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28 March 2022

PROVINCIAL WEEK 2022

ASSESSING STATE CAPACITY TO RESPOND TO THE NEEDS OF COMMUNITIES

WATER AND SANITATION PROJECTS PROFILES

1. Introduction

The purpose of this brief is to provide profiles or descriptions of projects that have been selected for assessment during the provincial week in the Free State, Gauteng and Northern Cape provinces.

2. Limitations

These profiles were prepared within a limited time within which the request was made. It is also worth noting that these profiles were made out of published documents from various entities, annual reports of water boards, parliamentary briefings, municipal IDPs and researcher's knowledge of the sector. The ambiguity on some of the project names made it difficult to get their respective profiles as the researcher did not know which project or site the request is referring to, for example, Fauresmith, Jagersfontein – these are names of places and could also be water or wastewater projects – therefore these names were addressed as wastewater treatment plants. The identification of events or incidents as projects or sites also presented challenges in drawing up their profiles, for example the sewage spill in Bethulie, there were many sewage spill incidents in this area throughout the years and the sewage continues to spill even today. Nevertheless, a general description is provided.

It is recommended that future events should invest in proper planning were researchers embark on pre-visits to collect any data or information that will be used during the actual event. Things like site/ project profiles can also be requested directly from the concerned municipality or department once a list is drawn as using desktop research to compile profiles is time consuming and the information is usually outdated.

3. Selected Water and Sanitation Projects in Free State, Northern Cape and Gauteng Provinces

3.1. Mangaung Metro

Mangaung Metropolitan Municipality is a Category A municipality. It consists of eight towns, namely, Bloemfontein, Botshabelo, Dewetsdorp, Mangaung, Soutpan, Thaba Nchu, Van Stadensrus, and Wepener, refer to Figure 1. It covers an area of 9 886km^2. It is situated in the Free State Province, in the central interior of South Africa. The Free State is bordered by the Gauteng, Eastern Cape, Northern Cape, KwaZulu-Natal and North West Provinces, as well as by the neighbouring country of Lesotho. Mangaung, meaning 'Place of the Cheetahs', accentuates the vibrant, dynamic and energetic character of the tourism industry in the 'At the Heart of it All'.[1] The economy is strongly driven by the government sector, which has seen the fastest growth in the last five years as a result of increased government programmes in livelihoods improvement interventions. The finance sector is the second-fastest growing sector due to very active estate and construction activities.[2]

Mangaung Metro Wastewater Treatment Systems

The selected Wastewater Treatment Plants, Dewetsdorp and Wepener were run by Naledi Local Municipality before 2016. These plants were then incorporated into Mangaung when their respective towns were incorporated after the 2016 municipal elections. Table 1 shows the description of these plants as per the Green Drop Report 2012. The risk rating shows that these plants have made good progress with a reduction in the risk ratings. The two plants were all categorised as medium risk plants, as a result of the implementation of effluent compliance monitoring in 2012. The lack of monitoring of the operating capacity and the noncompliance with regulation 2834 (R2834) with regard to operating and maintenance staff increases the risk of the plants.

[1] Manguang (2022) Incorporation of Soutpan, Dewetsdorp, Van Stadensrus & Wepener http://www.mangaung.co.za/
[2] Municipalities of South Africa (2022) Manguang Metro < https://municipalities.co.za/map/8/mangaung-metropolitan-municipality

Figure 1. Mangaung Metro[3]

The poor effluent compliance, particularly microbiological compliance, at the Dewetsdorp plant also contributes to the risk rating. It is worth noting that these were 2012 green drop assessment. The current state of performance of these plants is unknown, it is therefore recommended that the site visits should follow up on these ratings and confirm the current performance.

[3] Ibid

Table 1. Mangaung Metro Wastewater Treatment Plants[4]		
	Wastewater Treatment Works	
Attributes	**Dewetsdorp**	**Wepener**
Town	Dewetsdorp	Wepener
Treatment Technology	Activated sludge, anaerobic digestion and sludge drying beds	Activated sludge, anaerobic digestion and sludge drying beds
Design capacity (Ml/d)	2	2
Wastewater Risk Rating	70,6%	70,6%
Annual Average Effluent Quality Compliance	55,4%	95,4%
High Risk Area	No influent monitoring, poor effluent compliance, non-compliance with R2834 for operating and maintenance staff	No influent monitoring, non-compliance with R2834 for operating and maintenance staff

Manguang Water Treatment Systems

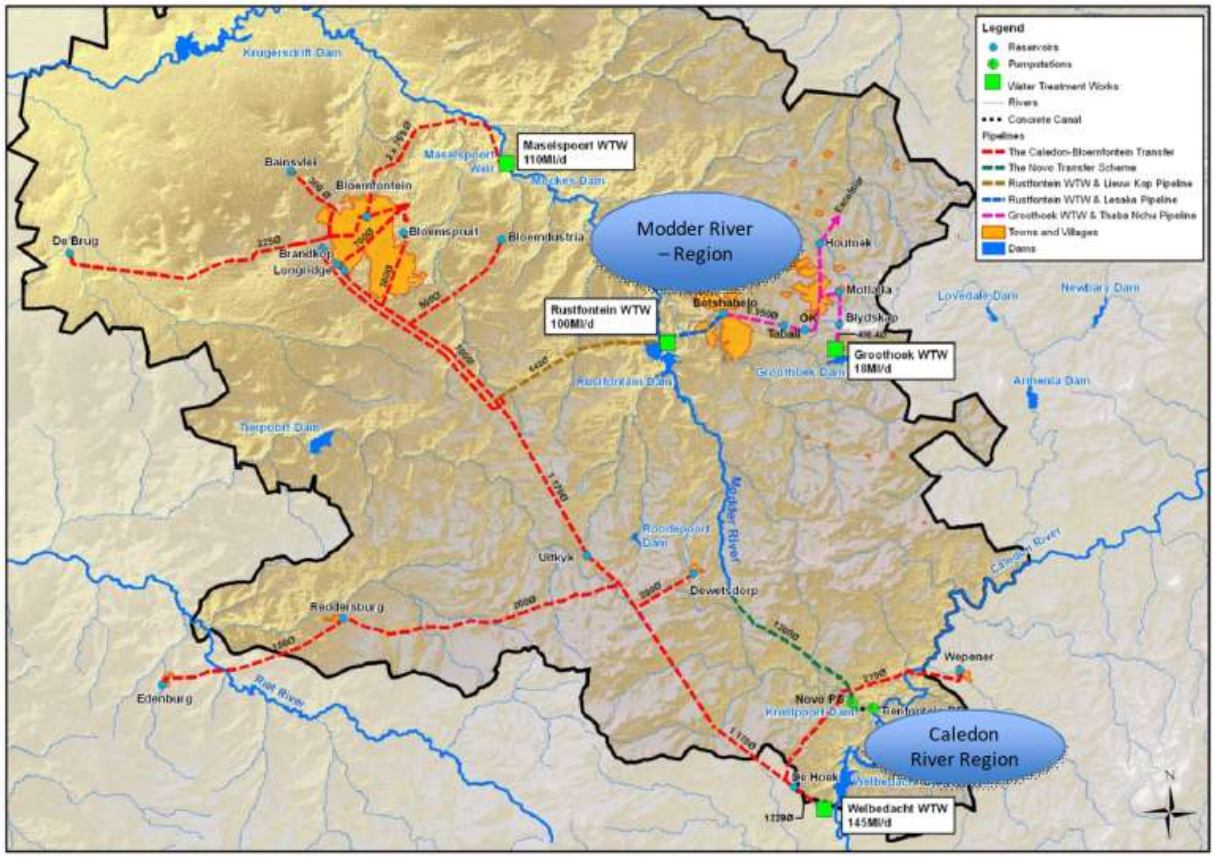
In as far as water supply and treatment is concerned, the request stated Dewetsdrop/Mooiplaas water. A systematic search on this yielded no results. Therefore, a brief on Mangaung water supply system which includes Dewetsdorp is provided.

The Greater Bloemfontein Area falls within the Modder River catchment. It is the largest urban area in the Orange Water Management Area. Its supply system provides potable water requirements to Bloemfontein, Thaba Nchu and Botshabelo and smaller towns of Wepener, Dewetsdorp, Reddersburg, Edenburg, and Excelsior. Bloem Water Board supplies 66% of to this these towns through Welbedacht (145 Ml/d) and Rustfontein (100

[4] Department of Water Affairs and Forestry (2012) Green Drop Report Chapter 6 – Free State Province

Ml/d) Water Treatment Plants while the balance is supplied mainly from Mangaung Metropolitan Municipality's Maselspoort Water Treatment Plant, refer to Figure 2.

Figure 2 Bloem Water Board Area of Supply[5]



3.2. Kopanong Local Municiplaity

The Kopanong Local Municipality is a Category B municipality situated within the Xhariep District. It is the largest of the three municipalities in the district, making up almost half of geographical area, which is 15 648km². It consists of ten towns, namely, Bethulie, Edenburg, Fauresmith, Gariep Dam, Jagersfontein, Philippolis, Reddersburg, Springfontein, Trompsburg, and Waterkloof. Kopanong Sesotho name meaning 'meeting place or where people are invited.

[5] Bloem Water Board (2022) Operations < https://www.bloemwater.co.za/infrastructure-projects/>

It is a host to some of the after sought events, and tourism destinations such as Lake Gariep and the Gariep Water Festival; the game reserve at Lake Gariep; Jagersfontein Mine; the 'Tiger Project' in Philippolis; the Orange River Ravine from the Gariep Dam wall to the PK le Roux Dam wall; battlefields of significant battles conducted during the Anglo-Boer War, for example, the Mostert's Hoek; Philippolis 'Witblits' Festival; historical buildings in Philippolis, which include the Dutch Reformed Church, library, old jail, the house where Lourens van der Post was born, Adam Kok's house (the Griqua leader) and a kraal and structure where gunpowder was kept; and Fauresmith horse endurance run.

Wastewater Treatment Systems

Kopanong Local Municipality has 12 wastewater treatments which were all reported to be poor performing in the 2012 Green Drop Report. In fact, this municipality was leading the list of poor performers with 100% of its plants at critical risk positions.[6] However, for this exercise, focus will be on the 5 plants as listed on Table 2.

Table 2. Kopanong Local Municipality Wastewater Treatment Plants					
	Wastewater Treatment Works				
Attributes	**Springfontein**	**Reddersburg**	**Fauresmith**	**Jagersfontein**	**Bethulie**
Town	Springfontein	Reddersburg	Fauresmith	Jagersfontein	Bethulie
Treatment Technology	Oxidation ponds	Oxidation ponds	Oxidation ponds	Biofilters, anaerobic digestion and sludge drying beds	Oxidation ponds
Design capacity (Ml/d)	0,5	0,75	1	2,2	0,5
Wastewater Risk Rating	100%	100%	100%	100%	100%
Annual Average Effluent Quality Compliance	NM	NM	NM	NM	NM

[6] Department of Water Affairs and Forestry (2012) Green Drop Report Chapter 6 – Free State Province

High Risk Area	No influent monitoring, no effluent compliance monitoring, noncompliance with R2834 for operating and maintenance staff.	No influent monitoring, no effluent compliance monitoring, noncompliance with R2834 for operating and maintenance staff.	No influent monitoring, no effluent compliance monitoring, noncompliance with R2834 for operating and maintenance staff.	No influent monitoring, no effluent compliance monitoring, noncompliance with R2834 for operating and maintenance staff.	No influent monitoring, no effluent compliance monitoring, noncompliance with R2834 for operating and maintenance staff.

It is of concern that the Kopanong Local Municipality has not demonstrated any progress since 2008 when Green Drop Assessment started. All plants are categorised as critical risk with a maximum risk rating as of 2012. The parameters that contribute to the continuing and increasing high risk rating is the lack of influent flow monitoring, no effluent compliance monitoring and noncompliance with R2834 with regard to operating and maintenance staff. The lack of this information renders the management of the treatment process difficult to monitor and optimise and the reduction of the risk rating difficult to achieve. In light of all this, the municipality was urged to take urgent action to reverse the critical situation and risk rating of all the wastewater treatment plants and develop a Green Drop Implementation Plan. In this regard, the Provincial Week delegation should establish whether these issues have been address or not and what the current assessment of the plants is so that corrective actions can be implemented.

Sewage spill incidents at Bethulie

Bethulie is a small town situated in the southern Free State. The township area is provided with full-bore water borne sewerage. The sewage spill incidents have been occurring since 2012 where families in more than 10 houses had to use stepping stones to reach their homes, which were surrounded by the overflow from toilets not flushing properly[7]. The problem is exacerbated by poor water and wastewater infrastructure in the area.

[7] IOL (2012) ACDP disgusted by sewage stench < https://www.iol.co.za/travel/south-africa/free-state/acdp-disgusted-by-sewage-stench-1313218>

Residents are also unable to pay for services and the municipality owes millions to the Bloem water board.[8] The worst affected townships are the Vergenoeg and Lephoi which have reported many sewage spill incidents recently.[9] It is therefore recommended that the Provincial Week delegation visit this area to establish the current state of wastewater system and whether sewage is still spilling and what is the municipality doing about.

3.3. Masilonyana Local Municipality

Masilonyana Local Municipality is a category B type of municipality located in the central Free State within Lejweleputswa District Municipality that includes four other local municipalities, namely Matjhabeng, Tswelopele, Nala and Tokologo, refer to Figure 3. It is situated between the province's biggest municipality, Mangaung Metro, in the south and the second-biggest municipality, Matjhabeng, in the north and has an area of 6 618 km^2. It is accessible via the national road N1 which runs between Gauteng and Western Cape provinces and the N5 which connects the Free State province to Kwazulu-Natal province. The following former Transitional Local Councils were amalgamated into the municipality: Theunissen, Brandfort, Winburg, Soutpan and Verkeerdevlei. It thus consists of four towns - Theunissen / Masilo, Winburg / Makeleketla, Brandfort / Majwemasweu, and Verkeerdevlei / Tshepong and the adjacent rural areas.[10] It should be noted that this municipality is left with four towns after the 2016 Local Government Elections that incorporated Soutpan / Ikgomotseng into Mangaung Metro.[11]

Its economy relies mainly on agriculture, stock and crop farming, gold and diamond mining and steel and peanut processing factories. Most businesses, service providers and light industries in the towns are centred on supporting these agricultural, mining and manufacturing activities.[12]

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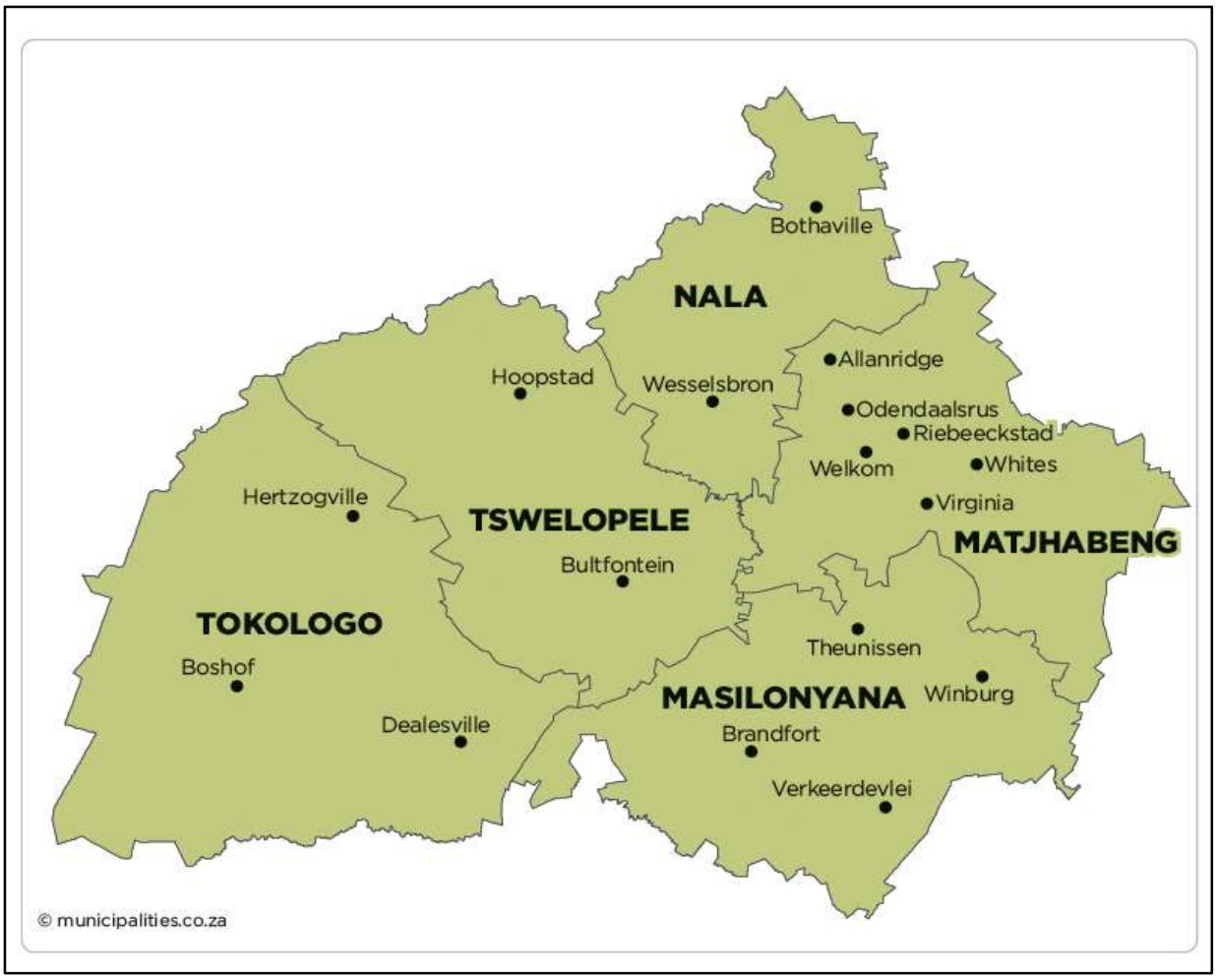
[8] Department of Water and Sanitation (2022) Bethulie and Masizakhe Stories < https://www.dws.gov.za/Projects/Dense/bethulie.aspx>
[9] SABC (2020) Free State community up in arms over constant sewage spills < https://www.sabcnews.com/free-state-community-up-in-arms-over-constant-sewage-spills/>
[10] Municipalities of South Africa (2022) Masilonyana Local Municipality <https://municipalities.co.za/overview/1043/masilonyana-local-municipality>
[11] Masilonyana Local Municipality (2019) Integrated Development Plan (IDP) 2019/20
[12] Masilonyana Local Municipality (2009) Infrastructure Masterplan for 2009-2039 <http://www.masilonyana.fs.gov.za/wp-content/uploads/2012/09/2009-to-2039-Infrastructure-Masterplan-2010.pdf>

Figure 3 Masilonyana Local Municipality



Theunissen is also situated on the ZR Mahabane Corridor between Bloemfontein and Welkom, and hosts the three mines within the municipal jurisdiction. Winburg has economic potential because of its location, which is 100km west of Bloemfontein, and its linking of Bloemfontein with Johannesburg, Cape Town and Durban. It prides itself with the Voortrekker Monument as its Heritage Site, and Masilonyana boasts several game reserves across all its towns. The municipality prides itself on its tourist destinations, such as the Florisbad National Quaternary Research Station. This is where the first human skull was discovered. There are also cooperatives in Soutpan working on the salt lakes to produce salt.[13]

[13] Ibid.

Households water access has decreased from 29.3% in 2011 to 26.5% in 2016 in so far as access to piped water inside dwelling is concerned. On the other hand, household access to flush toilet connected to sewerage has increased from 69.9% in 2011 to 84.4 in 2016. These percentages are in line with the eradication of bucket toilets in this municipality. [14]

The Masilonyana municipality acknowledges its water and sanitation challenges in its Infrastructure Masterplan for 2009-2039. These challenges are mainly from ageing and poor quality infrastructure, population growth, unemployment and lack of maintenance of infrastructure. Nevertheless, it reckons that the Infrastructure interventions or projects planned and approved in this plan will eliminate water and sanitation challenges and improve the quality service delivery.[15]

Winburg/Makeleketla sewer pump stations and wastewater treatment works

Makeleketla has 3 360 households, of which 25 households are making use of septic tanks while 3 335 households are using flushing toilet system. Sewage is collected through 19,425 km AC Pipe ranging from 110 mm to 250 mm and 28,790 km uPVC pipe ranging from 110 mm to 250 mm. These sewer mains transfers to three pump stations main pump station is in good conditions but two raising mains are in poor conditions.
The wastewater treatment plant is activated sludge system and is in very poor conditions. The capacity of the Plant is 1,6 Ml/day. The calculated waste water inflow = 1,544 Ml/day while actual wastewater inflow = 3,406 Ml/day.

General challenges associated with the wastewater treatment are shallow outfall sewer lines are causing too much pipe blockage; Old sewer line's gradient which is causing household back flashes; Households are inserting non-applicable/foreign material in the toilet systems, such as papers and plastics; and poor conditions of pump stations which are leading to frequent raw sewage spillages into the raw water dam.

[14] Ibid.
[15] Masilonyana Local Municipality (2009) Infrastructure Masterplan for 2009-2039 <http://www.masilonyana.fs.gov.za/wp-content/uploads/2012/09/2009-to-2039-Infrastructure-Masterplan-2010.pdf>

To respond to some of these challenges, the Pump stations 1&2 were refurbished at Winburg. A tender for the construction of outfall sewer and rectification of existing sewer network and construction of a new sewer pump station in Winburg/ Makeleketla was issued in 2021.[16]

Eradication of bucket system in Theunissen/Masilo

Masilonyana municipality reported eradication of 3 977 bucket toilets in Theunissen/ Masilo in 2011 using the Municipal Infrastructure Grant (MIG).[17] Currently, 581 households are using bucket systems in this area.[18]

Masilonyana Water Supply Systems

Theunissen and Brandfort towns draw raw water from Erfenis Dam. Both towns (Theunissen & Brandfort) have a daily abstraction allowance of 1 818,4 Megaliters (Ml) each. Winburg town draws its raw water from Rietfontein Dam and pumps it to Wolwas 1 and Wolwas 2 dams. Verkeerdevlei town does not have any surface water sources. Raw water for the town is extracted through 6 boreholes located in the town.

Winburg Water Treatment Works

Winburg has 4,85 km x 250 mm of AC Pipe and 5,55 km of uPVC Pipe ranging from 63 mm to 315 mm. There are too many challenges at Winburg water supply system which are includes low raw water abstraction registered; Waste Water Treatment Works discharge to the upstream of the raw water dam affecting the water quality; Silted raw water dam affecting the raw water storage capacity; Dilapidating raw water dams, visible cracks on the dam wall; Secondary settling tank at the water treatment plant is not operational; High water losses through bursting AC pipe due to pressure; Low clean water storage; and high laying area does not receive water due to constantly low reservoir

[16] TenderBulletins (2021) Construction of Outfall Sewer and Rectification of Existing Sewer Network and Construction of a New Sewer Pump Station in Winburg/ Makeleketla. Tender issued by Masilonyana Local Municipality <https://tenderbulletins.co.za/custom-tender/construction-of-outfall-sewer-and-rectification-of-existing-sewer-network-and-construction-of-a-new-sewer-pump-station-in-winburg-makeleketla/>
[17] Masilonyana Municipality (2011) Presentation to the NCOP 08 September 2011
[18] Masilonyana Local Municipality (2019) Integrated Development Plan (IDP) 2019/20

levels. The Winburg Water Treatment Works was refurbished in 2019/20 to improve efficiency. However, the current performance and condition of this plant is not known as this information was sourced from published documents.[19]

Water reticulation network in Makeleketla/Boitumelo

Masilonyana municipality reported the Upgrading of the Water Reticulation Network and Isolation Valves(Boitemelo) - Winburg/Makeleketla. This involved replacement of asbestos pipelines in the reticulation network. These projects were funded through the MIG.[20]

Waterworks at Brandfort

The Water Purification Plant - Brandfort/ Majwemasweu was upgraded in 2011 using the MIG.[21] Brandfort has 69,085 km of AC Pipe ranging from 50 mm to 250 mm and 29,425 km of uPVC Pipe ranging from 63 mm to 300 mm. This town is currently battling with low raw water abstraction registered; high water losses through bursting AC pipe due to pressure; Low clean water storage; High laying area struggling to receive water due to constantly low reservoir levels and high water losses due to leaking toilet systems.
In response to some of these challenges, a bulk raw water pipeline from Sandvet canal to Brandfort water works was constructed in 2016/17 while the refurbishment of Brandfort WTW was reported to be at tender and design stage in 2020/21.

Sedibeng-Winburg bulk water pipeline

Winburg derives its raw water from three dams namely, Rietfontein Dam, Wolvas 1 and Wolvas 2. During dry seasons, particularly in winter the Dams are affected by drought hence a construction of Bulk Water Pipeline from Sedibeng Storage Reservoirs to Winburg was initiated.

[19] Ibid.
[20] Ibid.
[21] Ibid.

3.4. Emfuleni Vaal Water System

The Emfuleni Vaal Water System is entirely dependent on the Vaal River (the Vaal). The Vaal is the second largest river in South Africa, after the Orange River, into which it flows. The 1300 km long river crosses the Gauteng, the Free State, Mpumalanga and the Northern Cape provinces. The water from the Vaal supplies water to important industries in South Africa situated in the Gauteng Province and increasingly over the years to urban domestic consumers. According to Rand Water, at least 70% of its water is supplied to urban domestic consumers. The Vaal River has much less water in winter (the dry season) than in the rainy summer season of the Highveld. For this reason, reservoirs and large dams have had to be constructed on the river to ensure a steady water supply to consumers' dependent on water from the Vaal, including during the dry season. The Vaal River Barrage Catchment Area ('the Barrage') was completed in 1926 and covers a surface area of about 900km^2 refer to Figure 4 for the location of the Vaal Dam. It was also used to supply water to the Witwatersrand area, but no longer does so due to deteriorating water quality caused by pollution.

The biggest dam on the Vaal is the Vaal Dam ('the Dam') which was completed in 1938, and is remains the main water supply for the Gauteng Province. According to National Treasury, Rand Water, extracts 98% of its raw water from the Vaal, supplying water to about 13 local municipalities, 40 mines, and 926 industries in and around the Gauteng province.

Figure 4 Vaal Dam and the Barrage[22]

The water from the Vaal River, the Dam, and the Barrage (referred to collectively as 'the Vaal') is clearly essential to the survival of persons and industry in Gauteng - a province that is allegedly on the cusp of a water shortage. Water from the Vaal is essential for agriculture, energy, mining and tourism.

Sewage Pollution in the Vaal River System

Pollution reached the unbearable state late 2018 where raw sewage had for months been leaking into and polluting the Vaal and the Rietspruit from the Municipality's Sebokeng wastewater treatment works, Rietspruit wastewater care and Management Works situated in Vanderbijlpark, the Leewkuil Waste Water Care and Management Works situated in Vereeniging and other areas within the Municipality. The Human Rights Commission concluded that the presence of raw, untreated sewage in homes, streets, in schools and in public areas directly affects people's dignity and should be addressed urgently. The report further revealed that millions of litres of untreated sewage enter the

[22] Google Earth Maps

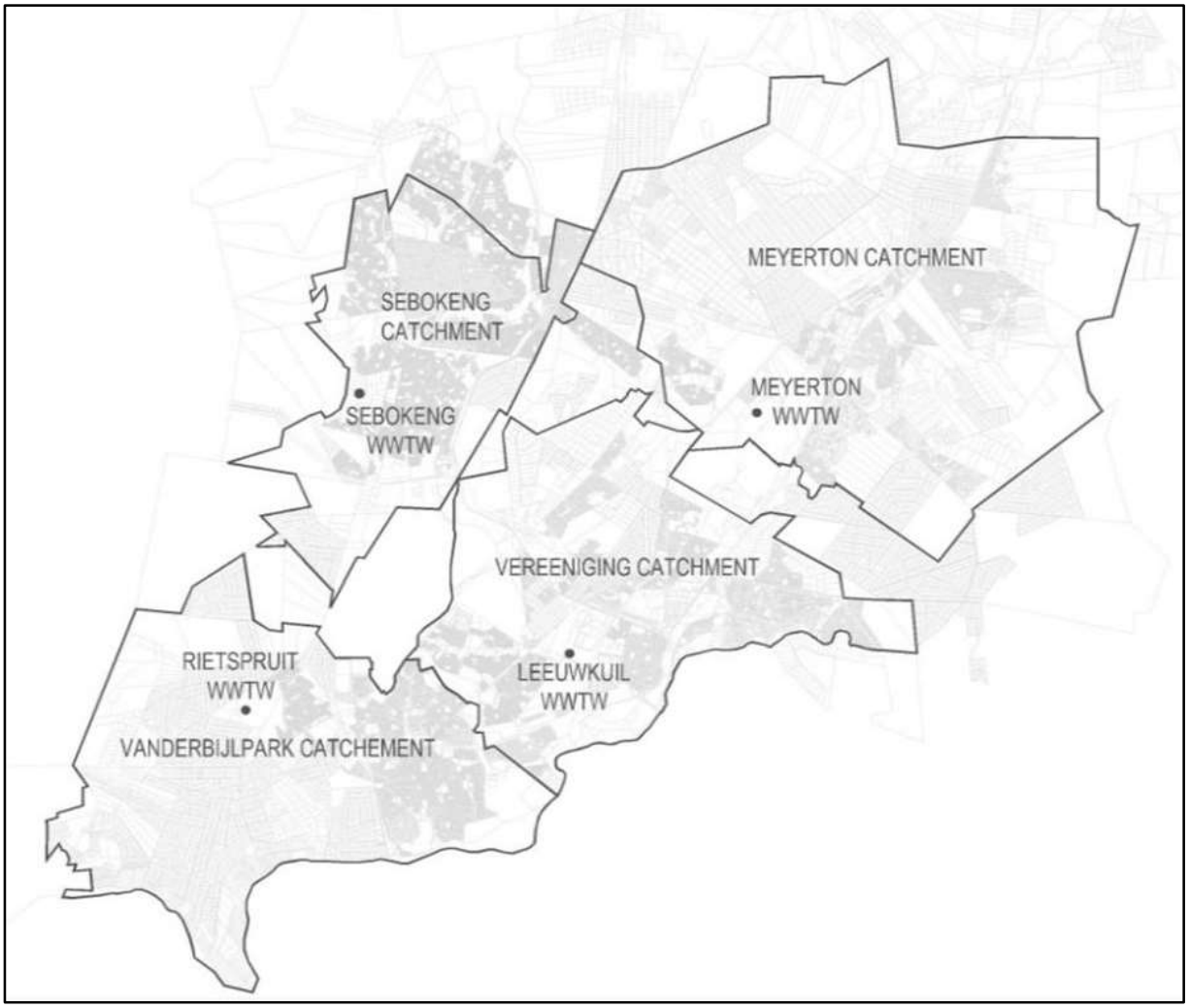
Vaal river system daily from the collapsed wastewater treatment infrastructure in the Emfuleni municipality, which is under partial administration. This affects 19-million people who rely on the polluted river for drinking, domestic and commercial use — and ultimately threatens Gauteng's water security.

Implementation of the Section 63 of the Water Services Act, 1997 (Act No. 107 of 1997)

The Human Rights Commission noted the South African National Defence Force (SANDF) intervention to repair wastewater treatment infrastructure in Emfuleni local municipality. However, the SANDF efforts could not resolve the sewage pollution and its associated socioeconomic effects in the Vaal. SANDF were hamstrung by lack of funds as they could only repair the Sebokeng Waste Water Treatment Plant - 3 modules, 4 pump stations and sewage lines; Rietspruit Waste Water Treatment Plan - 2 modules, 2 pump stations and sewage lines; and the Leeuwkuil Waste Water Treatment Plant - 2 modules, 36 pump stations and sewage lines. Apart from escalating costs, SANDF could not continue as its mandate was a short term intervention. SANDF could not transfer skills to the municipality because there were limited human resources that could be trained to carry on with maintenance and operation of the wastewater infrastructure.

The lack of capacity at Emfuleni municipality and the short term nature of the SANDF mandate meant that all the good work that SANDF did were left unattended and the wastewater infrastructure clogged up and sewage continue to leak into the rivers and people's homes unabated. In this regard, Human Rights Council made a number of recommendations, chief among them was the invoking of section 139(7) of the Constitution and section 63 of the Water Services Act. This culminated into a Cabinet decision to establish the Inter-Ministerial Committee (IMC) for Water and Sanitation on the 26 May 2021. Although this IMC will attend to all wastewater challenges across the country, it will use the Vaal as the case study. As indicated earlier this intervention was effected in terms of section 63 (2) of the Water Services Act, 1997 (Act 108 of 1997 as amended, for three years to rehabilitate the Vaal River Integrated System and simultaneously capacitate the municipality to manage operations, refer to Figure 5 which shows the section 63 intervention area of operation.

Figure 5 The Vaal Wastewater Treatment Works[23]



Section 63 seeks to, among others, revitalise and refurbish the WWTWs to current design capacity; Revitalise and refurbish the existing 44 pump stations in the Emfuleni catchments to current design capacity; Pipe replacement programme to eliminate pipe burst and pipe collapses; Leave sustainable and operational sewage infrastructure, thus preventing future pollution within the Vaal River catchment; Implement the Water Conservation and Water Demand Management, thus creating additional treatment capacity to meet current and short term future demands.

[23] Department of Water and Sanitation (2022) Vaal River System and Section 63 Intervention Progress Status

The outcomes for this intervention are as follows: Discharge of effluent that meets the effluent license conditions; Refurbishment of WWTW to original equipment manufacturers standards; Creation of additional treatment capacity to meet current and future demands; Facilitation of local economic development and job creation opportunities; Eradication of sanitation service delivery challenges which currently inhibit both social and economic developments in the region and Building institutional capacity to provide sustainable water and sanitation services in the region.

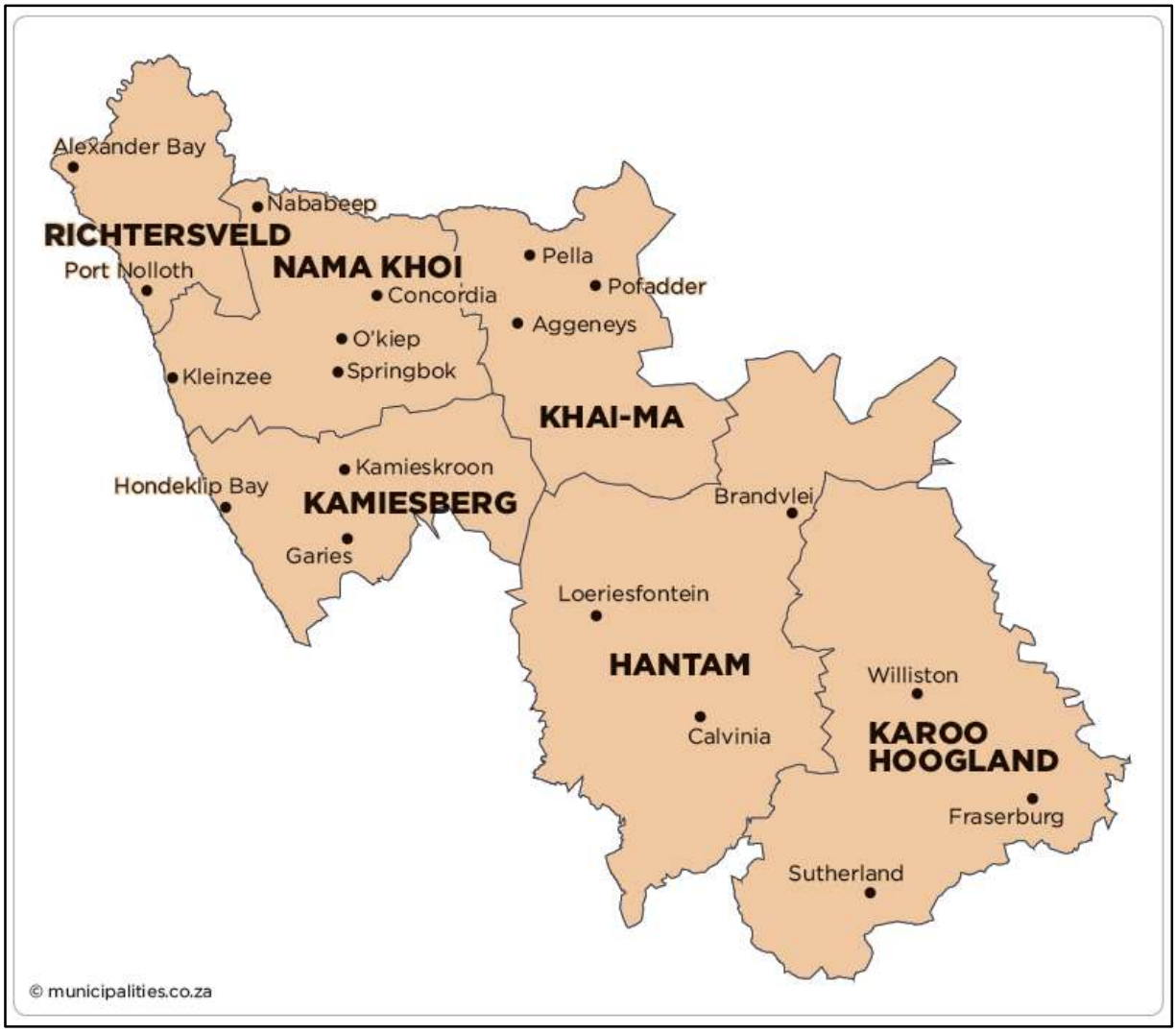
Rand Water has been appointed as the implementing agent (IA) of the section 63 intervention on the 6 July 2021. Rand Water has since commenced with the implementation of the section 63 directive. In this regard, the Provincial Week 2022 delegation should visit the Vaal and inspect progress and request Rand Water and the Department of Water and Sanitation to provide an update on the implementation of section 63 intervention.

3.5. Nama Khoi Drought Stricken Area

Nama Khoi Local Municipality is a Category B municipality situated on the north-western side of the Northern Cape Province in the Namakwa District, refer to Figure 6. It is one of the six municipalities that make up the district. It covers 17 990 km^2. It consists of nine towns, namely, Bulletrap, Carolusberg, Concordia, Kleinzee, Komaggas, Nababeep, O'Kiep, Springbok, and Steinkopf. Nama and Khoisan people occupied this area for hundreds of years. The town of Springbok is the administrative centre. Springbok is the most densely populated area, is close to the N7, and functions as the sub-regional centre for administrative, commercial and higher-order social facilities. Mining used to form the backbone of the economy, with tourism being seen as the new frontier for economic development.[24]

[24] Municipalities of South Africa (2022) Nama Khoi Local Municipality < https://municipalities.co.za/overview/1171/nama-khoi-local-municipality>

Figure 6 Namakwa District



Northern Cape is naturally a dry province. However, the drought reached severe magnitude over the past eight years. This culminated in Northern Cape being declared a disaster area in 2020, with R300-million[25] set aside by the Department of Water and Sanitation for emergency drought relief, refer to Figure 7 drought stricken areas.[26]

[25] Dailymaverick (2020) In drought-ravaged Northern Cape, government assistance may be too little, too late. < https://www.dailymaverick.co.za/article/2020-01-22-in-drought-ravaged-northern-cape-government-assistance-may-be-too-little-too-late/>

[26] Department of Water and Sanitation (2022) Presentation to National Council of Provinces on Status of water and sanitation in the Northern Cape province.

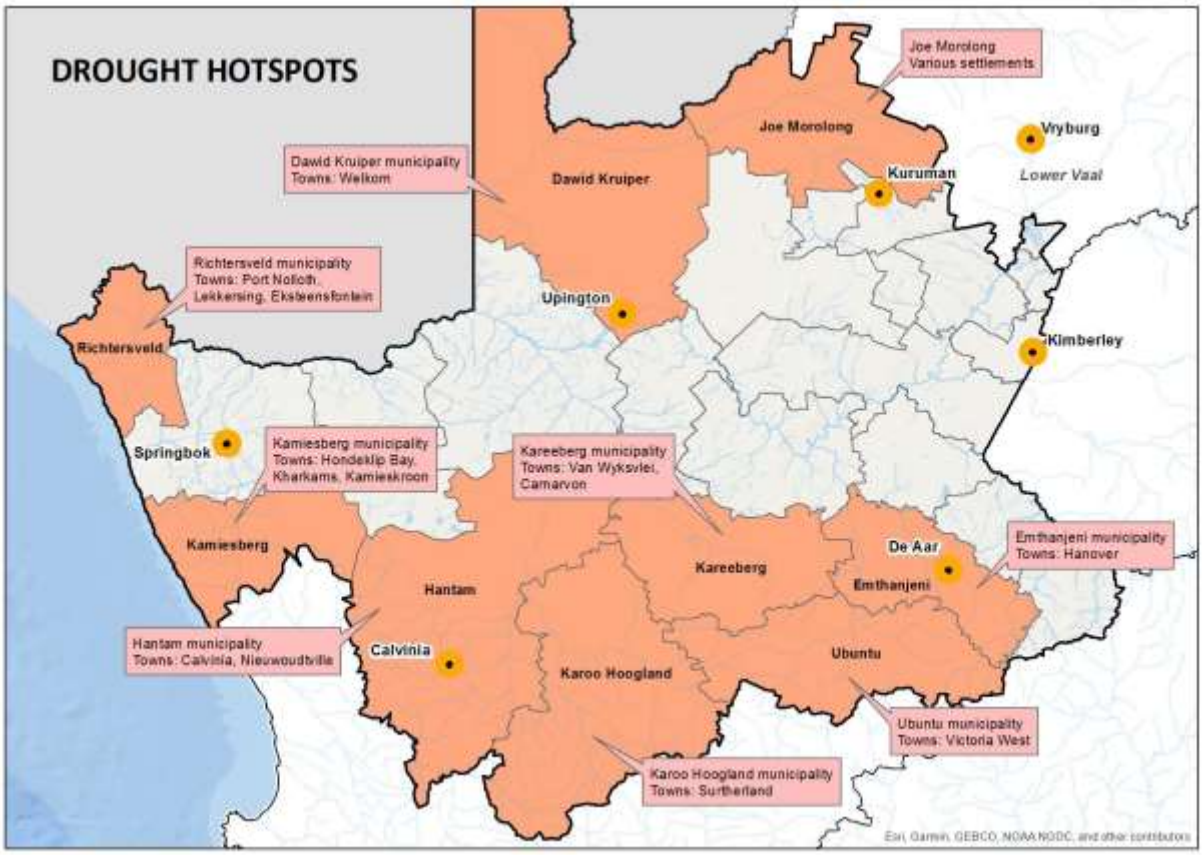
A combination of increasing temperatures and reduced and/or more variable rainfall have severe negative impacts for the Nama Khoi municipality. The municipality is characterised by fairly high levels of poverty and inequality, isolated communities, and a large geographical area, which results in a vulnerable population. Large numbers of people, both private and communal, are also directly dependent on agriculture, and therefore on functioning ecosystems and water regimes, for their livelihoods. These are sensitive to climate change. Drought is having greatest impact on water quality and availability in Nama Khoi.

Nama Khoi is naturally a dry and hot place, with summer day-time temperatures regularly reaching the high into the 30 degrees celsius. Climate scientists predict a rise in average temperatures as a result of climate change. A significant trend for increasing temperatures is already shown by weather stations in the Northern Cape tacking temperature data from 1960-2003.

Nama Khoi is already drought prone, and while little change is projected in the immediate future, droughts are expected to increase in frequency and severity by up to 50% towards the end of the century. However, the worst affected area by the drought that hit South Africa in 2014/15 is the Buffelsrivier. The provincial department of Rural Development and Land Reform provided drought relief funding to the tune of R2 million in 2019/20.[27] In this regard, the provincial week delegation should consider visiting this area to experience first-hand the effect of drought and the drought relief interventions that have been implemented thus far. Nama Khoi municipality should be requested to provide a comprehensive report on drought stricken areas.

[27] Nama Khoi (2020) Nama Khoi Integrated Development Plan second revision 2019/20

Figure 7 Northern Cape Drought Stricken Areas[28]



[28] Department of Water and Sanitation (2022) Presentation to National Council of Provinces on Status of water and sanitation in the Northern Cape province.