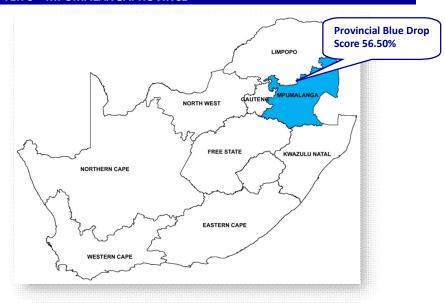
CHAPTER 8 – MPUMALANGAPROVINCE



Provincial Best Performer

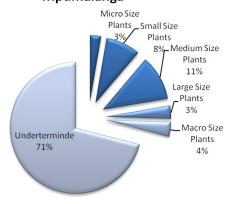
Steve Tshwete Local Municipality is the best performing municipality in Mpumalanga Province:

✓ 96.60% Municipal Blue Drop Score

Introduction

Water services delivery is performed by nineteen (19) Water Services Authorities in Mpumalanga via 80 drinking water supply systems.

Distribution of Water Supply Systems in Mpumalanga



A total design capacity of 661 is available for drinking water supply in MpumalangaProvince, distributed across 80 supply systems. Operational data is not available for all systems, however the existing data indicates average operating capacities between 71 and 118%. This result in an average output volume (final water) of 502 Ml/day.

	MICRO SIZE <0.5 M&/day	SMALL SIZE 0.5-2 M&/day	MEDIUM SIZE 2-10 M&/day	LARGE SIZE <10-25 M&/day	MACRO SIZE >25 M&/day	Undeter- mined	Total
No of Water Supply Systems	6	19	25	7	8	159	80
System Design Volume (M&/day)	1.8	27.3	104.7	109.0	416.0	NI	660.7
Average Operating Capacity (%)	118.2	71.3	77.3	83.4	71.5	NI	75.9
Output volume (Mℓ/day)	2.2	19.5	81.1	90.9	297.4	NI	501.5

N/A = Not Applicable NI = No Information

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Provincial Blue Drop Analysis

Analysis of the Blue Drop assessments and site inspection results indicate that performance vary from excellent to unsatisfactory. A total of 100% municipalities were assessed during the 2010/11 Blue Drop Certification.

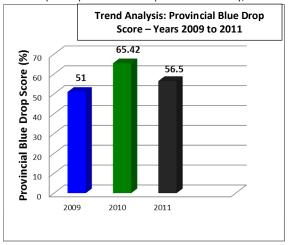
BLUE DROP COMPARATIVE ANALYSIS							
Performance Category	2009	2010	2011	Performance trend			
Incentive-based indicators							
Number of municipalities assessed	8 (of 21) (38.0%)	14 (of 21) (66.7%)	19 (of 21) (90.47%)	↑			
Number of water systems assessed	35	78	80	↑			
Number of Blue Drop scores ≥50%	19 (54.28%)	24 (30.7%)	44 (55%)	↑			
Number of Blue Drop scores <50%	16 (45.71%)	54 (69.23%)	36 (45%)	↑			
Number of Blue Drop awards	3	6	8	1			
PROVINCIAL BLUE DROP SCORE	51%	65.42%	56.50%	1			

N/A = Not applied \uparrow = improvement, \downarrow = digress, \rightarrow = no change

Most of the Mpumalanga municipalities is committed to the Blue Drop process, in an effort to raise the drinking water quality and reliability of supply to all consumers. The incentive-based regulatory approach act as a positive stimulus to facilitate improved performance and public accountability, whilst

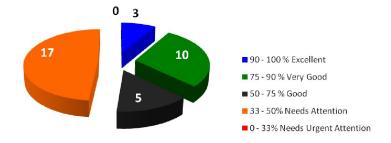
establishing essential systems and processes to <u>sustain</u> and <u>measure</u> gradual improvement. The trends analysis indicate that Mpumalanga is not quite on par with their provincial objectives to ensure continued improvement, as can be seen from the drop in provincial score from 65.4 to 56.5%. Renewed effort and resources will have to be applied to turn around this undesirable trend.

On a positive note, the overall appearance looks positive, as can be seen by the increased number of Blue Drops in the province, as a reflection of prominent centres of excellence in this Province. In addition, the number of systems that achieve >50% Blue

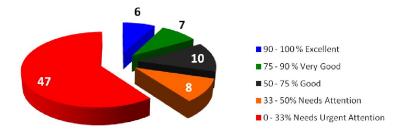


drop status has also increased. However, the most significant statistic is the Provincial Blue Drop Score of 56.5%, which place Mpumalanga amongst the lower performing provinces on the national Performance Log.

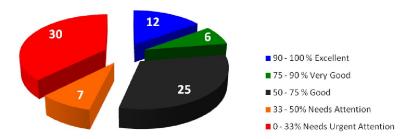
Blue Drop Assessment 2009



Blue Drop Assessment 2010



Blue Drop Assessment 2011



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When comparing 2011 Blue Drop results with 2009 and 2010, the following trends are observed:

- ✓ 80 systems are assessed in 2011 compare to only 35 (2009) and 78 (2010)
- ✓ 8 systems achieved Blue Drop Certification, compared to 6 (2010) and 3 (2009)
- ✓ 0% systems scored between 0-33% in 2010, which eliminate critical systems from the Mpumalanga performance log
- ★ 37.5% of all systems are now in critical condition compared to 60% (2010), which is a progressive improvement.

Readers need to be mindful that Blue Drop Certification follows a regulation strategy that facilitates gradual and sustainable improvement.... Thereby, Blue Drop requirements become more stringent with every assessment cycle. Municipalities who merely 'maintained' their water on same levels year in and out, is likely to achieve reduced Blue Drop scores, whilst municipalities that drive 'continuous' improvement, are likely to be awarded with improved Blue Drop scores with each assessment cycle.

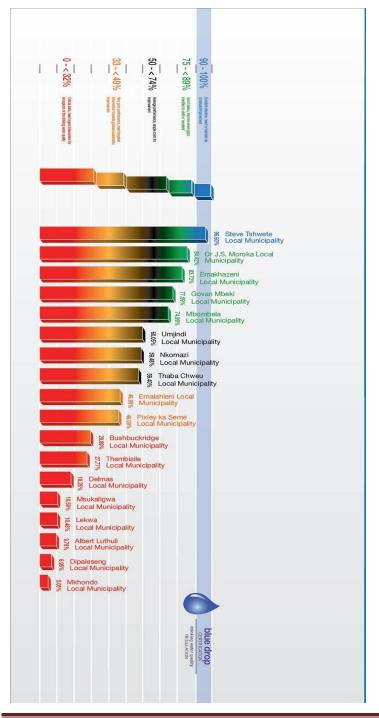
Conclusion

The Blue Drop results for 2011 indicate that municipal drinking water quality management in Mpumalanga vary from excellent to good, with 4 systems that need attention, as indicated in the Provincial Performance Log. The overall business of drinking water supply and quality management is satisfactory, however areas of concern are raised where improvement is required. Mpumalanga is taking a position amongst the lower performing provinces in the country.

Eight Blue Drop Certificates are awarded in Mpumalanga:

2 Blue Drops : Mbombela Local Municipality / Silulumanzi
 6 Blue Drops : Steve Tswete Local Municipality / ESKOM

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Water Services Authority: Albert Luthuli Local Municipality
Water Services Providers: Albert Luthuli Local Municipality

Carolina

Badplass

Mpuluzi

Municipal Blue Drop Score 2011: 09.78%

Performance Area

	Syster						Jetti, ago cu
Water Safety Planning Process & Incident Response Management		49		49	49		49
Process Control, Maintenance & Management Skills		23		23	23		23
Monitoring Programme		0		0	0		0
Credibility of Sample Analyses		5		5 5		5	
Submission of Results		0		0	0		0
Drinking Water Quality Compliance		0		0	0		0
Performance Publication		0		0	0		0
Asset Management		0		0	0		0
Bonus Scores		0		0	0		0
Penalties		0		0	0		0
Blue Drop Score (2011)		09.78% (↑)	09.	. 78% (→)	09.78%	(→)	09.78% (>)
Blue Drop Score (2010)		05.13%		08.96%	08.63%	,	08.63%
System Design Supply Capacity (MI	d)	6		4	8.5		4
System Operational Capacity		60%		NI	NI		NI
Population Served by System	11\	13 632 264		10 600	44 983		1 106
Ave. Daily Consumption per Capita Microbiological Compliance(12 mont		56.00% (7 months)	E6 00	7 (7 months)	56.00% (7 months)		56.00% (7 months)
Chemical Compliance(12 months)	113)	95.00% (7 months)		0% (6 months)	95.00% (7 months)		95.00% (7 months)
				,		,	
Performance Area	Systems	Elukwatini		Metula	i Fernie		Ekulindeni
Water Safety Planning Process & Incident Response Management		49		4	.9		49
Process Control, Maintenance & Management Skills		23		23			23
Monitoring Programme		0		0			0
Credibility of Sample Analyses		5		5			5
Submission of Results		0		0			0
Drinking Water Quality Compliance	•	0		0			0
Performance Publication		0		()	0	
Asset Management		0		()		0
Bonus Scores		0		()		0
Penalties	Penalties			()		0
Blue Drop Score (2011)		09.78% (→		09.78	3% (→)		09.78% (>)
Blue Drop Score (2010)		08.63%			53%		08.63%
System Design Supply Capacity (MI)	d)	13			7		5
System Operational Capacity		NI		·	II		66%
Population Served by System	71\	65 654		31	056		10 885
Ave. Daily Consumption per Capita		- FC 000/ (7	-1	EC 0007	- 7 \	-	322
Microbiological Compliance(12 months) Chemical Compliance(12 months)	ns)	56.00% (7 month 95.00% (6 month		56.00% (95.00% (6.00% (7 months) 5.00% (6 months)
onemical compliance(12 months)		33.00% (o month	٥)	33.00%	o monuis)	1 3	3.00% (6 months)

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Regulatory Impression:

The 2011 Blue Drop score of Albert Luthuli Local Municipality showed minimal improvement from the previous assessment. The Department however acknowledges the commencement of the water safety planning process. The commitment from the technical team is noted, even though the team currently faces a challenge with regards to staff turn-over. The current team was found to work under challenging conditions.

Although the Municipality appointed a service provider to assist in turning around the current appalling situation, DWA requires Albert Luthuli to immediately improve Drinking Water Quality (DWQ) management with intensive effort, all Blue Drop Requirements needs to be addressed.

Management support is needed for implementation of the water safety plan already noted being developed, funds must be available to improve DWQ service delivery. While the municipality and service provider attempts to improve the situation, information should be submitted on the Blue Drop System to allow DWA to monitor the situation (as required in Section 82 of the Water Services Act, No 108 of 1997). Conservatively, the Department assumes that all water within the jurisdiction of the municipality poses a risk of infection.

NB: The Regulator is extremely concerned with the performance of drinking water quality management by Albert Luthuli. The WSA is requested to submit a Corrective Action Plan to the Department within 30 days of release of the Blue Drop Report.

Findings

Lushushwane /

Bettysgoed

- According to the BDS, only two systems are registered. This does not allow DWA to adequately evaluate all seven system presented for evaluation. DWQ data has to be submitted per supply system, monitoring should occur as often as stipulated in SANS 241 (South African standard for Drinking Water) and informed by the risk assessment. This must be rectified as soon as possible.
- It is evident that there is a decline in the Microbial DWQ management practices of the municipality (i.e. disinfection), the inconsistent sampling practice is furthermore disconcerting since a false impression of safe water could be portrayed against the limited data
- 3. Compared with the results in 2010 for 11 months, the 7 months of microbiological and 6 months chemical data confirms that all water poses a serious risk to public health.
- 4. Other areas that requires urgent attention by the Municipality are:
 - Process Control, Maintenance & Management Skills
 - Monitoring Programme
 - Credibility of Sample Analyses
 - Performance Publication
 - Asset Management

Water Services Authority: Bushbuckridge Local Municipality
Water Services Providers: Bushbuckridge Local Municipality

Municipal Blue Drop Score 2011: 29.89%

Performance Area	Dingledale	Sigagule	Thorndale
Systems			
Water Safety Planning Process &			
Incident Response Management	0	0	0
Process Control, Maintenance &	5	10	0
Management Skills			-
Monitoring Programme	26	34	25
Credibility of Sample Analyses	50	50	50
Submission of Results	0	50	10
Drinking Water Quality Compliance	73	73	50
Performance Publication	0	0	0
Asset Management	0	0	0
Bonus Scores	0	0	0
Penalties	0.3	0.3	0.6
Blue Drop Score (2011)	27.48% (1)	31.32% (>)	25.00% (-)
Blue Drop Score (2011)	08.50%	NA	NA
System Design Supply Capacity (MI/d)	1.5	2	2d
System Operational Capacity	NI	NI	NI
Population Served by System	2 262	2 354	3 012
Ave. Daily Consumption per Capita (I)	-	-	-
Microbiological Compliance(12 months)	100.00% (7 months)	100.00% (11 months)	100.00%
Chemical Compliance(12 months)	100.00% (7 months)	100.00% (11 months)	88.89% (8 months)
Systems			
Water Safety Planning Process &			
Incident Response Management	0	0	0
Incident Response Management Process Control, Maintenance & Management Skills	10	0	0
		_	
Process Control, Maintenance & Management Skills Monitoring Programme	10	10	10
Process Control, Maintenance & Management Skills	10 14	10 42	10 21
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results	10 14 50	10 42 50	10 21 50
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance	10 14 50 100 75	10 42 50 100 65	10 21 50 20 65
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication	10 14 50 100 75	10 42 50 100 65 0	10 21 50 20 65
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management	10 14 50 100 75 0	10 42 50 100 65 0	10 21 50 20 65 0
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication	10 14 50 100 75	10 42 50 100 65 0	10 21 50 20 65
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores	10 14 50 100 75 0 0	10 42 50 100 65 0	10 21 50 20 65 0
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010)	10 14 50 100 75 0 0 0	10 42 50 100 65 0 0 0	10 21 50 20 65 0 0
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d)	10 14 50 100 75 0 0 0 0 0 33 32.42% (↑)	10 42 50 100 65 0 0 0 0 32.15% (>)	10 21 50 20 65 0 0 0 0.5 26.08% (→)
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity	10 14 50 100 75 0 0 0 0.3 32.42% (↑) 11.50% 4.5 NI	10 42 50 100 65 0 0 0 0 32.15% (→)	10 21 50 20 65 0 0 0 0.5 26.08% (>)
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System	10 14 50 100 75 0 0 0 0 33 32.42% (↑) 11.50%	10 42 50 100 65 0 0 0 0 32.15% (>) NA 3	10 21 50 20 65 0 0 0 0.5 26.08% >)
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System Ave. Daily Consumption per Capita (I)	10 14 50 100 75 0 0 0 0 332.42% (↑) 11.50% 4.5 NI 36 853	10 42 50 100 65 0 0 0 0.5 32.15% (-) NA 3 NI 20 366	10 21 50 20 65 0 0 0.5 26.08% () NA 2 NI 11563
Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System	10 14 50 100 75 0 0 0 0.3 32.42% (↑) 11.50% 4.5 NI	10 42 50 100 65 0 0 0 32.15% (→)	10 21 50 20 65 0 0 0.5 26.08% (→)

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Regulatory Impression:

Regrettably, despite numerous communiqué between the WSA and the Blue Drop Inspectors in an attempt to finalise the virtual assessment against data / information loaded on the Blue Drop System (BDS), no data was uploaded on the BDS at the confirmation assessment. The situation in Bushbuckridge LM is considered critical from a regulatory view and holds high risk to public health.

The 29.89% overall municipal score confirms that drinking water quality management services are still not managed according to the expectations of the regulation programme. The only positive the Department can highlight is the commencement of the water safety planning process.

The Municipality has to prioritise development and implementation of the water safety plan, it is imperative to conduct risk assessments for the entire area that covers the catchment, treatment systems and distribution. Roles and responsibilities must be clearly defined, while management shows support by availing budget. Service level agreements should be in place and endorsed should any Water Services Providers assist the Authority.

The municipality is commended for ensuring that DWQ data on both the chemical and microbiological quality of drinking water in all the supply systems are available on the BDS. The Regulator is encouraged that the municipality adhered to the request during the 2010 assessment to submit data. The municipality is now encouraged to improve on all other aspects of the DWQ management business.

NB: The regulator is extremely concerned with the DWQ management performance of Bushbuckridge. The WSA should submit a Corrective Action Plan to the Department within 30 days of release of the Blue Drop Report detailing plans to improve the situation.

Findings

- During the 2010 Blue Drop assessment, the WSA presented 10 systems for assessment.
 This year, Bushbuckridge registered 6 systems. The WSA is advised to ensure that the amalgamation of systems results in a more focussed DWQ management approach, the WSA should also confirm that the entire area under jurisdiction is included under the 6 supply systems.
- 2. The following areas require urgent attention by the Municipality, it must be included in the action plan submitted to the Department:
 - Water Safety Planning Process & Incident Response Management
 - Process Control, Maintenance & Management Skills
 - Monitoring Programme
 - Credibility of Sample Analyses
 - Submission of Results
 - Drinking Water Quality Compliance
 - Performance Publication
 - Asset Management

Water Services Authority: Dipaleseng Local Municipality
Water Services Providers: Dipaleseng Local Municipality

Municipal Blue Drop Score 2011: 06.95%

	_
Performance Area	Fortuna
systems	
Syst	
Water Cofe to Blancing Brown 0	
Water Safety Planning Process &	0
Incident Response Management	
Process Control, Maintenance & Management Skills	0
Monitoring Programme	45
Credibility of Sample Analyses	19
Submission of Results	0
Drinking Water Quality Compliance	5
Performance Publication	0
Asset Management	0
Bonus Scores	0
Penalties	0.3
Blue Drop Score (2011)	06.95% (→)
Blue Drop Score (2010)	NA
System Design Supply Capacity (MI/d)	5
System Operational Capacity	100%
Population Served by System	50 000
Ave. Daily Consumption per Capita (I)	100
Microbiological Compliance(12 months)	44.12% (5 months)
Chemical Compliance(12 months)	100.00% (4 months)

Regulatory Impression:

The representative of Dipaleseng Local Municipality sent to the 2011 Blue Drop confirmation session was not informed regarding the requirements for the Blue Drop evaluation. DWA consequently received minimal information during the session. Although required to make information available to the DWA to regulate the drinking water management service of the WSA (Water Services Act, Act 108 of 1997), almost no information was furthermore available on the Blue Drop System (BDS). This impedes the ability of the Department to perform its regulatory function. The WSA should improve drinking water quality management, all requirements of the Blue Drop Certification process require urgent attention.

The quality of drinking water presents a risk to public health, a number of E. coli failures were noted against the limited data on BDS.

The WSA should urgently develop a Water Safety Plan for the supply system. If implemented, DWQ management against the principles of the water safety planning process will enhance understanding and data availability on risks / hazards in the supply system. It should further provide the information to seek senior management commitment for service improvement.

The Blue Drop Inspectors noted an abattoir upstream of the treatment works that constitutes a high risk impacting the quality of the resource water. The WSA should ensure address of this risk. DWA also noted that the South African Development Bank is assisting with water related projects.

NB: The Regulator is extremely concerned with the DWQ management performance of Dipaleseng Local Municipality. The WSA should submit a Corrective Action Plan to the Department within 30 days of release of the Blue Drop Report.

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Findings

- Dipaleseng was highlighted in the 2010 Blue Drop report as one of the Municipalities who showed a lack of commitment towards Drinking Water Quality management. The Regulator can no longer tolerate the dismissive attitude, municipal management should immediately address the non-compliances.
- 2. The Municipality must note that even though the Blue Drop certification process is part of incentive-based regulation, assessments are compulsory. Water Service Authorities and Water Service Providers are compelled under law to provide the Regulator with the necessary information to do a proper analysis on the quality of DWQ management. Refer to the following Sections of the Water Services Act (Act 109 or 1997) for clarity:
 - Section 19: Institutional arrangements
 - Section 23: Responsibility to reveal information
 - Section 62: Right to regulate
 - Section 82: Offence to withhold information.

Water Services Authority: Dr JS Moroka Local Municipality
Water Services Providers: Dr JS Moroka Local Municipality

Municipal Blue Drop Score 2011: 84.42%

Performance Area	Systems	Weltevrede
Water Safety Planning Process & Incident Response Management		63
Process Control, Maintenance & Management Skills		100
Monitoring Programme		90
Credibility of Sample Analyses		88
Submission of Results		100
Drinking Water Quality Compliance		65
Performance Publication		100
Asset Management		70
Bonus Scores		10.3
Penalties		0.3
Blue Drop Score (2011)		84.42% (↓)
Blue Drop Score (2010)		95.73%
System Design Supply Capacity (MI/o	d)	60
System Operational Capacity		90%
Population Served by System		218 290
Ave. Daily Consumption per Capita (I)		247
Microbiological Compliance(12 month	ıs)	98.30%
Chemical Compliance(12 months)		100.00% (10 months)

Regulatory Impression:

It is disappointing that Dr JS Moroka could not retain its Blue Drop Certification status. Poor performance against the Water Safety Plan requirement, together with the microbiological quality of the water only evaluated as good, largely prevented DWA from evaluating the drinking water quality (DWQ) management business as excellent. Should these aspects receive serious attention, while performance is maintained against the other aspects of the business, Blue Drop status again becomes achievable in 2012.

Findings

- the compliance monitoring programme maintained by the WSA in the distribution system. The management of incidents in general also warranted concern. DWA found that the municipality monitors the microbiological quality of the drinking water at the point of use primarily with E. coli Colilert presence / absence tests. Although advisable to use when circumstances prevents monitoring with quantifiable test methods, the municipality provided little evidence on failure-follow-up sampling / analyses. The municipality furthermore provided little information to confirm credibility of the results from the inhouse laboratory. DWA advises the WSA to immediately re-sample water showing the presence of microbiological contaminants, analyses should then be done with a quantifiable method (probably an external laboratory). Remedial action should ensure positive identification of failures, notifications to be implemented when necessary.
- Incidents should be documented in the Incident Management Protocol, while the WSA also maintains an incident register.

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The Weltevrede WTWSystem was inspected to verify the Blue Drop findings and the following refers:

- The WTW is classified as a Class B works.
- All relevant manuals, logbooks, flow data and failure response management protocols were evident on site. Onsite equipment was found well managed.
- 3. The works and the building are well maintained. Security operates 24 hours, 7 days a week.
- 4. Gardens, lawns and safety signs are in excellent condition, well displayed.
- 5. Chlorination was found well controlled, with a proper sampling point and contact time.
- 6. The Inspectors however noted room for improvement at the storage facility of Bags.

Water Services Authority: Emakhazeni Local Municipality
Water Services Providers: Emakhazeni Local Municipality

Municipal Blue Drop Score 2011: 83.72%

Performance Area	Belfast (Emakhazeni)	Dullstroom	Emgwenya (W Boven)	Entokozweni (Machadodorp)
Water Safety Planning Process & Incident Response Management	70	70	70	70
Process Control, Maintenance & Management Skills	40	68	28	40
Monitoring Programme	76	91	69	76
Credibility of Sample Analyses	100	100	100	100
Submission of Results	100	100	100	100
Drinking Water Quality Compliance	100	60	100	100
Performance Publication	100	100	100	100
Asset Management	43	80	43	43
Bonus Scores	7	7	4	7
Penalties	0	0	0	0
Blue Drop Score (2011)	84.95% (1)	83.41% (↑)	80.42% (↑)	84.95% (1)
Blue Drop Score (2010)	71.19%	71.19%	65.19%	71.19%
System Design Supply Capacity (MI/d)	3.5	2.2	3	2.7
System Operational Capacity	91%	82%	70%	74%
Population Served by System	19 253	8 375	11 071	10 858
Ave. Daily Consumption per Capita (I)	165	215	190	184
Microbiological Compliance(12 months)	96.88%	96.94% (11 months)	100.00%	100% (11 months)
Chemical Compliance(12 months)	100.00%	100% (11 months)	100% (11 months)	99.07% (11 months)

Regulatory Impression:

The Emakhazeni LM is to be commended on their positive approach and commitment to fulfilling all the requirements of the Blue Drop Certification Programme. An attempt was made to table evidence for each criterion, some of the documentation was however generic in nature.

All the documentary evidence presented was in hard copy. It is recommended (required) that the LM appoint a responsible person to ensure that this information is uploaded on the Blue Drop System (BDS).

Findings

- 1. In general, the following areas requires the urgent attention of the Municipality:
 - Process Control, Maintenance & Management Skills
 - Credibility of Sample Analyses
 - Asset Management
- It is recommended that a concerted effort be made to compile operation and maintenance manuals for each plant.
- Inspectors noted the commitment by the LM to improve Process control and small infrastructure on the plants.

The Belfast and Dullstroom WTW's were inspected to verify the Blue Drop findings and the following refers:

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Belfast WTW

- 1. The WTW is classified as a Class C works, certificate was displayed on the wall.
- 2. O&M manual, as well as the calibration certificates, absent.
- The works and the building are in good condition. The area that needs attention is the sludge dams.
- 4. There is a room for improvement at the storage facility of Lime Bags.

Dullstroom WTW

- 1. The WTW is classified as a Class C works, certificate was displayed on the wall.
- 2. O&M manual available, manuals and equipment calibration fluids on-site.
- 3. The works and the building are in good condition.
- There is a room of improvement at the storage facility of Lime Bags and the disposal area of unused materials.

Water Services Authority: Emalahleni Local Municipality
Water Services Providers: Emalahleni Local Municipality

Municipal Blue Drop Score 2011: 46.90%

Performance Area	Witbank	Rietspruit	Kriel
Water Safety Planning Process & Incident Response Management	4	4	4
Process Control, Maintenance & Management Skills	33	23	43
Monitoring Programme	41	42	60
Credibility of Sample Analyses	93	93	93
Submission of Results	100	50	50
Drinking Water Quality Compliance	20	20	85
Performance Publication	100	100	100
Asset Management	27	8	31
Bonus Scores	9	11	3
Penalties	0.3	0.3	0.3
Blue Drop Score (2011)	46.05% (↑)	41.78% (↑)	61.22% (↑)
Blue Drop Score (2010)	31.00%	29.00%	29.00%
System Design Supply Capacity (MI/d)	120	NI	7.5
System Operational Capacity	79%	3.3	67%
Population Served by System	300 000	10 000	15 055
Ave. Daily Consumption per Capita (I)	316	-	334
Microbiological Compliance(12 months)	91.97%	90.48% (11 months)	100.00% (11 months)
Chemical Compliance(12 months)	99.72% (11 months)	99.17% (11 months)	100.00% (11 months)

Regulatory Impression:

Although Emalahleni still performed unsatisfactory against the requirements of the Blue Drop Certification process, an increase in the 2011 Blue Drop score is seen (municipal average from 29.7% to 46.90%). The municipality should improve all aspects of their drinking water quality (DWQ) management performance, urgent attention should be given to address the microbiological drinking water quality failures in the Witbank and Rietspruit systems. Disinfection should improve, it is further advisable that the WSA prepare O&M manuals for all the treatment plants.

The Witbank (eMalahleni) WTW was inspected to verify the Blue Drop findings and the following refers:

- All assets owned by the LM including the municipal buildings are poorly maintained.
 Operation was poorly supervised, failure of equipment appear a regular occurrence.
- The Class-B certification certificate is not displayed at the plant.
- There appears to be little incentive to improve performance. On the positive, record keeping and supervision was significantly better at the Kriel plant.
- The WSA takes no responsibility for sample collection or analysis, there is no follow-up sampling on failures which regularly occurs at the Witbank plant.
- No logbooks, no maintenance book, flow data and failure response management protocol
 were evident on-site.
- Insufficient signage at the chlorine installation.

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Water Services Authority: Govan Mbeki Local Municipality
Water Services Providers: Govan Mbeki Local Municipality

Municipal Blue Drop Score 2011: 77.59%

Performance Area	Systems	Greater Govan Mbeki
Water Safety Planning Process & Incident Response Management		50
Process Control, Maintenance & Management Skills		75
Monitoring Programme		89
Credibility of Sample Analyses		86
Submission of Results		100
Drinking Water Quality Compliance	•	44
Performance Publication		100
Asset Management		100
Bonus Scores		6
Penalties		0
Blue Drop Score (2011)		77. 59% (↓)
Blue Drop Score (2010)		78.88%
System Design Supply Capacity (MI/	d)	NI
System Operational Capacity		NI
Population Served by System		244 123
Ave. Daily Consumption per Capita (-
Microbiological Compliance(12 mont	hs)	96.76%
Chemical Compliance(12 months)		99.85%

Regulatory Impression:

Govan Mbeki was found to maintain good drinking water quality (DWQ) management practices for their area of responsibility. Evaluated against the more stringent 2011 Blue Drop requirements, the slight decline from the 2010 Blue Drop score is not seen as a decline in service delivery. DWA encourages the municipality to improve performance, address of the microbiological water quality failures and implementation of a water safety plan could see the municipality on its way of attaining Blue Drop status.

Water Services Authority: Lekwa Local Municipality
Water Services Providers: Lekwa Local Municipality

Municipal Blue Drop Score 2011: 10.48%

Performance Area	Morgenzon	Standerton
Water Safety Planning Process & Incident Response Management	0	0
Process Control, Maintenance & Management Skills	59	59
Monitoring Programme	16	14
Credibility of Sample Analyses	28	24
Submission of Results	0	0
Drinking Water Quality Compliance	6	5
Performance Publication	0	0
Asset Management	0	0
Bonus Scores	0	0
Penalties	0.2	0.3
Blue Drop Score (2011)	18.85% (↓)	09.92 (↓)
Blue Drop Score (2010)	21.00%	18.00%
System Design Supply Capacity (MI/d)	1.8	27
System Operational Capacity	44.00%	82.00%
Population Served by System	10 000	104 824
Ave. Daily Consumption per Capita (I)	72	211
Microbiological Compliance(12 months)	75.00% (4 months)	82.76% (6 months)
Chemical Compliance(12 months)	100.00% (7 months)	100.00% (9 months)

Regulatory Impression:

The overall municipal score confirms that the municipality did little to improve on their drinking water quality (DWQ) management business since the 2010 assessment when 19.5% was recorded.

The dismissive behaviour by Lekwa Local Municipality towards a national programme intent to inform the public of local municipal service performance, is deplorable. This Department is extremely concerned about the current status of the DWQ. For a second year the municipality did not adhere to the requirement of the regulator to provide information needed by the Minister to access all aspects of the DWQ management service. According to section 62 of the Water Services Act, Act 107 of 1998, the WSA must provide information to the Department on a monthly basis. Information must be uploaded per supply system on the Blue Drop System (BDS).

NB: The Regulator is extremely concerned with the DWQ management performance of Lekwa LM. DWA requires a Corrective Action Plan within 30 days of release of this Blue Drop Report.

Findings

- 1. All areas of the municipal service require improvement.
- The Municipality is advised to publish their DWQ performance against the South African standard for drinking water (SANS 241) – the public should be informed of the risk drinking water poses to public health.
- Management commitment is urgently needed to address the poor drinking water quality, disinfection should be optimised as a matter of urgency.

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Water Services Authority: Mbombela Local Municipality
Water Services Providers: Mbombela LM, Bushbuckridge Water ; Silulumanzi

Municipal Blue Drop Score 2011: 74.99%

Performance Area	Dwaleni ^a	Elandshoek	Hazyview	Legogote Mganduzweni ^a
Water Safety Planning Process &	0	56	56	30
Incident Response Management Process Control. Maintenance &				
Management Skills	0	50	70	8
Monitoring Programme	0	81	81	11
Credibility of Sample Analyses	0	86	92	35
Submission of Results	0	100	100	0
Drinking Water Quality Compliance	0	75	20	0
Performance Publication	0	80	80	0
	0			20
Asset Management	-	63	52	=*
Bonus Scores	0	0.3	6	0
Penalties	<u> </u>		· ·	Ü
Blue Drop Score (2011)	0.00%	74.61% (↑)	60.96% (↓)	11.14% (→)
Blue Drop Score (2010)	NA	NA	64.13%	NA
System Design Supply Capacity (MI/d)	NI	1	2	2
System Operational Capacity	NI	60%	90%	NI
Population Served by System	5 000	2 000	5 600	100
Ave. Daily Consumption per Capita (I) Microbiological Compliance(12 months)	No. dete	300	321	No. de la
Chemical Compliance(12 months)	No data No data	100.00% 100.00%	94.59% 100.00%	No data No data
chemical compilance(12 months)	No data	100.0070	100.0070	140 data
Performance Area	Matsulu ^b	Nelspruit ^b	Nsikazi North	Nsikazi South
Systems	blue drop GG 9400 EXCELLIBIT Centing their load is the regiment.	blue drop (3.55%-U DCQLDIT Coddy Brey Breyman	Nyongane ^a	Kanyamazane ^a
Water Safety Planning Process & Incident Response Management	96	96	30	15
Process Control, Maintenance & Management Skills	100	80	8	98
Monitoring Programme	89	89	26	48
Monitoring Programme Credibility of Sample Analyses	89 100	89 100	26 35	48 79
Credibility of Sample Analyses	100	100	35	79
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance	100 100 100	100 100 100	35 0	79 100 85
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication	100 100 100 100	100 100 100 100	35 0 0 0	79 100 85 100
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management	100 100 100 100 74	100 100 100 100 92	35 0 0 0 0	79 100 85 100 20
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication	100 100 100 100	100 100 100 100	35 0 0 0	79 100 85 100 20 8
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores	100 100 100 100 74	100 100 100 100 92	35 0 0 0 0 20	79 100 85 100 20
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010)	100 100 100 100 74 1 0	100 100 100 100 92 1	35 0 0 0 0 20 0	79 100 85 100 20 8 0.3
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011)	100 100 100 100 74 1 0 95.56% (↑)	100 100 100 100 92 1 0 96.11% (\$\lambda\$)	35 0 0 0 20 0 12.56% (*)	79 100 85 100 20 8 0.3 71.75% (\$\psi\$)
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity	100 100 100 100 74 1 0 95.56% (↑) 90.00% 12 133%	100 100 100 100 92 1 0 96.11% (\$\dstarting\$) 96.80% 55 87%	35 0 0 0 20 0 0 12.56% (→) NA 15 100%	79 100 85 100 20 8 0.3 71.75% (\$\psi\$) 88.00%
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System	100 100 100 100 74 1 0 95.56% (↑) 90.00% 12 133% 70 000	100 100 100 100 92 1 0 96.11% (↓) 96.80% 55 87% 56 000	35 0 0 0 20 0 0 12.56% (→) NA 15 100% 60 000	79 100 85 100 20 8 0.3 71.75% (↓) 88.00% 55 136% 450 000
Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity	100 100 100 100 74 1 0 95.56% (↑) 90.00% 12 133%	100 100 100 100 92 1 0 96.11% (\$\dstarting\$) 96.80% 55 87%	35 0 0 0 20 0 0 12.56% (→) NA 15 100%	79 100 85 100 20 8 0.3 71.75% (↓) 88.00% 55 136%

Performance Area	Phola Mshadza ^a	Tekwane Primkop ^b	White River	White River CE
Water Safety Planning Process & Incident Response Management	15	96	56	56
Process Control, Maintenance & Management Skills	26	100	68	80
Monitoring Programme	35	68	81	45
Credibility of Sample Analyses	0	96	93	93
Submission of Results	0	100	100	100
Drinking Water Quality Compliance	0	85	100	20
Performance Publication	0	100	100	100
Asset Management	16	82	40	63
Bonus Scores	0	2.0	3.0	6.0
Penalties	0	0.3	0	0
Blue Drop Score (2011)	08.96% (-)	91.13% (1)	81.76% (1)	61.82% (1)
Blue Drop Score (2010)	NA	NA	72.13%	NA
System Design Supply Capacity (MI/d)	1.5	1	6	1.5
System Operational Capacity	NI	180%	83%	90%
Population Served by System	3 500	2 500	17 000	1 000
Ave. Daily Consumption per Capita (I)	-	>500	293	>500
Microbiological Compliance(12 months)	No data	100.00%	97.56%	91.67%
Chemical Compliance(12 months)	No data	100.00%	100.00%	100.00%

Regulatory Impression:

Mbombela Local Municipality performed extremely well in some water supply systems, while the performance in particularly Dwaleni, Legogote Mganduzweni, Nsikazi North Nyongane and Phola Mshadza needs to urgently improve. On a very positive note, the Department wishes to applaud the Municipality for the shared team effort with Silulumanzi to achieve Blue Drop certification status in the Matsulu and Nelspruit systems.

Findings

 There has been a tremendous improvement in the quality of drinking water supplied in the Matsulu system. The Municipality is encouraged to sustain the current status, maintaining excellent service as a requirement for Blue Drop certification.

The Kanyamazane and Nelspruit Water Treatment Works were inspected to verify the Blue Drop findings, the following refers:

Kanyamazane WTW

- Plant classification certificate is displayed (class-A works).
- Proof provided of regular maintenance.
- Documents, i.e. logbook and job cards available on-site at time of inspection.
- With regards to the OHS, two problems were identified: Hoist for lime does not have rails
 to prevent people from falling down the shaft; sluice was noted broken.
- The garden is well maintained / neat.
- Entrance signage in place, well displayed, fences good condition. Gate next to sand filters.
- On-site monitoring equipment, staff showed good knowledge of use.
- Chlorination and final sampling point adequate.
- General condition good. Scum accumulated and removed.
- In general, the works is well maintained.

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Nelspruit WTW

- Plant classification certificate is displayed (class-B works).
- Proof provided of regular maintenance.
- Some challenges with security, the plant are currently being upgraded.
- Some documents, i.e. logbook and job cards referred to, but not available on-site at time of inspection.
- With regards to the OHS, no problems identified.
- Gate next to sand filters.
- The garden is well maintained / neat.
- Chlorination and final sampling point adequate. Lid of chamber not well-maintained rusted.
- In general, the works is well maintained.

Water Services Authority: Mkhondo Local Municipality
Water Services Providers: Mkhondo Local Municipality

Municipal Blue Drop Score 2011: 05.05%

Performance Area	Piet Retief	Amsterdam	Driefontein / Dirkiesdorp	Greater Mkhondo LM
Water Safety Planning Process & Incident Response Management	0	0	0	0
Process Control, Maintenance & Management Skills	0	0	0	0
Monitoring Programme	19	19	19	11
Credibility of Sample Analyses	0	0	0	0
Submission of Results	0	0	0	0
Drinking Water Quality Compliance	4	1	1	0
Performance Publication	25	25	25	25
Asset Management	0	0	0	0
Bonus Scores	0	0	0	0
Penalties	0.1	0.1	0.1	0
Blue Drop Score (2011)	05.46% (4)	04.56% (↓)	04.56% (4)	03.55% (>)
Blue Drop Score (2010)	28.55%	28.55%	28.55%	NA
System Design Supply Capacity (MI/d)	14	6.5	2	NI
System Operational Capacity	50%	59%	90%	NI
Population Served by System	40 000	40 000	40 000	116 788
Ave. Daily Consumption per Capita (I)	175	96	<50	-
Microbiological Compliance(12 months)	93.10% (5 months)	93.10% (5 months)	93.10% (5 months)	93.10% (5 months)
Chemical Compliance(12 months)	100% (2 months)	100% (2 months)	100% (2 months)	100% (2 months)

Regulatory Impression:

Mkhondo performed unsatisfactory and below expectations, DWA is seriously concerned about the decline of drinking water quality (DWQ) management. Microbiological compliance indicates all drinking water poses a risk of infection, DWQ data is yet to be supplied per water supply system. Data submission, for both microbiological and chemical determinands, is well below the 12 month legal requirement. DWA also noted a complete lack of operational monitoring at the water treatment works.

The municipality must improve disinfection, municipal management commitment required to ensure a turn-around of the unacceptable situation.

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Water Services Authority: Msukaligwa Local Municipality
Water Services Providers: Msukaligwa Local Municipality

Municipal Blue Drop Score 2011: 10.59%

Performance Area	Ermelo
Systems	
SS .	
Water Safety Planning Process &	0
Incident Response Management	· ·
Process Control, Maintenance &	23
Management Skills	23
Monitoring Programme	10
Credibility of Sample Analyses	5
Submission of Results	0
Drinking Water Quality Compliance	0
Performance Publication	0
Asset Management	48
Bonus Scores	0
Penalties	0
Blue Drop Score (2011)	10.59% (-)
Blue Drop Score (2010)	NA
System Design Supply Capacity (MI/d)	22.5
System Operational Capacity	58%
Population Served by System	60 000
Ave. Daily Consumption per Capita (I)	218
Microbiological Compliance(12 months)	77.14% (6 months)
Chemical Compliance(12 months)	97.87% (5 months)

Regulatory Impression:

During the on-site assessment, DWA noted as a major observation that the area of supply under Msukaligwa should be assessed under more than 1 water supply system. WSA representatives confirmed the observation, the WSA should therefore improve management and submission of information / data on the Blue Drop System (BDS) for future assessments. Proper demarcation of water supply systems should be prioritised, followed by the development of the Water Safety Plan, which should inform appropriate action across the individual Blue Drop Certification criteria. The WSA team displayed good cohesion & coordination in their different roles.

NB: The Regulator is however extremely concerned with the performance of Msukaligwa, DWQ management should improve to be in line with legal requirements / international best practice. The WSA should submit a Corrective Action Plan to the Department within 30 days of release of the Blue Drop Report.

Findings

Improvement is required in all areas of DWQ management (Blue Drop Requirements) to
ensure the supply of safe tap water on a continuous basis. Currently, the Department has
no confidence in the management of DWQ by the LM. It is however encouraging to note
that a new plant is due to be commissioned.

The Douglas Dam Water Treatment Works (Msukaligwa LM) was inspected to verify the Blue Drop findings, the following refers:

Plant classification certificate displayed (class C works).

- Some documents, i.e. logbook and job cards were available on-site at the time of inspection.
- Aspects related Occupational Health and Safety needs improvement.
- Gate next to sand filters.
- Even though the garden is well maintained and neat, DWA noted ageing infrastructure that needs to be replaced.
- In general, management at the works is regarded fair.

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Water Services Authority: Nkomazi Local Municipality
Water Services Providers: Nkomazi Local Municipality

Municipal Blue Drop Score 2011: 59.48%

Performance Area		Driekoppies	Fig Tree	Hectorspruit	Komatipoort
	Systems	• •	· ·		
	Syst				
Water Safety Planning Process &		46	25	46	4.6
Incident Response Management		46	26	46	46
Process Control, Maintenance &		35	10	15	10
Management Skills					
Monitoring Programme		75	48	63	63
Credibility of Sample Analyses		93	88	83	85
Submission of Results		100	100	100	100
Drinking Water Quality Compliance	e	100	20	100	100
Performance Publication		40	40	40	40
Asset Management		23	0	0	8
Bonus Scores		6	3	3	3
Penalties		0.3	0.3	0.3	0.3
Blue Drop Score (2011)		70.48% (↑)	32.44% (↑)	60.73% (↑)	61.42% (↑)
Blue Drop Score (2010)		17.15%	17.15%	17.15%	17.15%
System Design Supply Capacity (MI/	/d)	29 (estimated)	8 (Estimated)	2	6
System Operational Capacity	,	NI	NI	NI	75%
Population Served by System		110 000	20 000	1 000	4 000
Ave. Daily Consumption per Capita (-	-	-	>500
Microbiological Compliance(12 mont	hs)	99.38%	100.00%	100.00%	100.00%
Chemical Compliance(12 months)		100.00%	100.00%	100.00%	100.00%
Danfarra and Anda					
Performance Area	Su	Langeloop	Low Creek	Madadeni	Magudu
Performance Area	stems	Langeloop	Low Creek	Madadeni	Magudu
Performance Area	Systems	Langeloop	Low Creek	Madadeni	Magudu
Water Safety Planning Process &	Systems				
Water Safety Planning Process & Incident Response Management	Systems	Langeloop 46	Low Creek	Madadeni 26	Magudu 26
Water Safety Planning Process & Incident Response Management Process Control, Maintenance &	Systems				
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills	Systems	46	26 15	26 15	26 25
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme	Systems	46 60 63	26 15 24	26 15 46	26 25 55
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses	Systems	46 60 63 83	26 15 24 88	26 15 46 88	26 25 55 88
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results		46 60 63 83 100	26 15 24 88 0	26 15 46 88 50	26 25 55 88 100
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance		46 60 63 83 100 100	26 15 24 88 0	26 15 46 88 50 97	26 25 55 88 100 100
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication		46 60 63 83 100 100 40	26 15 24 88 0 80 40	26 15 46 88 50 97 40	26 25 55 88 100 100 40
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management		46 60 63 83 100 100 40 40	26 15 24 88 0 80 40	26 15 46 88 50 97 40	26 25 55 88 100 100 40 9
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores		46 60 63 83 100 100 40 40 3	26 15 24 88 0 80 40 0	26 15 46 88 50 97 40 0	26 25 55 88 100 100 40 9
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management		46 60 63 83 100 100 40 40 3 0.3	26 15 24 88 0 80 40	26 15 46 88 50 97 40 0 3 0.3	26 25 55 88 100 100 40 9 3 0.3
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011)		46 60 63 83 100 100 40 40 3	26 15 24 88 0 80 40 0	26 15 46 88 50 97 40 0	26 25 55 88 100 100 40 9 3 0.3 59.59% (↑)
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010)	e	46 60 63 83 100 100 40 40 3 0.3	26 15 24 88 0 80 40 0 0	26 15 46 88 50 97 40 0 3 0.3	26 25 55 88 100 100 40 9 3 0.3
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/	e	46 60 63 83 100 100 40 40 3 0.3 65.98%(↑) 17.15% 2.9	26 15 24 88 0 80 40 0 0 40 40 40 0 0 0 0 0.3	26 15 46 88 50 97 40 0 3 0.3 53.34% (↑)	26 25 55 88 100 100 40 9 3 0.3 59.59% (↑)
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/System Operational Capacity)	e	46 60 63 83 100 100 40 40 3 0.3 65.98% (↑) 17.15% 2.9 93%	26 15 24 88 0 80 40 0 0 0.3 40.24% (↑) 17.15% NI	26 15 46 88 50 97 40 0 3 0.3 53.34% (↑) 17.15%	26 25 55 88 100 100 40 9 3 0.3 59.59% (↑) 17.15% 2 NI
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/System Operational Capacity Population Served by System	e 2 //d)	46 60 63 83 100 100 40 40 3 0.3 65.98% (↑) 17.15% 2.9 93% 5 000	26 15 24 88 0 80 40 0 0 17.15% NI	26 15 46 88 50 97 40 0 3 0.3 53.34% (↑) 17.15%	26 25 55 88 100 100 40 9 3 0.3 59.59% (↑) 17.15% 2 NI
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/ System Operational Capacity Population Served by System Ave. Daily Consumption per Capita (e e	46 60 63 83 100 100 40 40 3 0.3 65.98% (↑) 17.15% 2.9 93% 5 000 539	26 15 24 88 0 80 40 0 0 0.3 40.24% (↑) 17.15% NI NI 1000	26 15 46 88 50 97 40 0 3 0.3 53.34% (↑) 17.15% 1 NI 7000	26 25 55 88 100 100 40 9 3 0.3 59.59% (↑) 17.15% 2 NI -
Water Safety Planning Process & Incident Response Management Process Control, Maintenance & Management Skills Monitoring Programme Credibility of Sample Analyses Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/System Operational Capacity Population Served by System	e e	46 60 63 83 100 100 40 40 3 0.3 65.98% (↑) 17.15% 2.9 93% 5 000	26 15 24 88 0 80 40 0 0 0.3 40.24% (↑) 17.15% NI	26 15 46 88 50 97 40 0 3 0.3 53.34% (↑) 17.15%	26 25 55 88 100 100 40 9 3 0.3 59.59% (↑) 17.15% 2 NI

Performance Area	Malalane	MarlothPark	Mbuzini	Nyathi
Syst				
Water Safety Planning Process & Incident Response Management	26	26	26	26
Process Control, Maintenance & Management Skills	15	15	25	15
Monitoring Programme	48	48	55	47
Credibility of Sample Analyses	88	88	88	88
Submission of Results	100	100	20	100
Drinking Water Quality Compliance	100	100	85	100
Performance Publication	40	40	40	40
Asset Management	0	0	2	0
Bonus Scores	3	3	2	3
Penalties	0.3	0.3	0.3	0.3
Blue Drop Score (2011)	56.70% (↑)	56.70% (↑)	48.68% (1)	56.67% (↑)
Blue Drop Score (2010)	17.15%	17.15%	17.15%	17.15%
System Design Supply Capacity (MI/d)	6	3.4	2	12
System Operational Capacity	NI	NI	NI	NI
Population Served by System	3 000	1 000	8 750	12 000
Ave. Daily Consumption per Capita (I)	-	-	-	-
Microbiological Compliance(12 months) Chemical Compliance(12 months)	100.00% 100.00%	100.00% 100.00%	100.00% 100.00%	100.00%
chemical compliance(12 months)	100.00%	100.00%	100.00%	100.00%
Performance Area	Nkomazi Rudimentary Boreholes	Siba	inge	Tonga
Water Safety Planning Process & Incident Response Management	26	2	6	26
Process Control, Maintenance & Management Skills	5	2	5	35
Monitoring Programme	48		_	55
		4	8	
Credibility of Sample Analyses	88		8	88
Credibility of Sample Analyses Submission of Results		8		
Submission of Results	88	8	8	88
	88 100	8 2 8	8 0	88 100
Submission of Results Drinking Water Quality Compliance Performance Publication	88 100 85 40	8 2 8 4	8 0 5 0	88 100 100
Submission of Results Drinking Water Quality Compliance	88 100 85 40	8 2 8 4	8 0 5 0	88 100 100 40 0
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management	88 100 85 40	8 2 8 4	8 0 5 0	88 100 100 40
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores	88 100 85 40 0	88 22 88 44 (8 0 0 5 0 0 0 0 3 3	88 100 100 40 0
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010)	88 100 85 40 0 3 0.3	88 88 44 (0 33 0 1) 49.4	8 0 0 5 0 0 0 0 3 3	88 100 100 40 0 3 0.3
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d)	88 100 85 40 0 3 0.3 51.44% (↑	8 8 8 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88 100 100 40 0 3 0.3 59.21% (↑) 17.15% 25
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity	88 100 85 40 0 3 0.3 51.44% (↑	8 8 8 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88 100 100 40 0 3 0.3 59.21% (↑) 17.15% 25 NI
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System	88 100 85 40 0 3 0.3 51.44% (↑ 17.15% NI NI 51000	8 8 8 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88 100 100 40 0 3 0.3 59.21% (↑) 17.15% 25
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System Ave. Daily Consumption per Capita (I)	88 100 85 40 0 3 0.3 51.44% (↑ 17.15% NI NI 51000	8 8 4 4 (; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	8 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88 100 100 40 0 3 0.3 59.21% (↑) 17.15% 25 NI 110 000
Submission of Results Drinking Water Quality Compliance Performance Publication Asset Management Bonus Scores Penalties Blue Drop Score (2011) Blue Drop Score (2010) System Design Supply Capacity (MI/d) System Operational Capacity Population Served by System	88 100 85 40 0 3 0.3 51.44% (↑ 17.15% NI NI 51000	8 8 8 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	88 100 100 40 0 3 0.3 59.21% (↑) 17.15% 25 NI

Regulatory Impression:

The Department wishes to applaud the Nkomazi Local Municipality on a good improvement with the Blue Drop score from (2010) 17.5 % to 59.48, this is worth phrasing. The most worthy praise is the submission of DWQ data to evaluate both chemical and microbiological compliance. The municipality is encouraged to further improve their performance.

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Findings

- The WSA is urged to amend the Water Safety Plan, on completion of supply system risk assessments, monitoring programmes should be amended.
- 2. The WSA should finalise registration of all process controller staff.
- Asset management needs to improve.

Water Services Authority: Pixley Ka Seme Local Municipality
Water Services Providers: Pixley Ka Seme Local Municipality

Municipal Blue Drop Score 2011: 46.09%

Performance Area	Volksrust	Vukuzakhe	Wakker- stroom	Amersfoort
Water Safety Planning Process & Incident Response Management	41	41	41	41
Process Control, Maintenance & Management Skills	68	78	70	70
Monitoring Programme	53	59	51	68
Credibility of Sample Analyses	5	5	51	33
Submission of Results	0	20	0	50
Drinking Water Quality Compliance	7	2	70	98
Performance Publication	80	80	80	80
Asset Management	27	27	27	27
Bonus Scores	0	0	0	0
Penalties	0	0.3	0.3	0
Blue Drop Score (2011)	32.48% (-)	33.56% (->)	51.50% (->)	65.61% (>)
Blue Drop Score (2010)	NA	NA	NA	NA
System Design Supply Capacity (MI/d)	4	4	2	4.8
System Operational Capacity	98%	63%	45%	90%
Population Served by System	15 000	40 000	9 000	44 000
Ave. Daily Consumption per Capita (I)	261	63	100	98
Microbiological Compliance(12 months)	60.00% (4 months)	72.97% (11 months)	100% (3 months)	100.00%
Chemical Compliance(12 months)	100% (4 months)	100% (11 months)	100% (3 months)	100% (11 months)

Regulatory Impression:

The performance of Pixley ka seme LM is satisfactorily, some gaps is however noted. Asset management, credibility of drinking water quality (DWQ) data, 12-month submission of all required compliance results, are some of the areas requiring attention. The municipality should however prioritise improvement of disinfection practices in the Volksrust and Vukuzakhe supply systems, water in these supply system were evaluated to pose an unacceptable risk to public health.

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Water Services Authority: Steve Tshwete Local Municipality

Water Services Providers: Steve Tshwete LM, ESKOM*; Kraanspoort Owners Committee *;

Middleburg Mine

Municipal Blue Drop Score 2011: 96.51%

Performance Area	Hendrina a blue drop	Arnot/Reitkuil a	Komati Blinkpan ^a	Middelburg & Mhluzi
Water Safety Planning Process & Incident Response Management	85	96	68	100
Process Control, Maintenance & Management Skills	100	100	100	80
Monitoring Programme	100	100	100	100
Credibility of Sample Analyses	100	100	100	100
Submission of Results	100	100	100	100
Drinking Water Quality Compliance	100	100	100	100
Performance Publication	100	100	100	100
Asset Management	100	85	78	93
Bonus Scores	0.2	0.2	0.6	0.7
Penalties	0.3	0.3	0.3	0.3
Blue Drop Score (2011)	97.75% (1)	97.36% (1)	92.37% (↓)	97.53% (1)
Blue Drop Score (2010)	95.84%	95.84%	95.43%	95.84%
System Design Supply Capacity (MI/d)	15	12	15	45
System Operational Capacity	80%	NI	100%	98%
Population Served by System	8 000	8 000	8 000	99 000
Ave. Daily Consumption per Capita (I)	>500	-	>500	446
Microbiological Compliance(12 months)	100.00%	100.00%	100.00%	100.00%
Chemical Compliance(12 months)	100.00%	100.00%	100.00%	100.00%

Performance Area	Presidentsrus	Hendrina (STLM)	Doorenkop 1&2
Systems	blue drop GRENDS GRENDS GRENDSS Grends two days frequency	blue drop CERTICO SCIENCIO CONTO DE CONTO PROGRAM	blue drop OCHINED DECELLORIT CHINED VOICE ON the Management
Water Safety Planning Process & Incident Response Management	100	100	100
Process Control, Maintenance & Management Skills	70	80	80
Monitoring Programme	100	100	80
Credibility of Sample Analyses	100	99	100
Submission of Results	100	100	100
Drinking Water Quality Compliance	100	100	100
Performance Publication	100	100	100
Asset Management	93	100	100
Bonus Scores	0.3	0.4	0.3
Penalties	0.3	0.3	0.3
Blue Drop Score (2011)	96.18% (↑)	97.96% (↑)	97.98% (1)
Blue Drop Score (2010)	89.34%	95.84%	92.84%
System Design Supply Capacity (MI/d)	0.32	5.4	0.25
System Operational Capacity	63%	46%	328%
Population Served by System	1 000	10 000	6 000
Ave. Daily Consumption per Capita (I)	202	248	125
Microbiological Compliance(12 months)	100.00%	100.00%	100.00%
Chemical Compliance(12 months)	100.00%	100.00%	100.00%

Performance Area	Kraanspoort ^b	Middleburg Mine ^c
Water Safety Planning Process & Incident Response Management	83	72
Process Control, Maintenance & Management Skills	66	66
Monitoring Programme	100	57
Credibility of Sample Analyses	55	100
Submission of Results	100	100
Drinking Water Quality Compliance	100	100
Performance Publication	100	100
Asset Management	85	52
Bonus Scores	1	1
Penalties	0.3	0.3
Blue Drop Score (2011)	90.26% (↑)	82.26% (↑)
Blue Drop Score (2010)	62.38%	87.85%
System Design Supply Capacity (MI/d)	1	1
System Operational Capacity	50%	100%
Population Served by System	1 000	1 584
Ave. Daily Consumption per Capita (I)	500	>500
Microbiological Compliance(12 months)	100.00%	100.00%
Chemical Compliance(12 months)	100.00%	100.00%

Regulatory Impression:

Steve Tshwete Local Municipality (STLM), assisted by the noted Water Services Providers (WSP's) performed exceptionally well during the 2011 Blue Drop assessments. The municipality and WSP's managed to uphold their Blue Drop certification status in various supply systems. Management and technical teams of the WSA and WSP's are applauded for continued passion and commitment. The Department encourages both the WSP and WSA to maintain the Blue Drop Certification status.

Findings

As can be seen in the score card, STLM still has room to improve drinking water quality (DWQ) management practices. Process Control is identified as an area that needs to be addressed.

The Hendrina STLM Water Treatment System was inspected to verify the Blue Drop findings, the following refers:

- The WTW is classified as a Class C works, the certificate is clearly displayed on the wall.
- All relevant manuals, logbooks, flow data and incident management procedure were evident on-site. On-site equipment is available at the works, the history of calibration can be shown.
- The works and the buildings, gardens, lawns and safety signs are generally in good condition. The lead inspector used the following words to describe the works "Beautifully manicured lawns; generally well kept facility".
- All Staff at the works are optimistic, have hands-on technical skills and are "happy people".
 DWA noted a pleasant and healthy workplace environment. In general, the works is at an excellent status.

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Water Services Authority: Thaba Chweu Local Municipality
Water Services Providers: Thaba Chweu Local Municipality

Municipal Blue Drop Score 2011: 59.40%

Performance Area	Lydenburg	Coromandal	Sabie	Graskop
Water Safety Planning Process & Incident Response Management	65	65	65	65
Process Control, Maintenance & Management Skills	25	25	25	15
Monitoring Programme	89	74	74	75
Credibility of Sample Analyses	41	41	41	41
Submission of Results	100	100	100	100
Drinking Water Quality Compliance	60	60	60	60
Performance Publication	25	25	25	25
Asset Management	28	28	43	28
Bonus Scores	3	3	6	7
Penalties	0.3	0.3	0.3	0.3
Blue Drop Score (2011)	59.15% (↑)	57.85% (↑)	59.80% (↑)	57.10% (↑)
Blue Drop Score (2010)	47.45%	45.20%	45.20%	47.45%
System Design Supply Capacity (MI/d)	23	0.45	22	NI
System Operational Capacity	NI	78%	46%	0.2
Population Served by System	28 000	1 500	17 000	6 000
Ave. Daily Consumption per Capita (I)	-	234	>500	-
Microbiological Compliance(12 months)	98.37%	98.37%	98.37%	98.37%
Chemical Compliance(12 months)	100% (7 months)	100% (7 months)	100% (7 months)	100% (7 months)

Regulatory Impression:

The Thaba Chweu LM performed satisfactorily compared to the 2010 performance (45.1% in 2010 increased to 59.49% in 2011). The most urgent areas requiring improvement are water safety planning, submission of results and improvement of drinking water quality (DWQ) compliance.

Findings

 Other areas also not satisfactory are process control (registration of the process controllers, availability of on-site O&M manuals), performance publication (an annual publication of drinking water quality management performance against the requirements of SANS 241) and asset management (specifically the annual plant and process audit).

Water Services Authority: Thembisile Local Municipality
Water Services Providers: Thembisile Local Municipality

Municipal Blue Drop Score 2011: 27.77%

Performance Area	Thembisile
systems	
SS	
Water Safety Planning Process &	0
Incident Response Management	· · · · · · · · · · · · · · · · · · ·
Process Control, Maintenance & Management Skills	0
Monitoring Programme	0
Credibility of Sample Analyses	45
Submission of Results	0
Drinking Water Quality Compliance	85
Performance Publication	0
Asset Management	0
Bonus Scores	0
Penalties	0.3
Blue Drop Score (2011)	27.77% (↓)
Blue Drop Score (2010)	39.88%
System Design Supply Capacity (MI/d)	NI
System Operational Capacity	NI
Population Served by System	262 489
Ave. Daily Consumption per Capita (I)	-
Microbiological Compliance(12 months)	100.00% (9 months)
Chemical Compliance(12 months)	100.00% (11 months)

Regulatory Impression:

The lack of information on the Blue Drop System (BDS), even after DWA forwarded various communiqué requesting the Municipality to make information available, made it impossible to adequately assess the drinking water quality (DWQ) management performance of the municipality. Representation from the WSA furthermore arrived only after the scheduled time for the confirmation session (@ 17H00). The official had no information to present to DWA. Concertedly, DWA still had no information on the business of the WSA even after a third provision was set to submit data.

The Municipality must note that the Blue Drop evaluations, as incentive-based regulation of DWA, it compulsory. Water Service Authorities and Water Service Providers are compelled under law to provide the necessary information required to do a proper analysis on the quality of the water services. Refer to the following Sections of the Water Services Act (Act 109 or 1997) for clarity on:

- Section 19: Institutional arrangements
- Section 23: responsibility to reveal information
- Section 62: Right to regulate
- Section 82: Offence to withhold information.

NB: In light of the above-mentioned, the Thembisile LM is requested to submit a Corrective Action Plan to the Department within 30 days of release of the Blue Drop Report.

Findings:

- 1. Other areas that requires urgent attention by the Municipality are:
 - The Water Safety need to be developed, the plan should include Risk Assessments of catchment, treatment works and reticulation. The Risk Assessment should indicate

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that the treatment facility has the ability to adequately treat the water from raw water quality to DWQ complying with SANS 24

- Process Control, Maintenance & Management Skills
- Monitoring Programme
- Credibility of Sample Analyses
- Submission of Results
- Drinking Water Quality Compliance
- Performance Publication
- Asset Management

Water Services Authority: Umjindi Local Municipality
Water Services Providers: Umjindi Local Municipality

Municipal Blue Drop Score 2011: 60.05%

Performance Area	Umjindi Trust	Rimmers Barberton Suidekaap	Sheba Water
Water Safety Planning Process & Incident Response Management	60	60	60
Process Control, Maintenance & Management Skills	18	48	48
Monitoring Programme	32	71	70
Credibility of Sample Analyses	5	5	5
Submission of Results	20	100	100
Drinking Water Quality Compliance	70	85	85
Performance Publication	25	25	25
Asset Management	28	13	16
Bonus Scores	0	4.5	0
Penalties	0.3	0.3	0.3
Blue Drop Score (2011)	42.83% (↓)	60.43 % (↑)	56.33% (↓)
Blue Drop Score (2010)	54.75%	55.25%	58.25%
System Design Supply Capacity (MI/d)	0.32	16.5	0.2
System Operational Capacity	NI	60%	NI
Population Served by System	5079	51000	4937
Ave. Daily Consumption per Capita (I)	-	194	-
Microbiological Compliance(12 months)	100.00% (10 months)	100.00%	100.00%
Chemical Compliance(12 months)	100.00% (1 month)	No data	No data

Regulatory Impression:

The overall score of Umjindi LM was satisfactory compared to the score in 2010, and given the fact that the current criteria are more stringent. This is a great achievement of the municipality.

The Department wishes to commend the performance of Umjindi, DWA trusts that the Municipality will build on this performance by pursuing continuous improvement.

The Department expresses some level confidence in Umjindi's ability to render safe and sustainable drinking water quality (DWQ) management services.

Findings

- The Department recommends that the WSA review and amend the water safety plan in place, findings must be implemented.
- Other areas requiring improvement include process control, adequacy of the monitoring programmes, sample analysis credibility, publication of performance and asset management.

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Water Services Authority: Victor Khanye Local Municipality
Water Services Providers: Victor Khanye Local Municipality

Municipal Blue Drop Score 2011: 18.26%

Performance Area	Delmas
Water Safety Planning Process & Incident Response Management	26
Process Control, Maintenance & Management Skills	40
Monitoring Programme	15
Credibility of Sample Analyses	55
Submission of Results	0
Drinking Water Quality Compliance	15
Performance Publication	0
Asset Management	11
Bonus Scores	0
Penalties	0.6
Blue Drop Score (2011)	18.26 (→)
Blue Drop Score (2010)	NA
System Design Supply Capacity (MI/d)	20.5 yield (b 5Ml)
System Operational Capacity	83%
Population Served by System	56 000
Ave. Daily Consumption per Capita (I)	303
Microbiological Compliance(12 months)	96.88% (3 months)
Chemical Compliance(12 months)	No data

Regulatory Impression:

The LM did not participate in the Blue Drop assessment during 2010. The information presented here is based on a telephonic interview and the Blue Drop Audit conducted April 2010. A new plant is due to be commissioned for the Victor Khanye LM.

NB: The Regulator is extremely concerned with the performance of drinking water quality management by Albert Luthuli. The WSA is requested to submit a Corrective Action Plan to the Department within 30 days of release of the Blue Drop Report.

Findings

The Victor Khanye DWQ management business urgently needs to be prioritised for improvement. Improvement is required in all aspects to ensure a continuous supply of safe tap water. Currently, the Department has no confidence in the management of DWQ by the LM. However, it is encouraging that a new plant is due to be commissioned.