

Sample Points	Sample Point Description	Ammonia	Chloride	Fluoride	M-Alkalinity	Nitrate	Phosphate	Sulphate	Chemical Oxygen Demand	Conductivity	pH	E. coli
VE	Vaal River @ Ermelo 26°21'46.17"S 30° 6'31.15"E	0.12	12.00	0.20	42.00	0.15	0.04	40.00	19.00	23.00	6.9	
		0.12	<10	0.15	46.00	0.11	<0.036	14.00	17.00	14.00	7	
		0.12	9.60	0.20	48.00	0.33	0.17	17.50	15.50	18.00	7.2	
		0.12	12.00	0.13	65.00	<0.10	<0.05	21.00	19.00	23.00	7.1	
ZD	Zaaihoek Dam 27°09'47.0"S 29°52'42.8"E	0.12	<10	0.11	<5.0	0.20	<0.036	8.10	28.00	82.00	7.7	71.00
		0.12	<10	0.33	135.00	<0.10	<0.036	20.00	20.00	32.00	7.7	98.00
		0.12	11.00	0.34	155.00	<0.10	<0.036	32.00	20.00	38.00	7.8	
		0.12	11.00	0.23	170.00	<0.10	<0.05	30.00	17.00	39.00	8.3	
VKV	Klein Vaal River @ Goedehoop 26°49'12.19"S 30° 8'12.00"E	0.12	<10	0.12	59.00	0.18	0.04	8.80	14.00	11.00	7	
		0.12	<10	0.10	52.00	<0.10	<0.036	<5	12.00	13.00	7.2	
		0.12	5.90	0.06	64.00		<0.036	<5	11.00	16.00	7.41	
		0.12	<10	0.06	64.00	0.10	<0.05	7.60	11.00	17.00	7.2	
VRA	Rietspruit below Amersfoort 26°54'47.20"S 29°52'19.22"E	0.12	15.00	0.24	110.00	0.36	0.05	53.00	17.00	25.00	7.6	
		0.12	<10	0.23	135.00	<0.10	0.11	21.00	18.00	32.00	7.9	
		0.12	12.45	0.14	200.00	<0.10	<0.036	27.00	11.50	46.00	8.23	
		0.12	22.00	0.20	215.00	0.15	<0.05	49.00	24.00	54.00	8.7	
VKK	Brummerspruit below Ermelo 26°30'49.51"S 29°54'27.37"E	19.00	30.00	0.24	170.00	0.12	1.80	92.00	51.00	67.00	7.3	
		11.00	22.00	0.24	155.00	0.11	1.30	115.00	45.00	60.00	7.4	
		8.80	35.50	0.16	170.00	0.47	2.08	91.50	40.50	62.00	7.52	
		18.00	37.00	0.21	170.00	0.74	2.10	120.00	72.00	69.00	7.2	
VKR	Tweefontein @ Riverside 26°37'21.17"S 29°50'16.24"E	2.50	19.00	0.27	140.00	0.59	0.53	54.00	29.00	49.00	7.2	
		0.34	18.00	0.33	165.00	1.20	0.14	68.00	32.00	52.00	7.6	
		0.55	20.50	0.15	155.00	1.45	0.46	44.00	28.00	50.00	7.7	
		8.60	30.00	0.17	180.00	1.20	1.60	92.00	44.00	64.00	7.4	
VK	Brummerspruit before Vaal River 26°46'51.26"S 29°48'23.51"E	1.40	17.00	0.26	120.00	0.95	0.46	52.00	25.00	44.00	7.2	
		0.12	16.00	0.30	180.00	0.79	0.06	48.00	25.00	48.00	7.7	
		0.12	19.50	0.16	150.00	1.14	0.19	43.00	24.50	50.00	7.94	
		0.12	25.00	0.22	165.00	3.60	0.58	69.00	22.00	55.00	8.2	
VAS	Vaal River above Standerton 26°51'18.56"S 29°41'51.61"E	0.54	11.00	0.22	91.00	0.51	0.11	35.00	20.00	31.00	7.2	
		0.12	<10	0.18	95.00	<0.10	<0.036	20.00	16.00	26.00	7.2	
		0.12	12.00	0.13	125.00	0.23		27.00	16.50	40.00	8.1	
VGK	Geelklipspruit below Amersfoort 26°57'53.51"S 29°40'19.12"E	0.12	19.00	0.27	215.00	0.10	0.04	56.00	22.00	57.00	8.1	
		0.12	<10	0.34	185.00	<0.10	<0.036	38.00	20.00	44.00	8.1	
		0.12	15.00	0.16	225.00	<0.10	<0.036	44.50	13.00	56.00	8.2	
		0.12	25.00	0.21	250.00	<0.10	<0.05	75.00	20.00	64.00	8.5	
VBB	Blesbokspruit below Bethal 26°34'2.11"S 29°26'41.21"E	1.80	39.00	0.52	130.00	0.24	1.30	37.00	76.00	53.00	7	
		0.12	24.00	0.45	140.00	0.35	0.84	34.00	31.00	45.00	7.3	
		7.50	29.60	0.26	175.00	0.80	1.51	32.00	38.30	58.00	7.47	
		6.00	58.00	0.36	220.00	5.10	1.80	54.00	47.00	74.00	7.9	
VBS	Blesbokspruit @ Skaapkraal 26°38'17.35"S 29°27'6.24"E	0.12	38.00	0.47	54.00	0.23	0.88	40.00	56.00	58.00	7.7	
			12.00	0.33	98.00	0.17	0.30	33.00	33.00	32.00	7.7	
		0.32	31.30	0.27		1.71	0.45	41.00	38.00		8.6	
	0.12	58.00	0.43	225.00	2.00	0.87	68.00	42.00	72.00	9		
VB	Blesbokspruit @ Vaal River Confluence 26°49'57.05"S 29°30'32.95"E	0.12	19.00	0.38	56.00	0.23	0.19	55.00	34.00	53.00	7.4	
		0.33	<10	0.31	115.00	0.17	0.20	30.00	30.00	33.00	7.6	
		0.12	25.00	0.27	200.00	2.00	0.27	46.00	31.50	54.00	8	
		0.12	44.00	0.37	235.00	0.24	<0.05	86.00	33.00	70.00	8.4	
ND-LEEU	Leeuspruit @ New Denmark Colliery 26°51'16.79"S 29°19'31.56"E	0.12	<10	0.38	72.00	0.22	0.10	29.00	50.00	40.00	6.8	
		0.12	<10	0.32	67.00	<0.10	0.04	20.00	43.00	18.00	8	
		0.12	17.50	0.19		0.22		34.50	29.50		8.02	
		0.12	33.00	0.34	230.00	0.14	<0.05	84.00	24.00	65.00	8.5	
VS	Vaal River @ Standerton 26°56'51.37"S 29°15'32.09"E	0.12	<10	0.28	63.00	0.55	0.06	22	31.00	23.00	6.9	
		0.12	<10	0.23	66.00	0.15	<0.036	20.00	18.00	21.00	6.8	
		0.12	7.20	0.36	72.00	0.26	0.08	16.00	21.00	22.00	7.37	
		0.12	<10	0.19	74.00	0.12	<0.05	22.00	19.00	23.00	7.9	

Sample Points	Sample Point Description	Ammonia	Chloride	Fluoride	M-Alkalinity	Nitrate	Phosphate	Sulphate	Chemical Oxygen Demand	Conductivity	pH	E. coli
S-BETHAL	Bethal Sewage Works 26°29'8.05"S 29°27'15.88"E	1.70	42.00	0.98	150.00	4.20	0.74	58.00	30.00	58.00	7.4	3000.00
		2.40	54.00	0.69	160.00	3.40	6.90	59.00	52.00	68.00	6.8	222610.00
		7.46	22.35	0.26	210.00	0.72	6.63	16.45	30.00	68.00	7.5	6420.00
		13.00	52.00	0.37	180.00	1.00	3.30	46.00	70.00	62.00	7.6	28880.00
S-ESW	Ermelo Sewage Works 26°30'42.84"S 29°57'51.11"E	0.12	<10	0.13	36.00	0.11	0.04	55.00	18.00	20.00	6.7	2020.00
		28.00	42.00	0.32	245.00	<0.10	3.90	56.00	210.00	75.00	7.1	1295070.00
		25.00	53.00	0.19	195.00	6.80	2.95	67.00	90.00	77.00	7.75	363511.50
		23.00	51.00	0.16	195.00	1.90	3.70	140.00	210.00	84.00	7.2	1673000.00
S-TUTU	Tutukani Sewage Works 26°47'36.70"S 29°17'30.43"E	16.00	74.00	0.43	130.00	0.93	2.30	51.00	34.00	52.00	7.4	100.00
		17.00	70.00	0.29	135.00	<0.10	2.10	50.00	33.00	51.00	7.2	26.00
		0.81	95.00	0.18	130.00	17.00	0.33	41.00	22.00	56.00	7.22	153.00
		2.20	100.00	0.18	93.00	1.80	0.31	60.00	28.00	52.00	7.2	95.00
S-MAJUBA	Majuba Power Station Sewage Works 27° 5'23.45"S 29°46'11.44"E	1.00	17.00	0.30	94.00	5.20	0.48	83.00	22.00	46.00	7.1	1300.00
		2.37	73.00	0.18	98.00	7.03	0.94	56.00	41.00	71.00	7.94	163.00
		2.37		0.18		7.03	0.94	56.00	41.00		7.9	163.00
		3.50	28.00	0.12	97.00	4.00	0.51	120.00	67.00	54.00	7.9	210.00
S-ND-SOUTH	New Denmark Colliery - South Shaft 26°44'41.51"S 29°18'31.70"E	6.70	115.00	0.27	125.00	7.80	5.00	47.00	58.00	75.00	7.2	99.00
		2.70	86.00	0.28	92.00	7.40	2.50	46.00	53.00	66.00	7.6	0.67
		2.53	81.00	0.22	110.00	6.17	1.53	40.00	33.30	58.00	7.77	236.00
		1.70	48.00	0.15	125.00	<0.10	1.20	47.00	41.00	68.00	7.6	125.00

Sewage Works Compliance (where applicable) to General Standard (GN 1191 Oct 1999)

S-BETHAL	Bethal Sewage Works 26°29'8.05"S 29°27'15.88"E	1.70		0.98		4.20	0.74		30.00		7.40	3000.00
		2.40		0.69		3.40	6.90		52.00		6.80	222610.00
		7.46		0.26		0.72	6.63		30.00		7.50	6420.00
		13.00		0.37		1.00	3.30		70.00	62.00	7.60	28880.00
S-ESW	Ermelo Sewage Works 26°30'42.84"S 29°57'51.11"E	0.12		0.13		0.11	0.04		18.00		6.70	2020.00
		28.00		0.32		<0.10	3.90		210.00		7.10	1295070.00
		25.00		0.19		6.80	2.95		90.00		7.75	363511.50
		23.00		0.16		1.90	3.70		210.00	84.00	7.20	1673000.00
S-TUTU	Tutukani Sewage Works 26°47'36.70"S 29°17'30.43"E	16.00		0.43		0.93	2.30		34.00		7.40	100.00
		17.00		0.29		<0.10	2.10		33.00		7.20	26.00
		0.81		0.18		17.00	0.33		22.00		7.20	153.00
		2.20		0.18		1.80	0.31		28.00	52.00	7.20	95.00
S-MAJUBA	Majuba Power Station Sewage Works 27° 5'23.45"S 29°46'11.44"E	2.20		0.21		9.30	0.98		35.00		7.30	15.00
		1.00		0.30		5.20	0.48		22.00		7.10	1300.00
		2.37		0.18		7.03	0.94		41.00		7.90	163.00
		3.50		0.12		4.00	0.51		67.00	54.00	7.90	210.00
S-ND-SOUTH	New Denmark Colliery - South Shaft 26°44'41.51"S 29°18'31.70"E	6.70		0.27		7.80	5.00		58.00		7.20	99.00
		2.70		0.28		7.40	2.50		53.00		7.60	0.67
		2.53		0.22		6.17	1.53		33.30		7.70	236.00
		1.70		0.15		<0.10	1.20		41.00	68.00	7.60	125.00

Key

VAS	Vaal River above Standerton	0.12	-	1 Oct 10 - 31 Dec 10
		0.12	-	1 Jan 11 - 31 Mar 11
		0.54	-	1 Apr 11 - 30 Jun 11
		0.12	-	1 July 11 - 30 Sept 11

Water Quality Guidelines

	-	Ideal
	-	Acceptable
	-	Tolerable
	-	Unacceptable