



WHEN THE SUN RISES
WE WORK HARD TO DELIVER

PROVINCIAL OVERVIEW REPORT ON WATER AND SANITATION SERVICES

15 MARCH 2022



co-operative governance
& traditional affairs

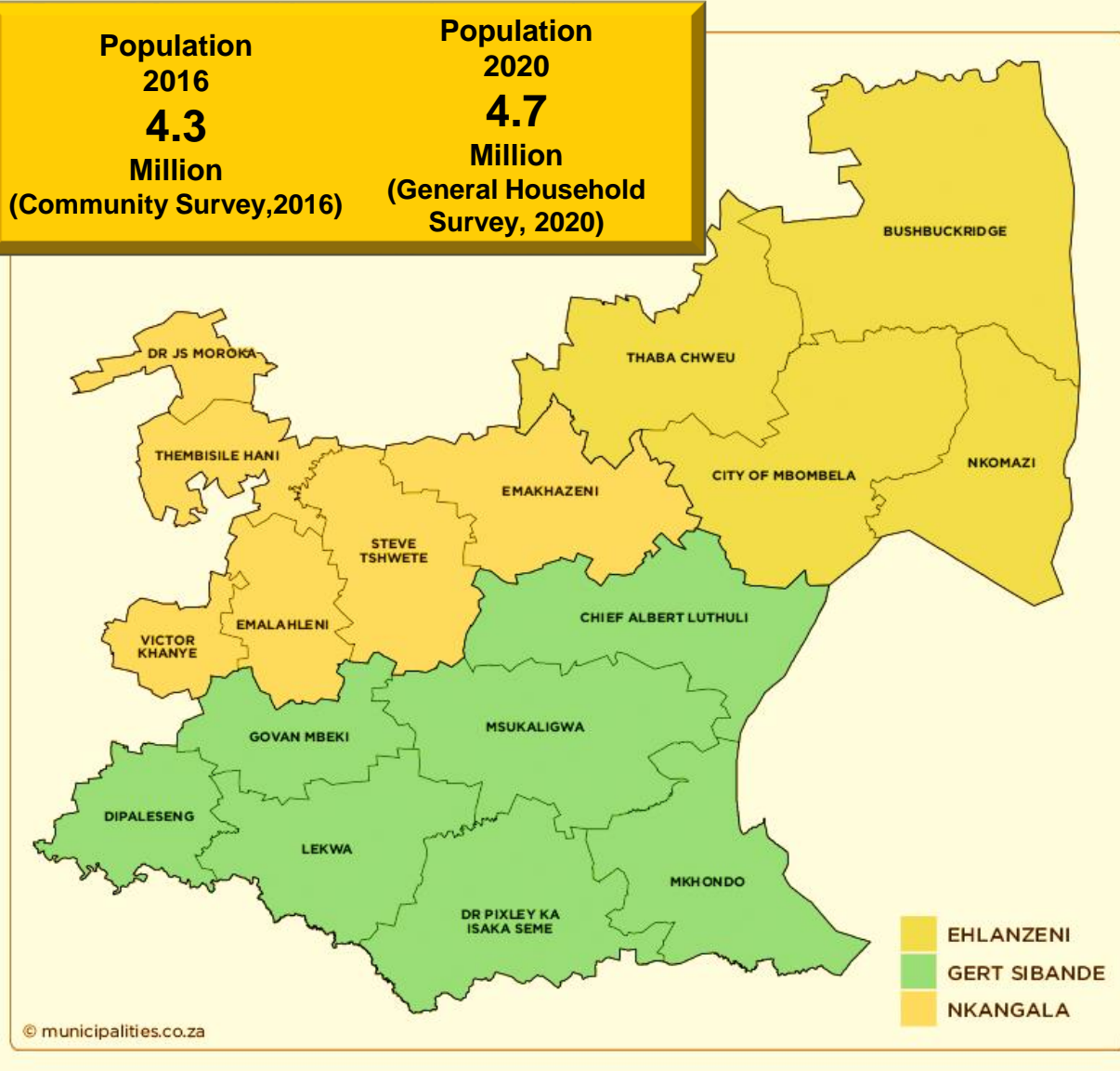
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA



PURPOSE

- ❑ *To present to NCOP the status of water and sanitation services in Mpumalanga Province*

MPUMALANGA PROVINCIAL OVERVIEW



- ❑ The population of Mpumalanga Province increased from 4.3 million in 2016 to 4.7 million in 2020 (increase of almost 400 000 people in 4 year period)
- ❑ The number of households have increased from 1.24 million to 1.35 million households
- ❑ Relatively high increase in household numbers in areas such as Emalahleni, Govan Mbeki, Steve Tshwete, City of Mbombela – the “big 4” and urban areas.
- ❑ Bushbuckridge as well as Nkomazi LMs are the largest fast growing rural areas.
- ❑ The fast growth in these municipalities induced by increase in the number of households put pressure on areas of infrastructure and service delivery – very visible for example in Emalahleni.
- ❑ The excessive growth in demand without concomitant upgrading of bulk water supply as well as the unavailable sufficient water resources has compounded the problems resulting to enormous pressures

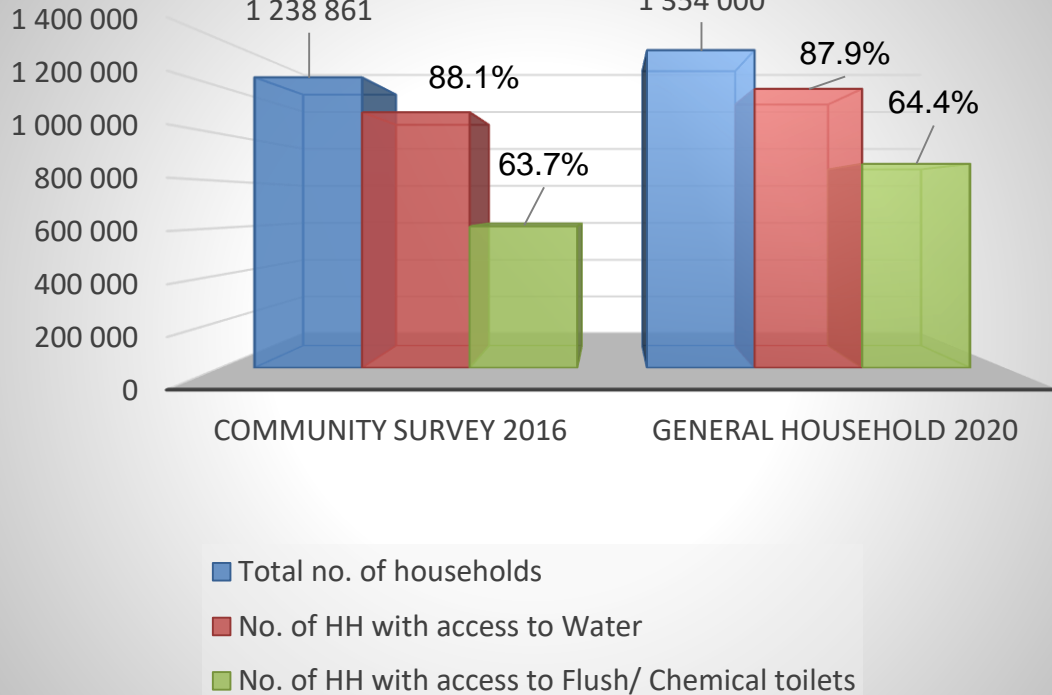
OBSERVED CRITICAL PRESSURES

- ❑ Acute deficit in terms of water resources, where sources such as the dams have already dried in areas such as in Dr. JS Moroka LM. The current deficit is estimated at approximately 20 ML/ day. (demand is 60,27ML/Day against 40,27ML/Day capacity supply)
- ❑ This can also be said in Thembisile Hani LM. The current deficit is estimated at approximately 17.1 ML/ day.(demand at 66.60 ML/Day against 49,5ML/day)
- ❑ Water security is also a challenge in eMalahleni LM- The water demand (161,92ML/Day) is higher than available supply (122.49ML/Day). The current deficit is estimated at approximately 39,43 ML/ day.
- ❑ High distribution water losses due to aged infrastructure (60% asbestos pipes)
- ❑ Aged infrastructure especially pipes that were laid between 1920 and 1940 I that can no longer cope with the demand especially in the fast growing towns
- ❑ Vandalism of the existing infrastructure, drilling of pipes during illegal connections resulting in excessive water distribution losses.
- ❑ Deficiency in the skills for operations and maintenance of existing infrastructure (Asset Care Management)
- ❑ Escalation of water debts owed by municipalities to the amount of R2.3 billion



STATUS OF HOUSEHOLDS ACCESSIBILITY TO WATER SERVICES

ACCESS TO BASIC SERVICES



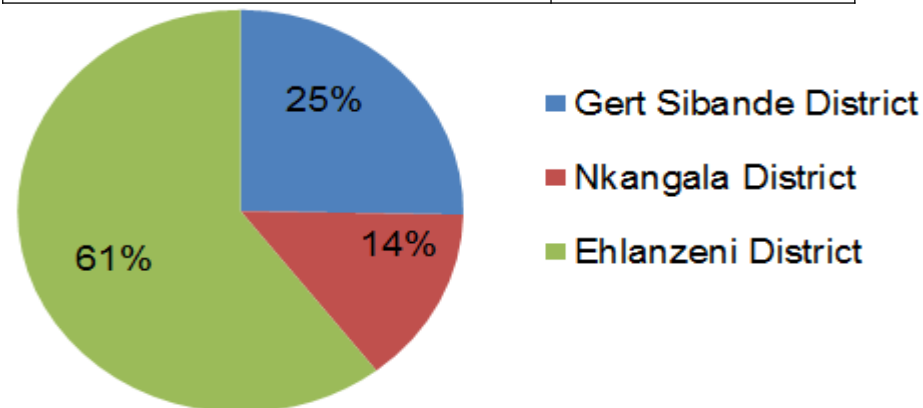
- ❑ In 2020, the percentage of households with access to piped water decreased from 88.1% to 87.9% households (GHS, 2020) due to an increase in the No of Households in the Province
- ❑ Between 2016 and 2020, percentage of households with access to sanitation increased from 63.7% to 64.4%.
- ❑ There's still a huge challenge in the Province on access to hygiene and RDP level toilets given the backlog of 482 024 households (35.6%)
- ❑ The population growth has influenced the level of access to basic services due to new settlements and mushrooming of informal settlements.
- ❑ The Department of Human Settlement is however implementing new projects to establish Integrated Human Settlement with access to basic services

STATUS OF WATER TREATMENT WORKS IN THE PROVINCE

Functionality of water treatment works



District municipalities	No of WTWs
Gert Sibande District	23
Nkangala District	13
Ehlanzeni District	55
Total	91



- The Province has a total of 91 Water Treatment Works (WTWs),
 - Gert Sibande District has 23 (25%)
 - Nkangala District has 13 (14%)
 - Ehlanzeni district has 55(61%)
- 18 of these WTWs are non-compliant.

Analysis

- The non compliant WTWs are compromising water quality which is a threat to the Health of communities.
- This is a clear indication that operations and maintenance is either poor or non existent.

Interventions

- The majority of these non compliant WTWs are being given attention through refurbishment and upgrading.
- More support is required to upgrade most of the Water Treatment Works in the province.
- The War on Leaks programme needs to be resuscitated as it has previously assisted in dealing leakages.

STATUS OF WATER TREATMENT WORKS IN THE PROVINCE

Capacity of Water Treatment Works and Reservoirs









Analysis

- ❑ The surplus excludes Mbombela which has a high deficit of 12.33ML/day
- ❑ Despite adequate capacity in Ehlanzeni District, water resource availability is a challenge.
- ❑ The population growth has put serious pressures in both Gert Sibande and Nkangala District municipalities.
- ❑ The limited bulk infrastructure capacity contributes to erratic water supply in municipalities.
- ❑ The water infrastructure challenge has increased the dissatisfaction level of communities on service delivery as can be seen with more cases reported to South African Human Rights Commission

Interventions

- ❑ More allocation is required through various grants to concentrate on the upgrading of bulk water infrastructure.

District municipalities	Current Capacity	Current Demand	Shortfall/Surplus
Ehlanzeni District	474,35ML/D 	385.31ML/D 	88.84ML/D
Gert Sibande District	251,25ML/D 	269,7ML/D 	-18,45ML/D
Nkangala District	307.33 ML/D 	395.64 ML/D 	-88,25ML/D

STATUS OF WATER RESERVOIRS/ STORAGES

Capacity of Water Storage/ Reservoirs



- ❑ The reservoirs capacity in the Province is not commensurate to the growing population and demand for water infrastructure.
 - ❑ The existing storage capacity in the Nkangala district is 758.9m/l versus the required storage of 845.28 m/l.
 - ❑ In Gert Sibande District existing storage is 392.2 m/l versus required capacity of 550.15 m/l.
 - ❑ In Ehlanzeni district the existing storage is 614.32 m/l versus the required capacity of 1 145.15 m/l which is the huge shortfall.

Analysis

- ❑ Any efforts of upgrading Water Treatment Works without sufficient storages will have no impact on access to basic water.
- ❑ Investment on infrastructure does not fully prioritise projects on water storages.

Interventions

- ❑ There is a need to consider ring fencing a percentage of grant allocations to water storages.

WATER RESOURCE VERSUS WATER USE DISTRIBUTION

Equitable balancing effect on water resource distribution

- ❑ Domestic water use is allocated 42% and 23% whereas irrigation is allocated 55% by both Water Use In Olifants WMA and Water Use In Inkomati-Usuthu WMA respectively.
- ❑ There is a need for a balance in the distribution of water from the water resources.
- ❑ Therefore a need arises for all the unallocated water quota as well as unused quota in the water resources to be directed for the purposes of primary use.
- ❑ Municipalities such as Dr JS Moroka and Thembisile Hani are the most affected municipalities amongst others. The City of Mbombela also has drought challenges in the Umjindi area. The release of water in this areas is a much needed intervention.

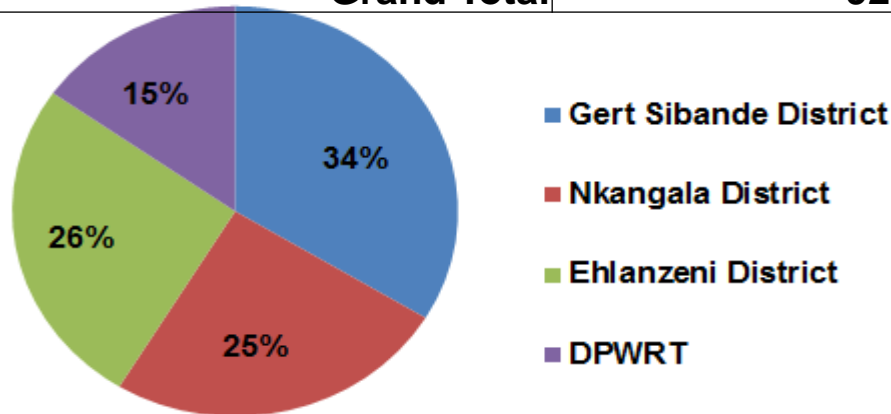


STATUS OF WASTE WATER TREATMENT WORKS IN THE PROVINCE

Functionality of Waste Water Treatment Works



District municipalities	No of WWTWs
Gert Sibande District	31
Nkangala District	23
Ehlanzeni District	24
Total for municipally owned WWTWs	78
DPWRT	14
Grand Total	92



- ❑ On sanitation backlogs, 483 516 households (36% of households) have access to other (non-hygienic) toilet facilities.
- ❑ The province has a total of 92 Waste Water Treatment Works (WWTWs)
 - ❑ 29 in Gert Sibande District
 - ❑ 24 in Nkangala District,
 - ❑ 24 in Ehlanzeni district
 - ❑ 14 WWTWs owned by the Department of Public Works, Roads and Transport.
- ❑ Nine (9) of these WWTWs are critical/noncompliant and require intervention.

Analysis

- ❑ Untreated waste water results in sewer spillages and contamination of water resources such as rivers, under ground water, streams and riparian zones amongst other.
- ❑ Poor operations and maintenance contributes to this challenges
- ❑ Operation of plants beyond design capacity adds to the dysfunctionality of the system.

Interventions

- ❑ in this financial year through various grants, a total of 24 Waste Water Treatment plants are under refurbishment and upgrading in various municipalities within the Province.
- ❑ More WWTWs needs to be prioritized for upgrading.

STATUS OF WASTE WATER TREATMENT WORKS IN THE PROVINCE

Capacity of Waste Water Treatment Works



- ❑ Ehlanzeni District has sufficient bulk infrastructure capacity on sanitation bulk infrastructure which is more than the current demand of 68,85 ML/d
- ❑ Gert Sibande and Nkangala Districts are operating beyond the exiting capacity.

Analysis

- ❑ The highest concern is the poor management of sewer leakages and spillage to water resources.
- ❑ Despite adequate capacity in Ehlanzeni District, Thaba Chweu and City of Mbombela have sewer spillages challenges.
- ❑ Municipalities such as Govan Mbeki, Msukaligwa, Lekwa, Emalahleni, Dr Pixley Ka Isaka Seme have recorded sewer spillages which are a consequence of inadequate infrastructure.
- ❑ The grant allocations are normally insufficient to immediately deal with upgrades in a short period but rather require multiyear implementation.
- ❑ The growing population will suffer if action is not taken to address bulk sanitation infrastructure.

District municipalities	Current Capacity	Current Demand	Shortfall/Surplus
Ehlanzeni District	89,10ML/D	68,85ML/D	20,25ML/D
Gert Sibande District	79,1ML/D	165ML/D	- 85,9ML/D
Nkangala District	153,7ML/D	395.64 ML/D	- 7,8ML/D

Interventions

- ❑ In this financial year through various grants, a total of 24 Waste Water Treatment plants are under refurbishment and upgrading in various municipalities within the Province.
- ❑ More WWTWs needs to be prioritized for upgrading.

MUNICIPAL SPECIFIC OBSERVATIONS

DR JS MOROKA MUNICIPALITY

- The acute shortage of water has prompted for the following exploration of alternatives for the augmentation in the short, medium and long term:
- Short term**
 - Mthombo emergency bulk pipeline, currently under construction funded from MIG to the value of R53m to be completed by end of March 2022 (additional 6MI/d)
- Medium Term**
 - Magalies Water board release of additional bulk water for the additional 10MI/d. A bulk pipeline connecting from the Magalies Water Board to Dr JS Moroka Municipality is part of the planning for 2022/23 FY going forward.
- Long term**
 - Rust De Winter bulk water pipeline is currently at feasibility study for additional of (10MI/d). Estimated at R620 million.
- Things in place:** Reconciliation strategy, Feasibility study on Implementation Readiness and Regional Bulk Infrastructure Master Plan.
- Things to do:** Review of Water Master plan, Municipal WSDP.

MUNICIPAL SPECIFIC OBSERVATIONS

THEMBISILE MUNICIPALITY

- ❑ The acute shortage of water has prompted for the following exploration of alternatives for the augmentation in the short, medium and long term:
 - ❑ **Short term**
 - ❑ Force City of Tshwane to provide the maximum allocation of water which is 16.8MI/d versus the current supply of 8MI/d.
 - ❑ Bundu Scheme is currently completed and supplying additional 2.5MI/d
 - ❑ Refurbishment of Moloto ground water supply scheme for additional 4MI/d
 - ❑ **Medium Term**
 - ❑ Nkangala District has confirmed to DWS the co-funding Arrangement for the Loskop bulk pipeline project.
 - ❑ **Long term**
 - ❑ Implementation of the Loskop Bulk Water Project for the additional 20 MI/d. The Implementation Readiness study has been approved and currently the project is at evaluation stage. Construction activities are planned to resume in April 2022 and completion set for April 2025.
- ❑ **Things in place:** Reconciliation strategy, Feasibility study on Implementation Readiness and Regional Bulk Infrastructure Master Plan, Municipal WSDP, Water conservation and Demand Management Plan and O&M Plan
- ❑ **Things to do:** DWS to finalise the review of the design by not later than December 2021

MUNICIPAL SPECIFIC OBSERVATIONS

EMALAHLENI MUNICIPALITY

- The acute shortage of water has prompted for the following exploration of alternatives for the augmentation in the short, medium and long term:
 - Short term**
 - Mine water reclamation for additional 8ml/d
 - Pressure Management programme currently underway by the municipality.
 - Replacement of asbestos bulk pipeline
 - Medium Term**
 - Roll out of the replacement of asbestos pipes for the entire affected areas to curb water losses
 - Finalise the Water Use License abstraction for the additional abstraction from the Witbank dam (Olifants system)
 - Allocation of the RBIG funding to address the bulk infrastructure pressures (an estimate of R831 million)
 - Long term**
 - Additional water from Witbank Dam for an additional of 13MI/d
 - Upgrading of the Witbank Water treatment Plant from 75MI/d to 120 ml/day
 - Effluent re-use for an additional of 14MI/d
 - Water conservation for additional capacity of 15MI/d
- Things to do:** Finalise the capital investment plan against the possible RBIG allocation.

MUNICIPAL SPECIFIC OBSERVATIONS

CITY OF MBOMBELA MUNICIPALITY

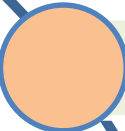


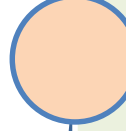



- The acute shortage of water has prompted for the following exploration of alternatives for the augmentation in the short, medium and long term:
 - Short term**
 - The finalisation of the Service Level Agreement (SLA) for the operation of the Hoxane Water Scheme between City of Mbombela and Bushbuckridge municipalities is at an advanced stage. This Scheme will benefit the Northern Nsikazi areas within the jurisdiction of City of Mbombela municipality.
 - Immediately curb illegal connections, vandalism and Improve on operation and maintenance (Asset care Management such as the pressure issues in the OMO reservoirs and the tempering with valves
 - Medium Term**
 - Water conservation for additional 37Ml/d
 - Address the acute water shortages through the construction
 - Implementation of the Northern Nsikazi Regional bulk water scheme to the value of R700 million to cover about 23 villages.
 - Long term**
 - The implementation of the Mountain View Regional/Mbombela Dam by DWS for the additional yield of 78Mm³/a is at feasibility stage
- Things to do:** Review of Water Master plan, Municipal WSDP. 15

MUNICIPAL SPECIFIC OBSERVATIONS

BUSHBUCKRIDGE MUNICIPALITY

- The acute shortage of water has prompted for the following exploration of alternatives for the augmentation in the medium and long term:
 - Short Term**
 - Bushbuckridge to deal effectively with operations and maintenance as well as vandalism to infrastructure
 - Medium Term**
 - Water reticulation infrastructure
 - Water conservation and demand Management to curb water losses
 - Financial injections for bulk water infrastructure
 - Long term**
 - Upgrading of Waste Water Treatment Plants
 - Installation of sewer reticulation infrastructure
- Things to do:** Review of Municipal WSDP in line with the demands on the ground.

SUMMARY OF OBSERVED CHALLENGES IN GENERAL

-  **Water Service Authority function being with local municipalities, some of which are failing in disposing the function**
-  **Lack of water and sanitation master plans**
-  **Aged infrastructure resulting in collapsing infrastructure system**
-  **Inability of Govan Mbeki and Victor Khanye municipalities to fully service their Rand Water debts resulting in Rand Water reducing water pressure thereby affecting water supply.**
-  **Lack of safe and reliable water supply (in line with Blue and Green Drop reports & scores of Municipalities)**
-  **Lack of technical capacity in municipalities as evidenced by poor infrastructure planning and implementation of infrastructure projects.**
-  **Inadequate budget allocation to implement projects and delays on project implementation**

PROVINCIAL INTERVENTIONS

- ❑ The Province has also intervened on sewer spillages in Msukaligwa and Govan Mbeki municipalities through the Department of Human Settlements and recently, the Department of COGTA has also intervened in Lekwa, Govan Mbeki and Thaba Chweu municipalities on sewer spillages. Work has also been completed in the Standerton Water Treatment Works to address filters and pipes which are making the plant ineffective. Further the Department is finalising an intervention to repair and maintain motors and pumps in various treatment works in Chief Albert Luthuli municipality
- ❑ Municipal project managers supported to improve performance on the implementation of infrastructure projects funded through various grants (MIG, IUDG, RBIG and WSIG).
- ❑ COGTA is intervening in terms of project preparation, master planning, asset care, revenue enhancement and spatial restructuring.
- ❑ Public-Private Growth Initiative is on board through the DDM approach in mobilizing private sector funding.
- ❑ DDM One Plan aligned to 6th Municipal Administration to revamp the priority of infrastructure development to address service delivery anomalies.

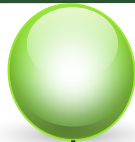


CONCLUSIONS

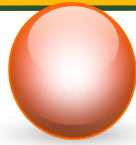
- ❑ Expediting the implementation of the Mountain View Regional/Mbombela Dam.
- ❑ Re-allocation of grants by DWS to the Emalahleni municipality for the implementation of water and sanitation infrastructure.
- ❑ Assess the possibilities for further grant injections to municipalities with bulk infrastructure challenges.
- ❑ Prioritize DR JS Moroka municipality in dealing with its acute bulk water supply challenges including immediate engagements with the City of Tshwane.
- ❑ Accelerate the Implementation of the Loskop Bulk Water scheme to stabilise bulk water supply for Thembisile Hani municipality.
- ❑ Accelerate the operation of the Hoxane Bulk water scheme for the equitable distribution between Bushbuckridge and City of Mbombela municipalities by finalising the Service Level Agreement between the parties.
- ❑ Mobilization of the private sector through the District Development Model across the three districts to support municipalities in addressing infrastructure challenges.
- ❑ Accelerate the review of the Provincial Water Master Plan to address issues of ageing infrastructure and backlog.
- ❑ Maintenance and upgrade of the ageing infrastructure projects of all treatment plants in the province to improve water quality.
- ❑ Improve Infrastructure planning, upgrading and maintenance through implementation of programmes supported by DBSA such as Infrastructure Project Preparation, Master Planning and Asset care



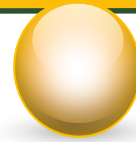
Questions



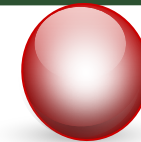
Comments



Inputs.



Suggestions



Nothing.

