

VHEMBE DISTRICT MUNICIPALITY

VHEMBE DISTRICT MUNICIPALITY PRESENTATION FOR THE
NCOP PRESENTATION

Presenter : Cllr Nenguda D.A
Designation: Executive Mayor
Directorate: Office of the Executive Mayor
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WATER IS LIFE - SANITATION IS DIGNITY



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



WATER IS LIFE - SANITATION IS DIGNITY

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BACKGROUND

- ❑ Vhembe DM is the WSA in its area of jurisdiction comprising of four Local Municipalities viz: Musina, Makhado, Collins Chabane LM and Thulamela LM
- ❑ The District Population is approximately 1 393 948 residing in 821 settlements.
- ❑ 89.7 % population reside in rural area and the remaining in population reside in towns
- ❑ There are 21 water treatment works in the District and five (5) ground water schemes, the total design capacity is 229.486 ML/d ,currently producing less than 186.6 ML/d with the overall performance of not more than 81.31%
- ❑ The district area has been generally experiencing water shortages due to various causes, viz,
 - ✓ ***Dilapidated and aging infrastructure***
 - ✓ ***Unauthorised water connections***
 - ✓ ***Growing communities***
 - ✓ ***Climate change (e.g. Drought)***
 - ✓ ***Load Shedding***
- ❑ The Municipality has 14 Wastewater treatment works
- ❑ Thohoyandou and Makhado are amongst the biggest wastewater Treatment Works in the District.
- ❑ Out of the 14 facilities, 06 are operational and the 08 are in need of refurbishment.
- ❑ During 2021 Green drop assessment , the municipality move from 12% to 24%, of which a Green drop action plan has been developed and currently on implementation
- ❑ The municipality has water and sanitation master plan developed in 2018, however the municipality need to review it to accommodate plans for the MMSEZ.

WATER & SANITATION PROVISION IN VHEME DISTRICT MUNICIPALITY PER LOCAL MUNICIPALITY

WATER DEMAND VS SUPPLY (DEFICIT OR SURPLUS)

WATER DEMAND VS SUPPLY (DEFICIT OR SURPLUS)

LM	Water Demand at yard connection (MI/d)							Current Supply (MI/d)	Current Surplus / Deficit (MI/d)	Future Surplus / Deficit (MI/d)
	2020	2022	2025	2030	2035	2040	2045	2022	2023	2045
Collins Chabane	53.4	54.2	55.5	59.8	66.7	73.9	80.0	65.1	10.9	-14.9
Makhado	81.8	82.1	82.4	87.7	96.1	104.8	112.7	30	-52.1	-82.7
Musina	44.0	45.0	46.4	52.8	58.0	62.7	67.0	24.4	-20.6	-42.6
Thulamela	96.5	97.5	98.9	103.1	113.2	123.7	132.8	96.56	-0.94	-36.2
Total	275.7	278.8	283.3	303.3	333.9	365.2	392.5	216.7	-62.7	-176.4

THULAMELA LM_WATER AND SANITATION PROVISION

THULAMELA LOCAL MUNICIPALITY

- ❑ Thulamela LM has a total population of 497 237 residing in 248 villages and Three (3) towns which are Thohoyandou, Sibasa and Shayandima. Thulamela LM has 41 wards.
- ❑ There are 4 WTWs which are Vondo, Nandoni, Phiphidi and Damani, and 4 package plants Dzindi, Belemu Dzingahe and Madaswali with the total design capacity of 127,822 MI/d and currently producing 94.5 MI/d.
- ❑ The average performance of the WTW is 74%. The major source for water supply is Nandoni Regional water supply at 36MI/day
- ❑ The surface bulk water supply is augmented 912 boreholes with 189 not operational mainly because of theft and vandalism, resending water tables and drying of borehole problems.
- ❑ Over and above that as a short-term intervention to assist the affected villages water supply is augmented further by tankering in other area.
- ❑ Thulamela has three WWTW including sewer ponds with the total designed capacity of 12,73 ML/day and currently producing 14,7 ML/day.
- ❑ Wastewater treatment works operating over its design capacity of 115,5%

THULAMELA LM_ RELIABILITY OF WATER SUPPLY (CONT...)

LM	Scheme Name/Number	Source	WTW	Villages/Settlement	Population	Capacity ML/D		Status of water supply (Reliability)	
						Design	Output	Less than 24hrs	24hrs Supply
Thulamela	Vondo RWS	Vondo Dam	Vondo WTW Phiphidi WTW Dzindi WTW Belemu WTW Dzingahe p/p	167	325 000	69.42	49.81	160	7
	Damani RWS	Damani Dam	Damani Mudaswali p/p	15	80 994	4.60	2.75	15	0
	Tshifudi RWS	Xikundu weir	See Xikundu		29 536	unknown	unknown		
	Mutale RWS	Mutale weir		25	125 449	13,5	10	17	8
	Nandoni RWS	Nandoni Dam	Nandoni	38	110 000	60.0	34	8	30

THULAMELA LM – WASTEWATER TREATMENT WORKS

WWTW	Capacity MI/day GDB	Green Drop Capacity MI/day Already	reached useful life-span?	Capacity Sufficient	Ave Operating hours per day	General physical Condition	Water Sampling	Notes
Tshifulanani Ponds WWTW	0.5	0.5	No	Yes	24	Operational	N/A	no outflow , VDM to install inflow meters
Thohoyandou (Vondo) WWTP	12	14	No	No	24	Operational	Daily	Consulting engineers appointed to do a technical report on prospects of upgrading the plant.
Mutale WWTW	0.23	0.2	No	Yes	24	Operational	N/A	no outflow

WATER AND SANITATION PROVISION INTERVENTION

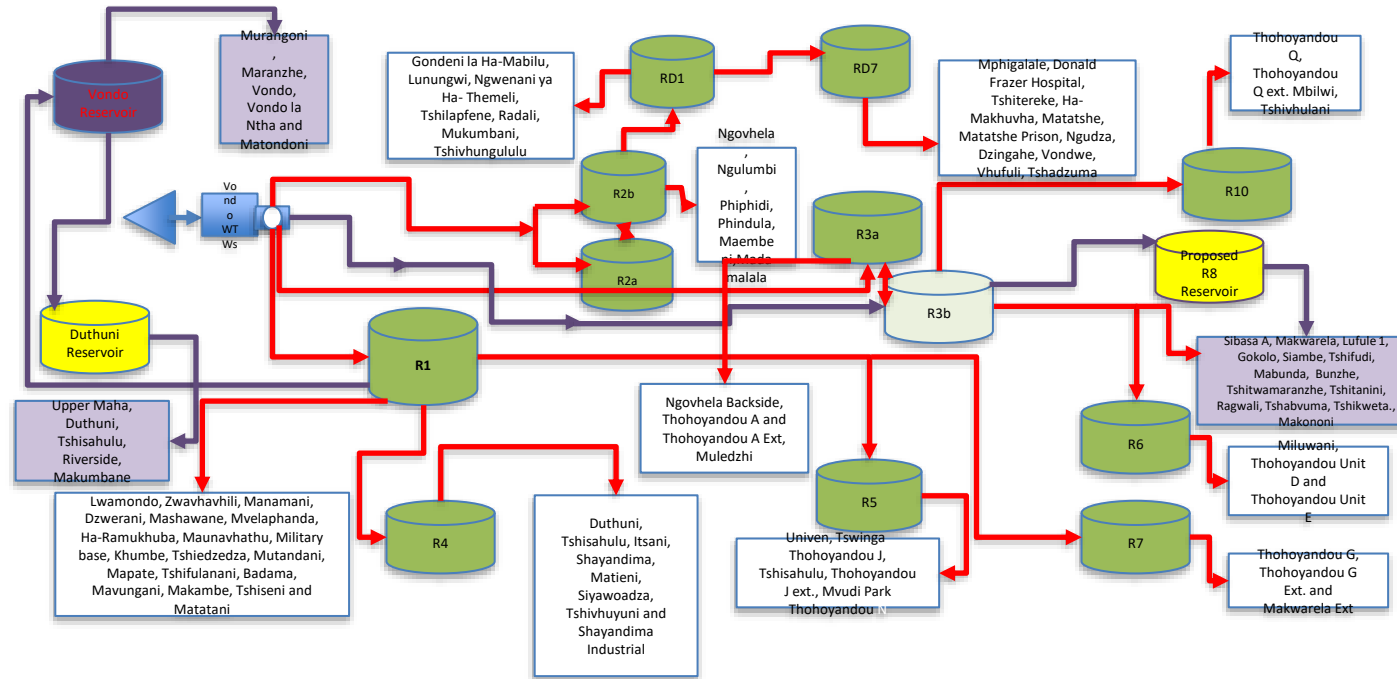
Main interventions for augmenting water supply in the Thulamela area which are in phases; however, in this presentation focus is more on phase 1 and 2

Phase 1 – Develop local water resources including taking groundwater from various alluvial aquifer and other sources of groundwater around Thulamela (*short term, ongoing actions*)

Phase 2 – Refurbishment or Upgrading of Water treatment works and water reticulation

Phase 3 – Construction of New Water treatment works / Building of new dams

VONDO RWS SUPPLY SYSTEM



PHASE 1: SHORT TERM PROJECTS TO ADDRESS THE CHALLENGE

Item No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	No bulk water pipeline and internal water reticulation	Construction of bulk water pipeline and internal reticulation from Damani to Vondwe, Makhuvha, Tshidimbini, Mukula	R 10 m	05 April 2023	30 October 2023	Project is 98%.
2.	Insufficient water supply to Tswinga and Muledane	Drilling of boreholes in Muledane and Tswinga, Construction of raising main and storage tank	R 9.5m	30 March 2023	30 September 2023	Project is 95% complete awaiting for Eskom to energized
3,	Pollution to water resources and aged infrastructure	Refurbishment of Thavhani sewer and Mvudi pump station	R8m	30 September 2023	30 June 2024	Projects on evaluation and will be appointed by 15 Sept 2023

PHASE 1: SHORT TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
4.	Insufficient water supply	Development of borehole and associated infrastructure at Tshaulu village	R4m	05 April 2023	30 October 2023	Project is 98%.
5.	Health hazard	Construction of VIP Thulamela	R3,6m	30 March 2023	30 September 2023	Project is 100% complete

PHASE 2: MEDIUM TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Insufficient raw water from Vondo dam to ,meet the current upgraded WTW	Construction of Raw Water Bulk Pipeline from Vondo Dam to Vondo Water Treatment Works	R 74 m	15 June 2023	October 2024	Project is currently at 0%.
2.	Aged bulk water pipeline i.e asbestos pipeline	Construction of Bulk Pipeline from Vondo treatment works to Ngovhela (R3b) Reservoir	R 99,5mm	30 Sept 2023	30 January 2025	0% progress , contractor appointed on the 25 August 2023.
3.	No bulk water supply , water reticulation and storage reservoirs	Construction of bulk and internal reticulation for Ngulumbi, Madamalala, Madamalala, Ngwenani which includes the storage reservoirs	R86m	15 April 2023	Sept 2024	Project progress is 57%. Project is progressing well
4.	No bulk water supply , water reticulation and storage reservoirs	Construction of bulk Pipelines and internal reticulation for Maranzhe, Tshikunda, Vondo lantha, Matondoni, Murangoni etc. which also included the storage reservoirs.	R 96,4m	15 April 2023	Sept 2024	Project progress is 30%, the project stated late due to work permit that was issued on 09 June 2023.
5.	Insufficient water supply to the two villages due to population increase.	Construction of Bulk Pipelines and internal reticulation for Duthuni, Makumbane and Tshisahulu villages	R 165,6m	01 July 2024	30 March 2026	Project not yet started and planned to commence in 2024/25 FY.

PHASE 2: MEDIUM TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
6,	Insufficient water supply to supply Budeli, Mutoti, Dumasi and Makuvha	Construction of Bulk pipeline and internal reticulation with storages for Dumasi, Makhuvha, Budeli and Mutoti.	R 29.9m	30 Nov 2023	30 April 2024	Project is at design stage.

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Avail Budget	Start date	End Date	Progress/Comments
1.	Aged infrastructure and the increase of population	Construction of Bulk Pipelines and Internal reticulations for Dzwerani, Tshivhazwaulu, Maematshena, Tshivhale, Manamani,	R 109m	R 0m	01 July 2024	30 June 2025	Project on planning stage
2.	Aged infrastructure and the increase of population	Construction of Bulk Pipeline and Internal reticulations for Tshivhulani, Gokolo, Tshififi, Mabunda, Tshikweta, Siambe, Bunzhe, Makononi, and Tshabvuma which includes upgrading of Makwarela reticulation.	R 129m	R0m	01 July 2024	30 Sept 2025	Project on planning stage
3.	Aged infrastructure and the increase of population	Construction of bulk water pipeline and internal reticulation from Damani to Vondwe, Makhuvha, Tshidimbini, Mukula	115m	R0m	01 July 2024	30 June 2025	Project on planning stage
5.	Aged infrastructure and the increase of population	Construction of Bulk pipeline and internal reticulations for Dopeni, Shanzha, Tshirenzheni, Tshikombani, Mudunungu Milaboni and Siloam	115m	R0m	01 July 2024	30 June 2025	Project on planning stage
		TOTAL ESTIMATED COSTS					

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

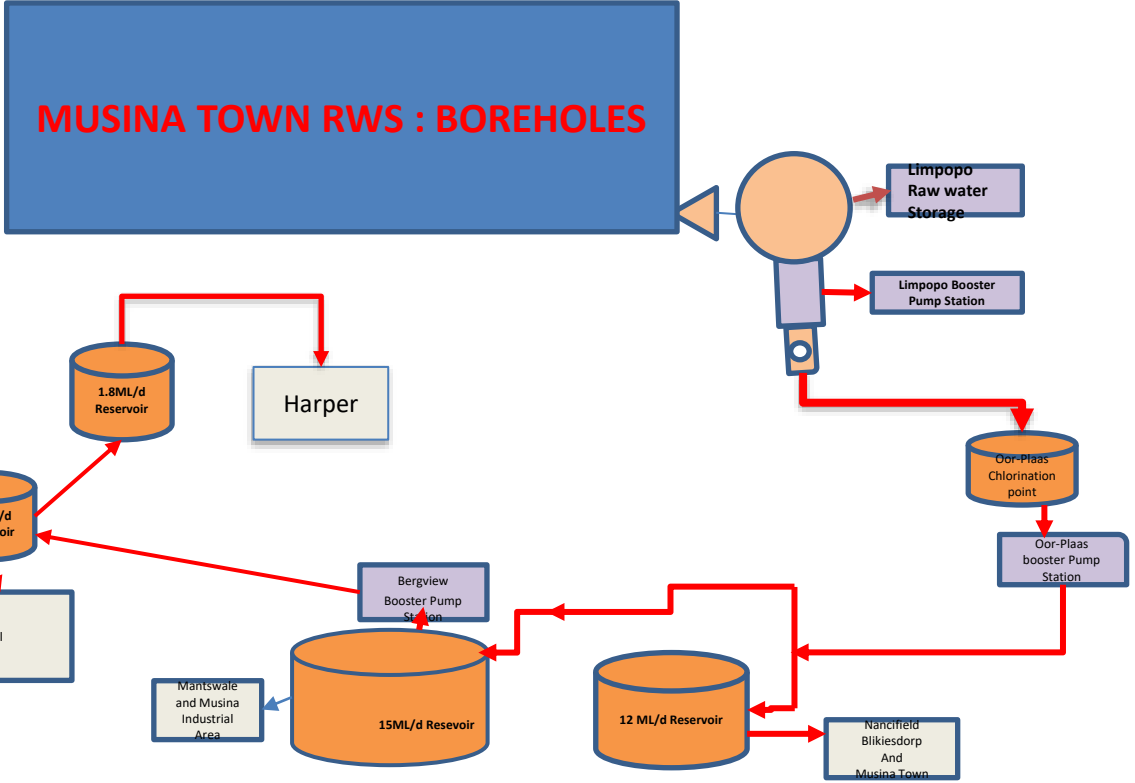
Item. No.	Challenge	Project to address the challenge	Project cost	Avail Budget	Start date	End Date	Progress/Comments
1.	pollution into water sources	Upgrading of Thohoyandou Wastewater Treatment Plant	R 95m	R 0m	01 July 2024	30 June 2025	Project on planning stage
2.	Aged sewerage pipe network	Replacement of dilapidated Asbestos sewer pipe networks in Thohoyandou, Sibabsa, Shayandima and Mkwarela	R 485m	R0m	01 July 2024	30 Sept 2026	Project on planning stage
3.	Continuous leakage from the Musina Manifold and rising main	Refurbishment of the Raw water Bulk pipelines	R 18m	18m	2 October 2023	25 February 2024	Contractor appointed, site establishment in 14 days with effect from the 2nOctober 2023

MUSINA LOCAL MUNICIPALITY

WATER AND SANITATION PROVISION IN MUSINA

MUSINA LOCAL MUNICIPALITY

- ❑ Musina LM has a total population of 132 009 residing in 192 villages and two (2) town, which is Musina and Masisi. The municipality has 12 wards
- ❑ They have boreholes system and two (2) WTW (Mutale and Nwanedi/Luphephe) with a total design capacity of 20.4 MI/d and currently producing 16.3 MI/day.
- ❑ The average performance of the Boreholes schemes is 79%
- ❑ The surface bulk water supply is augmented by 730 boreholes 151 of them not operational mainly because of theft and vandalism, resending water tables and drying of borehole problems.
- ❑ Over and above that as a short-term intervention to assist the affected villages water supply is augmented further by tankering in other areas
- ❑ Musina has two WWTW with the total designed capacity of 5 ML/day and currently producing 6.5ML/day
- ❑ Wastewater treatment works operating over its design capacity of 130%



WATER RESOURCES AUGMENTATION INTERVENTIONS

Main interventions for augmenting water supply in the Musina area which are in phases; however, in this presentation focus is more on phase 1

Phase 1 – Develop local water resources including taking groundwater from the Limpopo River alluvial aquifer and other sources of groundwater, water from defunct mines (*short term, ongoing actions*).

- Refurbishment of Manifolds, Booster Pumps and the rising main from Limpopo Booster Pump Station to Oor-Plaas reservoir.
- Drilling some borehole and locating the flooded boreholes along the river

Phase 2 – Refurbishment of WWTW (*medium term*)

Phase 3 – Building of new dams as follows:

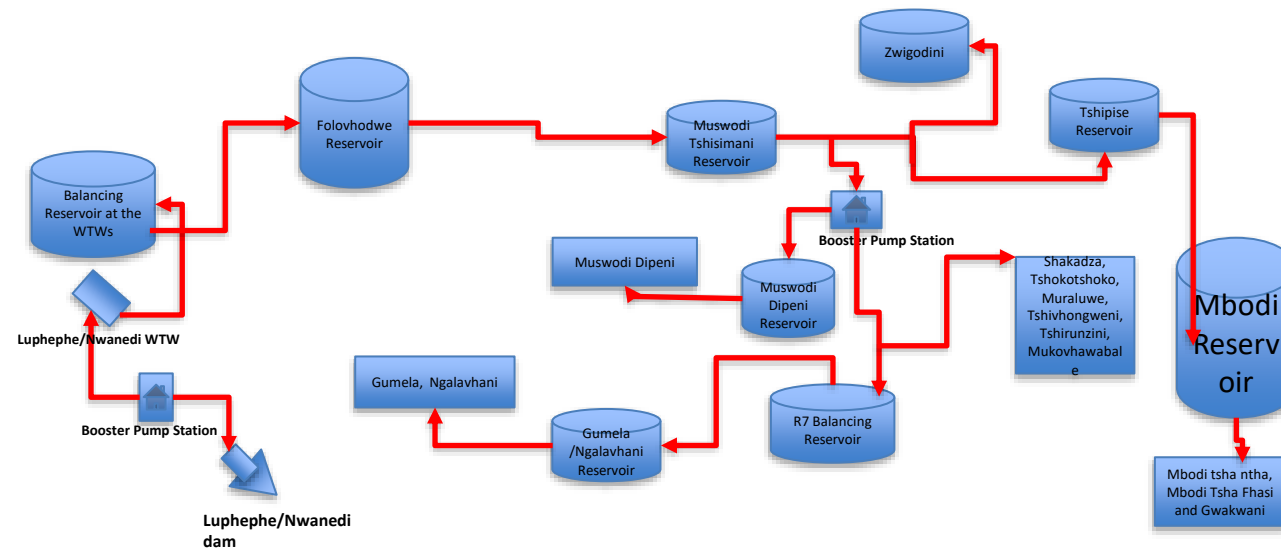
- a) Proposed dam on the Mutale River for use in the Luvuvhu - Letaba catchment as well as transfer of water to Musina (long term 2035)
- b) Abstracting water from the Limpopo River and storing it in a series of two dams (the Musina Dam and the Sand River Dam), coupled with distribution infrastructure to Musina Town (long term - 2035)

MUSINA LM_ RELIABILITY OF WATER SUPPLY (CONT...)

LM	Scheme Name/Number	Source	WTW	Villages/Settlement	Population	Capacity ML/D		Status of water supply (Reliability)	
						Design	Output	Less than 24hrs	24hrs Supply
Musina	Luphephe/Nwanedi RWS	Nwanedi Dam	Luphephe/Nwanedi water works	7	33 674	10.6	9.4	7	0
	Musina	Limpopo river	boreholes	4	47 074	Unknown	15	4	0

LUPHEPHE/NWANEDI WATER TREATMENT WORKS AND ITS SUPPLY AREAS

LUPHEPHE /NWANEDI DAM NETWORK



MUSINA LM - WASTEWATER TREATMENT WORKS

Local municipality	WWTW	Capacity Ml/day GDB	Green Drop Capacity Ml/day	Already reached useful life span?	Capacity Sufficient	Ave Operating hours per day	General physical Condition	Water Sampling	Notes
Musina	Musina WWTW	2	1.5	No	Yes	24	Dysfunctional	Monthly	Due for refurbishment under WSIG 2023/24 FY
Musina	Nancefield WWTW	3	5	No	No	24	Dysfunctional	Monthly	Due for refurbishment under WSIG 2023/24
Musina	Campbell	Unknown	-	Yes	-	8	Dysfunctional	Monthly	Due for refurbishment under WSIG 2023/24

WATER AND SANITATION PROVISION INTERVENTION

Main interventions for augmenting water supply in the Musina area which are in phases; however, in this presentation focus is more on phase 1 and 2

Phase 1 – Develop local water resources including taking groundwater from various alluvial aquifer and other sources of groundwater around Thulamela (*short term, ongoing actions*)

Phase 2 – Refurbishment or Upgrading of Water treatment works and water reticulation

Phase 3 – Construction of New Water treatment works / Building of new dams

PHASE 1: SHORT TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Insufficient water supply	Replacement of Sewer pipeline at Musina	R3,2m	30 March 2023	30 October 2023	Projects is 75% complete
2.	Insufficient water supply	Development of Borehole at Mbodi Village	R1,4m	30 March 2023	30 Sept 2023	Projects is 97% complete
3.	Insufficient water supply	Development of borehole at Domboni la Folovhodwe	R1,4m	30 March 2023	30 October 2023	Projects is 94% complete
4.	Insufficient water supply	Construction of VIP Musina	R2,5m	30 April 2023	25 June 2023	Projects is 100% complete
5.	Insufficient water supply	Upgrading of sewer line at Matswale	R3,3m	30 March 2023	30 Nov 2023	Projects is 96% complete
6.	Insufficient water supply	Gwengoni (Tshikundamalema) Development of borehole and associated Infrastructure	R1,4m	30 May 2023	30 Dec 2023	Projects is 86% complete

PHASE 2: MEDIUM TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Pollution to water resources and aged infrastructure	Refurbishment of Musina WWTW	R26,6m	30 September 2023	30 August 2024	Projects on evaluation and will be appointed by 15 Sept 2023
2.	Pollution to water resources and aged infrastructure	Refurbishment of Nancefield WWTW	R30,4m	30 September 2023	30 August 2024	Projects on evaluation and will be appointed by 15 Sept 2023
3.	Pollution to water resources and aged infrastructure	Campbell WTWW and China town pump station	R10,9m	30 September 2023	30 June 2024	Projects on evaluation and will be appointed by 15 Sept 2023
4.						

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Avail Budget	Start date	End Date	Progress/Comments
1.	Aged infrastructure and the increase of population	Replace existing dilapidated 40-year-old 8.1km 500mmDIA Steel pipeline with a 600mmDIA steel pipeline – from Limpopo pump station and to Oorplaas pump station	R 225m	R0m	01 July 2024	30 June 2026	Project on planning stage
2.	Aged infrastructure and the increase of population	Upgrading of Limpopo river pump station and Oorplass booster pump station.	R 95m	R0m	01 July 2024	30 Sept 2025	Project on planning stage
3.	Aged infrastructure and the increase of population	Construct a New 10ML Concrete Reservoir	R 52m	R0m	01 July 2025	30 June 2026	Project on planning stage
4.	Aged infrastructure and the increase of population	Replace 69km of dilapidated asbestos clean water pipes	R 170m	R0m	01 July 2025	30 June 2026	Project on planning stage
5.	Aged infrastructure and health hazard	Replacement and Upgrading of dilapidated 73km of asbestos sewerage pipe network	R 163m	R0	01 July 2024	30 June 2027	Project on planning stage

COLLINS CHABANE LOCAL MUNICIPALITY

COLLINS CHABANE LOCAL MUNICIPALITY

- ❑ Collins Chabane Local Municipality has a total population of 347 974 and have two (2) towns which are Vuwani and Malamulele. The municipality has 36 wards
- ❑ There are three(3) WTWs which are Malamulele, Xikundu and Mhinga with the total design capacity of 44.5 MI/d and currently producing 34.7 MI/d.
- ❑ The average performance of the WTW is at 78%
- ❑ The surface bulk water supply is augmented by 803 boreholes with 166 of them not operational mainly because of theft and vandalism, resending water tables and drying of borehole problems.
- ❑ Over and above that as a short-term intervention to assist the affected villages water supply is augmented further by tankering in other areas
- ❑ Collins Chabane has four WWTW including sewer ponds with the total designed capacity of 4.33 ML/day and currently producing 8.11ML/day
- ❑ Wastewater treatment works operating over its design capacity of 187%

COLLINS CHABANE_ RELIABILITY OF WATER SUPPLY (CONT...)

LM	Scheme Name/Number	Source	WTW	Villages/ Settlement	Population	Capacity ML/D		Status of water supply	
						Design	Output	Less than 24hrs	24hrs Supply
Collins Chabane	Xikundu scheme.	Xikundu weir	Xikundu	27	15 123	20,0	18	23	4
	Malamulele east RWS	Luvuvhu river	Malamulele	16	190 644	21	17	9	7
	Malamulele west RWS	Nandoni Dam	Nandoni	40	243 693	60	25	27	13
	Mhinga/ Lambani RWS	Luvuvhu river	Mhinga	14	75 406	3,5	3,1	3	11
	Middle letaba R.W.S	Middle letaba dam	Middle letaba	25	158 047	36	2	25	0

COLLINS CHABANE LM – WASTEWATER TREATMENT WORKS

WWTW	Capacity MI/day GDB	Green Drop Capacity MI/day	Already reached useful life span?	Capacity Sufficient Ave	Operating hours per day	General physical Condition	Water Sampling	Notes
Hlanganani Ponds	0.5	0.5	No	Yes	12	Dysfunctional	No outflow	Consulting engineers appointed to do a technical report on the required refurbishment
Vuwani Ponds STW	0.23	0.13	No	Yes	12	Operational	No outflow	Consulting engineers appointed to do a technical report on the required refurbishment
Mhinga WWTW	0.6	0.48	No	Yes	08	Vandalised	No outflow	Consulting engineers appointed to do a technical report on the required refurbishment
Malamulele WWTW	3	7	No	No	24	Vandalised	Monthly	Consulting engineers appointed to do a technical report on the required refurbishment and upgrade.

COLLINS CHABANE LM _ WATER AND SANITATION PROVISION

WATER AND SANITATION PROVISION INTERVENTION

Main interventions for augmenting water supply in the Collins Chabane area which are in phases; however, in this presentation focus is more on phase 1 and 2

Phase 1 – Develop local water resources including taking groundwater from various alluvial aquifer and other sources of groundwater around Thulamela (*short term, ongoing actions*)

Phase 2 – Refurbishment or Upgrading of Water treatment works and water reticulation

Phase 3 – Construction of New Water treatment works / Building of new dams

PHASE 1: SHORT TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Insufficient water supply	New Xigalo water supply	R4m	30 Aug 2022	30 Sept 2023	Project progress is at 98%. Awaiting Eskom to energise
2.	Health hazard	Construction of VIP Collins Chabane	R2,8m	15 April 2023	30 June 2023	Project progress is at 100%
3.	Insufficient water supply	Construction of reticulation at Nngwekhulu	R10m	15 April 2023	30 June 2023	Project progress is at 95%
4.	Insufficient water supply	Development of borehole and associated infrastructure in Mtititi village	R1,4m	15 April 2023	30 June 2023	Project progress is at 98%. Awaiting Eskom to energise Project progress is at 98%

PHASE 2: MEDIUM TERM PROJECTS TO ADDRESS THE CHALLENGE

Item . No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Insufficient water supply	Nandoni Regional Water Scheme: Construction of Bulk Pipeline and internal Reticulation for Nkuzana village	R 97.8m	25 Sept 2023	30 Sept 2024	Project on tender
2.	Insufficient water supply	Nandoni Regional Water Scheme: Construction of Bulk pipeline and internal reticulation for Bungeni, Chabani, Citaci, Mbokota, Shirley, Mabhondlongwa, Hlanganani	R 129m	01 July 2024	30 Sept 2025	The project is 42%
3.	Insufficient water supply	Nandoni regional water Scheme: Malamulele West- Construction of Gravity main from Gumbani to Mulenzhe via Phaphazela for water supply to Rotovhowa, Dididi, Makovha and Mulenzhe.	R 97m	10 March 2021	30 Sept 2023	Project is on 75% progress to date.
4.	Insufficient water supply	Xikundu Regional Water Scheme: Construction of Bulk and internal reticulation for Xaswita, Nkovani, Nthlaveni, Nghezimani, Bevula, Nghomunghomu, Makuleke, Nkavele, Gijana and Govhu	R 196m	15 April 2014	30 October 2023	Project is on 96% progress to date. This project was stalled and currently all contractors appointed to complete the project
5.	Insufficient water supply	Xikundu Regional Water Scheme: Construction of Bulk water Infrastructure and Internal reticulation for Maphophe, Peninghotsa, Saseleman, Botsoleni Xhamarwananwani and Mabiligwe	R650m	15 March 2014	30 October 2023	Project is currently at 99%

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Avail budget	Start date	End Date	Progress/Comments
1.	Aged infrastructure and the increase of population	Nandoni Regional Water Scheme: Construction of Bulk pipeline and Internal Reticulations for Xithlelani, Shingwedzi, Halahala, Lombard, Mchipisi, Dinga, Boltman, Matsakali, Merwe, Mabayeni, Jilongo, Mtititi, and Altein	R 229m	R 0	01 July 2024	30 June 2025	Project on planning stage
2	Aged infrastructure	Malamulele Regional Water scheme: Refurbishment of Malamulele East Water treatment plant	R 53m	R15m	15 October 2024	30 June 2024	Project on planning stage
3	Aged infrastructure	Nandoni regional Water Scheme: Construction of Bulk Water and Internal reticulations for Nngwekhulu, Vyeboom, Mabidi, Davhana, Malonga	R 170m	R 10m	01 July 2024	30 June 2025	Project on planning stage
4	Insufficient water supply	Xikundu Regional Water Scheme: Construction of Bulk Pipeline from Mhinga plant to Matiyani, Maphophe, and Josefa	R 160m	R0	01 July 2024	30 September 2023	Project on planning stage

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Avail budget	Start date	End Date	Progress/Comments
5.	Pollution to water resources	Upgrading of Mhinga Sewerage Plant	R 17 200 000.00	R0m	01 July 2024	30 August 2025	Project on planning stage
6.	Pollution to water resources	Upgrading Malamulele WWTW	R 95 000 000.00	R0m	01 July 2024	30 June 2025	Project on planning stage
7.	Aged infrastructure and health hazard	Construction of Sewer Network Malamulele Ext B	R 50 000 000.00	R0m	01 July 2024	30 June 2025	Project on planning stage
8.	Aged infrastructure and health hazard	Replacement of dilapidated Asbestos sewer pipe networks in Malamulele, Mhinga, Nthlaveni, Vuwani and Fumani.	R 218 000 000.00	R0m	01 July 2024	30 September 2026	Project on planning stage

MAKHADO LOCAL MUNICIPALITY

MAKHADO LOCAL MUNICIPALITY

- ❑ Makhado LM has a total population of 416 728 residing in 345 villages and three (3) towns which are Makhado, Dzanani and Elim. The municipality has 38 wards
- ❑ There are seven (7) WTWs, which are Tshakhuma, Mutshedzi, Albasini, Tshifhire/Murunwa, Maname, Tsheza weir, Ndzhelele and Musekwa Sandwell as well as cross boundary WTW that Middle Letaba which is shared between Vhembe and Mopani District.
- ❑ The total design capacity of the operating WTWs is 39.1MI/d and currently producing 36.1MI/d.
- ❑ The average performance of the WTWs is 92%, due to over performance of Mutshedzi WTW which is influenced by high water demand
- ❑ The surface bulk water supply is augmented by 1205 boreholes with 249 of them not operational mainly because of theft and vandalism, resending water tables and drying of borehole problems.
- ❑ Over and above that as a short-term intervention to assist the affected villages water supply is augmented further by tankering in other areas
- ❑ Makhado LM has five WWTW including sewer ponds with the total designed capacity of 22,8ML/day and currently producing 19ML/day
- ❑ Wastewater treatment works producing 83% of its design capacity.

MAKHADO LM_ RELIABILITY OF WATER SUPPLY (CONT...)

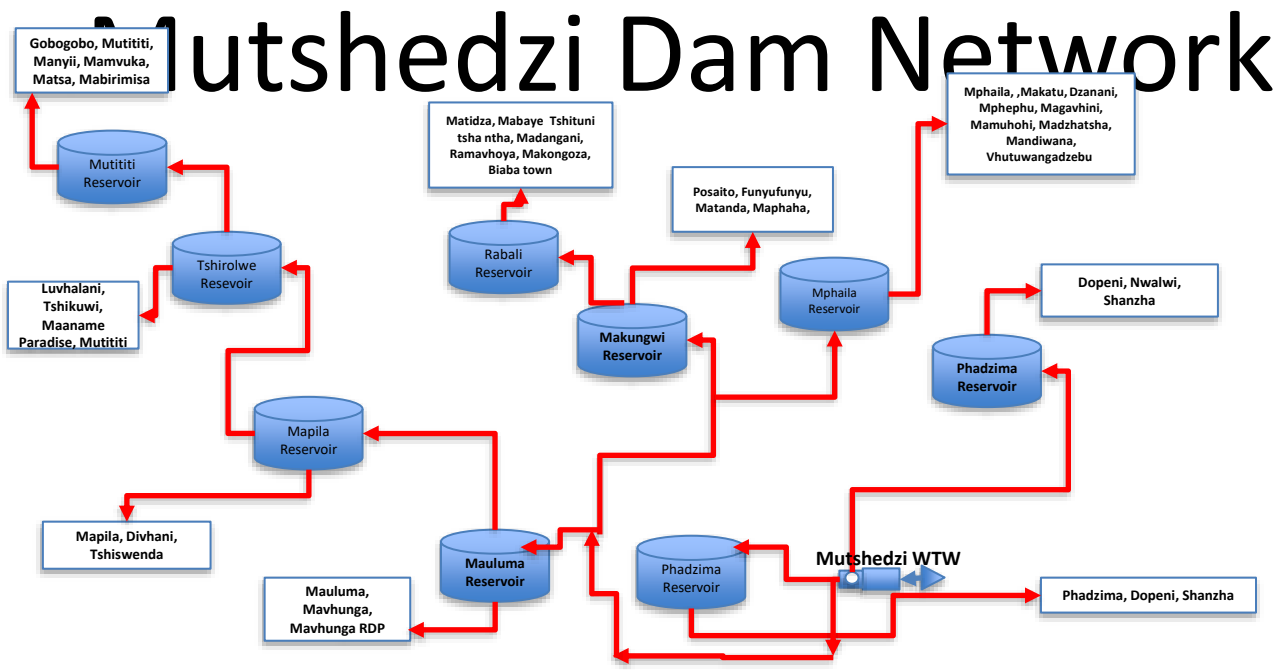
LM	Scheme Name/Number	Source	WTW	Villages/ Settlement	Population	Capacity ML/D		Status of water supply	
						Design	Output	Less than 24hrs	24hrs Supply
Makhado	Nzhelele R.W.S	Mutshedzi Dam	Weir & Mutshedzi WTW	7	125 449	14,8	12.9	6	1
	Nzhelele North R.W.S	sandwell	Musekwa sandwell 6	34	14 395	0,288	unknown	34	0
	Kutama/Sinthumule R.W.S	Borehole	Borehole	33	82 812	unknown	unknown	33	0
	Tshifhire/Murunwa R.W.S	River	Tshifhire p/p Tshedza p/p	4	4267	3,54	3,1	2	2
	Albasini	Albasini Dam	Albasini	2	24 000	10.4	9,60	1	1
	Middle letaba R.W.S	Middle letaba dam	Middle letaba	25	158 047	36	2.2	25	0

MAKHADO LM – WASTEWATER TREATMENT WORKS

WWTW	Capacity MI/day GDB	Green Drop Capacity	MI/day Already	reached useful life	span? Capacity Sufficient	Ave Operating hours per day	General physical Condition	Water Sampling	Notes
Vleifontein ponds	0.3	0.1		No	Yes	24	Vandalised	No inflow and outflow	Bulk line to the ponds is full of sands and is in the process of been replaced . Ponds require refurbishment.
Waterval WWTW	2.5	1.5		No	yes	24	Operational	Daily	Refurbishment required on pumps and drying beds.
Dzanani Ponds	1.1	0.9		No	Yes	24	Operational	Monthly	In need of refurbishment
Makhado (Louis Trichardt) WWTW	13.9	13		Yes	Yes	24	Vandalised	Monthly	Consulting engineers appointed to do a technical report on the required refurbishment and upgrade.
Rietvlei wwtw	5	3.5		No	Yes	24	Operational	Daily	

**MAKHADO LM _ WATER AND SANITATION
PROVISION INTERVENTION**

MUTSHEDZI TREATMENT WORKS AND ITS SUPPLY AREAS



WATER AND SANITATION PROVISION

Main interventions for augmenting water supply in the Makhado area which are in phases; however, in this presentation focus is more on phase 1 and 2

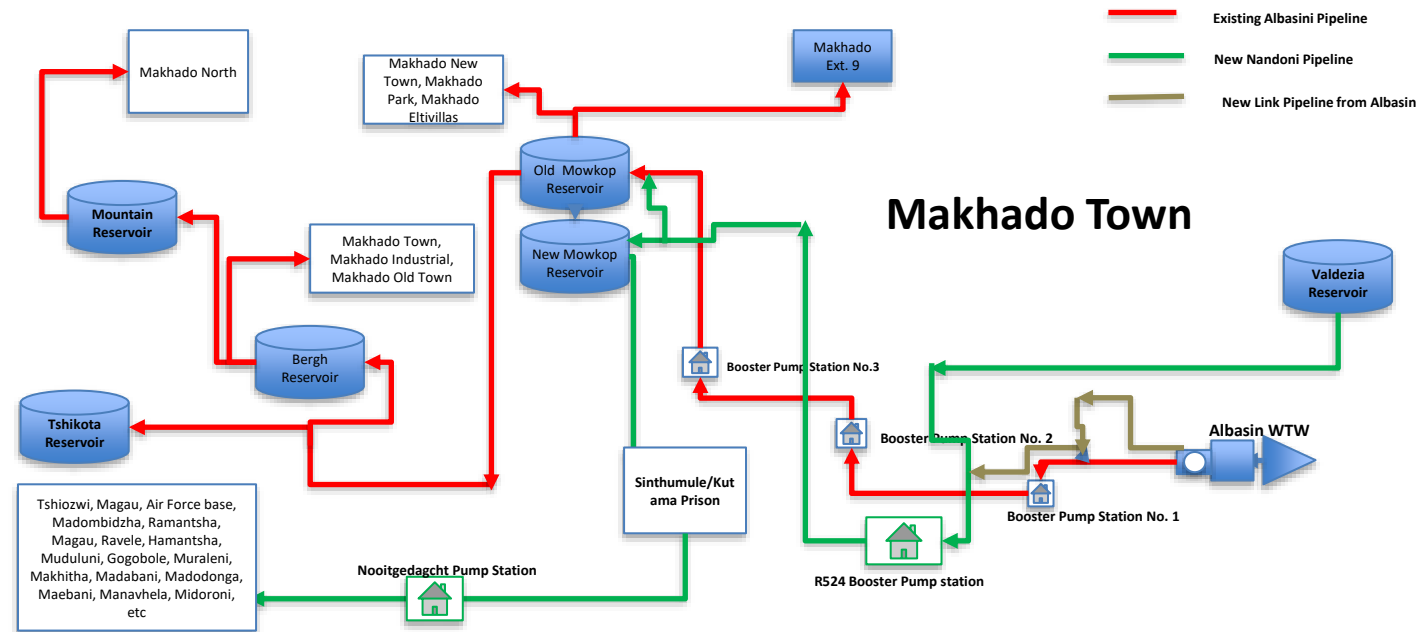
Phase 1 – Develop local water resources including taking groundwater from various alluvial aquifer and other sources of groundwater around Thulamela (*short term, ongoing actions*)

Phase 2 – Refurbishment or Upgrading of Water treatment works and water reticulation

Phase 3 – Construction of New Water treatment works / Building of new dams

ALBASINI WATER TREATMENT WORKS AND SUPPLY AREAS

Albasini Dam Network



PHASE 1: SHORT TERM PROJECT TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Insufficient water supply to Makhado	Refurbishment of Boreholes in Makhado LM	R 46 m	05 April 2023	30 Dec 2023	Project is 98%.
2.	Health hazard	Construction of VIP Makhado	R3,5m	05 April 2023	25 July 2023	Project is 100% complete
3.	Insufficient water supply	Refurbishment of boreholes at Sinthumule/ Kutama	R4m	05 April 2023	30 October 2023	Project is 95% complete
4.	Insufficient water supply	Development of Borehole at Tshivhuyuni Lusaka	R1,3m	05 April 2023	15 July 2023	Project is 100% complete
5.						

PHASE 2: MEDIUM TERM PROJECTS TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Start date	End Date	Progress/Comments
1.	Insufficient water supply Vondo dam to ,meet the current upgraded WTW	Linking of Pipeline from Albasini to the Nandoni Bulk Pipeline for supply to Makhado and Tshikota	R 22 m	30 May 2023	30 Sept 2023	Project on 20%, DWS awaiting for material to be delivered on site
2.	Insufficient water supply	Drilling of boreholes in various villages such as Kutama Sinthumule and the Nzhelele North	R 4.4m	30 April 2023	30 October 2023	Project is currently on 90%
3.	No bulk water supply , water reticulation and storage reservoirs	Repairs of Nandoni Bulk Water Pipeline from Mavambe to Valdezia via Vuwani Booster Pump Station	R 49.9m	10 January 2022	30 March 2024	Project is 97% complete.
4.	No bulk water supply , water reticulation and storage reservoirs	Mutshedzi RWS: Construction of bulk and internal reticulations for Mauluma, Mavhunga, Rabali, Ramavhoya, Tshituni tsha fhasi, Matidze, Mawoni, Biaba, Maaname, Tshikuwi and Tshiolwe.	R 664m		30 June 2025	Project is on 75%, and awaiting the approval of the budget maintainance
5.						

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Avail budget	Start date	End Date	Progress/Comments
1.	Aged infrastructure and the increase of population	Drilling of Boreholes at Bluegumpoort field	R 15m	R0	01 July 2024	30 June 2025	Project on planning stage
2.	Aged infrastructure and the increase of population	Transfer of water from Vondo to Nzhelele Valley	R 135m	R0	01 July 2024	30 Sept 2025	Project on planning stage
3.	Aged infrastructure and the increase of population	Construction of bulk pipeline from Valdezia to Elim, Vleifontein, Mailaskop and Tshitale	R 215m	R0	01 July 2024	30 June 2025	Project on planning stage
5.	Insufficient water infrastructure	Construction of Water Treatment works, associated bulk and internal water reticulations under Nzhelele North Regional Water scheme	R 420m	R0	01 July 2024	30 June 2025	Project on planning stage
	Insufficient water supply	Construction of Bulk pipeline from Valdedzia to Mulima via Vleifontein, Elim, Mpheni and Mailaskop villages	R750m	R0	01 July 2024	30 June 2027	Project on planning stage
		TOTAL ESTIMATED COSTS					

FUNDING SUPPORT REQUIRED TO ADDRESS THE CHALLENGE

Item. No.	Challenge	Project to address the challenge	Project cost	Avail budget	Start date	End Date	Progress/Comments
1.	Aged infrastructure and	Replacement of a dilapidated network of 77km of asbestos pipes than is over 60 years old and leaking profusely	R 190m	R0m	01 July 2024	30 June 2026	Project on planning stage
2.	Pollution to water sources	Upgrading of of two existing Wastewater plants and upgrading of electrical supply	R 55m	R4m	01 July 2024	30 Sept 2025	Project on planning stage
3.	Aged infrastructure and health hazard	Replacement of dilapidated asbestos sewer pipes with uPVC pipes	R 528m	R0	01 July 2024	30 June 2026	Project on planning stage

PROGRESS REPORT ON MUNICIPAL INFRASTRUCTURE GRANT (MIG) 2023/24

SUMMARY MIG PROJECTS 2023/2024

Item	Amount
Allocation	R 621 329 000,00
Amount Received	R 207 701 000,00
% of Amount Received	33%
Amount Spent to date	R 49 706 320,00
% Spending against total allocation	8%
% Spending against transferred	24%
Balance	R 621 329 000,00

MIG PROGRESS 2023-2024 FY – 31 AUGUST 2023

Item	Project name	Budget	Expenditure	Physical Progress	Comments
1.	Construction of Bulk pipeline from Vuwani to Middle Letaba System(Disaster Project)	R 14,2m	R0m	92%	Project was stalled and contractors appointed
2.	Xikundu/Mhinga water reticulation project	R 58,7m	R 0m	0%	Project was stalled and contractor appointed
3.	Mutale upgrading of raw water dam	R 0,5m	R0m	88%	Project was stalled and consultant appointed
4.	Vuwani to Vyeboom and construction of Reservoir (Makhado)	R 27,4m	R 0m	98%	Project was stalled due to budget maintenance and it has been approved

MIG PROGRESS 2023-2024 FY – 31 AUGUST 2023

Item	Project name	Budget	Expenditure	Physical Progress	Comments
5.	Mutshedzi Regional Water Scheme	R 54,4m	R 0m	75%	The municipality applied for budget maintenance to complete the project
6.	Increasing the Capacity of Vondo WTW & Upgrading of water related infrastructure in the area	R 64,8m	R 2,5m	98%	Phase 1 on practical completion and phase 2 , all contractors appointed
7.	Malamulele west Rigional Water Scheme(RWS)	R 24,6m	R 0m	75%	Contractor has been put on terms
8.	Water Supply and Bulk Water Reticulation of Ngwenani Themeli, Ngulumbi, Ngovhela, Madamalala, Phindu	R 81,6m	R 9,1m	60%	Contractor progressing well

MIG PROGRESS 2023-2024 FY – 31 AUGUST 2023

Item	Project name	Budget	Expenditure	Physical Progress	Comments
9.	VONDO RWS: Murangoni, Maranzhe, Vondo la fhasi, Tshikunda, Matondoni water supply.	R 88,8m	R 1,86m	7%	Contractor delay due to construction permit
10.	Block A (Miluwani and Tshidaulu) water reticulation	R 7,5m	R 0m	92%	Contractor finalizing roof slab
11.	Chavani & Surrounding Villages Bulk Pipeline and Water Reticulation (Bulk pipeline to Shirley, Njhak	R 98,5m	R 7,9m	45%	Project progressing well

PROGRESS REPORT ON WATER SERVICES INFRASTRUCTURE GRANT(WSIG) 2023/24

SUMMARY WSIG PROJECTS 2023/2024

Item	Amount
Allocation	R 109 000 000,00
Amount Received	R 39 000 000,00
% of Amount Received	36%
Amount Spent to date	R 8 894 894,86
% Spending against total allocation	8%
% Spending against transferred	36%
Balance	R109 000 000,00

WSIG PROGRESS 2023-2024 FY – 31 AUGUST 2023

Item	Project name	Budget	Expenditure	Physical progress	Comments
1.	Refurbishment of Musina WWTW	R26,6m	R 3,3m	0%	Project on adjudication and will be appointed on 31 September 2023
2.	Refurbishment of Thavhani sewer and Mvudi pump station	R8m	R 0,52m	0%	Project on adjudication and will be appointed on 31 September 2023
3.	Refurbishment of Nacefield WWTW	R30,4m	R 3,7m	0%	Project on adjudication and will be appointed on 31 September 2023
4.	Campbell WTWW and China town pump station	R10,9m	R0,56m	0%	Project on adjudication and will be appointed on 31 September 2023
5.	Construction of rising main from Nandoni WTW to services reservoirs in Mutoti village	R30m	R0m	0%	Project advertised

THANK YOU