A. WETLAND PLANT COMMUNITIES.

TABLE 18. THE DISTINCTIVE WETLAND PLANT COMMUNITIES IN THE RIETVLEI

Plant Community	Vegetation Description	Environment	Invasion Status
Perennial wetland	• *Zostera capensis* (sea grass) was absent • *Potamogeton pectinatus* (fonteingras) is Angiosperm • aquatic angiosperm *Ruppia maritima* • Abundant (mainly microscopic) algae and phytoplankton	In summer this community is occasionally exposed in parts. In recent history, shores of perennial sectors were white when exposed, instead of black mud colour they are now. This is due to increased eutrophication.	Increase in perennial status and decrease in intrusion of salinity from the ocean, may reach problematic levels present at Sandvlei
Reed Marsh	• virtually monospecific stands of *Phragmites australis* (fluitjiesriet) • monospecific intrusions of *Typha capensis* (bulrush) • the alga like aquatic *Potamogeton pectinatus* (fonteingras) • *Cyperus textilus* (matjiesgoed) and *Scirpus littoralis* (papgras), show sporadic occurrence	*Phragmites* reed beds prefer slightly brackish conditions on saturated soils	*Typha caponises* (bulrush) is the largest infestation is adjacent to the sewerage treatment works
Sedge Marsh	• Sedge species are well represented in this system, *Bolboschoenus maritimus* (sareegras) and, to lesser extend *Juncus kraussii* (biesie) • Other perennial associates are *Sarcocornia pillansii* (brakbos), *Triglochin bulbosa* (triglochin), *Sporobolis virginicus* (brakgras) and *Zantedeschia aethiopica* (arum)	This is floodplain vegetation and receives winter flooding primarily from running water.	*Pinnesetum clandestinum* (Kikuyu grass) colonise the upper reaches of the Diep River floodplain and is encouraged by resident landowners. *Paspalum vaginatum* (couchgrass) infested the waterlogged parts. Noxious alien *Sesbania punicea* (sesbania) are found on the landward fringes.
Open Pan	• sparse cover of macrophytes mainly comprising *Limosella capensis* (slangkos) and *Salicornia meyeriana* (glasswort) • during winter floods certain algae, such as *Hydrodictyon africanum* (hydrodictyon) become evident • *Ruppia maritima* (Ruppia) and *Zannichellia aschersoniana* (Zannichellia) are also notable components of the submerged growth	Shallow clay-based depressions are inundated soon after first rains during April-May.	The tendency of *Paspalum* to encroach from the adjacent Sedge Pan communities at the end of the dry season.

Table 18 cont.

Plant Community	Vegetation Description	Environment	Invasion Status
Sedge Pan:	• dried *Bolboschoenus maritimus* (sareegras) reeds are noticeable during the peak of the dry season • soon after first rains *Aponogeton distachyos* (waterblommetjie) and *Spiloxene aquatica* (water sterretjie) appear • Floristically speaking, this community appears to be transitional between Sedge Marsh and Open Pan	The flood pattern is much the same as that for Open Pan vegetation (above)	Monospecific stands of densely clumped *Paspalum.*
Strandveld	• terrestrial shrubland consisting of a scattered perennial overstory of spinescent species, succulents and moderately tall evergreen thickets • consist mainly of Asteraceae (daisies) • A comparatively low diversity of geotypes (bulbous species) is also present	Occupied coastal sands, which are well drained, calcareous and normally alkaline.	Invariably invaded by either an alien woody overstory or by *Pennisetum swards*

This Table is a summary from Lochner P, Barwell L, and Morant P, (1994 (a)))

B. HISTORY OF IMPOUNDMENTS, AND EXISTING MONITORING POINTS IN THE DIEP RIVER CATCHMENT.

TABLE 19. HISTORY OF IMPOUNDMENTS IN THE DIEP RIVER CATCHMENT AND THEIR STORAGE CAPACITIES

Dam name	River	Nearest Town	Quaternary Catchment	Year Built	Capacity (Mm^3)
Ou-werf	Riebeeks	Malmesbury	G21C	1976	0.051
Oak Valley	Riebeeks	Malmesbury	G21C	1973	0.082
Lelyfontein No. 1	Riebeeks	Malmesbury	G21C	1972	0.114
Lelyfontein No. 2	Riebeeks	Malmesbury	G21C	1972	0.114
Rheeboksfontein	-	Malmesbury	G21C	1981	0.000
Goedgedacht No. 1	Riebeeks	Malmesbury	G21C	1986	0.070
Goedgedacht No. 2	Riebeeks	Malmesbury	G21C	1986	0.070
Ongegund	Spruit	Malmesbury	G21C	1989	0.086
Rhenosterbosrug	Diep	Malmesbury	G21C	1983	0.050
Welgelegen	Diep	Malmesbury	G21C	1984	0.073
Nelson-groot	Diep	Malmesbury	G21D	1989	0.017
Niel De Waal	Sand	Paarl	G21E	1991	0.150
Varsfontein	Klapmuts	Paarl	G21E	1984	0.137
Hoogstede-vlei	Sand	Paarl	G21E	1973	0.114
Hoogstede-berg	-	Paarl	G21E	1965	0.068
Blijdskap	Klapmuts	Malmesbury	G21E	-	0.220
Groot Phesantekraal	Mosselbank	Dullstroom	G21E	1966	0.274
Weltevreden-groot	Mosselbank	Kraaifontein	G21E	1955	0.060
Weltevrede	Mosselbank	Kraaifontein	G21E	1964	0.060
Adderley	Diep	Durbanville	G21F	1985	0.144

Table adopted from Midgley DC, WV Pitman, and BJ Middleton (1994).

TABLE 20. GROUNDWATER ABSTRACTION DETAILS

Area/ Name	Borehole Code Name	Quality of Groundwater	Ownership
Leliefontein Skaapkraal	817/2B	Good	DWAF
Olyphants Fontyn 766	766/1W	Poor	DWAF
Rozenburg 771	771/1W	Poor	DWAF
Spes Bona/ Kalbaskraal	824/2	Poor	DWAF
Vryheid 51	51/1B	Poor	DWAF
Rustplaats 682	682/1B	Poor	DWAF
Vissershok 957	957/1B	Poor	DWAF
Mosselbank 906	906/1B	Poor	DWAF
Groen Rivier Outspan 759	759/1B *	Poor	DWAF
Kliprug 942	942/1B	Poor	DWAF
Draaihoek 44	44/1B	Poor	DWAF
Dassenvalley 45	45/003B *	Poor	DWAF
Swellengift 42	42/1B	Poor	DWAF
De Grendel 780	780/1B	Poor	DWAF
Adderley 66	66/1B	Poor	DWAF
Lichtenburg/Riverside	171/1B	Poor	DWAF

TABLE 21. EXISTING WATER MONITORING POINTS IN THE CATCHMENT

DWAF Codes	Site Description	Type Of Monitoring	Frequency	Responsibility
SURFACE WATER QUALITY				
G202 DR A	At a road bridge, on farm road leading to R45.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF; CMC
G202 DR B	On farm Skoonespruit, off R45.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR C	Upstream of Malmesbury, at road bridge upstream of campground.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR D	Immediately downstream of railway bridge, access via farm, below Malmesbury.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR E	At road bridge leading to Abbotdale.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR F	Downstream of road bridge, on road to Kalbaskraal.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR G	Upstream of confluence of Diep with Mosselbank River and Philadelphia Stream, immediately upstream of roadbridge, on dirt road to Kalbaskraal from R304.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR H	Downstream of R304 road bridge, immediately below confluence of Mosselbank River.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR I	Downstream of N7 road bridge.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR L	Upstream of Blaauwberg Bridge, opposite Killarney.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR M	At Otto Du Plessis Bridge (Milnerton)	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR J	Downstream of dirt road culvert, on western side of N7.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
G202 DR K	Upstream of R304 bridge, near town of Philadelphia.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 C	Downstream of road bridge over R312, immediately east of R302 junction.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 A	Off R304. Near Tygerberg Zoo.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 B	Downstream of road bridge on R312, near Fisantekraal.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 D	Downstream of road bridge leading to Melish.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 H	Downstream of bridge over R304, west of R302 junction.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 J	At farm off R304, immediately upstream of confluence of Mosselbank and Diep Rivers.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 L	In pine forest, downstream of R312 road bridge.	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
MR 720 G	Off R304, downstream of K15A	Macro, trace metals; biomonitoring	± 2 months; annual	DWAF
SOURCE IMPACTS ON SURFACE WATER QUALITY				
Malmesbury WWTW	Malmesbury Wastewater Treatment Works	Macro, trace metals, bacteriological	± 2 months	DWAF
Kraaifontein WWTW	Kraaifontein Wastewater Treatment Works	Macro, trace metals, bacteriological	± 2 months	DWAF
Milnerton WWTW	Milnerton Wastewater Treatment Works	Macro, trace metals, bacteriological	± 2 months	DWAF

Table 21 cont.

DWAF Codes	Site Description	Type Of Monitoring	Frequency	Responsibility
SURFACE WATER QUANTITY				
G2H012	Diep River, Malmesbury	Flow	Daily	DWAF
G2H013	Mosselbank, Klipheuwel	Flow	Daily	DWAF
G2H014	Diep River, Visserhok	Flow	Daily	DWAF
G2H041	Diep River, De Goede Ontmoeting	Flow	Daily	DWAF
COASTAL WATER QUALITY				
cn22	Sample site +/- 50m South of Diep River estuary	Bacteriological	2 weeks	CMC
xcn04	Sample site in front of Milnerton Lighthouse	Bacteriological	2 weeks	CMC
GROUNDWATER QUALITY				
		Depth/m – type of monitoring		
817/2B	Leliefontein Skaapkraal	N/A – macro, Trace metal	± 3 months	DWAF
766/1W	Olyphants Fontyn 766	2.00 – macro, Trace metal	± 3 months	DWAF
771/1W	Rozenburg 771	2.62 – macro, Trace metal	± 3 months	DWAF
824/2	Spes Bona/ Kalbaskraal	83.00 – macro, Trace metal	± 3 months	DWAF
51/1B	Vryheid 51	30.00 – macro, Trace metal	± 3 months	DWAF
682/1B	Rustplaats 682	N/A – macro, Trace metal	± 3 months	DWAF
957/1B	Vissershok 957	110.00 – macro, Trace metal	± 3 months	DWAF
906/1B	Mosselbank 906	40.00 – macro, Trace metal	± 3 months	DWAF
759/1B *	Groen Rivier Outspan 759	50.00 – macro, Trace metal	± 3 months	DWAF
942/1B	Kliprug 942	60.96 – macro, Trace metal	± 3 months	DWAF
44/1B	Draaihoek 44	12.00 – macro, Trace metal	± 3 months	DWAF
45/003B *	Dassenvalley 45	12.86 – macro, Trace metal	± 3 months	DWAF
42/1B	Swellengift 42	12.00 – macro, Trace metal	± 3 months	DWAF
780/1B	De Grendel 780	75.00 – macro, Trace metal	± 3 months	DWAF
66/1B	Adderley 66	40.00 – macro, Trace metal	± 3 months	DWAF
171/1B	Lichtenburg/Riverside	16.68 – macro, Trace metal	± 3 months	DWAF

* 759/1B DON'T EXIST SINCE FEBRUARY 2000 &
* 45/003B DON'T EXIST SINCE AUGUST 2000

TABLE 22. BIOMONITORING SAMPLING POINTS (SASS4, ASPT, HAM, AND HABS1)

River	Site Code	Description	Land-Use in close vicinity	Month of Sample				
				Nov 1997	Feb 1998	Sep 1998	Oct 1999	Nov 2000
Diep	D11A	In mountain stream zone, on farm Nooitgedacht.	Agriculture	*				
Diep	D11	At a road bridge, on farm road leading to R45.	Agriculture			*	*	*
Diep	D09	Upstream of Malmesbury, at road bridge upstream of campground.	Urban	*		*	*	
Diep	D08	Immediately downstream of railway bridge, access via farm, below Malmesbury.	Urban / agriculture / downstream of Malmesbury WWTW	*	*	*	*	*
Diep	D07	At road bridge leading to Abbotdale.	Rural settlement / agriculture	*	*	*	*	*
Diep	D06	Downstream of road bridge, on road to Kalbaskraal.	Rural settlement / agriculture	*	*	*	*	*
Diep	D05A	On farm Nooitgedacht, midway between D05 and D06.	Agriculture	*		*	*	
Diep	D05	Upstream of confluence of Diep with Mosselbank River and Philadelphia Stream, immediately upstream of roadbridge, on dirt road to Kalbaskraal from R304.	Agriculture	*		*	*	*
Diep	D04	Downstream of R304 road bridge, immediately below confluence of Mosselbank River.	Agriculture	*		*	*	*
Diep	D03	Downstream of N7 road bridge.	Agriculture	*	*	*	*	*
Diep	D02	Upstream of Blaauwberg Bridge, opposite Killarney.	Industrial / urban residential	*	*	*	*	*
Riebeeks	R10	On farm Skoonespruit, off R45.	Agriculture			*	*	
Groen	Groen	Downstream of dirt road culvert, on western side of N7.	Agriculture			*	*	
Stream	Phil	Upstream of R304 bridge, near town of Philadelphia.	Small urban settlement / agriculture			*	*	
Trib Mosselbank	Trib 17	Downstream of road bridge over R312, immediately east of R302 junction.	Smallholdings, urban fringe, agriculture; downstream of inflow from Kraaifontein WWTW			*	*	
Mosselbank	M19	Off R304. Near Tygerberg Zoo.	Agriculture			*	*	
Mosselbank	M18	Downstream of road bridge on R312, near Fisantekraal.	Smallholdings, urban fringe; immediately downstream of informal high density settlement			*	*	
Mosselbank	M16	Downstream of road bridge leading to Melish.	Agriculture	*	*	*	*	*
Mosselbank	M13A	Downstream of bridge over R304, west of R302 junction.	Agriculture, rural settlement	*		*	*	
Mosselbank	M12	At farm off R304, immediately upstream of confluence of Mosselbank and Diep Rivers.	Agriculture	*		*	*	
Klapmuts	K15A	In pine forest, downstream of R312 road bridge.	Agriculture	*		*	*	
Klapmuts	K14	Off R304, downstream of K15A	Agriculture			*	*	

* Indicates the month when samples collected.
The Table is adopted from Dallas H F and Day E, reports

TABLE 23. SASS4 SCORES, ASPTS AND NUMBER OF TAXA, FOR SITES SAMPLED IN THE DIEP RIVER CATCHMENT

Site	SASS4 score					ASPT					No. of taxa					Interpretation
	Nov 1997	Feb 1998	Sep 1998	Oct 1999	Nov 2000	Nov 1997	Feb 1998	Sep 1998	Oct 1999	Nov 2000	Nov 1997	Feb 1998	Sep 1998	Oct 1999	Nov 2000	
D11A	98					7.54					13					Water quality natural, habitat diversity reduced
D11			40	58				4.40	4.6				9	11		Some deterioration in water quality
D09	62	22	57	70		4.43	3.67	4.75	4.7		14	6	12	15		Some deterioration in water quality
D08	41	30	22	37	29	3.42	3.33	3.67	4.6	3.2	12	9	6	8	9	Some deterioration in water quality
D07	52	46	25	45	50	4.00	3.83	3.57	4.1	4.2	13	12	7	11	12	Some deterioration in water quality
D06	67		36	48	78	4.47		4.00	3.4	4.3	15		9	14	18	Some deterioration in water quality
D05A	62	32	45	59		4.13	4.00	4.09	4.5		15	8	11	13		Some deterioration in water quality
D05	46		57	61	80	4.18		4.07	4.6	4.7	11		14	14	17	Some deterioration in water quality
D04	58		38	60	60	3.63		3.78	4.0	4.3	16		10	15	14	Some deterioration in water quality
D03	50	14	56	32	68	4.17	3.50	4.60	3.7	4.5	12	4	12	9	15	Some deterioration in water quality
D02	36	42	29	57	45	4.00	4.20	3.62	5.2	4.5	9	10	8	11	10	Some deterioration in water quality
R10			45	43	54			5.00	4.3	4.2			9	10	13	Some deterioration in water quality
Groen			66	76				5.08	4.5				13	17		Some deterioration in water quality
M19			15	50				3.75	3.8				4	13		Some deterioration in water quality
M18			17	22				2.83	2.8				6	8		Some deterioration in water quality
M16	42	33	11	31	44	4.20	4.13	2.75	3.9	4.9	10	8	4	8	9	Some deterioration in water quality
M13A	49		29	35		4.08		4.14	3.5		12		7	10		Some deterioration in water quality
M12	29		16	35		3.63		4.00	4.4		8		4	8		Some deterioration in water quality
K15A	76		62	32		4.75		5.10	3.6		16		12	9		Some deterioration in water quality
K14			69	27				4.60	3.0				15	9		Some deterioration in water quality
Trib17			44	38				4.40	3.8				10	10		Some deterioration in water quality
Phil			57	55				4.75	4.6				12	12		Some deterioration in water quality

Empty space, no sampling done at the sites
Adopted from Dallas H F (1997) and Day E,(1998)

C. A SUMMARY OF THE WATER QUALITY CLASSIFICATION SYSTEM SUITABLE FOR DIFFERENT USERS.

TABLE 24. WATER QUALITY CLASSIFICATION SYSTEM FOR SUITABILITY OF DRINKING WATER

Constituent	Class 0	Class 1	Class 2	Class 3	Class 4
Bacteriological					
Faecal coliforms (counts/100mℓ)	0	0-1	1-10	10-100	>100
Total coliforms (counts/100mℓ)	0	0-10	10-100	100-1000	>1000
Free available chlorine (residual)(mg/ℓ)	0.3-0.6	0.2-0.3 or 0.6-0.8	0.1—0.2 or 0.8-1.0	0.05-0.1 or 1.0-1.5	<0.05 or >1.5
Physical quality					
Electrical conductivity (mS/m)	<70	70-150	150-370	370-520	>520
Total dissolved salts (mg/ℓ)	0-450	450-1000	1000-2400	2400-3400	>3400
pH	6-9	5-6 or 9-9.5	4-5 or 9.5-10	3.5-4 or 10-10.5	<3.5 or >10.5
Turbidity (Nephelometric Turbidity Units) - *:effect with microbiological contaminants	<0.1	0.1-1	1-20*	20-50*	>50*
Chemical quality					
Arsenic (mg/ℓ)	0-0.01	0.01-0.05	0.05-0.2	0.2-2	>2
Ammonia (mg/ℓ)	0-1	1-2	2-10	>10	-
Cadmium (mg/ℓ)	0-0.003	0.003-0.005	0.005-0.02	0.02-0.05	>0.05
Calcium (mg/ℓ)	0-80	80-150	150-300	>300	-
Sodium & chloride (mg/ℓ)	0-100	100-200	200-600	600-1200	>1200
Copper (mg/ℓ)	0-0.5	0.5-1	1-2	2-15	>15
Fluoride (mg/ℓ)	0-0.7	0.7-1.0	1.0-1.5	1.5-3.5	>3.5
Iron (mg/ℓ)	0-0.1	0.1-0.2	0.2-2	2-10	>10
Manganese (mg/ℓ)	0-0.05	0.05-0.1	0.1-1	1-5	>5
Magnesium (mg/ℓ)	0-30	30-70	70-100	100-200	>200
Nitrate + Nitrite (mg/ℓ)	0-6	6-10	10-20	20-40	>40
Potassium (mg/ℓ)	0-25	25-50	50-100	100-500	>500
Sulphate (mg/ℓ)	0-200	200-400	400-600	600-1000	>1000
Zinc (mg/ℓ)	0-3	3-5	5-10	10-20	>20
Please Note: List above is not comprehensive (See the assessment guide when assessing other domestic water quality)					

Adopted from Belcher A, et al., (1999) and DWAF water quality guidelines for domestic use, and DWAF (1996), WRC (1998)

TABLE 25. WATER QUALITY CLASSIFICATION SYSTEM (REQUIREMENTS) FOR IRRIGATION

Constituent	Class 1	Class 2	Class 3	Class 4
Electrical conductivity (mS/m)	0-40	40-90	90-270	270-540
Boron (mg/ℓ)	0-0.2	0.2-.09	0.9-1.5	1.5-3
Chloride (mg/ℓ)	0-105	105-140	140-350	>350
Fluoride (mg/ℓ)	0-2		2-7.5	7.5-15
Iron (mg/ℓ)	0-5		5-10	10-20
Manganese (mg/ℓ)	0-0.2		0.5-5	5-10
Arsenic (mg/ℓ)	0-0.1		0.1-1	1-2
Sodium (mg/ℓ) (SAR, mmol/ℓ)	0-70 0-3	70-115 3-5	115-230 5-7	>230 7-9

SAR = Sodium Adsorption Ratio
Adopted from Belcher A, et al, (1999)

TABLE 26. WATER QUALITY REQUIREMENTS FOR LIVESTOCK WATERING

Constituent	Target Range
Chloride (mg/ℓ)	0-1500 (non-ruminants) 0-300 (ruminants)
Nitrate (mg/ℓ)	0-100
Nitrite (mg/ℓ)	0-10
Sodium (mg/ℓ)	0-2000
Sulphate (mg/ℓ)	0-1000
Faecal coliforms (counts/100mℓ)	0-1000
Fluoride (mg/ℓ)	0-2 (non-ruminants) 0-6 (ruminants)
Iron (mg/ℓ)	0-10
Manganese (mg/ℓ)	0-10
Aluminium (mg/ℓ)	0-5
Boron (mg/ℓ)	0-5
Arsenic (mg/ℓ)	0-0.5
Magnesium (mg/ℓ)	0-500

Adopted from Belcher A, et al., (1999)

TABLE 27. EFFECTS FOR ELECTRICAL CONDUCTIVITY AND TOTAL DISSOLVED SALTS, WITH REGARDS TO LIVESTOCK WATERING

Class	Electrical Conductivity (mS/m)	Total dissolved salts (mg/ℓ)	Suitability
1	0-154	0-1000	Target range
2	154-770	1000-5000	Some health effects in sensitive livestock and in poultry
3	770-1540	5000-10000	Unsuitable for poultry, dairy cattle and sensitive livestock
4	>1540	>10000	Unsuitable for all livestock

Sensitive livestock = young, pregnant livestock (animals).
Adopted from Belcher A, et al., (1999)

D. ESTUARINE BIRD SPECIES.

TABLE 28. SUMMARY OF BIRD SPECIES AND DEPENDENCIES ON THE ESTUARY (MAXIMUM BIRD COUNTS RECORDED AT THE RIETVLEI SINCE 1950)

Common Name	Scientific Name	Maximum numbers	Seasonality	Breeding Status	Dietary Guilds
OPEN WATER					
Great Crested Grebe	*Podiceps cristatus*	110	R	PNB	I, P, A
Dabchick	*Tachybaptus ruficollis*	31	R	B	I, P, A
White Pelican	*Pelecanus onocrotalus*	221	R	NB	P
Whitebreasted Cormorant	*Phalacrocorax carbo*	160	R	PNB	P
Cape Cormorant	*Phalacrocorax capensis*	45	R	NB	P
Reed Cormorant	*Phalacrocorax africanus*	85	R	PNB	P
Darter	*Anhinga melanogaster*	97	R	B	P
Grey Heron	*Ardea cinerea*	84	R	B	P, A
Black Stork	*Ciconia nigra*	25	R	NB	P
African Spoonbill	*Platalea alba*	121	R	PNB	I, P, A
Greater Flamingo	*Phoenicopterus ruber*	1248	R	NB	I
Lesser Flamingo	*Phoenicopterus minor*	1379	R	NB	I
Egyptian Goose	*Alopochen aegyptiacus*	1336	R	B	H
South African Shelduck	*Tadorna cana*	164	R	PNB	H
Yellowbilled Duck	*Anas undulata*	1158	R	B	H
Cape Teal	*Anas capensis*	500	R	B	I
Redbilled Teal	*Anas. erythrorhyncha*	387	R	PB	H, I
Cape Shoveller	*Anas smithii*	1740	R	B	H, I, A
Southern Pochard	*Netta erythrophthalma*	125	R	B	H
Spurwinged Goose	*Plectropterus gambensis*	248	R	PNB	H
Maccoa Duck	*Oxyura maccoa*	1	R	PNB	I
African Fish Eagle	*Haliaeetus vocifer*	2	R	PNB	P
Redknobbed Coot	*Fulica cristata*	2946	R	B	H
Kelp gull	*Larus dominicanus*	941	R	PNB	I, P
Greyheaded Gull	*Larus cirrocephalus*	3	R	PNB	I, P

C = Common but not counted

The seasonality (R = resident, M= migrant), habitat preference (W = open water, M = bare shoreline, S = short vegetated shoreline, E = tall emergent vegetation), breeding status (B = confirmed breeding, PB = =probably breeding, PNB = probably non-breeding, NB = not breeding), and major dietary guilds (H = herbivores, I = Benthic invertebrate-feeders, P = Piscivores, A = Amphibian eaters) are given. Endemic species are underlined. Adopted from the Lochner P, L Barwell, and P Morant (1994 (b))

Table 28 cont.

Common Name	Scientific Name	Maximum numbers	Seasonality	Breeding Status	Dietary Guilds
OPEN WATER					
Hartlaub`s Gull	*Larus hartlaubii*	3598	R	B	I
Caspian Tern	*Hydroprogne caspia*	15	R	NB	P
Swift Tern	*Sterna bergii*	23	R	NB	P
Sandwich Tern	*Sterna. sandvicensis*	260	M	NB	P
Common Tern	*Sterna. hirundo*	1001	M	NB	P
Whitewinged Tern	*Ceryle leucopterus*	804	M	NB	I
Pied Kingfisher	*Ceryle rudis*	18	R	PB	P
Malachite Kingfisher	*Alcedo cristata*	3	R	PB	P
Whitethroated Swallow	*Hirundo albigularis*	C	M	B	I
Brownthroated Martin	*Riparia paludicola*	C	R	B	I
BARE SHORELINE					
Little Egret	*Egretta garzetta*	28	R	PNB	I
African Black Oystercatcher	*Haematopus moquini*	29	R	NB	I
Ringed Plover	*Charadrius hiaticula*	450	M	NB	I
Whitefronted Plover	*Charadrius marginatus*	50	R	NB	I
Kittlitz`s Plover	*Charadrius pecuarius*	867	R	B	I
Threebanded Plover	*Charadrius tricollaris*	110	R	PB	I
Grey Plover	*Pluvialis squatarola*	50	M	NB	I
Blacksmith Plover	*Vanellus armatus*	202	R	B	I
Turnstone	*Arenaria interpres*	7	M	NB	I
Wood Sandpiper	*Tringa glareola*	18	M	NB	I
Marsh Sandpiper	*Tringa stagnatilis*	190	M	NB	I
Greenshank	*Tringa nebularia*	99	M	NB	I
Crulew Sandpiper	*Calidris ferruginea*	7087	M	NB	I
Little Stint	*Calidris minuta*	2141	M	NB	I
Sanderling	*Calidris alba*	100	M	NB	I
Ruff	*Philomachus pugnax*	3000	M	NB	I
Avocet	*Recurvirostra avosetta*	2000	R	PNB	I

C = Common but not counted

The seasonality (R = resident, M= migrant), habitat preference (W = open water, M = bare shoreline, S = short vegetated shoreline, E = tall emergent vegetation), breeding status (B = confirmed breeding, PB = =probably breeding, PNB = probably non-breeding, NB = not breeding), and major dietary guilds (H = herbivores, I = Benthic invertebrate-feeders, P = Piscivores, A = Amphibian eaters) are given. Endemic species are underlined.. Adopted from the Lochner P, L Barwell, and P Morant (1994 (b))

Table 28 cont.

Common Name	Scientific Name	Maximum numbers	Seasonality	Breeding Status	Dietary Guilds
BARE SHORELINE					
Blackwinged Stilt	*Himantopus himantopus*	500	R	B	I
Cape Wagtail	*Motacilla capensis*	102	R	B	I
SHORT VEGETATED SHORELINE					
Blackheaded Heron	*Ardea melanocephela*	10	R	B	A
Yellowbilled Egret	*Egretta. intermedia*	31	R	PNB	P, A
Cattle Egret	*Bubulcus ibis*	176	R	PNB	I
Blackcroswned Night Heron	*Nycticorax nycticorax*	101	R	PNB	P, A
Sacred Ibis	*Threskiornis aethiopicus*	119	R	PNB	I, P, A
Glossy Ibis	*Plegadis falcinellus*	39	R	PNB	I
Hadeala Ibis	*Bostrychia hagedash*	3	R	PNB	I
Painted Snipe	*Rostratula benghalensis*	4	R	PB	I
Ethiopian Snipe	*Gallinago nigripennis*	64	R	B	I
Water Dikkop	*Burhinus vermiculatus*	6	R	PB	I
Levaillant`s Cisticola	*Cisticola tinniens*	C	R	PB	I
TALL EMERGENT VEGETATION					
Purple Heron	*Ardea purpurea*	14	R	PNB	P
Little Bittern	*Ixobrychus minutus*	1	R	PB	P, A
African Marsh Harrier	*Circus ranivorus*	8	R	PB	A
Black Crake	*Amaurornis flavirostris*	1	R	PB	H, I
Purple Gallinule	*Porphyrio porphyrio*	10	R	B	H
Moorhen	*Callinula choropus*	39	R	B	H
African Marsh Warbler	*Acrocephalus baeticatus*	C	M	PB	I
Cape Reed Warbler	*Acrocephalus gracilirostris*	C	R	PB	I
African Sedge Warbler	*Bradypterus baboecala*	C	R	PB	I
Cape Weaver	*Ploceus capensis*	C	R	B	H
Masked Weaver	*Ploceus velatus*	C	R	B	H
Red bishop	*Euplectes orix*	C	R	B	H
Common Waxbill	*Estrilda astrild*	C	R	PB	H

C = Common but not counted

The seasonality (R = resident, M= migrant), habitat preference (W = open water, M = bare shoreline, S = short vegetated shoreline, E = tall emergent vegetation), breeding status (B = confirmed breeding, PB = =probably breeding, PNB = probably non-breeding, NB = not breeding), and major dietary guilds (H = herbivores, I = Benthic invertebrate-feeders, P = Piscivores, A = Amphibian eaters) are given. Endemic species are underlined.. Adopted from the Lochner P, Barwell L, and Morant P (1994 (b)).

TABLE 29. MAXIMUM COUNTS OF VAGRANT WATERBIRD SPECIES RECORDED AT RIETVLEI SINCE 1950

Common Name	Scientific Name	Maximum Number
Blacknecked Grebe	*Podiceps nigricollis*	35
Crowned Cormorant	*Phalacrocorax coronatus*	1
Great White Egret	*Casmerodius albus*	1
Hamerkop	*Scopus umbretta*	6
Yellowbilled Stork	*Mycteria ibis*	1
White-faced Duck	*Dendrocygna viduata*	4
Fulvous Duck	*Dendrocygna. Bicolor*	18
Hottentot Teal	*Anas hottentota*	5
Knobbilled Duck	*Sarkidiornis melanotos*	1
Spotted Crake	*Porzana porzana*	1
Baillon`s Crake	*Porzana pusilla*	2
Common Sandpiper	*Actitis hypoleucos*	1
Redshank	*Tringa totanus*	1
Knot	*Calidris canutus*	5
Pectoral Sandpiper	*Calidris melanotos*	1
Bartailed Godwit	*Limosa lapponica*	1
Whimbrel	*Numenius phaeopus*	1
Wilson`s Phalarope	*Phalaropus ticolor*	1
Damara Tern	*Sterna balaenarum**	1
Whiskered Tern	*Chlidonias hybridus*	2
Marsh Owl	*Asio capensis*	1
Giant Kingfisher	*Ceryle maxima*	1

* - endemic

Adopted from the Lochner P, L Barwell, and P Morant (1994 (b))

TABLE 30: DETAILS OF WATERBIRD POPULATIONS AT RIETVLEI, WHICH ARE OF REGIONAL OR NATIONAL IMPORTANCE

Species	Rietvlei	SW Cape wetland population	% of the SW Cape wetland population	National coastal wetland population	% of the national coastal wetland population
Great Crested Grebe	110	206	53	371	30
Darter	97	579	17	1263	8
White Pelican	221	603	37	2662	8
Reed Cormorant	85	786	11	2906	3
Grey Heron	84	342	25	919	9
Blackheaded Heron	10	56	18	251	4
Purple Heron	14	52	27	120	12
Yellowbilled Egret	31	10	310	32	97
Cattle Egret	176	323	54	1644	11
Blackcrowned Night Heron	101	169	60	186	54
Sacred Ibis	119	243	49	620	19
Glossy Ibis	39	13	300	162	24
African Spoonbill	121	407	30	918	13
Greater Flamingo	1248	5035	25	30900	4
Lesser Flamingo	1379	6035	23	22036	6
Egyptian Goose	1336	2608	51	3773	35
S. African Shelduck	164	1393	12	2310	7
Cape Teal	500	1959	26	4387	11
Redbilled Teal	387	274	141	1482	26
Cape Shoveller	1740	3412	51	4862	36
Yellowbilled Duck	1158	3087	38	7122	16
Southern Pochard	125	991	13	4139	3
Spurwinged Goose	248	259	96	313	79
Ringed Plover	450	1460	31	5088	8
Kittlitz`s Plover	867	2166	40	2861	31
Threebanded Plover	110	303	36	656	17
Blacksmith Plover	202	1598	13	2022	10
Curlew Sandpiper	7087	53089	13	103945	7
Little Stint	2141	8280	26	20068	11

Adopted from the Lochner P, Barwell L, and Morant P (1994 (b)).

Table 30 cont.

Species	Rietvlei	SW Cape wetland population	% of the SW Cape wetland population	National coastal wetland population	% of the national coastal wetland population
Ethiopian Snipe	64	101	63	147	44
Avocet	2000	2842	70	6303	32
Blackwinged Stilt	500	1275	39	2727	18
Ruff	3000	11632	26	21220	14
Kelp Gull	941	3587	26	28774	3
Hartlaub`s Gull	3598	9353	38	29616	12
Caspian Tern	15	124	12	545	3
Sandwich Tern	260	2197	12	8151	3

Regional and national populations from Cooper & Hockey (1982).
Adopted from the Lochner P, L Barwell, and P Morant (1994 (b)).

E. WATER QUALITY DATA, SURFACE WATER OF THE DIEP RIVER CATCHMENT

Table 31-1. G202 DR A - Diep River at a road bridge, on farm road leading to R45
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
17/09/1997	8.3	95	30	0.2			56
25/11/1997	NO SAMPLE						
19/01/1998	NO SAMPLE						
10/02/1998	NO SAMPLE						
07/04/1998	NO SAMPLE						
28/04/1998	NO SAMPLE						
18/05/1998	NO SAMPLE						
08/06/1998	7.8	161	61	0.2	5.1	0.41	101
14/07/1998	8.1	254	35	0.2	1.3	0.12	98
17/08/1998	8.9	310	16	0.3	0.2	0.50	86
14/09/1998	8.1	331	14	0.2	0.2	0.03	125
05/10/1998	7.7	354	17	0.2	0.2	0.03	78
09/11/1998	NO SAMPLE						
14/12/1998	NO SAMPLE						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLE						
04/05/1999	NO SAMPLE						
08/06/1999	NO SAMPLE						
03/08/1999	7.6	107	39	0.2	0.9	0.19	77
29/09/1999	8.5	121	5	0.2	0.2	0.06	56
08/11/1999	NO SAMPLE						
09/02/2000	NO SAMPLE						
24/05/2000	NO SAMPLE						

Table 31-2. G202 DR B - Diep River above Malmesbury, On farm Skoonespruit, off R45.
SABS – analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.8	156	13	0.2			50
25/11/1997	7.6	262	13	0.2	0.2	0.03	46
19/01/1998	NO SAMPLE						
10/02/1998	NO SAMPLE						
07/04/1998	NO SAMPLE						
28/04/1998	NO SAMPLE						
18/05/1998	7.6	325	10	0.2	0.4	0.03	179
08/06/1998	7.7	133	107	0.2	7.4	1.00	79
14/07/1998	8.0	206	5	0.1	1.9	0.05	46
17/08/1998	8.0	235	11	0.2	0.2	0.10	44
14/09/1998	7.9	337	18	0.2	0.2	0.03	75
05/10/1998	7.9	356	5	0.2	0.2	0.03	42
09/11/1998	NO SAMPLE						
14/12/1998	NO SAMPLE						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLE						
04/05/1999	7.8	301	5	0.2	0.2	0.03	60
08/06/1999	NO SAMPLE						
03/08/1999	7.7	131	24	0.2	1.6	0.20	65
29/09/1999	8.2	234	14	0.2	0.2	0.03	78
08/11/1999	NO SAMPLE						
09/02/2000	NO SAMPLE						
24/05/2000	NO SAMPLE						

Table 31-3. G202 DR C - Diep River upstream of Malmesbury - Above Sewage Works
SABS – Analyses laboratory results

Date	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.8	176	49	0.2			80
25/11/1997	7.4	82	152	0.2	0.2	0.03	38
19/01/1998	8.0	243	53	0.2	0.2	0.03	73
10/02/1998	NO SAMPLE						
07/04/1998	NO SAMPLE						
28/04/1998	NO SAMPLE						
18/05/1998	7.6	278	23	0.2	0.8	0.03	279
08/06/1998	7.6	173	97	0.2	4.0	0.07	63
14/07/1998	7.8	215	19	0.2	1.2	0.03	54
17/08/1998	7.9	254	19	0.2	0.2	0.06	58
14/09/1998	7.8	269	13	0.2	0.2	0.03	75
05/10/1998	7.7	183	43	0.2	0.2	0.03	40
09/10/1998	7.6	172	42	0.2	0.2	0.03	72
14/12/1998	NO SAMPLE						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLE						
04/05/1999	7.4	79	42	0.2	0.2	0.03	48
08/06/1999	7.4	89	10	0.2	0.2	0.03	21
03/08/1999	7.4	127	29	0.2	15.1	0.21	61
29/09/1999	7.9	197	12	0.2	0.2	0.03	68
08/11/1999	NO SAMPLE						
09/02/2000	NO SAMPLES						
24/05/2000	7.9	349	36	0.2	0.2	0.03	104

Table 31-4. G202 DR D - Diep River below Malmesbury
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.1	197	56	3.7			72
25/11/1997	7.6	193	10	27.7	0.2	5.00	82
19/01/1998	7.5	174	16	38.4	0.2	12.40	90
10/02/1998	7.2	169	23	42.2	0.2	14.70	104
07/04/1998	7.3	207	17	36.6	0.2	4.20	100
28/04/1998	7.5	184	5	31.5	0.2	4.97	89
18/05/1998	7.3	239	12	12.2	0.6	1.72	76
08/06/1998	7.3	191	71	1.7	3.1	0.35	63
14/07/1998	7.4	235	16	5.2	1.0	0.86	62
17/08/1998	7.7	268	14	5.4	0.3	0.68	76
14/09/1998	7.3	249	16	2.8	3.9	1.95	95
05/10/1998	7.4	210	5	3.7	7.0	3.27	60
09/11/1998	7.1	201	34	1.2	5.3	2.03	72
14/12/1998	6.7	160	12	9.3	7.1	8.90	74
31/01/1999	7.1	130	11	3.8	0.2	10.50	51
07/03/1999	6.9	138	5	7.8	23.6	10.80	66
04/05/1999	6.8	128	32	1.8	3.4	1.71	50
08/06/1999	7.0	196	16	1.5	21.1	5.00	63
03/08/1999	7.5	141	24	0.2	1.4	0.29	77
29/09/1999	7.8	194	10	0.2	0.3	0.36	60
08/11/1999	7.4	126	13	7.0	0.2	2.62	40
09/02/2000	7.2	117	15	1.1	7.3	10.30	64
12/04/2000	6.6	108	5	1.8	13.9	10.00	38
24/05/2000	7.0	138	30	2.2	12.7	8.80	48

Table 31-5. G202 DR E - Diep River at Abbotsdale
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.1	204	19	3.3			179
25/11/1997	7.5	205	12	11.4	2.0	2.23	78
19/01/1998	7.4	226	28	15.3	2.3	4.96	71
10/02/1998	7.1	206	18	16.4	1.7	5.30	52
07/04/1998	7.5	220	26	37.4	0.2	7.50	112
28/04/1998	7.5	212	15	20.3	1.9	4.80	107
18/05/1998	7.1	254	31	9.2	2.2	1.78	139
08/06/1998	7.4	195	113	0.6	3.0	0.41	107
14/07/1998	7.3	240	16	6.8	0.8	1.08	247
17/08/1998	7.6	276	22	3.1	2.9	0.78	70
14/09/1998	7.5	261	16	0.7	3.5	1.09	105
05/10/1998	7.4	224	15	1.6	5.0	2.06	52
09/11/1998	7.4	219	21	0.2	3.4	1.31	96
14/12/1998	7.1	203	14	1.0	4.2	5.1	132
31/01/1999	7.5	173	29	0.2	0.7	7.7	41
07/03/1999	7.1	174	17	0.3	13.8	6.5	58
04/05/1999	6.8	143	51	2.2	3.5	1.23	54
08/06/1999	7.5	216	5	0.2	10.6	2.71	59
03/08/1999	7.4	63	30	0.2	5.2	0.27	98
29/09/1999	7.8	228	13	0.2	0.5	0.38	60
08/11/1999	7.5	183	12	5.1	1.1	1.55	78
09/02/2000	7.7	206	18	0.2	2.8	3.78	58
12/04/2000	7.3	164	13	0.2	8.9	6.1	58
24/05/2000	7.5	187	5	0.2	6.4	5.9	42

Table 31-6. G202 DR F - Diep River downstream of road bridge leading to Kalbaskraal
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.8	244	17	0.2			153
25/11/1997	7.8	243	10	3.0	5.1	0.92	86
19/01/1998	NO SAMPLE						
10/02/1998	NO SAMPLE						
07/04/1998	7.5	304	5	0.8	2.4	0.27	92
28/04/1998	7.4	264	10	4.8	7.1	0.80	113
18/05/1998	7.4	270	15	0.2	4.2	0.33	68
08/06/1998	7.5	191	90	0.2	2.2	0.25	95
14/07/1998	7.8	242	11	0.2	3.5	0.32	52
17/08/1998	8.0	285	10	0.3	2.2	0.47	104
14/09/1998	8.0	282	13	0.2	2.4	0.35	67
05/10/1998	NO SAMPLE						
09/11/1998	7.8	228	14	0.2	1.6	0.63	78
14/12/1998	NO SAMPLE						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLE						
04/05/1999	7.6	189	36	0.2	2.3	1.44	54
08/06/1999	7.8	231	5	0.2	8.0	2.00	51
03/08/1999	7.4	63	46	0.2	1.8	0.22	75
29/09/1999	7.9	214	10	0.2	0.4	0.30	72
08/11/1999	8.0	248	5	0.2	1.7	0.63	70
09/02/2000	NO SAMPLES						
24/05/2000	7.7	222	5	0.2	5.3	2.22	42

Table 31-7. G202 DR G - Diep River before confluence with Mosselbank
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.8	255	35	0.2			96
25/11/1997	8.0	394	38	0.2	0.2	0.03	124
19/01/1998	8.3	629	132	0.2	0.2	0.03	Not Done
10/02/1998	NO SAMPLE						
07/04/1998	NO SAMPLE						
28/04/1998	NO SAMPLE						
18/05/1998	7.5	268	42	0.4	2.7	0.10	70
08/06/1998	7.6	262	81	0.2	3.8	0.31	92
14/07/1998	7.7	279	31	0.2	2.7	0.20	114
17/08/1998	7.9	289	29	0.2	3.9	0.45	78
14/09/1998	8.0	340	22	0.2	1.0	0.09	83
05/10/1998	NO SAMPLE						
09/11/1998	7.6	270	24	0.2	0.2	0.27	96
14/12/1998	NO SAMPLE						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLE						
04/05/1999	NO SAMPLE						
08/06/1999	7.6	271	23	0.2	1.4	0.22	55
03/08/1999	7.4	63	22	0.2	1.0	0.23	92
29/09/1999	7.8	217	24	0.2	0.6	0.30	100
08/11/1999	7.9	365	28	0.2	0.2	0.13	92
09/02/2000	NO SAMPLES						
24/05/2000	NO SAMPLES						

Table 31-8. G202 DR H - Diep River at bridge below confluence of Mosselbank River
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.8	214	29	0.2			116
25/11/1997	8.0	370	37	0.2	0.2	0.270	181
19/01/1998	8.1	489	103	0.2	0.2	0.025	171
10/02/1998	NO SAMPLE						
07/04/1998	NO SAMPLE						
28/04/1998	NO SAMPLE						
18/05/1998	7.5	240	53	0.4	3.2	0.290	94
08/06/1998	7.4	158	158	0.2	5.2	1.100	116
14/07/1998	7.7	255	40	0.2	3.2	0.430	88
17/08/1998	8.0	273	34	0.6	3.2	0.990	198
14/09/1998	7.9	313	25	0.2	3.5	0.510	85
05/10/1998	8.0	298	22	0.2	2.0	0.400	104
09/11/1998	7.6	206	23	0.2	1.2	1.000	76
14/12/1998	NO SAMPLE						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLE						
04/05/1999	8.0	221	17	0.2	0.2	0.93	116
08/06/1999	7.6	260	18	0.2	3.3	0.41	71
03/08/1999	7.2	63	34	0.2	1.9	0.29	71
29/09/1999	7.7	169	18	0.2	2.2	0.78	96
08/11/1999	7.9	373	19	0.2	0.2	0.17	106
09/02/2000	NO SAMPLES						
24/05/2000	NO SAMPLES						

Table 31-9. G202 DR I - Diep River at N7 bridge
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
17/09/1997	7.7	251	60	0.2			134
25/11/1997	8.4	479	25	0.2	0.2	0.100	153
19/01/1998	8.4	639	110	0.2	0.2	0.025	Not Done
10/02/1998	8.2	765	105	0.2	0.2	0.180	Not Done
07/04/1998	8.6	1180	281	0.2	0.2	0.050	Not Done
28/04/1998	8.5	1230	216	0.2	0.2	0.080	Not Done
18/05/1998	7.4	272	51	0.3	2.2	0.300	102
08/06/1998	7.4	217	179	0.3	5.0	0.720	94
14/07/1998	7.6	219	53	0.2	2.7	0.580	72
17/08/1998	7.9	338	47	0.2	1.9	0.620	78
14/09/1998	8	318	47	0.2	3.1	0.300	97
05/10/1998	8	333	39	0.2	0.2	0.180	100
09/11/1998	7.6	306	32	0.2	0.2	0.390	118
14/12/1998	7.8	305	16	0.2	0.2	0.350	140
31/01/1999	8.3	422	63	0.2	0.2	0.160	168
07/03/1999	8	603	91	0.2	0.2	0.15	Not Done
04/05/1999	8.5	741	102	0.2	0.2	0.07	Not Done
08/06/1999	7.8	401	22	0.2	0.2	0.23	104
03/08/1999	7.2	63	52	0.2	1.6	0.31	94
29/09/1999	8	214	21	0.2	1.5	0.53	92
08/11/1999	8.2	405	18	0.2	0.2	0.14	110
09/02/2000	NO SAMPLES						
24/05/2000	8.4	1270	70	0.2	0.2	0.13	Not Done

Table 31-10. G202 DR J – Diep River at Groen River, downstream of dirt road culvert, on western side of N7
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
08/06/1998	7.4	112	14	0.2	2.8	0.07	78
14/07/1998	7.3	140	5	0.2	13.8	0.03	78
17/08/1998	7.1	125	5	0.2	6.8	0.03	90
14/09/1998	NO SAMPLES						
05/10/1998	7.1	197	84	0.3	0.15	0.13	155
09/11/1998	NO SAMPLES						
14/12/1998	NO SAMPLES						
31/01/1999	NO SAMPLE						
07/03/1999	NO SAMPLES						
04/05/1999	NO SAMPLES						
08/06/1999	NO SAMPLES						
03/08/1999	7.0	63	13	0.2	1.80	0.14	79
29/09/1999	7.2	122	5	0.2	6.20	0.03	110
08/11/1999	NO SAMPLES						
09/02/2000	NO SAMPLES						
24/05/2000	NO SAMPLES						

Table 31-11. G202 DR K - Tributary from Philadelphia
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
03/08/1999	7.5	111	340	1.4	3.0	0.31	108
29/09/1999	NO SAMPLES						
08/11/1999	NO SAMPLES						
09/02/2000	NO SAMPLES						

Table 31-12. G202 DR L - Diep River at Blaauberg Bridge
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
1996-08-06	7.5	190	23	0.2	1.40	0.32	89
1996-09-02	7.5	200	17	0.2	1.00	0.36	72
1996-10-01	7.6	186	24	0.2	1.00	0.36	86
1996-10-30	7.7	195	20	0.2	0.80	0.33	104
1996-11-25	7.6	338	20	4.8	1.90	1.64	104
1997-01-06	8.0	325	17	3.7	0.15	1.10	68
1997-01-27	7.8	239	66	5.2	1.00	2.76	114
1997-03-03	7.8	223	98	0.2	0.80	1.44	77
80/04/1997	7.9	298	96	0.2	0.15	0.53	143
1997-04-29	7.7	358	112	0.2	0.15	0.60	100
1997-05-27	7.4	234	78	1.0	1.40	0.87	306
1997-06-30	7.1	121	104	0.2	5.00	0.54	94
1997-07-21	7.6	345	15	0.2	1.60	0.14	125
1997-08-26	7.9	240	26	0.2	1.10	0.33	104
1997-09-16	7.9	261	57	0.2	0.15	0.23	112
1997-10-14	8.1	366	85	0.2	0.15	0.10	161
1997-11-12	7.8	196	15	0.2	1.50	2.08	65
1997-12-09	7.6	184	13	0.2	0.15	3.20	71
1998-01-12	7.0	118	5	0.2	0.15	5.20	66
1998-02-10	7.5	148	5	0.2	0.15	5.00	72
1998-03-09	7.3	111	89	0.2	1.30	4.93	91
1998-04-06	7.4	136	14	0.2	0.15	4.31	64
1998-05-11	7.0	230	69	2.2	3.70	0.87	121
1998-06-03	7.7	220	24	0.4	2.90	0.12	118
1998-06-08	NO SAMPLES						
1998-07-21	7.5	204	15	0.2	1.80	0.46	105
1998-08-12	7.6	324	16	0.2	0.90	0.30	107

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D Mg/ℓ	COD mg/ℓ
1998-09-14	NO SAMPLES						
1998-10-06	7.8	372	51	0.2	0.15	0.30	100
1998-10-28	7.8	423	128	0.2	0.15	0.50	136
1998-12-15	NO SAMPLES						
1999-02-02	7.5	156	64	0.2	0.60	1.96	60
1999-03-02	7.1	105	34	4.0	2.70	3.89	52
1999-03-15	7.4	113	42	8.0	1.40	7.00	58
1999-04-26	7.0	111	27	2.0	7.80	5.60	62
1999-06-08	NO SAMPLES						
1999-07-12	7.4	269	27	0.0	0.70	0.32	107
29/09/1999	7.8	250	25	0.2	1.1	0.44	108
08/11/1999	NO SAMPLES						
09/02/2000	NO SAMPLES						

Table 31-13. G202 DR M - Diep River at Otto Du Plessis Bridge (Milnerton)
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
1996-08-06	8.0	268	29	0.2	0.2	0.06	119
1996-09-02	7.7	248	25	0.2	0.2	0.18	59
1996-10-01	8.2	193	44	0.2	0.2	0.29	106
1996-10-30	7.8	211	60	0.2	0.2	0.30	132
1996-11-25	7.8	314	23	0.2	0.2	0.13	110
1997-01-08	7.4	396	5	0.2	2.9	0.03	303
1997-01-27	7.6	373	16	8.5	4.0	4.03	160
1997-03-03	7.4	174	17	5.2	3.8	3.56	83
1997-04-08	7.4	220	21	5.6	6.0	3.60	167
1997-04-29	7.2	167	13	7.2	7.0	5.80	82
1997-05-27	7.3	234	24	5.7	6.0	2.07	79
1997-06-30	7.0	168	154	0.2	4.8	0.49	72
1997-07-21	7.1	320	19	3.6	6.4	0.74	107
1997-08-26	7.6	302	644	0.2	1.5	0.40	238
1997-09-16	7.6	254	42	1.4	2.7	0.82	108
1997-10-14	7.4	232	19	6.1	5.0	2.32	221
1997-11-12	7.6	153	5	9.7	5.2	4.29	67
1997-12-09	6.9	214	17	3.1	10.4	4.65	65
1998-01-12	7.4	501	24	5.3	5.2	4.93	158
1998-02-10	7.0	139	11	5.2	4.0	6.40	98
1998-03-09	7.1	140	5	7.6	6.8	6.30	52
1998-04-06	7.3	134	11	7.6	3.3	5.86	61
1998-05-11	7.1	212	75	1.2	2.0	0.80	119
1998-06-03	NO SAMPLES						
1998-06-08	7.2	316	140	0.7	3.8	1.00	192
1998-07-21	8.0	307	10	0.2	0.2	0.22	151
1998-08-12	7.5	301	17	0.2	3.4	0.80	81

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
1998-09-14	7.5	195	18	2.5	3.9	1.19	93
1998-10-06	7.5	328	24	6.0	8.3	3.20	102
1998-10-28	7.3	203	23	10.6	13.3	5.50	90
1998-12-15	NO SAMPLES						
1999-02-02	7.3	147	20	9.8	13.2	2.84	60
1999-03-02	7.0	191	5	5.8	7.8	3.93	55
1999-05-15	NO SAMPLES						
1999-04-26	7.1	143	5	1.9	8.8	4.07	56
1999-06-08	6.9	138	16	1.0	13.2	7.50	57
1999-07-12	7.2	231	23	2.1	6.7	1.38	79
1999-09-29	7.7	306	19	0.2	1.4	0.50	96
08/11/1999	NO SAMPLES						
09/02/2000	NO SAMPLES						
12/04/2000	7.2	138	5	9.5	4.3	5.00	50

Table 31-14. MR 720 A - Mosselbank on Matjieskuil Farm
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/05/1996		280	66	51.0	8.1			346
10/06/1996		83	17	3.5	0.2			92
25/06/1996		74	13	2.6	0.2			66
08/07/1996		62	13	2.5	0.2			68
23/07/1996		183	20	3.6	0.2			107
15/08/1996		67	13	2.5	0.2			72
02/09/1996		63	12	2.8	0.5			63
30/09/1996		140	23	2.6	0.2			94
15/10/1996		56	5	1.9	0.2			88
03/12/1996		74	12	2.1	0.2			83
06/01/1997		182	16	2.8	0.2			105
10/02/1997	NO SAMPLE							
19/03/1997	NO SAMPLE							
21/04/1997	NO SAMPLE							
12/05/1997	NO SAMPLE							
11/06/1997		116	5	7.8	3.7			160
07/07/1997		117	10	3.2	0.2			100
11/08/1997		126	5	2.6	0.2			93
02/09/1997		115	23	3.5	0.4			134
22/09/1997		129	149	12.2	7.5			153
25/11/1997	7.5	96	15		0.2	0.2	0.17	84
19/01/1998	NO SAMPLE							
10/02/1998	NO SAMPLE							
07/04/1998	NO SAMPLE							
28/04/1998	NO SAMPLE							
18/05/1998	NO SAMPLE							
08/06/1998	7.2	78	37		0.2	0.8	0.49	76

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/07/1998	7.4	95	18		0.2	0.8	0.29	107
17/08/1998	7.6	100	23		0.2	2.3	0.28	58
14/09/1998	7.6	100	13		0.2	0.2	0.24	69
05/10/1998	NO SAMPLE							
09/11/1998	NO SAMPLE							
14/12/1998	NO SAMPLE							
31/01/1999	NO SAMPLE							
07/03/1999	NO SAMPLE							
04/05/1999	NO SAMPLE							
08/06/1999	NO SAMPLE							
03/08/1999	7.6	49	62		1.8	1.4	0.49	78
29/09/1999	7.4	72	13		0.8	0.7	0.41	78
08/11/1999	NO SAMPLE							
09/02/2000	NO SAMPLE							
24/05/2000	NO SAMPLE							

Table 31-15. MR 720 B - Mosselbank at road bridge at Fisantekraal
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
10/06/1996		179	5	5.2	0.2			146
25/06/1996		142	5	3.0	0.2			104
08/07/1996		101	12	2.6	0.2			117
23/07/1996		129	13	2.2	0.2			85
15/08/1996		99	14	2.7	0.2			187
02/09/1996		115	24	2.8	0.2			105
30/09/1996		137	31	3.0	0.2			72
15/10/1996		89	24	3.3	0.4			104
03/12/1996		123	13	15.8	12.9			109
10/02/1997		200	32	5.7	1.0			176
19/03/1997	NO SAMPLE							
21/04/1997	NO SAMPLE							
12/05/1997	NO SAMPLE							
11/06/1997		116	5	7.5	2.9			140
07/07/1997		117	10	3.2	0.2			102
11/08/1997		127	27	3.0	0.2			99
02/09/1997		116	11	3.3	0.2			113
22/09/1997		129	56	11.8	7.5			125
25/11/1997	7.4	115	5		0.5	7.8	3.5	60
19/01/1998	NO SAMPLE							
10/02/1998	NO SAMPLE							
07/04/1998	NO SAMPLE							
28/04/1998	NO SAMPLE							
18/05/1998	7.3	141	10		9.8	1.0	11.6	203
08/06/1998	6.9	124	10		5.4	3.4	9.8	169
13/07/1998	7.3	127	5		0.2	3.1	1.9	87
17/08/1998	7.3	155	5		0.6	11.1	2.6	88

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
14/09/1998	7.6	150	37		25.8	0.2	7.6	119
05/10/1998	NO SAMPLE							
09/11/1998	NO SAMPLE							
14/12/1998	NO SAMPLE							
31/01/1999	NO SAMPLE							
07/03/1999	NO SAMPLE							
04/05/1999	NO SAMPLE							
08/06/1999	7.4	119	22		37.2	0.7	6.4	107
03/08/1999	7.4	52	36		1.4	1.5	0.3	84
29/09/1999	7.3	106	12		4.1	0.2	1.1	112
08/11/1999	NO SAMPLE							
09/02/2000	NO SAMPLE							
24/05/2000	7.5	109	37		59.4	2.4	10.5	86

Table 31-16. MR 720 C - Unnamed tributary ex Kraaifontein Wastewater Treatment works (at bridge)
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/05/1996		95	5	3.1	0.8			264
10/06/1996		209	27	6.5	3.6			98
25/06/1996		162	21	4.8	2.7			78
08/07/1996		138	101	4.2	0.5			105
23/07/1996		169	62	5.0	1.6			93
15/08/1996		136	11	2.3	0.2			80
02/09/1996		158	15	3.9	2.0			190
30/09/1996		99	24	3.2	0.2			148
15/10/1996		124	24	2.9	0.2			112
03/12/1996		82	37	2.3	0.7			67
06/01/1997		149	12	5.2	0.7			82
10/02/1997	NO SAMPLE							
19/03/1997		139	83	3.8	0.2			106
21/04/1997	NO SAMPLE							
12/05/1997		116	10	2.5	0.2			83
11/06/1997		141	5	3.6	1.1			72
07/07/1997		149	5	4.4	1.7			80
11/08/1997		162	47	5.7	1.5			181
02/09/1997		147	15	2.4	0.2			81
22/09/1997		147	23	4.8	2.7			75
25/11/1997	7.5	111	5		0.2	7.5	3.64	64
19/01/1998	7.8	130	5		0.2	1.7	7.40	69
10/02/1998	NO SAMPLE							
07/04/1998	7.4	149	10		1.7	2.0	1.68	92
28/04/1998	7.4	163	5		0.2	15.0	5.60	93
18/05/1998	7.4	156	5		0.2	21.4	4.41	102
08/06/1998	7.4	160	24		0.4	14.2	2.90	95

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/07/1999	7.1	157	14		3.0	16.4	3.22	73
17/08/1998	7.7	166	14		0.6	0.2	1.90	78
14/09/1998	7.5	150	5		0.2	19.7	4.57	67
05/10/1998	7.6	177	13		1.0	21.9	3.58	100
09/11/1998	NO SAMPLE							
14/12/1998	NO SAMPLE							
31/01/1999	NO SAMPLE							
07/03/1999	NO SAMPLE							
04/05/1999	7.3	124	19		1.1	18.5	3.82	76
08/06/1999	NO SAMPLE							
03/08/1999	7.5	77.7	83		0.8	6.8	0.96	52
29/09/1999	7.4	110	16		1.0	6.2	1.78	64
08/11/1999	7.8	230	5		1.1	22.0	5.10	134
09/02/2000	NO SAMPLE							
24/05/2000	7.8	248	5		0.2	10.6	8.40	139

Table 31-17. MR 720 D - Mosselbank at road leading to Melish
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/05/1996		133	11	3.0	0.15			46
10/06/1996		146	59	3.8	0.80			74
25/06/1996		163	31	3.5	1.10			90
08/07/1996		127	20	4.1	0.30			90
23/07/1996		165	15	2.7	0.15			95
15/08/1996		120	26	2.8	0.15			78
02/09/1996		147	23	3.1	0.60			250
30/09/1996		162	33	2.3	0.15			124
15/10/1996		114	37	3.1	0.15			106
03/12/1996		156	32	3.8	1.20			107
06/01/1997		120	10	2.6	0.15			266
10/02/1997		170	20	3.1	0.15			96
19/03/1997		154	122	3.5	0.15			104
21/04/1997		123	34	2.3	0.15			70
12/05/1997		120	42	4.3	0.15			95
11/06/1997		109	36	2.8	0.40			106
07/07/1997		144	34	3.6	0.90			60
11/08/1997		207	15	2.8	0.15			91
02/09/1997		137	19	2.9	0.15			86
22/09/1997		158	32	5.7	2.70			77
25/11/1997	7.4	111	42		0.30	3.50	2.44	78
19/01/1998	7.8	145	72		1.00	0.15	6.20	114
10/02/1998	NO SAMPLES							
07/04/1998	7.4	140	83		0.70	0.15	0.93	90
28/04/1998	7.3	86	45		0.40	1.5	1.81	67
18/05/1998	7.4	152	50		0.15	17.6	3.17	84
08/06/1998	7.3	120	48		0.3	9.6	1.90	65

13/07/1998	7.2	154	24		1.1	15.5	2.88	91
17/08/1998	7.5	149	18		2.1	8.2	1.90	68
14/09/1998	7.5	151	16		6.7	15.9	4.26	82
05/10/1998	7.5	154	16		13.6	15.3	4.21	94
09/11/1998	7.6	133	13		0.15	7.5	2.83	74
14/12/1998	NO SAMPLES							
31/01/1999	NO SAMPLES							
07/03/1999	NO SAMPLES							
04/05/1999	7.1	101	57		1.8	12.9	4.14	68
08/06/1999	7.1	167	24		1.6	18.9	6.00	87
03/08/1999	NO SAMPLES							
29/09/1999	7.4	116	14		0.7	4.3	1.42	78
08/11/1999	7.6	186	40		5.8	6.2	3.84	120
09/02/2000	S							
24/05/2000	7.6	157	75		0.15	12	2.39	82

Table 31-18. MR 720 G - Klapmuts River downstream of K15A
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/05/1996		22	960	5.0	0.7			101
10/06/1996		180	420	11.8	6.7			146
25/06/1996		258	28	2.6	0.2			148
08/07/1996		137	43	2.7	0.2			74
23/07/1996		245	18	2.1	0.2			111
15/08/1996		122	46	2.6	0.2			76
02/09/1996		197	23	1.7	0.2			97
30/09/1996		140	22	2.6	0.2			110
15/10/1996		129	26	2.0	0.2			100
03/12/1996		251	12	4.6	0.2			143
06/01/1997		340	12	2.3	0.2			120
10/02/1997	NO SAMPLES							
19/03/1997	NO SAMPLES							
21/04/1997	NO SAMPLES							
12/05/1997	NO SAMPLES							
11/06/1997		214	100	11.3	0.8			240
07/07/1997		211	27	2.6	0.4			100
11/08/1997		198	28	2.6	0.2			96
02/09/1997		177	19	2.5	0.2			88
22/09/1997		229	21	1.9	0.2			140
25/11/1997	NO SAMPLES							
19/01/1998	NO SAMPLES							
10/02/1998	NO SAMPLES							
07/04/1998	NO SAMPLES							
28/04/1998	NO SAMPLES							
18/05/1998	NO SAMPLES							
08/06/1998	7.3	163	73		0.2	5	0.35	85

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/07/1998	7.5	189	34		0.2	0.9	0.17	85
17/08/1998	7.6	296	21		0.2	5.7	0.38	140
14/09/1998	NO SAMPLES							
05/10/1998	8	314	18		0.2	0.8	0.12	120
09/11/1998	NO SAMPLES							
14/12/1998	NO SAMPLES							
31/01/1999	NO SAMPLES							
07/03/1999	NO SAMPLES							
04/05/1999	NO SAMPLES							
08/06/1999	NO SAMPLES							
03/08/1999	7.4	65	38		0.2	1.4	0.25	88
29/09/1999	7.7	154	14		0.2	0.6	0.28	96
08/11/1999	NO SAMPLES							
09/02/2000	NO SAMPLES							

Table 31-19. MR 720 H - Mosselbank at Klipheuwel bridge
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/05/1996		141	10	2.1	0.5			46
10/06/1996		104	107	2.7	0.4			84
25/06/1996		214	56	2.7	0.2			114
08/07/1996		135	41	2.2	0.2			90
23/07/1996		326	24	1.6	0.2			157
15/08/1996		124	33	2.6	0.2			76
02/09/1996		189	28	2.4	0.2			107
30/09/1996		151	27	2.4	0.2			100
15/10/1996		118	35	2.3	0.2			102
03/12/1996		211	13	2.1	0.2			111
06/01/1997		343	5	1.2	0.2			145
10/02/1997	NO SAMPLES							
19/03/1997	NO SAMPLES							
21/04/1997		133	11	1.8	0.2			113
12/05/1997	NO SAMPLES							
11/06/1997		236	58	2.2	0.4			122
07/07/1997		294	56	1.6	0.2			106
11/08/1997		276	37	1.7	0.2			146
02/09/1997		246	36	1.7	0.2			94
22/09/1997		271	65	1.7	0.2			143
25/11/1997	7.7	149	12		0.2	3.7	2.44	84
19/01/1998	NO SAMPLES							
10/02/1998	NO SAMPLES							
07/04/1998	7.5	179	18		0.2	0.2	1.25	104
28/04/1998	7.6	150	16		0.8	0.5	0.8	95
18/05/1998	7.5	171	35		0.3	14.0	1.84	98
08/06/1998	7.5	149	64		0.2	6.3	1.2	93

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/07/1998	7.6	183	30		0.2	7.4	1.4	73
17/08/1998	7.8	193	25		1.5	6.3	0.57	78
14/09/1998	7.7	183	19		0.2	14.3	2.83	78
05/10/1998	7.4	152	15		1.4	15.4	3.46	78
09/11/1998	7.6	138	13		0.2	5.7	2.31	76
14/12/1998	NO SAMPLES							
31/01/1999	NO SAMPLES							
07/03/1999	NO SAMPLES							
04/05/1999	7.7	148	14		0.2	10.4	2.09	80
08/06/1999	7.6	140	16		0.2	15.0	3.19	63
03/08/1999	7.7	56	29		0.6	1.8	0.26	70
29/09/1999	7.7	140	13		0.2	2.6	0.94	102
08/11/1999	8.1	235	5		0.2	0.6	2.83	94
09/02/2000	NO SAMPLES							
24/05/2000	7.8	191	10		0.2	3.3	1.76	110

Table 31-20. MR 720 J - Mosselbank above confluence with Diep River
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/05/96		499	356	16.7	4.1			358
10/06/96		191	106	3.0	0.5			80
25/06/96		229	50	2.1	0.2			112
08/07/96		127	60	1.3	0.2			90
23/07/96		332	18	1.6	0.2			117
15/08/96		120	53	3.1	0.2			90
02/09/96		184	44	2.4	0.2			131
30/09/96		145	54	2.8	0.2			120
15/10/96		118	27	2.4	0.2			96
03/12/96		257	42	2.0	0.2			84
06/01/97		175	5	2.1	0.2			62
10/02/97		389	125	2.3	0.2			138
19/03/97		265	47	4.7	0.2			182
21/04/97	NO SAMPLES							
12/05/1997		469	33	1.7	0.2			227
11/06/1997		230	51	1.9	0.2			96
07/07/1997		289	32	1.6	0.2			108
11/08/1997		272	29	1.6	0.2			90
02/09/1997		243	33	1.5	0.2			66
22/09/1997		266	32	1.5	0.2			127
25/11/1997	8.1	343	28		0.2	0.2	0.30	124
19/01/1998	NO SAMPLES							
10/02/1998	NO SAMPLES							
07/04/1998	NO SAMPLES							
28/04/1998	NO SAMPLES							
18/05/1998	7.5	192	32		0.4	4.5	0.71	120
08/06/1998	7.4	153	173		0.6	5.5	0.78	101

DATE	pH	EC mS/m	SS mg/ℓ	NKJEL mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-P mg/ℓ	COD mg/ℓ
13/07/1998	7.7	195	36		0.2	5.0	0.96	98
17/08/1998	7.8	224	29		0.9	1.3	1.50	80
14/09/1998	7.8	237	64		0.2	9.5	1.40	106
05/10/1998	8	235	23		0.2	5.2	1.07	98
09/11/1998	NO SAMPLES							
14/12/1998	NO SAMPLES							
31/01/1999	NO SAMPLES							
07/03/1999	NO SAMPLES							
04/05/1999	7.8	212	18		0.2	0.2	1.00	102
08/06/1999	7.7	191	5		0.2	7.3	0.78	69
03/08/1999	7.2	66	64		0.5	2.0	0.24	86
29/09/1999	7.8	186	17		0.2	2.0	0.76	92
08/11/1999	7.8	366	28		0.2	0.2	0.38	112
09/02/2000	NO SAMPLES							

Table 31-21. MR 720 L - Klapmuts River at Klapmuts
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
18/05/1998	6.8	156	26	0.6	21.0	0.03	94
08/06/1998	NO SAMPLES						
13/07/1998	7.0	69	31	2.3	1.8	0.67	64
17/08/1998	7.4	98	47	8.3	1.2	3.1	94
14/09/1998	7.5	110	35	15.2	0.2	1.42	90
05/10/1998	7.7	132	29	31.4	0.2	2.78	99
09/11/1998	7.2	92	63	5.6	0.2	0.1	98
14/12/1998	NO SAMPLES						
31/01/1999	NO SAMPLES						
07/03/1999	NO SAMPLES						
04/05/1999	NO SAMPLES						
08/06/1999	NO SAMPLES						
03/08/1999	7.3	40	283	0.6	1.5	0.22	74
29/09/1999	7.5	50	24	0.2	2.1	0.51	50
08/11/1999	NO SAMPLES						
09/02/2000	NO SAMPLES						

Table 31-22. Kraaifontein Wastewater Treatment Works
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
19/01/1998	7.5	88	21	6.5	15.6	13.0	69
10/02/1998	7.2	80	22	1.3	8.1	12.6	83
07/04/1998	7.3	84	16	6.7	12.4	13.2	63
28/04/1998	7.3	88	11	12.8	16.8	13.0	73
18/05/1998	7.1	83	5	8.2	19.7	9.7	56
08/06/1998	7.1	93	5	11.2	24.4	10.4	47
13/07/1998	7.1	102	5	17.4	20.2	9.0	63
17/08/1998	7.5	107	5	13.7	16.2	9.8	54
14/09/1998	7.3	104	10	12.3	24.8	11.0	68
05/10/1998	7.3	104	5	15.4	22.0	11.4	80
09/11/1998	7.2	97	5	17.1	17.9	10.8	76
14/12/1998	6.8	96	5	13.8	14.5	10.2	86
31/01/1999	7.3	86	5	2.7	9.1	13.7	53
07/03/1999	NO SAMPLES						
04/05/1999	7.0	81	10	10.4	14.4	11.4	50
08/06/1999	7.1	90	5	16.4	21.0	11.8	55
03/08/1999	7.5	98	12	13.9	20.0	8.5	69
29/09/1999	7.4	99	5	18.4	7.2	7.7	72
08/11/1999	7.5	97	5	17.6	7.2	12.6	70
09/02/2000	7.1	78	43	6.8	5.2	11.5	94
04/12/2000	6.8	74	5	6.4	9.7	12.5	40
24/05/2000	7.3	86	5	21.6	10.1	13.5	58

Table 31-23. Malmesbury Wastewater Treatment Works
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
23/09/1997	7.2	158	22	42.7			157
04/11/1997	7.4	167	13	50.9			76
15/12/1997	7.4	182	5	59.0			48
19/01/1998	7.4	164	28	48.2	0.2	14.10	212
10/02/1998	7.2	162	30	54.9	0.2	18.50	148
07/04/1998	7.3	166	15	48.0	0.2	5.20	146
28/04/1998	7.3	88	11	12.8	16.8	13.00	73
18/05/1998	7.3	168	13	46.0	0.2	7.60	122
08/06/1998	7.1	148	25	38.9	0.2	9.10	143
14/07/1998	7.0	164	49	50.6	0.9	9.80	319
17/08/1998	NO SAMPLES						
26/08/1998	6.9	144	14	48.0	1.2	8.90	88
14/09/1998	7.2	131	41	10.0	14.8	10.00	117
05/10/1998	7.2	130	42	10.1	22.4	10.30	130
09/11/1998	6.8	122	14	6.5	19.1	7.80	80
14/12/1998	6.9	150	12	15.6	14.8	13.00	110
31/01/1999	7.1	118	21	4.2	0.2	10.40	126
07/03/1999	6.8	130	15	10.0	26.0	11.60	78
04/05/1999	7.0	118	14	6.7	13.2	9.80	58
08/06/1999	6.4	114	5	5.3	13.0	11.20	47
03/08/1999	7.1	108	14	6.4	1.2	8.90	47
29/09/1999	7.1	120	5	2.9	5.9	6.40	48
08/11/1999	7.3	98	5	6.8	0.2	6.00	44
09/02/2000	7.2	97	5	3.8	4.8	12.60	60
2000-12-04	6.6	108	5	1.8	13.9	10.00	38
24/05/2000	7.0	109	5	3.6	21.0	11.40	46

Table 31-24. Milnerton Wastewater Treatment Works
SABS – Analyses laboratory results

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
1997-07-21	7.2	110	5	6.50	1.20	4.78	77
1997-08-26	NO SAMPLES						
1997-09-16	7.4	108	11	7.00	4.10	6.00	86
1997-10-14	7.5	114	5	11.70	0.90	4.68	68
1997-11-12	7.6	100	5	6.90	0.15	2.98	59
1997-12-09	6.9	101	5	5.90	4.60	7.10	65
1998-01-12	7.5	109	5	6.80	0.15	4.76	80
1998-02-10	7.2	95	5	1.60	1.60	6.90	47
1998-03-09	7.3	94	11	2.10	4.30	6.50	52
1998-04-06	7.3	92	5	2.80	3.10	3.17	55
1998-05-11	7.1	121	5	5.90	2.40	1.72	17
1998-06-03	NO SAMPLES						
1998-06-08	NO SAMPLES						
1998-07-21	NO SAMPLES						
1999-02-02	NO SAMPLES						
1998-08-12	7.4	107	5	4.70	NOT DONE	NOT DONE	57
1998-09-14	NO SAMPLES						
1998-10-06	7.5	113	11	11.20	NOT DONE	NOT DONE	80
1998-10-28	7.3	122	5	7.70	2.90	7.50	62
1998-12-15	NO SAMPLES						
1999-02-02	NO SAMPLES						
1999-03-02	7.0	100	5	4.30	3.30	6.50	52
1999-03-15	7.5	104	5	6.00	2.30	3.73	50
1999-04-26	7.1	102	5	2.90	6.00	5.40	56
1999-06-08	7.1	108	13	3.40	7.10	13.40	73
1999-06-12	NO SAMPLES						
1999-09-29	7.3	143	5	2.20	3.80	2.08	52

DATE	pH	EC mS/m	SS mg/ℓ	NH_3-N mg N/ℓ	NO_3-N mg N/ℓ	PO_4-D mg/ℓ	COD mg/ℓ
08/11/1999	NO SAMPLES						
09/02/2000	NO SAMPLES						
2000-12-04	7.4	100.0	5.0	3.3	1.8	1.9	62.0
25/05/2000	7.6	109	27	6.2	2.5	3.91	76

Table 31-25. Monitoring results on the Diep River on the 21st September 2000
IWQS – Analyses laboratory results

SITE DESCRIPTION	pH	NKJEL mg/ℓ	NH_3-N mg N/ℓ	$NO_3 + NO_2$ mg N/ℓ	F Mg/ℓ	Si mg/ℓ	Total-P mg/ℓ	Orth-PO_4-P mg/ℓ	EC mS/m	TDS mg/ℓ
MR 720 A	8.2	2.61	<0.04	0.69	0.3	3.0	0.820	0.803	86.4	532
MR 720 B	No sample									
MR 720 C	No sample									
MR 720 D	8.1	5.20	1.98	11.23	0.3	3.2	3.490	3.471	171	970
MR 720 G	No sample									
MR 720 H	8.3	2.54	0.11	8.79	0.4	1.7	2.682	2.394	201.0	971
MR 720 J	8.3	2.93	<0.04	4.35	0.4	1.5	1.652	1.510	250.0	1451
MR 720 L	8.1	2.49	<0.04	10.87	0.2	5.0	0.090	0.033	84.3	527
Kraaifontein WWTW	No sample									
G 202 DR A	No sample									
G 202 DR B	8.3	0.95	0.05	0.19	0.6	4.0	0.067	0.034	453	2542
G 202 DR C	No sample									
Malmesbury WWTW	No sample									
G 202 DR D	7.9	1.50	<0.04	1.10	0.5	5.9	2.558	2.422	288.0	1535
G 202 DR E	8.5	1.32	0.17	2.14	0.5	6.6	1.987	1.803	305.0	2553
G 202 DR F	8.3	1.23	<0.04	1.10	0.5	4.6	0.945	0.845	313.0	1669
G 202 DR G	8.2	1.41	0.10	0.43	0.5	3.4	0.498	0.386	366	1988
G 202 DR H	8.1	1.79	<0.04	1.55	0.4	2.9	0.821	0.763	343.0	1903
G 202 DR I	8.6	2.31	<0.04	2.60	0.5	2.7	1.142	0.860	363.0	2003
G 202 DR K	No sample									
G 202 DR L	No sample									
Milnerton WWTW	No sample									
G 202 DR M	No sample									

Table 31-26. Monitoring results on the Diep River on the 21st September 2000
IWQS – Analyses laboratory results

SITE DESCRIPTION	**$CaCO_3$** mg/ℓ	**Na** mg/ℓ	**Mg** mg/ℓ	**SO_4** mg/ℓ	**Cl** mg/ℓ	**K** mg/ℓ	**Ca** mg/ℓ
MR 720 A	132	98	19	42	162	15.2	29
MR 720 B	No sample						
MR 720 C	No sample						
MR 720 D	170	188	33	101	286	25.8	64
MR 720 G	No sample						
MR 720 H	168	240	42	107	295	23.4	12
MR 720 J	166	383	52	109	597	22.7	60
MR 720 L	111	80	17	64	124	17.5	41
Kraaifontein WWTW	No sample						
G 202 DR A	No sample						
G 202 DR B	228	690	87	164	1244	11.3	66
G 202 DR C	No sample						
Malmesbury WWTW	No sample						
G 202 DR D	158	402	41	102	713	13	58
G 202 DR E	149	410	303	101	1473	12.7	58
G 202 DR F	155	437	50	101	812	13.1	58
G 202 DR G	159	533	68	118	991	14	67
G 202 DR H	164	524	60	120	909	16.5	65
G 202 DR I	196	533	58	140	926	21.6	71
G 202 DR K	No sample						
G 202 DR L	No sample						
Milnerton WWTW	No sample						
G 202 DR M	No sample						

Table 31-27. Monitoring results on the Diep River on the 21st September 2000
SABS – Analyses laboratory results

SITE DESCRIPTION	E. coli (coliform/100 mℓ)
MR 720 A	No Growth
MR 720 D	40
MR 720 H	>300
MR 720 J	90
MR 720 L	No Growth
G202 DR D	60
G202 DR E	30
G202 DR F	20
G202 DR G	20
G202 DR H	20

Table 32-1. Water Quality Data (Trace Metals), Groundwater of the Diep River Catchment

Borehole Name – CODE	CODE	DATE	B- Mg/ℓ	Al- mg/ℓ	V- mg/ℓ	Cr- mg/ℓ	Mn- mg/ℓ	Fe- mg/ℓ	Ni- mg/ℓ	Cu- mg/ℓ	Zn- mg/ℓ	As- mg/ℓ	Sr- mg/ℓ	Mo- mg/ℓ	Cd- mg/ℓ	Ba- mg/ℓ	Pb- mg/ℓ
Leliefontein 817/Skaapkraal	817/2B	2000-02-16	<0.011	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Leliefontein 817/Skaapkraal	817/2B	1998-11-05	<0.003	<0.02	0.006	<0.003	<0.001	<0.003	0.012	<0.002	<0.004	<0.05	0.055	<0.005	<0.002	<0.001	<0.015
Leliefontein 817/Skaapkraal	817/2B	1999-02-18	<0.003	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.052	<0.005	<0.002	<0.001	<0.015
Leliefontein 817/Skaapkraal	817/2B	1999-11-02	<0.011	<0.035	<0.005	<0.007	0.001	<0.005	<0.007	<0.009	0.035	<0.003	0.032	<0.011	<0.007	<0.002	<0.1
Leliefontein 817/Skaapkraal	817/2B	2000-02-16	<0.011	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Leliefontein 817/Skaapkraal	817/2B	1999-11-02	<0.011	<0.035	<0.005	<0.007	0.001	<0.005	<0.007	<0.009	<0.008	<0.003	0.034	<0.011	<0.007	<0.002	<0.1
Olyphants fontyn 766	766/1W	2000-02-15	<0.011	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Olyphants fontyn 766	766/1W	1998-04-22	<0.003	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.051	<0.005	<0.002	<0.001	<0.015
Olyphants fontyn 766	766/1W	1998-07-23	0.015	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.057	<0.005	<0.002	<0.001	<0.015
Olyphants fontyn 766	766/1W	1999-11-03	<0.011	<0.035	<0.005	<0.007	0.001	<0.005	<0.007	<0.009	<0.008	<0.003	0.036	<0.011	<0.007	0.008	<0.1
Rozenburg 771	771/1W	2000-02-15	0.059	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Rozenburg 771	771/1W	1998-04-23	0.223	<0.02	<0.002	<0.003	0.913	0.147	<0.006	<0.002	0.034	<0.05	0.454	<0.005	<0.002	0.033	<0.015
Rozenburg 771	771/1W	1998-07-23	0.138	<0.02	0.011	<0.003	<0.001	<0.003	0.008	<0.002	<0.004	<0.05	0.273	<0.005	<0.002	0.015	<0.015
Rozenburg 771	771/1W	1999-11-02	0.072	<0.035	<0.005	<0.007	0.001	0.205	<0.007	<0.009	<0.008	<0.003	0.259	<0.011	<0.007	0.028	<0.1
Spes bona/Kalbaskraal	824/2	2000-02-16	<0.011	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Spes bona/Kalbaskraal	824/2	1998-04-23	<0.003	<0.02	<0.002	<0.003	0.257	<0.003	<0.006	<0.002	<0.004	<0.05	1.79	<0.005	<0.002	<0.001	<0.015
Spes bona/Kalbaskraal	824/2	1998-07-23	0.015	<0.02	0.005	<0.003	0.243	0.03	<0.006	<0.002	<0.004	<0.05	1.865	<0.005	<0.002	<0.001	<0.015
Spes bona/Kalbaskraal	824/2	1999-11-02	<0.011	<0.035	<0.005	<0.007	0.305	<0.005	<0.007	<0.009	<0.008	<0.003	2.072	<0.011	<0.007	0.026	<0.1
Vryheid 51	51/1B	2000-02-15	<0.011	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Vryheid 51	51/1B	1998-04-22	0.058	<0.02	<0.002	<0.003	0.712	<0.003	<0.006	<0.002	<0.004	<0.05	1.251	<0.005	<0.002	0.129	<0.015
Vryheid 51	51/1B	1998-07-23	0.093	<0.02	<0.002	<0.003	0.407	<0.003	<0.006	<0.002	<0.004	<0.05	0.587	<0.005	<0.002	0.03	<0.015
Vryheid 51	51/1B	1999-11-03	0.015	<0.035	<0.005	<0.007	0.822	<0.005	<0.007	<0.009	<0.008	10	1.133	<0.011	<0.007	0.145	<0.1
Rustplaats 682	682/1B	1998-04-22	0.113	<0.02	<0.002	<0.003	0.229	0.248	<0.006	<0.002	<0.004	<0.05	4.445	<0.005	<0.002	<0.001	<0.015
Rustplaats 682	682/1B	1998-07-23	0.094	<0.02	<0.002	<0.003	1.065	0.204	<0.006	<0.002	<0.004	<0.05	2.65	<0.005	<0.002	<0.001	<0.015
Vissershok 957	957/1B	1998-04-23	0.276	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	1.156	<0.005	<0.002	<0.001	<0.015
Vissershok 957	957/1B	1998-07-24	0.302	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	1.131	<0.005	<0.002	<0.001	<0.015
Mosselbank 906	906/1B	2000-02-15	0.55	<0.035		<0.007	0.406	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1

Borehole Name – CODE	CODE	DATE	B- Mg/ℓ	Al- mg/ℓ	V- mg/ℓ	Cr- mg/ℓ	Mn- mg/ℓ	Fe- mg/ℓ	Ni- mg/ℓ	Cu- mg/ℓ	Zn- mg/ℓ	As- mg/ℓ	Sr- mg/ℓ	Mo- mg/ℓ	Cd- mg/ℓ	Ba- mg/ℓ	Pb- mg/ℓ
Mosselbank 906	906/1B	1998-04-23	0.525	<0.02	<0.002	<0.003	0.498	<0.003	<0.006	<0.002	0.183	<0.05	1.344	<0.005	<0.002	<0.001	<0.015
Mosselbank 906	906/1B	1998-07-24	0.51	<0.02	0.007	<0.003	0.389	0.059	<0.006	<0.002	<0.004	<0.05	1.314	<0.005	<0.002	<0.001	<0.015
Mosselbank 906	906/1B	1999-11-03	0.47	<0.035	<0.005	<0.007	0.451	<0.005	<0.007	<0.009	0.033	<0.003	1.432	<0.011	<0.007	<0.002	<0.1
Groen river outspan 759	759/1B	1998-04-22	<0.003	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.468	<0.005	<0.002	0.013	<0.015
Groen river outspan 759	759/1B	1998-07-23	0.01	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.551	<0.005	<0.002	0.02	<0.015
Groen river outspan 759	759/1B	1999-11-03	<0.011	<0.035	<0.005	<0.007	0.095	<0.005	<0.007	<0.009	<0.008	<0.003	0.413	<0.011	<0.007	0.035	<0.1
Kliprug 942	942/1B	2000-02-16	0.016	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Kliprug 942	942/1B	1998-04-23	0.042	<0.02	<0.002	<0.003	0.51	0.533	<0.006	<0.002	0.095	<0.05	0.67	<0.005	<0.002	0.129	<0.015
Kliprug 942	942/1B	1998-07-24	0.053	<0.02	0.016	<0.003	0.386	<0.003	0.01	<0.002	<0.004	<0.05	0.625	<0.005	<0.002	0.129	<0.015
Kliprug 942	942/1B	1999-11-02	<0.011	<0.035	<0.005	<0.007	0.001	<0.005	<0.007	<0.009	<0.008	<0.003	0.668	<0.011	<0.007	0.142	<0.1
Draaihoek 44	44/1B	2000-02-15	0.943	<0.035		<0.007	0.014	0.225	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Draaihoek 44	44/1B	1998-04-22	0.304	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.924	<0.005	<0.002	0.039	<0.015
Draaihoek 44	44/1B	1998-07-23	0.326	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	0.959	<0.005	<0.002	0.023	<0.015
Draaihoek 44	44/1B	1999-11-03	0.264	<0.035	<0.005	<0.007	0.055	0.014	<0.007	<0.009	<0.008	<0.003	0.932	<0.011	<0.007	0.067	<0.1
Dassenvalley 45	45/003B	2000-02-15	0.485	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Dassenvalley 45	45/003B	1998-04-23	0.397	<0.02	<0.002	<0.003	<0.001	0.051	<0.006	<0.002	<0.004	<0.05	1.783	<0.005	<0.002	<0.001	<0.015
Dassenvalley 45	45/003B	1998-07-24	0.449	<0.02	<0.002	<0.003	<0.001	<0.003	<0.006	<0.002	<0.004	<0.05	1.952	<0.005	<0.002	<0.001	<0.015
Dassenvalley 45	45/003B	1999-11-03	0.345	<0.035	<0.005	<0.007	0.001	<0.005	<0.007	<0.009	<0.008	<0.003	1.783	<0.011	<0.007	<0.002	<0.1
Swellengift 42	42/1B	2000-02-15	0.33	<0.035		<0.007	0.325	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Swellengift 42	42/1B	1998-04-22	0.326	<0.02	<0.002	<0.003	0.514	1.932	<0.006	<0.002	<0.004	<0.05	5.85	<0.005	<0.002	0.057	<0.015
Swellengift 42	42/1B	1998-07-24	0.366	<0.02	<0.002	<0.003	0.449	<0.003	<0.006	<0.002	<0.004	<0.05	5.38	<0.005	<0.002	0.057	<0.015
Swellengift 42	42/1B	1999-11-03	0.278	<0.035	<0.005	<0.007	0.517	<0.005	<0.007	<0.009	<0.008	<0.003	5.74	<0.011	<0.007	0.073	<0.1
De grendel 780	780/1B	2000-02-16	0.094	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
De grendel 780	780/1B	1998-04-23	0.114	<0.02	<0.002	<0.003	0.062	<0.003	<0.006	<0.002	<0.004	<0.05	0.258	<0.005	<0.002	<0.001	<0.015
De grendel 780	780/1B	1998-07-24	0.135	<0.02	<0.002	<0.003	0.044	<0.003	<0.006	<0.002	<0.004	<0.05	0.274	<0.005	<0.002	<0.001	<0.015
De grendel 780	780/1B	1999-11-02	0.061	<0.035	<0.005	<0.007	0.001	<0.005	<0.007	<0.009	<0.008	<0.003	0.232	<0.011	<0.007	<0.002	<0.1
Adderley 66	66/1B	2000-02-16	0.482	<0.035		<0.007	0.001	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Adderley 66	66/1B	1998-04-23	0.394	<0.02	<0.002	<0.003	0.032	0.02	<0.006	<0.002	<0.004	<0.05	0.287	<0.005	<0.002	<0.001	<0.015

Borehole Name – CODE	CODE	DATE	B- Mg/ℓ	Al- mg/ℓ	V- mg/ℓ	Cr- mg/ℓ	Mn- mg/ℓ	Fe- mg/ℓ	Ni- mg/ℓ	Cu- mg/ℓ	Zn- mg/ℓ	As- mg/ℓ	Sr- mg/ℓ	Mo- mg/ℓ	Cd- mg/ℓ	Ba- mg/ℓ	Pb- mg/ℓ
Adderley 66	66/1B	1998-07-24	0.406	<0.02	0.006	<0.003	0.076	<0.003	<0.006	<0.002	<0.004	<0.05	0.318	<0.005	<0.002	<0.001	<0.015
Adderley 66	66/1B	1999-11-08	0.359	<0.035	<0.005	<0.007	0.129	<0.005	<0.007	<0.009	<0.008	<0.003	0.223	<0.011	<0.007	0.009	<0.1
Lichtenburg/riverside	171/1B	2000-02-16	0.166	<0.035		<0.007	0.073	<0.005	<0.007	<0.009		<0.003		<0.011	<0.007		<0.1
Lichtenburg/riverside	171/1B	1998-04-23	0.234	<0.02	<0.002	<0.003	1.163	<0.003	<0.006	<0.002	<0.004	<0.05	2.838	<0.005	<0.002	0.038	<0.015
Lichtenburg/riverside	171/1B	1998-07-23	0.199	<0.02	<0.002	<0.003	1.323	<0.003	<0.006	<0.002	<0.004	<0.05	2.708	<0.005	<0.002	0.088	<0.015
Lichtenburg/riverside	171/1B	1999-11-02	0.171	<0.035	<0.005	<0.007	1.351	<0.005	<0.007	<0.009	0.013	<0.003	2.704	<0.011	<0.007	0.122	<0.1

Table 32-2. Water Quality Data (Inorganic's), Groundwater of the Diep River Catchment

Borehole Name	Borehole Code	Date	pH	NO_3+NO_3 (mg N/ℓ)	NH_4-N- (mg/ℓ)	F- (mg/ℓ)	TAL- (mg/ℓ)	Na- (mg/ℓ)	Mg- (mg/ℓ)	Si- (mg/ℓ)	PO_4- (mg/ℓ)	SO_4- (mg/ℓ)	Cl- (mg/ℓ)	K- (mg/ℓ)	Ca (mg/ℓ)	EC- (mS/m)	TDS- (mg/ℓ)
Leliefontein 817/Skaapkraal	817/2B	2000-05-22	7.861	0.083	<0.04	0.259	45.172	41.767	5.453	11.494	0.024	5.455	56.456	1.576	4.585	31.4	171.094
Leliefontein 817/Skaapkraal	817/2B	2000-02-16	7.985	0.068	<0.04	0.262	40.919	39.803	7.279	12.642	0.051	<4	57.382	2.159	4.712	31.8	163.971
Leliefontein 817/Skaapkraal	817/2B	1998-11-05	6.77	2.299	<0.04	0.18	16.3	71.2	8.9	6	0.012	10	123.4	1.45	4.5	48.8	250
Leliefontein 817/Skaapkraal	817/2B	1999-02-18	7.74	0.087	<0.04	0.25	41.9	39.1	7.7	12.3	0.073	5.7	57.5	2	4.4	30.4	168
Leliefontein 817/Skaapkraal	817/2B	1999-02-18															
Leliefontein 817/Skaapkraal	817/2B	1999-11-02	7.803	3.217	<0.04	0.256	40.27	39.726	7.135	12.25	0.042	7.425	59.146	2.213	4.765	31.5	184.161
Leliefontein 817/Skaapkraal	817/2B	2000-02-16	8.015	0.1	0.105	0.296	44.945	40.879	6.801	12.127	0.194	<4	54.307	1.728	5.61	31.6	167.593
Leliefontein 817/Skaapkraal	817/2B	1999-11-02	7.9	0.59	<0.04	0.324	45.051	41.221	6.669	12.007	0.028	5.499	59.19	1.643	5.772	32	177.97
Olyphants Fontyn 766	766/1W	2000-05-24	6.917	2.057	<0.04	0.156	15.8	83.1	10.481	10.03	0.014	11.014	156.204	2.751	6.294	63.2	298.439
Olyphants Fontyn 766	766/1W	2000-02-15	7.463	1.845	<0.04	0.185	18.378	89.277	10.408	10.268	0.017	6.611	159.742	2.752	7.944	64.3	307.572
Olyphants Fontyn 766	766/1W	1998-04-22	6.53	1.711	<0.04	0.2	19.8	83.1	9.9	9.21	0.014	10	155.8	2.85	6.3	59.5	300
Olyphants Fontyn 766	766/1W	1998-07-23	6.45	1.993	<0.04	0.19	23	92.3	11.1	11.02	0.012	10.6	159.1	2.39	6.1	49	319
Olyphants Fontyn 766	766/1W	1999-11-03	<2	724.873	0.06	0.168	<4	152.364	33.864	11.312	0.051	<4	168.347	6.208	18.891	1860	3593.38
Rozenburg 771	771/1W	2000-05-24	7.263	16.345	<0.04	0.555	38.905	185.628	18.996	19.197	0.033	53.754	259.577	5.029	16.58	119.2	660.037
Rozenburg 771	771/1W	2000-02-15	7.815	15.226	0.058	0.613	39.867	177.868	16.615	19.002	0.03	51.627	246.17	4.661	14.547	111.9	628.278
Rozenburg 771	771/1W	1998-04-23	6.9	6.766	<0.04	0.42	34.9	486.2	58.2	14.95	0.021	122.9	914.4	5.29	50.3	312	1710
Rozenburg 771	771/1W	1998-07-23	7.02	3.985	0.05	0.55	73.2	290.7	39	18.94	0.026	80.8	484	5.86	29.9	162	1038
Rozenburg 771	771/1W	1999-11-03	<2	514.897	<0.04	0.474	<4	247.428	67.761	19.064	0.019	42.023	341.902	25.47	91.089	1670	3098.02
Spes Bona/Kalbaskraal	824/2	2000-05-22	7.629	0.054	0.054	0.351	52.437	147.599	12.662	12.473	0.016	12.861	320.348	3.307	58.40	124.9	619.822
Spes Bona/Kalbaskraal	824/2	2000-02-16	7.924	<0.04	0.051	0.324	54.509	143.323	13.008	13.429	0.023	44.331	318.286	3.027	63.00	124.6	651.983
Spes Bona/Kalbaskraal	824/2	1998-01-22	7.97	<0.04	0.05	0.69	81.1	144.3	4.9	9.97	0.018	5.3	236.2	1.9	33.7	87.6	526
Spes Bona/Kalbaskraal	824/2	1998-04-23	7.37	0.053	0.052	0.32	49.6	122.4	11.6	11.78	0.01	8	269.9	2.66	46.4	97.6	522
Spes Bona/Kalbaskraal	824/2	1998-07-23	7.47	<0.04	0.063	0.34	65.9	127.1	10.7	14.42	0.017	13.6	252.2	2.67	45.3	80.7	533
Spes Bona/Kalbaskraal	824/2	1999-11-02	<2	647.318	0.191	0.283	<4	178.152	35.351	13.732	0.088	4.546	257.758	8.227	62.54	1650	3415.36
Vryheid 51	51/1B	2000-05-24	6.761	<0.04	0.384	0.238	77.51	248.006	50.947	16.766	0.026	153.715	609.081	6.397	132.73	249	1296.28
Vryheid 51	51/1B	2000-02-15	7.903	<0.04	<0.04	0.269	76.04	249.985	53.479	17.02	0.013	162.629	614.305	6.259	136.65	328	1316.44
Vryheid 51	51/1B	1998-04-22	6.82	<0.04	0.104	0.21	73.8	258.3	54.3	14.95	0.006	169.3	649.7	6.54	139.9	240	1369
Vryheid 51	51/1B	1998-07-23	7.22	3.976	<0.04	0.23	162.9	126.4	30.9	12.71	0.023	100.1	170.1	5.92	61	108.7	711
Vryheid 51	51/1B	1999-11-03	<2	688.527	0.161	0.27	<4	285.806	90.896	17.353	0.048	137.997	531.322	25.991	134.28	1800	4257.33

Borehole Name	Borehole Code	Date	pH	NO_3+NO_3 (mg N/ℓ)	NH_4-N- (mg/ℓ)	F- (mg/ℓ)	TAL- (mg/ℓ)	Na- (mg/ℓ)	Mg- (mg/ℓ)	Si- (mg/ℓ)	PO_4- (mg/ℓ)	SO_4- (mg/ℓ)	Cl- (mg/ℓ)	K- (mg/ℓ)	Ca (mg/ℓ)	EC- (mS/m)	TDS- (mg/ℓ)
Rustplaats 682	682/1B	2000-05-22	7.94	<0.04	0.129	0.88	142.838	311.171	56.101	10.694	0.021	119.361	599.001	3.718	92.31	259	1357.02
Rustplaats 682	682/1B	1998-04-22	7.97	<0.04	0.211	0.82	129.4	323.8	35.7	10.87	0.014	107.4	651.1	3.47	107.2	237	1388
Rustplaats 682	682/1B	1998-07-23	7.99	<0.04	0.109	0.72	123	340.6	56.1	14.51	0.011	117.3	663.3	4.37	87.7	248	1420
Vissershok 957	957/1B	2000-05-22	7.499	7.695	<0.04	0.6	144.561	707.235	123.399	12.835	0.033	245.48	1337.06	20.98	97.48	497	2742.67
Vissershok 957	957/1B	1998-04-23	7.63	7.984	<0.04	0.52	148.3	666.9	138.4	12.83	0.027	226.5	1390.9	11.91	99.1	470	2750
Vissershok 957	957/1B	1998-07-24	7.48	3.984	<0.04	0.56	139.7	738.6	149.4	15.07	0.026	336.7	1380.8	19.99	109.3	412	2923
Mosselbank 906	906/1B	2000-02-15	8.376	<0.04	0.115	0.726	296.389	1119.85	137.563	8.84	0.015	353.544	1975.64	17.186	87.42	724	4053.59
Mosselbank 906	906/1B	1998-04-23	8.01	0.112	<0.04	0.69	274.3	1237.2	139.9	6.82	0.007	352.4	2031.1	15.15	74.3	685	4186
Mosselbank 906	906/1B	1998-07-24	7.87	<0.04	0.076	0.71	303.6	1242.8	151.1	9.47	0.011	363.1	2114.6	16.23	81.1	580	4340
Mosselbank 906	906/1B	1999-11-03	<2	686.929	0.32	0.535	<4	1351.62	267.451	10.731	0.088	329.11	1960.29	57.81	116.25	1980	7127.08
Groen Rivier Outspan 759	759/1B	1998-04-22	8.31	0.043	<0.04	0.41	93.7	88.2	3.9	3.99	0.007	<4	128.2	2.19	20.9	58.1	360
Groen Rivier Outspan 759	759/1B	1998-07-23	8.16	<0.04	0.106	0.41	106.7	96.5	5.6	3.74	0.011	13.2	124.2	2.31	20.8	58.3	393
Groen Rivier Outspan 759	759/1B	1999-11-03	<2	707.975	0.248	0.277	<4	145.597	29.309	3.104	0.04	11.985	135.038	6.227	21.416	1770	3486.80
Kliprug 942	942/1B	2000-05-22	7.787	0.156	<0.04	0.225	143.375	234.058	39.012	9.751	0.019	63.8	464.966	8.102	76.86	201	1062.61
Kliprug 942	942/1B	2000-02-16	8.44	0.102	<0.04	0.362	147.876	235.677	40.408	9.917	0.02	60.531	461.894	8.095	78.85	201	1066.65
Kliprug 942	942/1B	1998-04-23	7.85	0.315	<0.04	0.22	148.3	241.9	37.6	8.74	0.017	42.1	470.7	7.93	74	182	1057
Kliprug 942	942/1B	1998-07-24	7.57	0.06	0.045	0.22	156.3	239.9	38.8	10.03	0.012	42.3	493.9	7.62	73.6	183	1087
Kliprug 942	942/1B	1999-11-02	8.31	0.077	<0.04	0.245	148.867	219.997	37.518	9.366	0.018	47.364	444.388	7.82	74.99	197	1014.25
Draaihoek 44	44/1B	1998-04-22	7.63	5.176	<0.04	0.4	146.2	1070.3	113	6.99	0.019	179.4	1967.9	4.24	58.7	528	3595
Draaihoek 44	44/1B	1998-07-23	7.99	3.977	0.071	0.38	142.8	1111.1	124.4	6.91	0.019	175.8	1979	10.46	66.6	619	3660
Dassenvalley 45	45/003B	2000-05-24	7.715	4.705	<0.04	0.564	145.919	973.659	92.21	10.225	0.021	207.044	1708.24	16.174	74.211	607	3270.93
Dassenvalley 45	45/003B	2000-02-15	8.128	4.675	<0.04	0.6	143.717	982.042	105.853	10.728	0.016	213.403	1773.37	18.827	82.631	614	3372.72
Dassenvalley 45	45/003B	1998-04-23	8.15	4.366	<0.04	0.5	148.6	953.8	106.8	9.33	0.028	196.8	1795	16.07	81.9	486	3351
Dassenvalley 45	45/003B	1998-07-24	7.65	3.981	<0.04	0.54	144.2	987.4	113.4	11.09	0.022	215.8	1835.3	17.41	87.9	591	3451
Dassenvalley 45	45/003B	1999-11-03	<2	713.697	0.075	0.433	<4	857.205	112.948	11.612	0.064	95.857	1705.41	18.41	70.23	2070	6022.61
Swellengift 42	42/1B	2000-02-15	8.134	<0.04	0.117	0.903	205.094	1158.71	106.943	13.219	0.025	152.255	2411.28	10.295	211.29	761	4302.05
Swellengift 42	42/1B	1998-04-22	8.04	0.063	0.114	0.99	213	1296	111.6	11.53	0.012	127	2436.3	9.8	170.8	644	4413
Swellengift 42	42/1B	1998-07-24	7.65	<0.04	0.132	0.96	198.7	1251.9	116.3	14.08	0.012	204.9	2362	9.57	157.4	740	4346
Swellengift 42	42/1B	1999-11-03	<2	581.417	0.755	0.84	<4	1211.16	130.646	15.322	0.156	80.7	2415.57	21.553	194.55	2040	6632.73
De Grendel 780	780/1B	2000-05-22	8.358	0.479	<0.04	0.349	100.036	237.67	25.203	11.065	0.013	60.834	391.245	3.881	25.84	171	869.174

Borehole Name	Borehole Code	Date	pH	NO_3+NO_3 (mg N/ℓ)	NH_4-N- (mg/ℓ)	F- (mg/ℓ)	TAL- (mg/ℓ)	Na- (mg/ℓ)	Mg- (mg/ℓ)	Si- (mg/ℓ)	PO_4- (mg/ℓ)	SO_4- (mg/ℓ)	Cl- (mg/ℓ)	K- (mg/ℓ)	Ca (mg/ℓ)	EC- (mS/m)	TDS- (mg/ℓ)
De Grendel 780	780/1B	2000-02-16															899.343
De Grendel 780	780/1B	1998-04-23	7.88	0.324	<0.04	0.43	105.5	266.7	27	10.49	0.013	66.3	406.8	3.95	28.4	171	930
De Grendel 780	780/1B	1998-07-24	7.39	0.307	<0.04	0.4	115.6	262.9	27.2	12.36	0.009	61.1	395.1	3.9	28.3	126	921
De Grendel 780	780/1B	1999-11-02	8.189	0.986	<0.04	0.44	89.029	226.955	25.964	12.169	0.022	70.892	372.202	3.995	27.57	169	841.028
Adderley 66	66/1B	2000-02-16	8.374	0.381	<0.04	1.998	217.9	508.178	25.294	8.623	0.079	101.221	670.3	5.626	22.73	287	1602.97
Adderley 66	66/1B	1998-04-23	8.1	0.238	<0.04	1.48	212.2	550.3	34	7.81	0.029	128.9	763.6	5.31	19.1	297	1763
Adderley 66	66/1B	1998-07-24	6.72	1.031	<0.04	1.67	224.9	544	38.1	9.29	0.028	123.9	747.4	5.15	20.9	253	1760
Adderley 66	66/1B	1999-11-08	8.421	2.984	<0.04	2.132	205.66	437.073	23.07	8.209	0.027	105.96	636.752	4.702	15.172	273	1488.93
Lichtenburg/Riverside	171/1B	2000-02-16	8.555	0.66	0.072	0.725	269.22	775.072	165.949	9.339	0.02	245.852	1577.21	4.022	94.01	570	3194.16
Lichtenburg/Riverside	171/1B	1998-04-23	8.11	0.656	<0.04	0.8	267.1	749.3	168.5	9.03	0.014	206.5	1504.9	5.78	91.3	523	3056
Lichtenburg/Riverside	171/1B	1998-07-23	7.79	0.521	0.057	0.78	248.3	743.8	159.8	9.24	0.014	258.7	1443.8	3.12	92.9	440	3008
Lichtenburg/Riverside	171/1B	1999-11-02	8.078	3.052	0.066	0.806	249.589	756.056	154.042	9.364	0.023	231.104	1490.57	4.136	90.92	541	3045.61

TABLE 33. WATER QUALITY DATA, COASTAL WATER OF THE DIEP RIVER CATCHMENT

Data obtained from CITY OF CAPE TOWN Scientific Services Department
Bacteriological monitoring of coastal sites
cn22 = sample site +/- 50m South of Diep River estuary
xcn04 = sample site in front of Milnerton Lighthouse
Faecal Coliforms/100 ml

DATE	cn22	Xcn04
1995-01-11	34	36
1995-01-25	126	14
1995-02-08	4	2
1995-02-22	2	2
1995-03-08	38	2
1995-03-23	72	28
1995-04-05	-	12
1995-04-06	84	-
1995-04-19	-	200
1995-04-20	2	-
1995-05-03	-	54
1995-05-04	192	-
1995-05-17	200	38
1995-05-31	600	104
1995-06-14	5000	96
1995-06-28	400	24
1995-07-12	-	2
1995-07-13	900	-
1995-07-26	5000	200
1995-08-10	1850	6
1995-08-23	400	32
1995-09-06	1500	2
1995-09-20	1100	2
1995-10-04	10	86
1995-10-18	42	20
1995-11-02	2600	-
1995-11-15	2	2
1995-11-29	1100	192
1995-12-13	6	2
1995-12-27	32	6
1996-01-10	2	8
1996-01-24	300	16
1996-02-08	22	2
1996-02-21	50	2
1996-03-06	1800	2
1996-03-19	550	-
1996-04-03	550	250
1996-04-17	4300	200
1996-04-29	70	18
1996-05-15	28	2
1996-05-30	252	-
1996-06-12	-	10
1996-06-13	300	-
1996-06-26	34	2
1996-07-10	40	2
1996-07-24	2800	10
1996-08-07	-	2
1996-08-21	-	2
1996-09-04	500	4
1996-09-18	-	40
1996-10-02	-	58
1996-10-16	14	6

DATE	cn22	Xcn04
1996-10-30	-	700
1996-11-13	650	2
1996-11-27	-	2
1996-12-11	800	2
1996-12-23	-	2
1997-01-08	800	36
1997-01-22	200	-
1997-02-05	2	12
1997-02-19	100	2
1997-03-05	4	30
1997-03-19	350	18
1997-04-02	-	26
1997-04-03	28	-
1997-04-16	46	4
1997-04-29	86	-
1997-05-14	72	2
1997-05-28	200	90
1997-06-11	94	22
1997-06-25	-	6
1997-07-09	1550	-
1997-07-23	4500	-
1997-08-06	200	-
1997-08-20	18	86
1997-09-03	950	4
1997-09-17	70	94
1997-10-01	50	8
1997-10-15	16	72
1997-10-27	18	-
1997-10-29	18	2

DATE	cn22	Xcn04
1997-11-13	2	-
1997-11-26	54	54
1997-12-10	22	8
1997-12-23	14	-
1998-01-07	12	-
1998-01-21	14	-
1998-02-04	50	-
1998-02-12	-	20
1998-02-18	32	6
1998-03-04	300	10
1998-03-18	4900	-
1998-04-01	4	2
1998-04-08	-	2
1998-04-15	14	-
1998-04-29	400	-
1998-05-13	2	2
1998-05-27	54	2
1998-06-24	6	
1998-07-08	1000	
1998-07-22	150	4
1998-08-05	850	6
1998-08-19	40	
1998-09-02	248	2
1998-09-16	2	2
1998-09-30	2400	2
1998-10-14	150	46
1998-10-28	6	2
1998-11-11	64	2
1998-11-25	8	2

DATE	cn22	Xcn04
1998-12-09	2	
1998-12-23	50	
1999-01-06	3400	
1999-02-03	5000	
1999-02-17	54	
1999-03-03	60	
1999-03-17	2	
1999-03-31	400	
1999-04-14	2	2
1999-04-28	8	2
1999-05-12	20	18
1999-05-26	800	24
1999-06-09		8
1999-06-23	50	2
1999-07-07	60	
1999-07-21	60	6
1999-08-04	5000	
1999-08-18	50	2
1999-09-01	66	24
1999-09-15	550	16
1999-09-29		2
1999-10-13	62	2
1999-10-27		2
1999-11-10	2	2
1999-11-24	2	2

DATE	cn22	Xcn04
1999-12-08	3250	60
1999-12-22	200	
2000-01-05	3050	
2000-02-16	88	2
2000-03-01	36	8
2000-03-15	28	2
2000-03-29	400	2
2000-04-12	48	2
2000-04-26	900	1700
2000-05-10	100	12
2000-05-24	1050	
2000-06-07	130	2
2000-06-21	950	4
2000-07-05	102	8
2000-07-19	5000	20
2000-08-02	5000	5000
2000-08-16	150	20
2000-08-30	500	14
2000-09-13	5000	10
2000-09-27	1700	46
2000-10-11	32	8
2000-10-25	6	2
2000-11-07		2

H. GLOSSARY OF TERMINOLOGY

ABSTRACTION: Removal of water from any source.

ALGAE: Assemblage of macroscopic or large aquatic plants without vessels for carrying sap.

ALGAL BLOOM: large, visible masses of algae found in bodies of water during warm water.

ALIEN VEGETATION: Introduced from one environment to another where they did not occur originally.

ARENACEOUS SLATES (GRAYWACKES): Coarse sandstone composed mostly of relatively unaltered rock chips

ARGILLACEOUS SHALES: Mechanically formed from smallest particles generally clay.

AQUICLUDE: Term used to describe the groundwater bearing properties of the rock formation. Aquicludes do not transfer water easily and do not yield water to wells, though they may retain much water.

AQUIFER: A porous water-bearing under groundwater layer of rock, sand or gravel capable of holding significant quantities of water.

BIOTA: Living organisms of a region or system.

CATCHMENT: Land area from which a river is fed.

ECOSYSTEM: community of animals and plants and the physical environment in which they live.

EFFLUENT: discharge or emission of a liquid or gas.

ESTUARY: Partially enclosed coastal body of water that is either permanently open or periodically open to the sea.

EUTROPHICATION: degradation of water quality due enrichment by nutrients, primarily nitrogen (N) and phosphorus (P), which results in excessive plant (principally algae) growth and decay. Low dissolved oxygen (DO) in the water is a common consequence.

FAUNA: Assemblage of animals in a particular area.

FLOODPLAIN: Low gradient or flat land onto which a river regularly overflows its banks.

GEOLOGY: Study of earth's crust, rock layers, and their relationships.

GROUNDWATER: Water that flows or is stored below the surface of the land.

HABITAT: Locality of a living organism defined by the set of physical, chemical and biological features.

HAZARDOUS WASTE: solid, liquid, or gaseous substance which, because of its source or measurable characteristics, is classified under state or federal law as potentially dangerous and is subject to special handling, shipping, and disposal requirements.

HYDROLOGY: Study of water, including its physical characteristics, distribution, and movement.

INDIGENOUS: Belonging to a place and not imported.

LEACHATE: The liquid emanating from solid matter, usually waste.

LEACHING: Movement through soil of dissolved or suspended substances in water

MACROINVERTEBRATES: Macroscopic animals without a backbone or internal skeleton.

MEIOFAUNA: Estuarine animals without a backbone or internal skeleton and larger than 0.05 mm but smaller than 0.1 mm.

MONOGASTRICS: having one stomach, e.g. pigs.

NERITIC MARINE PLANKTON: Plankton inhabiting the sea above the continental shaft.

NON-POINT SOURCE: Disperse sources of impact on the water quality, resulting from surface runoff, infiltration, or atmospheric deposition.

PALEARCTIC-BREEDING MIGRANTS: Flies long distances from North Africa, Greenland, Europe, and Asia to its breeding grounds.

PELAGIC ALGAL: Ocean dwelling algae.

POINT SOURCE: Known sources of impact on the water quality, e.g. effluent from a wastewater treatment works. The volume and quality of the effluent can be measured directly.

POLLUTION: presence of a contaminant to such a degree that the environment (land, water, or air) is not suitable for a particular use.

POTABLE WATER: Water suitable for drinking.

RIPARIAN: Adjacent to or along the banks of the rivers and streams.

RUMINANTS: Even-toed, hoofed animals such as cattle and sheep that chew a cud.

RUNOFF: Overland flow produced by rainfall.

SALINITY: Quality of water based on its salt content; seawater contains approximately 18,000 parts per million of salt.

SPECIES: Particular kind of organism.

SURFACE WATER: Water that flows or is stored on the surface of the land.

VAGRANT: Rare or stray – not normally found within the region.

VLEI: Shallow body of water with emergent vegetation.

WATER RESOURCE QUALITY: The sustainability of a water resource for use and for the maintenance of the aquatic ecosystem, determined in terms of its habitat, aquatic biota, and the physical, chemical, and ecological processes that interlink these components.

WATER QUALITY: Describe the physical, chemical, biological, and aesthetic properties of water which determines its suitability for use or its ability to maintain the health of the aquatic ecosystem.

WATER QUALITY CONSTITUENT: Describes any of the properties of water and the substances suspended or dissolved in it.

WATER QUALITY GUIDELINES: A set of information provided for a specific water quality constituent.

WATER QUALITY OBJECTIVE: Value not to be exceeded, set for a specific water quality constituent in a defined water body or portion of a water body to allow for a measure of suitability for the water users.

WATER RESOURCE: Three compartments of habitat (sediments, instream and riparian), aquatic biota, and water, as well as the physical, chemical and ecological processes which link these compartments of the aquatic environment.

WATER USER: Person or group of persons that use water for a particular use. The four uses of water recognised by the Water Act are domestic, industrial, agricultural, and recreational.

I. GLOSSARY OF ABBREVIATIONS

CCT: City of Cape Town

CMC: Cape Metropolitan Council

CTM: Cape Town Municipality

CTWU: Cape Town Water Undertakings

DME: Department of Minerals and Energy

DWAF: Department of Water Affairs and Forestry

MAP: Mean Annual Precipitation

MAR: Mean Annual Runoff

mg/ℓ: milligrams per litre

Mℓ: megalitre

mS/m: milli-Siemens per metre

MSL: Mean sea level

PW: Purification Works

RSC: Regional Service Council

SASS4: South African Scoring System Version 4

WWTW: Wastewater Treatment Works