

GAUTENG LEGISLATURE: BRIEFING ON THE STATUS OF THE ROOIWAL WASTEWATER TREATMENT PLANT

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WATER IS LIFE - SANITATION IS DIGNITY



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



Purpose

- The purpose of the presentation is to provide progress report to the Environment, Agriculture and Rural Development Portfolio Committee on:
 - Rooiwaal Wastewater Treatment Works refurbishment and upgrade
 - Enforcement Actions by DWS and Progress on Criminal cases

The Rooiwal Wastewater Treatment Works and pollution of water arriving at the Temba Water Treatment Works

- The City of Tshwane has 15 wastewater treatment works (WWTW). Some of the WWTW are in need of refurbishments and upgrades due to aged infrastructure as well as hydraulic and organic overloading
- The most critical WWTW are the Rooiwal, Klipgat, Baviaanspoort and Sunderland Ridge WWTW
- However, of the 4 WWTW, **Rooiwal was identified as requiring urgent intervention because its effluent had a direct impact on the quality of drinking water treated at the City's Temba Water Treatment Works** (Hammanskraal)
- The Rooiwal Wastewater Treatment Works discharges effluent into the Apies River which flows into the Leeukraal Dam from which water is abstracted by the City's Temba Water Treatment Works
- The Temba Water Treatment Works is supposed to clean the raw water abstracted from the dam and treat it so that it is fit for human consumption
- The water in the Leeukraal dam is so polluted that the Temba Water Treatment Works is not able to treat the water such that it meets the required standards for drinking water
- For this reason, the City of Tshwane was using water tankers to supply the residents of Hammanskraal within the supply area of the Temba Water Treatment Works with drinking water

Treatment of raw water for Hammanskraal

- Either water boards or municipalities treat the raw water abstracted from rivers and dams before it is supplied to households
- Municipalities are not allowed by law to provide communities with water that does not meet the quality standards set by the South African Bureau of Standards
- Some municipalities obtain treated water from water boards, while other municipalities have their own water treatment works
- Tshwane Municipality receives treated water from two water boards, Rand Water and Magalies Water, as well as supplying residents in some areas with water from its own Water Treatment Works
- Water from the Temba Water Treatment Works only supplies the Hammanskraal area in Tshwane
- Water Boards and municipalities are required to conduct regular tests in line with South African National Standard (SANS) 241 (issued by the South African Bureau of Standards) on the treated water that they supply to households
- Tests on the water from the Temba WTW has not been meeting the standards. The City has therefore issued warnings to the Hammanskraal community not to use the water for consumption purposes but for other household use such as washing, gardening etc.
- Water for human consumption was sourced from compliant points by water tankers and delivered to the affected areas of Hammanskraal. This water is also regularly tested by the City

PART 2

CONDITION OF WASTEWATER TREATMENT WORKS IN THE CITY OF TSHWANE AND REGULATORY ACTIONS TAKEN BY THE DEPARTMENT

Tshwane wastewater treatment infrastructure

- The City of Tshwane has 15 wastewater treatment works (WWTW). Some of the WWTW are in need of refurbishments and upgrades due to aged infrastructure as well as hydraulic and organic overloading. The most critical WWTW are:
 - Rooiwal WWTW
 - Klipgat WWTW
 - Baviaanspoort WWTW
 - Sunderland Ridge WWTW
- However, of the 4 WWTW, **Rooiwal is crucial and requires urgent intervention because its effluent has a direct impact on the quality of drinking water treated at Temba WTW** (Hammanskraal), while the Baviaanspoort WWTW effluent has a direct impact on the quality of drinking water treated at Roodeplaat WTW (Pretoria North West)
- Over the past decade, DWS has instituted a series of enforcement actions (directives) and compliance requirements against the City, for the City to address the pollution from the Rooiwal Wastewater Treatment Works into the Apies River and Leeukraal Dam
- After the City failed to respond to the Department's directives, a legal process was instituted against the City by the Department, with the aim of obtaining a court order to force the city to address the failure of the Rooiwal Wastewater Treatment Works

DWS regulatory actions

WWTWs	Enforcement action taken	Water resource
Sunderland Ridge	Directive issued Court Case in High Court Pretoria	Hennops River
Baviaanspoort	Directive issued Court Case in High Court Pretoria	Piennars
Klipgat	Directive issued Court Case in High Court Pretoria Criminal case opened at Mabopane Police station	Tolwane
Rooiwal	Directive issued Court Case in High Court Pretoria	Apies
Centurion lake	Directive Court Case opened by Redifine company against CoT	Kaalspruit
Zeekoegat	Pre- directive	Roodeplaat dam

DWS regulatory actions

WWTWs	DWS CRIMINAL CASES	STATUS
Sunderland Ridge	(CAS 129/03/2024)	Referred to NPA for prosecution
Baviaanspoort	(CAS 356/08/2019)	Referred to NPA for Prosecution
Klipgat	(CAS 356/08/2019)	Matter has been in Court and waiting for Decision
Rooiwal		
Zeekoegat	(CAS 536/03/2024)	Referred to NPA for Decision

Litigation

- On 12 March 2019, the Department issued a Notice of Motion against COT seeking relief from court for a declaratory order
- The declaratory order was to compel the COT to comply with its legal obligations by ensuring that the WWTWs are restored to and kept in a proper state of repair
- The CoT filed its notice of intention to oppose on the 18 March 2019 and later filed an answering affidavit in opposition
- Whilst the aforesaid litigation against CoT was still pending, the SAHRC issued a report with findings and recommendations. The SAHRC recommended that DWS take over the sanitation function in Tshwane
- In response to the SAHRC report, the Department initiated processes to intervene in terms of Section 63 of the Water Services Act
- Letters were sent to the then Executive Mayor of CoT and the intervention was declined
- DWS does not have voted funds to provide to Metros for water and sanitation infrastructure
- DWS engaged with National Treasury to seek funding to assist CoT to address the sanitation issues in Hammanskraal
- National Treasury indicated that CoT has funding for this through its USDG grant and declined the DWS request for funding, and indicated that CoT must use its USDG grant for this purpose

PART 3

OUTBREAK OF CHOLERA AND AGREEMENT BETWEEN DWS AND COT TO COLLABORATE TO ADDRESS THE PROBLEMS

Outbreak of cholera

- It is possible that the cholera outbreak which started in Hammanskraal in February 2023 Tshwane was related to the pollution of water sources in the area from the Rooiwal Waste Water Treatment Works
- Investigations into the source or sources of the cholera outbreak were inconclusive – it is known internationally that it is very difficult to pinpoint the source of a cholera outbreak
- Cholera is not only spread through polluted water – it is also spread through poor hygiene, eating contaminated food or by coming into contact with the faeces of an infected person
- The investigations were carried out by technical teams from DWS, the provincial and national Department of Health as well as relevant municipalities. They are also engaged in tracking and tracing of infections
- The WRC also commissioned a verification of the DWS and CoT tests as well as independent tests

Agreement on collaborative effort to address the situation

- In the light of the cholera outbreak, it became imperative that the repair and upgrade of the Rooiwal WWTW be dealt with as a matter of national urgency
- On 26 May 2023, the Minister and Mayor agreed that:
 1. DWS and the City will partner together to jointly manage a project to fix the Rooiwal WWTW in Hammanskraal
 2. Tshwane will contribute a portion of its USDG allocations
 3. The City would appoint a competent independent implementing agent will be appointed to manage implementation – the DBSA
 4. DWS and the City will form a joint technical steering committee to oversee the project. The team will also seek additional funding from other sources, such as loan financing from the DBSA
 5. In the meantime, while the City repairs the Rooiwal WWTW, DWS and Magalies Water would work on an interim solution to provide clean drinking water to Hammanskraal – the development of a ‘package plant’ at Magalies Water’s Klipdrift Water Treatment Works – to enable Magalies Water to provide clean drinking water into the City’s water distribution network in Hammanskraal

Progress with the agreement

- Progress with the refurbishment of the Rooiwal WWTW is as follows:
 1. The DWS and COT have formed a partnership to work together to fix the plant and the project is ongoing
 2. COT has committed R450 million for the next three years for the work. The City is also working with the DBSA to secure additional funding for phase 2 upgrade
 3. DWS contributed R750 million for the construction of a package plant in Klipdrift
 4. DBSA (Rooivaal) and Magalies Water Board (package plant) were appointed as implementing Agents
 5. A Joint Steering Committee which is chaired by DWS DDG: Water Services Management is monitoring progress on the two projects

PART 4

REFUBISHMENT AND UPGRADING OF THE ROOIWAL WASTEWATER TREATMENT WORKS

Repair of Rooiwal Wastewater Treatment Works

Status quo of the works at the start of the project (COT- Will Provide Progress Report to date)

- The Rooiwal WWTW was hydraulically (30%) and biologically (70%) overloaded, impacting on the effluent quality discharged into the Apies River
- The WWTW had not been properly maintained for many years, and was largely dysfunctional

Progress

- The City appointed a contractor to start rehabilitation work at the Rooiwal WTW, but the contractor left site due to contractual disputes, when the project was approximately 60% complete
- The City's appointment of the first contractor is the subject of an SIU investigation
- Since the previous contractor left site, the COT has appointed a new contractor and DBSA as Implementing Agent to complete Phase 1 of the project (repair of the existing plant) which was at 68% when the first contractor left site

The objectives of the project are:

- Upgrading of the Inlet works at the Rooiwal North Plant
- Upgrading of the Primary Settling Tanks system
- Upgrading of the biological reactors mixing and aeration system
- Upgrading of the anaerobic digester on the Rooiwal East & West Plant
- Upgrading of the top sludge dewatering facility
- Improve the discharge effluent quality



PART 5

INSTALLATION OF PACKAGE PLANT AT MAGALIES WATER KLIPDRIFT WATER TREATMENT WORKS

Hammanaskraal Intervention

- This intervention was implemented as an emergency response following water quality failures and public health risks linked to long-standing dysfunction in the municipal water and sanitation system
- The Department, through Magalies Water, implemented a 50 ML/d package plant at Klipdrift, abstracting from the Pienaars River, to rapidly restore potable water supply
- The project serves the Hammanaskraal area ($\pm 47,500$ households across 15 wards) and includes treatment, abstraction, pumping and bulk distribution infrastructure

Progress & Impact

- The intervention has successfully restored bulk potable water supply to many areas of Hammanaskraal
- However, it is imperative that the City of Tshwane completes its repairs to its Rooiwal WWTW and to its Temba WTW so that water can also be supplied to Hammanaskraal from Temba
- All four treatment modules are complete and operational, supplying potable water into the distribution system
- The project was officially launched by the President in July 2026 following achievement of full supply capacity
- The Department has invested approximately R759 million
- Remaining activities focused on optimisation and full system integration with final completion set for October 2026.

THANK YOU!!