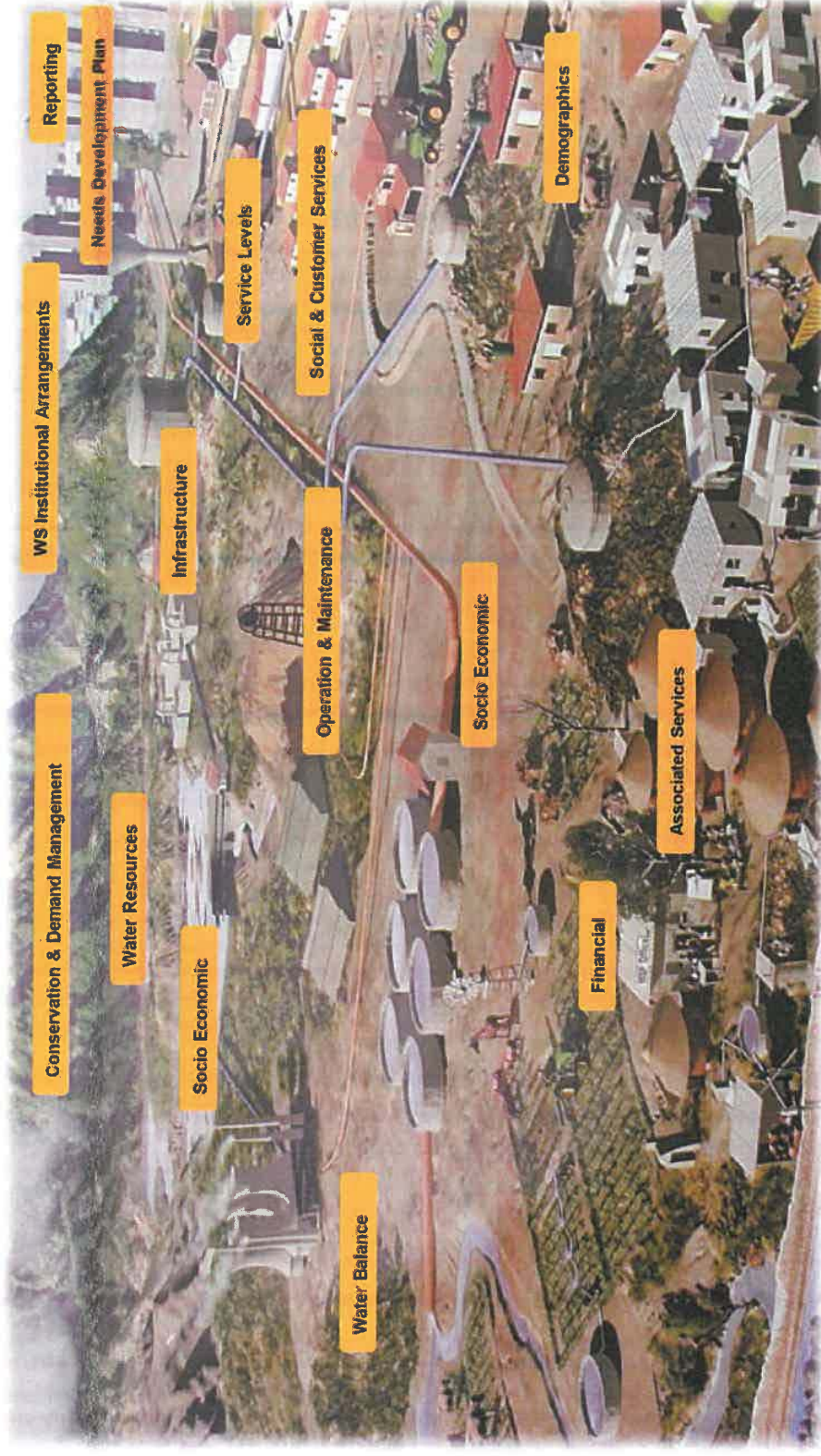


Stellenbosch Local Municipality Water Services Development Plan

WSDP Revision 1: 2017 (2017 – 2018)



Stellenbosch Local Municipality
Water Services Development Plan

WSDP Revision 1: 2017 (2017 – 2018)

WSDP Compiled and submitted for approval

Municipal WSDP Coordinator: APPUKUTZ Name: J.G. Louw

Signature: 

Date: 28/8/19

WSDP Recommended for approval

Municipal Manager:

Recommended: Name: Geraldine Mettler

Signature: 

Date: 30/8/19

Not Recommended: Name: _____

Signature: _____

Date: _____

Final Council approval:

Capacity: _____

Approved: Name: _____

Signature: _____

Date: _____

Not Approved: Name: _____

Signature: _____

Date: _____

**Stellenbosch Local Municipality
Water Services Development Plan**

WSDP Revision 1: 2017 (2017 – 2018)

Role Players Contact Details

Position	Name	Surname	Tel	Fax	Cell	E-mail	Interaction Acknowledgement Yes/No	Interaction Acknowledgement Signature
Chief Financial Officer	Marius	Wüst	021 808 8528			marius.wust@stellenbosch.gov.za	Y	N
IDP Manager	Delorees	Kotze	021 808 8176			delorees.kotze@stellenbosch.gov.za	Y	N
Municipal Manager	Geraldine	Mettler	021 808 8025		083 460 2118	municipal.manager@stellenbosch.gov.za	Y	Y
Manager: Water & Sanitation Services	Dries	van Taak	021 808 8218	021 883 9912	076 412 4482	Dries.vantaak@stellenbosch.gov.za	Y	Y
WSA Manager	Dries	van Taak	021 808 8218	021 883 9912	076 412 4482	Dries.vantaak@stellenbosch.gov.za	Y	Y
WSDP Contact	Adriaan	Kurtz	021 808 8221	021 883 9912	082 903 3123	project.water@stellenbosch.gov.za	Y	Y
Mayor	Gesie	Van Deventer	021 808 8002			mayor@stellenbosch.gov.za	Y	Y
Environmental	Schalk	Van der Merwe	021 828 8679			schalk.vandermerwe@stellenbosch.gov.za	Y	N
HOD: Planning	Bernabe	Del la Bat	021 808 8676			bernabe.delabat@stellenbosch.gov.za	Y	N
Housing	Tabiso	Mfeya	021 808 8491			tabiso.mfeya@stellenbosch.gov.za	N	N
Water & Sanitation Superintendent	Vivian	Kloppers	021 808 8258	086 613 7339	073 423 7475	Vivian.Kloppers@stellenbosch.gov.za	N	N
Water Services Councillor	Jan	De Villiers			083 489 8087	jan.devilliers@stellenbosch.gov.za	N	N
Water & Sanitation Superintendent	Willem	de Kock	021 808 8965		084 975 9519		N	N

**Stellenbosch Local Municipality
Water Services Development Plan**

WSDP Revision 1: 2017 (2017 – 2018)

Professional Service Provider (PSP)

Company

Hatch Africa (Pty) Ltd.

Name of PSP WSDP Project Manager

Alroy Hoffmeister

Tel: 021 911 5823

Cell: 082 892 7098

Fax: 021 911 5824

Email: alroy.hoffmeister@hatch.com

Inputs

Name of PSP WSDP Information Systems Operator

Ronel Dreyer (Isquare)

Tel:

Cell: 082 375 2015

Fax:

Email: roneld@isquare.co.za

Components	Chapter	Name	Designation	Role	Contact Address, and Number
All	All			Field	

**Stellenbosch Local Municipality
Water Services Development Plan**

WSDP Revision 1: 2017 (2017 – 2018)

Sector Integration

Did this plan consult with other Sector Plans and incorporated their needs

Sector Plan	Sector Interaction	Area	WSA
Tourism	Partial	WC024	Stellenbosch
Finance	Partial	WC024	Stellenbosch
Water Master Plan	Yes	WC024	Stellenbosch
Sewer Master Plan	Yes	WC024	Stellenbosch
Unaccounted for Water Strategy	Yes	WC024	Stellenbosch
SDF	Yes	WC024	Stellenbosch
ISP	Yes	WC024	Stellenbosch
			Stellenbosch

Stellenbosch Local Municipality
Water Services Development Plan

WSDP Revision 1: 2017 (2017 – 2018)

Chapter1: Implementation Activity Chart of current MTEF Projects

Financial Year 2018																																			
Nr	Project Number	Project Name	Description	Project Type	Project Solution	Main Category	Sub Category	Component(Yes/No)										Project Cost (R'000)	Funding Source (R'000)																
								Bulk Pipeline	Reticulation Line	Pumpstation	WTW	Reservoir	Source Development	Power Installation	Feasibility	Operations	Maintenance		WCDM	WWTW	Water Bourne Sanitation	VIP Sanitation	Own	MIG	RBIG	ACIP	DR	MWIG	Other						
Topic 1 - Settlement Demographics & Public Amenities																																			
1	STB1415026	Bulk Sewerpipe Replacement	Bulk Sewerpipe Replacement			Sanitation	Sanitation Bulk	Y	N	N	N	N	N	N	N	N	N	N	N	N	19,204	164	0	0	0	0	0	0	0	0	0	0	0	0	
Topic 2 - Service Level Profile																																			
Topic 3 - Water Services Asset Management																																			
2	STB6	Upgrade Auto-samplers (WTW & WWTW)	Upgrade Auto-samplers (WTW & WWTW)			Water	Internal Bulk	N	N	Y	N	N	N	Y	N	N	Y	N	N	N	0	110	0	0	0	0	0	0	0	0	0	0	0	0	
3	STB1415004	Water Treatment Works: Idas Valley	WTW Idas Valley - New Filterbeds			Water	Internal Bulk	N	N	Y	N	N	N	N	N	N	N	N	N	N	1,099	145	0	0	0	0	0	0	0	0	0	0	0	0	0
4	STB1415025	New Plankenburg Main Sewer Outfall	New Plankenburg Main Sewer Outfall			Sanitation	Sanitation Bulk	Y	N	N	N	N	N	N	N	N	N	N	N	N	120,000	0	24,549	0	0	0	0	0	0	0	0	0	0	0	2,838
Topic 4 - Water Services Operations & Maintenance (O&M)																																			
5	STB7	Reservoirs and Dam Safety & Bulk Water Supply Improvements	Reservoirs and Dam Safety & Bulk Water Supply Improvements			Water	Internal Bulk	Y	N	N	N	N	N	N	N	N	N	N	N	N	8,600	2,300	0	0	0	0	0	0	0	0	0	0	0	0	0
6	STB4	Water Pipe Replacement	Water Pipe Replacement			Water	Reticulation	N	Y	N	N	N	N	N	N	N	N	N	N	N	9,000	3,300	0	0	0	0	0	0	0	0	0	0	0	0	0
7	STB6	Upgrade Auto-samplers (WTW & WWTW)	Upgrade Auto-samplers (WTW & WWTW)			Water	Internal Bulk	N	N	Y	N	N	N	Y	N	N	Y	N	N	N	0	110	0	0	0	0	0	0	0	0	0	0	0	0	0

**Stellenbosch Local Municipality
Water Services Development Plan**

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Nr	Project Number	Project Name	Description	Project Type	Project Solution	Main Category	Sub Category	Component(Yes/No)													Project Cost (R'000)	Funding Source (R'000)										
								Bulk Pipeline	Retiulation Line	Pumpstation	WTW	Reservoir	Source Development	Power Installation	Feasibility	Operations	Maintenance	WCDM	WWTW	Water Bourne Sanitation		VIP Sanitation	Own	MIG	RBIG	ACIP	DR	MMWIG	Other			
8	STB6	Upgrade Auto-samplers (WTW & WWTW)	Upgrade Auto-samplers (WTW & WWTW)			Water	Internal Bulk	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0	110	0	0	0	0	0	0
Topic 5.1 - Conservation & Demand Management - Water Resource																																
9	STB13	Water Conservation and Demand Management	Water Conservation and Demand Management			Water	Planning	Y	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	1,500	69,002	0	0	0	0	0	
Topic 5.2 - Conservation & Demand Management - Water Balance																																
10	STB13	Water Conservation and Demand Management	Water Conservation and Demand Management			Water	Planning	Y	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	1,500	69,002	0	0	0	0	0	
Topic 6 - Water Resource																																
Funding Source (R'000)																																
														Own						Other												
														MIG		RBIG		ACIP		DR		MMWIG		Other								
														24,549		0		0		0		0		2,838								
Total Funding														75,021						2,838												

**Stellenbosch Local Municipality
Water Services Development Plan**

WSDP Revision 1: 2017 (2017 – 2018)

Nr	Project Number	Project Name	Description	Project Type	Project Solution	Main Category	Sub Category	Component(Yes/No)													Project Cost (R'000)	Funding Source (R'000)															
								Bulk Pipeline	Reticulation Line	Pumpstation	WTW	Reservoir	Source Development	Power Installation	Feasibility	Operations	Maintenance	WCDM	WWTW	Water Bourne Sanitation		VIP Sanitation	Own	MIG	RBIG	ACIP	DR	MMIG	Other								
9	STB8	Chlorination Installation: MHI study	Chlorination Installation: MHI study			Water	Basic Supply	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	850	0	0	0	0	0	0	0	0	0	0	1,000
Topic 5.1 - Conservation & Demand Management - Water Resource																																					
10	STB13	Water Conservation and Demand Management	Water Conservation and Demand Management			Water	Planning	Y	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1,500	0	0	0	0	0	0	0	0	0	0	500
Topic 5.2 - Conservation & Demand Management - Water Balance																																					
11	STB13	Water Conservation and Demand Management	Water Conservation and Demand Management			Water	Planning	Y	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1,500	0	0	0	0	0	0	0	0	0	0	500
12	STB11	Upgrade and replace water meters	Upgrade and replace water meters			Water	Reticulation	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2,500	0	0	0	0	0	0	0	0	0	0	1,500
Topic 6 - Water Resource																																					
Funding Source (R'000)																																					
Own																																					
MIG																																					
RBIG																																					
ACIP																																					
DR																																					
MMIG																																					
Other																																					
Total Funding: 0																																					
26,644																																					
0																																					
0																																					
26,856																																					

**Stellenbosch Local Municipality
Water Services Development Plan**

WSDP Revision 1: 2017 (2017 – 2018)

Financial Year 2020																																
Nr	Project Number	Project Name	Description	Project Type	Project Solution	Main Category	Sub Category	Component(Yes/No)											Project Cost (R'000)	Funding Source (R'000)												
								Bulk Pipeline	Reticulation Line	Pumpstation	WTW	Reservoir	Source Development	Power Installation	Feasibility	Operations	Maintenance	WCDM		WWTW	Water Bourne Sanitation	VIP Sanitation	Own	IMG	RSIG	ACIP	DR	MWIG	Other			
Topic 1 - Settlement Demographics & Public Amenities																																
Topic 2 - Service Level Profile																																
Topic 3 - Water Services Asset Management																																
1	STB11	Upgrade and replace water meters	Upgrade and replace water meters			Water	Reticulation	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2,500	0	0	0	0	0	0	1,500
2	STB14	Water Telemetry Upgrade	Water Telemetry Upgrade			Water	Internal Bulk	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	400	0	0	0	0	0	500	
3	STB1415004	Water Treatment Works: Idas Valley	WTW Idas Valley - New Filterbeds			Water	Internal Bulk	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1,099	0	0	0	0	0	1,000	
4	STB10	Storage Dam and Reservoir Upgrade (STB)	Storage Dam and Reservoir Upgrade (STB)			Water	Internal Bulk	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1,550	0	0	0	0	0	1,000	
Topic 4 - Water Services Operations & Maintenance (O&M)																																
5	STB7	Reservoirs and Dam Safety & Bulk Water Supply Improvements	Reservoirs and Dam Safety & Bulk Water Supply Improvements			Water	Internal Bulk	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8,800	0	0	0	0	0	1,500	
6	STB8	Chlorination Installation: MHI study	Chlorination Installation: MHI study			Water	Basic Supply	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	350	0	0	0	0	0	500	
Topic 5.1 - Conservation & Demand Management - Water Resource																																

Stellenbosch Local Municipality
Water Services Development Plan

WSDP Revision 1: 2017 (2017 – 2018)

Nr	Project Number	Project Name	Description	Project Type	Project Solution	Main Category	Sub Category	Component(Yes/No)														Project Cost (R'000)	Funding Source (R'000)												
								Bulk Pipeline	Retoulation Line	Pumpstation	WTW	Reservoir	Source Development	Power Installation	Feasibility	Operations	Maintenance	WCDM	WWTW	Water Bourne Sanitation	VIP Sanitation		Own	MIG	RBIG	ACIP	DR	MWIG	Other						
7	STB13	Water Conservation and Demand Management	Water Conservation and Demand Management			Water	Planning	Y	Y	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	1,500	0	0	0	0	0	0	0	0	2,000
Topic 5.2 - Conservation & Demand Management - Water Balance																																			
8	STB13	Water Conservation and Demand Management	Water Conservation and Demand Management			Water	Planning	Y	Y	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	1,500	0	0	0	0	0	0	0	0	2,000
9	STB11	Upgrade and replace water meters	Upgrade and replace water meters			Water	Reticulation	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2,500	0	0	0	0	0	0	0	0	1,500
Topic 6 - Water Resource																																			
Funding Source (R'000)																																			
						Own	MIG	RBIG	ACIP	DR	MWIG	Other																							
Total Funding:						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,000		

Chapter 2:

Topic 1: Settlement Demographics & Public Amenities

Settlement Summary		
Section	Value	Assessment Score
1.1 Total Population	178417	100
1.2 Total Number of Households	49774	100
1.3 Average Household Size	4.17	100
1.4 Total Number of Settlements	72	100

Summary by Settlement Group			
Settlement Type	Settlements	Population	Households
Rural	19	48854	14249
Urban	53	131563	35525

Stellenbosch Local Municipality Water Services Development Plan

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Amenities Summary		
Description	Number per type	Assessment Score
Educational facilities	62	100
Health Facilities	16	100

Assessment Score					
Settlement Type	Number of settlements	Population per settlement type	Households per settlement type	Average Households size per settlement type	
Rural	Farming	37329	11679	3.2	100
Rural	Rural - Small Village <= 5000	7705	2095	3.68	100
Rural	Rural Scattered Low Density	1258	356	4.45	100
Rural	Rural Scattered Very Low Density	317	77	5.67	100
Rural	Squatter Camp - Rural	245	42	5.83	100
Urban	Urban - Formal Town	98280	27858	4.17	100
Urban	Urban - Informal Settlements (Squatter Camp)	28484	6959	4.48	100
Urban	Working Towns and Service Centres - Mines, Prisons etc.	4799	708	3.42	100
Total					100.0%

Topic 1 Master Plan	
Section	Does this plan address the problem 100%?
Is there a master plan to address this problem?	Does this plan address the problem 100%?

Stellenbosch Local Municipality Water Services Development Plan

WSDP Revision 1: 2017 (2017 – 2018)

1.1 Settlements Summary	Yes	Yes
1.2 Summary by Settlement Group	Yes	Yes
1.3 Assessment Score by Settlement Type	Yes	Yes
1.4 Amenities Summary	Yes	Yes

Strategic Interpretation

Detail situation assessments per Topic element

1.1 Settlements Summary

Total number of households is 49 774 and total population is 178 417

Interpret Situation Assessment:

1.2 Summary by Settlement Group

There are 19 settlements classified as rural with the number of households at 14 249 and there are 53 settlements classified as urban with a total number of households of 35 525.

Interpret Situation Assessment:

1.3 Assessment Score by Settlement Type

Urban - Informal Settlements (Squatter Camp): 7 settlements
Rural - Small Village <= 5000: 10 settlements
Scattered Very Low Density: 4 settlements
Urban - Formal Town: 40 settlements
Urban - Informal Settlements (Squatter Camp): 7 settlements
Working Towns and Service Centres - Mines, Prisons etc.: 6 settlements
Squatter Camp - Rural: 1 settlement

Interpret Situation Assessment:

1.4 Amenities Summary

There are 2 hospitals, 1 health centre and 10 clinics.

Interpret Situation Assessment:

Stellenbosch Local Municipality Water Services Development Plan

WSDP Revision 1: 2017 (2017 – 2018)

Business Element Report Items	Compliance Score	Intervention Required	Solution description as identified by Master Plan	Is there an existing project addressing this problem?	Does this current project address the problem totally?	Project Approved by Council as part of WSDP Database?	Approved by council, in part of 5 yr IDP cycle projects	Project listed in 3 yr MTEF - cycle	Total Points %	Current Demand Overall Scoring %
1.1 Settlements Summary	100	No		No	No	No	No	No	0	100
1.2 Summary by Settlement Group	0	No		No	No	No	No	No	0	100
1.3 Assessment Score by Settlement Type	100	No		No	No	No	No	No	0	100
1.4 Amenities Summary	100	No		No	No	No	No	No	0	100
Demand Overall Scoring Average									100	100

WSDP FY2018: Strategies and Objectives

Nr	Objective	Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP			WSDP	
						FY2018 Target	FY2019 Target	FY2020 Target		
Settlement Demographics & Public Amenities										
1.2	Provision of sustainable basic services to informal settlements. (Forms part of Human Settlements projects)		Number of settlements serviced	3		3				
1.3	Provision of basic services to rural communities located on farms.		Number of communities serviced.	na		na				
1.1	The replacement and upgrading of old infrastructure to accommodate development.		% of approved project budget spent	95%	STB1415026, Bulk Sewerpipe Replacement	100%				

Stellenbosch

**Stellenbosch Local Municipality
Water Services Development Plan**

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Topic 2: Service Levels Profile

	Totals	Assessment Score
Direct Backlog (Water & Sanitation)		
Direct settlement backlog water house holds. Total house hold of settlement with a water need (irrelevant the type of need)	530	99
Direct settlement backlog water population. Total population of settlement with a water need (irrelevant the type of need)	1694	99
Direct settlement backlog sanitation house holds. Total house hold of settlement with a sanitation need (irrelevant the type of need)	1193	98
Direct settlement backlog sanitation population. Total population of settlement with a sanitation need (irrelevant the type of need)	3813	98

Water Profile	Totals	Assessment Score
Water Services Infrastructure Supply Level Profile		
Piped water inside the dwelling/house-Households	38093	100
Piped water inside yard-Households	2522	100
Piped water distance <200m - Households	8344	100
Piped water distance <201m - Households	0	100
Borehole in the yard - Households	285	100
Rain-water tank in yard - Households	0	100
Water vendor-carrier/tanker - Households	0	100
Stagnant water - dam/pool - Households	0	100
Flowing water/spring/ stream/river - Households	0	100
Water Other - Households	530	99
Water Reliability Profile		
Water Supply System	-1	100
Total Number of Households having Reliable Service. (Interpret Direct Backlog field above)	49244	100
Total Number of Households NOT having Reliable Service. (Interpret Direct Backlog field above)	530	99

**Stellenbosch Local Municipality
Water Services Development Plan**

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Water Profile	Totals	Assessment Score
System Total Number of Households NOT having Reliable Service due to: Functionality (O&M and Management)	0	100
Total Number of Households NOT having Reliable Service due to: Resource	0	100
Total Number of Households NOT having Reliable Service due to: Infrastructure	530	99
Total Number of Households NOT having Reliable Service due to: Resource - Conservation & Demand Management	0	100
Total Number of Households NOT having Reliable Service due to: Resource - New Source	0	100
Total Number of Households NOT having Reliable Service due to: Infrastructure – UPGRADE/REFURBISHMENT	0	100
Total Number of Households NOT having Reliable Service due to: Infrastructure – EXTENSION	0	100
Total Number of Households NOT having Reliable Service due to: Infrastructure – NEW SCHEME	0	100
Total Number of Households NOT having Reliable Service due to: REPLACE OLD	0	100

Sanitation Profile	Totals	Assessment Score
Sanitation Service Infrastructure Supply Level Profile		
None - Households	1193	98
Flush toilet (connected to sewerage system) - Households	48047	100
Flush toilet (with septic tank) - Households	491	100
Chemical Toilet - Households	43	100
Pit toilet with ventilation (VIP) - Households	0	100
Pit without ventilation - Households	0	100
Bucket toilet - Households	0	100
Sanitation Reliability Profile		
Household requiring VIP Refurbishment	0	100
Household requiring Existing Scheme Refurbishment	816	98
Household not having reliable service due to Functionality	0	100
Household not having reliable service due to Resource - Water Security	0	100
Infrastructure to be upgraded: Pit to VIP (HH)	0	100
Infrastructure to be upgraded: Buckets to waterborne (HH)	0	100

**Stellenbosch Local Municipality
Water Services Development Plan**

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Sanitation Profile		Totals	Assessment Score
Infrastructure requirement: None to waterborne. (HH)		1193	98
Infrastructure to be upgraded: Buckets to VIP (HH)		0	100
Infrastructure to be upgraded: None to VIP (HH)		0	100

	Waterstatus
Consumer types	Adequate
Educational facilities	62
Health Facilities	16
Grand Total	78

**Stellenbosch Local Municipality
Water Services Development Plan**

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2.1 Water Services	Associated Services Facility	Number of facilities	Facilities with Adequate services	Facilities with No services	Facilities with Inadequate services	Total Potential Cost (basic level) (RM)	Assessment Score
2.1.1 Education Plan							
	Primary School	30	30	0	0	0.00	100
	Secondary School	12	12	0	0	0.00	100
	Tertiary	8	8	0	0	0.00	100
	Combined	4	4	0	0	0.00	100
	Special Needs	1	1	0	0	0.00	100
	Other	1	1	0	0	0.00	100
	Total	56	56	0	0	0.00	
2.1.2 Health Plan							
	Hospitals	2	2	0	0	0.00	100
	Health Centers	1	1	0	0	0.00	100
	Clinics	13	13	0	0	0.00	100
	Other	0	0	0	0	0.00	100
	Total	16	16	0	0	0.00	
2.2 Sanitation Services							
2.2.1 Education Plan							
	Primary School	30	30	0	0	0.00	100
	Secondary School	12	12	0	0	0.00	100
	Tertiary	8	8	0	0	0.00	100
	Combined	4	4	0	0	0.00	100
	Special Needs	1	1	0	0	0.00	100
	Other	1	1	0	0	0.00	100
	Total	56	56	0	0	0.00	

**Stellenbosch Local Municipality
Water Services Development Plan**

WSDP Revision 1: 2017 (2017 – 2018)

2.2.2 Health Plan						
Hospitals	2	2	0	0	0.00	100
Health Centers	1	1	0	0	0.00	100
Clinics	13	13	0	0	0.00	100
Other	0	0	0	0	0.00	100
Total	16	16	0	0	0.00	

Topic 2 Master Plan	Is there a master plan to address this problem?			Does this plan address the plan address this problem 100%?
Section				
Direct Backlog Water			Yes	Yes
Water Services Infrastructure Supply Level Profile			Yes	Yes
Sanitation Service Infrastructure Supply Level Profile			Yes	Yes
Water Services: Education			Yes	Yes
Sanitation Services: Education			Yes	Yes
Health and Educational Facilities			Yes	Yes
Direct Backlog Sanitation			Yes	Yes
Water Reliability Profile			Yes	Yes
Sanitation Reliability Profile			Yes	Yes
Water Services: Health			Yes	Yes
Sanitation Services: Health			Yes	Yes

Strategic Interpretation
Detail situation assessments per Topic element
 Direct Backlog Water

**Stellenbosch Local Municipality
Water Services Development Plan**

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Interpret Situation Assessment:	There are no households with a water need irrelevant of the type of need.
---------------------------------	---

Water Services Infrastructure Supply Level Profile

Interpret Situation Assessment:	The municipality provide adequate supply.
---------------------------------	---

Sanitation Service Infrastructure Supply Level Profile

Interpret Situation Assessment:	The municipality provide adequate supply.
---------------------------------	---

Water Services: Education

Interpret Situation Assessment:	All education facilities are serviced.
---------------------------------	--

Sanitation Services: Education

Interpret Situation Assessment:	All education facilities are serviced.
---------------------------------	--

Health and Educational Facilities

Stellenbosch Local Municipality Water Services Development Plan

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Interpret Situation Assessment:	All education and health facilities are serviced.
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Direct Backlog Sanitation

Interpret Situation Assessment:	There are still backlogs in Stellenbosch, Klappmuts, Kylemore and Stellenbosch NU
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Water Reliability Profile

Interpret Situation Assessment:	The municipality provide a reliable supply to their residents. A number of projects are ongoing such as the replacement of old AC pipes to reduce the number of leaks and pipe bursts which result in a breakdown of supply.
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Sanitation Reliability Profile

Interpret Situation Assessment:	The municipality has reliable sanitation infrastructure in place and has initiated a number of projects to increase the efficiency and the capacity of the treatment works to accommodate future growth.
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Water Services: Health

Interpret Situation Assessment:	All health facilities are serviced.
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Sanitation Services: Health

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Interpret Situation Assessment:
All health facilities are serviced.

Business Element Report Items	Compliance Score	Intervention Required	Solution description as identified by Master Plan	Is there an existing project addressing this problem?	Does this current project address the problem totally?	Project Approved by Council as part of WSDP Database?	Approved by Council, in part of 3 Yr IDP cycle projects	Project listed in 3 Yr MTEF cycle	Total Points	Current Demand Scoring %
Direct Backlog Water	98.5	No		0	0	0	0	0	0	100
Water Services Infrastructure Supply Level Profile	99.86	No		0	0	0	0	0	0	100
Sanitation Service Infrastructure Supply Level Profile	99.63	No		0	0	0	0	0	0	100
Water Services: Education	100	No		0	0	0	0	0	0	100
Sanitation Services: Education	100	No		0	0	0	0	0	0	100
Health and Educational Facilities	0	No		0	0	0	0	0	0	100
Direct Backlog Sanitation	0	Yes	Upgrade of Stellenbosch WWTW, Upgrade of Klapmuts WWTW	100	100	Yes	100	Yes	100	700
Water Reliability Profile	0	No		0	0	0	0	0	0	100
Sanitation Reliability Profile	0	No		0	0	0	0	0	0	100
Water Services: Health	0	No		0	0	0	0	0	0	100
Sanitation Services: Health	0	No		0	0	0	0	0	0	100
Demand Overall Scoring Average										100

WSDP FY2018: Strategies and Objectives

Nr	Objective	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
	Strategy								
	Service Levels Profile								

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Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018		WSDP FY2019		WSDP FY2020		WSDP FY2021		WSDP FY2022	
					Target	Target	Target	Target	Target	Target	Target	Target		
2.1	Provision of cleaned piped water to all formal HH within 200 meters from the household in terms of the Dept of Water Affairs' legislative requirements.	Number of reports			1	1	1	1	1	1				
2.2	Provision of sanitation services to domestic wastewater and sewerage disposal at formal households. (Forms part of Human Settlements projects)	Number of reports			1	1	1	1	1	1				
2.3	Provide 50 additional waterborne toilet facilities and taps to informal settlements.	Number of waterborne toilet facilities and taps installed			50	50	50	50	50	50				
2.4	Provide free basic sanitation services to registered indigent account holders which are connected to the municipal waste water (sanitation/sewerage) network & are billed for sewerage service, irrespective of the number of water closets (toilets). (Forms part of Human Settlements projects)	Number of indigent account holders connected to the sanitation/sewerage network and are billed for sewerage services			5757	6486	6486	6486	6486	6486				
2.5	Provide sanitation services to residential properties which are connected to the municipal waste water (sanitation/sewerage) network.	Number of residential properties which are billed for sewerage in accordance with the SAMRAS financial system			37902	37902	37902	37902	37902	37902				

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Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP				
					FY2018 Target	FY2019 Target	FY2020 Target	FY2021 Target	WSDP FY2022 Target
2.6	Provide clean piped water to registered indigent account holders which are connected to the municipal water infrastructure network.	Number of indigent account holders receiving free basic water			5757	6486	6486		
2.7	Provide clean piped water to formal residential properties which are connected to the municipal water infrastructure network.	Number of formal residential properties receiving piped water			37902	37902	37989		

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Topic 3: Water Services Asset Management

Question	Yes	No	Grid	Assessment Score
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3.1 General Information				
3.1.1 Is there an Asset Management plan	True			80
3.1.2 Is there a disaster management plan	True			80
3.1.3 Is there a plan in place to manage untreated effluent	True			80

Questions										
Question	B	AP	WTW	WP	SP	WL	SL	R	WWTW	Assessment Score

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		48	5	33	20	14.66	0	30	5	100									
3.1.1 Total number of components / km of pipeline / units	[section]																		
3.2.1.1 Previous incidents including Security Problems (Regular)		0	0	0	0			0	0	100									
3.2.1.2 Previous incidents including Security Problems (Periodic)		0	0	0	0			0	0	84									
3.2.1.3 Previous incidents including Security Problems (Sporadic)		3	3	0	20			0	0	100									
3.2.1.4 Previous incidents including Security Problems (None)		5	0	39	5			50	5	100									
3.2.2.1 Safety inspection performed (Regular)		8	3	32	20			41	5	91									
3.2.2.2 Safety inspection performed (Periodic)		0	0	0	0			0	0	100									
3.2.2.3 Safety inspection performed (Sporadic)		0	0	0	0			0	0	95									
3.2.2.4 Safety inspection performed (None)		0	0	7	5			9	0	100									
3.2.5 Average Operating hours per day (X hrs)			17.6						17.6	100									
3.3.1.1 General physical condition: Dysfunctional		0	0	3	1			3	0	100									
3.3.1.2 General physical condition: Operational		65	3	36	24			44	4	100									

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3.3.1.3 General physical condition: Prime Condition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	84
3.3.1.4 General physical condition: Vandalised	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
3.3.2 Number of breakages / failures per year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
3.3.3 Total refurbishment needs %	0%	2%	2%	32%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	24%	12%	80
3.3.4 Total refurbishment needs cost (RM)	0.00	3.65	2.11	23.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.25	17.74	80
3.3.4.1 Refurbishment cost for 5 year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27.939	0	100
3.3.4.2 Refurbishment cost for 10 year	0	3.650625	2.110361	23.946958	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39.184	15.04094	100
3.3.4.3 Refurbishment cost for 15 year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54.958	0	84
3.3.5 Total replacement needs %	0%	0%	13%	12%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	2%	95
3.3.6 Total replacement needs cost (RM)	0.00	0.00	10.76	7.80	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.09	2.78	92
3.3.6.1 Replacement cost for 5 year	0	0	0	28.87	15.466	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39.86	150.21525	97
3.3.6.2 Replacement cost for 10 year	0	0	10.767564	40.49166647	21.69196509	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55.605	104.9805135	100
3.3.6.3 Replacement cost for 15 year	0	0	0	56.79165965	30.42396286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78.41	231.3941341	100

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3.3.7 Total New development cost required	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
3.3.7.1 New development cost for 5 year	0	0	34.2	0	0	0	0	0	0	0	0	0	0	0	87.96632468	374.644			100
3.3.7.2 New development cost for 10 year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	525.458			100
3.3.7.3 New development cost for 15 year	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	736.982			100
3.3.8 % Of Components already reached useful life	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	0%			100
3.3.9 % Whereoff the WSA Self is the Current Owner	100%	88%	100%	92%	88%	100%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%			100
3.3.10 % Whereoff the WSA Self is Current Operator	100%	88%	100%	92%	88%	100%	100%	100%	100%	100%	100%	100%	100%	100%	92%	100%			100
3.4.1 % Expected total lifespan: Short (1-3 yrs)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			100
3.4.2 % Expected total lifespan: Medium (3 - 10 yrs)	0	50	0	64.1	16	0	0	0	0	0	0	0	0	12	0	0			100
3.4.3 % Expected total lifespan: Long (10 - 20 yrs)	100	50	100	35.9	80	100	100	100	100	100	100	100	100	84	100	100			99

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Sanitation Schemes		Green Drop	Assessment Score
Dwarstivier	True		40
Franschhoek	True		37
Klapmuts	True		39
Raitiby	True		32
Stellenbosch	True		41

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Water Schemes		Water Schemes	Blue Drop	Assessment Score
Dwarsrivier	True		88	
Franschoek	True		71	
Klapmuts	False		0	
Raitiby	False		0	
Rural Stellenbosch	False		0	
Stellenbosch	True		78	
Stellenbosch LM Rural	False		0	
WSA Level				

Topic 3 Master Plan

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Section	Is there a master plan to address this problem?	Does this plan address the plan address this problem 100%?
3.1 General Information	Yes	Yes
3.2 Operation	Yes	Yes
3.3 Functionality Observation	Yes	Yes
3.4 Asset Assessment Spectrum	Yes	Yes
3.5 Water and Sanitation schemes	Yes	Yes

Strategic Interpretation

Detail situation assessments per Topic element

3.1 General Information

Interpret Situation Assessment:	An infrastructure asset register is in place, but it is critical that an infrastructure management plan be implemented based on preventative maintenance to ensure that damage to assets is prevented before it occur.
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3.2 Operation

Interpret Situation Assessment:	In general the municipality keeps its infrastructure in good order.
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3.3 Functionality Observation

Interpret Situation Assessment:	One of the major challenges facing the Municipality is the need for replacement/upgrading of existing assets which have aged and deteriorated. A large portion of the water network in the municipal area consists of ageing Asbestos Cement (AC) pipes that is a significant contributing factor in causing leaking and bursting of water pipes. The Municipality has instituted a number of initiatives and projects such as replacement of old AC pipe lines, replacement of old and faulty watermeters, etc to provide an improved and secure water supply to its residents. Another challenge faced by the Municipality is the insufficient treatment capacity at various Waste Water Treatment Works, which is a result of historical under-investment and recent sustained growth in population and associated development. The council has in recent years invested vast amounts in the expansion of the treatment works capacity by rehabilitation of assets, upgrading and renewal of facilities and equipment.
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3.4 Asset Assessment Spectrum

Interpret Situation Assessment:	The current replacement cost of the water infrastructure of Stellenbosch Municipality is estimated at R1,034.06 million (excluding VAT). Reticulation pipeline assets make up the bulk of the backlog. The current replacement cost of the sanitation infrastructure of Stellenbosch Municipality is estimated at R853.3 million (excluding VAT). The bulk of the backlog is made up of sewer reticulation assets and the Stellenbosch WWTV.
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3.5 Water and Sanitation schemes

Interpret Situation Assessment:	Stellenbosch Municipality also achieved Blue Drop certification in 2012 for four of its five water supply systems, with a total Blue Drop score of 95.56%. The Municipality achieved a platinum award for the Stellenbosch Water Supply System for achieving Blue Drop accreditation three times, every year since the programme's inception in 2009. Based on the last Green Drop report in 2013 the municipality did not meet the expectation of the Regulator and the Green Drop programme. The municipal Green Drop score of 40.16% showed a significant decline from the 71.3% score in 2011, the main reason being the condition and the operation of their wastewater treatment plants. In its efforts to address the shortcomings, the Municipality has in the last few years put great emphasis on the improvement of their WWTVs.
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Business Element Report Items	Compliance Score	Intervention Required %	Solution description as identified by Master Plan	Is there an Existing project addressing this problem?	Does this current project address the problem totally?	Project Approved by Council as part of WSDP Database?	Approved by council, in project database and part of 5 yr IDP cycle projects	Project listed in 3 yr MTEF - cycle	Total Points	Current Demand Overall Scoring %
3.1 General Information	85	No		No	No	No	No	No	0	100
3.2 Operation	92	No		No	No	No	No	No	0	100
3.3 Functionality Observation	98.59	Yes	Replace old infrastructure.	Yes	Yes	Yes	Yes	Yes	100	100
3.4 Asset Assessment Spectrum	89.33	Yes	Assess assets	Yes	Yes	Yes	Yes	Yes	100	100
3.5 Water and Sanitation schemes	32.77	Yes	Improve WWTV	No	Yes	Yes	Yes	Yes	100	100
Demand Overall Scoring Average										100

WSDP FY2018: Strategies and Objectives

Nr	Objective	Key Performance Indicator	Baseline (2017 status quo)	Linked Project		WSDP		WSDP		WSDP	
				FY2018	FY2019	FY2020	FY2021	FY2022	Target	Target	Target
	Strategy			Target	Target	Target	Target	Target	Target	Target	Target

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Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018		WSDP FY2019		WSDP FY2020		WSDP FY2021		WSDP FY2022	
					Target	Actual	Target	Actual	Target	Actual	Target	Actual		
3.07	Complete new water reticulation projects.	Number of projects completed			3		3		na					
3.11	Development of an Asset Management Plan.	Plan submitted to Council for approval			na		na		na					
3.01	Upgrade and replace water meters.	% of approved project budget spent		STB11, Upgrade and replace water meters	100%		100%		na					
3.02	Upgrade Auto-samplers for water services.	% of approved project budget spent		STB6, Upgrade Auto-samplers (WWTW & WWTW)	100%		100%		na					
3.03	Upgrade the Water Telemetry system.	Completed projects		STB14, Water Telemetry Upgrade	1		1		na					
3.04	Upgrade the Water treatment works.	Completed projects		STB1415004, Water Treatment Works: Idas Valley	na		na		na					
3.05	Upgrade bulk water supply.	Number of projects completed		STB1415030, Bulk water supply Pipe Line & Pumpstations: Franschoek	3		na		na					
3.08	Upgrade storage Dams 1 & 2.	% of approved project budget spent		STB10, Storage Dam and Reservoir Upgrade (STB)	100%		100%		100%					
3.09	Upgrade Bulk Sewer reticulation.	Number of projects completed		STB1415025, New Plankenburg Main Sewer Outfall	3		na		na					

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Topic 4: Water Services O&M

In Place	Assesment Score	Status Quo	Impact	Assesment Score
4.1 Operation & Maintenance Plan				
Is There a Operation and Maintenance Plan?				
True	100			
Phase	Compliance	Status Quo	Impact	Assesment Score
4.2 Resources				
4.2.1 Existing Groundwater Infrastructure				
Operation	Staff	Not Required	No Impact	100
Maintenance	Staff	Not Required	No Impact	100
Operation	External resources	Not Required	No Impact	100
Maintenance	External resources	Not Required	No Impact	100
Operation	Spare Parts	Not Required	No Impact	100
Maintenance	Spare Parts	Not Required	No Impact	100
Operation	Tools & Equipment	Not Required	No Impact	100
Maintenance	Tools & Equipment	Not Required	No Impact	100
Operation	Budget	Not Required	No Impact	100
Maintenance	Budget	Not Required	No Impact	100
4.2 Resources				
4.2.2 Existing Surface Water Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	25
Maintenance	Staff	Below Minimum requirement	Medium/High	25

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Operation	External resources	Minimum basic requirement	Medium/High	50
Maintenance	External resources	Minimum basic requirement	Medium/High	50
Operation	Spare Parts	Below Minimum requirement	Critical	25
Maintenance	Spare Parts	Below Minimum requirement	Critical	25
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Budget	Minimum basic requirement	Low	50
Maintenance	Budget	Minimum basic requirement	Low	50
4.2 Resources				
4.2.3 Existing Waste Water Treatment Works Infrastructure				
Operation	Staff	Minimum basic requirement	Medium/High	50
Maintenance	Staff	Minimum basic requirement	Medium/High	50
Operation	External resources	Below Minimum requirement	Medium/High	25
Maintenance	External resources	Above minimum requirement	Low	75
Operation	Spare Parts	Below Minimum requirement	Critical	25
Maintenance	Spare Parts	Below Minimum requirement	Critical	25
Operation	Tools & Equipment	Minimum basic requirement	Medium/High	50
Maintenance	Tools & Equipment	Minimum basic requirement	Medium/High	50
Operation	Budget	Minimum basic requirement	Medium/High	50
Maintenance	Budget	Minimum basic requirement	Medium/High	50
4.2 Resources				
4.2.4 Existing Water Treatment Works Infrastructure				
Operation	Staff	Minimum basic requirement	Medium/High	50
Maintenance	Staff	Minimum basic requirement	Medium/High	50
Operation	External resources	Minimum basic requirement	Low	50
Maintenance	External resources	Minimum basic requirement	Low	50
Operation	Spare Parts	Below Minimum requirement	Medium/High	25
Maintenance	Spare Parts	Below Minimum requirement	Medium/High	25
Operation	Tools & Equipment	Minimum basic requirement	Medium/High	50
Maintenance	Tools & Equipment	Minimum basic requirement	Medium/High	50
Operation	Budget	Minimum basic requirement	Medium/High	50
Maintenance	Budget	Minimum basic requirement	Medium/High	50

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4.2 Resources				
4.2.5 Existing Pump Station Infrastructure				
Operation	Staff	Minimum basic requirement	Medium/High	50
Maintenance	Staff	Minimum basic requirement	Medium/High	50
Operation	External resources	Minimum basic requirement	Low	50
Maintenance	External resources	Minimum basic requirement	Low	50
Operation	Spare Parts	Below Minimum requirement	Medium/High	25
Maintenance	Spare Parts	Below Minimum requirement	Medium/High	25
Operation	Tools & Equipment	Minimum basic requirement	Medium/High	50
Maintenance	Tools & Equipment	Minimum basic requirement	Medium/High	50
Operation	Budget	Minimum basic requirement	Medium/High	50
Maintenance	Budget	Minimum basic requirement	Medium/High	50
4.2 Resources				
4.2.6 Existing Bulk Pipeline Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	25
Maintenance	Staff	Below Minimum requirement	Medium/High	25
Operation	External resources	Minimum basic requirement	Medium/High	50
Maintenance	External resources	Minimum basic requirement	Medium/High	50
Operation	Spare Parts	Below Minimum requirement	Critical	25
Maintenance	Spare Parts	Below Minimum requirement	Critical	25
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Budget	Minimum basic requirement	Low	50
Maintenance	Budget	Minimum basic requirement	Low	50
4.2 Resources				
4.2.7 Existing Tower & Reservoir Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	25
Maintenance	Staff	Below Minimum requirement	Medium/High	25
Operation	External resources	Minimum basic requirement	Medium/High	50
Maintenance	External resources	Minimum basic requirement	Medium/High	50
Operation	Spare Parts	Minimum basic requirement	Medium/High	50
Maintenance	Spare Parts	Minimum basic requirement	Medium/High	50

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Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Budget	Minimum basic requirement	Low	50
Maintenance	Budget	Minimum basic requirement	Low	50
4.2 Resources				
4.2.8 Existing Retreatment Infrastructure				
Operation	Staff	Below Minimum requirement	Critical	25
Maintenance	Staff	Below Minimum requirement	Critical	25
Operation	External resources	Minimum basic requirement	Medium/High	50
Maintenance	External resources	Minimum basic requirement	Medium/High	50
Operation	Spare Parts	Below Minimum requirement	Critical	25
Maintenance	Spare Parts	Below Minimum requirement	Critical	25
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Budget	Minimum basic requirement	Low	50
Maintenance	Budget	Minimum basic requirement	Low	50
4.3 Information				
4.3.1 Existing Groundwater Infrastructure				
Operation	Manuals Available	Not Required	No Impact	100
Maintenance	Manuals Available	Not Required	No Impact	100
Operation	Asset Register	Not Required	No Impact	100
Maintenance	Asset Register	Not Required	No Impact	100
Operation	As-Built info.	Not Required	No Impact	100
Maintenance	As-Built info.	Not Required	No Impact	100
Operation	Tools & Equipment	Not Required	No Impact	100
Maintenance	Tools & Equipment	Not Required	No Impact	100
Operation	Contingency & Safety Plan	Not Required	No Impact	100
Maintenance	Contingency & Safety Plan	Not Required	No Impact	100
4.3 Information				
4.3.2 Existing Surface Water Infrastructure				
Operation	Manuals Available	Below Minimum requirement	Critical	25
Maintenance	Manuals Available	Below Minimum requirement	Critical	25

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Operation	Asset Register	Minimum basic requirement	Medium/High	50
Maintenance	Asset Register	Minimum basic requirement	Medium/High	50
Operation	As-Built info.	Below Minimum requirement	Critical	25
Maintenance	As-Built info.	Below Minimum requirement	Critical	25
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Low	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Low	50
4.3 Information				
4.3.3 Existing Water Treatment Works Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Critical	25
Operation	Asset Register	Minimum basic requirement	Medium/High	50
Maintenance	Asset Register	Minimum basic requirement	Medium/High	50
Operation	As-Built info.	Zero Compliance	Critical	0
Maintenance	As-Built info.	Zero Compliance	Medium/High	0
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Zero Compliance	Critical	0
Operation	Contingency & Safety Plan	Minimum basic requirement	Low	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Low	50
4.3 Interrelated				
4.3.4 Existing Waste Water Treatment Works Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	50
Maintenance	Manuals Available	Below Minimum requirement	Critical	25
Operation	Asset Register	Below Minimum requirement	Critical	25
Maintenance	Asset Register	Below Minimum requirement	Critical	25
Operation	As-Built info.	Minimum basic requirement	Medium/High	50
Maintenance	As-Built info.	Minimum basic requirement	Medium/High	50
Operation	Tools & Equipment	Minimum basic requirement	Medium/High	50
Maintenance	Tools & Equipment	Minimum basic requirement	Medium/High	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Low	50
4.3 Interrelated				
4.3.4 Existing Waste Water Treatment Works Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	50
Maintenance	Manuals Available	Below Minimum requirement	Critical	25
Operation	Asset Register	Below Minimum requirement	Critical	25
Maintenance	Asset Register	Below Minimum requirement	Critical	25
Operation	As-Built info.	Minimum basic requirement	Medium/High	50
Maintenance	As-Built info.	Minimum basic requirement	Medium/High	50
Operation	Tools & Equipment	Minimum basic requirement	Medium/High	50
Maintenance	Tools & Equipment	Minimum basic requirement	Medium/High	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Low	50

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4.3 Information				
4.3.5 Existing Pump Station Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	50
Maintenance	Manuals Available	Minimum basic requirement	Low	50
Operation	Asset Register	Minimum basic requirement	Medium/High	50
Maintenance	Asset Register	Minimum basic requirement	Medium/High	50
Operation	As-Built info.	Below Minimum requirement	Critical	25
Maintenance	As-Built info.	Below Minimum requirement	Critical	25
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Low	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Low	50
4.3 Information				
4.3.6 Existing Bulk Pipeline Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	50
Maintenance	Manuals Available	Minimum basic requirement	Low	50
Operation	Asset Register	Minimum basic requirement	Low	50
Maintenance	Asset Register	Minimum basic requirement	Low	50
Operation	As-Built info.	Minimum basic requirement	Low	50
Maintenance	As-Built info.	Minimum basic requirement	Low	50
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
4.3 Information				
4.3.7 Existing Tower & Reservoir Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	50
Maintenance	Manuals Available	Minimum basic requirement	Low	50
Operation	Asset Register	Minimum basic requirement	Low	50
Maintenance	Asset Register	Minimum basic requirement	Low	50
Operation	As-Built info.	Minimum basic requirement	Low	50
Maintenance	As-Built info.	Minimum basic requirement	Low	50

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Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
4.3 Information				
4.3.2 Existing Retoulution Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	50
Maintenance	Manuals Available	Minimum basic requirement	Low	50
Operation	Asset Register	Minimum basic requirement	Low	50
Maintenance	Asset Register	Minimum basic requirement	Low	50
Operation	As-Built info.	Minimum basic requirement	Low	50
Maintenance	As-Built info.	Minimum basic requirement	Low	50
Operation	Tools & Equipment	Minimum basic requirement	Low	50
Maintenance	Tools & Equipment	Minimum basic requirement	Low	50
Operation	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Minimum basic requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.1 Existing Groundwater Infrastructure				
Operation	Procedures	Not Required	No Impact	100
Maintenance	Procedures	Not Required	No Impact	100
Operation	Record keeping in place	Not Required	No Impact	100
Maintenance	Record keeping in place	Not Required	No Impact	100
Operation	Quality Control procedures established	Not Required	No Impact	100
Maintenance	Quality Control procedures established	Not Required	No Impact	100
Operation	Risk Management	Not Required	No Impact	100
Maintenance	Risk Management	Not Required	No Impact	100
Operation	Reporting (data analysis & report generation est.)	Not Required	No Impact	100
Maintenance	Reporting (data analysis & report generation est.)	Not Required	No Impact	100
4.4 Activity Control & Management				
4.4.2 Existing Surface water Infrastructure				
Operation	Procedures	Minimum basic requirement	Medium/High	50
Maintenance	Procedures	Minimum basic requirement	Medium/High	50

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Operation	Record keeping in place	Below Minimum requirement	Medium/High	25
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	25
Operation	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Maintenance	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Operation	Risk Management	Minimum basic requirement	Medium/High	50
Maintenance	Risk Management	Minimum basic requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.3 Existing Water Treatment Works Infrastructure				
Operation	Procedures	Minimum basic requirement	Low	50
Maintenance	Procedures	Minimum basic requirement	Low	50
Operation	Record keeping in place	Below Minimum requirement	Critical	25
Maintenance	Record keeping in place	Below Minimum requirement	Critical	25
Operation	Quality Control procedures established	Below Minimum requirement	Critical	25
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	25
Operation	Risk Management	Minimum basic requirement	Medium/High	50
Maintenance	Risk Management	Minimum basic requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Low	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Low	50
4.4 Activity Control & Management				
4.4.4 Existing Waste Water Treatment Works Infrastructure				
Operation	Procedures	Minimum basic requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Critical	25
Operation	Record keeping in place	Minimum basic requirement	Medium/High	50
Maintenance	Record keeping in place	Minimum basic requirement	Medium/High	50
Operation	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Maintenance	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Operation	Risk Management	Below Minimum requirement	Critical	25
Maintenance	Risk Management	Minimum basic requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.4 Existing Waste Water Treatment Works Infrastructure				
Operation	Procedures	Minimum basic requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Critical	25
Operation	Record keeping in place	Minimum basic requirement	Medium/High	50
Maintenance	Record keeping in place	Minimum basic requirement	Medium/High	50
Operation	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Maintenance	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Operation	Risk Management	Below Minimum requirement	Critical	25
Maintenance	Risk Management	Minimum basic requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50

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4.4 Activity Control & Management			
4.4.5 Existing Pump Station Infrastructure			
Operation	Procedures	Minimum basic requirement	Medium/High
Maintenance	Procedures	Minimum basic requirement	Medium/High
Operation	Record keeping in place	Below Minimum requirement	25
Maintenance	Record keeping in place	Below Minimum requirement	25
Operation	Quality Control procedures established	Minimum basic requirement	50
Maintenance	Quality Control procedures established	Minimum basic requirement	50
Operation	Risk Management	Minimum basic requirement	50
Maintenance	Risk Management	Minimum basic requirement	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	50
4.4 Activity Control & Management			
4.4.6 Existing Bulk Pipelines Infrastructure			
Operation	Procedures	Minimum basic requirement	50
Maintenance	Procedures	Minimum basic requirement	50
Operation	Record keeping in place	Below Minimum requirement	25
Maintenance	Record keeping in place	Below Minimum requirement	25
Operation	Quality Control procedures established	Minimum basic requirement	50
Maintenance	Quality Control procedures established	Minimum basic requirement	50
Operation	Risk Management	Minimum basic requirement	50
Maintenance	Risk Management	Minimum basic requirement	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	50
4.4 Activity Control & Management			
4.4.7 Existing Tower & Reservoir Infrastructure			
Operation	Procedures	Minimum basic requirement	50
Maintenance	Procedures	Minimum basic requirement	50
Operation	Record keeping in place	Below Minimum requirement	25
Maintenance	Record keeping in place	Below Minimum requirement	25
Operation	Quality Control procedures established	Minimum basic requirement	50
Maintenance	Quality Control procedures established	Minimum basic requirement	50

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Operation	Risk Management	Minimum basic requirement	Medium/High	50
Maintenance	Risk Management	Minimum basic requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.8 Existing Retention Infrastructure				
Operation	Procedures	Minimum basic requirement	Medium/High	50
Maintenance	Procedures	Minimum basic requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	25
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	25
Operation	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Maintenance	Quality Control procedures established	Minimum basic requirement	Medium/High	50
Operation	Risk Management	Minimum basic requirement	Medium/High	50
Maintenance	Risk Management	Minimum basic requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	25
Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	25

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Topic 4 Master Plan	Is there a master plan to address this problem?	Does this plan address the problem 100%?
Section 4.1 Operation & Maintenance Plan	Yes	Yes
4.1.1 Is There an Operation and Maintenance Plan?	Yes	Yes
4.2 Resources	Yes	Yes
4.3 Information	Yes	Yes
4.4 Activity Control & Management	Yes	Yes

Strategic Interpretation

Detail situation assessments per Topic element

4.1 Operation & Maintenance Plan

Interpret Situation Assessment:	Operation & Maintenance Plan is in place
---------------------------------	--

4.1.1 Is There an Operation and Maintenance Plan?

Interpret Situation Assessment:	Operation & Maintenance Plan is in place
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4.2 Resources

Interpret Situation Assessment:	In most instances the minimum required staff are available. More people are currently being trained by the municipality
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4.3 Information

Interpret Situation Assessment:	The municipality must improve the asbuilt information on some of their infrastructure.
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4.4 Activity Control & Management

Interpret Situation Assessment:	There is a need for record keeping and reporting at the facilities to be improved in some cases.
---------------------------------	--

Business Element / Report Items	Compliance Score	Intervention Required	Solution description as identified by Master Plan	Is there an Existing project addressing this problem?	Does this current project address the problem totally?	Project Approved by Council as part of WSDP Database?	Approved by Council, in project database and part of 3 yr IDP cycle projects	Project listed in 3 yr MTEF - cycle	Total Points	Current Demand Overall Scoring %
4.1 Operation & Maintenance Plan	100	No		No	No	No	No	No	0	100
4.1.1 Is There an Operation and Maintenance Plan?	50	No		No	No	No	No	No	0	100
4.2 Resources	51.25	Yes	Personnel to be trained	Yes	Yes	Yes	Yes	Yes	100	700
4.3 Information	50.63	No		No	No	No	No	No	0	100
4.4 Activity Control & Management	0	No		No	No	No	No	No	0	100

Demand Overall Scoring Average

100

WSDP FY2018: Strategies and Objectives

Nr	Objective	Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project		WSDP	
					WSDP FY2018	Target	WSDP FY2019	Target
					WSDP FY2018	Target	WSDP FY2019	Target
					WSDP FY2018	Target	WSDP FY2020	Target
					WSDP FY2019	Target	WSDP FY2021	Target
					WSDP FY2020	Target	WSDP FY2022	Target

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Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018		WSDP FY2019		WSDP FY2020		WSDP FY2021		WSDP FY2022	
					Target	Target	Target	Target	Target	Target	Target	Target		
Water Services O&M														
4.01	Spend the maintenance budget for water assets.	% of the maintenance budget spent			95%		95%		95%					
4.05	Spend the waste water maintenance budget.	% of maintenance budget spent			95%		95%		95%					
4.06	Spend the maintenance budget for sanitation assets.	% of maintenance budget spent			95%		95%		95%					
4.07	Training of staff on treatment processes, quality monitoring and control.	Number of staff trained			38		40		38					
4.08	Safety audits to be undertaken on all WWTW's to ensure compliance with the Occupational Health and Safety Act.	Number of audits			1		1		1					
4.11	Spent 90% of the total approved water services capital budget applicable to the directorate (Actual capital expenditure divided by the total approved capital budget).	% of the capital budget spent			90%		90%		90%					
4.02	Improve the Reservoirs and Dam safety.	% of approved project budget spent		STB7, Reservoirs and Dam Safety & Bulk Water Supply Improvements	98%		98%		98%					
4.03	Complete the water pipe replacement.	% of approved project budget spent		STB4, Water Pipe Replacement	100%		100%		100%					
4.04	Monitoring of drinking water quality in terms of SANS 241 on a monthly basis.	% Drinking Water Quality Compliance		STB6, Upgrade Auto-samplers (WWTW & WWTW)	98%		98%		98%					

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Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018		WSDP FY2019		WSDP FY2020		WSDP FY2021		WSDP FY2022	
					Target	Target	Target	Target	Target	Target	Target	Target		
4.09	50% Weighted Average effluent quality achieved in terms of requirements as regulated by the water use license for all Waste Water Treatment Works.	% effluent quality		STB6, Upgrade Auto-samplers (WWTW & WWTW)	60%	60%	60%	60%	60%	60%				
4.10	90% Average water quality achieved as per micro, chemical, operational and physical determinants in terms of the Blue Drop requirements regulated by SANS 241 for all Water Treatment Works.	% Average water quality achieved as per micro, chemical, operational and physical determinants		STB8, Chlorination Installation: MHI study	90%	90%	90%	90%	90%	90%				

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Topic 5: Conservation & Demand Management

Topic 5.1: Water Resource Management

Demand Info		Assessment Score
Question	Resource Available	
5.1 Reducing unaccounted water and water inefficiencies		
5.1.1 Night flow metering	1	100
5.1.2 Day flow metering	1	100
5.1.3 Reticulation leaks	1	100
5.1.4 Illegal connections	1	75
5.1.5 Un-metered connections	1	75
5.2 Leak and meter repair programmes. Consumer units targeted by:		
5.2.1 Leak repair assistance programme	1	100

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5.2.2 Retro-fitting of water inefficient toilets	0	100
5.2.3 Meter repair programme	1	100
5.3 Consumer/land-use demand management: Public Information & Education Programmes		
5.3.1 Schools targeted by education programmes	0	100
5.3.2 Consumers targeted by public information programmes	1	100

Demand Info Question 8		Assessment Score
Question	Number of Settlements	
Conjunctive use of surface - and groundwater		
891	65	100
893	0	100
894	0	100

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Demand Info Question 9		Assessment Score
Question	Yes/No	
5.5 Working for Water		
Is there a Working for Water Programme in place:	1	100

Demand Info Question 10		Assessment Score
Project Name		
Provide List of Projects		

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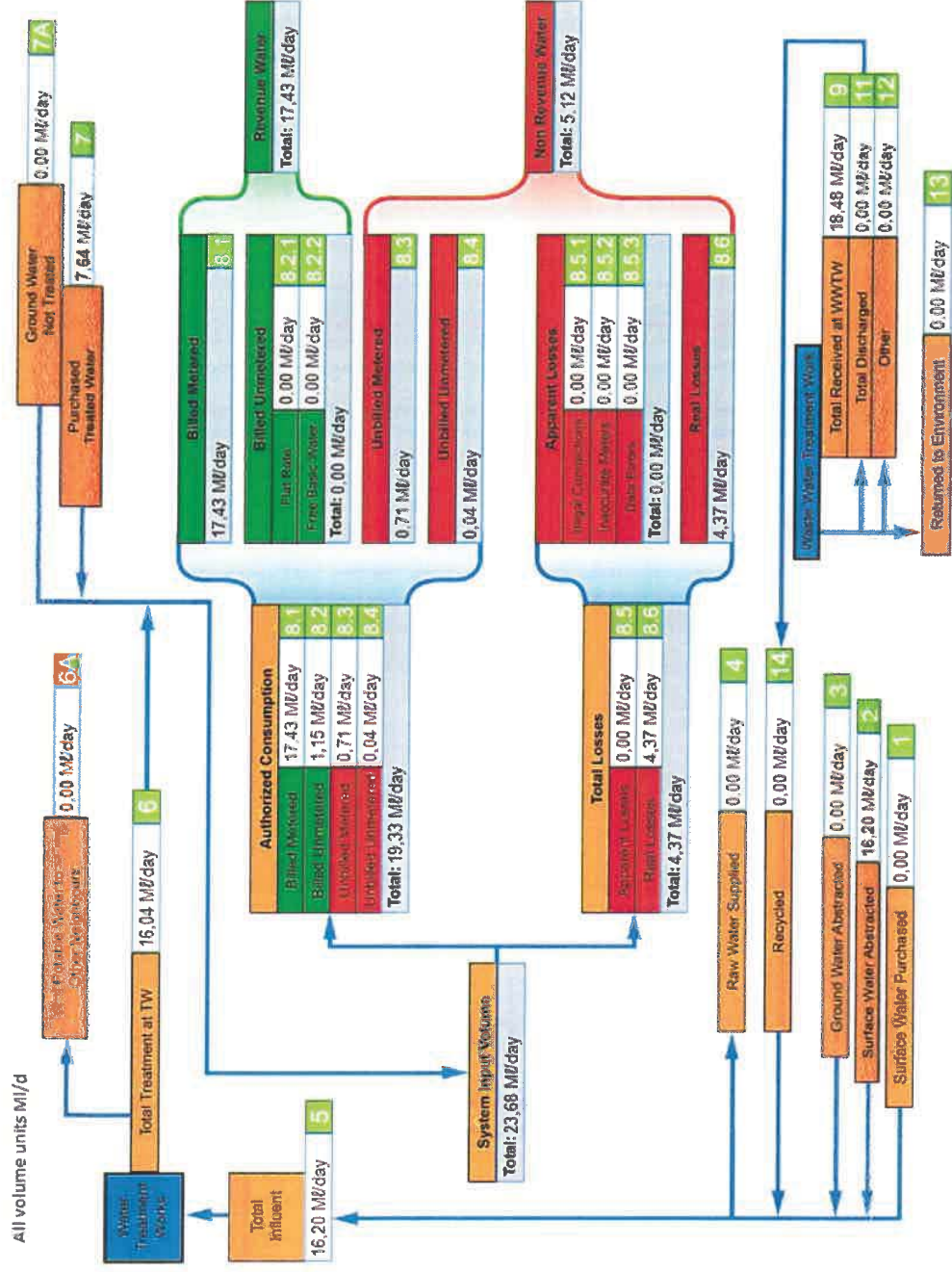
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Topic 5.1 Master Plan Section	Is there a master plan to address this problem?	Does this plan address the plan address this problem 100%?
5.1 Reducing unaccounted water and water inefficiencies	Yes	Yes
5.2 Leak and meter repair programmes.	Yes	Yes
5.3 Consumer/end-use demand management: Public Information & Education Programmes	Yes	Yes
5.4: Conjunctive use of surface - and groundwater	Yes	Yes
5.5 Working for Water	No	No

Topic 5.2: Water Balance

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Topic 5.2: Water Balance

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Questions		Assessment Score
5.2.1 Amount of surface water purchased.		
5.2.2 Amount of surface water abstracted.		
5.2.3 Amount of ground water abstracted.		
5.2.4 Amount of raw water supplied.		
5.2.5 Total influent of water to water treatment plants.		
5.2.6 Total water treated at water treatment plants.		
5.2.6A Potable water sent to neighbours.		
5.2.7 Total amount of treated water purchased.		
5.2.7A Amount of untreated water pumped directly into reticulation system.		
5.2.8.1 Amount of billed and metered water consumed.		
5.2.8.2 Amount of billed, but not metered, water consumed.		
5.2.8.3 Amount of unbilled metered water consumed.		
5.2.8.4 Amount of unbilled and unmetered water consumed.		
5.2.8.5 Apparent loss of water.		
5.2.8.6 Real loss of water.		
5.2.8.2.1 Water is billed for based on a flat rate tariff (i.e. not based on a meter reading).		
5.2.8.2.2 Free basic water used through unbilled unmetered stand pipes or yard connections.		
5.2.8.5.1 Water used through illegal connections.		
5.2.8.5.2 Water used but not billed for because of inaccurate meters.		
5.2.8.5.3 Water used but not billed for because of data transfer errors, low estimated readings or any administrative errors.		
5.2.9 Total amount of water received at waste water treatment works.		
5.2.11 Total amount of water discharged from waste water treatment works.		
5.2.12 Other		
5.2.13 Amount of water returned to the environment.		
5.2.14 Amount of recycled water supplied.		

Topic 5.2 Master Plan

Topic 5.2 Master Plan		
Section	Is there a master plan that addresses this problem?	Does this plan address this problem 100%?

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5.2 Water Balance	Yes	Yes
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Strategic Interpretation

Detail situation assessments per Topic element

5.1 Reducing unaccounted water and water inefficiencies

Interpret Situation Assessment:	The municipality has rolled out a number of project in order to reduce unaccounted water and water inefficiencies. Projects include the water pipe replacement programme which entails the replacement of aging water mains in the WC024 network using Prioritization Program, the Phase 1 of a water meter audit programme has also commenced in the WC024 area. Phase 1 entailed the audit of all water meters in the Klapmuts area. This programme will be extended across the municipal area.
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5.2 Leak and meter repair programmes.

Interpret Situation Assessment:	The Phase 1 of a water meter audit programme has commenced in the WC024 area. Phase 1 entailed the audit of all water meters in the Klapmuts area. This programme will be extended across the municipal area.
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5.3 Consumer/end-use demand management: Public Information & Education Programmes

Interpret Situation Assessment:	Pamphlets containing water saving tips are regularly enclosed with the bills of consumers.
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5.4: Conjunctive use of surface - and groundwater

Interpret Situation Assessment:	
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5.5 Working for Water

Interpret Situation Assessment:	No projects currently ongoing.
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5.2 Water Balance

Interpret Situation Assessment:	Stellenbosch Municipality has kept records of the volumes of raw water received, water treated and water consumed. The municipality is currently in the process of further breaking down their consumption figures for the different category of users i.e. residential, commercial/business, industrial & large users. At the time of preparing this report this information was not yet available.										
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Business Element Report Items	Compliance Score	Intervention Required	Solution description as identified by Master Plan	%	Is there an existing project addressing this problem?	%	Does this current project address the problem totally?	%	Project Approved by Council as part of WSDP Database?	%	Approved by council, in part of 3 yr IDP cycle projects	%	Project listed in 3 yr MTEF cycle	%	Total Points	Current Demand Overall Scoring %
5.1 Reducing unaccounted water and water inefficiencies	95	Yes	Reduce unaccounted water inefficiencies	100	No	100	Yes	100	Yes	100	Yes	100	Yes	100	700	100
5.2 Leak and meter repair programmes.	100	Yes	Audit water meters.	100	Yes	100	Yes	100	Yes	100	Yes	100	Yes	100	700	100
5.3 Consumer/end-use demand management: Public Information & Education Programmes	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
5.4: Conjunctive use of surface - and groundwater	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
5.5 Working for Water	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
5.2 Water Balance	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
Demand Overall Scoring Average															100	

WSDP FY2018: Strategies and Objectives

Nr	Objective	Key Performance	Baseline (2017 status quo)	Linked Project			Stellenbosch			
			WSDP FY2018	WSDP FY2019	WSDP FY2020	WSDP FY2021	WSDP FY2022			
	Water Resource Management									

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Nr	Objective <i>Strategy</i>	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP		WSDP		WSDP	
					FY2018 Target	FY2019 Target	FY2020 Target	FY2021 Target	FY2022 Target	
5.1.1	Implement Water Conservation & Demand Management.	% of approved project budget spent		STB13, Water Conservation and Demand Management	95%	95%	95%			

Strategic Interpretation

Detail situation assessments per Topic element

5.1 Reducing unaccounted water and water inefficiencies

Interpret Situation Assessment:
The municipality has rolled out a number of project in order to reduce unaccounted water and water inefficiencies. Projects include the water pipe replacement programme which entails the replacement of aging water mains in the WC024 network using Prioritization Program, the Phase 1 of a water meter audit programme has also commenced in the WC024 area. Phase 1 entailed the audit of all water meters in the Klapmuts area. This programme will be extended across the municipal area.

5.2 Leak and meter repair programmes.

Interpret Situation Assessment:
The Phase 1 of a water meter audit programme has commenced in the WC024 area. Phase 1 entailed the audit of all water meters in the Klapmuts area. This programme will be extended across the municipal area.

5.3 Consumer/end-use demand management: Public Information & Education Programmes

Interpret Situation Assessment:
Pamphlets containing water saving tips are regularly enclosed with the bills of consumers.

5.4: Conjunctive use of surface - and groundwater

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Interpret Situation Assessment:	
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5.5 Working for Water

No projects currently ongoing.

Interpret Situation Assessment:	
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5.2 Water Balance

Interpret Situation Assessment:	Stellenbosch Municipality has kept records of the volumes of raw water received, water treated and water consumed. The municipality is currently in the process of further breaking down their consumption figures for the different category of users i.e. residential, commercial/business, industrial & large users. At the time of preparing this report this information was not yet available.
--	--

Business Element Report Items	Compliance Score	Intervention Required	Solution description as identified by Master Plan	%	Is there an existing project addressing this problem?	%	Does this current project address the problem totally?	%	Project Approved by Council as part of WSDP Database?	%	Approved by council in part of 5 yr IDP cycle projects	%	Project listed in 3 yr MTEF cycle	%	Total Points	Current Demand Overall Scoring %
5.1 Reducing unaccounted water and water inefficiencies	0	Yes	Reduce unaccounted water inefficiencies	100	No	100	Yes	100	Yes	100	Yes	100	Yes	100	700	100
5.2 Leak and meter repair programmes.	0	Yes	Audit water meters.	100	Yes	100	Yes	100	Yes	100	Yes	100	Yes	100	700	100
5.3 Consumer/end-use demand management: Public Information & Education Programmes	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
5.4: Conjunctive use of surface - and groundwater	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
5.5 Working for Water	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
5.2 Water Balance	0	No		0	No	0	No	0	No	0	No	0	No	0	0	100
Demand Overall Scoring Average															100	

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WSDP FY2018: Strategies and Objectives

Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP				WSDP FY2022 Target
					WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	
Water Balance									
5.2. 3	Water meter audit of all bulk and consumer water meters including development of a Meter Maintenance and Management Strategy.	Completed Audit Report submitted to council			1	1	1	1	
5.2. 4	Upgrading of water telemetry systems.	Number of completed projects			2	3	3		
5.2. 1	Implement Water conservation & Demand Management.	% of approved project budget spent		STB13, Water Conservation and Demand Management	95%	95%	95%		
5.2. 2	Limit unaccounted for water to less than 25%.	% Unaccounted for water		STB11, Upgrade and replace water meters	<25%	<25%	<25%		

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Topic 6: Water Resources

* Current Water Sources	* Number of sources	* Current abstraction (Mm3/A)	Components abstraction registered	Components abstraction recorded	Licensed abstraction (Mm3/A)	Community water supply		Assesment Score
						Rural	Urban	
Boreholes	65	0	65	65	0			75
Surface Water Abstract	8	9.686867	8	8	11.20392	13	52	75
External Sources (Bulk Purchase)	3	4.468356			7.224			75
Water returned to source	0	0			0			100
Conjunctive Use								100

Additional Source Available	* Number of sources	Potential Volume	Licensed abstraction (Mm3/A)	Assesment Score
Ground Water	0	0	0	100

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Surface Water	4	0.885	50
External Sources (Bulk Purchase)			100

Question	In Place	Assessment Score

Question	General Assessment	Status Quo	Assessment Score

Question	In Place	Assessment Score

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Question	General Assessment	Status Quo	Assessment Score

Question	B	AP	WTW	W/P	SP	WL	SL	R	WWTW	Assessment Score
[section]										
6.4.1.1 The abstraction IS registered with DWS	0	7								100
6.4.1.2 The abstraction IS NOT registered with DWS	65	1								100
6.4.2.1 The abstraction IS recorded	0	8								100
6.4.2.2 The abstraction IS NOT recorded	65	0								100

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Topic 6: Master Plan	Is there a master plan to address this problem?	Does this plan address the plan address this problem 100%?
Section		
6.1.1 Current Water Sources	Yes	No
6.2 Monitoring	Yes	No
6.3 Water Quality	Yes	Yes
6.4 Operation	Yes	Yes
6.1.2 Additional Sources Available	Yes	No

Strategic Interpretation

Detail situation assessments per Topic element

6.1.1 Current Water Sources

Interpret Situation Assessment:	
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6.2 Monitoring

Interpret Situation Assessment:	The municipality has an extensive monitoring point network in place and has implemented a comprehensive drinking water sampling programme for its formal water supply schemes. There are 5 No supply systems within the Stellenbosch municipal area with 38 No registered monitoring sites. The current monitoring programme is aligned with the requirements set out in SANS241:2015 in both the amount of samples being taken and the frequency of analyses.
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6.3 Water Quality

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Interpret Situation Assessment:
The Municipality's water is of a good quality and complies with National Standards (SANS 241). A 95.5% Blue Drop score was achieved for the 2012 period. The Municipality achieved Blue Drop Status awards for four of its five networks in 2011. A Water Safety Plan and Risk Assessment has also been developed to ensure water supply and quality compliance.

6.4 Operation

Interpret Situation Assessment:
A Water Safety Plan and Risk Assessment has been developed to ensure water supply and quality compliance from all their treatment works. Upgrading of a number of the treatment works within the municipal boundary has been undertaken to ensure water supply and quality compliance. One of the most recent upgrades are the Paradyskloof WTW has been completed in the 2014/15 financial year.

6.1.2 Additional Sources Available

Interpret Situation Assessment:
Following the drought experienced in the Western Cape for the past three years the municipality has embarked on the development of new resources to feed into the existing water network. The municipality is the process of developing a number of new boreholes that will augment the existing water supply of the current network.

Business Element Report Items	Compliance Score	Intervention Required	Solution description as identified by Master Plan	%	Is there an existing project address this problem?	%	Does this current project address the problem totally?	%	Project Approved by Council as part of WSDP Database?	%	Approved by council in database and part of 5 yr IDP cycle projects	%	Project listed in 3 yr MTEF - cycle	Total Points	Current Demand Overall Scoring %
6.1.1 Current Water Sources	84:38	No		100	No	0	No	0	No	0	No	0	No	0	100
6.2 Monitoring	0	No		100	No	0	No	0	No	0	No	0	No	0	100
6.3 Water Quality	0	No		100	No	0	No	0	No	0	No	0	No	0	100
6.4 Operation	100	No		100	No	0	No	0	No	0	No	0	No	0	100
6.1.2 Additional Sources Available	0	Yes	Develop new boreholes	100	Yes	100	Yes	100	Yes	100	Yes	100	Yes	700	100

Demand Overall Scoring Average
100

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Nr	Objective Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP		WSDP		WSDP	
					FY2018 Target	FY2019 Target	FY2020 Target	FY2021 Target	FY2022 Target	

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Topic 7: Finance

Expenditure Cost Standards & Ratios (Rand Million)												
	2018			2019			2020			2021		
	R/c	Units	R/c	R/c	Units	R/c	R/c	Units	R/c	Units	R/c	
Sanitation service O&M [and repair] as a % of budget												
Sanitation service O&M [and repair] as a % Asset value [PPE]			2.24			2.24						
Water service O&M [and repair] Cost as % of budget value												
Water service O&M [and repair] Cost as % of Asset value [PPE]			0.64			0.67						
Untreated waste water units released												
Cost to purify water												
Cost to deliver water to consumer			97196.00			101161.00						
Cost to treat waste water			143465.00			157135.00						
Cost to deliver waste water to treatment facility			116790.00			129117.00						
Blue drop cost			0.74									
Blue drop number WTW												
Green drop cost			0.42									
Green drop WWTW number of plants												
Water balance cost [Non Revenue Water]												
	2018			2019			2020			2021		
	R/c	Units	R/c	R/c	Units	R/c	R/c	Units	R/c	Units	R/c	
Metered units bulk raw water, or bulk potable water purchased and/or produced. Water that goes into a water supply system		23.66										
Billed Metered Consumption		17.43										
Billed Un Metered Consumption		1.14										
Un Billed Metered Consumption		0.71										
Un Billed Un Metered Consumption		0.05										
Apparent (commercial) losses												
Real (physical) losses		4.36										
Water used [lost] during the process of Operation, Repair and Maintenance												
MTEF												
Water balance cost [Non Revenue Water]												
	2018			2019			2020			2021		
	R/c	Units	R/c	R/c	Units	R/c	R/c	Units	R/c	Units	R/c	
Metered units bulk raw water, or bulk potable water purchased and/or produced. Water that goes into a water supply system		23.66										
Billed Metered Consumption		17.43										
Billed Un Metered Consumption		1.14										
Un Billed Metered Consumption		0.71										
Un Billed Un Metered Consumption		0.05										
Apparent (commercial) losses												
Real (physical) losses		4.36										
Water used [lost] during the process of Operation, Repair and Maintenance												
Balance Cost / Process: Water												
Operation / Function / Process: Water												

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Resource (Required/used for Service delivery activities - In Public Procurement here are generally three procurement categories: goods, works and services.)	Operational Resource Costs [Cost to operate & or deliver service]			
	2018	2019	2021	2022
Staff				
Vehicles / transport	500.00	500.00		
Chemicals	582.00	582.00		
Materials				
Equipment	250.00	250.00		
Tools				
Operation				
Administration				
Maintenance (corrective, adaptive, preventative)	23805.00	25346.00		
Billing	207516.00	219602.00		
Revenue collection	213842.00	225393.00		
Management				

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MTEF Expenditure Million				
MTEF	2018	2019	2020	2021
Property - WTW				
Dams - WTW	1000	1500		
Springs - WTW				
Weirs - WTW				
Boreholes - WTW				
Reservoirs - WTW	500	5000		
Water Treatment Works (WTW) Civil works	7000			
Water Treatment Works (WTW) Mechanical works	2000			
Water Treatment Works (WTW) Electrical works	1000			
Pump Station (PS) Civil works				
Pump Station (PS) Mechanical works				
Pump Station (PS) Electrical works				
Internal [water] reticulation - WTW	3000	3000		
Bulk [water] reticulation - WTW	12000			
Meters Bulk - WTW				
Meters Household - WTW	1500	1500		
Property - WWTW				
Waste Water Treatment Works (WWTW) Civil works	9606	700		
Waste Water Treatment Works (WWTW) Mechanical works	2745	200		
Waste Water Treatment Works (WWTW) Electrical works	1372	100		
Pump Station (PS) Civil works - WWTW				
Pump Station (PS) Mechanical works - WWTW				
Pump Station (PS) Electrical works - WWTW				
Internal sanitation reticulation				
Bulk sanitation reticulation - WWTW	33600	50000		
Meters Bulk - WWTW				
Ponds - WWTW				
Total				
Notes:	1	Pump stations should be included separate itemised in asset registers due to the impact of type of station [e.g. diesel costs; Distance; Etc.]		
	2	NRW excludes FBS and is a MTEF cost to service		

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REVENUE Million									
Fund source name	Service charges -	Water Services Subsidy Grant (Sch 6)	Water Services Operating and Transfer Subsidy Grant (Sch 7)	Transfers recognised - operational	Agency services	Interest earned - outstanding debtors	Equitable Share	Trading Entities (e.g. Rand Water, Pikitup, Etc.)	Partnership Funds
	Votes								
Agency services									
Agriculture + rural water services									
Agriculture + rural sanitation service									
FBS Sanitation									
FBS Water									
Urban HLS Water									
Sanitation Urban HLS									
Industrial Water									
Industrial Waste Water									
NRW									
Total									

The assumption is that rural and urban costs are differentiated and that Assumption is made that potable water and industrial water tariffs differ

NRW excludes FBS and is a MTEF cost to service

Pump stations should be included separate itemised in asset registers due to the impact of type of station [e.g. diesel costs, Etc.]

Topic 8: Water Services Institutional Arrangements and Customer Services

Questions	Context Information	Answers

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Date of completion		04/20/2017 00:00:00				
Municipality type	A - Metro	B1 - LM	B2 - LM	B3 - LM	B4 - LM	C2 - DM
Water service provider type	Internal (i.e. municipality)	External (e.g. Water Board, service provider)	Combination of internal and external			
Wastewater service provider type	Internal (i.e. municipality)	External (e.g. Water Care Company, service provider)	Combination of internal and external			
Water system maintenance	Internal (i.e. municipality)	External (e.g. service provider)	Combination of internal and external			
Wastewater system maintenance	Internal (i.e. municipality)	External (e.g. service provider)	Combination of internal and external			
You are able to respond within necessary timeframes to emergencies, via internal staff and resources, or through other procurement processes (e.g. 'as and when' required contracts)	Yes, strongly agree	In place, with occasional non-optimal response	Partially in place, but not ideal	No, disagree	Don't know	
The key staff (i.e. managerial) turnover in your WSA	High > 25% (i.e. problematic, frequently lose staff)	Moderate: 10 - 25% (i.e. occasionally lose staff)	Low: < 10% (i.e. not an issue, good staff retention)	Don't know		
Your WSA has developed and implemented a scarce skills policy	Yes, developed and implemented	Yes, developed and partially implemented	In development	No, not developed	Don't know	
Your WSA is preparing for the impacts of pending and/or new regulations (for e.g. Regulation 813 (previously Regulation 17) (WTW and WWTW process controllers))	Yes, strongly agree	In process	No, disagree	Don't know		
Your WSA actively provides required drinking water related data to the Regulator (e.g. Blue Drop participation)	Yes, strongly agree	In process	No, disagree	Don't know		
Regular drinking-water quality monitoring and management (including boreholes) is performed for ALL communities/towns in the WSA	Yes, all (i.e. 100% of WSA population)	Almost all (i.e. >95% of WSA population)	Most (i.e. >75% of WSA population)	Some (i.e. >50% of WSA population)	<50% of WSA population	None (i.e. 0% of WSA population)
WTWs operational capacity as a function of total design capacity (NOTE: Combine for ALL WTWs within your WSA)	>105%	>100% - 105%	95% - 100%	90% - 95%	<90%	Don't know
Your WSA actively provides required wastewater related data to the Regulator (e.g. Green Drop participation)	Yes, strongly agree	In process	No, disagree	Don't know		
Regular wastewater quality monitoring and management is performed for ALL wastewater systems in the WSA	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)
						Don't know

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WWTWs operational flow capacity as a function of total design capacity (NOTE: Combine for ALL WWTWs within your WSA)	>105%	>100% - 105%	>95% - 100%	90% - 95%	<90%	Don't know	Not applicable
WWTWs operational COD load as a function of total design load (NOTE: Combine for ALL WWTWs within your WSA)	>105%	>100% - 105%	>95% - 100%	90% - 95%	<90%	Don't know	Not applicable
Your WSA actively provides required water conservation and water demand management related data to the Regulator (e.g. No Drop participation)	Yes, strongly agree	In process	No, disagree	Don't know			
Your WSA actively promotes improved hygiene practices through campaigns in communities (e.g. hand washing education, safe and improved sanitation)	Yes strongly agree (i.e. campaigns established and functioning)	Partially in place, but not ideal	No, disagree	Don't know			
Billing & accounts - With regards to water and sanitation bills, please indicate the frequency of billing and posting of accounts.	Actual billing and posting of accounts on a monthly basis	Actual billing and posting of accounts at least every 2nd month	Billing and posting of accounts at least on a quarterly basis	Billing and posting of accounts less frequently than quarterly	Don't know	Don't know	
Development contributions - With regard to new developments, by-laws in your municipality require developers to adequately contribute towards construction of new bulk infrastructure (i.e. developers charges).	Yes, strongly agree	In place, with occasional non-optimal response	in process	No, disagree	Don't know		
Please indicate what proportion of your requested water and sanitation services budget (CAPEX and OPEX) is actually funded?	>100%	>90% - 100%	>80% - 90%	>70% - 80%	<70%	Don't know	
Council is stable with functional Council meetings.	Yes, strongly agree (i.e. Council meetings are held at least quarterly)	Partially in place, but not ideal	No, disagree	Don't know			
Council has functional Oversight Committees and Ward Committees, as appropriate (DM would be served via LM Ward Committees)	Yes, strongly agree (i.e. Oversight and Ward Committees established and functioning)	Partially in place, but not ideal	No, disagree	Don't know			
Council has effective systems of internal control and functional governance structures (internal audit unit, audit committee, risk committee, IT governance)	Yes, strongly agree (i.e. established and posts filled, governance structures in place, frequent meetings held and risk assessments conducted, audit plan developed and quarterly reports submitted to council)	Partially in place, but not ideal	No, disagree	Don't know			

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Forensic investigations are undertaken as and when necessary to ensure adherence to governance requirements (i.e. either internally initiated by the municipality or externally initiated by, for example, Public Protector, Auditor General)	Yes, strongly agree	Partially in place, but not ideal	No, disagree	Don't know		
Your municipality actively implements actions against identified instances of fraud and corruption, maladministration and failure to fulfil statutory obligations	Yes, strongly agree	In place, with occasional non-optimal response	Partially in place, but not ideal	No, disagree	Don't know	
Your municipality has policies, procedures and systems in place that negate the impact of vandalism / sabotage of municipal water and sanitation infrastructure on services delivery	Yes, strongly agree	In place, with occasional non-optimal response	Partially in place, but not ideal	No, disagree	Don't know	
Your municipality has ongoing and appropriate public participation, is transparent in its decision making, and is accountable to its constituency (fiscal and social).	Yes, strongly agree	Partially in place, but not ideal	No, disagree	Don't know		
Those of your 18 MuSSA Business Aspects which reflect Extreme and/or Highly Vulnerable, are included within your WSAs Corporate Risk Register	Yes, strongly agree	Partially in place, but not ideal	No, disagree	Don't know		
Your MuSSA was completed with appropriate inputs from senior officials within Technical Services, Finance and Human Resources (as a minimum these 3 departments should participate).	Yes, strongly agree (i.e. Technical Services HOD, Finance AND HR all participated)	Agree (i.e. Technical Services HOD and either Finance OR HR participated)	Only Technical Services HOD	Other Technical Services	Don't know	
Names, designation and contact details (phone, email) of all MuSSA participants (e.g. Mr Thabo Smit; Technical Director; 0215436789; thabos@muni.gov.za)	Deon Louw, Director Engineering Services, 0218088213, deon.louw@stellenbosch.gov.za					

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MuSSA Questionnaire		Answers	
1. Water and Sanitation Services Planning			
<p>Your appropriate water and sanitation services planning (e.g. WSDP) and associated master planning processes include and are aligned with appropriate Water and Sewage Master Plans, Spatial Development Framework (SDF), Water Safety Plans and Wastewater Risk Abatement Plans (WZRAPs), and are aligned to your IDP and associated SDBIP targets.</p>	<p>Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 95%)</p>	<p>Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 75%)</p>	<p>Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 50%)</p>
<p>You are implementing an up-to-date and adopted municipal water and sanitation services plan (e.g. WSDP).</p>	<p>Yes, municipal water and sanitation services plan up-to-date, adopted and implemented</p>	<p>Municipal water and sanitation services plans adopted but not yet implemented</p>	<p>Municipal water and sanitation services plans neither adopted nor implemented</p>
<p>Your current project list addresses existing needs/shortcomings identified through the WSDP and associated master planning process.</p>	<p>Yes, all projects are identified via the planning process (i.e. 100%)</p>	<p>Most projects (i.e. >75%)</p>	<p>Some projects (i.e. >50%)</p>
<p>Project progress is monitored, tracked and reported to municipal top management/council and the Regulator (through the annual water and sanitation services report)</p>	<p>Yes, strongly agree (both to municipal top management/council and Regulator)</p>	<p>Only to Regulator</p>	<p>Don't know</p>
<p>Projects identified through your various planning processes have been implemented in the last 3 years.</p>	<p>Yes, all projects identified via planning have been implemented (i.e. 100%)</p>	<p>Most implemented (i.e. >75%)</p>	<p><50% implemented (i.e. 0%)</p>
2. Management Skill Level (Technical)			
<p>Your council approved technical management organisational organogram meets your business requirements, and key posts are filled (e.g. Technical Director, Water Services Manager, Sanitation Services Manager).</p>	<p>Yes, and almost all posts filled (i.e. >95%)</p>	<p>Yes, and most posts filled (i.e. >75%)</p>	<p>Yes, but only some posts filled (i.e. >50%)</p>
<p>You have sufficient technical management and technical support staff.</p>	<p>Yes, 100% as per approved organogram</p>	<p>Mostly agree (i.e. >75% as per approved organogram)</p>	<p><50% as per approved organogram</p>
			<p>Plan development not yet initiated</p>
			<p>Don't know</p>

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Technical management and technical support staff have the correct skills/qualifications and experience as per Job Description requirements (e.g. if Job Description requires PrEng, PrTech or CPM, the staff have these qualifications).	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know	
Managers and technical support staff regularly attend appropriate water and sanitation services skills development/training to support professionalisation	Quarterly (or more frequent) skills development/ training	Bi-annual skills development/ training	Annual skills development/ training	Less frequent skills development/ training (i.e. >1 year)	No skills development/ training	Don't know		
Key technical managers (e.g. Section 56 and other Senior Management) have signed and monitored Performance Agreements.	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know	
3. Staff Skill Levels (Technical)								
WWTWs are operated by staff with the required skills/qualifications and experience (as per Regulation 2834).	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know	Not applicable
WWTWs are operated by staff with the required skills/qualifications and experience (as per Regulation 2834).	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know	Not applicable
Water system plumbers, millwrights, mechanics and electricians have the required skills/qualifications and experience (including contractors/outourced resources)	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know	
Sewage system plumbers, millwrights, mechanics and electricians have the required skills/qualifications and experience (including contractors/outourced resources)	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know	
Staff regularly attend appropriate water and sanitation services skills development/training (including safety) (e.g. ESETA courses).	Quarterly (or more frequent) skills development/ training	Bi-annual skills development/ training	Annual skills development/ training	Less frequent skills development/ training (i.e. >1 year)	No skills development/ training	Don't know		
4. Technical Staff Capacity (Numbers)								
Your council approved technical staff organisational program meets your business requirements, and posts are filled (i.e. Superintendent of WWTWs/WWWTWs and below).	Yes, and all posts filled (i.e. 100%) as per the approved organogram	Strongly agree, and most posts filled (i.e. >95%) as per the approved organogram	Yes, and most posts filled (i.e. >75%) as per the approved organogram	Yes, but only some posts filled (i.e. >50%) as per the approved organogram	Yes, but <50% of posts filled as per the approved organogram	No, does not meet requirements	Don't know	
WWTWs are operated by the appropriate number of staff (as per Regulation 2834).	Yes, 100% as per requirements	Strongly agree (i.e. >95% as per requirements)	Mostly agree (i.e. >75% as per requirements)	Agree somewhat (i.e. >50% as per requirements)	<50% as per requirements	None (i.e. 0% as per requirements)	Don't know	Not applicable

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WWTWs are operated by the appropriate number of staff (as per Regulation 2834).	Yes, 100% as per requirements	Strongly agree (i.e. >95% as per requirements)	Mostly agree (i.e. >75% as per requirements)	Agree somewhat (i.e. >50% as per requirements)	<50% as per requirements	None (i.e. 0% as per requirements)	Don't know	Not applicable
You have sufficient water and sewerage/sanitation network operations and repair staff/plumbers including contractors/outsource resources (i.e. you have the appropriate number of staff).	Yes, 100% as per functional requirements	Strongly agree (i.e. >95% as per functional requirements)	Mostly agree (i.e. >75% as per functional requirements)	Agree somewhat (i.e. >50% as per functional requirements)	<50% as per functional requirements	None (i.e. 0% as per functional requirements)	Don't know	Not applicable
An active mentoring/shadowing programme is in place where experienced staff train your younger, inexperienced municipal staff.	Yes, strongly agree	In place, but not ideal	No, disagree	Don't know				
5. Water Resource Management (WRM)								
The recommendations and actions from the Reconciliation Strategies (Large Systems/All Towns) have been incorporated into your WSDP, master planning and IDP processes.	Yes, strongly agree	In process	No, disagree	Don't know	Not applicable			
The metered quantity of water available from the resources is sufficient for your current WSA needs (at the stipulated level of abstraction and assurance of supply).	No shortage (i.e. sufficient water)	1 - 10% shortage	11-20% shortage	21-30% shortage	31-40% shortage	41-50% shortage	>50% shortage	Don't know
The metered quantity of water available from the resources is sufficient for your future WSA needs (at the stipulated level of abstraction and assurance of supply, and considering possible climate change impacts) (i.e. no shortage in 10 years).	No shortage (i.e. sufficient water)	1 - 10% shortage	11-20% shortage	21-30% shortage	31-40% shortage	41-50% shortage	>50% shortage	Don't know
The source water quality is currently acceptable for its purpose.	Yes, strongly agree (i.e. all sources (100%) by water volume are acceptable)	Mostly agree (i.e. >75% of sources by water volume are acceptable)	Agree somewhat (i.e. >50% of sources by water volume are acceptable)	<50% of sources by water volume acceptable	None (i.e. 0% of sources by water volume are acceptable)	Don't know	Not applicable	
The trend indicates a deteriorating source water quality.	Yes, all sources (100%) by water volume are deteriorating	>75% of sources by water volume are deteriorating	>50% of sources by water volume are deteriorating	>25% of sources by water volume are deteriorating	<25% of sources by water volume are deteriorating	No, no sources (0%) are deteriorating	Don't know	Not applicable
6. Water Conservation & Water Demand Management (WC/WDM)								
Your WSA has developed a council approved Water Conservation and Water Demand Strategy which includes a standard water balance (e.g. modified IWA).	WC/WDM Strategy and water balance developed	Only WC/WDM Strategy developed	Only water balance developed	None developed	Don't know			
Please indicate your percentage Non-Revenue Water (NRW) as per the modified IWA water balance.	Less than 15%	Less than 20%	Less than 30%	Less than 40%	Less than 50%	50% or more	Don't know	Don't know

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System input volumes (bulk) to the WSA are accurately monitored using calibrated bulk meters (e.g. check metering).	Yes, all (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. >50%)	<50%	None (i.e. 0%)	Don't know
Please indicate what percentage of all residential and non-residential (commercial, industrial, etc.) on a monthly basis.	>98%	75% - 95%	50% - 75%	<50%	< 25%	No metering	Don't know
Your WSA is implementing appropriate intervention programmes to reduce NRW (e.g. minimisation of night flows through pressure management, removal of unlawful connections, leak detection and repairs, consumer education/awareness).	Yes, strongly agree (i.e. 100% implementation)	Mostly agree (i.e. >75% implementation)	Agree somewhat (i.e. >50% implementation)	<50% implementation	No implementation (i.e. 0%)	Don't know	
7. Drinking Water Safety & Regulatory Compliance							
Please indicate your microbiological drinking-water quality compliance for E.coli (or faecal coliforms) for the communities you are monitoring, for the last 12 months.	99% - 100%	97% - <99%	95% - <97%	< 95%	Don't know		
ALL your supply schemes, WTWs, process controllers, monitoring programmes, sample points, laboratories, results, procedures, protocols, etc. are managed with a suitable Water Safety Planning framework.	Yes, strongly agree (i.e. 100% covered)	Strongly agree (i.e. >95% covered)	Mostly agree (i.e. >75% covered)	Agree somewhat (i.e. >50% covered)	<50% covered	None covered (i.e. 0%)	Don't know
Council have been made aware of high risk / critical water safety plan related issues (including those identified via the Blue Drop Certification programme) that require budget and actioning, and these issues have been actioned (where applicable).	Yes, strongly agree (i.e. all (100%) tabled)	Strongly agree (i.e. >95% tabled)	Mostly agree (i.e. >75% tabled)	Agree somewhat (i.e. >50% tabled)	<50% tabled	issues noted but none tabled (i.e. 0%)	Not applicable (no issues requiring council resolution exist)
Sufficient funds have been made available to address all these identified water safety related issues.	Yes, strongly agree (i.e. 100% of required funds)	Strongly agree (i.e. >95% of required funds)	Mostly agree (i.e. >75% of required funds)	Agree somewhat (i.e. >50% of required funds)	<50% of required funds	issues noted but no funds (i.e. 0%)	Not applicable (no issues requiring funding exist)
Required corrective actions/remedial measures to address all these identified water safety related issues have been successfully implemented.	Yes, strongly agree (i.e. 100% implementation)	Strongly agree (i.e. >95% implementation)	Mostly agree (i.e. >75% implementation)	Agree somewhat (i.e. >50% implementation)	<50% implementation	issues noted but no implementation (i.e. 0%)	Not applicable (no issues requiring corrective actions exist)
8. Basic Sanitation							

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You have formal housing areas that are not fully serviced with sanitation infrastructure	No, all informal areas are fully serviced (i.e. no bucket sanitation service)	Yes, but these are new households that will be serviced within 2 years >90% are serviced	Yes, still trying to meet formal backlog with 80-90% serviced	Yes, still trying to meet formal backlog with 60 - 80% serviced	Yes, still trying to meet formal backlog with <60% serviced (e.g. occurrence of bucket systems, existence of open defecation)	Don't know
You have informal housing or rural areas that are not fully serviced with sanitation infrastructure	No, all informal and rural areas are fully serviced	We have no informal areas and rural areas are serviced	Yes, still trying to meet informal or rural backlog with >90% serviced	Yes, still trying to meet informal or rural backlog but 80- 90% are serviced	Yes, still trying to meet informal or rural backlog with <60% serviced (e.g. occurrence of bucket systems, existence of open defecation)	Don't know
You have a detailed plan and programme to provide safe sanitation to all households (including health and hygiene education and user awareness including Water, Sanitation and Health (WASH) aspects)	Yes, strongly agree (i.e. 100% implementation)	Strongly agree (i.e. >95% implementation)	Mostly agree (i.e. >75% implementation)	Agree somewhat (i.e. >50% implementation)	No implementation (i.e. 0%)	Don't know
Your sanitation budget is appropriate for required sanitation programmes (implementation and O&M)	Yes, strongly agree (i.e. 100% of required funds)	Mostly agree (i.e. >95% of required funds)	Some shortfall (i.e. >75% of required funds)	Disagree, significant shortfall (50-75% of required funds)	No funds (i.e. 0%)	Don't know
You are servicing your basic sanitation facilities (e.g. pit latrines) as per safe sanitation requirements (healthy, environmentally safe, structurally sound, regularly maintained, following faecal sludge management best practices).	Yes, 100% as per requirements	Strongly agree (i.e. >95% as per requirements)	Mostly agree (i.e. >75% as per requirements)	Agree somewhat (i.e. >50% as per requirements)	No, we have serious shortfalls in the servicing of sanitation infrastructure (i.e. <20 %)	Don't know
9. Wastewater/Environmental Safety & Regulatory Compliance						
Please indicate your treated wastewater effluent compliance for COD for your (or your service provider's) WWTPs for the last 12 months.	>95%	90% - 95%	80% - <90%	<80%	Don't know	
ALL your WWTPs, process controllers, monitoring programmes, sample points, laboratories, results, procedures, protocols, etc. are managed with a suitable waste water risk abatement framework.	Yes, strongly agree (i.e. 100% covered)	Agree (i.e. >95% covered)	Mostly agree (i.e. >75% covered)	Agree somewhat (i.e. >50% covered)	None covered (i.e. 0%)	Don't know
Council have been aware of all W2RAP related issues (e.g. pollution incidents, Green Drop deficiencies) that require budget and actioning, and these issues have been actioned (where applicable).	Yes, strongly agree (i.e. all (100%) tabled)	Agree (i.e. >95% covered)	Mostly agree (i.e. >75% tabled)	Agree somewhat (i.e. >50% tabled)	Issues noted but none tabled (i.e. 0%)	Not applicable (no issues requiring council resolution exist)

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Sufficient funds have been made available to address all identified wastewater and environmental safety related issues.	Yes, strongly agree (i.e. 100% of required funds)	Agree (i.e. >95% covered)	Mostly agree (i.e. >75% of required funds)	Agree somewhat (i.e. >50% of required funds)	< 50% of required funds	Issues noted but no funds (i.e. 0%)	Not applicable (no issues requiring funding exist)	Don't know
Required corrective actions/remedial measures to address all identified wastewater and environmental safety related issues have been successfully implemented.	Yes, strongly agree (i.e. 100% implementation)	Agree (i.e. >95% covered)	Mostly agree (i.e. >75% implementation)	Agree somewhat (i.e. >50% implementation)	<50% implementation	Issues noted but no implementation (i.e. 0%)	Not applicable (no issues requiring corrective actions exist)	Don't know
10. Infrastructure Asset Management (IAM)								
You have an appropriate and up-to-date water and sanitation services technical Asset Register (includes asset name, location, condition, extent, remaining useful life, performance and risk). NOTE: This does only not refer to GRAP17 asset register requirements.	Yes, strongly agree (e.g. advanced asset register)	Yes, agree (e.g. basic asset register - i.e. not all aspects included)	Not ideal (e.g. outdated asset register)	No, disagree (i.e. no asset register)	Don't know			
You have developed an appropriate Infrastructure Asset Management (IAM) Plan for your WSA.	Yes, strongly agree	Partially in place, but not ideal	No, disagree	Don't know				
You are implementing the IAM outcomes	Yes, strongly agree (i.e. 100% implementation)	Agree (i.e. >95% implementation)	Mostly agree (i.e. >75% implementation)	Agree somewhat (i.e. >50% implementation)	< 50% implementation	No implementation (i.e. 0%)	Don't know	
Budget allocated to implement IAM outcomes is sufficient and is being effectively spent.	Yes, strongly agree (i.e. 100%)	Agree (i.e. >95%)	Mostly agree (i.e. >75%)	Agree somewhat (i.e. >50%)	< 50%	No (i.e. 0%)	Don't know	
You conduct annual technical assessments of your water and wastewater related systems (including sources, WWTWs, WWTWs, pump stations, network, etc.) and implement required follow-up actions.	Yes, all systems (i.e. 100%)	Almost all systems (i.e. >95%)	Most systems (i.e. >75%)	Some systems (i.e. >50%)	< 50% systems	No systems (i.e. 0%)	Don't know	Not applicable
11. Operation & Maintenance of Assets								
Appropriate maintenance facility(ies) that is(are) secure and stocked with essential equipment (e.g. spare parts), plant and tools is(are) available.	Yes, strongly agree	Partially in place, but not ideal	No, disagree	Don't know				
Appropriate water and sanitation services infrastructure/equipment planned/preventative maintenance schedules are developed.	Yes, strongly agree	Partially in place, but not ideal	No, disagree	Don't know				
Appropriate planned/preventative maintenance is performed at all WWTWs and associated reservoirs, pump stations, distribution network.	Yes, all (i.e. 100%)	Most (i.e. >75%)	Some (i.e. > 50%)	< 50%	None (i.e. 0%)	Don't know		

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	Yes, all (i.e. 100%)	Most (i.e. >75%)	Some (i.e. > 50%)	< 50%	None (i.e. 0%)	Don't know
Appropriate planned/preventative maintenance is performed at all WWTPs and associated collection system, pump stations.						
Please indicate your infrastructure repairs and maintenance costs as a function of total operating expenditure (%).	<5%	5% - <8%	8% - <10%	10% - <15%	15% or more	Don't know
12. Financial Management						
Financial controls - Please state the audit opinion with regard to your last audit report on the financial statements.	Clean audit outcome (i.e. unqualified with no findings)	Financially unqualified audit opinion (with findings)	Qualified audit opinion	Disclaimer of audit opinion	Adverse audit opinion	Don't know
Cash flow status - Please state your Cash/Cost Coverage Ratio (excluding Unspent Conditional Grants)	> 90 days	60 - 90 days	30 - 60 days	< 30 days	Don't know	
Your actual operating expenditure closely reflects your budgeted operating expenditure (i.e. Operating Expenditure Budget Implementation Indicator)	95% - 100%	90% - <95%	85% - <90%	80% - <85%	<80%	Don't know
Your actual revenue closely reflects your budgeted operating revenue (i.e. Operating Revenue Budget Implementation Indicator)	95% - 100%	90% - <95%	85% - <90%	80% - <85%	<80%	Don't know
Liabilities (Creditors) - Money is owed by your municipality to major/critical service providers (e.g. Eskom, Water Board, largest contractors, etc.) for more than 30 days from receipt of invoice (NOTE: Ignore disputed invoices)	Never	Once per year	Twice per year	Once per quarter	More frequently than quarterly	Don't know
13. Revenue Collection						
Please indicate the frequency of actual consumer meter readings.	Actual meter reading on a monthly basis	Actual meter reading at least every 2nd month	Meter reading at least on a quarterly basis	Meter reading less frequently than quarterly	Don't know	
Net Surplus/Deficit - Please state your net surplus/deficit from water services activities for the last 12 months (NOTE: This question tests whether your WSA currently has fully cost reflective Water and Sanitation tariffs (which take into account cost of maintenance and renewal of purification plants and networks, and the cost of new infrastructure).	Surplus (i.e. >0%)	Breakeven (i.e. = 0%)	Net deficit (i.e. <0%)	Don't know		
Revenue collection - Please state the revenue collection rate in respect to Water & Sanitation Services (%)	<50%	50% - <70%	70% - <80%	80% - <95%	95% or more	Don't know

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Revenue Growth - Please state your Water and Sanitation Services revenue growth for the last financial year(%)	<CPI	Equals CPI	<CPI, but >0%	Negative growth (-ve)	Don't know		
Grant dependency - Actual operating revenue less operational grants/subsidies (e.g. equitable share) sufficiently covers actual operating expenditure.	Yes, all (i.e. 100%)	Most (i.e. >75%)	Some (i.e. > 50%)	< 50%	None (i.e. 0%)	Don't know	
14. Financial Asset Management							
Capital Expenditure (Municipal) - Please state your municipal Capital Expenditure as a percentage of Total Expenditure (i.e. Total Operating Expenditure + Capital Expenditure)	<5%	5% - <10%	10% - <15%	15% - <20%	20% or more	Don't know	
Capital Expenditure (Water Services) - Please state your Capital Expenditure on Water and Sanitation Services as a percentage of Total Capital Expenditure (Capital Expenditure (Municipal))	<25%	25% - <50%	50% - <75%	75% or more	Don't know		
Asset Renewal - Please state your Asset Renewal investment as percentage of Depreciation costs	100%	>90%	>75%	>50%	<50%	None (i.e. 0%)	Don't know
Repairs and Maintenance - Please state your Repairs and Maintenance expenditure as a percentage of Property, Plant and Equipment, Investment Property (Carrying Value)	<5%	5% - <8%	8% - <10%	10% or more	Don't know		
Grant funding of capital expenditure - Please state your reliance on grant funding	>90%	> 75%	>50%	<50%	Don't know		
15. Information Management (IT)							
You have a developed, approved and implemented IT Master Systems Plan (e.g. covering 3 - 5 years) that addresses your IT business requirements.	Yes, developed, approved and being implemented	Developed and approved, but not yet implemented	Developed but not yet approved or implemented	In development	No, disagree	Don't know	
You have a developed, approved and implemented ICT Technology Master Plan that addresses your current and future IT infrastructure requirements.	Yes, developed, approved and being implemented	Developed and approved, but not yet implemented	Developed but not yet approved or implemented	In development	No, disagree	Don't know	
You have IT systems that support your full range of water and sanitation services business requirements (e.g. billing, GIS, customer care, O&M, asset management).	Yes, strongly agree (i.e. 100% of required systems)	Mostly agree (i.e. >75% of required systems)	Agree somewhat (i.e. >50% of required systems)	< 50% of required systems	None (i.e. 0% of required systems)	Don't know	

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ICT service continuity - Adequate IT security exists with off-site back-ups/archiving of operation critical applications, databases, data, etc. routinely performed in terms of an IT Disaster Recovery Plan.	Yes, strongly agree (i.e. All (100%) in place)	Mostly agree (i.e. >75% in place)	Agree somewhat (i.e. >50% in place)	< 50% in place	Nothing in place (i.e. 0%)	Don't know	
You have sufficient budget and staff to keep key IT systems stable and up-to-date as per IT policies and procedures.	Yes, strongly agree (i.e. 100%)	Mostly agree (i.e. >75%)	Agree somewhat (i.e. >50%)	< 50%	No (i.e. 0%)	Don't know	
16. Organisational Performance Monitoring							
Appropriate plans, policies and procedures to address Disaster Management/emergencies and other issues (safety, public participation, communication, etc.) are developed and implemented. NOTE: Although Disaster Management is a district function, LMs need to ensure they are aware of their associated roles and responsibilities and have developed a Disaster Management Framework.	Yes, developed and implemented	Developed but not yet implemented	In development	No, disagree	Don't know		
An organisational performance management system is developed and implemented (i.e. effectively measure, monitor and track water and sanitation services performance indicators).	Yes, developed and implemented	Developed but not yet implemented	In development	No, disagree	Don't know		
A municipal risk management framework is developed and implemented and includes monitoring and tracking of water and sanitation related risks.	Yes, developed and implemented and includes water and sanitation related risks	Yes, developed and implemented but does not include water and sanitation related risks	Developed but not yet implemented	In development	No, disagree	Don't know	
Effective administration support is available to technical staff to assist with processing work orders, providing order numbers, handling correspondence, etc.	Yes, strongly agree (i.e. 100% effective)	Mostly agree (i.e. >75% effective)	Agree somewhat (i.e. >50% effective)	< 50% effective	No, completely ineffective (i.e. 0%)	Don't know	
"Access to Basic Water and Sanitation Services" progress reports are frequently produced and presented to council for discussion, action and follow-up.	At least quarterly	At least bi-annually	At least annually	Less frequently (i.e. > 1 year)	No, never	Don't know	
17. Water and Sanitation Service Quality							

	Yes, strongly agree (i.e. 100% in place)	Mostly agree (i.e. >75% in place)	Agree somewhat (i.e. >50% in place)	< 50% in place	Nothing in place (i.e. 0%)	Don't know	
Critical business databases and documents (e.g. as-built drawings, records, manuals, agreements, billing/revenue collection, project and scheme management data, etc.) are current, maintained and stored in secure locations (on-site and off-site, both paper and electronic).	Yes, all have a functional, reliable and safe service (i.e. 100%)	At least 90% have a functional, reliable and safe service	Most have a functional, reliable and safe service (i.e. >75%)	Some have a functional, reliable and safe service (i.e. > 50%)	< 50% of customers have a functional, reliable and safe service (i.e. 0%)	None have a functional, reliable and safe service (i.e. 0%)	Don't know
All consumers served experience interruptions of less than 48 hours (at any given time) and a cumulative interruption time during the year of less than 15 days.	Yes, all (i.e. 100%)	>90% of households	>75% of households	>50% of households	<50% of households	None (i.e. 0%)	Don't know
Households in your WSA do not experience water pressure problems (i.e. no flow/partial flow less than 10 litres/minute) (not to be confused with interruption to supply).	Yes, no households experience pressure problems (i.e. 100% do not experience pressure problems)	>90% of households do not experience pressure problems	>75% of households do not experience pressure problems	>50% of households do not experience pressure problems	<50% of households do not experience pressure problems	All households (i.e. 100%) experience pressure problems	Don't know
Customers have a functional, reliable, dignified and safe sanitation system with no blockages resulting in overflows that impact on the environment, including effective collection and treatment of faecal sludge.	Yes, all customers have a functional, reliable, dignified and safe service with no impact on the environment (i.e. 100%)	> 98% of all customers have a functional, reliable, dignified and safe service with minimal impact on environmental health	Almost all have a functional, reliable, dignified and safe service (i.e. >90%)	Most have a functional, reliable, dignified and safe service (i.e. >75%)	Some have a functional, reliable, dignified and safe service (i.e. > 50%)	< 50% of customers have a functional, reliable, dignified and safe service (i.e. 0%)	None have a functional, reliable, dignified and safe service (i.e. 0%)
18. Customer Care (CRM)							
A functional customer service system manned by appropriate customer services representatives and using a complaints register, is in place to address complaints and appropriately inform customers of service interruptions, contamination of water, boil water alert, etc.	Yes, strongly agree	In place, with occasional non-optimal performance	Partially in place, but not ideal	No, disagree	Don't know	Don't know	
Regular municipal wide customer satisfaction surveys are conducted to determine customer satisfaction levels and inform the Customer Care Management Plan	Annual customer satisfaction surveys	Biennial (i.e. every 2nd year) customer satisfaction surveys	Less frequent customer satisfaction surveys (i.e. > 2 years)	No customer satisfaction surveys	Don't know	Don't know	
Please indicate what percentage of the reported water related complaints/callouts are acknowledged, including consumer response, within 24 hours.	All (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. > 50%)	< 50%	None (i.e. 0%)	Don't know

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	All (i.e. 100%)	Almost all (i.e. >95%)	Most (i.e. >75%)	Some (i.e. > 50%)	< 50%	None (i.e. 0%)	Don't know
Please indicate what percentage of the reported wastewater/sanitation related complaints/callouts are acknowledged, including consumer response, within 24 hours.							
A comprehensive customer awareness programme (informing customers of water and wastewater system O&M activities, water quality, resource protection/pollution, reporting incidents/security concerns, etc.) is in place and implemented.	Yes, strongly agree	Partially in place, but not ideal	No, disagree (i.e. no awareness programme)	Don't know			

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Chapter 3:

Water Master Plan Perspective

List of projects per Water Services Business Element (Topics) based on Demand Modeling

Question	Answer	Score
1. Is there a Water Master Plan that addresses Future Demands in regards to the following: a. Existing needs that will take more than 5 years to resolve b. Resource Development Plan for a 5, 10 and 15 year scenario c. Infrastructure Development Plan for a 5, 10 and 15 year scenario d. Functionality Needs Prediction for a 5, 10 and 15 year scenario	Yes Yes Yes Yes	25 25 25 25
2. Did council approve any projects that should have started this current year that address the following: a. Existing needs that will take more than 5 years to resolve b. Resource Development Plan for a 5, 10 and 15 year scenario c. Infrastructure Development Plan for a 5, 10 and 15 year scenario d. Functionality Needs Prediction for a 5, 10 and 15 year scenario	Yes Yes Yes Yes	25 25 25 25
3. Are these future projects included in the next 5 year IDP programme for the following: a. Existing needs that will take more than 5 years to resolve b. Resource Development Plan for a 5, 10 and 15 year scenario c. Infrastructure Development Plan for a 5, 10 and 15 year scenario d. Functionality Needs Prediction for a 5, 10 and 15 year scenario	Yes Yes Yes Yes	25 25 25 25
4. Taking in to consideration the current financial and institutional capacity of the WSA, score the probability scenario of the timely implementation of these projects in regards to the following: a. Existing needs that will take more than 5 years to resolve b. Resource Development Plan for a 5, 10 and 15 year scenario c. Infrastructure Development Plan for a 5, 10 and 15 year scenario d. Functionality Needs Prediction for a 5, 10 and 15 year scenario	Probable Probable Probable Probable	75 75 75 75

Overall Future Perspective Score	93.75%
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Chapter 4: Investment Framework

Investment Framework costs per Infrastructure Component

Infrastructure Type	Infrastructure Component	Replacement Cost			Refurbishment Cost				
		5 yr	10 yr	15 yr	Existing Value	5 yr	10 yr	15 yr	Existing Value

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Water Infrastructure Pipelines	Water Internal Reticulation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitation Infrastructure Pipelines	Water Bulk pipeline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sewer internal Reticulation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sewer Bulk pipeline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	WTW	0.00	10.78	0.00	0.00	10.78	0.00	2.11	0.00	2.11	0.00	2.11
	WWTW	39.86	55.91	78.41	53.05	27.94	39.18	54.96	36.25			
Infrastructure Works	Water Pump stations	28.87	40.49	56.79	7.80	0.00	23.95	0.00	23.95			
	Sanitation Pump stations	15.47	21.69	30.42	1.40	0.00	0.00	0.00	0.95			
Infrastructure	Reservoirs	150.22	164.98	231.39	2.78	0.00	15.04	0.00	17.74			

Investment Framework costs per Future Infrastructure Component

Infrastructure Type	Infrastructure Component	New Development Cost		
		5 yr	10 yr	15 yr
Water Infrastructure Pipelines	Water Internal Reticulation	0.00	0.00	0.00
Sanitation Infrastructure Pipelines	Water Bulk pipeline	0.00	0.00	0.00
	Sewer internal Reticulation	0.00	0.00	0.00
	Sewer Bulk pipeline	0.00	0.00	0.00

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Instructure Works	WTW	34,20	0,00	0,00	0,00
	WWTW	374,64	525,46	735,98	0,00
	Water Pump stations	0,00	0,00	0,00	0,00
	Sanitation Pump stations	0,00	0,00	0,00	0,00
Infrastructure	Reservoirs	87,97	0,00	0,00	0,00

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Chapter 5: WSDP Scoring

Total Score	STATUS
70.27	

Overall Ability to Perform Water Services Planning

