# Platform for Water Secure Gauteng – Strategy

July 2025 Revision 02

## Contents

# Preamble

This document has been prepared for discussion by the *Platform for a Water Secure Gauteng (*PWSG) leadership group at its meeting in May 2025. Its purpose is to outline the strategy proposed for the Platform to help address growing water security challenges in the province and to guide the ongoing collaboration between its partners. The document is intended to be brief and accessible to a wider community of partners and stakeholders. It will be complemented by more detailed plans and proposals. These will cover, for instance, the technical challenges faced by the water institutions involved, approaches that can be taken to achieve the short-term goal of demand reduction (for example communications and community engagement) as well as the contributions that can be made by the wider family of stakeholders.

# 1 Introduction

## 1.1 Context

The multi-stakeholder Platform for a Water Secure Gauteng (PWSG) was launched in June 2024 at the request of the Director General of the National Dept of Water and Sanitation (DWS) to address growing water insecurity in Gauteng. It brings together some of the key stakeholders from national, provincial and local government, leaders of the metro municipality water providers Rand Water as well as leaders of some key business and civil society organisations. The PWSG is supported by the World Bank based 2030 Water Resources Group (2030WRG) and technical experts from local academia and professional organisations.

The water challenges faced in the province are manifested in chronic shortages in some places and increasingly widespread supply interruptions, outages and irregular, intermittent supply. The consumer-side problems have been accompanied by an increase in visible leaks and losses from the supply network, worsened by slow response times and repairs that often require repeated visits to resolve successfully. Institutional weaknesses at municipal level have contributed significantly to this deterioration in services.

These problems have been compounded by long delays in the nationally led Lesotho Highlands Water Project Phase 2 (LHWP2) to increase bulk water supplies from the Integrated Vaal River System (IVRS) on which the region depends. At present, Rand Water, the bulk water provider to Gauteng, is taking more water than can safely and sustainably be supplied from the IVRS in the long-term (1 600 million $m^3$ per annum, which is the long-term sustainable abstraction limit). Due to good rainfalls in recent years, DWS has given Rand Water a temporary license to abstract 1870 million $m^3$ per annum, which is renewed annually, depending on the storage status of the IVRS. If conditions in the IVRS deteriorate, DWS will have to revert to the long-term abstraction limit to avoid the risk of major water shortages should there be a serious multi-year drought.

In the context of ongoing population growth, Gauteng will have to substantially reduce its water use. Even when LHWP2 is completed, Rand Water will only be able to increase its abstraction by a limited amount (given that it is already over-abstracting in terms of the sustainable long-term abstraction limit). It is envisaged that the long-term sustainable abstraction limit will only increase to 1908 million $m^3$ per annum in 2028 when additional water starts to be captured in the Polihali Dam in Lesotho.

Failure to reduce water use will have serious consequences. This in turn is impacting negatively on the quality of life of the affected population. The PWSG is thus committed to supporting the goal set by DWS and Rand Water of reducing the region's overall water use, including leaks and losses from the supply systems, by 10%. The three metros have made some progress through the implementation of water

conservation and water demand management strategies to reduce losses. The PWSG will focus its efforts on promoting and supporting these and other measures that keep water use in the province within sustainable limits while ensuring that all water users (residents, businesses and institutions, private and public) can meet their essential water requirements in an equitable manner, getting their fair share of the limited water that is available.

As part of this effort, the PWSG will consider, recommend and support the implementation of technical, institutional and communications interventions to help achieve the required reductions in water use. This document presents the strategy that is proposed to guide the work of the Platform.

## 1.2 Mandate and mission

The mandate of the PWSG is to understand, promote and support efforts to ensure that all water users in Gauteng (residents and institutions, private and public) can meet their essential water requirements in an equitable, reliable and sustainable manner. It is guided by the recognition that engagement between stakeholders, supported by clear information, communication and coordination, will build greater trust and lead to better outcomes.

## 1.3 Time frame

In recent years, Gauteng's water shortages have been most acute in the summer months. For this reason, the strategy aims to start implementation of priority actions immediately to ensure readiness by spring of 2025 (September/October). The focus will be on actions that achieve rapid impact, with the resources available, across the entire Rand Water supply area. The PWSG will therefore:

- support immediate steps to improve water security in Gauteng from the spring (September/October) of 2025; and
- aim to sustain such improvements in the medium-term until the expected completion of LHWP2 in 2029.

# 2 The current context of water security

The concept of 'water security' covers a wide range of issues. It is often defined as "the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems, and production, coupled with an acceptable level of water-related risks to people, environments, and economies".[1] This PWSG strategy to promote regional water security takes this broad perspective and is informed by an analysis of the complex environment in which it is being implemented and its implications.

## 2.1 Political

Initiatives to improve performance of water supply and to bring water use into line with available supplies requires the combined effort of government, its agencies, the private sector, civil society and experts to succeed. Current government initiatives include:

- The 2024-2029 Medium Term Development Plan has specific targets supporting improved service delivery in local government:
  - Shift to a utility model for water services to ensure financial and operational sustainability (all metros with ring fenced & professionally managed utilities)
  - Fiscal framework review and use of conditional grants
  - Increased capital expenditure (more than 10% of total expenditure)

[1] Grey, D. and Sadoff, C.W., 2007. Sink or swim? Water security for growth and development. *Water policy*, *9*(6), pp.545-571.

    - Strengthen disaster management capabilities at local government to respond effectively to any events.
- This is reinforced by the prioritisation of basic water service delivery by the President in his 2025 State of the Nation Address and at the March 2025 Water and Sanitation Indaba, responding to citizen concern about government's ability to provide basic services.
- Operation Vulindlela Phase 2 has two of its six priorities relevant to water security in Gauteng: ensuring reliable supply of quality drinking water, and strengthening local government in improved delivery of basic services.
- The National Treasury's Cities Support Programme (CSP) is driving a six year program of reforms to turnaround and improve performance in the trading services (which include water and sanitation) of the eight metro municipalities.
- DWS, COGTA and SALGA are encouraging municipalities to ringfence and strengthen their 'water services provider' operations to improve their performance and enable them to reduce their debt to water boards, which will help to assure the latter's sustainability.
- Ongoing efforts by the municipalities to provide reliable services to their communities in a sustainable manner in response to growing community dissatisfaction. The metros' water and sanitation services are responding to the Treasury reform programme aimed at substantial financial and operational improvement, and result in increased investment in infrastructure, maintenance and water services delivery.

The work of the platform will support these initiatives.

## 2.2 Economic

Limited and unreliable water supplies are constraining business operations and investment, hampering economic and employment growth. This places an additional burden on both private and public finance.

- A lack of water security is slowing the growth of the Gauteng economy, which contributes over 30% of South Africa's GDP[2], and could shrink growth rates by a further 2–5% annually[3].
- There is limited fiscal capacity to support further public spending in the expansion, maintenance and operation of Gauteng's municipal water infrastructure, which should be largely self-financing.
- The scope for 'off-budget' financing (loans or public-private partnerships (PPPs)) is limited by both inefficiencies in current water services operations and the diversion of municipal water income to other purposes.
- The funding of LHWP2 and other infrastructure developments will increase financial pressures on water users and requires increased efficiencies and a review of municipal tariffs in order to achieve a balance between social equity and economic efficiency.

Some of these issues will be addressed by the initiatives listed in 2.1, above.

## 2.3 Social

Relationships between water service providers and users are strained by a vicious cycle in which poor municipal performance undermines mutual trust and weakens efforts to improve water service delivery and promote efficient water use. In South Africa's very unequal society, this is compounded by:

[2] Statistics South Africa (Stats SA). (2023). *Statistical Release P0441.2: Provincial Gross Domestic Product 2023*. Pretoria: Statistics South Africa. Available at: https://www.statssa.gov.za/publications/P0441.2/P0441.22023.pdf

[3] Business Day. (2025, February 11). Sapoa warns water crisis could dampen investor confidence. BusinessLIVE. https://www.businesslive.co.za/bd/companies/property/2025-02-11-sapoa-warns-water-crisis-could-dampen-investor-confidence/ and Business Day. (2024, July 31). Coronation warns water-shedding a risk to investment. BusinessLIVE.https://www.businesslive.co.za/bd/national/2024-07-31-coronation-warns-water-shedding-a-risk-to-investment/

- Failure to clearly explain and equitably and consistently implement the constitutional right to water[4] which has led some poorer communities to oppose cost-recovery measures as punitive or exclusionary.
- The prevalence of illegal connections has grown in line with general lawlessness in the country, further vexing those who do pay for water, while municipalities are often deemed to be powerless to stem water theft.
- Non-payment and service delivery protests polarize relations between users and providers.
- Differential levels of service provision between wealthier and poorer areas reinforce perceptions of apartheid-era spatial inequities.
- While resistance to billing in poorer communities often reflects protest against perceived unfairness, some wealthier communities resent cross-subsidization of poorer areas.
- Across more affluent groups, municipalities' failure to meet expectations of, for instance, reliable supply or accurate billing creates mistrust and a lack of willingness to cooperate.
- Historical mismanagement, corruption scandals, and perceived incompetence erode faith in municipalities and weaken users' response to appeals for conservation or to report leaks.

The PWSG must address these issues to help strengthen cooperation between users and providers and rebuild mutual trust and respect. It will also support measures to ensure that grant funding allocations for basic water services in poor communities are used for the intended purposes.

## 2.4 Technical

Gauteng's complex water supply and sanitation system has evolved over more than a century to accommodate economic, social and political change. The process is ongoing as the province's population has more than doubled, from 7,3 million in 1996 to over 16 million in 2025. To address the region's water supply needs:

- National government (DWS) manages the IVRS which can currently provide a reliable supply of 4,380[5] Ml/d to Rand Water. The volume available will be increased to ±6,516[6] Ml/d when LHWP2 is completed.
- Use of Rand Water's water treatment and transmission capacity of 5,000 Ml/d (maximum day in 1995/1996) [7] has been constrained by the IVRS's limited yield. It is renewing and expanding its treatment capacity to 6,080[3] Ml/d to be operational when LHWP2 comes on stream.
- Metro municipalities have extensive storage and distribution networks but are often unable to maintain full (24/7) supply due to limited availability from Rand Water. The deficit is aggravated by significant levels of non-revenue water due to both commercial losses and leakages.
- In some areas, limited municipal storage leads to failures to manage peak demands or short (<48 hour) interruptions.
- The metros have programmes to reduce losses through, for instance, installation of pressure management devices and leak reduction programmes but their impact is limited by lack of investment in the renewal of deteriorating distribution infrastructure. The smaller municipalities have even higher percentage of losses, although much smaller volumes of loss than the metros.
- Frequent supply throttling and shutdowns appear to be increasing the occurrence of failures and resulting water losses in the distribution infrastructure.

[4] Water is provided at no cost to informal settlement through shared standpipes while basic water used by indigent households is provided at no charge by the metros, with the National Treasury Equitable Share intended to cover this cost. For capital investments, loan funding must be repaid with interest, requiring expenditure on revenue generating assets whereas own revenue and grant funding can be applied to build infrastructure with limited opportunity to generate revenue.

[5] DWS Ministerial technical report, March 2023

[6] Rand Water, April 2025

[7] www.dws.gov.za/Documents/Other/WMA/Upper%20Vaal%20WMA.pdf

- External factors, notably unreliable electricity supply but also vandalism and theft, impact on the reliability of both Rand Water and the municipalities.

In summary, despite extensive[8] investment and institutional change since 1994, the system still fails to meet fully the expectations of its growing community of social and economic users. Overall, reliable supply to Gauteng's users is constrained by the limited reliable yield from the IVRS, further aggravated by failures in the management of local distribution networks.

(Separate but related problems affect sanitation infrastructure. While metro sewage treatment has generally met minimum standards[9], poorly managed connections to the sewer network and sewer blockages lead to spillages into stormwater drains which pollute local streams).

## 2.5 Environmental

The IVRS which serves Gauteng has been designed to enable reliable water supplies to be sustained despite the region's extremely variable climate.

- No significant climate change impacts on water supply from the IVRS have yet been identified but system yields and risks must continue to be carefully monitored.
- The IVRS's climate risks are reduced because the system captures water from several river catchments, and it is unlikely that all will be impacted upon equally during prolonged dry periods.
- The 14 large dams in the IVRS can store almost 10 500 $Mm^3$, more than 5 years of the average river flows and six times the volume used annually within Gauteng. In comparison, Cape Town was vulnerable because its Western Cape Water Supply System (WCWSS) stores less than two years of average flow. The IVRS catchment extends over 40 000 $km^2$ while the WCWSS covers just 800 $km^2$.
- Although water pollution is a growing problem, the IVRS catchments that supply Rand Water are upstream of Vaal Dam and less vulnerable than those downstream of major urban, industrial and mining areas. However, ongoing monitoring and protection are essential, as upstream sources are not immune to pollution.
- Further increases in freshwater supply are possible but will be increasingly expensive.
- New sources such as wastewater reuse and mine drainage desalination will likely be required and their development will help to address water resource quality challenges.

## 2.6 Legal

Gauteng's water security is further complicated by the complex institutional and legal framework and conflicting priorities across the very unequal society. While many responsibilities are allocated to the local sphere, it has limited institutional capacity to respond, and other spheres of government are Constitutionally constrained in terms of intervention. Key legal instruments include:-

**Legal Frameworks Governing Water**

- Constitution (1996): Provides for the 'right to water' and the protection of the environment and allocates water and sanitation functions to municipalities.
- National Water Act (1998): Regulates the management and use of water resources.
- Water Services Act (1997): Regulates water services provision by municipalities and provides for the establishment of water boards as regional bulk services providers.

[8] Although extensive investment may have been made, it has not been sufficient to either maintain infrastructure or provide for growth, nor has it been adequately prioritised (e.g. new reservoirs taking precedence over replacement of old distribution networks). Value for money procurement has also been hampered by corruption and ineffective regulation.
[9] DWS Green Drop report 2023

- Municipal Structures Act,
- Municipal Systems Act,
- Municipal Finance Management Act.

These laws, their respective regulations and municipal bylaws guide the governance and management of the natural resources as well as the services provided by municipalities.

# 3 Problem statement

In the complex context described above, the emerging challenges of water security for the communities of Gauteng cannot be addressed by the water institutions alone. Their actions will only be effective if they have the support and trust of the communities and businesses who depend on them.

What is needed is thus a platform of common understanding built jointly by those affected by water insecurity and those responsible for addressing the challenges. The role of the PWSG, given its limited resources and mandate[10], is to help to build that platform, build consensus on the interventions required, foster collective effort and joint responsibility and mobilise the support of all stakeholders concerned for the interventions required.

In this process, immediate actions must also build a foundation for longer term water security – simply pumping more water from the IVRS might provide some immediate relief but would risk complete supply failure if a serious drought occurred.

The starting point must be to identify and address the nature and immediate causes of current water insecurity. The availability, reliability and quantity of water currently provided is not acceptable to those users who currently suffer regular interruptions in supply. The systematic analysis which follows seeks to pinpoint specific challenges and thus to focus efforts on developing responses to them.

## 3.1 Delay in major infrastructure projects

The immediate and obvious cause of water shortages and insecurity in Gauteng is the delay in implementing Phase 2 of the LHWP. In 2012, Parliament was told that it would be completed by 2019[11]. After repeated delays, it is now expected to be operational only in 2029 (the project is currently approximately 50% complete). Accordingly, investment in treatment, storage and distribution networks by Rand Water was postponed.

## 3.2 Water losses and non-revenue water

If less water was used, the supply deficit would be reduced. So the shortage is aggravated by high levels of water loss from Gauteng's municipal systems. Water providers measure and report on 'non-revenue water' (NRW), water that is supplied to the municipalities but lost to leaks or otherwise unaccounted for. This covers both physical water loss as well as water that is used without any revenue accruing to the provider.

Non-revenue water consists of:

a) Unbilled authorised consumption (failure by municipalities to bill customers and to collect revenue)

[10] Joint statement by the Ministry of Water and Sanitation, Gauteng Office of the Premier, City of Johannesburg and Rand Water on water challenges in Johannesburg. 11 November 2024

[11] (Presentation to) NCOP Select Committee Land & Environmental Affairs, 23 October 2012 (at) https://static.pmg.org.za/docs/121023lesotho-_1.pdf

b) Commercial losses (unauthorised consumption, customer meter inaccuracies, and data transfer errors)
c) Real or Physical losses (i.e. leaks).

The term 'total losses' is often used to refer to the sum of b) and c) above.

While efficiently managed services might expect an NRW of around 25%, in December 2024 it was reported to be at 48.4% in Joburg, 33.3% in Tshwane and 30.0% in Ekurhuleni. While the target for real/physical losses is 15%, it was recently reported to be 26.6% in Joburg, 26% in Tshwane and 21.4% in Ekurhuleni with the balance being unbilled authorised consumption and commercial losses[12].

## 3.3 Insufficient maintenance and intermittent operation

There has been significant deterioration in municipal water distribution systems due to shortfalls in maintenance and repair and delays in renewing infrastructure that has exceeded its useful life. Both factors contribute to increased physical water losses[13]. This is compounded by resource constraints, budget availability and ineffective supply chain management.

In some locations, a lack of resources and an apparent lack of alternative measures has led municipalities to resort to the practice of 'throttling' and periodically interrupting supplies. This practice has been explicitly discouraged because the resulting pressure changes are likely to accelerate deterioration and lead to increased breaks, leaks and losses. [14]

## 3.4 Theft, vandalism and lawlessness

Vandalism and theft of infrastructure interrupts supplies to users, leads to water losses and imposes costs on municipalities. Infrastructure is sometimes damaged to enable water tanker 'mafias' to exploit municipalities and water users. Theft of water by bypassing meters at household level or finding other ways to take unmetered, unconstrained volumes at a commercial scale has also grown significantly and general lawlessness has encouraged a culture of theft and non-payment for basic services. Also, theft and vandalism of poorly protected wastewater infrastructure result in the pollution of water resources used by downstream users.

## 3.5 Urban densification and demand peaks

At a local distribution level, the tight supply-demand balance makes water systems highly vulnerable to increases in demand. These increases may be due simply to an increase in population (due to unplanned densification) or to external shocks. Network design and upgrading to cater for densification is often not undertaken even where changes in land use do not have planning permission as, for instance, where domestic premises have been converted to student accommodation. Heatwaves during dry periods cause spikes in demand, resulting in reservoir depletion and extended outages especially in high-lying areas. The Waste Water Treatment Works are not upgraded at a pace that matches growth, resulting in insufficient treatment capacity to treat all the sewage effectively. This, in turn, compromises the protection of receiving water bodies and limits the capacity of drinking water plant to produce clean, potable water.

[12] Monthly Dashboard report of Platform for a Water Secure Gauteng
[13] Decades of underinvestment has been enabled by short-term political budget decision making and absence of ring-fencing revenues from sales of water and sanitation services to be applied to expenditures required to run sustainable services. This is at the core of the Treasury reform referred to in §2.1
[14] Water supply The Neighbourhood Planning and Design Guide, Part II Planning and design guidelines. Department of Human Settlements, 2019

## 3.6 Supply disruptions related to electricity supply

Another set of externally driven impacts have been electricity outages which disrupt water supply when pumping or treatment is affected. In the past, such electricity outages were often caused by load shedding by ESKOM, but more recently they have been mostly caused by breakdowns in municipal electricity distribution infrastructure. With little redundancy in water supply, transformer failures and tripping due to thunderstorms regularly impact on water supply since, if reservoirs are emptied, the time required to refill them often results in prolonged water outages.

## 3.7 Inappropriate, inaccurate information weakens understanding and trust

The proliferation of social media platforms makes it difficult for public agencies to communicate effectively since false news often spreads faster than truth. Public authorities need to provide accurate and often complex information, but this has to be done regularly and promptly if it is to build mutual trust, respect and credibility. Where many institutions are involved, they must coordinate their responses to avoid perceptions of 'blame-games' since conflicting communication also erodes trust.

Since the inception of the PWSG, metros such as Johannesburg have substantially increased and improved their information flows. However, good communication cannot compensate for poor services. There is evidence that appeals to 'save water' or to 'report leaks' are intensely irritating to communities where water supply is failing particularly when there is no visible response or improvement.

Communications must thus be carefully designed to address the concerns of the intended audiences. If the PWSG is to make a positive contribution, it must ensure that its content is targeted to address the experience and expectations of the water users and supports the strategies that are being implemented by the service providers. A particular challenge is to gain support from users who are not currently affected by shortages as well as those without reliable water who seek effective action.

# 4 Stakeholder Analysis

Water supply in Gauteng is a complex process involving many players whose roles and interests need to be understood in order to guide and support their collaboration.

## 4.1 Water providers

The main players in water supply to Gauteng are:

**National Government: DWS, COGTA and National Treasury:**

DWS's roles are set out in the National Water Act (1998) (NWA) and the Water Services Act (1997) (WSA).

Under the NWA, DWS ensures that the country's water resources are protected, managed, used, developed, conserved and controlled. Under the NWA, DWS develops and operates the Integrated Vaal River System, managing and protecting this resource by regulating and controlling the abstraction from bulk off-takers, such as Rand Water and industries. DWS also regulates the disposal of wastewater to ensure that the resource is not damaged.

Under the WSA, DWS regulates and supports the delivery of effective water and sanitation service by municipalities (in collaboration with COGTA and National Treasury) and establishes and regulates the governance and tariffs of water boards. It also supports Water Boards and municipalities[15] through policies and guidelines, supporting coordination, communication and awareness.

[15] Some municipalities are designated by COGTA as As Water Services Authorities (WSA), responsible for ensuring access to water services in their areas of jurisdiction.

The NWA delegates certain operational powers to Catchment Management Agencies

(CMAs). These include the power to 'temporarily control, limit or prohibit use of water during periods of water shortage' (NWA Schedule 3 Art. 6). The NWA also allows the Minister to direct the CMA to take such actions if necessary. (NWA art 74). A CMA has now been established that covers the Vaal and Orange catchments.

**Rand Water Board:**

Rand Water's 'primary activity' under the WSA is to provide water services to 17 municipalities and other large users within its service area, which includes part of the Free State, Mpumalanga, North West as well as Gauteng provinces. As a state-owned entity, Rand Water is funded from the revenue earned from the sale of bulk water. While the Minister of Water and Sanitation appoints members of Rand Water's board and may give directives, DWS has no direct powers over it. Water Boards take responsibility for their own governance and management and report annually to the Minister and Parliament. Rand Water is responsible in its service area for the development, operation, maintenance and management of all the bulk water infrastructure that connects Water Service Authorities (WSAs)to the IVRS. Rand Water is not only responsible for minimising losses from its system but also decides how the limited volume that it is authorised to abstract is distributed between its various clients.

Rand Water is actively involved in water conservation through water use awareness with its Water Wise initiative. It also provides technology and skills support to the water services sector through its subsidiary, Rand Water Services.

**Municipalities:**
Gauteng's 9 municipalities are all (WSAs) that receive most of their water from the IVRS via Rand Water. Three are Metropolitan Municipalities (Tshwane, Johannesburg and Ekurhuleni) while the remaining six are local municipalities. Figure 1 shows that the three Metros take over 75% of the water Rand Water produces, with Emfuleni taking a further 6%. The participation and active involvement of these WSAs in the Platform is thus essential.

Each municipality, as the WSA, is responsible for the efficient development and management of its water services as well as for setting tariffs and collecting revenue to cover the costs of services and developing and enforcing bylaws. All municipalities undertake their water services provision role through internal structures except in Johannesburg, where Johannesburg Water is a separate 100% municipal owned 'entity'.

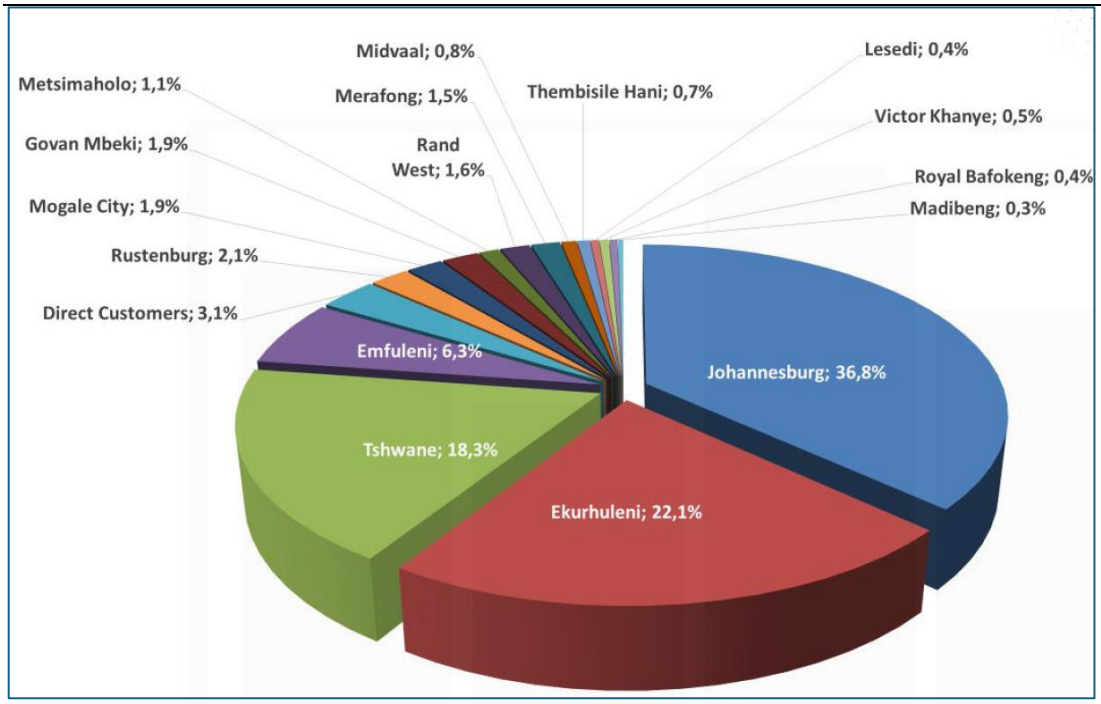


*Figure 1: Rand Water bulk water distribution*[16]

## 4.2 Water users

Water users are the primary stakeholders for the water provider institutions. They are conveniently divided into three categories:

- Residential,
- Institutional and
- Commercial.

Each group has its own characteristics and requirements which must be considered when developing and implementing policy and interventions such as campaigns to reduce water demand.

### 4.2.1 Residential water-users

Gauteng's population reflects South Africa's diversity of languages and cultures as well as its huge levels of inequality and poverty. This diversity presents challenges for the delivery of public services which must address the different circumstances of the various groups in society in an equitable but effective manner. These challenges are particularly acute in the provision of water services which must meet the needs of all households. Wealthy households typically demand, and are prepared to pay for, high volumes of water and levels of service. Very poor households are not able to afford a basic water supply beyond the volume provided free of charge, but also require reliable water services.

In practice, it is necessary to 'segment' residential water users into different groups for different purposes, whether to communicate about service issues, design their supply networks, establish tariffs, metering and billing processes or, as in the present case, to encourage them to reduce their water use because of supply constraints (as dealt with in S.5.3 below).

[16] Credit to Rand Water

### *4.2.2 Public institutions as water users*

In many public institutions such as health and education facilities, security and correctional institutions, recreational spaces as well as government offices, there is often significant water wastage. This may be due to old infrastructure and poor maintenance but leaking pipes, taps and toilets are often left unattended because those responsible for maintenance do not pay the water bills. Where payment of water bills is centralised, there is a disconnect between the officials approving the bill, and the client department responsible for the consumption.

In public institutions, this disconnect between the user and payer of services, as well as the lack of clear accountability can result in exorbitant water use which must be a focus area in any demand management programme.

### *4.2.3 Commercial water users*

Commercial and industrial users as well as some private institutions are usually grouped together for purposes of water supply management. In Gauteng, an estimated 30% of water supply by volume is used by commerce and industry.

Since these users provide a substantial and reliable revenue base for municipalities, typically cross subsidising poor households, relationships are usually managed by a commercial manager. In addition, because reliable water supplies are often a strategic concern, commercial water users (or their business associations) are often important partners who can support water institutions to address long term development strategies as well as to amplify messages about better water use through their employees and customer bases.

## 4.3 Organised business, civil society and academia

Representatives of business and civil society organisations who are members of the Platform offer guidance in respect of the overall approach taken and the issues to be addressed. They can also provide valuable support with access or approaches to particular communities and geographical area in which the Platform seeks to work. In addition, business can support in providing resources in cash or kind and work with their employees and customers to communicate water saving initiatives. The PWSG does not include specific businesses but does have members from business umbrella groups. Academic and professional experts are also part of the Platform and contribute their insights to help inform and implement the Platform programme.

# 5 Platform Objectives and Actions

The PWSG aims to achieve rapid impacts to contribute to improved water security in Gauteng. Through the analysis above, it has identified several distinct problem areas where actions can be targeted. While many of these are beyond the PWSG mandate, there are others where PWSG can make an immediate contribution. In selecting these, PWSG is guided by three simple principles:-

- Equitable outcomes
- Shared responsibilities
- Mutual trust and respect

## 5.1 Areas of action

***The PWSG's overarching objective is to contribute positively to Gauteng's water security by promoting and supporting measures that help to keep water use in Gauteng within sustainable***

***limits while ensuring that all water users (residents and institutions, private and public) can meet their essential water requirements in an equitable and cost-effective manner.***

The PWSG thus seeks to identify and support actions that rapidly improve water supply reliability for Gauteng communities. It recognises that operational, communications and policy actions can often have more rapid impact and are much less costly than long term infrastructure projects and programmes. It thus proposes to focus on a limited set of such actions, notably:

- Engagement and communications to promote demand reduction
- Identification of methods to ensure that available water is shared fairly
- Support to help water providers to prioritise their distribution, operations and management.

Through this programme of short-term actions, the PWSG will help to strengthen community awareness of the province's water challenges as well as to build trust, engagement and support for the water institutions' own efforts to achieve long-term sustainability while sustaining and improving their day-to-day operations.

## 5.2 Choice & design of short-term support initiatives

It is often assumed that the quickest way to reduce demand is to persuade every person, household and business to change their behaviour and use less water. However, this goal has seldom proven easy to achieve, despite significant allocation of time and money resources. This is the experience of Gauteng's extensive campaigns by the metros, Rand Water and national DWS; supported by similar efforts by business and civil society.

Where water-demand reduction programmes have been successful (as, for instance, in Cape Town) there has often been a combination of contributing factors:-

- An evident threat to sustainable supplies (a drought or a system failure)
- A recognition that this is a community-wide challenge requiring a collective response
- Extensive communication and information about the threat and progress of the response
- Formal requests to users from official sources to reduce water use
- Promulgation of formal use restrictions, incentives and penalties
- Social/community level reinforcement of the restriction messages
- Penalties imposed and enforced for failure to comply with water use limits
- Extensive communication and information about the progress of the response

Challenges arise when:

- There is conflict between stakeholders about the 'correct' response
- The message about the threat is not credible or relevant to a significant group of users
- The response from individuals is not visible
- There is no apparent consequence for failure to reduce use

Gauteng's present situation, in contrast to Cape Town's experience, is that there is no obvious existential threat. Dams are full, good rains have fallen and water will continue to be available from the IVRS, albeit in limited volumes or at increasingly reduced levels of assurance. PWSG will therefore be acting in communities where water supply is currently relatively secure (often because they are in low lying areas which are often not affected by reductions in water pressure due to municipal reservoirs being depleted) and may thus lack the motivation to reduce their consumption. This difference must guide PWSG's strategic focus.

The PWSG cannot usurp the functions of the formal water institutions. It can however support them by focusing on activities that leverage its multi-stakeholder character. PWSG focus areas must thus prioritise:

- Encouraging discussion and coordination amongst stakeholders of efforts to promote water security;
- Building mutual trust and respect and a common understanding of problems and possible actions and solutions; and
- Facilitating communication that supports action to improve user behaviour and public sector delivery.

To this end, three focus areas are proposed as initial priorities for short-term support. They are:

- Promoting demand reduction
- Support to water providers to prioritise improvements in their distribution operations and management.
- Identification of approaches to ensure that available water is shared fairly (i.e. equitably, efficiently and cost effectively).

The intent and content of each focus area is outlined briefly below. More detailed programme descriptions will be developed for each area by the teams responsible.

## 5.3 Communications to promote demand reduction

The PWSG communications programme will have four legs:-

- The Gauteng Water Security Dashboard;
- Behaviour change campaigns;
- Water security awareness campaigns;
- Think tanks

### *5.3.1 The dashboard – providing relevant, in-depth information*

Since September 2024, the PWSG has produced the Gauteng Water Security Dashboard, available online, to provide weekly and monthly information about the state of the IVRS and water use across the province. The objective of the dashboard is to give stakeholders a reliable up-to-date insight into water availability and the system's status. It continues to be developed and also provides a channel through which to disseminate more detailed information and analysis and provide access to other institutional resources for communities and business.

The initial dashboard development focussed on establishing a reliable, regular publication in acrobat format and loaded onto the DWS Water Security Dashboard webpage. This initiated the flow of information from metros, into a basic format, with continuous feedback from Platform stakeholders. A future goal is to develop an interactive dashboard that is continuously improved to offer data that water users need. Where possible, partnerships will be formed to feed in information from service providers that are already collecting data for this purpose, with the aim of efficiency for the Platform but also strengthening organisations already involved in doing so.

### *5.3.2 Behaviour change campaigns*

An initial campaign has been conceptualised that uses the waterbuck as a mascot for water savings - as a South African animal, linked to water, and 'bucks' a colloquial word for money. The waterbuck campaign proposes linking the cost of water to savings[17] that can be made by reducing water use. The aim of the campaign is to promote a "feel-good" response - saving water saves both your own 'bucks' and contributes to the public good. This approach reflects the finding that many households do not understand the connection between their water consumption and their municipal bills. It is envisaged that different complementary campaigns may run, tailored to the needs and culture of different sorts of

[17] Campaign launch must be mindful of annual municipal tariff increases annually in July.

communities. This will involve testing of 'what works' to enable optimisation and continuous improvement.

### *5.3.3 Water security awareness campaigns*

Further tools to support campaigns that address critical water security challenges are being developed. These may target specific activities - how to read a meter, how to fix leaks on site, tips to save water - to general information on water shortages etc. Materials will be tailored and targeted for different water consumer and demographic categories, geographic areas and stakeholder channels - churches, hospitality industry, retailers, educational institutions etc. In the current low trust environment, local stakeholder channels and leaders are more likely to effect behaviour change than government communications.

### *5.3.4 Communication coordination and digital development*

The metros already make extensive use of digital applications to engage with their stakeholders, notably to promote water conservation awareness, report leaks and to advise on reservoir levels and system interruptions. However, there remains extensive demand from water users for more effective, timely and useful interaction particularly on metering and billing issues as well as on service interruptions. While these systems are the domain of the water services providers, the PWSG will offer support to the providers to help them to enhance communication channels and to ensure that, starting with websites, digital channels are compatible and consistent with the operations of traditional call centres and walk-in offices.

## 5.4 Information tools to help water providers prioritise their operations

While the metro water providers have huge amounts of data about the water they supply and its use, this is often not easily available in a format that supports decision making. To address this, PWSG partners have engaged with a telecom company to develop a set of digital tools that will inform the operational activities of stakeholders and help them to identify and reduce, non-revenue water losses.

Products and services are available that support utilities' asset management and have offered to help to address Gauteng's water insecurity. They have demonstrated how, in collaboration with the municipal service providers, they can aggregate data from multiple sources to provide information at municipal, suburb or district metering areas on a monthly or annual basis. This can help service providers to target their interventions by providing regular information on trends in non-revenue water, as well as identifying high consumption or high NRW areas for possible intervention.

The tools are being trialled with City of Tshwane and discussions are underway with the other two Metros on their potential application. An important contribution that these tools can make to the PWSG's overall programme is to provide rapid (monthly) information that can inform and evaluate interventions such as communications campaigns, supply throttling etc. This will also help the PWSG and the operators to assess the impact of such interventions as well as to guide and prioritise their operations more generally. However, the decision to adopt and use such tools will lie with the municipalities.

## 5.5 Fair shares: Available water for all

As water shortages are exacerbated by population growth and rising levels of losses, a growing challenge for municipalities is to devise operational approaches that distribute water fairly between their many and varied communities. A particular problem is the recognition that supply interruptions, through 'throttling' (reduction in outflows) or temporary closures of supply, are causing severe hardship in many areas. At current levels of supply and use, these practices are effectively starving some areas of water for long periods, either because they are high-lying or at the end of long distribution lines. This practice, which

causes rapid changes in pressure, also appears to be associated with increased bursts and leaks resulting in increased water losses.

Communities who experience the consequences of these practices have protested increasingly vocally against what they perceive as victimisation. They have demanded that city authorities respond by adopting approaches that do not unfairly cut their supplies while leaving other users unaffected. Since shortages will become more acute over the next few years, the extent of these water-starved communities will grow unless targeted actions are taken. The PWSG will thus work with the affected communities and service providers to discuss the issues and identify possible solutions that will share the burden of shortages in a more fair, yet sustainable, manner. The 'information tools' described above will help to inform such discussions.

## 5.6 Research and technical advisory support to water providers

In addition to the focus areas described above, the PWSG is committed to mobilising advisory resources from wide range of technical, professional and academic institutions. Such resources may be deployed to sub-groups tasked with particular activities or on a stand-alone basis to address specific issues.

Some of the issues to be addressed may require significant research and the cooperation of higher education institutions. The Water Research Commission and others will be mobilised to contribute to this. The PWSG will also encourage such institutions to continue to promote relevant presentations and seminars to specialist and general audiences and to involve a wide range of social science and business disciplines as well as their specialists from technical fields.

More immediately, the PWSG will harness skills and expertise to engage, advise and support the municipalities[18]. Helpfully, this assistance can be in the form of 'just-in-time' advice since, with the help of partners, it can often be mobilised without the need to go through formal procurement procedures.

# 6 Institutional arrangements and resource requirements

## 6.1 Composition (see §4.3)

As a multi-stakeholder platform, the PWSG includes top leadership of DWS, Rand Water, the three Gauteng metros and all other water service authorities, National Treasury Cities Support Programme, a number of organised business organisations, the property sector including city improvement districts, as well as civil society, including ratepayers, civic organisations and religious organisations as well as technical professionals and experts and remains open to newcomers.

However, if it is to be agile and effective, the PWSG's structure and operational approaches will have to be managed and reviewed from time to time. A distinction may usefully be made between a leadership group and specialist sub-groups. The leadership group should be drawn from the primary stakeholder groups and focus on overall strategy and impact. The sub-groups could convene appropriate range of partners to focus on specific activities. A small sub-group of the leadership group could be nominated to take responsibility to act as a secretariat and convene activities.

## 6.2 Governance

The DWS requested the establishment of the Platform but sought, from the outset, for it to be independent in character. It was envisaged that the Platform will work until 2028 – 2030, in anticipation

[18] For example, to immediately review the practice of reservoir throttling for its potential negative impact on overall water use due to infrastructure deterioration.

of major water supply coming on-stream. This may be reviewed mid-term to determine whether the Platform should continue on a more permanent basis.

The Platform is initially being hosted by the 2030WRG at the World Bank, which is also providing financial support for a core secretariat. It is anticipated that, should the PWSG seek continued existence, one or more local hosting organisations will be identified and potentially more formal decision making protocols will be determined.

The Governance is initially informal, requiring that decisions be taken by sufficient consensus in leadership meetings and subgroups. The leadership group aims to meet three times per year or every 4 months, and sub-groups meet as needed. There are currently two working groups in the PWSG Platform, namely that focused on the Water Security Dashboards and on the development of communications and awareness programmes.

Other governance matters to be addressed include:

1. Ensuring that participants respect the group and reflect its positions when acting as Platform members;
2. Locating accountability for funding appropriately with the organization that provides it but with oversight by the PWSG leadership group of its application;
3. Agreeing protocols for communications that use Platform branding;
4. Respecting and guiding the brand and communications norms of Platform members;
5. Developing conflict resolution approaches and protocols for challenges that may arise; and
6. Reflecting the requirements of the POPI Act for data availability and sharing.

## 6.3 Participation, staffing and finances

Participation in the PWSG is voluntary and will not be remunerated. Organisational representatives will contribute to and benefit from interaction and donate their time in kind. Funding for specific activities as well as the secretariat will be mobilised by relevant participants.

The World Bank 2030 Water Resources Group (2030WRG) facilitated funding to cover some direct costs for part-time staff in administrating and implementing the Platform work. Most of the participants on the Platform are voluntary, representing their respective organisations and as such not directly reimbursed for their participation.

2030 WRG is working towards raising a minimum of support for 2025 to 2028, aiming for ±R25 million per year. Costs envisaged include ongoing secretariat support and coordination. Provision will also be made for separate task-oriented budgets which will be prepared for specific activities such as commercial communication services, analytical work, impact evaluation and outreach, as agreed with the Leadership Group.

Some part of this work may be funded through contributions-in-kind by corporates or other organisations that procure services directly and/or channel through their own system. While other funding mechanisms have been explored, existing sources of funding raised are:

- Initial seed funding is provided by the 2030WRG,
- DWS has provided additional funding for the Gauteng platform and intends to do this annually subject to Treasury approval.
- Rand Water has indicated an intention to support through in-kind contributions where it procures services directly.

# 7 Evaluation of progress

The PWSG will monitor and seek to measure the impact of each of the activities outlined in s.5, using practical approaches that support improvement rather than focusing on methodological rigour. However, since many activities will effectively be pilot projects, the evidence generated must be available for evaluation in order to inform further initiatives.

The PWSG's approach will be one of continuous learning that supports further rounds of implementation and the scaling-up of impacts. Its work will be documented so that its experience is available to other practitioners in South Africa and globally. A specialist monitoring and evaluation service provider may be recruited to develop metrics that will enable the Platform to monitor the impact of its work and support a process of continuous improvement.