

# NKOMAZI MUNICIPALITY PROFILING DRIEKOPPIES WATER TREATMENT WORKS

28 MARCH 2022





## PRESENTATION OUTLINE

- OVERVIEW
- DIAGRAM OF THE EXISTING DRIEKOPPIES WTW,
- WATER QUALITY COMPLIANCE
- LATEST UPGRADE PROJECTS ON THE WTWs
- CHALLENGES
- INTERVENTION





## **OVERVIEW**

- Driekoppies WTW is part of the Nkomazi Local Municipality water infrastructure assets
- It is located at Middleplaas area next to Driekoppies dam, in the Mpumalanga province,
   with GPS Coordinates: 31,5368, -25,7094.





# **OVERVIEW Cont...: LOCALITY MAP**

Figure 1. shows the locality map for Driekoppies WTW.



## **OVERVIEW CONT...**

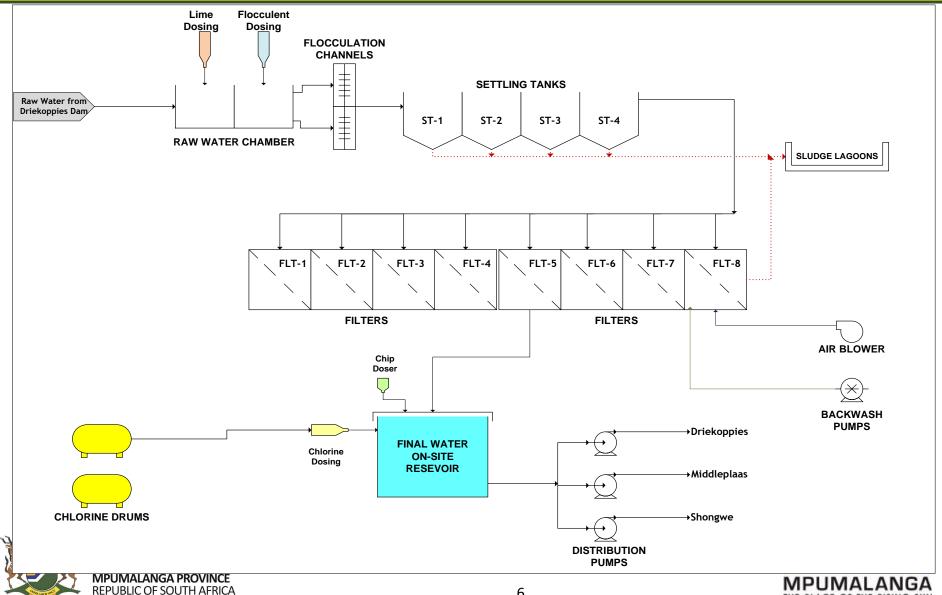
- □ Driekoppies Water Treatment Works is Class C plant with a design capacity of 22ML/d, the plant is currently operating above capacity at 28ML/d
- Water Use Licence in place
- □ Driekoppies WTW is a Conventional Treatment Facility and abstracts raw water from the Driekoppies Dam
- Water is purified and distributed via pump lines, reservoirs and booster pump station
- ☐ Driekoppies WTW is currently Servicing the following villages: Driekoppies,
  - Schoemansdal, Jeppes Reef, Middleplaas, Shulzendal, Aniva, Boschfontein, Magogeni,
  - Skoonplaas with a total current estimated population of 122 642.
- ☐ The municipality is currently implementing both compliance (Monthly) and operation

(Daily) monitoring - water sampling.





### **SCHEMATIC LAYOUT OF DRIEKOPPIES WTW**



## WATER QUALITY COMPLIANCE

#### **Test Report - WTW Water Analysis**

Customer: SINRMAS Report #: C22-09961 Samples received: January 2022

Sampled by: SINRMAS Sampling date: January 2022

Results for: DRIEKOPPIES WATER SUPPLY SYSTEM Testing Date (Micro): January 2022

Lab Number C22-09961 **Driekopies** Your Reference WTW01 (Final) **Parameters** Unit Result **Total Coliforms** cfu/100ml <1 cfu/100ml E. coli <1 Heterotrophic Plate Count cfu/1ml ND





## **OVERALL WATER QUALITY COMPLIANCE**

#### **Nkomazi Local Municipality**

**Microbiological: Acute Health** 

Description	Sites		Samples			Analysis			
	Count	Crit	Count	Crit	Freq	Certified	Count	% Compliance	
Driekoppies WSS	16	7	151	68	38.7 <sub>days</sub>	>99.9%	151	94.7%	





# **UPGRADE PROJECTS**

Project Name/ Location	Project Description	Construction Progress to Date	_	Approved Project Budget (R)	Financial Progress to Date (R)	Start Date	Estimated Completed date	Challenges
Schoemansdal, Boschfontein	Driekoppies bulk line and booster pump Phase 1B	98% Construction	RBIG	55,120,000.00	42,474,126.91	09 January 2019	30 June 2022	None
Aniva, Magogeni, Middelplaas, Schulzendal &	Driekoppies Water Treatment Works Upgrade additional 10ML Phase 1A	Construction	RBIG DWS	96,743,094.52	24,511,137.50	05 Novembe r 2019		None





#### DRIEKOPPIES REGIONAL BULK WATER SUPPLY SCHEME UPGRADE

The Driekoppies Regional bulk Water Scheme commenced 2016 and is currently constructed at **Driekoppies Treatment Plant** The Driekoppies Water Treatment Plant is currently upgraded with additional 10 ML/d for phase 1 and another 10ML/d for phase 2, the plant is currently operating above capacity The plant is aimed at addressing water backlog in the following villages: Driekoppies, Schoemansdal, Jeppes Reef, Middleplaas, Shulzendal. Aniva, Boschfontein, Magogeni,

☐ The total population that will benefit from the Driekoppies Scheme Project is 237 396 households.

Local Municipality

Skoonplaas

Langeloop

## **CHALLENGES**

- □ The Driekoppies Water Treatment Works Treatment Works is operating above its design capacity.
- ☐ Insufficient budget for maintenance of the existing water Treatment Works.
- ☐ Some components of the existing plants are ageing.
- □ Illegal connections on the main lines due to mushrooming of stands affect daily operations of the schemes.





## INTERVENTIONS

- ☐ The project of Upgrading of the Driekoppies Scheme is in progress for 10ML/d additional phase 1.
- ☐ To speed up process of licence approval for the additional 10Ml/d for phase 2 that is still to be implemented.
- ☐ To complete the upgrade of the bulk water supply scheme projects, and connection of reticulation for new stands requiring more funding.
- ☐ To refurbish existing treatment plants to comply with standards (budget has been set aside from own revenue).





