.0	0.50	29	190	
K13	Stream @ Witwatersrand Gold Mine S26.262 E28.222	0.29	2.80		48	180		7.6		0.39	0.03	13	0.16	1.20	7.8	0.89	41	375	
		0.01	2.30		16	97		5.4		0.13	0.07	6	0.22	0.35	7.7	0.37	25	125	

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E7	Elsburgspruit @ Elsburg Town S26.250 E28.204	0.03	6.10		42	85		3.8		1.50	0.72	19	2.50	0.78	6.5	0.11	33	320	
		0.07	10.65		40	120		3.0		0.34	0.57	18	2.40	0.90	6.8	0.24	48	255	
		0.05	12.00		83	120		4.4		2.40	0.43	27	2.80	0.83	6.5	0.42	62	290	
		<0.01	6.40		38	93		4.5		0.34	0.13	21	2.10	0.56	7.0	0.13	43	270	
E8	Stream @ Elspark S26.262 E28.222	0.03	0.12		64	120		6.6		0.73	0.02	56	1.20	0.84	6.6	0.09	63	190	
		<0.01	<0.24		110	250		8.7		0.26	0.01	120	0.26	0.60	6.9	<0.04	105	325	
		<0.01	0.95		145	250		7.7		0.30	0.01	160	0.57	0.90	6.6	<0.05	150	260	
		<0.01	0.11		34	71		6.5		0.40	0.03	30	0.18	0.75	7.1	<0.05	34	270	
N4	Natsalspruit from Simmer and Jack Mine S26.240 E28.124	3.20	0.51		91	105		5.2		1.00	8.20	34	10.00	0.94	4.3	0.13	20	265	
		4.20	0.71		125	110		6.0		0.61	15.00	30	13.00	0.66	4.4	0.08	17	245	
		3.70	0.73		165	110		6.6		0.66	18.00	42	13.00	0.97	4.4	<0.05	24	295	
		3.20	1.40		140	100		5.2		0.67	7.90	39	14.00	0.83	4.1	<0.05	23	345	
N7	Natsalspruit @ Alrode S26.298 E28.144	0.04	3.30		33	60		5.2	7,420	0.43	0.11	16	3.10	0.62	6.2	0.10	21	335	
		<0.01	5.52		44	67		5.2	67,560	0.41	0.02	14	2.00	0.74	6.8	0.04	24	195	
		<0.01	4.90		55	67		4.9	7,230	0.35	0.14	20	2.60	0.62	6.6	0.05	32	215	
		<0.01	2.80		44	64		3.9	21,180	0.39	0.26	19	3.50	0.48	6.6	0.27	24	220	
N8	Natsalspruit @ Heidelberg Road S26.426 E28.165	0.02	1.90	21	55	66	100	5.1	73,750	0.34	0.02	16	0.37	1.70	6.7	0.39	39	120	13
		<0.01	3.29	21	77	76	100	5.8	3,480	0.32	0.02	17	0.41	3.40	7.4	0.19	52	105	<10
		<0.01	3.90	25	75	76	100	5.8	2,080	0.36	0.03	19	0.44	3.30	7.3	0.43	58	125	<10
		<0.01	1.00	20	61	72	99	5.5	11,160	0.32	0.12	17	0.32	2.40	7.4	0.26	41	140	12
R1	Rietspruit from Sallies S26.305 E28.336	0.02	0.12		52	170		5.5		0.33	0.01	36	0.19	0.13	6.5	<0.05	97	340	
		<0.01	0.12		86	115		6.4		0.27	0.02	59	0.44	0.26	7.1	<0.05	110	115	
R2	Withokspruit Tributary S26.324 E28.338	0.02	0.14		24	41		6.6		0.43	0.03	11	0.02	0.92	6.9	<0.05	18	51	
		0.03	<0.24		21	41		7.7		0.42	0.05	12	0.07	0.36	7.6	<0.05	25	32	
		<0.01	0.21		25	40		7.8		0.33	0.08	15	0.16	1.10	7.4	0.07	26	45	
		0.03	0.13		13	44		5.5		0.32	0.06	11	0.09	0.49	7.4	<0.05	15	44	
R3	Tributary @ Van Dyk Consolidated S26.259 E28.321	0.01	0.12		37	51		5.6		0.54	0.02	15	0.01	0.78	7.0	0.21	30	69	
		<0.01	<0.24		17	35		6.7		0.34	0.03	11	0.03	0.78	7.3	<0.05	20	44	
		<0.01	0.20		36	33		8.2		0.34	0.04	12	0.03	0.77	7.1	0.07	18	28	
		0.02	0.11		16	58		4.7		0.69	0.04	9.7	0.12	0.51	7.3	<0.05	17	62	
R4	Rietspruit @ Vosloorus S26.372 E28.245	0.01	0.12		67	165		4.4		0.36	0.01	43	0.07	1.10	6.8	0.06	92	260	
		<0.01	<0.24		105	180		8.1		0.40	<0.01	68	0.09	0.28	7.5	<0.05	91	370	
		<0.01	0.11		120	200		8.8		0.38	0.01	96	0.14	0.80	7.3	0.09	105	690	
		<0.01	0.11		84	155		5.9		0.49	0.01	73	0.13	0.33	7.5	<0.05	90	290	
R5	Rietspruit @ Hardmans Farm S26.429 E28.181	0.01	0.16		59	140		6.4	14,380	0.30	<0.01	45	0.09	1.50	7.1	0.31	81	380	
		<0.01	<0.24		67	125		7.5	6,660	0.35	0.01	47	0.10	0.85	8.0	<0.05	59	275	
		<0.01	0.56		98	155		7.6	7,820	0.38	0.02	75	0.22	2.10	7.7	0.19	82	425	
		<0.01	0.70		66	120		3.9	225,780	0.34	0.03	55	0.11	0.73	7.7	0.16	54	340	
R6	Rietspruit @ Hardmans Farm S26.429 E28.181	0.02	0.94	20	53	71	100	5.3	20,190	0.31	0.02	18	0.17	2.00	6.8	2.70	40	145	40
		0.03	1.61	19	78	79	100	5.5	6,230	0.29	0.05	18	0.32	4.40	7.5	0.17	50	130	<10
		<0.01	2.20	21	82	82	100	5.7	1,090	0.39	0.02	23	0.34	4.10	7.2	0.36	59	165	13
		<0.01	0.26	18	60	76	99	4.9	4,180	0.29	0.05	19	0.17	3.00	7.4	0.25	43	140	23

**Key**

N4	Natsalspruit from Simmer and Jack Mine	3.20	0.51	- 1 Jan to 31 Mar 2012
		4.20	0.71	- 1 Apr to 30 Jun 2012
		3.70	0.73	- 1 Jul to 30 Sep 2012
		3.20	1.40	- 1 Oct to 31 Dec 2012

**Water Quality Guidelines**

	- Ideal
	- Acceptable
	- Tolerable
	- Unacceptable