

Rand Water
Quarterly Water Quality Status of the Blesbokspruit Catchment

01 Oct 2018 - 30 Sep 2019



Sample Points	Sample Point Description	Quarter	Aluminium	Ammonia	Chemical Oxygen Demand	Chloride	Conductivity	Daphnia Toxicity	Dissolved Oxygen	E.coli	Fluoride	Iron	Magnesium	Manganese	Nitrate	pH	Phosphate	Sodium	Sulphate	Suspended Solids
B12	Stream from Kaydale Station 26° 28.627'S 28° 24.266'E	1	0.08	3.37		59	80		1.7		0.50	0.14	18	0.22	2.73	7.4	1.40	28	144	
		2	0.03	0.23		76	96		0.5		0.88	0.08	22	0.14	1.28	7.7	0.46	82	220	
		3	0.22	1.65		45	67		1.5		0.80	0.26	18	0.15	2.17	7.5	0.56	51	153	
		4	0.08	4.55		61	89		4.4		0.80	0.11	21	0.31	0.87	7.5	0.82	72	217	
B10	Blesbokspruit Weir @ Heidelberg 26° 30.641'S 28° 21.049'E	1	0.03	1.10	26	70	112	91	1.4	1,437	1.05	0.08	28	0.22	2.26	7.7	0.90	91	296	26
		2	0.06	1.11	29	67	96	100	2.1	5,509	0.87	0.16	20	0.12	1.18	7.9	0.63	66	214	85
		3	0.06	0.19	17	66	107	100	3.6	1,041	1.11	0.10	24	0.09	1.28	7.9	0.48	68	334	29
		4	0.07	0.44	20	81	133	99	4.0	1,387	1.45	0.10	33	0.24	1.97	7.7	0.43	101	424	15
S1	Suikerbosrant River below Balfour 26° 37.793'S 28° 17.797'E	1	0.04	0.18		60	57		0.9	334	0.43	0.13	21	0.23	0.57	7.8	0.25	51	72	
		2	0.05	0.10		44	44		0.6	1,958	0.49	0.14	11	0.05	0.54	7.6	0.41	32	12	
		3	0.11	0.07		28	35		2.4	188	0.43	0.17	12	0.10	0.52	7.6	0.26	25	17	
		4	0.03	0.18		50	61		4.9	36	0.42	0.03	17	0.02	2.41	7.7	0.25	47	24	
S2	Suikerbosrant River Weir @ Three Rivers 26° 40.253'S 28° 01.828'E	1	0.04	0.04	20	88	121	98	2.3	144	0.68	0.08	29	0.07	3.61	8.0	0.41	90	391	16
		2	0.04	0.12	22	73	88	100	1.7	407	0.86	0.08	20	0.03	1.28	8.1	0.42	65	217	30
		3	0.10	0.10	16	66	101	100	3.6	389	1.05	0.11	23	0.07	1.35	8.0	0.32	66	305	19
		4	0.04	0.94	19	87	121	100	5.3	165	1.36	0.07	34	0.07	2.13	8.0	0.32	117	442	19

Key

B12	Stream from Kaydale Station 26° 28.627'S 28° 24.266'E	1	0.08	3.37	- 1 Oct to 31 Dec 2018
		2	0.03	0.23	- 1 Jan to 31 Mar 2019
		3	0.22	1.65	- 1 Apr to 30 Jun 2019
		4	0.08	4.55	- 1 Jul to 30 Sep 2019

Water Quality Guidelines

	- Ideal
	- Acceptable
	- Tolerable
	- Unacceptable
	- Not analysed

Variables	Measured as	Ideal Catchment Background	Acceptable Management Target	Tolerable Interim Target	Unacceptable
Physical					
Conductivity	mS/m	< 45	45 - 70	70 - 120	> 120
Dissolved Oxygen (O ₂)	mg/l O ₂		> 6.0	5.0 - 6.0	< 5.0
pH	pH units	6.5 - 8.5			< 6.5; > 8.5
Suspended Solids	mg/l	< 20	20 - 30	30 - 55	> 55
Organic					
Chemical Oxygen Demand (COD)	mg/l	< 20	20 - 35	35 - 55	> 55
Macro Elements					
Aluminium (Al)	mg/l		< 0.3	0.3 - 0.5	> 0.5
Ammonia (NH ₄)	mg/l	< 0.1	0.1 - 1.5	1.5 - 5.0	> 5.0
Chloride (Cl)	mg/l	< 80	80 - 150	150 - 200	> 200
Fluoride (F)	mg/l	< 0.19	0.19 - 0.70	0.70 - 1.00	> 1.00
Iron (Fe)	mg/l	< 0.1	0.1 - 0.5	0.5 - 1.0	> 1.0
Magnesium (Mg)	mg/l	< 8	8 - 30	30 - 70	> 70
Manganese (Mn)	mg/l	< 0.2	0.2 - 0.5	0.5 - 1.0	> 1.0
Nitrate (NO ₃)	mg/l	< 0.5	0.5 - 3.0	3.0 - 6.0	> 6.0
Phosphate (PO ₄)	mg/l	< 0.2	0.2 - 0.4	0.4 - 0.6	> 0.6
Sodium (Na)	mg/l	< 70	70 - 100	100 - 150	> 150
Sulphate (SO ₄)	mg/l	< 150	150 - 300	300 - 500	> 500
Bacteriological					
<i>E. coli</i>	counts/100ml	< 130	130 - 200	200 - 400	> 400
Faecal coliforms	counts/100ml		< 126	126 - 1,000	> 1,000
Biological					
<i>Daphnia</i>	% survival	100	90 - 100	80 - 90	< 80