

# Bergrivier Municipality

## Western Cape, South Africa

### Drinking Water Quality Summary Report

#### July 2011

## 1. Background

This report provides an overview of water quality in your area of concern. The report is generated automatically on a monthly basis and is based on data loaded onto your electronic Water Quality Management System (eWQMS). The report includes tables and graphs which highlight issues related to key bacteriological, physical and chemical parameters monitored in your area of concern.

You are reminded that a full analysis of water quality in your area of concern can be accessed at <http://www.wqms.co.za>.

Website access includes the following components:

- Management Dashboard (shows specific sample sites in excess of required limits, and assists with status tracking)
- Overview (includes map-based interface, summary of bacteriological, physical and chemical water quality and quick links to regularly used tables/graphs)
- Tables and Graphs (includes Point Analysis Tables, Compliance/Failure Tables, Mean Value/Median Value Graphs, Failure Graphs)
- Reports (an archive of water quality management reports in PDF format - if applicable)
- Reference (reference material and information)

Other features of the eWQMS include an infrastructure component (ability to capture details of water system related infrastructure) and a risk toolbox (ability to perform water system related self-assessments).

If you have any queries or difficulties with regards to the above, please do not hesitate to contact us at [info@emanti.co.za](mailto:info@emanti.co.za).

## 2. Purpose of Report

This report provides summary information on key water quality results as required for legislative compliance. This includes:

- Percentage characterisation of water quality against national standards/limits for the report period
- Points failing Maximum Allowable Limits for the report period
- Percentage failure and/or mean values for SANS 241 minimum required parameters for the report period
- Percentage failure for other key bacteriological water quality parameters for the report period
- Mean values and percentage failure for other key physico-chemical water quality parameters for the report period

The above aspects will be presented in the following section.



# 3. Drinking Water Quality Overview

## 3.1. Management Dashboard

Sample points are categorized as follows:

Green: All parameters monitored satisfy the following limits:

- SANS 241 Table 1 column 4 (microbiological safety requirements - 4% of samples max.) and/or
- SANS 241 Table 2 column 3 (Class I - recommended operational limit)
- SANS 241 Table C.3 Operational water quality alert values

Yellow: One or more parameters monitored satisfy the following limits:

- SANS 241 Table 1 column 5 (microbiological safety requirements - 1% of samples max.) and/or
- SANS 241 Table 2 column 4 (Class II - max. allowable for limited duration)

Yellow: One or more parameters monitored do not satisfy the following limits:

- SANS 241 Table C.3 Operational water quality alert values

Orange: One or more aesthetic or operational related parameters monitored do not satisfy the following limits:

- SANS 241 Table 2 column 4 (Class II - max. allowable for limited duration)

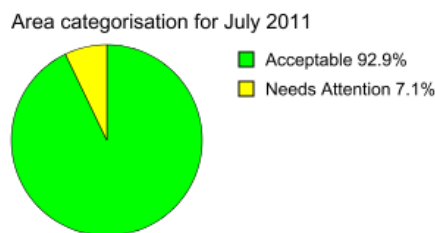
Red: One or more health related parameters monitored do not satisfy the following limits:

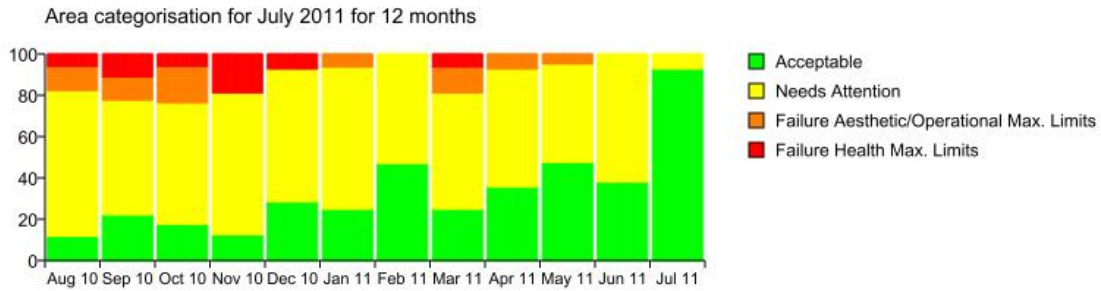
- SANS 241 Table 1 column 5 (microbiological safety requirements - 1% of samples max.) and/or
- SANS 241 Table 2 column 4 (Class II - max. allowable for limited duration)

The following results are presented for July 2011:

Acceptable (Green):	13 sample points or 92% of monitored sample points
Needs Attention (Yellow):	1 sample points or 7% of monitored sample points
Failure Aesthetic/Operational Max. Limits (Orange):	0 sample points
Failure Health Max. Limits (Red):	0 sample points

Detailed information related to the above table can be accessed via the Management Dashboard of your website. The following table presents details of those sample points which were classified as being Red (i.e. failing SANS Health Max. Limits).





Red: July 2011				
Area	Sample Point	Determinant	Date Occurred	Sample Value
None				

0 failures at 0 Sample Points

The following table presents details of those sample points which were classified as being Orange (i.e. failing SANS Aesthetic/Operational Max Limits).

Orange: July 2011			
Area	Sample Point	Determinant	Date Occurred
None			

At time of analysis, the water quality issues noted above were communicated to operational personnel. As you are aware, corrective action is required to address these issues. Therefore, the responsible Water Service Authority should login onto eWQMS and add details of the corrective actions/interventions implemented to address the identified water quality issues. Details of corrective actions/interventions implemented are added/viewed under the "comments" section of the "details" link in the Management Dashboard. The comment/s serve as a record of the management actions implemented by the Water Service Authority. If you have added any comments, this will be displayed in Appendix B.

### 3.2. SANS 241 Minimum Required Parameters

The following section highlights performance versus the minimum parameters specified in SANS 241. The following section will therefore present results for the following parameters:

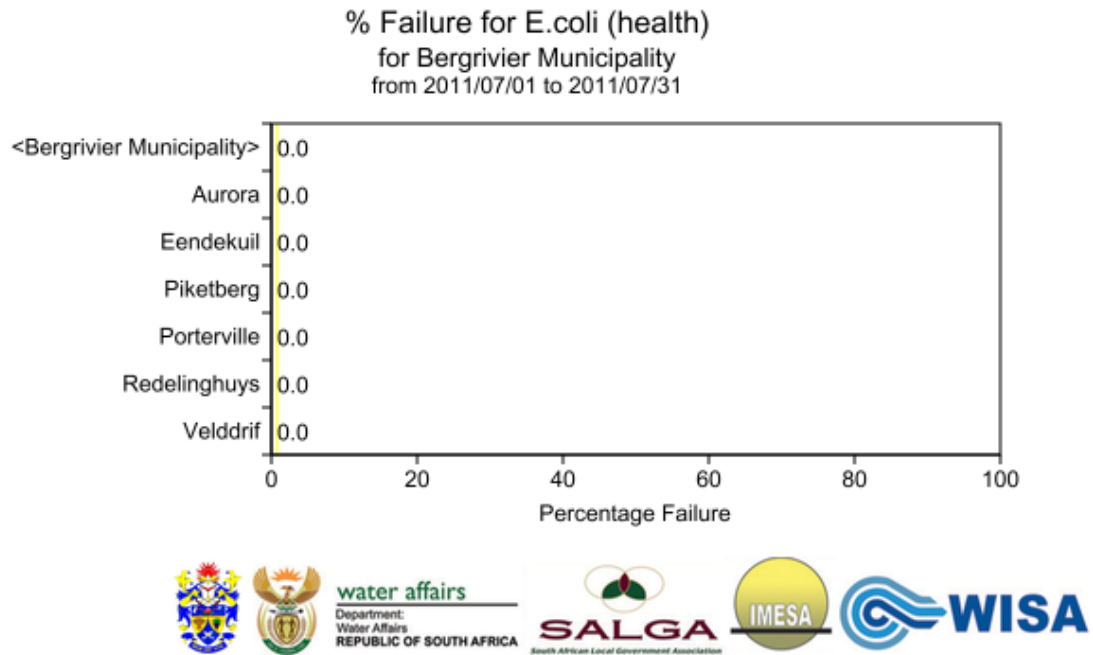
- E.coli and/or Faecal coliforms
- pH
- Electrical Conductivity
- Turbidity
- Free chlorine residual

Although it is acknowledged that SANS 241 states that the minimum required parameters is based on the water characteristics (e.g nitrates/nitrites and/or fluoride for groundwaters; aluminium or iron if alum or ferric chloride are used for water treatment purposes), and that WSAs may need to monitor these particular water characteristics, the results thereof will not be included in this section. Please refer to later sections of this report for these results.

#### 3.2.1. E.coli

**NOTE:** SANS 241 specifies that either E.coli or faecal coliforms should be monitored as an indicator of microbiological safety of drinking water. Therefore, if faecal coliforms are used as the indicator of microbiological safety, no results for E.coli will be displayed.

If neither E.coli nor faecal coliforms results are displayed, it implies that microbiological safety indicators were not monitored for the report period or had not been entered by the time of automatic summary report generation.



### Notes

E.coli: health 1. Standards: SANS 241 Column 4, Allowable compliance contribution: 4%, Upper Limit: Not detected (count/100mL). 2. Description: Escherichia coli (E.coli) is used as an indicator of faecal pollution by warm blooded animals (often interpreted as human faecal pollution). The presence of faecal pollution by warm blooded animals may indicate the presence of pathogens responsible for infectious disease such as gastroenteritis, cholera, dysentery and typhoid fever after ingestion of contaminated water. Any bacteriological failure with regards to E.coli can therefore be considered as a direct indication of risk to health. If the percentage failure exceeds the required limits shown above, intervention is required to rectify the situation (e.g. optimise disinfection).

### 3.2.2. Faecal coliforms

**NOTE:** SANS 241 specifies that either E.coli or faecal coliforms should be monitored as an indicator of microbiological safety of drinking water. Therefore, if E.coli are used as the indicator of microbiological safety, no results for faecal coliforms will be displayed.

If neither E.coli nor faecal coliforms results are displayed, it implies that microbiological safety indicators were not monitored for the report period or had not been entered by the time of automatic summary report generation.

### 3.2.3. pH

**NOTE:** SANS 241 specifies that pH should be regularly monitored. If no results for pH are displayed, it implies that pH was not monitored for the report period or had not been entered by the time of automatic summary report generation.

### 3.2.4. Electrical conductivity

**NOTE:** SANS 241 specifies that electrical conductivity should be regularly monitored. If no results for electrical conductivity are displayed, it implies that electrical conductivity was not monitored for the report period or had not been entered by the time of automatic summary report generation.

### 3.2.5. Turbidity

**NOTE:** SANS 241 specifies that turbidity should be regularly monitored. If no results for turbidity are displayed, it implies that turbidity was not monitored for the report period or had not been entered by the time of automatic summary report generation.

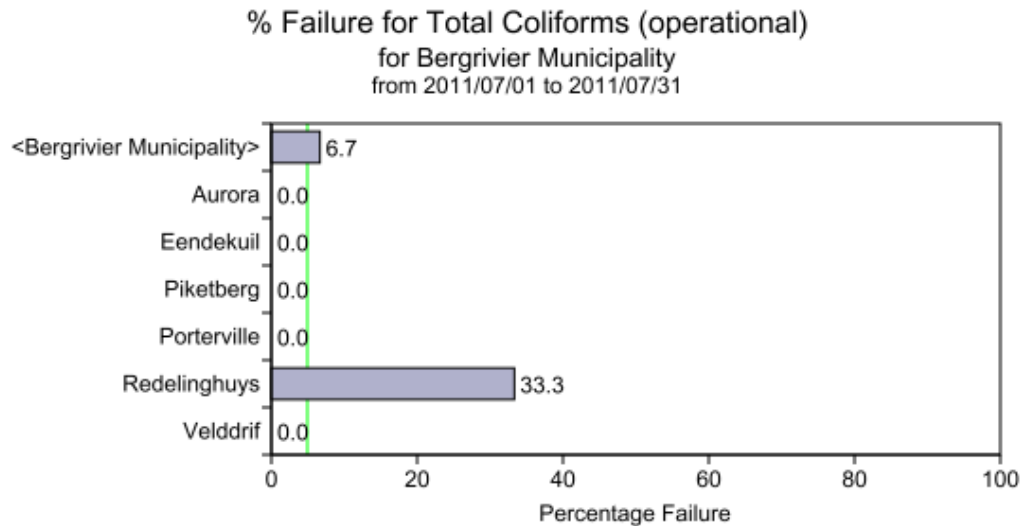
### 3.2.6. Free chlorine residual

**NOTE:** If chlorine is added to drinking-water for disinfection purposes, free chlorine residual should be regularly monitored. If no results for free chlorine residual are displayed, it implies that free chlorine residual was not monitored for the report period or had not been entered by the time of automatic summary report generation. In some areas, total (available) chlorine may be regularly monitored, no disinfection may be occurring or disinfection could be achieved using another disinfectant (e.g. ozone). The above must be considered in areas where no free chlorine results are displayed below.



### 3.3. Other Bacteriological Quality

**NOTE:**Water quality graphs for other key bacteriological parameters are shown in the section below. If data for the report period had not been entered by the time of automatic summary report generation, the applicable bacteriological water quality graphs will not be available. Water quality graphs for other key bacteriological parameters are shown in the section below. If data for the report period had not been entered by the time of automatic summary report generation, the applicable bacteriological water quality graphs will not be available.



#### Notes

- The graph shows limits for SANS: Operational Limits: Acceptable Level
- Green Drop requires at least 90% compliance (ie maximum 10% failure).

Total Coliforms: Operational 1. Drinking-Water Standards: SANS 241 Table C.3 (Operational water quality alert values): 10 count/100 mL. 2. Description: The total coliform group includes bacteria of faecal origin and indicates the possible presence of bacterial pathogens such as Salmonella spp., Shigella spp., Vibrio cholerae, pathogenic E. coli, etc. These organisms can cause diseases such as gastroenteritis, salmonellosis, dysentery, cholera and typhoid fever. Total coliform counts are primarily used in the evaluation of the operational efficiency of water treatment processes. They also indicate microbial growth in the distribution system or post-treatment contamination of drinking water. If the percentage failure exceeds the required limits shown above, intervention is required to rectify the situation (e.g. optimise disinfection).

#### Point Analysis Tables

E.coli (health) (count per 100 mL)				
Area	Sample Point	Sample Date	Sample Value	Standard
Aurora	Municipal Office	2011/07/05	0	= 1.0
Eendekuil	Eendekuil Gemeenskapsaal	2011/07/05	0	= 1.0
Eendekuil	Eendekuil- Silo's	2011/07/05	0	
Piketberg	Allan Boesak Hall	2011/07/05	0	= 1.0



E.coli (health) (count per 100 mL)				
Area	Sample Point	Sample Date	Sample Value	Standard
Piketberg	Soetkysie	2011/07/05	0	
Porterville	Bettie Julius Biblioteek	2011/07/05	0	= 1.0
Porterville	Municipal Office - Kitchen Tap	2011/07/05	0	= 1.0
Redelinghuys	Municipal Office	2011/07/05	0	= 1.0
Redelinghuys	Redelinghuys woning	2011/07/05	0	= 1.0
Velddrif	Municipal Offices	2011/07/05	0	= 1.0
Velddrif	Eigevis, Laaiplek	2011/07/05	0	
Velddrif	Noordhoek Gemeenskapsaal	2011/07/05	0	= 1.0
Velddrif	SDR - Manhole	2011/07/05	0	= 1.0
Velddrif	Dwarskersbos Reservoir	2011/07/05	0	= 1.0

Total Coliforms (operational) (count per 100 mL)				
Area	Sample Point	Sample Date	Sample Value	Standard
Aurora	Municipal Office	2011/07/05	0	< 10.0
Eendekuil	Eendekuil Gemeenskapsaal	2011/07/05	0	< 10.0
Eendekuil	Eendekuil- Silo's	2011/07/05	0	
Piketberg	Allan Boesak Hall	2011/07/05	0	< 10.0
Piketberg	Soetkysie	2011/07/05	0	
Porterville	Bettie Julius Biblioteek	2011/07/05	0	< 10.0
Porterville	Municipal Office - Kitchen Tap	2011/07/05	0	< 10.0
Redelinghuys	Redelinghuys woning	2011/07/05	301	< 10.0
Redelinghuys	Municipal Office	2011/07/05	1	< 10.0
Velddrif	Municipal Offices	2011/07/05	0	< 10.0
Velddrif	Eigevis, Laaiplek	2011/07/05	1	
Velddrif	Noordhoek Gemeenskapsaal	2011/07/05	0	< 10.0
Velddrif	SDR - Manhole	2011/07/05	0	< 10.0
Velddrif	Dwarskersbos Reservoir	2011/07/05	0	< 10.0



### 3.4. Other Physical Quality

**NOTE:** Water quality graphs for other key physical parameters are shown in the section below. If data for the report period had not been entered by the time of automatic summary report generation, the applicable physical water quality graphs will not be available. If no results for other physical quality parameters are displayed, it implies that other physical quality parameters monitored for the report period or had not been entered by the time of automatic summary report generation.

#### Point Analysis Tables

### 3.5. Other Chemical Quality

**NOTE:** Water quality graphs for other key chemical parameters are shown in the section below. If data for the report period had not been entered by the time of automatic summary report generation, the applicable chemical water quality graphs will not be available. If no results for other chemical quality parameters are displayed, it implies that other chemical quality parameters monitored for the report period or had not been entered by the time of automatic summary report generation.

#### Point Analysis Tables



## Appendix A: Data Received and Sampled Areas

### Number of Samples Collected in Each Area for the Report Period

The following section highlights the following:

- The areas that were sampled for the report period (i.e. 1 month)
- The number of samples collected in each area for the report period (i.e. 1 month)

The number of samples collected in each area is shown in the table below.

Area	Samples Collected
Aurora	1
Eendekuil	2
Piketberg	2
Porterville	2
Redelinghuys	2
Velddrif	5
<b>TOTAL</b>	<b>14</b>



## Appendix B: Comments on Red Failures

The following section highlights health related failures of maximum allowable limits (i.e. Reds) for the report period (i.e. 1 month). In addition, where a health related failure of maximum allowable limits has occurred, any previous failures within the last 12 months are also highlighted. This helps to determine if the failure has been once-off or is re-occurring.

In particular, the tables show the following:

- Sampled area
- Sample point name
- Sample dates on which failures of maximum allowable limits occurred (for the last 12 months)
- The parameter/s that failed
- The actual analysis value of the failing parameter
- The comment added stating if an issue has been rectified, resolved, etc. **NOTE:** If a comment regarding corrective actions to resolve issues has not been captured on the eWQMS, this section will state "No Comment on Failure"

Note: The number before the area description is the unique sample point ID as per the eWQMS Database

# Appendix C

This section highlights the following:

1. Percentage compliance versus SANS 241 for the report period (i.e. 1 month) for the following parameters:

- Microbiological
- Physical
- Chemical

2. Overview of percentage compliance versus SANS 241 for the last 12 months for the following parameters:

- Microbiological
- Physical
- Chemical

## 1. Percentage Compliance vs. SANS 241 for the Report Period

Parameters:	Unit Of Measure	Number of Samples	SANS 241			
			SANS: Microbiological Safety: Column 3	SANS: Microbiological Safety: Column 4	SANS: Operational Limits: Acceptable Level	SANS: Microbiological Safety: Column 5
<b>Microbiological</b>						
Total Coliforms (operational)	count per 100 mL	15	-	-	93.3	-
Faecal Coliforms (health)	count per 100 mL	0	-	-	-	-
E.coli (health)	count per 100 mL	15	100.0	100.0	-	100.0

Parameters:	Unit Of Measure	Number of Samples	SANS 241	
			SANS: Physical, Organoleptic, Chemical: Class I	SANS: Physical, Organoleptic, Chemical: Class II
<b>Physical</b>				
Colour (aesthetic)	mg/L Pt	0	-	-
Electrical Conductivity (aesthetic)	mS/m	0	-	-
Odour (aesthetic)	TON	0	-	-
pH (aesthetic/operational)	pH units	0	-	-
Taste (aesthetic)	FTN	0	-	-
Total Dissolved Solids (aesthetic)	mg/L	0	-	-

Parameters:	Unit Of Measure	Number of Samples	SANS 241	
			SANS: Physical, Organoleptic, Chemical: Class I	SANS: Physical, Organoleptic, Chemical: Class II
<b>Physical</b>				
Turbidity (aesthetic/operational/indirect health)	NTU	0	-	-
Turbidity (Operational)	NTU	0	-	-

Parameters:	Unit Of Measure	Number of Samples	SANS 241	
			SANS: Physical, Organoleptic, Chemical: Class I	SANS: Physical, Organoleptic, Chemical: Class II
<b>Chemical</b>				
Aluminium (health)	ug/L	0	-	-
Ammonia (operational)	mg/L as N	0	-	-
Antimony (health)	ug/L as Sb	0	-	-
Arsenic (health)	ug/L	0	-	-
Cadmium (health)	ug/L	0	-	-
Calcium (aesthetic/operational)	mg/L as Ca	0	-	-
Chloride (aesthetic)	mg/L as Cl-	0	-	-
Chromium (health)	ug/L	0	-	-
Cobalt (health)	ug/L as Co	0	-	-
Copper (health)	ug/L	0	-	-
Cyanide (recoverable) (health)	ug/L as CN-	0	-	-
Dissolved Organic Carbon (aesthetic/health)	mg/L as C	0	-	-
Fluoride (health)	mg/L as F-	0	-	-
Iron (aesthetic/operational)	ug/L	0	-	-
Lead (health)	ug/L	0	-	-
Magnesium (aesthetic/health)	mg/L as Mg	0	-	-
Manganese (aesthetic)	ug/L	0	-	-
Mercury (health)	ug/L	0	-	-
Nickel (health)	ug/L as Ni	0	-	-
Nitrate (health)	mg/L as N	0	-	-



Parameters:	Unit Of Measure	Number of Samples	SANS 241	
			SANS: Physical, Organoleptic, Chemical: Class I	SANS: Physical, Organoleptic, Chemical: Class II
<b>Chemical</b>				
Nitrates and Nitrites (health)	mg/L as N	0	-	-
Phenols (aesthetic/health)	ug/L	0	-	-
Potassium (operational/health)	mg/L as K	0	-	-
Selenium (health)	ug/L	0	-	-
Sodium (aesthetic/health)	mg/L as Na	0	-	-
Sulphate (health)	mg/L as SO4=	0	-	-
Total Trihalomethanes (health)	ug/L	0	-	-
Vanadium (health)	ug/L as V	0	-	-
Zinc (aesthetic/health)	mg/L as Zn	0	-	-



## 2. Overview of Percentage Compliance vs. SANS 241 for the Last 12 Months

### Microbiological Safety

Area	E.coli (health)		Faecal Coliforms (health)	
	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	24162	98	4862	98
Western Cape	3366	98	1448	99
Bergrivier Municipality	288	99	5	100
Aurora	34	100	3	100
Eendekuil	36	100	0	0
Piketberg	39	100	1	100
Porterville	60	98	1	100
Redelinghuys	40	98	0	0
Velddrif	79	100	0	0

#### Notes:

- The percentage compliance displayed is the percentage of all samples collected in the area falling within SANS: Microbiological Safety: Column 5.
- Based on samples taken during the last 12 months.

#### SANS 241 Table C.2: Compliance frequency targets in respect of microbiological and chemical requirements that have health implications

Quality of Water System	Microbiological requirement	Chemical requirement	
	Column 5 of Table 1	Class I	Class II
Excellent	>= 99%%	>= 95%%	>= 97%%
Good	>= 98%%	>= 90%%	>= 95%%
Fair	>= 97%%	>= 85%%	>= 90%%
Poor	<97%%	<85%%	<90%%

## Microbiological Operational

Area	Total Coliforms (operational)	
	SampleCount	Compliance %
South Africa	22816	92
Western Cape	4647	91
Bergrivier Municipality	287	89
Aurora	34	91
Eendekuil	36	92
Piketberg	39	90
Porterville	60	98
Redelinghuys	39	72
Velddrif	79	86

### Notes:

- The percentage compliance displayed is the percentage of all samples collected in the area falling within SANS: Operational Limits: Acceptable Level.
- Based on samples taken during the last 12 months.



## Physical

Area	pH (aesthetic/operational)		Turbidity (aesthetic/operational/indirect health)		Electrical Conductivity (aesthetic)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	23337	99	23098	69	20996	99
Western Cape	3756	94	3705	76	3433	99
Bergrivier Municipality	155	99	155	44	155	93
Aurora	22	100	22	82	22	50
Eendekuil	21	100	21	33	21	100
Piketberg	22	100	22	23	22	100
Porterville	34	100	34	29	34	100
Redelinghuys	22	91	22	5	22	100
Velddrif	34	100	34	79	34	100

Area	Total Dissolved Solids (aesthetic)		Turbidity (Operational)		Colour (aesthetic)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	4654	98	583	100	4640	91
Western Cape	1031	96	38	100	1369	87
Bergrivier Municipality	141	88	0	0	155	90
Aurora	21	19	0	0	22	95
Eendekuil	21	100	0	0	21	100
Piketberg	22	100	0	0	22	95
Porterville	30	100	0	0	34	97
Redelinghuys	18	100	0	0	22	55
Velddrif	29	100	0	0	34	94

Area	Odour (aesthetic)		Taste (aesthetic)	
	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	1203	95	606	96
Western Cape	3	100	0	0
Bergrivier Municipality	0	0	0	0
Aurora	0	0	0	0
Eendekuil	0	0	0	0
Piketberg	0	0	0	0
Porterville	0	0	0	0
Redelinghuys	0	0	0	0



Area	Odour (aesthetic)		Taste (aesthetic)	
	SampleCount	Compliance %	SampleCount	Compliance %
Velddrif	0	0	0	0

**Notes:**

- The percentage compliance displayed is the percentage of all samples collected in the area falling within SANS: Physical, Organoleptic, Chemical: Class I.
- Based on samples taken during the last 12 months.

## Chemical

Area	Fluoride (health)		Sulphate (health)		Manganese (aesthetic)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	3556	99	2535	100	2753	97
Western Cape	842	98	791	100	1293	97
Bergrivier Municipality	153	99	155	100	150	92
Aurora	22	95	22	100	22	50
Eendekuil	21	100	21	100	21	100
Piketberg	22	100	22	100	22	95
Porterville	34	100	34	100	33	100
Redelinghuys	22	100	22	100	22	100
Velddrif	32	100	34	100	30	100

Area	Nitrate (health)		Aluminium (health)		Iron (aesthetic/operational)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	1381	99	2220	93	5443	92
Western Cape	185	100	1279	88	1807	93
Bergrivier Municipality	0	0	155	94	154	88
Aurora	0	0	22	100	22	95
Eendekuil	0	0	21	95	21	100
Piketberg	0	0	22	64	22	86
Porterville	0	0	34	97	34	85
Redelinghuys	0	0	22	100	22	82
Velddrif	0	0	34	100	33	85

Area	Calcium (aesthetic/operational)		Ammonia (operational)		Chloride (aesthetic)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	5606	100	1178	98	2621	96
Western Cape	1464	100	484	99	1038	92
Bergrivier Municipality	155	100	155	100	155	83
Aurora	22	100	22	100	22	14
Eendekuil	21	100	21	100	21	100
Piketberg	22	100	22	100	22	100
Porterville	34	100	34	100	34	100
Redelinghuys	22	100	22	100	22	82
Velddrif	34	100	34	100	34	91



Area	Magnesium (aesthetic/health)		Potassium (operational/health)		Sodium (aesthetic/health)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	4884	99	1243	100	1743	98
Western Cape	1050	100	610	100	607	96
Bergrivier Municipality	155	100	155	100	155	90
Aurora	22	100	22	100	22	32
Eendekuil	21	100	21	100	21	100
Piketberg	22	100	22	100	22	100
Porterville	34	100	34	100	34	100
Redelinghuys	22	100	22	100	22	100
Velddrif	34	100	34	100	34	100

Area	Copper (health)		Nitrates and Nitrites (health)		Zinc (aesthetic/health)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	620	100	1577	100	942	99
Western Cape	19	100	892	100	490	100
Bergrivier Municipality	0	0	155	100	155	100
Aurora	0	0	22	100	22	100
Eendekuil	0	0	21	100	21	100
Piketberg	0	0	22	100	22	100
Porterville	0	0	34	100	34	100
Redelinghuys	0	0	22	100	22	100
Velddrif	0	0	34	100	34	100

Area	Cadmium (health)		Chromium (health)		Cobalt (health)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	518	99	394	100	346	100
Western Cape	3	100	3	100	3	100
Bergrivier Municipality	0	0	0	0	0	0
Aurora	0	0	0	0	0	0
Eendekuil	0	0	0	0	0	0
Piketberg	0	0	0	0	0	0
Porterville	0	0	0	0	0	0
Redelinghuys	0	0	0	0	0	0
Velddrif	0	0	0	0	0	0



Area	Lead (health)		Mercury (health)		Nickel (health)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	762	100	288	98	391	100
Western Cape	3	100	3	100	3	100
Bergrivier Municipality	0	0	0	0	0	0
Aurora	0	0	0	0	0	0
Eendekuil	0	0	0	0	0	0
Piketberg	0	0	0	0	0	0
Porterville	0	0	0	0	0	0
Redelinghuys	0	0	0	0	0	0
Velddrif	0	0	0	0	0	0

Area	Vanadium (health)		Phenols (aesthetic/health)		Arsenic (health)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	298	100	189	75	227	100
Western Cape	3	100	3	100	3	100
Bergrivier Municipality	0	0	0	0	0	0
Aurora	0	0	0	0	0	0
Eendekuil	0	0	0	0	0	0
Piketberg	0	0	0	0	0	0
Porterville	0	0	0	0	0	0
Redelinghuys	0	0	0	0	0	0
Velddrif	0	0	0	0	0	0

Area	Selenium (health)		Antimony (health)		Cyanide (recoverable) (health)	
	SampleCount	Compliance %	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	158	95	152	63	33	91
Western Cape	3	100	3	100	3	0
Bergrivier Municipality	0	0	0	0	0	0
Aurora	0	0	0	0	0	0
Eendekuil	0	0	0	0	0	0
Piketberg	0	0	0	0	0	0
Porterville	0	0	0	0	0	0
Redelinghuys	0	0	0	0	0	0
Velddrif	0	0	0	0	0	0



Area	Dissolved Organic Carbon (aesthetic/health)		Total Trihalomethanes (health)	
	SampleCount	Compliance %	SampleCount	Compliance %
South Africa	240	98	93	99
Western Cape	6	83	6	100
Bergrivier Municipality	0	0	0	0
Aurora	0	0	0	0
Eendekuil	0	0	0	0
Piketberg	0	0	0	0
Porterville	0	0	0	0
Redelinghuys	0	0	0	0
Velddrif	0	0	0	0

**Notes:**

- The percentage compliance displayed is the percentage of all samples collected in the area falling within SANS: Physical, Organoleptic, Chemical: Class I.
- Based on samples taken during the last 12 months.

**SANS 241 Table C.2: Compliance frequency targets in respect of microbiological and chemical requirements that have health implications**

Quality of Water System	Microbiological requirement	Chemical requirement	
	Column 5 of Table 1	Class I	Class II
Excellent	>= 99%%	>= 95%%	>= 97%%
Good	>= 98%%	>= 90%%	>= 95%%
Fair	>= 97%%	>= 85%%	>= 90%%
Poor	<97%%	<85%%	<90%%