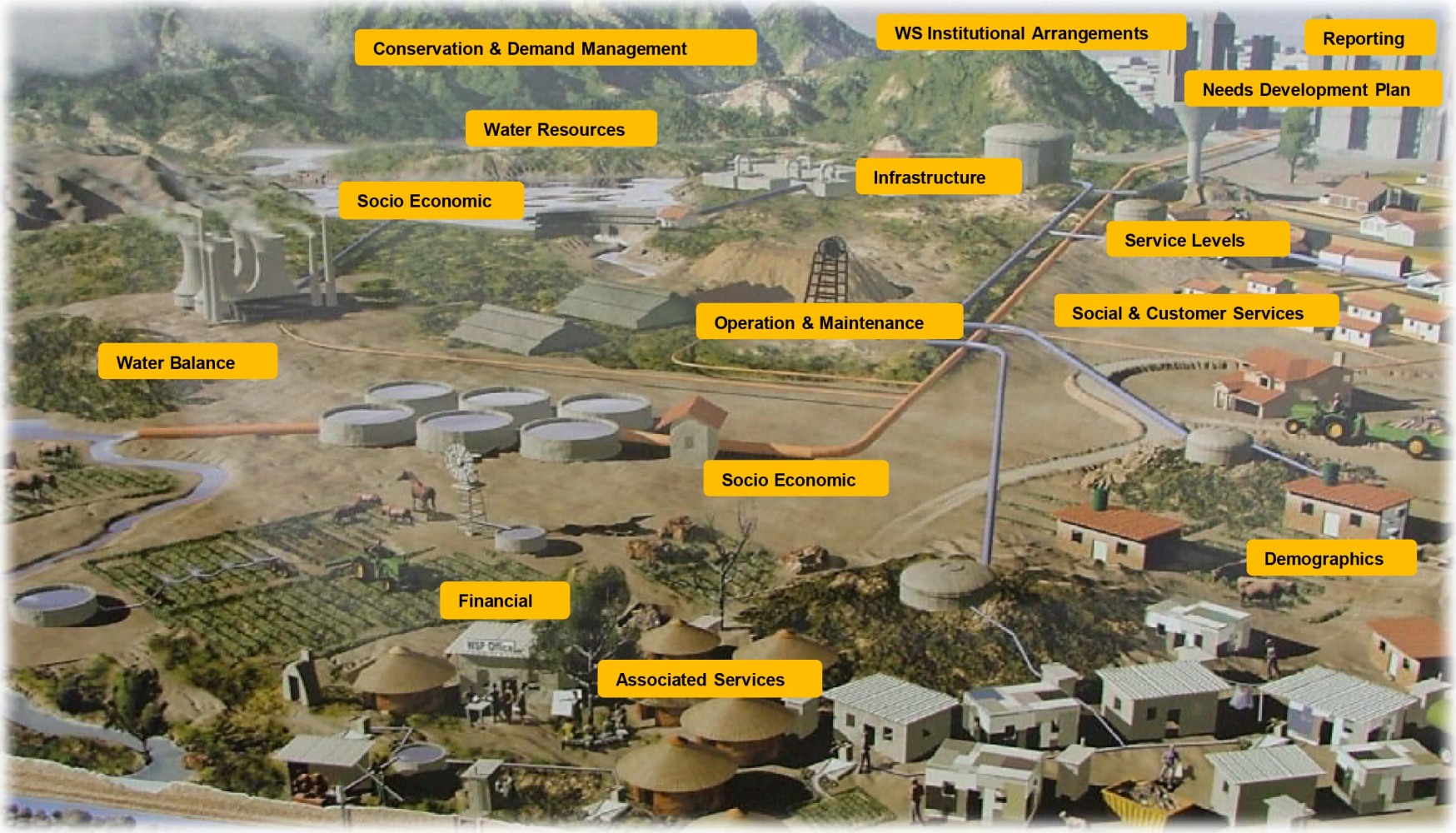
Conservation & Demand Management
WS Institutional Arrangements
Reporting
Needs Development Plan
Water Resources
Infrastructure
Socio Economic
Service Levels
Operation & Maintenance
Social & Customer Services
Water Balance
Socio Economic
Demographics
Financial
Associated Services

WSDP Compiled and submitted for approval

Municipal WSDP Coordinator:	Name: _____	Signature: _____	Date: _____

WSDP Recommended for approval

Municipal Manager:

Recommended:	Name: _____	Signature: _____	Date: _____
Not Recommended:	Name: _____	Signature: _____	Date: _____

Final Council approval:

Capacity: _____

Approved:	Name: _____	Signature: _____	Date: _____
Not Approved:	Name: _____	Signature: _____	Date: _____

Role Players Contact Details

Position	Name	Surname	Tel	Fax	Cell	E-mail	Interaction Acknowledgement Yes/No	Interaction Acknowledgement Signature
Municipal Manager	Mrs AN	Dlamini	039-834-8700	039-834-1750	083-6370-905	dweban@harrygwaladm.gov.za	Y	Y
Mayor	ME	Ndobe	039-834-8736	039-834-1661	082-560-8016	ndobem@harrygwaladm.gov.za	N	N
Water Care Superintendant	Mr BP	Nzimande	039-834-8781	039-834-1661		nzimandeb@harrygwaladm.gov.za	N	N
WSDP Contact	Mr NE	Biyase	039-834-3939	039-834-2485	0723005511	biyasenk@harrygwaladm.gov.za	N	N
IDP Manager	Mr Zweli	Mtolo	039-834-8700	039-834-1750	082-809-6323	mtoloz@harrygwaladm.gov.za	N	N
Technical Services	Mr DB	Makwakwa	039-834-8700	039-834-2259	082-806-9213	makwakwab@harrygwaladm.gov.za	N	N
WSDP Data Custodian	Ms Success	Buthelezi	039-834-3939	039-834-2485	071-7236-353	successbuth@vodamail.co.za	N	N
WSDP Custodian	Mr NE	Biyase	039-834-3939	039-834-2485	072-3005-511	biyasenk@harrygwaladm.gov.za	N	N
GIS Officer	Ms Success	Buthelezi	039-834-3939	039-834-2485	071-723-6353	successbuth@vodamail.co.za	N	N
PMU Manager	Mrs N	Hlengwa	039-834-8700	039-834-1750	084-236-5525	hlengwan@harrygwaladm.gov.za	N	N
Chief Financial Officer	Mr M	Mkatu	039-834-8700	039-834-1750	082-451-4227	mkatum@harrygwaladm.gov.za	N	N
Environmental	Mr Lucky	Zondi	039-834-8700	039-834-1750	084-638-1624	zondil@harrygwaladm.gov.za	N	N
Infrastructure	Mr B	Makwakwa	039-834-8700	039-834-2259		makwakwab@harrygwaladm.gov.za	N	N

Professional Service Provider (PSP)

Company GLS Consulting
Name of PSP WSDP Project Manager Jacques Calitz
Tel: **Cell:** 0721505118 **Fax:** **Email:** jacques@gls.co.za

Inputs

Name of PSP WSDP Information Systems Operator Jacques Calitz
Tel: **Cell:** 0721505118 **Fax:** **Email:** jacques@gls.co.za

Components	Chapter	Name	Designation	Role	Contact Address, and Number
	All				

Sector Integration

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

Sector Plan	Sector Interaction	Area	WSA

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																														
Topic 2 - Service Level Profile																														
Topic 3 - Water Services Asset Management																														
Topic 4 - Water Services Operations & Maintenance (O&M)																														
Topic 5.1 - Conservation & Demand Management - Water Resource																														
Topic 5.2 - Conservation & Demand Management - Water Balance																														
Topic 6 - Water Resource																														

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

	Funding Source (R'000)						
	Own	MIG	RBIG	ACIP	DR	MWIG	Other
Total Funding:	0	0	0	0	0	0	0

Financial Year 2019																												
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																												
Topic 2 - Service Level Profile																												
Topic 3 - Water Services Asset Management																												
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								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

	Funding Source (R'000)						
	Own	MIG	RBIG	ACIP	DR	MWIG	Other
Total Funding:	0	0	0	0	0	0	0

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	MIG	RBIG	ACIP	DR	MWIG	Other
Topic 1 - Settlement Demographics & Public Amenities																												
Topic 2 - Service Level Profile																												
Topic 3 - Water Services Asset Management																												
Topic 4 - Water Services Operations & Maintenance (O&M)																												
Topic 5.1 - Conservation & Demand Management - Water Resource																												
Topic 5.2 - Conservation & Demand Management - Water Balance																												
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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	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

	Funding Source (R'000)						
	Own	MIG	RBIG	ACIP	DR	MWIG	Other
Total Funding:	0	0	0	0	0	0	0

Chapter 2:

Topic 1: Settlement Demographics & Public Amenities

Settlement Summary		
Section	**Value**	**Assessment Score**
1.1 Total Population	570622	60
1.2 Total Number of Households	122973	60
1.3 Average Household Size	4.78	60
1.4 Total Number of Settlements	399	60

Summary by Settlement Group			
Settlement Type	**Settlements**	**Population**	**Households**
Rural	385	493954	102185
Urban	14	76668	20788

Amenities Summary		
Description	**Number per type**	**Assessment Score**
Educational facilities	501	50
Health Facilities	67	50

Assessment Score						
Settlement Type		**Number of settlements**	**Population per settlement type**	**Households per settlement type**	**Average Households size per settlement type**	
Rural	Farming	37	49869	10378	4.49	80
Rural	Rural - Dense Village > 5000	11	92642	18301	5.08	80
Rural	Rural - Small Village <= 5000	205	242789	51130	4.77	80
Rural	Rural Scattered	132	108654	22376	4.94	80
Urban	Urban - Formal Town	13	74146	20135	3.86	80
Urban	Urban - Former Township	1	2522	653	3.9	80
					Total	80.0%

Topic 1 Master Plan		
Section	**Is there a master plan to address this problem?**	**Does this plan address the plan address this problem 100%?**
1.1 Settlements Summary	No	No
1.2 Summary by Settlement Group	No	No
1.3 Assessment Score by Settlement Type	No	No
1.4 Amenities Summary	No	No

Strategic Interpretation

Detail situation assessments per Topic element

1.1 Settlements Summary

Interpret Situation Assessment:	Settlements have been discussed with WSA. Number of households were taken from Eskom HH count done in 2013 and counting HH from aerial photo. The population figures were calculated using the HH and the number of HH from CENSUS 2011. The WSA didn't agree with WSDP and census household and population figures. Study per settlement needs to be completed to assess households and population figures in a more accurate way.

1.2 Summary by Settlement Group

Interpret Situation Assessment:	Urban and rural figures are accurate. Population and households figures need updated with a more accurate study.

1.3 Assessment Score by Settlement Type

Interpret Situation Assessment:	Settlements have been discussed with WSA and checks have been made versus the CENSUS 2011 and UAP data provided. The identification of settlement types are adequate, but the settlement households and population figures still need to be assessed in more detail.

1.4 Amenities Summary

Interpret Situation Assessment:	Public amenities figures were not available at the WSA - Public amenity figures need to be discussed with health and education departments to ensure correct number of facilities to ensure correct planning. The backlogs and service levels also need to be confirmed.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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 %
1.1 Settlements Summary	60	Yes	100	Households and population figures needs to be updated through a settlement survey.	100	Yes	100	No	0	No	0	No	0	No	0	300	42.86
1.2 Summary by Settlement Group	0	Yes	100	Households and population figures needs to be updated through a settlement survey.	100	Yes	100	No	0	No	0	No	0	No	0	300	42.86
1.3 Assessment Score by Settlement Type	80	Yes	100	Households and population figures needs to be updated through a settlement survey.	100	Yes	100	No	0	No	0	No	0	No	0	300	42.86

1.4 Amenities Summary	50	Yes	100	Public amenities figures not available at WSA - Public amenity figures need to be discussed with health and education department	100	No	0	No	0	No	0	No	0	No	0	200	28.57

Demand Overall Scoring Average 39.29

WSDP FY2018: Strategies and Objectives ***Harry Gwala***

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
Settlement Demographics & Public Amenities									
1	Settlement (urban and rural) survey assessing households and population	All settlements should be investigated and the number of households and population numbers should be determined. GPS locations should also be taken	Currently the information is based on eskom households and the number of people per household from CENSUS 2011 data was used to determine the population.		Present to council need for settlement assessment to provide funding and resources	Complete settlement survey	Update WSDP with new settlement figures	Update WSDP	
2	Public amenities should be investigated with cooperation of the health and education departments	All public amenities (health and education) should be investigated and the number of facilities and their type should be determined. GPS locations should also be taken	Currently the information is based on information contained in the existing GDB and from information provided by the surveyor general. The WSA didn't provide any data.		Present to council need for public amenity assessment to provide funding and resources	Complete public amenity survey	Update WSDP with new public amenity figures	Update WSDP	

Topic 2: Service Levels Profile

Direct Backlog (Water & Sanitation)		
	Totals	**Assessment Score**
Direct settlement backlog water house holds. Total house hold of settlement with a water need (irrelevant the type of need)	59597	70
Direct settlement backlog water population. Total population of settlement with a water need (irrelevant the type of need)	253217	70
Direct settlement backlog sanitation house holds. Total house hold of settlement with a sanitation need (irrelevant the type of need)	23364	70
Direct settlement backlog sanitation population. Total population of settlement with a sanitation need (irrelevant the type of need)	99334	70

Water Profile		
	Totals	**Assessment Score**
Water Services Infrastructure Supply Level Profile		
Piped water inside the dwelling/house-Housholds	19232	60
Piped water inside yard-Households	695	60
Piped water distance <200m - Households	66811	60
Piped water distance <201m - Households	1192	60
Borehole in the yard - Households	0	60
Rain-water tank in yard - Households	0	60
Water vendor-carrier/tanker - Households	22180	60
Stagnant water - dam/pool - Households	0	60
Flowing water/spring/ stream/river - Households	9059	60
Water Other - Households	3804	60
Water Reliability Profile		
Water Supply System	-1	60
Total Number of Households having Reliable Service. (Interpret Direct Backlog field above)	63376	60
Total Number of Households NOT having Reliable Service. (Interpret Direct Backlog field above)	59597	60

Water Profile		
	Totals	**Assessment Score**
System Total Number of Households NOT having Reliable Service due to: Functionality (O&M and Management)	0	60
Total Number of Households NOT having Reliable Service due to: Resource	23075	60
Total Number of Households NOT having Reliable Service due to: Infrastructure	38693	60
Total Number of Households NOT having Reliable Service due to: Resource - Conservation & Demand Management	0	60
Total Number of Households NOT having Reliable Service due to: Resource - New Source	23075	60
Total Number of Households NOT having Reliable Service due to: Infrastructure – UPGRADE/REFURBISHMENT	6551	60
Total Number of Households NOT having Reliable Service due to: Infrastructure – EXTENSION	959	60
Total Number of Households NOT having Reliable Service due to: Infrastructure – NEW SCHEME	31183	60
Total Number of Households NOT having Reliable Service due to: REPLACE OLD	0	60

Sanitation Profile		
	Totals	**Assessment Score**
Sanitation Service Infrastructure Supply Level Profile		
None - Households	832	60
Flush toilet (connected to sewerage system) - Households	15435	60
Flush toilet (with septic tank) - Households	8553	60
Chemical Toilet - Households	0	60
Pit toilet with ventilation (VIP) - Households	98069	60
Pit without ventilation - Households	84	60
Bucket toilet - Households	0	60
Sanitation Reliability Profile		
Household requiring VIP Refurbishment	832	60
Household requiring Existing Scheme Refurbishment	0	60
Household not having reliable service due to Functionality	0	60
Household not having reliable service due to Resource - Water Security	0	60
Infrastructure to be upgraded: Pit to VIP (HH)	1126	60

Sanitation Profile		
	Totals	**Assessment Score**
Infrastructure to be upgraded: Buckets to waterborne (HH)	23075	60
Infrastructure requirement: None to to waterborne. (HH)	0	60
Infrastructure to be upgraded: Buckets to VIP (HH)	0	60
Infrastructure to be upgraded: None to VIP (HH)	0	60

	Waterstatus		
Consumer types	Adequate	Inadequate	Grand Total
Educational facilities	149	352	501
Health Facilities	29	38	67
Grand Total	178	390	568

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	277	95	0	182	0.00	50
Secondary School	81	31	0	50	0.00	50
Tertiary	1	0	0	1	0.00	50
Combined	140	21	0	119	0.00	50
Special Needs	2	2	0	0	0.00	50
Other	0	0	0	0	0.00	50
Total	**501**	**149**	**0**	**352**	**0.00**	
2.1.2 Health Plan						
Hospitals	8	8	0	0	0.00	50
Health Centers	24	14	0	10	0.00	50
Clinics	35	7	0	28	0.00	50
Other	0	0	0	0	0.00	50
Total	**67**	**29**	**0**	**38**	**0.00**	

2.2 Sanitation Services

2.2.1 Education Plan						
Primary School	277	164	0	113	0.00	50
Secondary School	81	60	0	21	0.00	50
Tertiary	1	0	0	1	0.00	50
Combined	140	95	0	45	0.00	50
Special Needs	2	2	0	0	0.00	50
Other	0	0	0	0	0.00	50
Total	**501**	**321**	**0**	**180**	**0.00**	

2.2.2 Health Plan						
Hospitals	8	8	0	0	0.00	50
Health Centers	24	14	0	10	0.00	50
Clinics	35	7	0	28	0.00	50
Other	0	0	0	0	0.00	50
Total	**67**	**29**	**0**	**38**	**0.00**	

Topic 2 Master Plan		
Section	**Is there a master plan to address this problem?**	**Does this plan address the plan address this problem 100%?**
Direct Backlog Water	Yes	No
Water Services Infrastructure Supply Level Profile	Yes	No
Sanitation Service Infrastructure Supply Level Profile	No	No
Water Services: Education	No	No
Sanitation Services: Education	No	No
Health and Educational Facilities	No	No
Direct Backlog Sanitation	No	No
Water Reliability Profile	Yes	No
Sanitation Reliability Profile	No	No
Water Services: Health	No	No
Sanitation Services: Health	No	No

Strategic Interpretation

Detail situation assessments per Topic element

Direct Backlog Water

Interpret Situation Assessment:	Projects are in place to improve water services of backlog area but funding is an issue and lack of regional bulk water supply schemes. Too many small rudimentary schemes to backlog situation. Areas that are below RDP level water supply needs to be supplied via new schemes or regional schemes

Water Services Infrastructure Supply Level Profile

Interpret Situation Assessment:	Discussions were had with infrastructure regarding water service provision as Census and DWA service levels were incorrect. The service levels still need more investigation for a more accurate representation. Using the current service levels, more than half of the households are above RDP level water supply, however, 18% of the households are served via water tankers and 7% via springs and rivers with no proper schemes. There is thus a large portion (25%) of the WSA that is below RDP level water supply which need to be serviced.

Sanitation Service Infrastructure Supply Level Profile

Interpret Situation Assessment:	Discussions were had with infrastructure regarding water service provision as Census and DWA service levels were incorrect. The service levels still need more investigation for a more accurate representation. Using the current service levels, more than half of the households are above RDP level sanitation supply, however, 35% of the households are served via PIT toilets. There is thus a large portion (35%) of the WSA that is below RDP level sanitation supply which need to be serviced.

Water Services: Education

Interpret Situation Assessment:	The service levels of the health and education facilities were based on the service levels identified from the operational meeting with each LM and the UAP data. A detailed study into each of the facilities is however required for a proper assessment of the service levels. Majority of the facilities have inadequate water provision and needs to be addressed.

Sanitation Services: Education

Interpret Situation Assessment:	The service levels of the health and education facilities were based on the service levels identified from the operational meeting with each LM and the UAP data. A detailed study into each of the facilities is however required for a proper assessment of the service levels. Some of the facilities have inadequate sanitation provision and needs to be addressed.

Health and Educational Facilities

Interpret Situation Assessment:	The service levels of the health and education facilities were based on the service levels identified from the operational meeting with each LM and the UAP data. A detailed study into each of the facilities is however required for a proper assessment of the service levels. Some of the facilities have inadequate sanitation provision and needs to be addressed.

Direct Backlog Sanitation

Interpret Situation Assessment:	There is no proper VIP or sanitation service level asset register to assess backlog situation. There are several new rural expansions without proper planning and assessment regarding basic service provision. There are projects in place each year reducing backlogs. Areas that are below RDP level sanitation supply (VIP) needs to be serviced with either VIPs or waterbourne sanitation.

Water Reliability Profile

Interpret Situation Assessment:	Discussions were had with infrastructure regarding water service provision as Census and DWA service levels were incorrect. The service levels still need more investigation for a more accurate representation. Using the current service levels and reliability profile, the majority of the backlog areas require either infrastructure or where there is a scheme in place a more reliable resource.

Sanitation Reliability Profile

Interpret Situation Assessment:	Discussions were had with infrastructure regarding water service provision as Census and DWA service levels were incorrect. The service levels still need more investigation for a more accurate representation. Using the current service levels and reliability profile, the majority of the backlog areas require the existing PIT toilets to be upgraded to VIPs. Some of the VIP areas are also planned to be upgraded to waterbourne

Water Services: Health

Interpret Situation Assessment:	The service levels of the health and education facilities were based on the service levels identified from the operational meeting with each LM and the UAP data. A detailed study into each of the facilities is however required for a proper assessment of the service levels. Some of the facilities have inadequate water provision and needs to be addressed.

Sanitation Services: Health

Interpret Situation Assessment:	The service levels of the health and education facilities were based on the service levels identified from the operational meeting with each LM and the UAP data. A detailed study into each of the facilities is however required for a proper assessment of the service levels.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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 %
Direct Backlog Water	70	Yes	100	Masterplan to assess backlog areas needs to be completed and regional supply needs to be developed and implemented. Areas that are below RDP level water supply needs to be supplied via new schemes or regional schemes	100	Yes	100	No	0		0		0		0	300	42.86
Water Services Infrastructure Supply Level Profile	60	Yes	100	Areas that are below RDP level water supply needs to be supplied via new schemes or regional schemes	100	Yes	100	No	0		0		0		0	300	42.86
Sanitation Service Infrastructure Supply Level Profile	60	Yes	100	Areas that are below RDP level sanitation supply (VIP) needs to be serviced with either VIPs or waterbourne sanitation.	100	Yes	100	No	0		0		0		0	300	42.86
Water Services: Education	50	Yes	100	The service levels of each of the facilities need to be investigated and assessed. Facilities with backlogs need to be properly serviced.	100	Yes	100	No	0		0		0		0	300	42.86
Sanitation Services: Education	50	Yes	100	The service levels of each of the facilities need to be investigated and assessed. Facilities with backlogs need to be properly serviced.	100	Yes	100	No	0		0		0		0	300	42.86
Health and Educational Facilities	0	Yes	100	The service levels of each of the facilities need to be investigated and assessed. Facilities with backlogs need to be properly serviced.	100	Yes	100	No	0		0		0		0	300	42.86
Direct Backlog Sanitation	0	Yes	100	Proper investigation needs to be completed regarding sanitation provision and backlog reduction. Areas that are below RDP level sanitation supply (VIP) needs to be serviced with either VIPs or waterbourne sanitation.	100	Yes	100	No	0		0		0		0	300	42.86
Water Reliability Profile	0	Yes	100	Areas that are below RDP level water supply needs to be supplied via new schemes or regional schemes	100	Yes	100	No	0		0		0		0	300	42.86
Sanitation Reliability Profile	0	Yes	100	Areas that are below RDP level sanitation supply (VIP) needs to be serviced with either VIPs or waterbourne sanitation.	100	Yes	100	No	0		0		0		0	300	42.86

Water Services: Health	0	Yes	100	The service levels of each of the facilities need to be investigated and assessed. Facilities with backlogs need to be properly serviced.	100	Yes	100	No	0		0		0		0	300	42.86
Sanitation Services: Health	0	Yes	100	The service levels of each of the facilities need to be investigated and assessed. Facilities with backlogs need to be properly serviced.	100	Yes	100	No	0		0		0		0	300	42.86
												Demand Overall Scoring Average					42.86

WSDP FY2018: Strategies and Objectives ***Harry Gwala***

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
Service Levels Profile									
1	Settlement survey assessing service levels - both water and sewer	Settlement survey needs to be completed assessing the service levels of each of the settlements in Harry Gwala (rural and urban)- both water and sewer. The survey will aid in identifying the backlog areas in terms of service provision in Harry Gwala.	Discussions were had with infrastructure regarding water and sewer service provision as Census and DWA service levels were incorrect. The service levels still need more investigation for a more accurate representation.		Presenting to council need for settlement assessment to provide funding and resources	Complete settlement survey	Update WSDP with new settlement figures	Update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
2	Areas that are below RDP level water supply needs to be supplied via new schemes or regional schemes	Areas that are below RDP level water supply needs to be supplied via new schemes or regional schemes	Using the current service levels, more than half of the households are above RDP level water supply,however, 18 % of the households are served via water tankers and 7% via springs and rivers with no proper schemes. There is thus a large portion (25%) of the WSA that is below RDP level water supply which need to be serviced.	2011MIGFDC4320 1672-08/2010-03; Ixopo - Mariathal Water Supply Project	Presenting to council need for improving areas below RDP level of water provision to provide funding and resources	Upgrade below RDP level of water services areas	Upgrade below RDP level of water services areas - update WSDP	Upgrade below RDP level of water services areas - update WSDP	
3	Areas that are below RDP level sanitation supply (VIP) needs to be serviced with either VIPs or waterbourne sanitation.	Areas that are below RDP level sanitation supply (VIP) needs to be serviced with either VIPs or waterbourne sanitation.	Using the current service levels, more than half of the households are above RDP level sanitation supply, however, 35% of the households are served via PIT toilets. There is thus a large portion (35%) of the WSA that is below RDP level sanitation supply which need to be serviced.		Presenting to council need for improving areas below RDP level of sewer provision to provide funding and resources	Upgrade below RDP level of sewer services areas	Upgrade below RDP level of sewer services areas - update WSDP	Upgrade below RDP level of sewer services areas - update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
4	Assessment of service levels of Health and education facilities for planning and design	An assessment of the service levels of the Health and education facilities in Harry Gwala is required for planning and design and ensuring the facilities have adequate services	The service levels of the health and education facilities were based on the service levels identified from the operational meeting with each LM and the UAP data. A detailed study into each of the facilities is however required for a proper assessment of the service levels.		Get health and education facility information from respective departments	Update service levels and WSDP	Update WSDP	Update WSDP	
5	Facilities with backlogs need to be properly serviced.	Facilities with backlogs need to be properly serviced.	Some of the facilities have inadequate water and sewer provision according to the current service levels and needs to be addressed.		Present to council need for providing proper services to health and educational facilities to provide funding and resources	Improve backlogs of facilities and update WSDP	Improve backlogs of facilities and update WSDP	Improve backlogs of facilities and update WSDP	
6	A water and sanitation masterplan needs to be completed for the WSA on a bulk and reticulation scale for the existing and future demand scenario	A water and sanitation masterplan needs to be completed for the WSA on a bulk and reticulation scale for the existing and future demand scenario	Currently there is no proper masterplan that assesses the infrastructure (sewer and water) and looks at the existing and future demands of the WSA. A masterplan is imperative in adequate planning infrastructure		Present to council need for a proper water and sewer masterplan to provide funding and resources	Complete masterplan and reduce backlogs	Complete masterplan and reduce backlogs	Complete masterplan and reduce backlogs	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
7	The existing sources should be investigated and future sources identified	The existing sources should be investigated and future sources identified	Currently the biggest issue with the existing schemes are source reliability. There is a need for more sustainable sources.		Present to council need for the investigation of the existing and future sources to provide funding and resources	Investigate existing and future sources	Implement new sources to improve scheme supply and update WSDP	Implement new sources to improve scheme supply and update WSDP	

Topic 3: Water Services Asset Management

Yes No Grid		
Question	**Yes**	**Assessment Score**
3.1 General Information		
3.1.1 Is there an Asset Management plan	True	25
3.1.2 Is there a disaster management plan	True	25
3.1.3 Is there a plan in place to manage untreated effluent		10

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

										Score
[section]										
3.1.1 Total number of components / km of pipeline / units	1988	184	23	73	4	0.79	0	713	13	70
3.2.1.1 Previous incidents including Security Problems (Regular)		0	0	0	0			0	0	50
3.2.1.2 Previous incidents including Security Problems (Periodic)		0	23	0	0			0	1	50
3.2.1.3 Previous incidents including Security Problems (Sporadic)		184	0	73	4			713	11	70
3.2.1.4 Previous incidents including Security Problems (None)		0	0	0	0			0	0	50
3.2.2.1 Safety inspection performed (Requlat)		0	0	0	0			0	0	0
3.2.2.2 Safety inspection performed (Periodic)		0	0	0	0			0	0	0
3.2.2.3 Safety inspection performed (Sporadic)		184	0	73	4			713	0	0
3.2.2.4 Safety inspection performed (None)		0	0	0	0			0	0	10
3.2.5 Average Operating hours per day (X hrs)			9.92						9.92	80
3.3.1.1 General physical condition: Dysfunctional	0	0	0	0	0	0	0	0	2	80
3.3.1.2 General physical condition: Operational	1988	184	0	73	4	0	0	713	10	10

3.3.1.3 General physical condition: Prime Condition	0	0	0	0	0	0	0	0	0	10
3.3.1.4 General physical condition: Vandalised	0	0	0	0	0	0	0	0	0	10
3.3.2 Number of breakages / failures per year	0	0	0	0	0	0	0	0	0	50
3.3.3 Total refurbishment needs %	0%	0%	0%	0%	0%	0%	0	0%	0%	50
3.3.4 Total refurbishment needs cost (RM)	0.00	0.00	0.00	0.20	0.00	0.00	0	0.00	0.00	50
3.3.4.1 Refurbishment cost for 5 year	0	0	0	0	0	0	0	0	0	50
3.3.4.2 Refurbishment cost for 10 year	0	0	0	0	0	0	0	0	0	50
3.3.4.3 Refurbishment cost for 15 year	0	0	0	0	0	0	0	0	0	50
3.3.5 Total replacement needs %	0%	0%	0%	0%	0%	0%	0	0%	0%	50
3.3.6 Total replacement needs cost (RM)	0.00	0.00	0.00	0.38	0.00	0.00	0	6.00	0.00	50
3.3.6.1 Replacement cost for 5 year	0	0	0	0	0	0	0	0	0	50
3.3.6.2 Replacement cost for 10 year	0	0	0	0	0	0	0	0	0	50
3.3.6.3 Replacement cost for 15 year	0	0	0	0	0	0	0	0	0	0

3.3.7 Total New development cost required	0	0	0	0	0	0	0	0	0	0
3.3.7.1 New development cost for 5 year	0	0	0	0	0	0	0	0	0	0
3.3.7.2 New development cost for 10 year	0	0	0	0	0	0	0	0	0	0
3.3.7.3 New development cost for 15 year	0	0	0	0	0	0	0	0	0	0
3.3.8 % Of Components already reached useful life	0%	0%	0%	0%	0%	0%	0	0%	0%	0
3.3.9 % Whereoff the WSA Self is the Current Owner	100%	100%	0%	100%	100%	100%	0	100%	0%	0
3.3.10 % Whereoff the WSA Self is Current Operator	100%	100%	0%	100%	100%	100%	0	100%	0%	0
3.4.1 % Expected total lifespan: Short (1-3 yrs)	0	0	0	0	0	0.78	0	0	0	0
3.4.2 % Expected total lifespan: Medium (3 - 10 yrs)	0	0	0	0	0	8.91	0	0	0	0
3.4.3 % Expected total lifespan: Long (10 - 20 yrs)	0	0	0	1.37	0	8.53	0	1.12	0	0

Sanitation Schemes		
Sanitation Schemes	**Green Drop**	**Assessment Score**

BULWER	True	75
CREIGHTON	False	75
FRANKLIN	False	75
HIMEVILLE (PACKAGE PLANT)	False	75
HLANGANANI/POLELA	True	75
IXOPO	False	75
KOKSTAD	True	75
RIETVLEI	False	75
RIVERSIDE	True	75
ST APOLLINARIS/CENTOCOW	True	75
UMZIMKHULU	True	75
UNDERBERG	True	75

UNDERBERG RDP (PACKAGE PLANT)	False	75

Water Schemes		
Water Schemes	**Blue Drop**	**Assessment Score**
ANTIOCH SCHEME	False	75
BOMBO SCHEME	False	75
BORNDRAND SCHEME	False	75
BULWER BULK (FUTURE)	False	75
BULWER NKELABANTWANA WATER SCHEME	False	75
BULWER SCHEME	True	75
BULWER-NKELABANTWANA NKUMBA (FUTURE)	False	75
CARRISBROOKE SCHEME 2	False	75

CENTOCOW / ST .APOLLINARIS/MAKHOLWENI SCHEME	True	75
CHIBINI (FUTURE)	False	75
CLYDESDALE SCHEME	False	75
COMMONVILLE/HOPEVALE SCHEME	False	75
CORINTH SCHEME	False	75
CREIGHTON WATER SCHEME	True	75
DELAMZI SCHEME	False	75
DIPHINI/DUMISA SCHEME	False	75
DONNYBROOK / GALA WATER SCHEME	True	75
DONNYBROOK SCHEME	False	75
DR NKOSAZANA DLAMINI-ZUMA	False	75
EASTLANDS SCHEME	False	75
EBOVINI / EMAZABEKWENI WATER SUPPLY SCHEME 3	False	75

EBUTHA - WATER TANKER	False	75
EDGERTON SCHEME	False	75
EMAUS SCHEME	False	75
EMVUBUKAZI / KWABALA SCHEME	False	75
ENGWAQA	False	75
ENHLANHLENI/EMAKHOLWENI SCHEME	False	75
ERITH TRUST/EBHAYI/KWATHATHANE SCHEME	False	75
ESICEDENI/QULASHE AREA SCHEME	False	75
ESIKHESHINI SCHEME	False	75
ESIQANDULWENI WATER SUPPLY SCHEME	True	75
ESIZINGENI	False	75
FOUNTAINS/MATHATHANESCHEME	False	75
FRANKLIN WATER SCHEME	True	75

GOSO SCHEME	False	75
GREATER IMPENDLE 2 GREATER STOFFLETON - HG	False	75
GREATER KOKSTAD	False	75
GREATER MBULWELENI (FUTURE)	False	75
GREATER MKHUNYA (FUTURE)	False	75
GREATER PANINKHUKU SCHEME	False	75
GREATER SUMMERFIELD SCHEME	False	75
GUDLINGDABA SCHEME	False	75
GUGWINI & SIHLONHLWENI SCHEME	False	75
HIGHFLATS	True	75
HIGHLANDS/WASCHBANK SCHEME	True	75
HIMEVILLE SCHEME	False	75
HLANGANANI/POLELA SCHEME	True	75

HLOKOZI SCHEME	False	75
HLOKOZI WATER SUPPLY SCHEME	False	75
HOPEWELL/CARRISBROOKE SUPPLY SCHEME	False	75
HOPEWELL/KWADAYI SUPPLY SCHEME	False	75
IBISI SCHEME	False	75
IBISI/MFUNDWENI WATER SCHEME	True	75
INDAWANA SCHEME	False	75
IXOPO BULK (FUTURE)	False	75
IXOPO WATER SUPPLY SCHEME	True	75
JABULA/NDZIMANKULU SCHEME	False	75
JOLIVET/VULAMEHLO WATER SUPPLY SCHEME - CROSS BORDER	True	75
KILIMON WATER SCHEME (FUTURE)	False	75
KLIPSPRUIT SCHEME	False	75

KNOEKFARM	False	75
KOKSHILL RA SCHEME	False	75
KOKSHILL RB SCHEME	False	75
KOKSTAD WATER SCHEME	True	75
KRAANSDRAAI / GLEN EDWARD WATER SCHEME	False	75
KROMHOEK SCHEME	False	75
KWABASE/PIKININI SCHEME	False	75
KWAFILI / RUSTFONTEIN SCHEME	False	75
KWAJAMES SCHEME	False	75
KWAMAKHOBA WATER SCHEME	False	75
KWASENTI WATER SCHEME	False	75
KWASOKHELA SCHEME	False	75
LUKHANYENI/MDENI WATER SCHEME	False	75

LUKHASINI WATER SCHEME	False	75
LUSIZNIN SCHEME	False	75
LUWAMBENI SCHEME	False	75
MACABAZINI WATER SCHEME	False	75
MACHUNWENI SCHEME	False	75
MAGQAGQENI SCHEME	False	75
MAGQORHOLWENI WATER SCHEME	False	75
MAHEWINI WATER SCHEME	False	75
MAHHEHLE WATER SUPPLY SCHEME	False	75
MAHRWAQA (FUTURE)	False	75
MAKHOLWENI SCHEME	False	75
MALENGE SCHEME	False	75
MAMBATHENI WATER SCHEME	False	75

MANGWANENI WATER SCHEME	False	75
MARAISKOP	False	75
MARIATHAL WATER SCHEME	False	75
MARIATHAL WATER SCHEME (FUTURE)	False	75
MASAMANI KHUKHULELA WATER SCHEME	False	75
MASAMANI WATER SCHEME	False	75
MASHAWINI SCHEME	False	75
MAWUSI SCHEME	False	75
MBHULELO SCHEME	False	75
MBULELWENI WATER SCHEME	False	75
MDAYANE WATER SCHEME	False	75
MDENI SCHEME	False	75
MFULAMHLE SCHEME	False	75

MGODI/SKEI WATER SUPPLY SCHEME	False	75
MKHUNYA	False	75
MNKANGALA SCHEME	False	75
MNQUMENI (FUTURE)	False	75
MNQUNDEKWENI WATER SCHEME	False	75
MNYWANENI WATER SCHEME	False	75
MOTYENI/SMALL MAHOBE SCHEME	False	75
MPHITHINI WATER SCHEME	False	75
MPHOLA/GAYBROOK SCHEME	False	75
MPOFINI WATER SCHEME	False	75
MQATSHENI/MAGUZWANA-STEPMORE	False	75
MQHOKWENI SCHEME	False	75
MZIKI-AGRI VILLAGE	False	75

NARAZETH SCHEME	False	75
NCAKUBANA (FUTURE)	False	75
NCAMBELE/BLOEMFONTEIN SCHEME	False	75
NDABAYILALI SCHEME	False	75
NDAWANA SCHEME	False	75
NDZOMBANE SCHEME	False	75
NETHERBY	False	75
NGCESHENI WATER SCHEME	False	75
NGQOKOZWENI SCHEME	False	75
NGQUMARENI SCHEME	False	75
NGWANQA SCHEME	False	75
NGWINJINI WATER SCHEME	False	75
NJUNGA AND RHALODI SCHEME	False	75

NKWEZELA WATER SCHEME	False	75
NOKWEJA WATER SUPPLY SCHEME	True	75
NOMANDLOVU SCHEME	False	75
NONGIDI SCHEME	False	75
NTAKAMA SCHEME	False	75
NTLAMBAMASOKA SCHEME	False	75
NTSIKENI SCHEME	False	75
NXAPHANXAPHENI SCHEME	False	75
NYANISWENI	False	75
NYANISWENI WATER SCHEME - KS	False	75
NYANISWENI WATER SCHEME - UMZ	False	75
NYEMBE SCHEME	False	75
NZIMANKULU SCHEME	False	75

OKHETHENI WATER SCHEME	False	75
OQAQENI WATER SCHEME	False	75
PAKKIES WATER SCHEME	False	75
PITELA SCHEME	False	75
PUNGASHE/MHLABATSHANE SCHEME - HG	False	75
RIESDALE SCHEME	False	75
RIETFLEI SCHEME	False	75
RIVERSIDE SCHEME	True	75
ROCKY MOUNT SCHEME	False	75
SANDANEZWE WATER SCHEME	False	75
SDADENI WATER SCHEME	False	75
SIKHULU SCHEME	False	75
SINGISI FACTORY SCHEME	False	75

SMALL MAHOBE SCHEME	False	75
SPITZKOP SCHEME	False	75
SPRINGVALE WATER SUPPLY SCHEME	False	75
ST BARNABAS SCHEME	False	75
ST PAUL SCHEME	False	75
STEPMORE	False	75
STRANGERS REST SCHEME	False	75
TARSVALLEY WATER SCHEME	False	75
THUTHUKANE WATER SCHEME	False	75
TSAWULE SCHEME	False	75
UBUHLEBEZWE	False	75
UFAFA (FUTURE)	False	75
UMZIMKHULU	False	75

UMZIMKHULU SCHEME	True	75
UNDERBERG SCHEME	True	75
VIERKANT WATER SCHEME	False	75
VOYIZANA WATER SCHEME	False	75
VUKA WATER SCHEME (NOT OPERATIONAL)	False	75
WATERFALL/NTLANGWINI SCHEME	False	75
WENSBURG	False	75
WSA Level		
ZIQALABENI SCHEME	False	75

Topic 3 Master Plan		
Section	**Is there a master plan to address this problem?**	**Does this plan address the plan address this problem 100%?**
3.1 General Information	No	No
3.2 Operation	No	No
3.3 Functionality Observation	Yes	No

3.4 Asset Assessment Spectrum	Yes	No
3.5 Water and Sanitation schemes	Yes	Yes

Strategic Interpretation

Detail situation assessments per Topic element

3.1 General Information

Interpret Situation Assessment:	The WSA has a asset and disaster management plan in place. It does however not have a plan in place to manage untreated effluent. The asset register also needs to be updated to include all the missing schemes and infrastructure.

3.2 Operation

Interpret Situation Assessment:	The asset register does not include information regarding security incidents and safety inspections performed. The information was discussed with LMs and assumptions were made. Proper assessment of security incidents and safety inspection are required.

3.3 Functionality Observation

Interpret Situation Assessment:	Very little to no information was available in the asset register regarding replacement value of the infrastructure. There was also no information available regarding the refurbishment or new development costs. There was also no information regarding the physical condition of the infrastructure and information was provided and assumed based on meetings with operational managers of each LM.

3.4 Asset Assessment Spectrum

Interpret Situation Assessment:	No information was available regarding the expected lifespan of the infrastructure. Very Little to no information was also available regarding the infrastructures age to determine expected lifespans of the infrastructure.

3.5 Water and Sanitation schemes

Interpret Situation Assessment:	There are several rudimentary schemes in HGDM. There should however be more regional schemes implemented as the maintenance and sustainability of the rudimentary schemes are difficult and several of the schemes are not operating as they should. Some of the treatment works also do not have green and blue drop reports and should be addressed.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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	32.5	Yes	100	The WSA should improve the asset management plan and develop a plan to manage untreated effluent.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
3.2 Operation	52.22	Yes	100	The WSA to do proper assessment of security incidents and safety inspections performed	100	No	0	No	0	No	0	No	0	No	0	200	28.57
3.3 Functionality Observation	19.09	Yes	100	Proper replacement, refurbishment and new development costs needs to be determined for all the water and sanitation infrastructure in Harry Gwala. There is also a need to determine the general physical condition of the infrastructure.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
3.4 Asset Assessment Spectrum	10	Yes	100	The expected lifespan on the infrastructure should be determined based on the age and the condition of the infrastructure.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
3.5 Water and Sanitation schemes	74.6	Yes	100	Investigate and implement more regional water and sanitation schemes. blue and green drop reports should be done for outstanding treatment works	100	No	0	No	0	No	0	No	0	No	0	200	28.57
																Demand Overall Scoring Average	28.57

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

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
1	The WSA should improve the asset management plan and develop a plan to manage untreated effluent	The WSA should update and improve the asset management plan and develop a plan to manage untreated effluent	The WSA has a asset and disaster management plan in place. It does however not have a plan in place to manage untreated effluent. The asset register also needs to be updated to include all the missing schemes and infrastructure.		Present to council need to improve the asset management plan and develop a plan to manage untreated effluent to provide funding and resources	Improve the asset management plan and develop a plan to manage untreated effluent and update WSDP	Impliment the improvedasset management plan and plan to manage untreated effluent and update WSDP	Update WSDP	
2	The WSA to do proper assessment of security incidents and safety inspections performed	The WSA to do proper assessment of security incidents and safety inspections performed	"The asset register does not include information regarding security incidents and safety inspections performed. The information was discussed with LMs andassumptions were made. Proper assessment of security incidents and safety inspection are required."		Present to council need to do proper assessment of security incidents and safety inspections performed to provide funding and resources	Conduct a poper assessment of security incidents and safety inspections performed and update WSDP	Conduct a poper assessment of security incidents and safety inspections performed and update WSDP	Conduct a poper assessment of security incidents and safety inspections performed and update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
3	Proper replacement, refurbishment and new development costs needs to be determined for all the water and sanitation infrastructure in Harry Gwala.	Proper replacement, refurbishment and new development costs needs to be determined for all the water and sanitation infrastructure in Harry Gwala. This can be achieved with a sewer and water masterplan	Very little to no information was available in the asset register regarding replacement value of the infrastructure. There was also no information availableregarding the refurbishment or new development costs. There was also no information regarding the physical condition of the infrastructure and information was provided and assumed based on meetings with operational managers of each LM.		Present to council need to determine replacement, refurbishment and new development costs for all the water and sanitation infrastructure to provide funding and resources	Determine replacement, refurbishment and new development costs for all the water and sanitation infrastructure and update WSDP	Determine replacement, refurbishment and new development costs for all the water and sanitation infrastructure and update WSDP	Determine replacement, refurbishment and new development costs for all the water and sanitation infrastructure and update WSDP	
4	The expected lifespan on the infrastructure should be determined based on the age and the condition of the infrastructure.	The expected lifespan on the infrastructure should be determined based on the age and the condition of the infrastructure. A proper assessment of the infrastructure and their ages are required	"No information was available regarding the expected lifespan of the infrastructure. Very Little to no information was also available regarding the infrastructuresage to determine expected lifespans of the infrastructure."		Present to council need to determine expected lifespan on the infrastructure to provide funding and resources	Determine expected lifespan on the infrastructure and update WSDP	Determine expected lifespan on the infrastructure and update WSDP	Determine expected lifespan on the infrastructure and update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
5	Investigate and implement more regional water and sanitation schemes.	Investigate and implement more regional water and sanitation schemes. This can be adressed with the water and sewer masterplans	There are several rudimentary schemes in HGDM. There should however be more regional schemes implemented as the maintenance and sustainability of the rudimentary schemes are difficult and several of the schemes are not operating as they should.		Presenting to council need to investigate and implement more regional water and sanitation schemes to provide funding and resources	Investigate and implement more regional water and sanitation schemes and update WSDP	Investigate and implement more regional water and sanitation schemes and update WSDP	Investigate and implement more regional water and sanitation schemes and update WSDP	
6	Blue and green drop reports should be done for outstanding treatment works and the existing works should be refurbished or upgraded as the score are very low	Blue and green drop reports should be done for outstanding treatment works and the existing works should be refurbished or upgraded as the score are very low	Some of the treatment works also do not have green and blue drop reports and the ones that do have are not in good working order and should be addressed.		Presenting to council need for assessing the infrastructure condition to provide funding and resources	Complete asset register assessment	Update WSDP	Update WSDP	
7	Update of asset register to include pshysical condition of all the assets.	Update of asset register to include pshysical condition of all the assets.	Currently the asset register does not include the physical condition of all the infrastructure		Present to council need to ascertain the physical condition of the infrastructure to provide funding and resources	Ascertain the physical condition of the infrastructure and update asset register and WSDP	Ascertain the physical condition of the infrastructure and update asset register and WSDP	Ascertain the physical condition of the infrastructure and update asset register and WSDP	

Topic 4: Water Services O&M

In Place	Assesement Score
4.1 Operation & Maintenance Plan	
Is There a Operation and Maintenance Plan?	
True	60

Phase	Compliance	StatusQuo	Impact	Assesement Score
4.2 Resources				
4.2.1 Existing Groundwater Infrastructure				
Operation	Staff	Below Minimum requirement	Low	50
Maintenance	Staff	Below Minimum requirement	Medium/High	50
Operation	External resources	Below Minimum requirement	Low	50
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Medium/High	50
Maintenance	Spare Parts	Below Minimum requirement	Medium/High	50
Operation	Tools & Equipment	Above minimum requirement	Low	80
Maintenance	Tools & Equipment	Minimum basic requirement	Low	80
Operation	Budget	Below Minimum requirement	Medium/High	50
Maintenance	Budget	Below Minimum requirement	Medium/High	50
4.2 Resources				
4.2.2 Existing Surface Water Infrastructure				
Operation	Staff	Minimum basic requirement	Low	70

Maintenance	Staff	Minimum basic requirement	Low	70
Operation	External resources	Above minimum requirement	Low	80
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Low	50
Maintenance	Spare Parts	Below Minimum requirement	Low	50
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Budget	Below Minimum requirement	Medium/High	50
Maintenance	Budget	Below Minimum requirement	Medium/High	50
4.2 Resources				
4.2.3 Existing Waste Water Treatment Works Infrastructure				
Operation	Staff	Below Minimum requirement	Critical	10
Maintenance	Staff	Below Minimum requirement	Critical	10
Operation	External resources	Above minimum requirement	Low	80
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Critical	10
Maintenance	Spare Parts	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Budget	Below Minimum requirement	Critical	10
Maintenance	Budget	Below Minimum requirement	Critical	10
4.2 Resources				
4.2.4 Existing Water Treatment Works Infrastructure				
Operation	Staff	Below Minimum requirement	Critical	10
Maintenance	Staff	Below Minimum requirement	Critical	10
Operation	External resources	Above minimum requirement	Low	80
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Critical	10
Maintenance	Spare Parts	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70

Operation	Budget	Below Minimum requirement	Critical	10
Maintenance	Budget	Below Minimum requirement	Critical	10
4.2 Resources				
4.2.5 Existing Pump Station Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	50
Maintenance	Staff	Below Minimum requirement	Medium/High	50
Operation	External resources	Above minimum requirement	Low	80
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Medium/High	50
Maintenance	Spare Parts	Below Minimum requirement	Medium/High	50
Operation	Tools & Equipment	Below Minimum requirement	Low	50
Maintenance	Tools & Equipment	Below Minimum requirement	Low	50
Operation	Budget	Below Minimum requirement	Critical	10
Maintenance	Budget	Below Minimum requirement	Critical	10
4.2 Resources				
4.2.6 Existing Bulk Pipeline Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	50
Maintenance	Staff	Below Minimum requirement	Medium/High	50
Operation	External resources	Above minimum requirement	Low	80
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Medium/High	50
Maintenance	Spare Parts	Below Minimum requirement	Medium/High	50
Operation	Tools & Equipment	Below Minimum requirement	Low	50
Maintenance	Tools & Equipment	Below Minimum requirement	Low	50
Operation	Budget	Below Minimum requirement	Critical	10
Maintenance	Budget	Below Minimum requirement	Critical	10
4.2 Resources				
4.2.7 Existing Tower & Reservoir Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	50
Maintenance	Staff	Below Minimum requirement	Medium/High	50
Operation	External resources	Above minimum requirement	Low	80

Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Below Minimum requirement	Medium/High	50
Maintenance	Spare Parts	Below Minimum requirement	Medium/High	50
Operation	Tools & Equipment	Below Minimum requirement	Low	50
Maintenance	Tools & Equipment	Below Minimum requirement	Low	50
Operation	Budget	Below Minimum requirement	Critical	10
Maintenance	Budget	Below Minimum requirement	Critical	10
4.2 Resources				
4.2.8 Existing Reticulation Infrastructure				
Operation	Staff	Below Minimum requirement	Medium/High	50
Maintenance	Staff	Below Minimum requirement	Medium/High	50
Operation	External resources	Above minimum requirement	Low	80
Maintenance	External resources	Above minimum requirement	Low	80
Operation	Spare Parts	Above minimum requirement	Low	80
Maintenance	Spare Parts	Above minimum requirement	Low	80
Operation	Tools & Equipment	Below Minimum requirement	Low	50
Maintenance	Tools & Equipment	Below Minimum requirement	Low	50
Operation	Budget	Below Minimum requirement	Critical	10
Maintenance	Budget	Below Minimum requirement	Critical	10
4.3 Information				
4.3.1 Existing Groundwater Infrastructure				
Operation	Manuals Available	Below Minimum requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Medium/High	50
Operation	Asset Register	Minimum basic requirement	Medium/High	60
Maintenance	Asset Register	Minimum basic requirement	Medium/High	60
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50

4.3 Information				
4.3.2 Existing Surface Water Infrastructure				
Operation	Manuals Available	Below Minimum requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Medium/High	50
Operation	Asset Register	Minimum basic requirement	Medium/High	60
Maintenance	Asset Register	Minimum basic requirement	Medium/High	60
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
4.3 Information				
4.3.3 Existing Water Treatement Works Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	70
Maintenance	Manuals Available	Minimum basic requirement	Low	70
Operation	Asset Register	Above minimum requirement	Low	80
Maintenance	Asset Register	Above minimum requirement	Low	80
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Above minimum requirement	Low	80
Maintenance	Contingency & Safety Plan	Above minimum requirement	Low	80
4.3 Information				
4.3.4 Existing Waste Water Treatment Works Infrastructure				
Operation	Manuals Available	Minimum basic requirement	Low	70
Maintenance	Manuals Available	Minimum basic requirement	Low	70
Operation	Asset Register	Above minimum requirement	Low	80
Maintenance	Asset Register	Above minimum requirement	Low	80
Operation	As-Built info.	Below Minimum requirement	Critical	10

Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Above minimum requirement	Low	80
Maintenance	Contingency & Safety Plan	Above minimum requirement	Low	80
4.3 Information				
4.3.5 Existing Pump Station Infrastructure				
Operation	Manuals Available	Below Minimum requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Medium/High	50
Operation	Asset Register	Above minimum requirement	Low	80
Maintenance	Asset Register	Above minimum requirement	Low	80
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
4.3 Information				
4.3.6 Existing Bulk Pipeline Infrastructure				
Operation	Manuals Available	Below Minimum requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Medium/High	50
Operation	Asset Register	Above minimum requirement	Low	80
Maintenance	Asset Register	Above minimum requirement	Low	80
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
4.3 Information				
4.3.7 Existing Tower & Reservoir Infrastructure				

Operation	Manuals Available	Below Minimum requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Medium/High	50
Operation	Asset Register	Above minimum requirement	Low	80
Maintenance	Asset Register	Above minimum requirement	Low	80
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
4.3 Information				
4.3.8 Existing Reticulation Infrastructure				
Operation	Manuals Available	Below Minimum requirement	Medium/High	50
Maintenance	Manuals Available	Below Minimum requirement	Medium/High	50
Operation	Asset Register	Above minimum requirement	Low	80
Maintenance	Asset Register	Above minimum requirement	Low	80
Operation	As-Built info.	Below Minimum requirement	Critical	10
Maintenance	As-Built info.	Below Minimum requirement	Critical	10
Operation	Tools & Equipment	Minimum basic requirement	Low	70
Maintenance	Tools & Equipment	Minimum basic requirement	Low	70
Operation	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
Maintenance	Contingency & Safety Plan	Below Minimum requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.1 Existing Groundwater Infrastructure				
Operation	Procedures	Below Minimum requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	50
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	50
Operation	Quality Control procedures established	Below Minimum requirement	Critical	10
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	10
Operation	Risk Management	Below Minimum requirement	Critical	10

Maintenance	Risk Management	Below Minimum requirement	Critical	10
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.2 Existing Surface water infrastructure				
Operation	Procedures	Below Minimum requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	50
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	50
Operation	Quality Control procedures established	Below Minimum requirement	Critical	10
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	10
Operation	Risk Management	Below Minimum requirement	Medium/High	50
Maintenance	Risk Management	Below Minimum requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.3 Existing Water Treatment Works infrastructure				
Operation	Procedures	Minimum basic requirement	Medium/High	60
Maintenance	Procedures	Minimum basic requirement	Medium/High	60
Operation	Record keeping in place	Minimum basic requirement	Low	70
Maintenance	Record keeping in place	Minimum basic requirement	Low	70
Operation	Quality Control procedures established	Minimum basic requirement	Low	70
Maintenance	Quality Control procedures established	Minimum basic requirement	Low	70
Operation	Risk Management	Minimum basic requirement	Low	70
Maintenance	Risk Management	Minimum basic requirement	Low	70
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Low	70
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Low	70
4.4 Activity Control & Management				
4.4.4 Existing Waste Water Treatment Works infrastructure				
Operation	Procedures	Minimum basic requirement	Medium/High	60
Maintenance	Procedures	Minimum basic requirement	Medium/High	60

Operation	Record keeping in place	Minimum basic requirement	Low	70
Maintenance	Record keeping in place	Minimum basic requirement	Low	70
Operation	Quality Control procedures established	Minimum basic requirement	Low	70
Maintenance	Quality Control procedures established	Minimum basic requirement	Low	70
Operation	Risk Management	Minimum basic requirement	Low	70
Maintenance	Risk Management	Minimum basic requirement	Low	70
Operation	Reporting (data analysis & report generation est.)	Minimum basic requirement	Low	70
Maintenance	Reporting (data analysis & report generation est.)	Minimum basic requirement	Low	70
4.4 Activity Control & Management				
4.4.5 Existing Pump Station infrastructure				
Operation	Procedures	Below Minimum requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	50
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	50
Operation	Quality Control procedures established	Below Minimum requirement	Critical	10
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	10
Operation	Risk Management	Below Minimum requirement	Medium/High	50
Maintenance	Risk Management	Below Minimum requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.6 Existing Bulk Pipeline infrastructure				
Operation	Procedures	Below Minimum requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	50
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	50
Operation	Quality Control procedures established	Below Minimum requirement	Critical	10
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	10
Operation	Risk Management	Below Minimum requirement	Medium/High	50
Maintenance	Risk Management	Below Minimum requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50

Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.7 Existing Tower & Reservoir infrastructure				
Operation	Procedures	Below Minimum requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	50
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	50
Operation	Quality Control procedures established	Below Minimum requirement	Critical	10
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	10
Operation	Risk Management	Below Minimum requirement	Medium/High	50
Maintenance	Risk Management	Below Minimum requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
4.4 Activity Control & Management				
4.4.8 Existing Reticulation infrastructure				
Operation	Procedures	Below Minimum requirement	Medium/High	50
Maintenance	Procedures	Below Minimum requirement	Medium/High	50
Operation	Record keeping in place	Below Minimum requirement	Medium/High	50
Maintenance	Record keeping in place	Below Minimum requirement	Medium/High	50
Operation	Quality Control procedures established	Below Minimum requirement	Critical	10
Maintenance	Quality Control procedures established	Below Minimum requirement	Critical	10
Operation	Risk Management	Below Minimum requirement	Medium/High	50
Maintenance	Risk Management	Below Minimum requirement	Medium/High	50
Operation	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50
Maintenance	Reporting (data analysis & report generation est.)	Below Minimum requirement	Medium/High	50

Topic 4 Master Plan		
Section	**Is there a master plan to address this problem?**	**Does this plan address the plan address this problem 100%?**
4.1 Operation & Maintenance Plan	Yes	No
4.1.1 Is There an Operation and Maintenance Plan?	Yes	No
4.2 Resources	Yes	No
4.3 Information	Yes	No
4.4 Activity Control & Management	Yes	No

Strategic Interpretation

Detail situation assessments per Topic element

4.1 Operation & Maintenance Plan

Interpret Situation Assessment:	There is currently am operation and maintenance plan in place. The plan should however be improved and implemented. The plan is currently not implemented as it should, mainly due to budget constraints.

4.1.1 Is There an Operation and Maintenance Plan?

Interpret Situation Assessment:	There is currently am operation and maintenance plan in place. The plan should however be improved and implemented. The plan is currently not implemented as it should, mainly due to budget constraints.

4.2 Resources

Interpret Situation Assessment:	The main concern in terms of resources to the WSA in terms of all its infrastructure is budget. The WSA doesnt have enough budget to operate and maintain its infrastructure. After budget the WSA has issues regarding the amount if staff and spare parts, which is again linked to budget.

4.3 Information

Interpret Situation Assessment:	According to the WSA there are very little to no AS-built information available regarding the infrastructure. The relevant as-builts should be collected from the consultants and surveys should be completed where necessary. There is an asset register in place but should also be updated. several of the schemes infrastructure is not included in the current asset register. There is sufficient information available regarding the tools and equipment and there are manuals and safety plans

4.4 Activity Control & Management

Interpret Situation Assessment:	The WSA shows very little compliance to the activity control and management of its infrastructure. The major area of concern is the quality control procedures which are non existent.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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 %
4.1 Operation & Maintenance Plan	60	Yes	100	The WSA to develop and implement an improved Operation and Maintenance Plan	100	No	0	No	0	No	0	No	0	No	0	200	28.57
4.1.1 Is There an Operation and Maintenance Plan?	49.13	Yes	100	The WSA to develop and implement an improved Operation and Maintenance Plan	100	No	0	No	0	No	0	No	0	No	0	200	28.57
4.2 Resources	53.5	Yes	100	Develop and implement an operation and maintenance plan for the effective operation and maintenance of assets. Improved budgets should be allocated to improve O&M.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
4.3 Information	47.5	Yes	100	Develop and implement an operation and maintenance plan for the effective operation and maintenance of assets. Collect all as builts from consultants regarding infrastructure and survey where required. The asset register needs to be updated and all the missing infrastructure should be included.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
4.4 Activity Control & Management	0	Yes	100	Develop systems and processes for effective activity control and management (activity control and management)	100	No	0	No	0	No	0	No	0	No	0	200	28.57
														Demand Overall Scoring Average			28.57

WSDP FY2018: Strategies and Objectives *Harry Gwala*

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
Water Services O&M									
1	Develop and implement an improved operation and maintenance plan for the effective operation and maintenance of assets. Improved budgets should be allocated to improve O&M.	Develop and implement an improved operation and maintenance plan for the effective operation and maintenance of assets. Improved budgets should be allocated to improve O&M.	"There is currently am operation and maintenance plan in place. The plan should however be improved and implemented. The plan is currently not implemented as it should, mainly due to budget constraints."		Present to council need to develop and implement an improved operation and maintenance plan to provide funding and resources	Develop and implement an improved operation and maintenance plan	Update WSDP	Update WSDP	
2	Proper physical survey needs to be conducted and as-built drawings need to be created as very little information is available regarding physical information which limits the capacity of operational staff	Proper physical survey needs to be conducted and as-built drawings need to be created as very little information is available regarding physical information which limits the capacity of operational staff	According to the WSA there is very little to no AS-built information available regarding the sewer and water infrastructure. The relevant as-builts should be collected from the consultants and physical surveys should be completed where necessary.		Present to council need to survey infrastucture and collect as-builts to provide funding and resources	Survey infrastucture and collect as-builts and update WSDP	Survey infrastucture and collect as-builts and update WSDP	Survey infrastucture and collect as-builts and update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
3	The asset register needs to be updated and all the infrastructure of existing schemes should be included.	The asset register needs to be updated and all the infrastructure of existing schemes should be included.	There is an asset register in place but should also be updated. several of the schemes infrastructure is not included in the current asset register.		Present to council need to update asset register to provide funding and resources	Update asset register and update WSDP	Update asset register and update WSDP	Update asset register and update WSDP	
4	Develop systems and processes for effective activity control and management - especially in terms of risk and quality	Develop systems and processes for effective activity control and management - especially in terms of risk and quality	The WSA shows very little compliance to the activity control and management of its infrastructure. The major area of concern is the quality control procedures which are non existent.		Present to council need to develop systems and processes for effective activity control and management to provide funding and resources	Develop systems and processes for effective activity control and management	Update WSDP	Update WSDP	
5	Budget to be improved regarding operation and maintenance as currently not enough budget	Budget to be improved regarding operation and maintenance as currently not enough budget	The main concern in terms of resources to the WSA in terms of all its infrastructure is budget. The WSA doesnt have enough budget to operate and maintain its infrastructure.		Present to council need for improved O&M budget to provide funding and resources	Improve O&M with increased budget and update WSDP	Improve O&M with increased budget and update WSDP	Improve O&M with increased budget and update WSDP	
6	More staff and spare parts need to be allocated to WWTW and WTW plants and pumpstations for optimal operation	More staff and spare parts need to be allocated to WWTW and WTW plants and pumpstations for optimal operation	After budget the WSA has issues regarding the amount if staff and spare parts, which is again linked to budget.		Present to council need for more staff and spare parts to provide funding and resources	Acquire more staff and spare parts and update WSDP	Acquire more staff and spare parts and update WSDP	Acquire more staff and spare parts and update WSDP	

Topic 5: Conservation & Demand Management

Topic 5.1: Water Resource Management

Demand Info		
Question	**Resource Available**	**Assessment Score**
5.1 Reducing unaccounted water and water inefficiencies		
5.1.1 Night flow metering	3	25
5.1.2 Day flow metering	3	25
5.1.3 Reticulation leaks	1	60
5.1.4 Illegal connections	0	25
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	60

5.2.2 Retro-fitting of water inefficient toilets	0	25
5.2.3 Meter repair programme	1	60
5.3 Consumer/end-use demand management: Public Information & Education Programmes		
5.3.1 Schools targeted by education programmes	1	60
5.3.2 Consumers targeted by public information programmes	1	75

Demand Info Question 8

Question	Number of Settlements	Assessment Score
Conjunctive use of surface - and groundwater		
893	0	0
894	2	60

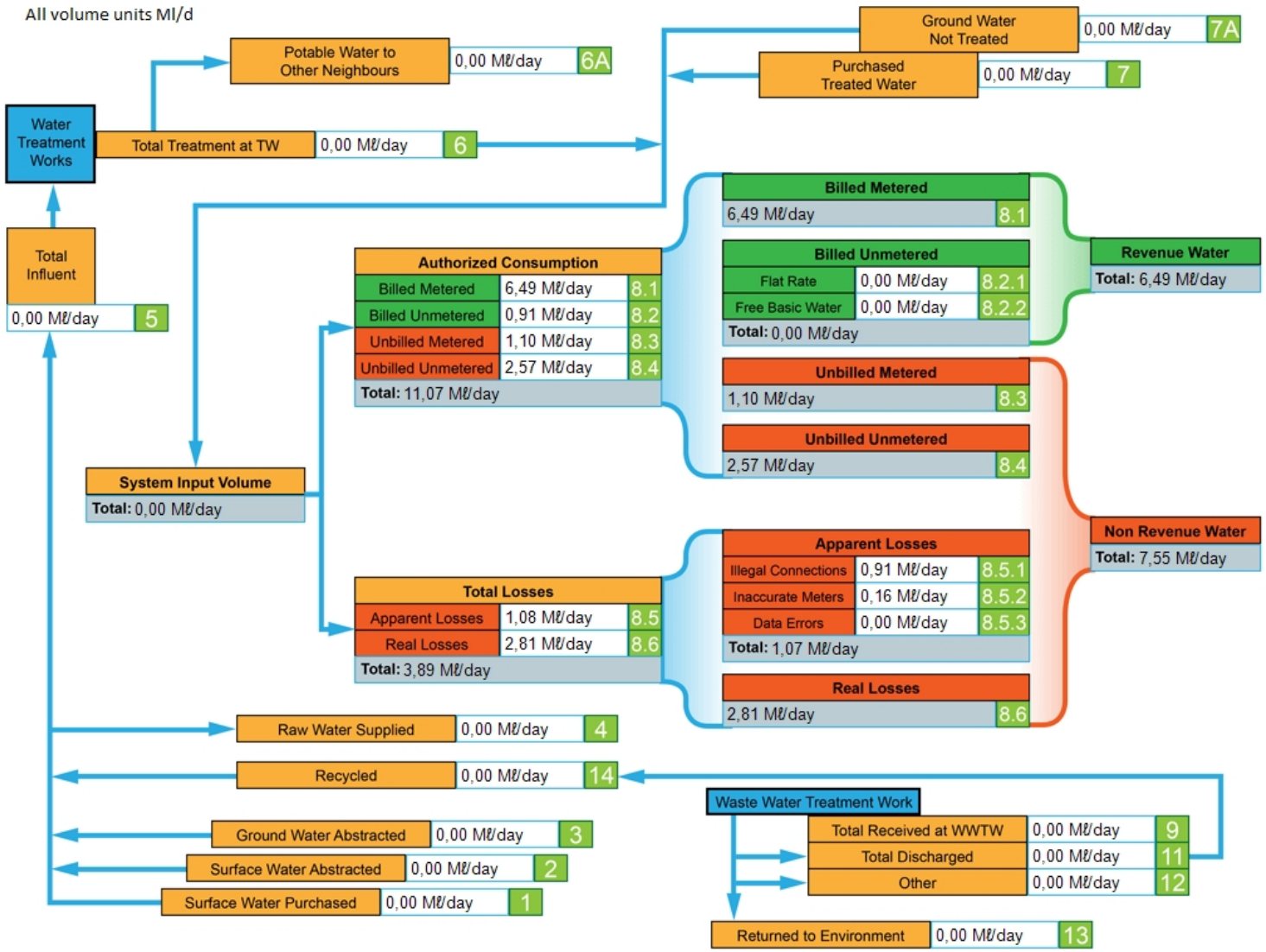
Demand Info Question 9

Question	Yes/No	Assessment Score
5.5 Working for Water		
Is there a Working for Water Programme in place:	0	80

Demand Info Question 10	
Project Name	**Assessment Score**
Provide List of Projects	
Alien vegetation removal project	60

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	No
5.2 Leak and meter repair programmes.	Yes	No
5.3 Consumer/end-use demand management: Public Information & Education Programmes	Yes	Yes
5.4: Conjunctive use of surface - and groundwater	No	No
5.5 Working for Water	Yes	No

Topic 5.2: Water Balance



Topic 5.2: Water Balance	
Questions	Assessment Score

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 amoount 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% ?**
5.2 Water Balance	Yes	No

Strategic Interpretation

Detail situation assessments per Topic element

5.1 Reducing unaccounted water and water inefficiencies

Interpret Situation Assessment:	The WSA stated that there is only partial metering taking place in the WSA, mainly in urban areas where there are proper house or yard connection. The rural schemes have no metering, which is a big issue especially in terms of the water balance. There are programmes to improve leaks and un-metered connections,but are not sufficient.

5.2 Leak and meter repair programmes.

Interpret Situation Assessment:	The WSA stated that there are currently active leak and meter repair programmes in place. There is however a need for retrofitting inefficient toilets. There are also several illegal connection (yard connection from communal standpipe) which increases leaking.

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

Interpret Situation Assessment:	There are currently programmes in place for educating schools and communities regarding end use/consumer demand management. The WSA states that these are adequate but more awareness and education is necessary.

5.4: Conjunctive use of surface - and groundwater

Interpret Situation Assessment:	No information was available regarding artificial recharge and only information on one scheme was available regarding rainwater harvesting. There is thus a need to investigate artificial recharge and rainwater harvesting in the WSA.

5.5 Working for Water

Interpret Situation Assessment:	Currently there are no programs in place to remove alien vegetation or to reduce alien vegetation. Alien vegetation are categoristic of high water use and should thus be removed. There has been programs in the past but none are currently in place.

5.2 Water Balance

Interpret Situation Assessment:	Limited to no information was available regarding the water consumption/metering and water resources (purchased and ground and surface water sources - abstraction volumes). This made the accuracy of the water balance very low and several assumptions were made. The current NRW due to inadequate metering needs to be addressed.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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 %
5.1 Reducing unaccounted water and water inefficiencies	49	Yes	100	WC&DM Programmes and interventions (Reducing unaccounted water and water inefficiencies) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.2 Leak and meter repair programmes.	30	Yes	100	WC&DM Programmes and interventions (Leak and meter repair programmes.) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.3 Consumer/end-use demand management: Public Information & Education Programmes	0	Yes	100	WC&DM Programmes and interventions (more public awareness and education programmes) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.4: Conjunctive use of surface - and groundwater	0	Yes	100	WC&DM Programmes and interventions to be implemented (artificial recharge and rainwater harvesting investigation and monitoring) to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.5 Working for Water	0	Yes	100	WC&DM Programmes and interventions (alien vegetation removing programs) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.2 Water Balance	0	Yes	100	Implement strategies as contained in NRW report compiled by JOAT. Especially regarding metering of sources and consumers (metering of standpipes etc.)	100	No	0	No	0	No	0	No	0	No	0	200	28.57

Demand Overall Scoring Average 28.57

WSDP FY2018: Strategies and Objectives *Harry Gwala*

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
Water Resource Management									
1	WC&DM Programmes and interventions to be implemented to ensure compliance by the WSA.	WC&DM Programmes and interventions to be implemented to ensure compliance by the WSA. Especially regarding:- Reducing unaccounted water and water inefficiencies- Leak and meter repair programmes- more public awareness and education programmes- artificial recharge and rainwater harvesting investigation and monitoring- alien vegetation removing programs	The WSA stated that there is only partial metering taking place in the WSA, mainly in urban areas where there are proper house or yard connection. The rural schemes have no metering, which is a big issue especially in terms of the water balance. The WSA stated that there are currently active leak and meter repair programmes in place. There is however a need for retrofitting inefficient toilets. There are also several illegal connection (yard connection from communal standpipe) which increases leaking.There are currently programmes in		Present to council need for proper WC&DM programmes and interventions to provide funding and resources	Develop and impliment WC&DM Programmes and interventions and update WSDP	Develop and impliment WC&DM Programmes and interventions and update WSDP	Develop and impliment WC&DM Programmes and interventions and update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
			place for educating schools and communities regarding end use/consumer demand management. The WSA states that these are adequate but more awareness and education is necessary.No information was available regarding artificial recharge and only information on one scheme was available regarding rainwater harvesting. Currently there are no programs in place to remove alien vegetation or to reduce alien vegetation. Alien vegetation are categoristic of high water use and should thus be removed. There has been programs in the past but none are currently in place.						

Strategic Interpretation

Detail situation assessments per Topic element

5.1 Reducing unaccounted water and water inefficiencies

Interpret Situation Assessment:	The WSA stated that there is only partial metering taking place in the WSA, mainly in urban areas where there are proper house or yard connection. The rural schemes have no metering, which is a big issue especially in terms of the water balance. There are programmes to improve leaks and un-metered connections,but are not sufficient.

5.2 Leak and meter repair programmes.

Interpret Situation Assessment:	The WSA stated that there are currently active leak and meter repair programmes in place. There is however a need for retrofitting inefficient toilets. There are also several illegal connection (yard connection from communal standpipe) which increases leaking.

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

Interpret Situation Assessment:	There are currently programmes in place for educating schools and communities regarding end use/consumer demand management. The WSA states that these are adequate but more awareness and education is necessary.

5.4: Conjunctive use of surface - and groundwater

Interpret Situation Assessment:	No information was available regarding artificial recharge and only information on one scheme was available regarding rainwater harvesting. There is thus a need to investigate artificial recharge and rainwater harvesting in the WSA.

5.5 Working for Water

Interpret Situation Assessment:	Currently there are no programs in place to remove alien vegetation or to reduce alien vegetation. Alien vegetation are categoristic of high water use and should thus be removed. There has been programs in the past but none are currently in place.

5.2 Water Balance

Interpret Situation Assessment:	Limited to no information was available regarding the water consumption/metering and water resources (purchased and ground and surface water sources - abstraction volumes). This made the accuracy of the water balance very low and several assumptions were made. The current NRW due to inadequate metering needs to be addressed.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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 %
5.1 Reducing unaccounted water and water inefficiencies	0	Yes	100	WC&DM Programmes and interventions (Reducing unaccounted water and water inefficiencies) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.2 Leak and meter repair programmes.	0	Yes	100	WC&DM Programmes and interventions (Leak and meter repair programmes.) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.3 Consumer/end-use demand management: Public Information & Education Programmes	0	Yes	100	WC&DM Programmes and interventions (more public awareness and education programmes) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.4: Conjunctive use of surface - and groundwater	0	Yes	100	WC&DM Programmes and interventions to be implemented (artificial recharge and rainwater harvesting investigation and monitoring) to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.5 Working for Water	0	Yes	100	WC&DM Programmes and interventions (alien vegetation removing programs) to be implemented to ensure compliance by the WSA.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
5.2 Water Balance	0	Yes	100	Implement strategies as contained in NRW report compiled by JOAT. Especially regarding metering of sources and consumers (metering of standpipes etc.)	100	No	0	No	0	No	0	No	0	No	0	200	28.57
																Demand Overall Scoring Average	28.57

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
Water Balance									
1	Implement strategies as contained in NRW report compiled by JOAT. Especially regarding metering of sources and consumers (metering of standpipes etc.)	Implement strategies as contained in NRW report compiled by JOAT. Especially regarding metering of sources and consumers (metering of standpipes etc.)	Limited to no information was available regarding the water consumption/metering and water resources (purchased and ground and surface water sources - abstraction volumes). This made the accuracy of the water balance very low and several assumptions were made. The current NRW due to inadequate metering needs to be addressed.		Present to council need for proper metering to provide funding and resources	Improve metering of sources, reservoirs and consumers - Update WSDP	Improve metering of sources, reservoirs and consumers - Update WSDP	Improve metering of sources, reservoirs and consumers - Update WSDP	
2	The WSA to develop and implement the water monitoring plan.	Develop and implement the water monitoring plan.	The water monitoring plan is not in place with limited resources to manage these functions effectively.		Develop and implement the water monitoring plan.	Develop and implement the water monitoring plan.	Update WSDP	Update WSDP	

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		Assement Score
						Rural	Urban	
Boreholes	1988	0	1988	1988	0			50
Surface Water Abstract	184	0	184	184	0			10
External Sources (Bulk Purchase)	2	98			90			10
Water returned to source	17	2.73			2.73			0
Conjunctive Use								50

Additional Source Available	* Number of sources	Potential Volume	* Licensed abstraction (Mm3/A)	Assessment Score
Ground Water	113		4.57	10

Surface Water	17		9.1	10
External Sources (Bulk Purchase)	2			10

Question	In Place	Assessment Score
6.2 Monitoring		
Is there a monitoring plan in place?	No	50

Question	General Assessment	Status Quo	Assessment Score
6.2 Monitoring			
6.2.1 % of water abstracted monitored: Surface water	60	No	10
6.2.2 % of water abstracted monitored: Ground water	20	No	10
6.2.4 Surface water levels (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	3	No	10
6.2.5 Ground water levels (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	3	No	10
6.2.6 Water quality for formal schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	3	No	50

6.2.7 Water quality for rudimentary schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	3	No	10
6.2.8 Borehole abstraction? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	5	No	10

Question	In Place	Assessment Score
6.3 Water Quality		
Is there a Water Safety Plan in Place?	No	10

Question	General Assessment	Status Quo	Assessment Score
6.3 Water Quality			
6.3.1 Reporting on quality of water taken from source: urban & rural		No	10
6.3.2 Quality of water returned to the resource: urban	60	No	50
6.3.3 Quality of water returned to the resource: rural	0	No	10
6.3.4 Is there a Pollution contingency measures plan in place?		No	10

6.3.5 Quality of water taken from source: urban - % monitored by WSA self?	25	No	10
6.3.6 Quality of water taken from source: rural - % monitored by WSA self ?	25	No	10
6.3.7 Quality of water returned to the source: urban - % monitored by WSA self?	25	No	10
6.3.8 Quality of water returned to the source: rural - % monitored by WSA self ?	25	No	10
6.3.9 Are these results available in electronic format? (Yes/no)		No	10
6.3.10 % Time (days) within SANS 241 standards per year	40	No	10

Question	B	AP	WTW	WP	SP	WL	SL	R	WWTW	Assessment Score
[section]										
6.4.1.1 The abstraction IS registered with DWS	1988	184								60
6.4.1.2 The abstraction IS NOT registered with DWS	0	0								60
6.4.2.1 The abstraction IS recorded	0	0								60

6.4.2.2 The abstraction IS NOT recorded	1988	184								60

Topic 6 Master Plan		
Section	**Is there a master plan to address this problem?**	**Does this plan address the plan address this problem 100%?**
6.1.1 Current Water Sources	Yes	No
6.2 Monitoring	Yes	No
6.3 Water Quality	No	No
6.4 Operation	No	No
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:	Limited information was provided on the sources and additional sources available and their volumes and abstraction volumes

6.2 Monitoring

Interpret Situation Assessment:	Information was provided regarding monitoring of sources by the technical staff of the WSA. Monitoring occurs either never or very rarely. No monitoring is done regarding the groundwater sources and only some of the more formal schemes surface water abstraction is monitored. A need for proper monitoring of the schemes and sources are required. The monitoring of sources are also vital for the water balance.

6.3 Water Quality

Interpret Situation Assessment:	The WSA provided information on the water quality. According to the WSA, UW mainly conducts the quality monitoring of the sources (abstraction) and the water that is returned. The WSA does not itself monitoring water quality. There are no staff dedicated to water quality and monitoring in the WSA. There is a need to improve quality monitoring in the WSA.

6.4 Operation

Interpret Situation Assessment:	Most of the abstraction points (surface and ground) are registered with the DWS, but in general they are not recorded. Proper asset management and monitoring of the abstraction points are required.

6.1.2 Additional Sources Available

Interpret Situation Assessment:	Limited information was provided on the sources and additional sources available and their volumes and abstraction volumes. The UAP completed looked at current and additional sources. There is, however, a need to complete a WSA master plan to identify possible additional sources and assess the current infrastructure in more detail.

Business Element Report Items	Compliancy Score	Intervention Required	%	Solution description as identified by Master Plan	%	Is there an Existing project addressing this problem?	%	Does this current listed 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 %
6.1.1 Current Water Sources	18.75	Yes	100	The available sources should be analysed in terms of their available abstraction volumes and existing abstraction volumes.	100	No	0	No	0	No	0	No	0	No	0	200	28.57
6.2 Monitoring	20	Yes	100	A proper source monitoring program needs to be put in place	100	No	0	No	0	No	0	No	0	No	0	200	28.57
6.3 Water Quality	13.64	Yes	100	A proper water quality and water monitoring program needs to be put in place	100	No	0	No	0	No	0	No	0	No	0	200	28.57

6.4 Operation	60	Yes	100	Proper asset management and recording/monitoring of all sources are required	100	No	0	No	0	No	0	No	0	No	0	200	28.57
6.1.2 Additional Sources Available	0	Yes	100	Complete a WSA masterplan to assess additional sources	100	No	0	No	0	No	0	No	0	No	0	200	28.57
												Demand Overall Scoring Average					28.57

WSDP FY2018: Strategies and Objectives ***Harry Gwala***

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
Water Resources									
1	The available sources should be analysed in terms of their available abstraction volumes and existing abstraction volumes.	All abstraction sources should be logged and monitored to determine the available abstraction volumes and the existing abstraction volumes. Proper yield analysis of sources is also required	Limited information was provided on the sources and additional sources available and their volumes and abstraction volumes"		Present to council need for proper source analysis to provide funding and resources	Analyse available and existing abstraction volumes and update asset register to include volumes	Update WSDP	Update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
2	A proper source monitoring program needs to be put in place - monitoring and metering of both ground and surface abstraction is required	A proper source monitoring program needs to be put in place - monitoring and metering of both ground and surface abstraction is required	Information was provided regarding monitoring of sources by the technical staff of the WSA. Monitoring occurs either never or very rarely. No monitoring is done regarding the groundwater sources and only some of the more formal schemes surface water abstraction is monitored. A need for proper monitoring of the schemes and sources are required. The monitoring of sources are also vital for the water balance.		Present to council need for proper source monitoring to provide funding and resources	Impliment and develop source monitoring	Update WSDP	Update WSDP	

Nr	Objective / Strategy	Key Performance Indicator	Baseline (2017 status quo)	Linked Project	WSDP FY2018 Target	WSDP FY2019 Target	WSDP FY2020 Target	WSDP FY2021 Target	WSDP FY2022 Target
3	A proper water quality and water monitoring program needs to be put in place - water and wastewater	A proper water quality and water monitoring program needs to be put in place - water and wastewater	The WSA provided information on the water quality. According to the WSA, UW mainly conducts the quality monitoring of the sources (abstraction) and the water that is returned. The WSA does not itself monitoring water quality. There are no staff dedicated to water quality and monitoring in the WSA. There is a need to improve quality monitoring in the WSA.		Present to council need for proper water and wastewater quality monitoring program to provide funding and resources	Develop and implement water and wastewater quality monitoring program	Update WSDP	Update WSDP	
4	Register and record all abstractions with DWS - licensing all necessary abstractions	Register and record all abstractions with DWS - licensing all necessary abstractions	Most of the abstraction points (surface and ground) are registered with the DWS, but in general they are not recorded. Proper asset management and monitoring of the abstraction points are required.		Register and record all abstraction works with DWS	Update WSDP	Update WSDP	Update WSDP	

Topic 7: Finance

Expenditure Cost Standards & Ratios (Rand Million)								
2018				2019		2020		2021
Ratios and efficacy indicators	Sanitation service O&M [and repair] as a % of budget	18.00						
	Sanitation service O&M [and repair] as a % Asset value [PPE]	22.00						
	Water service O&M [and repair] Cost as % of budget value	42.00						
	Water service O&M [and repair] Cost as % of Asset value [PPE]	52.00						
	Untreated waste water units released							
	Cost to purify water	21393328.32						
	Cost to deliver water to consumer	15577829.26						
	Cost to treat waste water	3148840.25						
	Cost to deliver waste water to treatment facility	496766.49						
	Blue drop cost	68812464.00				7850000.00		
	Blue drop number WTW	17.00						
	Green drop cost	697741.00				6650000.00		
	Green drop WWTW number of plants	7.00						
	Water balance cost [Non Revenue Water]							
MTEF		2018		2019		2020		2021
		R/c	Units	R/c	Units	R/c	Units	R/c	Units
Operation /Function / Process: Water Balance Cost / Revenue	Metered units bulk-raw water, or bulk potable water purchased and- or produced. Water that goes into a water supply system	48115516.00	5485000						
	Billed Metered Consumption	68264210.54	1191380	71677421.07		75261292.12			
	Billed Un Metered Consumption		1080620						
	Un Billed Metered Consumption	2150700.00	402000						
	Un Billed Un Metered Consumption	5012950.00	937000						
	Apparent (commercial) losses	2123950.00	397000						
	Real (physical) losses	7586300.00	1418000						
	Water used [lost] during the process of Operation, Repair and Maintenance	315650.00	59000						

Operational Resource Costs [Cost to operate & or deliver service]						
MTEF		2018		2019	2021	2022
Resource (Required/used for Service delivery activities - In Public Procurement there are generally three procurement categories: goods, works and services.)	Staff	61551431.00		66475546.00	71792590.00	
	Vehicles / transport	1084129.00				
	Chemicals	5000000.00		5200000.00	5512500.00	
	Materials					
	Equipment					
	Tools					
	Operation					
	Administration					
	Maintenance (corrective; adaptive; preventative)	83373000.00		89678000.00	96057000.00	
	Billing	55390300.00		58713718.00	62236541.00	
	Revenue collection	29910762.00		28851921.00	30583036.00	
	Management					

MTEF Expenditure Million				
MTEF	2018	2019	2020	2021
Property - WTW				
Dams - WTW				
Springs - WTW				
Weirs - WTW				
Boreholes - WTW				
Reservoirs - WTW				
Water Treatment Works (WTW) Civil works				
Water Treatment Works (WTW) Mechanical works				
Water Treatment Works (WTW) Electrical works				
Pump Station (PS) Civil works				
Pump Station (PS) Mechanical works				
Pump Station (PS) Electrical works				
Internal [water] reticulation - WTW				
Bulk [water] reticulation - WTW				
Meters Bulk - WTW				
Meters Household - WTW				
Property - WWTW				
Waste Water Treatment Works (WWTW) Civil works				
Waste Water Treatment Works (WWTW) Mechanical works				
Waste Water Treatment Works (WWTW) Electrical works				
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				
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

CAPEX Million															
Assets per Class	Fund source name	Transfers recognised - operational	Local Government Equitable Share	Municipal Infrastructure Grant	Municipal Water Infrastructure Grant	Expanded Public Works Programme Integrated Grant (Municipality)	Urban Settlement Development Grant	Rural Households Infrastructure Grant	Backlogs in Water and Sanitation at Clinics and Schools Grant	Implementation of Water Services Projects [ACIP; Etc.]	Regional Bulk Infrastructure Grant	Water Services Operating and Transfer Subsidy Grant (Schedule 6)	Water Services Operating and Transfer Subsidy Grant (Schedule 7)	Municipal Drought Relief Grant	Accelerated Community Infrastructure Programme
	Votes														
Property , Plant and Equipment - Water Treatment System	Property - WTW														
	Dams - WTW														
	Springs - WTW														
	Weirs - WTW														
	Boreholes - WTW														
	Reservoirs - WTW														
	WTW Civil works														
	WTW Mechanical works														
	WTW Electrical works														
	Pump Station (PS) Civil works														
	Pump Station (PS) Mechanical works														
	Pump Station (PS) Electrical works														
	Internal [water] reticulation - WTW														
	Bulk [water] reticulation - WTW														
	Meters Bulk - WTW														
	Meters Household - WTW														
Property , Plant and Equipment - Waste Water Treatment System	Property														
	WWTW Civil works														
	WWTW Mechanical works														
	WWTW Electrical works														
	Pump Station (PS) Civil works - WWTW														
	Pump Station (PS) Mechanical works - WWTW														
	Pump Station (PS) Electrical works - WWTW														
	Internal sanitation reticulation														
	Bulk sanitation reticulation														
	Meters Bulk WWTW														
	Ponds - WWTW														
															Total

REVENUE Million									
Fund source name	Service charges - service	Water Services Operating and Transfer 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.]	Partneship 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 tarrifs 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

Context Information	
Questions	**Answers**

Date of completion							
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)	Don't know
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	Not applicable
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

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		
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. internal audit unit 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			

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)							

MuSSA Questionnaire								
Questions	**Answers**							
1. Water and Sanitation Services Planning								
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 (W2RAPs), and are aligned to your IDP and associated SDBIP targets.	Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. 100%)	Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 95%)	Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 75%)	Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 50%)	Plans still in development	Plan development not yet initiated	Don't know	
You are implementing an up-to-date and adopted municipal water and sanitation services plan (e.g. WSDP.)	Yes, municipal water and sanitation services plans up-to-date, adopted and implemented	Municipal water and sanitation services plans adopted and implemented, but out-of-date (i.e. requires revision)	Municipal water and sanitation services plans adopted but not yet implemented	Municipal water and sanitation services plans not adopted but implemented	Municipal water and sanitation services plans neither adopted nor implemented	Don't know		
Your current project list addresses existing needs/shortcomings identified through the WSDP and associated master planning process.	Yes, all projects are identified via the planning process (i.e. 100%)	Almost all (i.e. >95% of projects)	Most projects (i.e. >75%)	Some projects (i.e. >50%)	<50% of projects	None (i.e. 0%)	Don't know	
Project progress is monitored, tracked and reported to municipal top management/council and the Regulator (through the annual water and sanitation services report)	Yes, strongly agree (both to municipal top management/council and Regulator)	Only to municipal top management/council	Only to Regulator	No, disagree	Don't know			
Projects identified through your various planning processes have been implemented in the last 3 years.	Yes, all projects identified via planning have been implemented (i.e. 100 %)	Almost all implemented (i.e. >95 %)	Most implemented (i.e. >75%)	Some implemented (i.e. >50%)	<50% implemented	None implemented (i.e. 0%)	Don't know	
2. Management Skill Level (Technical)								
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).	Yes, and all posts filled (i.e. 100%)	Yes, and almost all posts filled (i.e. >95%)	Yes, and most posts filled (i.e. >75%)	Yes, but only some posts filled (i.e. >50%)	Yes, but <50% of posts filled	No, does not meet business requirements	Don't know	
You have sufficient technical management and technical support staff.	Yes, 100% as per approved organogram	Yes, strongly agree (i.e. >95% as per approved organogram)	Mostly agree (i.e. >75% as per approved organogram)	Agree somewhat (i.e. >50% as per approved organogram)	<50% as per approved organogram	None (i.e. 0% as per approved organogram)	Don't know	

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)								
WTWs 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/outsourced 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/outsourced 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 organogram meets your business requirements, and posts are filled (i.e. Superintendent of WTWs/WWTWs 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	
WTWs 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

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/outsourced 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	
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	

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 connections are metered and billed (residential and non-residential (commercial, industrial, etc.)) on a monthly basis.	>98%	75% - 98%	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)	Don't know
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)	Don't know
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)	Don't know
8. Basic Sanitation								

You have formal housing areas that are not fully serviced with sanitation infrastructure	No, all formal areas are fully serviced (i.e. no bucket sanitation service)	Yes, but these are new households that will be serviced within 2 years	Yes, still trying to meet formal backlog but >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, but these are new households that will be serviced within 2 years	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 - 80% 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)	<50% implementation	No implementation (i.e. 0%)	Don't know	Not applicable
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)	Serious underfunding (<50% of required funds)	No funds (i.e. 0%)	Don't know	Not applicable
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 only manage to service <50% of the sanitation infrastructure	No, we have serious shortfalls in the servicing of sanitation infrastructure (i.e.<20 %)	Don't know	Not applicable
9. Wastewater/Environmental Safety & Regulatory Compliance								
Please indicate your treated wastewater effluent compliance for COD for your (or your service provider's) WWTWs for the last 12 months.	>95%	90% - 95%	80% - <90%	<80%	Don't know			
ALL your WWTWs, 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)	< 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)	< 50% tabled	Issues noted but none tabled (i.e. 0%)	Not applicable (no issues requiring council resolution exist)	Don't know

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, WTWs, 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 WTWs 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		

Appropriate planned/preventative maintenance is performed at all WWTWs and associated collection system, pump stations.	Yes, all (i.e. 100%)	Most (i.e. >75%)	Some (i.e. > 50%)	< 50%	None (i.e. 0%)	Don't know		
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		

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		

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								

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, 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		
Customers have a functional, reliable and safe water supply system with sufficient quantity and flow, good quality, and minimal interruptions.	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	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	None have a functional, reliable, dignified and safe service (i.e. 0%)	Don't know
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			
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			
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	

Please indicate what percentage of the reported wastewater/sanitation 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	
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				

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	No	0
b.	Resource Development Plan for a 5, 10 and 15 year scenario	Yes	25
c.	Infrastructure Development Plan for a 5, 10 and 15 year scenario	No	0
d.	Functionality Needs Prediction for a 5, 10 and 15 year scenario	No	0
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	Yes	25
b.	Resource Development Plan for a 5, 10 and 15 year scenario	Yes	25
c.	Infrastructure Development Plan for a 5, 10 and 15 year scenario	Yes	25
d.	Functionality Needs Prediction for a 5, 10 and 15 year scenario	No	0
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	Yes	25
b.	Resource Development Plan for a 5, 10 and 15 year scenario	Yes	25
c.	Infrastructure Development Plan for a 5, 10 and 15 year scenario	Yes	25
d.	Functionality Needs Prediction for a 5, 10 and 15 year scenario	No	0
4.	**Taking in to consideration the current financial and institutional capacity of the WSA, score the probability scenario of the timeous implementation of these projects i**		
a.	Existing needs that will take more than 5 years to resolve	Likely	50
b.	Resource Development Plan for a 5, 10 and 15 year scenario	Likely	50
c.	Infrastructure Development Plan for a 5, 10 and 15 year scenario	Likely	50
d.	Functionality Needs Prediction for a 5, 10 and 15 year scenario	Unlikely	25

Overall Future Perspective Score	54.69%

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

Water Infrastructure Pipelines	Water Internal Reticulation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Water Bulk pipeline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitation Infrastructure Pipelines	Sewer internal Reticulation	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
Instructure Works	WTW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	WWTW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Water Pump stations	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.20
	Sanitation Pump stations	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Infrastructure	Reservoirs	0.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00

Investment Framework costs per Future Infrastructure Component

Infrastructure Type	Infrastructure Component	New Development Cost			
		5 yr	10 yr	15 yr	Existing Value
Water Infrastructure Pipelines	Water Internal Reticulation	0.00	0.00	0.00	0.00
	Water Bulk pipeline	0.00	0.00	0.00	0.00

Sanitation Infrastructure Pipelines	Sewer internal Reticulation	0.00	0.00	0.00	0.00
	Sewer Bulk pipeline	0.00	0.00	0.00	0.00
Instructure Works	WTW	0.00	0.00	0.00	0.00
	WWTW	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00

Chapter 5: WSDP Scoring

Total Score	STATUS
41.15