Official Guide to SOUTH AFRICA

2021/22

WATER AND SANITATION

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The mandate of the Department of Water and Sanitation (DWS), as set out in the National Water Act of 1998 and the Water Services Act of 1997, is to ensure that the country's water resources are protected, managed, used, developed, conserved and controlled by regulating and supporting the delivery of effective water supply and sanitation.

This is done in accordance with the requirements of water-related policies and legislation that are critical in delivering on people's right to have enough food and water, growing the economy, and eradicating poverty.

Over the medium term, the department planned to continue focusing on enhancing regulatory measures, ensuring that infrastructure is protected and restored, and ensuring that water and sanitation services are managed effectively.

Over the period ahead, the department will continue to ensure the delivery of safe water and the effective management of wastewater through enforcing various regulatory measures and strengthening its oversight functions. To this end, the Blue Drop, Green Drop and No Drop regulatory standards are in place to improve asset management practices in municipalities.

Over the medium-term period, the department is expected to support 32 district municipalities with developing water and sanitation reliability plans and monitoring the compliance of all water services authorities with regulatory standards. Over the same period, the department aims to ensure that 80% of applications to authorise water-use are finalised within 90 days and that 963 wastewater systems are assessed for compliance against Green Drop regulatory requirements.

In February 2022, the DWS convened a two-day National Water and Sanitation Summit, attended by a wide range of stakeholders and experts. As a result of these engagements, it has developed a thorough understanding of the water and sanitation challenges facing the country, as well as a high level of consensus regarding what needs to be done to turn the tide.

Through Operation Vulindlela, the DWS is working towards resolving 80% of water-use licences submitted by mining companies within 90 days down from years.

National Water and Sanitation Master Plan (NW&SMP)

By mid-2022, the DWS was leading the initiative to develop the NW&SMP, which is intended to guide the water sector with investment planning for the development of water resources and the delivery of water and sanitation services over the horizon until 2030, and beyond. This development is a first for South Africa.

The core purpose of the NW&SMP is to provide an overall perspective of the scope of the water and sanitation business to provide a comprehensive schedule of actions needed to address present challenges, to estimate the investments

required to ensure effective water resources, and water and sanitation services delivery, as well as to facilitate effective integrated investment planning, implementation of actions and evaluation of achievements.

The master plan identifies key actions in the water sector and allocates roles and responsibilities to all in the water sector, from the various tiers of government, the private sector and other stakeholders for the implementation of the plan.

The NW&SMP will include a list of key programmes, projects and actions to be implemented for the protection and development of the national water resources, and for the provision of adequate and reliable water and sanitation services for all citizens. It will also address the enabling requirements, such as the institutional and legal arrangements for implementation, operation and maintenance, funding requirements and models, and monitoring and evaluation models.

National Water Resources Infrastructure Agency (NWRIA)

By mid-2022, the DWS was in the process of planning and implementing a range of major projects to augment national bulk water resource infrastructure. It was also in the process of establishing the NWRIA to leverage large-scale investments in national water resource infrastructure that are required to ensure that South Africa has sufficient bulk water supply now and in future.

The augmentation projects, establishment of the NWRIA and interventions are intended to ensure that the supply of water does not become a binding constraint to economic growth. They are also aimed at ensuring that challenges with municipal water and sanitation service delivery are not exacerbated by a shortage of bulk water, as has happened in the cities of Cape Town and Nelson Mandela Bay, amongst others.

Water and sanitation sector regulation, compliance and enforcement

The department committed itself in June 2021 to reviving the incentive-based regulation programmes, namely the Green Drop and Blue Drop Certification programmes. A total of 995 wastewater systems were subjected to Green Drop consultative audits; not only to detect non-compliance and dysfunctionality, but also to guide those responsible towards improving operational philosophies which will result in improved effluent quality.

These plants demand the merging of scientific and engineering skills to ensure that we have the capability to treat used water to acceptable water quality standards, which allows the reuse of the precious resource.

Drinking water

Tap water inside their dwellings, off-site or on-site was most common among households in Western Cape (99,4%), Gauteng (98,4%), and Free State (93,6%)

and least common in Limpopo (69,4%) and Eastern Cape (71,0%), according to Statistics South Africa's General Household Survey of 2021.

Since 2002, the percentage of households in Eastern Cape with access to water in the dwelling, on- or off-site increased by 14,9 percentage points and those in KwaZulu-Natal by 11,6 percentage points. Nationally, the percentage of households with access to tap water in their dwellings, off-site or on-site increased by 4,3 percentage points during the same period.

Despite these notable improvements, access to water actually declined in six provinces between 2002 and 2021. The largest declined was observed in Limpopo (-4,4 percentage points), Mpumalanga (-4,3 percentage points), North West (- 2,2 percentage points) and Free State (-2,0 percentage points). In addition, access to water has been declining in both Eastern Cape and Limpopo since at least 2014. On the positive side one should, however, take into account that many more households were provided with water in 2021 than two decades earlier.

An estimated 45,2% of households had access to piped water in their dwellings in 2021. A further 29,4% accessed water on-site while 12,2% relied on communal taps and 1,9% relied on neighbours' taps. Although generally households' access to water improved, 2,7% of households still had to fetch water from rivers, streams, stagnant water pools, dams, wells and springs in 2021.

The percentage of households with access to piped or tap water in their dwellings, off-site or on-site by metropolitan area, is presented in Figure 9.2. The figure shows that 98,6% of households in metros had access to tap water. This type of access to water was most common in Cape Town (99,5%), Nelson Mandela Bay (99,2%), and Johannesburg (99,1%). Mangaung (92,0%) and Ethekwini (97,7%) recorded the lowest access amongst metros.

Groundwater

World Water Day in 2022 was celebrated under the theme: "Making the invisible visible", highlighting the importance of exploring 'groundwater' as an alternative water source. Groundwater is already the main source of water for large parts of our country, including the Karoo, Northern Cape and Western Cape, and parts of Limpopo, KwaZulu-Natal and the Eastern Cape.

While the development of groundwater sources is a local function, the DWS plays an important monitoring and regulatory role, and was expected to finalise and publish improved regulations and guidelines for the extraction of groundwater and management of groundwater use in 2022.

Lesotho Highlands Water Project (LHWP)

The R36-billion Phase 2 LHWP is aimed at ensuring an adequate long term water supply for Gauteng and the Vaal River System. The project is funded through finance raised by the Trans-Caledon Tunnel Authority and is being implemented jointly by the governments of Lesotho and South Africa, through the Lesotho Highlands Water Commission and the Lesotho Highlands Development Authority.

By mid-2022, about 14% of the budget had been spent and the project is due to start delivering water to Gauteng in November 2027.

Provincial projects

The DWS has a number of projects at various stages throughout the country. In the Eastern Cape, the Mzimvubu Water Project is aimed at providing water to 750 000 people at a cost of R25 billion. By mid-2022, the designs were 80% complete and the first round of fundraising began in January 2022 through a Request for Information.

In the Free State, the department was in the feasibility stage of a R10-billion project to build a major pipeline from the Xhariep Dam to augment water supply in Mangaung. The project is planned to be completed by 2028. In addition, the department is implementing a R1.7 billion project to upgrade wastewater treatment works, water treatment works and water distribution networks in the Maluti-a-Phofung area. This project is planned to be completed by July 2025.

In KwaZulu-Natal, the raising of the dam wall at Hazelmere Dam to ensure long-term water supply to Ethekwini was expected to be completed in the third quarter of 2022 at a cost of approximately R800 million. The construction of the uMkhomazi Water Project, which is also aimed at delivering long term additional water to the Ethekwini region at a cost of R23 billion, is expected to start in 2025 and be completed by 2028.

In May 2022, the DWS officially launched the R24-billion Olifants River Water Resources Development Project, which will be implemented as a Public-Private Collaboration with mining companies, to fast-track water delivery to communities and mines in the Sekhukhune and Mokgalakwena municipalities in Limpopo by 2028. Government and the mining companies will each fund about 50% of the project, which will be implemented by the transformed Lebalelo Water Users Association.

The project is at approval stage with some of the work packages at pre-construction stage and construction is anticipated to begin by late 2022. The R1.2 billion Thembisile-Loskop bulk water supply project in Mpumalanga is aimed at addressing water supply challenges in the Thembisile Hani Local Municipality. The project will provide 23 Mℓ of water to communities in the Mpumalanga and Limpopo provinces. The project is planned to be implemented over a three-year period from May 2022 to April 2025.

Phase 1 of the Vaal Gamagara Water Supply Scheme, which is critical for both mining and potable water supply in the Northern Cape, cost R1,4 billion and Phase 2 was expected to start in 2022 at an estimated cost of R10 billion.

In 2022 the DWS commissioned the Moretele South Pipeline in the North West, a 60-km pipe which will be operated and maintained by Magalies Water and which will benefit the villages in the Moretele Local Municipality, including Carousel View, Dertig, Bosplaas, Mathibestad, and Makapanstad.

To increase water security in the west coast area of Cederberg in the Western Cape, the DWS had by mid-2022 resumed construction work to raise the wall of Clanwilliam Dam at a cost of R3,2 billion. The project is due to be completed in late 2026.

In addition, the department was implementing the R21-million Brandvlei Dam Project in the Western Cape, which involves the construction of a feeder canal which will provide an additional 33 Mℓ of water for storage in the dam, unlocking agricultural growth potential in the area. Construction was expected to be completed by October 2022.

Entities:

Consolidated water boards

Water boards are established in terms of the Water Services Act of 1997. The water boards' main role is to provide bulk potable and wastewater to water service institutions within their respective service areas. They support municipalities by providing, managing and operating regional bulk water services infrastructure.

The water boards vary in size, activities, customer mix, revenue base and capacity. Some water boards provide retail water and sanitation services on behalf of municipalities. Rand Water and Umgeni Water serve largely urban areas. The rest of the water boards operate largely in the rural areas.

Rand Water

Rand Water was established in terms of the Water Services Act of 1997 and is mandated to supply quality bulk potable water within its area of supply. The water board's distribution network includes more than 3 056 kilometres of large diameter pipelines, feeding 58 strategically located service reservoirs, with customers including metropolitan municipalities, local municipalities, and mines and industries in and around Gauteng, supplying, on average, 3.7 million litres of water daily.

Umgeni Water

Umgeni Water was established in terms of the Water Services Act of 1997 to provide water and sanitation services in its service area, which comprises mostly rural areas in KwaZulu-Natal and the eThekwini metropolitan area. The water board supplies water to approximately six million consumers. Its ongoing objective is to support.

Magalies Water

Magalies Water provides quality bulk water and secondary services directly to municipalities, mines and other industries which in turn helps to grow the economy and improve the lives of communities. Raw water is drawn from the rivers which flow into dams that are owned by the DWS and Magalies Water buys the water from the department.

Water from the dams is channelled to Magalies Water's four water-treatment plants where the water is treated and made safe for public consumption. Municipalities draw the water provided by Magalies Water through the reservoir and provide it to consumers for household use.

Bloem Water

Bloem Water (formery Bloem Area Water Board) was established in 1991 with the aim to operate the Caledon/Bloemfontein Government Water Scheme as well as supplying water to the municipal areas of Bloemfontein, Bainsvlei, Bloemspruit, Botshabelo and Dewetsdorp.

Amatola Water

Amatola Water was established in 1998 to provide bulk-water services in the Eastern Cape. It is committed to ensuring that the Eastern Cape communities have access to basic water services as this is a right enshrined in the Constitution of the Republic of South Africa of 1996.

Mhlathuze Water (MW)

MW was established in 1980 and predominantly operates in the uMkhanyakude, King Cetshwayo and Zululand district municipalities but has plans to expand beyond these districts. MW is supplied by three dominant water sources namely: Mhlathuze River, Lake Mzingazi and Lake Nsezi. The organisation's business activities include raw (untreated), clarified (partially treated) and purified water supply; disposal of industrial and domestic waste water and scientific services.

Lepelle Northern Water (LNW)

The mandate of LNW is to provide bulk-water services to water services authorities and industries within Limpopo. It is actively involved in schemes serving more than three million people as well as some major industrial users. LNW will continue to partner with the DWS in implementing Water Conservation and Demand Management as well as groundwater exploration to augment the surface water.

Overberg Water

Overberg Water came into being in 1993 when the former Duivenhoks and Rûensveld water boards amalgamated. It distributes water to the surrounding and rural areas of Cape Agulhas, Theewaterskloof and Swellendam. It has three water-treatment schemes with 22 reservoirs which are strategically located across the Overberg region.

The water board derives its revenue from the sale of bulk potable water to its main customers, namely municipalities, as well as retail sales to the agricultural sector/ industry in the region. The organisation supplies and distributes approximately

four million cubic metres of water per year. The region currently supplied covers approximately 6 000 square kilometres with a pipeline network estimated at 1 450 kilometres.

Sedibeng Water

By mid-2022, the DWS was in the process of disestablishing the Sedibeng Water Board, which was financially unsustainable, and also had governance challenges. It was established on 1 June 1979. It initially serviced the Free State Goldfields and parts of the former Western Transvaal. In 1996, Sedibeng Water extended its operational area to North West and also the Vaal Gamagara Water Scheme in the Northern Cape.

Other entities:

- The **Breede-Gouritz Catchment Management Agency** was established in terms of the National Water Act of 1998. The agency plays an important role in protecting, using, developing, conserving, managing and controlling water resources in a cooperative manner within the boundaries of the Breede-Gouritz catchment area.

- The **Inkomati-Usuthu Catchment Management Agency** was established in 2004 in terms of the National Water Act of 1998. The agency plays a key role in the use, protection and development of water resources in the Inkomati-Usuthu water management area, and aims to ensure that water is used and managed to support equitable and sustainable socio-economic transformation and development.

- The **Water Research Commission** was established in terms of the Water Research Act of 1971. It is mandated to conduct research in the water sector by determining needs and priorities for research; promoting coordination, cooperation and communication in the area of water-research development; stimulating and funding water research; promoting the effective transfer of information and technology; and enhancing knowledge and building capacity in the water sector.

- The **Water Trading Entity** was established in 1983 and was converted into a trading entity in terms of the Public Finance Management Act of 1999 in 2008. The entity's primary role is to manage water infrastructure and resources, and the sale of raw water.

- The **Trans-Caledon Tunnel Authority** was established in 1986 as a specialised liability management entity, deriving its mandate from the National Water Act of 1998. It is responsible for financing and implementing the development of bulk raw water infrastructure and providing treasury management services to

the DWS. The authority plays an important role in providing: financial advisory services such as structuring and raising project finance, managing debt and setting tariffs; project implementation services; and other technical support to the department and water boards.