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The official magazine of the Water Institute of Southern Africa

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Transforming the way South Africa delivers water

INDUSTRY INSIGHT

Ramateu Monyokolo, chairperson of AWSISA and Rand Water

MAGALIES WATER turns crisis into innovation



IN THE *HOT SEAT*

"By investing in our own apprenticeship programme, we can train artisans to our standards and retain those who demonstrate the greatest potential."
John Montgomery, general manager, APE Pumps and Mather + Platt

WISA
Water Institute of Southern Africa

RETHINKING AMANZI
securing our future

Biennial Conference & Exhibition
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CONFERENCE PROGRAMME INSIDE

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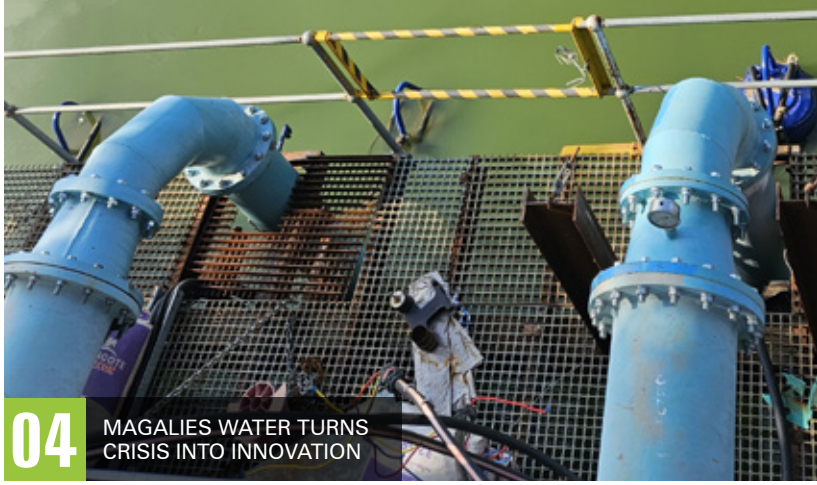
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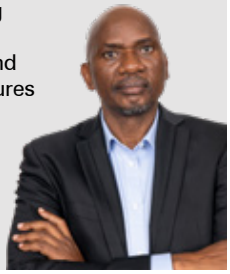
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INDUSTRY INSIGHT

According to Rand Water and AWSISA chairperson Ramateu Monyokolo, Africa can no longer solve today's water challenges with yesterday's thinking. Climate change, ageing infrastructure, urbanisation and financial pressures are driving a transformation in how water is governed, financed and managed. **P16**



South Africa's infrastructure ambitions depend on skilled people as much as equipment. **Kirsten Kelly** speaks to APE Pumps and Mather+Platt's John Montgomery and Mirna Liesering about apprenticeships, knowledge transfer and investing in the next generation of artisans, technicians and engineers. **P20**



IN THE HOT SEAT



Building Water Resilience

For a growing city

Guided by its Water Strategy, the City of Cape Town's New Water Programme will add approximately 300 million litres of drinking water per day from alternative water sources over the coming years, strengthening Cape Town's resilience to climate change, population growth and future droughts.

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- ✓ 100+ ML/d drilling boreholes and tapping springs
- ✓ 50-70ML/d removing salt from seawater
- ✓ 40ML/d water drawn from rivers and dams

Water Strategy Commitments

1. SAFE ACCESS TO WATER & SANITATION
Delivering reliable, equitable and safe access to water and sanitation for all.

2. WISE WATER USE
Promoting water efficiency and responsible use every day.

3. SUFFICIENT, RELIABLE WATER FROM DIVERSE SOURCES
Working with stakeholders for mutual benefit and water security.

4. SHARED BENEFITS FROM REGIONAL WATER RESOURCES
Working with stakeholders for mutual benefit and water security.

5. A WATER-SENSITIVE CITY
Building a city that respects, protects and values water in all we do.

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OVERBERG WATER

Overberg Water Board is a South African public entity responsible for providing bulk drinking potable water to municipalities, agricultural users, and industries in the Overberg region of the Western Cape. It operates under the supervision of the Department of Water and Sanitation and functions in terms of the **Water Services Act 108 of 1997.**





ITS KEY FUNCTIONS INCLUDE:

- Treating and supplying bulk drinking water.
- Operating and maintaining water treatment plants, reservoirs, and pipelines.
- Supplying water to municipalities and other large users.
- Supporting sustainable water management in the Overberg region.

AREA OF OPERATION:

The service area of Overberg Water Board covers parts of:

- Cape Agulhas
- Theewaterskloof
- Swellendam



The entity has shown significant improvement in governance and financial management over the years, progressing from a disclaimer audit in 2015/16 to achieving clean audits in 2020/21 and again in 2024/25.

This demonstrates its commitment to sound financial management, compliance, accountability, and effective service delivery.

www.overbergwater.co.za



MAGALIES WATER TURNS CRISIS INTO INNOVATION

The Klipdrift Modular Treatment Plant is Africa's largest package water treatment plant and the first in the world to integrate dissolved air flotation (DAF) and sand filtration within a single modular treatment system.



"The scale and innovation of the package plant reflects the challenging circumstances under which it was built," explains Ofentse Nthutang, CEO, Magalies Water.

The Klipdrift Modular Treatment Plant is located near Hammanskraal, north of Pretoria. For years, Hammanskraal was a region where water supply was erratic in the best of times and non-existent in the worst of times. The longstanding water crisis in Hammanskraal reached a critical stage with the cholera outbreak that claimed 31 lives.

Ofentse Nthutang, Chief Executive Officer, Magalies Water

The City of Tshwane was unable to rely on the Temba Water Treatment Plant to adequately supply Hammanskraal. Water tankers, which were intended to serve as a short-term emergency measure, became a near-permanent feature. Maintaining the tanker operation came at considerable cost and presented ongoing logistical challenges. There were also recurring concerns about the origin and quality of some tanker-supplied water, with reports that certain operators sourced water from unauthorised locations, raising questions about compliance and water quality assurance.

"Therefore, there was enormous public pressure on government, the City of Tshwane and Magalies Water to restore safe drinking water to communities who had lost trust in

the municipal water system. At the same time, Magalies Water was itself undergoing significant organisational change following its merger with Sedibeng Water. While managing this organisational transition, we had to procure and implement one of the largest emergency water interventions undertaken in the region, ensuring that all procurement and governance requirements remained fully compliant," says Nthuang.

Furthermore, Magalies Water had to cope with increasingly poor raw water quality in the Pienaars River system. The heavily polluted source water has elevated nutrient, microbial and ammonia loads (especially during high rainfall), placing pressure on treatment processes and increasing the complexity of consistently producing compliant drinking water under already urgent conditions.

"This project therefore represents more than just a water treatment plant. It is an example of emergency infrastructure delivery under crisis conditions, where engineering decisions, public health concerns, political expectations and community pressure all had to be managed at the same time," adds Nthutang.



The package plant adds 50 Mℓ/day of treatment capacity

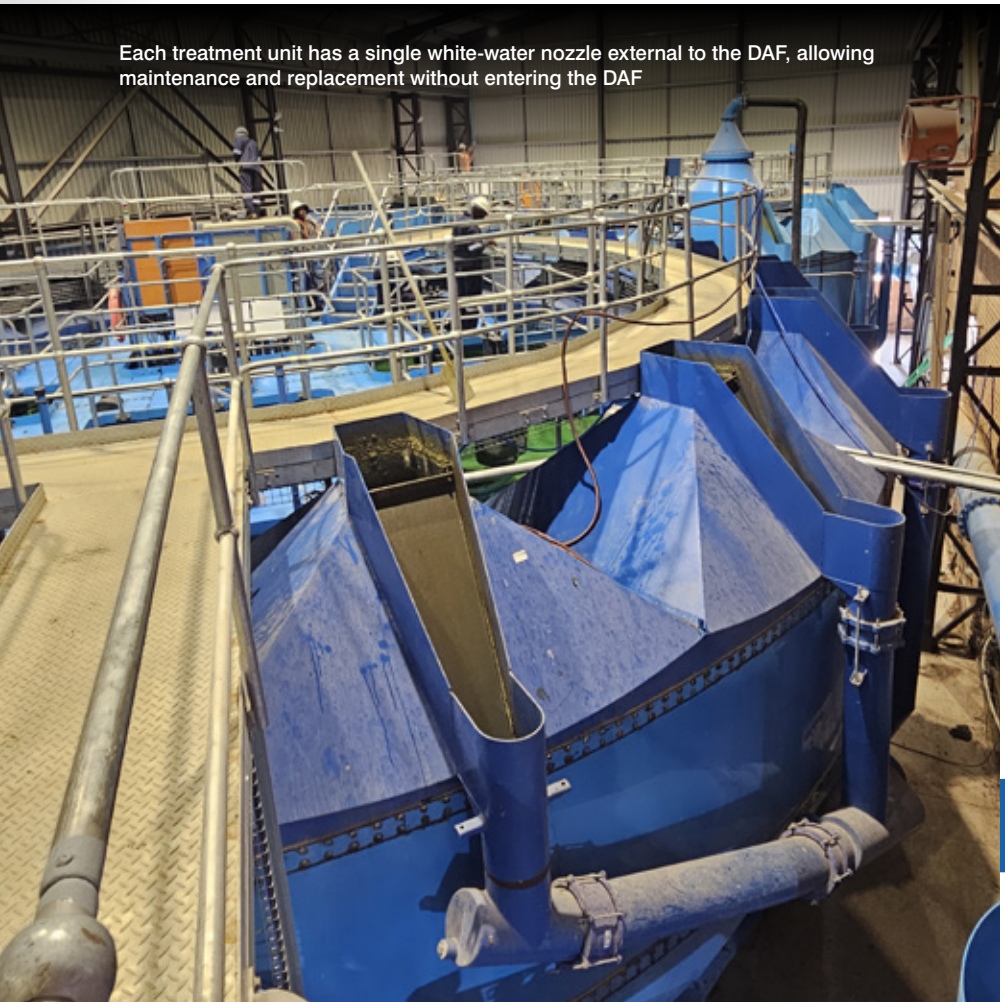
Motivation for a packaged plant

Unlike conventional water treatment projects that may take several years to design and construct, the Klipdrift project was expected to deliver water almost immediately. "Traditional infrastructure timelines were simply not viable under the circumstances," says Nthutang.

In response, the Department of Water and Sanitation (DWS), together with the City of Tshwane and Magalies Water, initiated the construction of Tecroveer's Klipdrift Modular Treatment Plant adjacent to the existing Klipdrift Water Treatment Plant. DWS allocated R758 million for the project, with Magalies Water as the implementing agent.

Tecroveer, a leader in water and resource recovery solutions, was appointed as contractor by Pro-Plan Consulting Engineers to manufacture and commission the package plant. The package plant adds 50 Mℓ/day of treatment capacity, with the combined output of the two plants (Klipdrift Water Treatment Plant and Klipdrift Package plant) from 42 Mℓ/day to 92 Mℓ/day. This has more than doubled capacity.

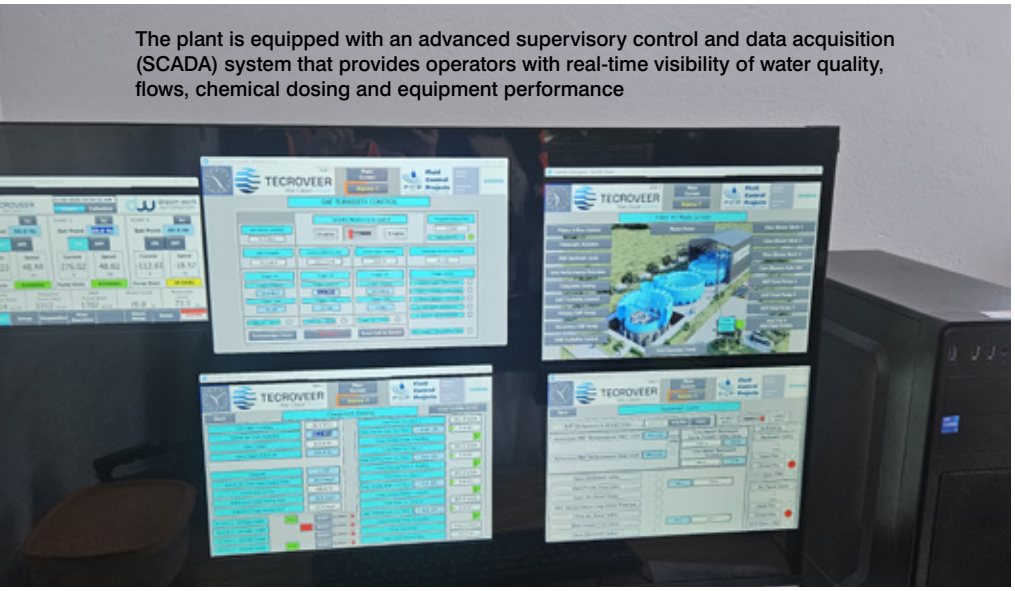
"Without the package plant, it is extremely difficult to treat the poor water quality from the Pienaars River to SANS 241 standards and still consistently send the required output of potable water to the community every day. Treating poor raw water requires a



Each treatment unit has a single white-water nozzle external to the DAF, allowing maintenance and replacement without entering the DAF



Izak Cronje, CEO, Tecroveer



The plant is equipped with an advanced supervisory control and data acquisition (SCADA) system that provides operators with real-time visibility of water quality, flows, chemical dosing and equipment performance

longer retention time for chemicals and processes to work. The package plant will therefore assist the existing Klipdrift Water Treatment Plant with meeting the required demand," states Nthutang.

However, continued population growth in the area is placing increasing pressure on available water resources. The City of Tshwane is currently updating its demand projections, with preliminary estimates indicating a potential shortfall of approximately 15 Mℓ/day. To address this gap, several options are under consideration, including supplying additional water via the D-line from Soshanguve, which receives water from Rand Water, or further optimising the performance and capacity of the Klipdrift Water Treatment Plant.

Leveraging off existing infrastructure

In order to accelerate project delivery, Magalies Water leveraged existing infrastructure at the adjacent Klipdrift Water Treatment Plant wherever possible. Abstraction works, pipelines, reservoirs and chemical dosing systems were upgraded and integrated into the new scheme.

Pumps were replaced and upgraded to increase abstraction capacity to 92 Mℓ/day without expanding the footprint of the existing abstraction works. Existing clear water tanks were used for phase 1 and phase 2 of the project.

Additional sedimentation tanks were also added to the Klipdrift Water Treatment Plant to cope with high organic and inorganic loads during seasonal rainfall.

Water from the Klipdrift Water Treatment Plant and Klipdrift Package Plant is pumped to the Babelegi Reservoirs (East and West) as well as the Temba reservoir. A pump station also had to be upgraded to pump water from Babelegi to Temba.

"Two pipelines; a steel pipeline and an asbestos cement pipeline connected the two reservoirs. During investigations, engineers discovered that sections of the existing pipeline network differed from original drawings. A missing section of the steel pipeline across the Apies River had to be constructed, while portions of ageing asbestos cement pipeline were replaced with HDPE pipe to prevent contamination ingress into the system," explains Nthutang.

He adds that other challenges included the discovery of hard rock. This bedrock needed to be excavated for construction to take place. A process of chemical blasting was used to crack the rock, which was then broken into pieces with rock breakers and removed. Faster, traditional blasting methods were not used as they posed a risk of damaging existing infrastructure. A malfunctioning substation and Eskom's unreliable electricity supply caused some delays in the production of the units for the package plant.

Flying an aeroplane while building it

The package plant was constructed and commissioned in four phases, with each module contributing 12.5 Mℓ/day of potable water supply. However, unlike a conventional project where the full plant would typically be completed, tested and optimised before commissioning, the urgency of the Hammanskraal water crisis placed immense pressure on the project team to get phase 1 operational as quickly as possible, followed by phase 2, phase 3 and lastly phase 4.

This phased commissioning approach meant that individual treatment modules had to begin supplying water while additional modules were still under construction. As one unit became operational, construction and optimisation continued on the remaining phases, requiring the team to integrate live treatment infrastructure into an active construction environment. The approach was less efficient from a construction perspective, but necessary to rapidly restore water supply to communities that had endured prolonged shortages and unreliable access to potable water.

"We started with module 1 and changed it as we went along to optimise everything and make sure it worked. Before we started module 2, we had already changed module 1 about three times," explains Izak Cronje, co-founder and CEO at Tecroveer.

Rather than replicating a fixed design across all four treatment modules, lessons learnt during commissioning were incorporated into subsequent modules. Equipment layouts were adjusted, operational processes refined and treatment performance optimised while construction crews continued building the remaining phases.

Any design modifications had to be implemented without disrupting production from units already supplying water to communities. At the same time, operators were learning how to manage an entirely new treatment process that combined dissolved air flotation and continuous filtration technologies at a scale not previously implemented for potable water treatment in South Africa.

The result was a plant that evolved during construction. By the time the final modules were commissioned, the treatment process had already undergone multiple rounds of

optimisation informed by actual operating data rather than theoretical design assumptions.

The modular design itself became central to overcoming time pressures. Because the units were pre-engineered and largely manufactured off-site, construction and fabrication could happen simultaneously. This allowed the project team to compress implementation timelines dramatically, with the first phase completed in approximately seven months.

A world first

The integration of DAF and continuous sand filtration within a single modular system allowed for a substantially smaller treatment footprint while maintaining high treatment capacity for the elevated loads of organic material found in the raw water from the Pienaars River System.

"Tecroveer designed this modular system – called the Calabash. In fact all the process steps – degritting, flocculation, dissolved air flotation, desilting, continuous filtration, and disinfection – are all achieved within a single unit, without any interconnecting pipework or pumping. The total head loss over these steps is less than one metre and there is less than 5% total water loss through de-gritting, desilting, flotation, and backwash," says Cronje.

He adds that the footprint of the package plant is close to 1 370 m^2 in terms of area. "The package plant uses roughly 2.5 times less area than a conventional treatment plant designed for the same output."

Each Calabash includes the largest publicly documented single-unit moving bed media filter (MBF) to date. The MBF (an alternative to gravity media filters) filters water upward rather than downward. To meet the design requirements of implementing this technology in a modular package plant, nine months of continuous research and development led to the implementation of a prototypal up-flow filter – the largest ever integrated into such a system.

Some of Calabash's treatment processes include:

Flocculation

Flocculation is initiated by introducing a coagulant that neutralises the electrical charges and keeps fine particles suspended in water. This causes small particles that would otherwise remain suspended to form larger particles (flocs). The flocs can then settle out in a sedimentation tank or be trapped in a filtration system. The Calabash incorporates a circular tank that allows for the introduction of a coagulant before entering the flocculator, where gentle mixing facilitates floc formation.

Degritting

While the final solution includes sedimentation tanks to remove grit and sediment, the Calabash was required to operate for two summer seasons without any upfront solids removal. A degritting feature was included as part of the flocculation compartment with all velocities prior to flocculation being maintained high enough to ensure no settlement in the feed network.

Flotation

Dissolved air flotation (DAF) is used in water treatment to effectively remove suspended solids, algae, oils, and other fine particles that are difficult to settle by gravity. Instead of allowing these impurities to sink, DAF systems lift them to the surface for removal, resulting in clearer, cleaner water for further treatment. DAF operates by introducing microbubbles into the tank, which attach to the flocs. Due to the combined specific density of the flocs and microbubbles, they rise to the surface, forming a scum/float layer of algae and impurities. These are then removed through a process called descumming or defloating. This process is especially useful for water sources that are heavily polluted or contain large volumes of light, buoyant contaminants. By incorporating DAF into the treatment train, the system significantly improves overall water clarity and reduces the burden on downstream filtration systems. An innovative approach was developed to enhance microbubble generation in the white-water stream exiting the saturator. Rather than relying on multiple precision-engineered nozzles, this solution uses a purpose-designed internal restriction that produces a sharp drop

1. **Sludge thickening technology has also been included into the package plant, with plans (pending environmental compliance) to eventually beneficiate the sludge and sell it to the local agricultural market**
2. **Advanced process control within the Klipdrift package plant enables more efficient chemical dosing, reducing operating costs and supporting sustainable water treatment**
3. **The project included the installation and upgrading of critical pipeline infrastructure to transport both raw and treated water, ensuring reliable supply to residents**











4 Magalies Water has to cope with increasingly deteriorating raw water quality in the Pienaars River system

5 A reservoir was installed below ground level to make the hydraulics work, with the settling dams at the highest point feeding the plant by gravity

in the water pressure, promoting fine air dispersion. The result is consistent microbubble formation and effective saturation, offering a significantly more cost-effective and low-maintenance alternative to traditional multi-nozzle systems. The travel distance in the DAF was optimised to ensure float formation and settlement. Removal of float and silt in the DAF was researched and improved by experimenting with existing float formation systems. Separation of the DAF and filter, with silt collection at the bottom of the DAF, eliminated media blinding caused by settlement.

Filtration

After coagulation, flocculation, and sedimentation, water still contains fine particles and micro-organisms. This water is directed into the MBF. Filtration occurs as water flows upward through the media bed. Particles are removed through two primary mechanisms. Larger particles are physically trapped between the media grains in a process known as straining, while heavier particles settle within the spaces between the media grains through sedimentation. Backwashing is achieved through a continuous process in which an airlift pump removes a small quantity of media from the bottom of each filter cell and transfers it to a sand washer located above the media bed. In the sand washer, accumulated solids are removed from the media before the cleaned media is returned to the top of the filter bed, allowing filtration and media cleaning to occur simultaneously.

The Calabash holds the following advantages:

- Utilises only 50% of the coagulant required by the existing plant.
- Enables automatic, continuous removal of float in the DAF, without moving mechanical components or labour-intensive methods.
- Results in an average water loss of just 3.5% during the continuous backwash process, with no system downtime.
- Reduces water loss during DAF float removal, improving the dewatering efficiency of the float.
- The continuous, gentle washing of the filter media doubles the lifespan of media in the sand filter.
- Each treatment unit has a single white-water nozzle external to the DAF, allowing maintenance and replacement without entering the DAF.
- Compared with a conventional plant, it is much less expensive to operate.
- Constructed in less than half the time of a conventional treatment plant.
- Consumes less energy than a conventional plant.
- Modular units are scalable and reconfigurable.
- Allows rapid deployment in emergency situations.
- Achieves 33% higher throughput compared to conventional plants.
- Requires less than half the space of conventional plants.

According to Cronje, combining DAF and sand filtration took a lot of simulation to get the correct flow, minimise solids and minimise the waste of water. “Unlike traditional gravity filters, continuous filtration technology means there are no backwash pumps, no complex automation, no downtime during backwashing, and consistent water quality at all times. The units are simple, with bulk mixing and distribution achieved hydraulically, having only two automated valves and a power consumption of less than 2 kW/Mℓ of water treated. The units are enclosed in a building with an overhead crane to accelerate installation and for ongoing maintenance. The whole system has can treat various water conditions, and has the ability to purify water with turbidity levels ranging from 1 to 400 NTU.”

Apart from mechanical items such as gearboxes, the modules are 100% locally implemented and manufactured.

The plant is equipped with an advanced supervisory control and data acquisition (SCADA) system that provides operators with real-time visibility of water quality, flows, chemical dosing and equipment performance. “Magalies can respond immediately to changes in raw water conditions. This enables precise dosing, rapid intervention when quality deteriorates and consistent treatment performance while minimising chemical consumption,” explains Cronje.

Sludge thickening technology has also been included into the package plant, with plans (pending environmental compliance) to eventually beneficiate

the sludge and sell it to the local agricultural market.

Increased supply to meet increased demand

Before the construction of the package plant, the Klipdrift Water Treatment Plant was supplying communities in Modimolle, Marakele, Bela-Bela and a very small part of Hammanskraal. With the addition of the Klipdrift Modular Package Plant, Magalies Water has been able to significantly expand supply into Hammanskraal and surrounding communities. According to Magalies Water, the completed first phase of the package plant supplies water to Mandela Village, Marokolong , Ramotse, Kekana Gardens, Kudube Unit 9, Babelegi Industrial and Bridgeview informal settlement.

Both the Klipdrift Water Treatment and the Klipdrift Package Plant has been designated as a national key point, ensuring its recognition as a site of strategic importance

"While the innovative modular design and the associated agile project management processes are key elements in the success of this emergency intervention, they are not the only factor. The collaboration, openness, integrity, clear intention, commitment, and vision of all parties involved – from National and Local Government to Magalies Water Board, ProPlan, Tecroveer, community stakeholders, and the people of Hammanskraal – have been equally vital. Without this collective effort, the project could never have materialised or been completed in such record time. From securing additional water abstraction approvals and obtaining environmental authorisations, to coordinating stakeholder engagement, accelerating decision-making and bringing Eskom on board to electrify the Babelegi pump station and upgrade power capacity at Klipdrift, every party worked towards a common goal of restoring a reliable supply of safe drinking water to the community," concludes Cronje.

"This project certainly positions water boards as key drivers of water security, responsible for building resilient supply systems and providing rapid responses to the water-related challenges facing communities across the country. The Klipdrift Packaged Water Treatment Project is proof that government, authorities, the private sector, and communities do have the local skills and vision to work together to solve the present crisis in South Africa's water and sanitation infrastructure, one project at a time," states Nthutang.



Both the Klipdrift Water Treatment and the Klipdrift Package Plant has been designated as a national key point, ensuring its recognition as a site of strategic importance

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CEO's message

The power of coming together

Every Biennial Conference is a moment to reset, to learn, and to connect. *Rethink Amanzi – Securing Our Future* is not just our theme – it is an invitation to every participant to bring their perspective, share their experience, and leave with renewed purpose.
By Dr Lester Goldman, CEO, WISA



From professionals to process controllers, from academics to leaders, from youth to experienced practitioners, and from stakeholders to suppliers – this conference is designed to bring the sector together. Each voice matters, and each contribution strengthens our collective ability to respond to the challenges we face.

The programme reflects WISA's strategy: professionalisation, capacity development, and collaboration. You will encounter technical sessions that deepen expertise, academic insights that broaden understanding, and practical learning that can be applied immediately in the workplace. You will also find opportunities for mentorship, for professional growth, and for building networks that endure long after the conference ends.

The wastewater crisis is a defining challenge, but it is also a catalyst. By engaging fully in the discussions, you will leave not only with new knowledge, but with confidence, connections, and a renewed sense of commitment to the sector's future.

This conference is not an end in itself. It is a platform for action – for building capability, strengthening institutions, and securing water services for communities across South Africa. Together, we can Rethink Amanzi, and in doing so, secure a future that is more resilient, more capable, and more united.

EDITOR'S message

Izandla ziyagezana

The conference theme - *Rethink Amanzi , Securing Our Future* – reminded me of this Zulu proverb I learned in high school. It means that just as one hand cannot wash itself without the other, people rely on each other to succeed and overcome challenges. **By Kirsten Kelly, publisher, Water&Sanitation Africa Magazine**



Few sectors embody this principle more than water. No single organisation, municipality, engineer, scientist, operator, policymaker or supplier can solve South Africa's water and sanitation challenges alone.

That is precisely what makes the WISA Biennial Conference so important. It brings together professionals from every corner of the sector to share knowledge, challenge assumptions, showcase innovation and learn from one another. Whether you are a process controller, consultant, researcher, student, municipal official or technology provider, every perspective contributes to building a stronger, more resilient water sector.

The conference is more than a place to discuss problems. It is where partnerships are formed, practical solutions are shared and future leaders are inspired. If we are serious about rethinking amanzi and securing our future, we must first recognise that lasting progress depends on working together. After all, we cannot wash any hand without water.

OC CHAIR'S Message

Together we rethink amanzi



I love Africa. I love South Africa. I love Cape Town. I love the water sector. So how fortunate to be at the WISA 2026 conference where I can be with other lovely, knowledgeable, interesting and committed people who share these passions. **By Ian Palmer, the WISA organising committee chair**

In this vein the WISA conference is a most significant event aimed at 'Rethinking Amanzi and Securing our Future'. The water and sanitation sector is facing challenging times across the continent, and in South Africa specifically, as we struggle to build systems and keep them running effectively so that communities and businesses can benefit from efficient and sustained service provision.

In facing this challenge, we need new ideas, improved technology, stronger institutions and improved access to finance both for capital works and system operations. We need to better understand the impact water and sanitation systems have on the physical environment and we need to build understanding between us as professionals and the communities and businesses which are the ultimate beneficiaries of the work we do.

And as we face this challenge, what a fine conference programme WISA has put together for the expected 1,500 delegates who have so much to gain from the 6 technical tours, 170 exhibitors, 123 paper presentations, 38 workshops and 34 posters! And, of course, conferences are places to gather informally, relax, party, and talk about common professional or academic interests, or life in general (with football or rugby results thrown in). Enjoy the conference, enjoy Cape Town, and gather as much knowledge as you can.

CHAIRMAN'S message

Rethinking wastewater to secure our future

As Chairman of the WISA Board, I write this comment at a time when South Africa's wastewater sector stands at a defining crossroads. The latest Green Drop results expose more than technical shortcomings; they reveal systemic challenges that threaten public health, environmental protection and economic confidence. **By Harrison Pienaar, chairperson, WISA**

With nearly half of municipal wastewater systems now classified as critical, incremental improvements are no longer enough.

The theme of our 2026 Biennial Conference, Rethink Amanzi - Securing Our Future, reflects the need to rethink not only infrastructure, but also governance, financing and the people who keep our water systems functioning. As a professional body representing more than 3 500 practitioners across the water value chain, WISA is committed to turning diagnosis into action.

Rebuilding human capability must be central to that effort. Through mentorship, professional registration and practical skills development, we can strengthen the expertise needed to restore struggling treatment works. At the same time, we must embrace practical infrastructure solutions, optimise existing assets and share approaches that work within South African realities.

Equally important are the governance and financing reforms needed to restore accountability and direct sustainable investment into wastewater services. WISA provides a neutral platform where professionals, policymakers and industry can collaborate on practical solutions.

Ultimately, wastewater is inseparable from water security and climate resilience. By recognising it as both a risk and a resource, we can strengthen the resilience of our water sector. WISA 2026 is more than a conference; it is a call to collective action to secure South Africa's water future.



WHO IS WISA?

The Water Institute of Southern Africa (WISA) brings together experts from a wide range of disciplines to meet, discuss, plan for and present solutions for a sustainable water future.

Established in 1987

Vision: An empowered, trusted water sector that serves everyone.

Mission: To drive water sustainability and security across Southern Africa by advancing professionalism, accountable leadership, and strategic collaboration that strengthen resilience and trust within the sector.

VALUES

Integrity: We uphold the highest ethical and professional standards in every action.
Collaboration: We foster partnerships that strengthen the water sector and benefit all communities.

Accountability: We are transparent, responsible, and committed to delivering on our promises.

Innovation: We embrace creativity and evidence-based solutions to advance water sustainability and resilience.

Excellence: We set and uphold professional standards that inspire trust and deliver lasting impact.

Inclusivity: We ensure all voices in the water sector are heard, valued, and empowered.

Stewardship: We champion the sustainable use and protection of water resources for current and future generations.

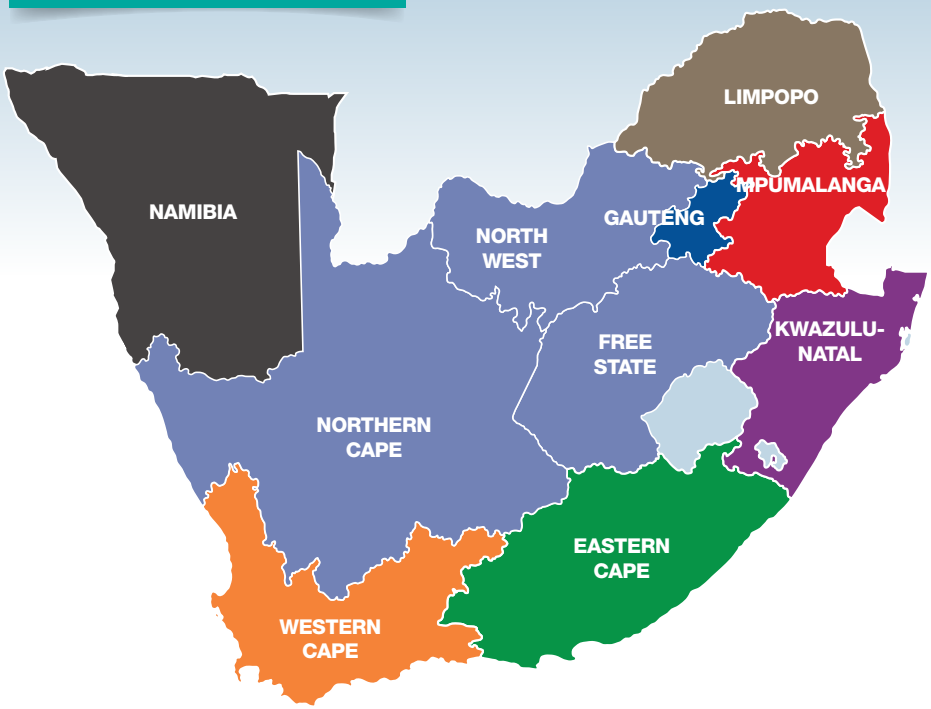
WHO IS WISA?

WISA is the central professional body for water professionals in Southern Africa, serving a critical dual role:

1. **WISA is a recognised professional body** accredited by the South African Qualifications Authority (SAQA) and is the official custodian of the Professional Process Controller (Pr. PC Water) designation, which is recognised in Regulation 3630. In practical terms, this means WISA helps ensure that the people responsible for operating and managing South Africa's water and wastewater treatment systems have the necessary skills, experience and ethical standards to perform these critical roles. By promoting professional registration and continuous professional development (CPD), WISA contributes to safer, more reliable and more sustainable water services for all.
2. **Voluntary membership body and sector platform:** WISA is a thriving voluntary body that unites water professionals and provides a crucial platform for the entire sector. We achieve this through:

- **Networking and collaboration:** WISA unites experts from various disciplines (scientists, engineers, managers, and municipal officials) to meet, discuss, and plan solutions for a sustainable water future. We foster collaboration among governments, stakeholders, partners and the public.
- **Skills development:** We provide opportunities for members to improve their skills and knowledge through our extensive programme of CPD training and events, ensuring the workforce remains current with best practices and evolving technology.
- **Knowledge sharing:** WISA hosts events, conferences, and publications, focusing on the provision of water, treatment of effluent, management of infrastructure, and water conservation – all critical to addressing the pressing water challenges facing the region.

WISA BRANCHES



- **EASTERN CAPE**
- **GAUTENG** (head office)
- **CENTRAL REGIONS** Free State, Northern Cape & North West (serviced by head office))
- **KWAZULU-NATAL**
- **LIMPOPO**
- **MPUMALANGA**
- **NAMIBIA**
- **WESTERN CAPE**

WE HAVE 14 TECHNICAL DIVISIONS:



01 Anaerobic Sludge Processes

08 Mine Water



02 Climate Change





09 Modelling and Data



03 Industrial Water

10 Process Controllers



04 Innovation in Water Supply and Sanitation





11 Small Wastewater Treatment Works

05 International Water Association – Southern Africa (IWA-SA)

12 Water Distribution



06 Management and Institutional Affairs



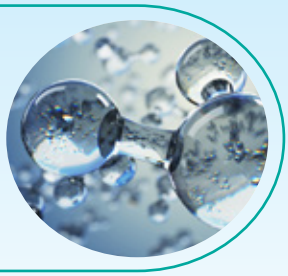


13 Water Reuse



07 Membrane Technology

14 Water Science



4 NEW TECHNICAL DIVISIONS TO COME!

As WISA it is our long-term commitment to continuously evolve to meet the ever-changing needs of the sector and our members. This commitment challenges us to constantly review and identify new technical divisions which are of pertinent to the sector. We are excited to inform you of our new technical divisions:



EMPOWERMENT PLATFORMS



Young Water Professionals



Women in Water

Water Institute of Southern Africa

GET IN TOUCH

If you would like to be a champion and volunteer for one of these divisions and make valuable contributions, contact the WISA Head office.

Name: Ntuthuko Majozi (WISA HO)
Phone: 086 111 9472
Email: ps.admin@wisa.org.za



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TRANSFORMING THE WAY SOUTH AFRICA DELIVERS WATER

Our continent can no longer solve today's water challenges with yesterday's thinking. Climate change, ageing infrastructure, urbanisation, pollution, growing demand and financial pressures are forcing the sector to rethink how water is governed, financed and managed. According to Rand Water and AWSISA chairperson – Ramateu Monyokolo – that transformation is already underway.



Ramateu Monyokolo, chairman of Rand Water and AWSISA

"One of the most significant reforms supporting this shift is the proposed Water Services Amendment Bill. The Bill seeks to strengthen the separation between Water Services Authorities (WSAs), which are responsible for oversight and planning, and Water Services Providers (WSPs), which are responsible for delivering water and sanitation services. Under these reforms, all WSPs must obtain an operating licence from the Department of Water and Sanitation. This will give the Minister greater authority to intervene where water services consistently fail, requiring municipalities to appoint capable, licensed service providers to restore and maintain service delivery," says Monyokolo.

He adds that there is a dire need for different models when providing water and sanitation services such as concessions and special purpose vehicles (SPVs). "Rand Water's new public-public SPV with Emfuleni Local Municipality marks a major shift in how failing municipal water and sanitation systems can be stabilised. The Vaal Corporation Water Utility is a ring-fenced, professionally managed utility designed to restore service delivery, improve billing and revenue collection, reduce non-revenue water, and rebuild public trust. While it is not a debt relief mechanism, it creates a long-term structure for operations, maintenance and infrastructure investment. Even though this specific







SPV is a public-public partnership, many SPVs can be packaged to welcome participation from the private sector."

Rather than viewing the initiative simply as an intervention in a struggling municipality, Monyokolo describes it as a blueprint for a new way of delivering water services.

Another model is the water concession, which is a long-term agreement in which a municipality retains ownership of its water infrastructure but appoints an external operator to finance, operate and maintain the system. South African Water Works is successfully operating one concession in Mbombela and another concession in Ballito.

While concessions represent a new approach to improving municipal water services, reform is also taking place at the national level. The establishment of the South African National Water Resources Infrastructure Agency (NWRIA) is intended to strengthen the planning, financing, development, operation and maintenance of South Africa's strategic water resource infrastructure. The agency will oversee major assets such as dams and bulk water transfer schemes, while also assuming many of the infrastructure development and financing responsibilities previously undertaken by the Trans-Caledon Tunnel Authority. By bringing these functions together under a single institution, the NWRIA aims to accelerate investment in the infrastructure needed to secure the country's long-term water future.

"The creation of the NWRIA demonstrates a move away from fragmented infrastructure delivery towards a more coordinated and financially sustainable approach. Water boards will be invoiced by the agency," adds Monyokolo.



Better governance

He believes national government has made encouraging progress in developing the policies and regulatory reforms needed to strengthen the water sector.

"We have always argued that water needs to be depoliticised. This means that all board members should be qualified, with the relevant experience. Long term planning is imperative, it provides clarity on the direction of an organisation. Entities need a business plan or master plan that is independent from those in power. For instance, many of the Rand Water projects (like Vlakfontein Reservoir and System 5A Water Purification Plant at Rand Water's Zuikerbosch Station) that were completed over the past few years were part of the Rand Water Strategy in 2009," maintains Monyokolo.

Municipalities must have the ability to plan over decades rather than election cycles. If municipalities create long term strategies, then politicians can focus on supporting the implementation and prioritisation of agreed upon aspects of a strategy rather than continually changing its direction.

Utilities of the future

"Water Boards have historically focused on bulk water services, but our role is evolving to encompass water reticulation in response to changing sector needs. In the future, I see utilities adopting more technologies for leak detection and asset management. I see water boards increasingly embracing water reclamation and reuse, while also expanding their role as technical advisers to large water users," adds Ramateu.

He believes South Africa's self-funding water boards are well positioned to expand their footprint across the African continent by exporting their technical, operational and management expertise. Rand Water has been selected as the preferred international partner to work with the Zanzibar







Water Authority (ZAWA) through a 10-year management, operations and maintenance contract. The partnership represents one of the largest international ventures undertaken by a South African water utility and forms part of Rand Water's strategy to expand its technical services across Africa while generating additional revenue outside its traditional bulk water business.

"For Rand Water, the partnership has several strategic benefits. It provides a new revenue stream that is expected to strengthen our balance sheet while allowing us to export the engineering, operational and management expertise we have developed over more than a century of supplying bulk water in South Africa. By diversifying our revenue base beyond municipal water sales, these partnerships help to reduce our exposure to municipal debt, while generating income in different currencies and strengthening our long-term financial sustainability. It also positions Rand Water as a leading player on the African continent, supporting other African countries through the transfer of skills, technology and institutional expertise, while strengthening regional cooperation and long-term relationships. The experience gained through managing different water systems further enhances our own operational capability and supports our long-term strategy of becoming a leading global water utility."

Two of South Africa's water boards (Rand Water and uMngeni-uThukela Water) have been debt listed on the Johannesburg stock exchange, and there is a possibility of more water boards following this example as they are well governed institutions that understand the business of water.

Climate change and water security

Changing rainfall patterns, prolonged droughts and increasingly severe floods mean resilience must become part of everyday planning rather than emergency response.

"We cannot continue managing water through crisis after crisis," says Monyokolo.

He believes greater emphasis should be placed on developing alternative water sources, including groundwater, desalination, water reuse and water reclamation. "Municipalities also need to expand their water storage capacity and strengthen the enforcement of bylaws relating to water storage by businesses. A fundamental shift in the mindset of citizens is also required. Water can no longer be viewed as an unlimited resource that will always be available at the turn of a tap. Households, businesses, industries and public institutions all have a role to play in using water more responsibly and valuing every drop. For instance, it is a waste to use potable water to flush out toilets and water our gardens. Lasting change will depend not only on better infrastructure and governance, but also on changing behaviours and building a culture that values and protects South Africa's most precious resource."

In his concluding remarks, Monyokolo adds that South Africa should have greater confidence in the expertise it has developed. Too often, he says, South Africans attend international conferences expecting only to learn, and then discover that the rest of the world is equally interested in learning from them. As the operator of the largest water utility in Africa and one of the largest in the world, Rand Water supplies 4.57 billion litres of water every day to millions of people, giving its operational experience that many developed countries simply do not have. While South Africa can continue to adopt international best practice in areas such as groundwater development and emerging technologies, it should also recognise the value of its own achievements. "We should not be shy of what we are capable of as South Africans," he says. "The continent, and indeed the world, has a great deal to learn from us as well." ●

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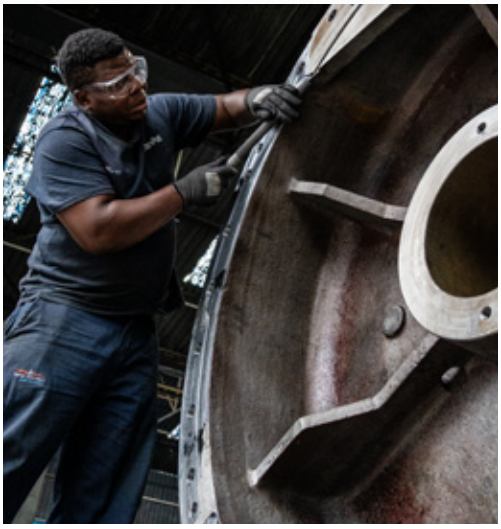
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BUILDING TOMORROW'S ENGINEERING WORKFORCE

South Africa's infrastructure ambitions depend on far more than new equipment. They require a new generation of artisans, technicians and engineers. **Kirsten Kelly** speaks to APE Pumps and Mather+Platt's John Montgomery and Mirna Liesering about apprenticeships, knowledge transfer and why developing people has become one of the company's biggest investments.







Over the years, APE Pumps and Mather+Platt (the group) have ensured their success through succession planning. What, in your opinion is the best possible hire?

John Montgomery (JM): A pump never operates in isolation. It forms part of an integrated system that includes motors, gearboxes, pipelines, suction pipework, valves, filters, treatment processes, control systems, power supply and the hydraulic characteristics of the entire network. Consequently, developing pump expertise means equipping professionals with an understanding of how each component interacts with the pump. Our technical people are trained to diagnose the entire system before recommending a solution.

There is a multitude of reasons why a pump is not working and most of the time, the problem lies with something around or connected to the pump. For instance, it could be a broken gearbox or motor, the suction pipework could have been incorrectly installed or a valve could be closed at the discharge side. Understanding the system in which a pump works as well as how each pump component interacts with each other will help a technician or engineer diagnose the reasons behind a faulty pump.

The best hire understands systems, not just components.

Our technical sales team are made up of artisans that can immediately attend to a problem on a customer's site. Unlike the traditional approach, where a salesperson first inspects the problem before calling in artisans, our technical



John Montgomery, general manager, APE Pumps and Mather + Platt



Mirna Liesering, skills and equity officer

sales representatives have the expertise to assess, troubleshoot and, in many cases, resolve the issue during the same visit. They carry around equipment worth around two million rand to work onsite and conduct vibration testing, assess and adjust pump alignment, measure the temperature of bearings, tighten gland packing etc.

This eliminates unnecessary delays and downtime. When a pump fails, it often brings an entire system to a standstill, making a rapid, technically informed response critical for both the customer and APE.



Knowledge transfer is becoming increasingly important as experienced artisans retire. How are you preserving decades of expertise?

JM: When I started to work at APE 21 years ago, we employed three qualified fitter and turners. Today, we have over 30 qualified fitter and turners. Following qualification, a fitter and turner typically spends around three years gaining practical industry experience before attaining journeyman status. At APE, each journeymen mentor three apprentices on the workshop floor, passing on practical skills that cannot be learnt in a classroom. They teach precision machining, fitting, assembly, maintenance, fault-finding and the quality standards required to manufacture high-performance pumps. The result is a continuous skills pipeline that allows APE to develop its own artisans. As experienced journeymen retire, they pass their knowledge to the next generation, helping to safeguard critical engineering skills for both the company and South Africa's manufacturing sector.

By investing in our own apprenticeship programme, we can train artisans to our standards and retain those who demonstrate the greatest potential. We currently have 19 active apprentices working through our programme.

Importantly, we don't allow knowledge to walk out the door. Some of our most experienced employees have come back after retirement to mentor younger staff. Their role isn't to work on the machines anymore – it's to pass on decades of practical knowledge before it disappears.

We're also establishing an in-house training facility where apprentices can learn on dedicated equipment while experienced artisans guide them through every stage of the process.



Your apprenticeship programme seems far more comprehensive than simply teaching someone a trade.

JM: Firstly, we raise the entry level. It is not enough for our apprentices to have a matric, an N4 qualification is a minimum requirement. This gives us proof that the applicant is self-motivated, can commit to something and is prepared to invest in his or her future.

We give preference to apprentices from communities close to APE Pumps. Investing in local talent is important to us because we want to create opportunities and contribute to the growth of the communities in which we operate.

Apprentices require close mentorship and continuous guidance. If you walk around our factory floor, you won't see anyone standing around waiting for work. We keep our apprentices actively engaged, challenging them with real-world tasks and exposing them to as many learning opportunities as possible. That hands-on experience is what accelerates their development into skilled artisans.

Mirna Liesering (ML): They need to be challenged, but you need to instil confidence in them as they need to eventually solve problems independently. We value apprentices who are curious, ask plenty of questions, absorb the





answers and apply what they've learnt. That willingness to learn is often what sets the best apprentices apart. We look for apprentices that have communication skills.

The apprenticeship programme runs for four years. When calculating the cost of the salaries, school fees, personal protective equipment, tool boxes and trade test fees – it runs into millions of rands. Their salaries are governed by the Metal and Engineering Industries Bargaining Council (MEIBC), and we often pay over the recommended rates. Some of the apprentices have even be sent for CNC training in addition to their other training.

If people are willing to invest in themselves, we're prepared to invest alongside them. Training doesn't stop once someone qualifies. We fund further studies, while we also assist some long-serving employees by covering their children's school fees.

If there was something you could change if the way South Africa approaches water skills – what would it be?

ML: It needs to be fair. Our apprenticeship programme is rigorous, we invest in the apprentices and try to retain talent. In fact, John has been known to create positions when there is a promising apprentice about to finish the programme.

There are companies that use an apprenticeship programme as a tick box exercise and honestly do the bare minimum to train and upskill the people in the programme, and never retain anyone. Many other learnerships only run for 12 months. It is very difficult to upskill an individual in such a short period of time.

Technology is changing engineering rapidly. How has this affected the skills you now recruit?

JM: Digital skills are becoming just as important as mechanical skills.

We have employed three new draughtsman that have completed the Autodesk Inventor course as well as a 3D scanning software course. They don't simply sit behind computers either. They spend time in the workshop stripping pumps, the foundries to learn the casting process, pattern shop, stores and quality department so they understand the complete manufacturing process.

We are finding that the staff we onboard are already computer literate and that is important as they often need to compile reports.

As these digital technologies continue to evolve, artificial intelligence (AI) is becoming another valuable tool for engineers. When looking at artificial intelligence (AI), it won't replace engineers. It will remove repetitive work so engineers can spend more time solving problems. For instance, our AI pump selection tool still requires engineering oversight because someone must interpret the results and ensure the recommendations are technically correct. AI can process information incredibly quickly, but engineering judgement still comes from experience.

Years ago engineers calculated everything manually before checking catalogues. Today software produces answers instantly. That's why we still teach first principles. If you understand how pumps actually work, then digital tools become incredibly powerful. If you don't understand the fundamentals, you simply become someone who knows how to operate software.

Looking back over your career, what skills have been most valuable that you didn't necessarily learn through studying further?

JM: Communication.

Technical knowledge is essential, but engineering is ultimately about working with people. Whether you're speaking to a cleaner, an apprentice or a CEO, you're dealing with another human being.

I've also learned that good leaders don't have all the answers. Some of my best ideas have come from people working on the factory floor. If you're willing to listen, you'll keep learning throughout your career.

And in closing?

JM: Clearly, no pump engineer, specialist technician or artisan is born overnight. The baseline skills are essential, but the experiential, applied learning is what defines master craftsmen, engineers and project managers in all our interrelated disciplines. That's why our business is dedicated to attracting and mentoring the best talent available.

Bringing new talent onboard is part of our sustained investment in human capital – a forward-thinking approach that continues to position us as an OEM leader and specialist turnkey contractor in the fluid transfer field.

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Date	Time	Title	Abstract Summary	Facilitator	Contributors
22 July	11:45	From climate stress to system stress: a systems approach to water availability, from coping to adaptation and resilience	This session positions water availability as a systemic risk management challenge shaped by the interaction between climatic variability and human systems. It seeks to move beyond narrow, climate-centric framings and instead examine how governance, infrastructure, land use, socioeconomic inequality, and institutional capacity determine whether water systems fail or cope under stress. The session will highlight integrated pathways for resilience that operate across sectors and scales, with a focus on actionable strategies for improving water security in complex and uncertain environments.	Dr Shafick Adams	Mr John Dini Dr Brilliant Petja
22 July	14:00	Overcoming implementation barriers to scale sustainable non-sewered Water Efficient Sanitation Solutions (WESS) in South Africa	The scope of this session covers comprehensive understanding of the diverse perspectives and contentious issues surrounding the scaling of WESS. • engage in a structured debate, critically analysing different viewpoints and arguments. • identify the core challenges and potential solutions to scaling WESS through the lens of a dynamic debate. • understanding of the complexities of sanitation implementation through the debate format.	Ramona-Reddy Madurai Mamohloding Maahlo	
22 July	15:45	Launching the Non-Revenue Water Online Training Programme	The WRC and the DWS are launching an ambitious NRW 2030 campaign to attempt to empower and build the knowledge of 30 000 personnel on NRW and its principles based on the products and platforms which have been developed by the WRC and partners over the years. Central to this, is a novel online training platform, which will be used for registered users to go through learning modules and tests at their own pace. The NRW Online Training programme, supported by the NRW Management Portal and implemented in partnership sector leaders, gives officials and sector professionals access to practical digital tools, and virtual training to help municipalities reduce water losses, improve billing efficiency, and strengthen water management.	Valerie Naidoo	WRC CEO Ndundu Sithole, WRC Sarah Slabbert, Plain Language Institute Shanna Nienaber, WRC
23 July	11:00	WRC strategy and national RDI agenda	South Africa faces growing water security challenges due to water scarcity, climate change, urbanisation, and extreme weather events such as droughts and floods. In response, the Water Research Commission (WRC) is expanding research and innovation efforts to improve water availability, water quality, and sustainable management while supporting national development goals. Over the next five years, the WRC will focus on creating an informed and innovative water sector, strengthening skills development, promoting transformation and inclusion, and improving organisational agility through digitisation, artificial intelligence, and advanced research. As the country's leading water research funder, the WRC supports postgraduate training, internships, citizen science, and new technologies aimed at improving South Africa's water and sanitation systems. Celebrating its 55th anniversary in 2026, the WRC reaffirmed its role as a key knowledge hub driving evidence-based solutions and shaping future national water research priorities through partnerships and stakeholder engagement.	WRC CEO	Prof Stanley Liphadzi, Exec: RDI Ms Ndundu Sithole, acting Exec S&C Dr Annelie Swanepoel - Rand Water Dr Bongani Ncube - CPUT Mr Johann Lubbe - Water Partnerships Office (WPO) Dr Moloko Matlala, Acting DDG water planning, information, and research Dr Ntsapokazi Deppa, Executive: Scientific Services, uMgeni-uThukela Water Prof Randhir Rawatlal, Director: WASH R&D Centre
23 July	14:00	Mainstreaming indigenous underutilised crops as a climate change adaptation strategy in a water-stressed South Africa	This session explores how indigenous underutilised crops can enhance climate resilience, water efficiency, and food security in South Africa. It highlights their suitability to harsh climates, low water and input needs, and role in diversifying food systems. The session examines pathways for integrating these crops into mainstream agriculture to address climate change, improve nutrition, support smallholder farmers, and strengthen agro-ecosystem resilience.	Luxon Nhamo	Prof Sylvester Mpandeli; Mr Richard Kunz; Prof Takalani Mulaudzi; Ms Ameera Yacoob
23 July	15:45	Innovations in Water: Building resilience and reducing vulnerability in the sector	This workshop focuses on scaling innovative water and sanitation solutions to address South Africa's water security challenges. It showcases real-world case studies, examines policy and institutional enablers, and explores financing models for innovation uptake. The session promotes collaboration among stakeholders to transition innovations from pilots to sustainable, climate-resilient solutions at scale.	Phillip Majeke	WRC CEO; Manjusha Sunil; Philip (WRC); Municipal representatives (Drakenstein, CoCT); DSI-NSI partners; innovators and sector stakeholders)
24 July	11:00	Launch of the Citizen Science and River Rehabilitation Toolkit - Capacity Gaps, and Policy Uptake	This workshop addresses the growing pressures on South Africa's river systems and introduces the River Rehabilitation Toolkit and citizen science guidelines. It explores how citizen science can strengthen river monitoring, capacity development, and policy uptake, while identifying barriers such as limited institutional support and data integration challenges. The session promotes inclusive, participatory approaches to river rehabilitation through multi-stakeholder dialogue and collaborative problem-solving.	Bonani Madikizela; Tovhowani Nyamande; Liz Day; Linda Downsborough; Vanessa Stippel	WRC CEO; Department of Water and Sanitation; sector stakeholders from government, academia, civil society, and communities
24 July	14:00	Strengthening Soft Skills and Professional Networks for Young Water Professionals	This interactive workshop focuses on building essential soft skills among young professionals in the water sector. It covers communication, emotional intelligence, time management, and professional networking, addressing gaps often not covered in technical training. Through practical exercises and engagement, the session equips participants to navigate workplace dynamics, build relationships, and position themselves for career growth.	Ms Dimpho Legodi; Ms Philadelphia Ngobeni	Ms Ndundu Sithole; Dr Mamohloding Maahlo; Mr Sivuyile Phezulu; YWP and WRC facilitators

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Tuesday, 21 July 2026		
08:00 - 17:00	Pre Conference Technical Tours - Cape Flats Managed Aquifer Recharge, Advanced Treatment plant with possibility to visit the Strandfontein Water Treatment Plant - The recently upgraded Zandvliet WWTW, Macassar - Innovative Sanitation Technologies Pilot Plants - Water Hub, Franschhoek: NBS water treatment and reuse in FEWW Nexus - Paardevlei Wetland Nature Reserve - rehabilitation and restoration of ecosystem functionality - City of Cape Town flood schemes under construction	
14:00 - 18h00	Registration Registration Foyer - Ground Floor	IDC
18:00 - 21:00	Welcome Cocktail & Exhbition Opening - Exhibition Hall, Ground Floor	
19:00	WSP/WISA Leadership Dinner - By Invitation Only	WSP
Wednesday, 22 July 2026		
07:00 - 17:00	Registration Registration Foyer - Ground Floor	IDC
08:00 - 11:00	Opening Session (Ballroom)	
	Welcome to WISA 2026: Ian Palmer – Chairperson of WISA2026 Organising Committee Address by Dr Lester Goldman – WISA CEO Address by Honourable Deputy Minister – DWS Address by Dr Sean Phillips, Director-General – DWS Keynote: Refilwe Buthelezi, Pr Eng, President of the Federation of African Engineering Organisations (FAEO): *"How Africa's water professionals must lead the 4IR water revolution - A call to rethink governance, technology, and investment in Africa's water future."* Overview and Introduction to WISA 2026 themes: Prof David Ikumi, WISA 2026 Technical Committee Chair	
11:00 - 11:30	Refreshment Break in Exhibition Hall	

SUBTHEMES:	Rethink Capacity: Refocusing Efforts to Empower People	Rethink Efficiency: Driving Water Efficiency & Effectiveness Across Sectors	Climate-Resilient Water Futures: Water Security in a Changing Climate	Smart Water Futures: Leveraging Digital Tools and the 4IR Revolution
	Funding the Flow: Innovative Finance & Partnerships for Water Services	Rethink Infrastructure: Reimagining Water Infrastructure for a Resilient Future	Water for Life: Managing Water Quality & Quantity Across Catchment	Rethinking Governance: Strengthening Institutions, Regulation & Accountability

11:30 - 12:45	Parallel Sessions									
VENUE:	Ballroom East	Ballroom West	Room 1,41 - 1,42	Room 1,43 - 1,44	Room 1,61 - 1,62	Room 1,63 - 1,64	Room 2,41 - 2,43	Room 2,44 - 2,46	Room 2,61 - 2,63	Room 2,64- 2,66
Session #	Session 1	Session 2 (DWS Stream)	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8	Session 9	Session 10 (WRC Stream)
Topic	**Chemicals of Emerging Concern in Water**	**Investments in Water**	**Biological Treatment Processes and Nutrient Removal**	**Measuring microbes and bacteria in exposed communities and workplaces**	**Reimagining Potable Water Treatment Systems from Dosing to Microplastics**	**Rethinking governance legislation, reponsibility, and accountability**	**Inftastructure, Community and Citizen Science**	**Beyond the Tap: Rethinking Alternative Drinking Water in South Africa**	**Re-Imagining Wastewater, Sludge, and Waste for the Circular Economy**	**System approach to ensure water resilliance**
Chair:	**Dr Swastika Surujlal-Naicker, CoCT**	**Dr Risimati Mathye, DWS**	**Prof David Ikumi, UCT**	**Dr Shalene Janse van Rensburg, Midvaal Water NPC**	**Marcia Letlhake, Rand Water**	**Dr Cornelius Ruiters, CEO, Lepelle Water**	**Dr Henry Roman, IWMI**	**Dr Samantha McCulloch-Jones, CSIR**	**Mlu Mnguni, uMngeni-uThukela Water**	**Dr Shafick Adams, WRC**
11:30 - 11:35	**Chair Open & Welcome**		**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**				
11:35 - 11:55	Comprehensive GC×GC-TOFMS for Detecting Emerging Organic Contaminants in Environmental Water, **Dr Christina Kannigadu**		Nitrate Removal by Ion Exchange Technology - Case Studies in South Africa, **Mantsha Mathibela**	Surveillance of human pathogens and antibiotic resistance genes in South African non-sewered communities using dPCR, **Zimkhitha Candy Myeko**	Rethinking Chemical Dosing at Faure Water Treatment Plant, **Liam Metcalfe**	Groundwater Governance for Potable Use in South African Cities: A Critical Evaluation of Municipal Bylaws, **Carin Bosman**				
11:55 - 12:15	An integration of 2,4,6-Trichlorophenol into an existing analytical method suite, **Makhosazane Magubane**	**DWS #1:** Consultative session: 2026 UN Water Conference for Interactive Dialogue 6 on ID(f) "Investments in Water", RSA & France	Integration of anaerobic digestion, nitrification with sulphide driven partial denitrification/ ANAMMOX process for domestic wastewater treatment, **Sandile Simiso Msimango**	Monitoring of enteric and respiratory virus circulation in non-sewered communities via environmental runoff and rivers, **Nomathamsanqa Francisca Manyisa Manyisa**	AMES Test Screening for Mutagenicity of Source and Drinking Water from South African Treatment Facilities, **Dr Rahzia Hendricks**	The Responsibilities of a Municipality in terms of Groundwater Governance, **Dale Barrow**	**Workshop #1:** Who Keeps Water Infrastructure Working? Rethinking Sustainability Beyond Construction	**Workshop #2:** Rethinking Climate Resilient Alternative Drinking Water Services in South Africa	**Workshop #3:** Re-Imagining Wastewater, Sludge, and Waste for the Circular Economy	**WRC #1:** From climate stress to system stress: a systems approach to water availability, from coping to adaptation and resilience
12:15 - 12:35	Detection of chemical markers in rivers downstream of unsewered communities – a wastewater-based epidemiology approach, **Paballo Nkone**		Leveraging calcium-NOM complexation phenomenon as RO fouling mitigation strategy during treatment of lake water, **Dr Oranso Mahlangu**	Metagenomic Profiling of Antibiotic Resistance in Wastewater Treatment Plant Bioaerosols, **Puseletso Constance Kumalo**	The removal efficiency of microplastics by conventional water treatment processes, **Caroline Motaung**	Rethinking Sanitation Accountability: Institutional Fragmentation, Regulatory Barriers, and Climate Stress in Cape Town's Informal Settlements, **Mphokuhle Aaron Dube**				
12:35 - 12:45	**Questions & Discussion**		**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**				
12:45 – 14:00	**Lunch Break in the Exhibition hall**									
	Poster session									



14:00 - 15:15	Parallel Sessions									
Session #	**Session 11**	**Session 12: DWS Stream**	**Session 13**	**Session 14**	**Session 15**	**Session 16**	**Session 17**	**Session 18**	**Session 19**	**Session 20: WRC Stream**
Topic	**Drinking Water Standards**	**IWA Water balance**	**Efficiency in nutrient recovery: Urine, Ammonia and Nitrates**	**Measuring microbes and bacteria in rivers and aquatic environments**	**Becoming climate resilient with better stormwater and wastewater management**	**Digital readiness for early warning systems**	**Municipal Performance - skills gap identification**	**Climate Resilient Alternative Water Services**	**Re-Imagining Wastewater, Sludge, and Waste for the Circular Economy (continue)**	**WESS in South Africa**
Chair:	**Leanne Coetzee, Waterlab**	**Dr Risimati Mathye, DWS**	**Nico van Blerk, ERWAT**	**Dr Liz Day, LDC**	**Dr Thandi Mmachaka, VOCMA**	**Dr Daniel Kibirige, CSIR**	**Melissa Cousins, WISA**	**Dr Samantha McCulloch-Jones, CSIR**	**Mlu Mnguni, uMngeni-uThukela Water**	**Jay Bhagwan/Ramona Reddy, WRC**
14:00 - 14:05			**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**					
14:05 - 14:25			Ion exchange urine treatment: Resin form effects on nutrients, scaling compounds, and pharmaceuticals, **Dr Caitlin Courtney**	Metagenomic insights into microbial succession, stress response, and resistome dynamics across an aquatic continuum, **Aaliyah Osman**	Governing multifunctional stormwater infrastructure to build resilience and promote just outcomes in South African cities, **Prof Kirsty Carden**		**Workshop #6:** Strengthening Municipal Performance: Review, Feedback and Skills Gap Identification for the WRC-WISA Capacity Building Initiative WISA			
14:25 - 14:45	**Workshop #4**: What to expect from the new drinking water standard: How to implement SANS 241:2025	**DWS #2:** Workshop on IWA Water balance: Roadmap to Reducing Real Losses	Surface-Modified Clinoptilolite with HDTMA for Enhanced TOC and Ammonia Removal in Water Treatment, **Ayanda Ngubo**	Molecular characterisation of multidrug-resistant genes in the Apies River water impacted by anthropogenic activities, P**rof Lizzy Mpenyana-Monyatsi**	Modelling water quality and quantity in a peri-urban South African catchment - Stiebeuel River, Franschhoek, **Rebecca Levy**	**Workshop #5:** The State of Early Warning Systems in South Africa		**Workshop #7:** Rethinking Climate-Resilient Alternative Water Services in South Africa	**Workshop #3** (continue): Re-Imagining Wastewater, Sludge, and Waste for the Circular Economy	**WRC #2:** Scaling Water-Efficient Sanitation Solutions (WESS) in South Africa
14:45 - 15:05			Optimizing pre-treatment of a reverse osmosis-based urine-to-fertilizer treatment process to reduce operating costs, **Njabulo Thela**	Mitigating Water Security Risks through Algal Bio-assessment: A Case Study of Apies River, South Africa, **Tebogo Margaret Kgosana**	Application of Hybrid Model to Assess the Resilience of Sustainable Drainage Systems to Climate Change, **Gloria Anano**					
15:05 - 15:15			**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**					
15:15– 15:45	Refreshment break in the Exhibition hall									
	Poster session									
15:45 - 17:30	Parallel Sessions									

Session #	Session 21	Session 22	Session 23	Session 24	Session 25	Session 26	Session 27	Session 28	Session 29: YWP Stream	Session 30: WRC Stream
Topic	**Drinking Water Standards (continue)**	**Water Efficient Sanitation Solutions - Training**	**Enhancing Water Security through Infrastructure care**	**Measuring algae and nutrients**	**Cape Flats Aquifer as alternative source of water**	**Local knowledge, citizen science, education and stakeholder engagement**	**Wetskills-South Africa (Cape Town) 2026: Finals**	**Institutional Water Security**	**YWP HACKATHON**	**Advancements in NRW**
Chair:	**Leanne Coetzee, Waterlab**	**Dr Preyan Arumugam, UKZN**	**Ian Palmer, Good Governance Africa**	**Robert Siebritz, CoCT**	**Prof Thokozani Kanyerere, UWC**	**Nqobile Simelane, CoCT**	**Johan Oost, Wetskills**	**Ayesha Laher, AHL Water**	**Dr Heidi Snyman, WSP**	**Jay Bhagwan/Shanna Nienaber, WRC**
15:45 - 15:50			**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**				
15:50 - 16:10			Smart Asset Care for Resilient Wastewater Infrastructure: Integrating Condition-Based Monitoring in Ageing Systems, **Malwande Sityoshwana**	Assessing Voëlvlei Dam algal communities and nutrient trends (2010–2023) to determine seasonal treatment risks, **Nicole Okkers**	Cape Flats Managed Aquifer Recharge Project, Part 1: Background and treatment train selection, **Chris Wise**	The Contribution of Local Knowledge to Adaptive and Collaborative Groundwater Governance in Rural South Africa, **Dr Samantha McCulloch-Jones, CSIR**				
16:10- 16:30	**Workshop #4** (continue): What to expect from the new drinking water standard : How to implement SANS 241:2025	**Workshop #8:** Water Efficient Sanitation Solutions - mechanisms to support scale up in the South African context	ONE Plan District Development Model in Action: A Multi-Component Infrastructure Upgrade Bulk Water Supply Scheme, **Rowen Clark**	Investigating causes of algal growth in water treatment processes and their effect on treated water, **Edokcia Maduna**	Cape Flats Aquifer Management Scheme Advanced Water Treatment Plant using Treated Effluent (Part 2), **Pierre Marais**	Water Education as a Collaborative Tool for Water Security in Gauteng Schools, **Sizwe Mndawe**	**Workshop #9:** Wetskills-South Africa (Cape Town) 2026: Finals & Award Ceremony	**Workshop #2:** Rethinking Institutional Water Security: Case study of Netcare Water Risk Mitigation Project	**Workshop #11:** HACKETHON – Bright minds solving real challenges in the Water Sector	**WRC #3:** Advancements in non-renenue water (NRW)
16:30- 16:50			Barriers to Mainstreaming Water Sensitive Urban Design in Municipal Infrastructure Delivery, **Ajith Edathoot**	Occurrence of toxic and non-toxic cyanobacteria species in water supplies destined for food processing, **Dr Mulalo Mutoti**	Cape Flats Aquifer Management Scheme –MAR and groundwater building a resilient future (Part 3), **David Mcgibbon**	The Role of Alumni in Academic Advisory Boards for Professionalization of the Water Sector, **Lebogang Tryphinah Mothobi**				
16:50- 17:10			Enhancing Rural Water Security through a Solar-Powered Borehole System in uMzumbe, South Africa, **Malungi Madlala**	Integrating satellite remote sensing into cyanobacteria monitoring protocols for the Vaal Dam, **Dr Annelie Swanepoel**	An assessment of Groundwater Contamination Sources in the Cape Flats Aquifer, Cape Town, SA, **Unarine Mukhwathi**	Enviro Champs: Citizen Capacity for Catchment Management, **Dr Hannah Siebrits**				
17:10 - 17:30			**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**				
17:30 - 18:30							Invitation Only: Wetskills Cocktail Function	Invitation only: Structure Leads		
Thursday, 23 July 2026										
07:00 - 17:00	**Registration** **Registration Foyer - Ground Floor**									
08:30 - 10;30	**Opening Session (Ballroom)**									
	Introduction: Carin Bosman **Plenary Keynote 1: Dr Wandile Sihlobo, *"Water Security, Food security, and Agriculture"*** **Plenary Keynote 2: Leonardo Manus, *"From Crisis to Resilience: Future-proofing South Africa's Water and Sanitation Systems"*** **Questions and Discussion**									
10:30 - 11:00	**Refreshment Break in Exhibition Hall**									
	Poster Session									

11:00 - 12:45	Parallel Sessions									
VENUE:	**Ballroom East**	**Ballroom West**	**Room 1,41 - 1,42**	**Room 1,43 - 1,44**	**Room 1,61 - 1,62**	**Room 1,63 - 1,64**	**Room 2,41 - 2,43**	**Room 2,44 - 2,46**	**Room 2,61 - 2,63**	**Room 2,64- 2,66**
Session #:	**Session 31**	**Session 32**	**Session 33**	**Session 34**	**Session 35**	**Session 36**	**Session 37**	**Session 38**	**Session 39: YWP Stream**	**Session 40: WRC Stream**
Topic	**Water reuse, our resilient future resource**	**Urban-Agricultural Water Nexus**	**Nature based solutions for a better water future**	**Rethinking urban and recreational water spaces: urban catchments, rivers, wetlands, dams, beaches**	**Becoming climate resilient: Rethinking Groundwater and Managed Aquifer Recharge (MAR)**	**Resilient and efficient water infrastructure**	**Abatoir wastewater reuse and management**	**Finance & Tariffs**	**YWP: A United Youth Voice for the Water Sector**	**South Africa's Water Research Agenda**
Chair	**Dr Esper Ncube, Rand Water**	**Eurica Scholtz – CEO, Berg River WUA**	**Prof Kirsty Carden, UCT**	**Shanna Nienaber, WRC**	**Dr Kevin Pietersen, UWC**	**Ayesha Laher, AHL Water**	**Ralph Richards, SFWISA**	**John Dini, WRC**	**Aluvuyo Bixa, YWP**	**WRC CEO**
11:00 - 11:05	**Chair Open & Welcome**	**Workshop #12:** From Catchment to Infrastructure: Reframing the Urban-Agricultural Water Nexus	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Workshop #13:** Improving water sector financial sustainability through implementation of the revised national water tariff frameworks	**Workshop #14:** Towards a united youth voice in the water sector	**WRC #4:** High-Level Engagement with the WRC CEO: SA Research Agenda
11:05 - 11:25	Enhanced catchment management: The first line of defence in an urban drinking water reuse scheme, **Thaabit Nacerodien**		Nature-based solutions for treating and reusing surface waters contaminated with emerging pollutants, **Emily Nicklin**	Sedimentary Accumulation and Vertical Profiling of Current-Use Pesticides in Eastern Cape Coastal Bays, **Solomon Matongo**	Rethinking managed aquifer recharge at Atlantis: residence time and water-quality resilience, **Dr Kyle Louw**	Water Pinch, a tool to reduce freshwater demand and improve water use efficiency for mining, **Marunel de Beer**	Addressing Abattoir Waste through Integrated Wastewater Treatment and COD-Based Modelling of Black Soldier Fly Larvae, **Laurah Gutu**			
11:25 - 11:45	Modelling for Water Reuse: From Ancient to Modern Times and the Future, **Shalongo Angula**		Laboratory pilot study assessing slow-release bioremediation products for sewage-polluted stormwater treatment, **Bangile Rolihlahla**	Assessment and Enhancement of Beach Water Quality Management Strategies in eThekwini Municipality, **Stanley Sizwe Mbatha**	Microbial And Geochemical Dynamics Of Atlantis MAR Site: Insights Into A Biosurveillance Framework, **Dr Bridget Makhahlela**	From Risk to Resilience: Water Optimisation in Action at La Lucia Mall, Durban, **Benjamin Biggs**	Direct Potable Reuse from Poultry Abattoir Wastewater: A Model for Resilient, Decentralised Water Infrastructure, **Liam Kay**			
11:45 - 12:05	CEC Removal in Potable Reuse Treatment Plants, **Chris Wise**		Evaluating a Liquid Microbial Bioremediation Product to Improve Maturation Pond Effluent Quality: A Lab-scale trial, **Dailin Currie**	Establishing the Baseline Ecological Status of Selected Rivers to Support the Liveable Urban Waterways Programme, **Lusanda Malusi**	MAR and the Microbiome: integrating microbial biodiversity analysis into aquifer management, **Dr Christopher Bryan**	Integration of Green Infrastructure into Municipality Asset Registry for Resilient City Management: City of Tshwane, **Bonani Madikizela**	Post-treatment effects on polyethyleneimine/ poly(sodium styrene sulfonate)-silver modified ultrafiltration membranes for slaughterhouse wastewater reuse, **Dr Fulufhelo Mudau**			
12:05 - 12:25	Reusing Greywater for Concrete Production: Advancing Sustainable Infrastructure in Informal Settlements, **Wihann van Reenen**		Resilient Water Infrastructure: Assessing Nature-based Solutions and Blue-Green Infrastructure in Cape Town, South Africa, **Dr Charne Theron**	An integrated control strategy as a management tool for aquatic Invasive Alien Plants (IAP) management, **Nhlanhla Mayinga**	Assessment of potential recharge enhancement sites in Limpopo, **Nando Mathabela**	A Multi-Pronged Approach to Incorporate Climate Friendly Solutions at the Coega Wastewater Treatment Works, **Dr Michele Kruger**	Towards enhanced hydrophilicity and antifouling propensity of PES-based membranes using Fe-BTCA@GO for abattoir wastewater remediation, **Ronewa Phadagi**			
12:25 - 12:45	**Questions & Discussion**		**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**			
12:45– 14:00	**Lunch Break in the exhibition hall**									
	Poster Session									
14:00 - 15:15	**Parallel Sessions**									
Session #	**Session 41**	**Session 42**	**Session 43**	**Session 44**	**Session 45**	**Session 46**	**Session 47**	**Session 48**	**Session 49: YWP Stream**	**Session 50: WRC Stream**
Topic	**Water Reuse**	**National Urban Catchment Management Platform**	**Rethinking performance in conventional water treatment**	**Water microbiomes**	**Circular Economy and Resource Recovery**	**Energy efficiency, recovery, and generation**	**Digital Tools for Decentralised sanitation**	**SDG 6 Linkages**	**YWP: Career Growth in the Water Sector**	**Indigenous crops as climate change adaptation stratey**
Chair	**Dr Nonhlanhla Kalebaila, WRC**	**Andrew McDonald, CoCT**	**Natasia van Binsbergen, AL Abbott**	**Dr Rahzia Hendricks, Rand Water**	**Dr Ashton Mpofu, AfriVolve**	**Burnett Persens, WSSA**	**Akhona Mazingisa, ESG**	**Dr Benton Otieno, UKZN**	**Boitumelo Matshediso - National Financial Lead - WISA YWP**	**Prof Sylvester Mpandeli, WRC**

14:00 - 14:05	**Workshop #15:** Reimagining Water Reuse Beyond Treatment	**Workshop #16:** Establishment of a National Urban Catchment and River Management Platform **(WISA W Cape Branch)**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Workshop #17:** Integrated Approaches to Decentralised Sanitation Services (IADSS): Digital Tool	**Workshop #18:** Operationalising SDG 6.3 Interlinkages for Integrated Water Quality and Wastewater Governance in South Africa	**Workshop #19:** Upskilling and mentorship for career growth in the water sector	**WRC #5:** Mainstreaming indigenous underutilised crops as a climate change adaptation strategy in a water-stressed South Africa.
14:05 - 14:25			Comparing conventional clarification and dissolved air floatation for algae related turbidity and TOC removal efficiency, **Teunis Cloete**	Building future-ready communities through Groundwater Microbiome Education, **Dr Bridget Makhahlela**	Implementing Granular Activated Carbon as a Circular Economy and Environmentally Sustainable Solution for PFAS, **Wesley Rolfe**	Co-digestion of Sewage Sludge and industrial effluent for potential energy generation: Darvill WWW Case Study, **Thandeka Makhanya**				
14:25 - 14:45			Process Adaptation and Resilience to Extreme Turbidity Loading at Hazelmere Waterworks, **Emerald Celestine Reddy**	Identifying Microbial Signatures in Urban River Biofilms: Understanding Short-Chain Chlorinated Paraffins Bioaccumulation and Stress Response, **Fezeka Zwane**	Transforming Forestry By-Products into High-Performance Natural Coagulants: A Circular Bioeconomy Approach to Water Treatment, **Dr Nonkululeko Zuma**	Surface aeration Energy Efficiency (EE): Study and Implementation at a municipal wastewater treatment plant, **Hopewell Lehlohonolo Molefe**				
14:45 - 15:05			Optimising Ozonation Pre-Treatment for Enhanced Sludge Solubilisation and Anaerobic Digestion Efficiency, **Joseph Lephallo**	Occurrence of antifungal-resistant opportunistic fungal pathogens in raw and treated wastewater in KwaZulu Natal, **Thembeka Thwala**	Taguchi-based optimisation of the solar Photo-Fenton process for the treatment and reuse of effluents, **Nizordinah Sithole**	Evaluation of a Membrane Aerated Biofilm Reactor Technology in Achieving Energy-Efficient Wastewater Treatment, **Mlu Mnguni**				
15:05 - 15:15			**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**				
15:15– 15:45	**Refreshment break in the Exhibition hall**									
15:45 - 17:00	**Parallel Sessions**									
Session #	**Session 51**	**Session 52**	**Session 53**	**Session 54**	**Session 55**	**Session 56**	**Session 57**	**Session 58**	**Session 59**	**Session 60: WRC Stream**
Topic	**Water Reuse (continue)**	**National Urban Catchment Management Platform**	**Water and Wastewater treatment: Remove micro-contaminants and metals**	**Climate change impacts: dealing with Droughts & Floods**	**Thermal Treatment and Resource Recovery**	**Rethinking the protection of soil to protect water resources**	**Industrial Water Risk & Security**	**SDG 6 Linkages (continue)**	**Negotiating Water Replenishment Agreements for South Africa's Stressed Basins**	**Innovations in Water:**
Chair	**Dr Nonhlanhla Kalebaila, WRC**	**Andrew McDonald, CoCT**	**Jason Minnie, UCT**	**Dr Daniel Kibirige, CSIR**	**Christina Mazivila, UCT**	**Dr Johan van der Waals, Real IPM**	**Boitumelo Matshediso, Talbot**	**Dr Benton Otieno, UKZN**	**Dr Craig Tanyanyiwa, Water Footprint Implementation**	**Dr Valerie Naidoo, WRC**
15:45 - 15:50	**Workshop #15 (continue):** Reimagining Water Reuse Beyond Treatment	**Workshop #16 (continue):** Establishment of a National Urban Catchment and River Management Platform **(WISA W Cape Branch)**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Workshop # 20:** Ensuring Industrial Water Security for Business Continuity in a Water-Constrained Economy	**Workshop #18 (continue):** Operationalising SDG 6.3 Interlinkages for Integrated Water Quality and Wastewater Governance in South Africa	**Workshop #21:** Negotiating Water Replenishment Agreements for South Africa's Stressed Basins - A World Café simulation on designing and financing water stewardship projects	**WRC #6:** Innovations in Water: Building Resilience and reducing vulnerability in the sector
15:50-16:10			Evaluation of unit process modules employed in drinking water treatment plant to remove the contaminants, **Dr Paki Israel Dikobe**	Introducing a new Multi-Index Approach for Integrated Drought Monitoring in South Africa using the NIWIS, **Dr Mxolisi Mukhawana**	Treatment of saline water with evaporation as pre-treatment to freeze crystallization, **Mosidi Mokoena**	"When nature fights back": Kinetic modelling of biosynthesised nanomaterials for disrupting antibiotic resistance in soil, **Anza-vhudziki Mboyi**				
16:10-16:30			Tio_2/Ag Nanoparticles-Grafted Polyamide Reverse Osmosis Membranes: Enhancing Hydrophilicity and Antifouling Properties, **Grace Makwela**	Assessing Impacts of Land Surface Temperature on Groundwater Resources using Remote Sensing, **Lawrence Marufu**	Treatment of Pyrolysis Process Water with Freeze Crystallization for Sodium Sulphate Recovery, **Mlungisi Mahlangu**	Upper uMkhomazi Soil Conservation and Restoration Project, **Sharon Ngcobo**				
16:30-16:50			Exploring the potential of Lippia javanica as sustainable bio-adsorbent for removing heavy metals in wastewater, **Dr Sihle Mngadi**	Assessment of groundwater level fluctuations in the Namaqualand region, **Robert Fourie**	Recovery of Energy from Macro and Microplastics Isolated from Wastewater Treatment, **Tendani Mphaga**	Phosphate storage capacity of Cape Flats soils and their role in protecting urban water quality, **Rachelle Schneuwly**				
16:50-17:00			**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**				

18:00	**WISA 2026 GALA DINNER**									
	Friday, 24 July 2026									
07:00 - 17:00	**Registration** **Registration Foyer - Ground Floor**									
08:30 - 10:30	**Opening Session (Ballroom)**									
	Introduction: **Prof David Ikumi** Plenary Keynote 1: **Dr Inga Jacobs-Mata,** ***"Letters to Amanzi: a rethink in seven letters"*** Plenary Keynote 2: **Bothwell Manikai, DBSA: "*** ***Bridging the gap - Unlocking water infrastructure investment: Exploring innovative financing solutions to address South Africa's water infrastructure funding shortfall and to drive sustainable, climate resilient and regionally integrated water investment"*** PANEL DISCUSSION: **Financing the Water Sector – Facilitator, Ian Palmer (Good Governance Africa). Panelists:** Mtohera Chirwa (AfDB), Johan Lubbe (DBSA/DWS), Alex Simalabwi (GWP), Kim Walsh (PDG), Craig Tanyanyiwa (Vice-chair WYP), Bothwell Manikai (DBSA) Questions and Discussion									
10:30-11:00	**Refreshment Break in exhibition Hall**									
	Poster Session									
11:00 - 12:15	**Parallel Sessions**									
VENUE:	**Ballroom East**	**Ballroom West**	**Room 1,41 - 1,42**	**Room 1,43 - 1,44**	**Room 1,61 - 1,62**	**Room 1,63 - 1,64**	**Room 2,41 - 2,43**	**Room 2,44 - 2,46**	**Room 2,61 - 2,63**	**Room 2,64- 2,66**
Session #	**Session 61**	**Session 62**	**Session 63**	**Session 64**	**Session 65**	**Session 66**	**Session 67**	**Session 68**	**Session 69**	**Session 70: WRC Stream**
Topic	**Water Utilities and Water Boards**	**Contaminants of Emerging Concern**	**Water infrastructure – planning, partnerships, and maintenance**	**Rethinking governance institutions**	**Water and Wastewater treatment: dealing with sludge**	**From monitoring to management: data accuracy, transparency, and accountability**	**Rethinking Safe Water for Facilities**	**Rethinking groundwater monitoring**	**Using AI and ML in water management and infrastructure maintenance**	**Citizen Science and River Rehabilitation**
Chair	**Ian Palmer, Good Governance Africa**	**Dr Michael van der Laan, ARC**	**Mpheteng Mokubung, COO Midvaal Water NPC**	**Abri Vermeulen, ACV Water**	**Laurah Gutu, UCT**	**Carin Bosman, CBSS**	**Mendi Shozi, BORDA**	**Dr John Okedi, UCT**	**Hope Mudau, UCT**	**Bonani Madikizela, WRC**
11:00 - 11:05			**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	**Chair Open & Welcome**	
11:05 - 11:25			Lessons learnt from 20 years of WWTW auditing: What do we do now?, **Chris Wise**	Institutional Fragmentation and Equity in Water Allocation: Governance of Joint Venture in Lower Sundays Catchment, **Simpiwe Ngilana**	A Systematic Review of Wastewater Sludge Management Practices: A Case Study in eThekwini Municipality, **Sabelo Edgar Mathenjwa**	Reflection on the 2022 National Water Monitoring Plan and roadmap for developing the 2027 Plan, **Dr Simphiwe Chabalala**	Guidelines for the Development of Water Safety Plans for Buildings, **Ayesha Laher**	Water Stable Isotopes: Determining groundwater recharge, pipe leakage, mine water flows, evaporation and other applications, **Dr Roger Diamond**	Smart Predictive Maintenance: AI and ML for Medium Voltage Pump Reliability, **Ranish Singh**	
11:25 - 11:45	**Workshop #22:** Effectiveness of water utilities across Africa	**Workshop #23:** From Data to Decisions: Co-Designing a Shared Knowledge Hub for Contaminants of Emerging Concern	Expanding the Scope of Water Operators' Partnerships: from Peer-to-Peer Learning to Systemic Resilience, **Ajith Edathoot**	Institutionalizing Water Stewardship: Aligning Technical and Governance Feasibility with Botswana's Priorities, **Robyn Tompkins**	Pilot Evaluation of Hopper Design Modifications to Mitigate Sludge Accumulation at Durban Heights WTW, **Nosipho Mzobe**	Strengthening water governance through ISO/IEC 17025: Enhancing data transparency and accountability, **Lebohang Sithole**	Legionella – the legio problem, **Dia van Staden**	Assessment of groundwater quality in compliance with SDG 6.3.2 targets: Case study of South Africa, **Tholoana Mabula**	Application of Machine Learning (ML) Techniques for Water Quality Assessment in a Water Treatment Plants, **Lindelwa Ndhlovu**	**WRC #7:** The launch of the river rehab tool kit: Connecting citizen action and fixing rivers
11:45 - 12:05			Virtual and Augmented Reality for Water and Wastewater Treatment Design and Training, **Presantha Maduray**	Scaling Excreta Flow Diagrams (EFDs): Institutional Ownership Supporting South Africa's National Faecal Sludge Management Strategy, **Janine Cumberledge**	Effect of solids concentration on dewatering performance of water treatment residue, **Nothando Mungwe**	How accurate are water quality test strips?, **Riyaadh Mayet**	Smart Water for Smart Facilities: Demand Management and Harvesting in Botswana's Limpopo Basin, **Benjamin Biggs**	The review of the current groundwater monitoring network: Northern Cape Region case study, **Kgotlello Mashishi**	Use of a generative AI assistant & a Knowledge Twin to improve asset maintenance efficiency, **Mogan Padayachee**	
12:05-12:25			Development of a Maintenance Strategy for Wastewater Treatment Works in the City of Johannesburg, **Dunyiswa Kosi- Mabuza**	Climate change, water security and transboundary agreements: Inkomati Maputo basin, **S'phamandla Mchunu**	Integrated modelling of filamentous bacteria dynamics in activated sludge and secondary settling tank systems, **Jason Minnie**	Review and update of the 1:500 000 hydro-geological map series of Queenstown and information brochure, **Dr Lindelani Lalumbe**	Demonstrating Circular Water Systems Through a Campus-Based Containerised MBR at UCT, **Cordi Symington**	Managing groundwater use allocation using groundwater monitoring data, **Tholeka Mafanya**	Development of a machine learning decision support system for water quality management in South Africa, **Katlego Mogane**	
12:25-12:45			**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	**Questions & Discussion**	

12:45– 14:00	Lunch Break in the exhibition hall									
	Poster Session									
12:45– 14:00	Parallel Sessions									
Session #	Session 71	Session 72	Session 73	Session 74	Session 75	Session 76	Session 77	Session 78	Session 79	Session 80: WRC & YWP Stream
Topic	Water Boards & ESG Reporting	Chemicals of Emerging Concern in Wastewater	Rethinking Finance & Investments	Mine Water beyond closure	EFD/SFD	Vaal River IWQM Plan	Water Availability for Alternative Energy Production	Making RDIs work in the Water Sector	Energy Efficiency and Wastewater Treatment	Strengthening Soft Skills and Professional Networks for Young Water Professionals
Chair	Sbusiso Khuboni , uMngeni-uThukela Water	Leanne Coetzee, Waterlab	Rajiv Paladh, Bosch Capital	Dr Palesa Diale, Wits	André van der Walt DWS	Khathutshelo Joshua Rasifudi, DWS	Priya Moodley, WSP Group Africa	John Dini, WRC	Dr Marlene Van der Merwe-Botha, Watergroup	Dr Mamohloding Maahlo, WRC and Boitumelo Matshediso, YWP
14:00 - 14:05	**Workshop 24:** Beyond Compliance: Leveraging ESG (Environment, Social and Governance) Frameworks for Radical Transparency in South African Water Boards	**Chair Open & Welcome**	**Chair Open & Welcome**	**Workshop #25:** Beyond Closure: Governing Mine Water for Generations	**Workshop #26:** Generate Excreta Flow Diagram (SFD) Live! Map Hidden Sanitation Losses for Efficient Water Resource Planning	**Workshop #27:** The Development and Implementation of Integrated Water Quality Management Plans: A Case Study of the Integrated Vaal River System, South Africa	**Workshop #28:** Do we have sufficient water for green hydrogen production?	**Workshop #29:** Synergising the water research and innovation ecosystem with the innovation priorities of the third National Water Resources Strategy	**Workshop #30:** Energy Efficiency and Wastewater Treatment: Practical Lessons from the Field	**WRC # 8:** WRC/ WISA Young Water Professions training workshop "Strengthening Soft Skills and Professional Networks for Young Water Professionals"
14:05 - 14:25		Extension of PWM_SA Model for Tracking Micropollutants in Wastewater Treatment Plants, **Dr Joshua Matesun**	Rethinking NRW: Integrating Debt Recovery into Demand Management, **Vishal Poona**							
14:25 - 14:45		Assessment of Industrial Organic Micropollutants and Potentially Toxic Elements Across Two Wastewater works in Ekurhuleni, **Sibusiso Nhlapo**	Financial, Sustainability & Business Model Considerations for WTR Management, **Dr Chantal Kotze**							
14:45 - 15:05		Rethinking Disinfection: Data Driven Chlorine Dosing for Resilient Water, **Ayesha Esop**	Understanding Cost Drivers in Small Wastewater Plants Through Operational and Historical Data Analysis, **Zama Xaba**							
15:05 - 15:15		**Questions & Discussion**	**Questions & Discussion**							
15:15– 15:45	Break									
15:45 - 17:00	Closing Session (Ballroom)									
15:45-16:15	Student Prize Award Ceremony									
16:15-17:00	Reflection on WISA2026									
17:00-18:00	Farewell Cocktail									

WORKSHOPS AT A GLANCE

Wednesday 22nd July

SESSION 2
Workshop Title: Investments in Water
DWS 1: Consultative session: 2026 UN Water Conference for Interactive Dialogue 6 on ID(f) "Investments in Water", RSA & France
Chair: Dr Risimati Mathye, DWS
Location: Ballroom West

SESSION 7
Workshop Title: Infrastructure, Community and Citizen Science
Workshop 1: Who Keeps Water Infrastructure Working? Rethinking Sustainability Beyond Construction
Chair: Dr Henry Roman, IWMI
Location: Room 2,41- 2,43

SESSION 8
Workshop Title: Beyond the Tap: Rethinking Alternative Drinking Water in South Africa
Workshop 2: Rethinking Climate Resilient Alternative Drinking Water Services in South Africa
Chair: Dr Samantha McCulloch-Jones, CSIR
Location: Room 2,44- 2,46

SESSIONS 9 AND 19
Workshop Title: Re-Imagining Wastewater, Sludge, and Waste for the Circular Economy
Workshop 3: Re-Imagining Wastewater, Sludge, and Waste for the Circular Economy
Chair: Mlu Mnguni, Umgeni-uThukela Water
Location: Room 2,61-2,63

SESSIONS 11 AND 21
Workshop Title: Drinking Water Standards
Workshop 4: What to expect from the new drinking water standard: How to implement SANS 241:2025
Chair: Leanne Coetzee, Waterlab
Location: Ballroom East

SESSION 12
Workshop Title: IWA Water balance
DWS 2: Workshop on IWA Water balance: Roadmap to Reducing Real Losses
Chair: Dr Risimati Mathye, DWS
Location: Ballroom West

SESSION 16
Workshop Title: Digital readiness for early warning systems
Workshop 5: The State of Early Warning Systems in South Africa
Chair: Dr Daniel Kibirige, CSIR
Location: Room 1,63- 1,64

SESSION 17
Workshop Title: Municipal Performance – skills gap identification
Workshop 6: Strengthening Municipal Performance: Review, Feedback and Skills Gap Identification for the WRC-WISA Capacity Building Initiative (WISA)
Chair: Melissa Cousins, WISA
Location: Room 2,41- 2,43

SESSION 18
Workshop Title: Climate Resilient Alternative Water Services
Workshop 7: Rethinking Climate-Resilient Alternative Water Services in South Africa
Chair: Dr Samantha McColloch-Jones, CSIR
Location: Room 2,44- 2,46

SESSION 22
Workshop Title: Water Efficient Sanitation Solutions – Training
Workshop 8: Water Efficient Sanitation Solutions - mechanisms to support scale-up in the South African context
Chair: Dr Preyan Arumugam, UKZN
Location: Ballroom West

SESSION 27
Workshop Title: Wetskills-South Africa (Cape Town) 2026: Finals
Workshop 9: Wetskills-South Africa (Cape Town) 2026: Finals & Award Ceremony
Chair: Johan Oost, Wetskills
Location: Room 2,41 - 2,43

SESSION 28
Workshop Title: Institutional Water Security
Workshop 10: Rethinking Institutional Water Security: Case study of Netcare Water Risk Mitigation Project
Chair: Ayesha Laher, AHL Water
Location: Room 2,44- 2,46

SESSION 29
Workshop Title: YWP HACKATHON
Workshop 11: HACKATHON – Bright minds solving real challenges in the Water Sector
Chair: Dr Heidi Snyman, WSP
Location: Room 2,61- 2,63

Thursday 23rd July

SESSION 32
Workshop Title: Urban-Agricultural Water Nexus
Workshop 12: From Catchment to Infrastructure: Reframing the Urban-Agricultural Water Nexus
Chair: Eurica Scholtz, CEO, Berg River WUA
Location: Ballroom West

SESSION 38
Workshop Title: Finance & Tariffs
Workshop 13: Improving water sector financial sustainability through implementation of the revised national water tariff frameworks
Chair: John Dini, WRC
Location: Room 2,44-2,46

SESSION 39
Workshop Title: YWP: A United Youth Voice for the Water Sector
Workshop 14: Towards a united youth voice in the water sector
Chair: Aluvuyo Bixa, YWP
Location: Room 2,61-2,63

SESSIONS 41 AND 51
Workshop Title: Water Reuse
Workshop 15: Reimagining Water Reuse Beyond Treatment
Chair: Dr Nonhlanhla Kalebaila, WRC
Location: Ballroom East

SESSIONS 42 AND 52
Workshop Title: National Urban Catchment Management Platform
Workshop 16: Establishment of a National Urban Catchment and River Management Platform
(WISA W Cape Branch)
Chair: Andrew McDonald, CoCT
Location: Ballroom West

SESSION 47
Workshop Title: Digital Tools for Decentralised Sanitation
Workshop 17: Integrated Approaches to Decentralised Sanitation Services (IADSS): Digital Tool
Chair: Akhona Mazingisa, ESG
Location: Room 2,41- 2,43

SESSIONS 48 AND 58
Workshop Title: SDG 6 Linkages
Workshop 18: Operationalising SDG 6.3 Interlinkages for Integrated Water Quality and Wastewater Governance in South Africa
Chair: Dr Benton Otieno, UKZN
Location: Room 2,44- 2,46

SESSION 49
Workshop Title: YWP: Career Growth in the Water Sector
Workshop 19: Upskilling and mentorship for career growth in the water sector
Chair: Boitumelo Matshediso - National Financial Lead, WISA YWP
Location: Room 2,61- 2,63

SESSION 57
Workshop Title: Industrial Water Risk & Security
Workshop 20: Ensuring Industrial Water Security for Business Continuity in a Water-Constrained Economy
Chair: Boitumelo Matshediso, Talbot
Location: Room 2,41- 2,43

SESSION 59
Workshop Title: Negotiating Water Replenishment Agreements for South Africa's Stressed Basins
Workshop 21: Negotiating Water Replenishment Agreements for South Africa's Stressed Basins - A World Café simulation on designing and financing water stewardship projects
Chair: Dr Craig Tanyanyiwa, Water Footprint Implementation
Location: Room 2,61-2,63

Friday 24th July

SESSION 61
Workshop Title: Water Utilities and Water Boards
Workshop 22: Effectiveness of water utilities across Africa
Chair: Ian Palmer, Good Governance Africa
Location: Ballroom East

SESSION 62
Workshop Title: Contaminants of Emerging Concern
Workshop 23: From Data to Decisions: Co-Designing a Shared Knowledge Hub for Contaminants of Emerging Concern
Chair: Dr Michael van der Laan, ARC
Location: Ballroom West

SESSION 71
Workshop Title: Water Boards & ESG Reporting
Workshop 24: Beyond Compliance: Leveraging ESG (Environment, Social and Governance) Frameworks for Radical Transparency in South African Water Boards
Chair: Sbusiso Khuboni, uMngeni-uThukela Water
Location: Ballroom East

SESSION 74
Workshop Title: Mine Water beyond closure
Workshop 25: Beyond Closure: Governing Mine Water for Generations
Chair: Dr Palesa Diale, Wits
Location: Room 1,43- 1,44

SESSION 75
Workshop Title: EFD/SFD
Workshop 26: Generate Excreta Flow Diagram (SFD) Live! Map Hidden Sanitation Losses for Efficient Water Resource Planning
Chair: André van der Walt, DWS
Location: Room 1,61- 1,62

SESSION 76
Workshop Title: Vaal River IWQM Plan
Workshop 27: The Development and Implementation of Integrated Water Quality Management Plans: A Case Study of the Integrated Vaal River System, South Africa
Chair: Khathutshelo Joshua Rasifudi, DWS
Location: Room 1,63- 1,64

SESSION 77
Workshop Title: Water Availability for Alternative Energy Production
Workshop 28: Do we have sufficient water for green hydrogen production?
Chair: Priya Moodley, WSP Group Africa
Location: Room 2,41- 2,43

SESSION 78
Workshop Title: Making RDIs work in the Water Sector
Workshop 29: Synergising the water research and innovation ecosystem with the innovation priorities of the third National Water Resources Strategy
Chair: John Dini, WRC
Location: Room 2,44- 2,46

SESSION 79
Workshop Title: Energy Efficiency and Wastewater Treatment
Workshop 30: Energy Efficiency and Wastewater Treatment: Practical Lessons from the Field
Chair: Dr Marlene Van der Merwe-Botha, Watergroup
Location: Room 2,61 - 2,63



POSTER SESSIONS AT A GLANCE

Wednesday 22nd July

12:45-14:00

THEME: Water for Life: Managing Water Quality & Quantity Across Catchments

Advancing Coastal Water Quality Prediction and Management in South Africa, *Dr Katelyn Johnson*

Modelling the macadamia nut orchard expansion on streamflow within the Middle Crocodile River Sub-catchment, Mpumalanga, *Zomakahle Ndlovu*

Determination of Trace Elements In Water And Sediments In The Vaal Triangle Air-Shed Priority Area, *Tshia Malehase*

Water Quality and Macroinvertebrate Response to Wastewater Effluent in the White River, South Africa, *Frengelinah Mamabolo*

Monitoring the spatial distribution of active pharmaceutical contaminants in a peri-urban catchment, *Shantel Mayinoti*

Fate of Emerging Contaminants in Bellville Wastewater Treatment Works, *Dr Joshua Matesun*

A Process-Weighted Extension of the Advection-Dispersion Equation for Emerging Contaminant Transport, *Dr Makosha Charlotte Morakaladi*

Chemical Profiling of Musty and Earthy Odours in Drinking Water, *Dr Christina Kannigadu*

Carbon sequestration and climate change mitigation potential of wetlands, *Ayanda Ndlovu*

15:15- 15:45

THEME: Water for Life: Managing Water Quality & Quantity Across Catchments

A Decadal Analysis of the Relationship Between Algal Counts, Nutrient Levels, and Physicochemical Properties, *Londiwe Nelisi*

Characterisation of faecal sludge variability to inform adaptive treatment selection and Integrated catchment monitoring framework, *Happiness Nobela*

Annual and Seasonal Trends of Total Coliforms and Escherichia coli in Treated Water (2014 -2024), *Slindokuhle Gwala*

Thursday 23rd July

10:30- 11:00

THEME: Rethink Efficiency

Simultaneously looking at low-cost beneficiation from waste products and informal settlement upliftment, *James Topkin*

Reusability of NaCl brine for magnetic ion exchange resin regeneration, *Sizakele Ndlovu*

THEME: Using AI and ML in water management and infrastructure maintenance

The Human Role in Automated Laboratories: Maintaining ISO 17025:2017 competence requirements in digitally transformed processes, *Lebohang Sithole*

12:45- 14:00

THEME: Rethink capacity

Tackling Stakeholder Engagement, Transformation and Social Inclusion of WASH practices, *Odwa Ntsika Mtembu*

Integrating Experiential Learning Programs for a Sustainable Water Future and Climate Resilience: A Comparative Analysis, *Dr Charné Theron*

Strengthening Water Quality Monitoring in Resource -Constrained Systems: A practical guide for Technicians, *Mamokete Msimanga*

Barriers and Opportunities for Wastewater Reuse in the Free State Province: A Stakeholder Perspective, *Dr Abdulrasaq Ajadi Ishola*

A Phenomenological exploration of community-based strategies to address water scarcity in Tsheseng Village, *Dineo Nkejane*

THEME: Funding the Flow

Bridging Revenue Gaps in Peri-Urban and Rural Water Services: Governance Challenges and Emerging Solutions, *Lukhanyiso Ndevu*

Addressing Water Quality Inequalities in South African Municipalities Through Peer Learning and Standardised Treatment Practices, *Sibahle Gabisa*

THEME: Climate-Resilient Water Futures

Evaluation and Optimisation of Polyaluminium Chloride Coagulation to Treat Municipal Secondary Effluent, *Kavir Manilal*

Geochemical characterisation of wastewater to assess the impact on groundwater, City of Cape Town, *Paula Finini*

Friday 24th July

10:30- 11:00

THEME: Rethinking governance

Building resilience through collaborative governance in the Western Cape Water Supply System, *Lauren Arendse*

THEME: Climate-Resilient Water Futures

Diversifying water sources for climate resilience: V&A Waterfront seawater desalination plant case study, *Rosan Van Wyngaard*

Industrial Food Processing Effluent Treatment: Challenges faced in the Recycle back to Potable, *Gerardo Pretorius*

12:45-14:00

THEME: Rethink Infrastructure

Impact of increased Fe(III) concentration on ferric sulphate coagulation performance on the treatment of water, *Esethu Dudumashe*

Untargeted GC×GC Profiling to Compare Chemical Differences in Off-Odour Drinking-Water Samples, *Dr Christina Kannigadu*

Performance of Hybrid activated sludge process wastewater treatment at ERWAT Tsakane WCWs, *Murendeni Masala*

Optimisation of nitrogen removal processes in an extended aeration Wastewater Treatment Plant, *Thamsanqa Shangase*

Evaluating The Potential Of Phycoremediation For The Removal Of Heavy Metals And Toxicity From Wastewater, *Lutendo Vele*

From Deterministic to Probabilistic: Advancing Benchmarking of Activated Sludge Configurations in Wastewater Treatment, *Muhammad Imraan Paleker*

Investigating the impact of treatment stages in South Africa's Drinking Water Treatment Plants using Metagenomics, *Dr Khuthadzo Mudau*

Assessment of microbial diversity in selected drinking water treatment plant, sludge and associated distribution systems, *Lesoka Reneiloe Ntobeng*

Beyond Conventional Treatment: Risk and Performance Assessment of Johannesburg's Wastewater Treatment Plants, *Arinao Muntswu*

Assessing Water Systems as Green Infrastructure Assets in Selected Mpumalanga Municipalities, *Marubini Jessica Mutuwa*

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KEYNOTES AT A GLANCE



Refilwe Buthelezi

Topic: How Africa's water professionals must lead the 4IR water revolution: A call to rethink governance, technology, and investment in Africa's water future

Refilwe Sarah Mpho Buthelezi is a Professional Engineer (PrEng) and current President of the Federation of African Engineering Organisations (FAEO), as well as the first female President of the Engineering Council of South Africa (ECSA). She champions the Operational Technology function at Rand Water and is a Fellow of the South African Academy of Engineering (SAAE).

She serves as a Non-Executive Director of SANRAL and Transnet and sits on the Programme Steering Committee for the Infrastructure Technical Assistance Facility, supporting sustainable development in South Africa. Passionate about STEM promotion, she co-founded the Pfuxani STEM Foundation.

Her recognitions include the SAIEE Women in Engineering Award (2021), University of Johannesburg Dignitas Award (2022), UK-South African Chamber of Commerce Chairman's Award (2023) and being named among the Top 10 Performing Presidents of Professional Bodies in Africa (2023).

Refilwe is a firm Pan-Africanist, committed to advancing engineering standards and collaboration across the continent.



Wandile Sihlobo

Topic: Water security, food security, and agriculture

Wandile Sihlobo is South Africa's Presidential Envoy on Agriculture and Land. He is also Chief Economist of the Agricultural Business Chamber of South Africa (Agbiz) and the author of three books, "The Uncomfortable Truth About South Africa's Agriculture (March 2025)", "A Country of Two Agricultures: The Disparities, the Challenges, the Solutions (2023)" and "Finding Common Ground: Land, Equity, and Agriculture (2020).

He is a Senior Lecturer Extraordinary at the Department of Agricultural Economics at Stellenbosch University.

Sihlobo was appointed as a member of President Cyril Ramaphosa's Presidential Economic Advisory Council in 2019 (and re-appointed in 2024), having served on the Presidential Expert Advisory Panel on Land Reform and Agriculture from 2018.

He is also a member of the Council of Statistics of South Africa (Stats SA) and a Commissioner at the International Trade Administration Commission of South Africa (ITAC). Sihlobo is the Chairman of the Agribusiness Working Group of the BRICS Business Council (South Africa).

Sihlobo holds a Bachelor of Science degree in Agricultural Economics from the University of Fort Hare and a Master of Science degree in Agricultural Economics from Stellenbosch University.



Leonardo Manus

Topic: From crises to resilience: Futureproofing South Africa's water and sanitation systems

Leonardo started working as a civil engineering student in the Eden District Municipality, after which he worked in a range of technical and management positions at the National Department of Water and Sanitation in Pretoria until 2023. During this period, he developed and executed various innovations in the water and sanitation management space, and most notably the award-winning incentive-based regulation Blue Drop and Green Drop programs, as well as the published wastewater risk abatement planning program. During his stint serving as the Deputy Director General for Water Resource Infrastructure Management, he explored capital project funding innovations and invested in ideation to improve asset management of government water schemes.

He added a master's degree in engineering management and a postgraduate diploma in business management to his academic credentials. He is currently pursuing further research in the field of systems engineering as it relates to unplanned settlements and its impact on sanitation systems.

He currently holds the position of Executive Director: Water and Sanitation for the City of Cape Town, where he is tasked with ensuring the resilience of the water supply and the sustainable operation of wastewater systems throughout the City.

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Dr Inga Jacobs-Mata

Topic: Letters to Amanzi: a rethink in seven letters

Dr Inga Jacobs-Mata is Director of Water, Growth and Inclusion at the International Water Management Institute (IWMI), where she leads research and partnerships focused on water governance, gender and social inclusion, circular economy and economics and impact assessment in Africa and Asia.

With more than 15 years of experience in water and environmental governance, she has become a recognised leader in advancing sustainable development through evidence-based policy, innovation and multi-stakeholder collaboration.

Previously, Jacobs-Mata served as IWMI's Regional Representative for Southern Africa and Country Representative for South Africa, and has held senior positions at the Council for Scientific and Industrial Research (CSIR) and the Water Research Commission (WRC). She has led major international programmes focused on innovation scaling, climate adaptation, drought resilience, water security and agrifood systems transformation, overseeing large multidisciplinary teams and multi-million-dollar investments across the continent.

A respected researcher and thought leader, Jacobs-Mata has authored more than 50 peer-reviewed publications and has played a key role in shaping policy and investment dialogues across Africa. She holds a PhD in International Relations from the University of St Andrews, a Master's degree from Stellenbosch University and a Bachelor's degree from Grinnell College in the United States.



Bothwell Manikai

Topic: Bridging the gap – Unlocking water infrastructure investment: Exploring innovative financing solutions to address South Africa's water infrastructure funding shortfall and to drive sustainable, climate-resilient and regionally integrated water investment

Bothwell Manikai has more than 25 years of experience in developmental infrastructure financing, private equity and investment banking across South Africa, the SADC region and Sub-Saharan Africa. Throughout his career, he has worked across the public and private sectors, specialising in infrastructure finance, structured finance and investment solutions that support sustainable economic development. He has played a key role in financing strategic infrastructure projects, with a particular focus on transport, logistics, water and sanitation.

He holds a Master of Finance and Investment (cum laude) from Wits Business School, a Bachelor of Commerce in Business Finance and Accounting from the University of the Witwatersrand, and a Management Development Programme qualification, graduating with distinction and merit. He is also an Associate Member of the Chartered Institute of Development Finance (CIDEF), and a member of the Investment Analysts Society of Southern Africa and the Institute of Directors South Africa.

He currently serves as Acting Head of Origination and Client Coverage, Transport, Logistics, Water and Sanitation, and Principal: Infrastructure Financing, South Africa and International at the Development Bank of Southern Africa (DBSA). In this role, he leads the origination and structuring of catalytic infrastructure investments, helping mobilise finance for projects that improve water security, transport connectivity and sustainable infrastructure development across South Africa and the African continent.

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DELEGATE INFORMATION AND HOUSEKEEPING



ACCESS TO SESSIONS

- Please always wear your badge to gain access to session rooms and the exhibition hall.
- Access to the session rooms is on a first-come, first-served basis.
- The organisers will close access to the session if all seats are filled, for health and safety reasons.
- Delegates are not allowed to stand in the aisles or at the back of the venue.
- Mobile phones must be switched to silent when in session.

ACCOMMODATION

Below is a list of the official hotels:

Hotel Sky Cape Town	021 879 5040
Southern Sun The Cullinan	021 415 4000
Southern Sun Waterfront	021 409 4000

AIRPORT TRANSFERS

Airport transfers are available to and from Cape Town International Airport. Arrangements can be made at any of the official hotels. Cost for transfers is for the delegate's account.

TAXI SERVICE

Uber is freely available in Cape Town and offers a very cost-effective option to get around. Download the Uber app – link available at www.uber.com/en-ZA.

BANKING

An ATM is located inside the Cape Town International Convention Centre (CTICC), lower level. Please enquire that the CTICC reception desk.

CONFERENCE VENUE

The conference will take place at the Cape Town International Convention Centre (CTICC).

Address: Convention Square, 1 Lower Long Street, Cape Town, 8001,
Tel: +27 21 410 5000

CONTINUING PROFESSIONAL DEVELOPMENT (CPD) AND ATTENDANCE CERTIFICATES

WISA/ECSA/SACNASP CPD points are allocated based on attendance. 1 Point (8hrs) per day attended and 0.5 points (4hrs) for technical tour attendance, with a minimum allocation of 0.5 points (4hrs) per day. Maximum points that can be earned is therefore 3.5 Points (28hrs) for full attendance.

- Attendance is tracked electronically via RFID chip imbedded in delegate name badges and electronic monitoring stations throughout the venue. CPD and/or attendance certificates will be issued by WISA electronically post event based on tracking data.
- To earn CPD points or obtain an attendance certificate after the event, please visit the CPD counter to activate your badge.
- The conference organisers cannot be held liable for lost data due to inactivated RFID chips.

EMERGENCY NUMBERS

Emergencies from a mobile:	021 480 7700
Emergencies from a landline:	107
South African Police Service:	10111
Ambulance, Medical & Fire Emergencies:	10177

INCLUDED

Full conference registration includes the following:

- Access to all conference sessions
- Access to the conference exhibition
- Delegate pack
- Welcome Reception (Wednesday 21 July)
- Farewell Reception (Friday 24 July)

FIRST AID

Medics will be available for the full duration of the conference. Should you need medical assistance, please contact staff at the registration desk, who will be able to assist you.

GALA DINNER TICKETS

Gala dinner tickets are not included in your registration fee. Please note that space at the gala dinner is limited.

Should you have bought a ticket and are no longer able to attend, your ticket is not refundable. You may, however, pass your ticket on to another delegate who has not already purchased one.

Should you wish to attend and have not yet purchased a ticket, please visit the registration desk where you can purchase a ticket if space is available.

INDEMNITY

While every care is being taken to ensure the safety of delegates, in the event of unforeseen disruptions, neither WISA, Conference Organisers nor CTICC can be held responsible for any losses or damages incurred by delegates.

The conference organisers act as agents only in securing hotels, transport and travel services, and shall in no event be liable for acts or omissions in the event of injury, damage, loss, accident or delay through contractors or by the employees of such contractors.

Hotel and transportation services are subject to the terms and conditions under which they are offered to the general public. Delegates should make their own arrangements with respect to personal insurance. The conference organisers reserve the right to make changes as and when deemed necessary without prior notice to the parties concerned. All disputes are subject to resolution under South African law.

PROGRAMME

The programme is correct as at the time of printing, but the organisers reserve the right to alter the programme when deemed necessary.

REGISTRATION

Registration and bag collection are located at the Registration Kiosk.

Registered delegates need to collect their own delegate badge.

Registration will be open at the following times:

Tuesday, 21 July 2026:	14:00 – 18:00
Wednesday, 22 July 2026:	07:30 - 18:00
Thursday, 23 July 2026:	07:30 – 19:00
Friday, 24 July 2026:	07:30 – 17:30

SAFETY

Here are our top tips for keeping safe in the city. For more detailed information, see the sections below.

- Avoid carrying large sums of cash, don't carry cameras or mobile devices in plain sight, and do not leave belongings unattended.
- Heed the advice of your hosts or locals on where to go after dusk. Avoid walking in deserted and dark places. beachfront at night. Park in a secure, well-lit area with street guards.
- Never allow strangers to assist you in any way at ATMs or cash points.
- Keep copies of all valuable documents in a safe place.
- Do not wear your nametags in public or walking to/from your hotel.

DISABILTY ACCESS

The Cape Town International Convention Centre (CTICC) is fully universally accessible, featuring step-free entrances, wheelchair-friendly elevators, and accessible restrooms throughout both CTICC 1 and CTICC 2.

Designated drop-off and pick-up points for visitors with disabilities are located directly at the main entrances of both venues.

Dedicated disabled parking bays are available in the **P3** (CTICC 1) and **P5** (CTICC 2) basement parkades. These bays have direct, level access to elevators designed to accommodate wheelchair users.

PRAYER ROOMS

The CTICC offers dedicated prayer rooms for its patrons in both CTICC 1 on the Ground Floor, and CTICC 2 on the roof level.

SMOKING

There is a no-smoking policy in the CTICC – please only smoke in the clearly marked smoking areas.

SOCIAL EVENTS

All social events will take place at the CTICC.

- **Welcome Reception:**
  Date: Tuesday 21 July 2026
  Time: 18:00 – 21:00
  Venue: Exhibition Hall
  Dress code: Business casual
  Access: Please ensure you wear your name badge at all times
  Inclusions: Light meal, limited drinks. Please bring a card or cash for additional drinks.
- **Gala Dinner:**
  Date: Thursday 23 July 2026
  Time: 19:00 till late
  Venue: CTICC 2 - Hall 7
  Dress code: Formal suit and tie/cocktail dress
  Access: Please bring your ticket with you
  Inclusions: Three-course meal and 2 drink vouchers. Bring cash or a card for additional drinks.
- **Farewell Cocktail:**
  Date: Friday 24 July 2026
  Time: 17:00 – 18:00
  Venue: CTICC
  Dress code: Business casual
  Access: Please ensure you wear your name badge at all times
  Inclusions: Light snacks, 2 drink vouchers. Please bring a card or cash for additional drinks.

SPEAKER PREPARATION ROOM

The speaker preparation room is located on the 1st floor of the CTICC. Should you be giving an oral presentation, please check in to the speaker preparation room at least three hours prior to your presentation, to check your PowerPoint presentation with the technical team. You will not be able to upload your presentation in the venue, nor will you be able to use your own laptop to present.

WI-FI

The CTICC has complimentary Wi-Fi throughout the building. No password is needed for login.

WISA 2026
MOBILE APP INFORMATION

We encourage all delegates to install the **WISA 2026 Biennial Conference & Exhibition** mobile app.

To download the app, search for **"The Event App" by EventsAir** on your play store, or use the following QR codes:

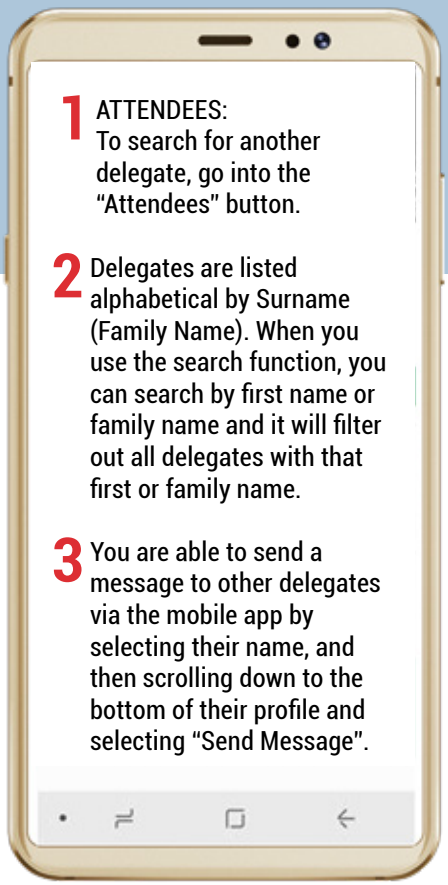
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SPEAKERS:
This is where you can view information on each speaker – including their biography, times and dates of presentations and their abstracts. Speakers are listed alphabetically by surname.

EXHIBITORS:
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EVENT NOTES:
Allows attendees to take general notes about any topic they wish to document. Each note is automatically saved, with the first line becoming the title

MEETING HUB:
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PRIVACY AND SETTINGS:
Privacy and Settings is where you can choose what information is shared with other users in Meeting Hub, Attendee Search, Sponsor Search and Speaker Search.

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This is where the organisers will send notifications of changes to the programme or other important alerts. An alert should appear on your mobile phone home screen, even if your phone is in locked mode.

bvi ENGINEERING PROCUREMENT MANAGEMENT





WORKING TOGETHER TO CREATE A SUSTAINABLE FUTURE FOR ALL

South Africa is a water-scarce country where effective water resource management, infrastructure planning, and ongoing maintenance are essential to ensuring sustainable water supply and environmental stewardship. BVi Consulting Engineers provides specialist expertise in the development, management, and protection of this critical resource. The company is fully committed to supporting the South African Government's constitutional objective of ensuring that all citizens have access to sufficient, safe, and clean water.

BVi has extensive experience in delivering professional engineering services across the entire water value chain, including surface water and groundwater resource development, water treatment and purification, bulk and reticulation distribution systems, storage infrastructure, and sanitation services. Recognising that the provision of safe, secure, and reliable water for domestic, industrial, and agricultural use remains one of Africa's most significant current and future challenges, BVi's Water Services Group offers innovative, sustainable, and multidisciplinary engineering solutions for both rural and urban developments.

BVi Consulting Engineers employs a team of highly skilled, motivated, and experienced engineers and technologists who possess the expertise and capacity to successfully undertake water-related projects of any scale and complexity.

BIG ENOUGH TO MAKE A DIFFERENCE SMALL ENOUGH TO CARE

BVi CORPORATE VIDEO

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www.bvi.co.za

ANCHOR SPONSORS

THE CITY OF CAPE TOWN

CITY OF CAPE TOWN
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The City of Cape Town's Water and Sanitation Directorate is one of Africa's leading municipal water utilities, delivering water and sanitation services to more than five million residents. Guided by its Water Strategy, the Directorate is committed to safe access to water and sanitation, wise water use, sufficient and reliable water from diverse sources, shared benefits from regional water resources, and becoming a water-sensitive city. Recognised globally for its response to drought and commitment to resilience, the City continues to drive innovation, infrastructure investment, and sustainable water management.

Tel: 0860 103 089
Email: water@capetown.gov.za
Address: 12 Hertzog Boulevard, Foreshore, Cape Town, 8001

OVERBERG

OVERBERG WATER

Overberg Water was established in 1993 as a water board operating within the Overberg Region of the Western Cape Province. It is one of the seven (7) water boards in South Africa. Overberg Water is governed by the Board of Directors reporting to the Minister of Water and Sanitation. It provides bulk water services as laid out in the Water Services Act (108 of 1997). According to its CEO, Dr Phakamani Buthelezi, "Overberg Water is a strategic state's entity that does not only provide bulk water but also enables economic opportunities by providing water to farmers for agro-processing activities."

Overberg Water's servicing footprint stretches 6 000 square kilometres from Botriver in the west to Heidelberg / Riversdale in the east and operates three main water schemes namely Rûensveld West, Rûensveld East and Duivenhoks. It distributes about 4 million kilolitres of water annually to agricultural, industrial, and municipal customers. Its pipeline is 1 450 kilometres.

In addition to bulk water supply, it has played several supporting roles such as assisting all non-metropolitan municipalities with water provision during the COVID pandemic, intervention in emergency water delivery challenges and supporting other State's departments in running their water services facilities.

As part of its Growth Path Initiative strategic goals, Overberg Water is focussed on expanding its footprint to cover additional areas within the Western Cape and envisions becoming the "leading regional water utility providing sustainable and competitive water & sanitation services."

Tel: 021 851 2155
Web: www.overbergwater.co.za

PLATINUM SPONSOR

UMNGENI-UTHUKELA WATER

UMNGENI-UTHUKELA WATER · AMANZI

uMngeni-uThukela Water is a state-owned entity (SOE) and a Water Board that was established on the 1st of July 2023. The entity provides water and related services to other water services institutions and other customers in its gazetted service area of the Province of KwaZulu-Natal. The entity operates in accordance with the Water Services Act (Act 108 of 1997) and the Public Finance Management Act (Act 1 of 1999), amongst others, and is categorised as a National Government Business Enterprise.

uMngeni-uThukela Water reports directly to the Department of Water and Sanitation (DWS), through the Board (Accounting Authority) and through its functionaries, the Chairperson of the Board and the Chief Executive. The Minister of Water and Sanitation is the Executive Authority for Water Boards.

KwaZulu-Natal is the gazetted supply area of uMngeniuThukela Water, which straddles a total geographical area of 94 359 km2 and is home to 12.42 million people and 2.9 million households.

KwaZulu-Natal comprises of one Metropolitan Municipality, 10 District Municipalities and 43 Local Municipalities. A total of 14 of these municipalities are Water Services Authorities (direct retail customers) as defined in the Water Services Act. uMngeni-uThukela Water's customers are spread across more than 41% of KwaZulu-Natal's geographical area and home to more than 74% households

Email: info@umgeni.co.za
Tel: +27 (33) 341 1111

SILVER SPONSOR

MAGALIES WATER

Magalies Water

Magalies Water as one of eight water boards in the country is mandated to provide bulk water and sanitation services. The Board supplies potable water municipalities, mines and other private consumers in North West, Limpopo and Gauteng provinces. It is also an organ of state reporting to the Minister of Water and Sanitation and utilizes the Pienaars and Crocodile rivers as major catchment areas of raw water. With a total staff compliment of over 700, the entity owns and operates four water treatment plants - Vaalkop (Rustenburg), Klipdrift, Wallmansthal and Cullinan (Pretoria) with the combined capacity of 340Ml/d, as well as a state-of-the-art scientific services laboratory in Brits.

Their vision is to be the leading provider of quality water and sanitation services in Southern Africa, and their mission is to provide sustainable, safe and reliable quality bulk water, sanitation and other related services to Water Services Authorities and other users to positively impact the quality of life and economic growth for communities in our area of operation.

Web: www.magalies.com
Socials: @MagaliesWaterZA

BRONZE SPONSOR

THE DEVELOPMENT BANK OF SOUTHERN AFRICA

The DBSA is a government-owned development finance institution, established in 1983, with the mandate to promote economic growth as well as regional integration for sustainable development projects and programmes across the African continent.

DBSA has collected over three decades' worth of experience in driving transformational change through multi-faceted investments for different types of infrastructure development. Our experience has resulted in us creating sound strategic objectives to lead us towards reaching our key mandates.

- Sustained growth in developmental impact – aggressively growing businesses to maximise developmental impact.
- Integrated infrastructure solutions provider – partner of choice for infrastructure development solutions.
- Financial sustainability – maintain profitability and operational efficiency to enable growth in equity and fund developmental activities.
- Sustainability innovations – instigate the formation of a new generation of special purpose vehicles and structured financial instruments that will facilitate and catalyse the mobilisation of investments in infrastructure development projects.

Email: info@dbsa.org
Tel: +27111313911
Web: www.dbsa.org/

KNOWLEDGE PARTNER

WATER RESEARCH COMMISSION

The Water Research Commission (WRC) is South Africa's premier water knowledge hub. Established in 1971, it functions as a research funder rather than a water service provider. The WRC drives innovation in water availability, resource protection, and sanitation technologies. By funding critical studies and translating findings into practical solutions, the WRC helps build a resilient, water-scarce nation.

Tel: +27 12 761 9300
Email: info@wrc.org.za
Web: www.wrc.org.za

REGISTRATION AREA SPONSOR

INFRASTRUCTURE DEVELOPMENT CORPORATION

The Industrial Development Corporation (IDC) of South Africa Limited was established in 1940 through an Act of Parliament (Industrial Development Corporation Act, 22 of 1940) and is fully owned by the South African Government.

We support industrial capacity development proactively identifying and funding high-impact projects, creating viable new industries, and using diverse industry expertise to drive growth in priority sectors. This is done to facilitate sustainable direct and indirect jobs; promoting entrepreneurial development and growing the SME sector; and transforming communities and growing black industrialists.

We fund industrial development projects, play a catalytic role in promoting partnerships across industries within and outside our borders, and promote regional economic growth.

Tel: 0860693888
Email: callcentre@idc.co.za
Web: www.idc.co.za

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PROXA (PTY) LTD

Proxa delivers cutting-edge water treatment solutions, setting the standard for reliability and operational excellence. With over 30 years of expertise, our global team partners with both private and public sectors to safeguard water resources, supporting economic resilience and environmental stewardship. We craft bespoke solutions for impacted mine water, seawater desalination, and domestic or industrial wastewater, transforming it to potable standards and enabling a more diversified water supply. By understanding and optimising clients' water balance, we reduce overall water footprint. Our end-to-end capabilities span consulting, R&D, design, engineering, construction, plant modernisation, rapid-response solutions, operations, maintenance, and comprehensive supply of chemicals, consumables, and spare parts.

Tel: +27 21 872 0089
Email: rvanwyngaard@proxawater.com
Web: www.proxawater.com

NOTEBOOKS AND PENS

FLOWTITE SA

FLOWTITE SA is the sole manufacturer of FLOWTITE™ glass fibre reinforced polyester (GRP) pipes and fittings in Sub-Saharan Africa. Based in Germiston, South Africa, the company manufactures corrosion-resistant piping systems for potable water, wastewater, stormwater, irrigation, mining, industrial, and marine applications. FLOWTITE products are recognised for their long service life, lightweight design, high strength, and low maintenance requirements. As an ISO 9001:2015-certified manufacturer and licensed member of the global Flowtite network, the company delivers world-class pipe solutions that support sustainable water and sanitation infrastructure development across Africa.

Tel: +27 10 055 7229
Email: info@flowtite-sa.co.za
Web: www.flowtite-sa.co.za

BAGS AND SHIRTS

RAND WATER

Rand Water is the largest bulk water utility in Africa and one of the largest in the world, supplying potable water to more than 11 million people across Gauteng and parts of Mpumalanga, the Free State, and North West Province. Established in 1903, the organisation is responsible for the abstraction, purification, and bulk distribution of water to municipalities, industries, and mines. Guided by its vision to be a provider of sustainable, universally competitive water and sanitation solutions for Africa, Rand Water is committed to operational excellence, innovation, environmental stewardship, and long-term water security through world-class infrastructure and service delivery.

Tel: 0860 10 10 60 / +27 (0)11 682 0911
Email: customerservice@randwater.co.za

VAAL CENTRAL WATER

Vaal Central Water is a Schedule 3B State-Owned Entity established in terms of the Water Services Act (Act 108 of 1997) and the Public Finance Management Act (Act 1 of 1999), as amended.

As a trusted partner in water security and implementing agent under Ministerial Directive, Vaal Central Water provides sustainable, quality and reliable bulk water and sanitation services to municipalities, communities and industries across the Free State and Northern Cape.

Through service excellence, innovation and strategic partnerships, the organisation contributes to socio-economic development and improved quality of life.

Vaal Central Water – The sustainable quality water and sanitation provider!

Tel: 051 403 0800
Email: communications@vcwater.co.za
Web: vaalcentralwater.co.za

SPONSORS

THE ENERGY & WATER SECTOR EDUCATION TRAINING AUTHORITY (EWSETA)

As one of South Africa's 21 SETAs, the Energy and Water Sector Education and Training Authority (EWSETA) was established in terms of Section 9 of the Skills Development Act (SDA), 97 of 1998, as amended and reports to the Honourable Minister of Higher Education, Science and Technology.

Our Vision
Creating a sustainable tomorrow, today through skills.

Our Mission
We will achieve our vision by:
- Research to determine the skills demand.
- Facilitating and coordinating skills development programmes to respond to sectoral challenges.
- Driving excellence through quality assurance.
- Fostering an ecosystem in energy and water that creates inclusive economic development.

Tel: +27 11 274 4700
Email: info@ewseta.org.za
Web: www.ewseta.org.za

MOU PARTNER

THE ASSOCIATION OF CERTIFIED FRAUD EXAMINERS (ACFE)

The Association of Certified Fraud Examiners (ACFE) is the world's largest anti-fraud organization, recognized globally for its premier credentialing and anti-fraud training. Its flagship Certified Fraud Examiner (CFE) designation proves high-level competence in preventing, detecting, and investigating corporate and white-collar crime.

MEDIA PARTNERS

INFRASTRUCTURE NEWS AND WATER&SANITATION AFRICA

Infrastructure News is a leading media brand that brings together communities from the water and sanitation, roads and bridges, energy, telecommunications, geotechnical and waste management sectors in Africa.

Water&Sanitation Africa Magazine publishes content dealing with the supply, governance, financing, treatment and measurement of water and sanitation in southern Africa. It is the official magazine of the Water Institute of Southern Africa (WISA).

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GLOBAL AFRICA NETWORK

Founded in 2004, Global Africa Network Media (Pty) Ltd (GAN) is a business-to-business print and digital media company based in Cape Town, South Africa.

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Web: www.globalnetwork.com





LOCAL SOLUTIONS FOR AFRICA'S WATER FUTURE

Reliable access to safe water depends on effective treatment processes and a secure supply of critical chemicals. Through its Water Care business, Protea Chemicals combines local manufacturing, technical expertise and regional reach to support water treatment operations across South Africa and the broader African continent.

As a member of the Omnia Group, Protea Chemicals has a long history of supplying speciality chemicals across multiple industries. In recent years, the company has undergone a strategic restructuring to improve efficiency and prepare for future growth. This included bringing certain businesses into the broader Omnia Group to benefit from shared manufacturing, logistics and technical resources, while strengthening Protea Chemicals' ability to serve its key markets and expand its specialised offerings.

This process positioned Protea Chemicals Water Care as a distinct and strategically important operation within Omnia's Chemicals segment. "Water treatment is an essential service that supports municipalities, mining operations and industrial customers, and we see significant opportunities to expand our contribution to water security across the continent. Protea Chemicals is a strong and profitable business, and we are focused on supporting its continued growth in the years ahead," says Joyce Jabane Bauwens, general manager, Protea Chemicals Water Care.

Moving beyond product supply

Historically, water treatment chemicals have often been viewed as commodities. Protea Chemicals believes this approach overlooks the complexity of modern water treatment and the critical role chemistry plays in achieving treatment objectives. "The chemicals are one part of the solution. We believe in providing the expertise, technical support and security of supply needed to ensure safe, reliable and compliant water services," says Bauwens.

Effective treatment depends on selecting the correct chemistry for each application, optimising dosing programmes, monitoring system performance and ensuring compliance with increasingly stringent regulatory requirements.

Strengthening local manufacturing

A key differentiator for Protea Chemicals is its investment in local manufacturing capacity. The company manufactures its Zetafloc coagulant range at its Mobeni facility in Durban and ferric sulphate at its Blackheath facility in Cape Town. Both products play a vital role in water treatment processes. In addition, Protea Chemicals operates a chlorine packaging facility in Sasolburg.

This local manufacturing footprint provides customers with greater security of supply, reduced reliance on imported products and shorter lead times. It also allows Protea Chemicals to maintain close oversight of product quality, respond more rapidly to changes in customer demand and provide technical support backed by local production capabilities. In an environment where global supply chains remain vulnerable to disruption,



Joyce Jabane Bauwens, general manager, Protea Chemicals Water Care

local manufacturing helps ensure the consistent availability of critical water treatment chemicals.

"Local manufacturing has become increasingly important in an environment where global supply chains remain vulnerable to disruption, largely driven by geopolitical tensions. By producing critical treatment chemicals locally, Protea Chemicals helps reduce its reliance on imports, which ensure security of supply for customers," states Bauwens.

According to Bauwens, the benefits extend beyond operational resilience. "Local production also supports economic development in a key sector through employment creation, skills development and investment in South African manufacturing capabilities."

Serving a diverse customer base that spans municipalities, industrial facilities and mining operations, Protea Chemicals supplies chlorine and serves customers in every province in South Africa. The company also exports to regional markets including Angola, Namibia, and Zambia, while maintaining a broader footprint across East and West Africa. This extensive reach underscores the scale of its operations and its significant role in supporting water treatment and industrial processes across the continent.

Supporting water security

Chlorine remains one of the most important chemicals used in drinking water treatment, providing the final barrier against waterborne disease. "Protea Chemicals plays a significant role in ensuring reliable chlorine supply through its packaging facility and national distribution network," says Bauwens.

However, the company believes supply alone is not enough. Demand forecasting, logistics planning and technical support are equally important in helping municipalities maintain treatment performance and comply with water quality regulations.

This is particularly relevant as programmes such as Blue Drop Certification continue to place greater emphasis on performance accountability and compliance within municipal water systems. Across the region, customers are increasingly looking beyond upfront chemical costs and focusing instead on total treatment cost, performance and lifecycle value.

Bauwens cautions that selecting treatment chemicals based purely on price can result in poor treatment outcomes, equipment damage, compliance failures and ultimately higher costs. "Water treatment is not about purchasing the cheapest chemical. It is about selecting the right chemistry for the application and ensuring it is applied correctly to achieve reliable, compliant and cost-effective treatment."

Growing opportunities across Africa

The company sees significant opportunities for African-manufactured water treatment solutions as countries increasingly prioritise localisation, infrastructure development and supply chain resilience.

"At the same time, success in African markets requires solutions tailored to local conditions. Water quality characteristics, infrastructure maturity, technical skills availability and financial constraints vary significantly across the continent. Our regional footprint and technical expertise position us well to develop fit-for-purpose solutions that address these realities while delivering sustainable treatment outcomes," explains Bauwens.

Despite the challenges facing the sector, Protea Chemicals remains optimistic. "As part of the Omnia Group, Protea Chemicals benefits from the scale, resources and expertise of a business with more than 70 years of experience across the mining, agriculture and chemicals sectors. This gives customers confidence in our ability to provide a reliable supply of products, backed by technical support and practical industry knowledge," she adds.

Bauwens believes that the greatest opportunities are expected to come from municipal water treatment, industrial water optimisation, and water reuse and recycling initiatives as water scarcity and environmental pressures continue to intensify. "Reliability of supply, treatment performance and operational efficiency are becoming increasingly important considerations. At the same time, growing water scarcity is driving greater interest in water reuse, with municipalities and industries increasingly viewing wastewater as a resource rather than a waste stream. As investment in sustainable water management increases, demand for practical, fit-for-purpose treatment solutions is expected to continue growing across Africa."

Investing in water treatment and effective chemical management is not an optional expense; it is essential for protecting public health, maintaining regulatory compliance and ensuring the long-term reliability of water and wastewater services. ●



ABBY LABORATORIES

Abby Laboratories is a South African chemical manufacturer based in Gqeberha, specialising in water treatment chemicals for industrial and municipal applications. Established in 1999, the company develops and manufactures customised chemical solutions designed to improve water quality, optimise treatment processes, and support efficient plant operations. Abby Laboratories supplies a range of products, including flocculants, coagulants, and dewatering aids, used across various water treatment systems. In addition to the water sector, the company formulates specialised chemicals for the automotive and textile industries.

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Web: www.abbylabs.co.za
Address: 11 Tassan Road, Walmer Dunes Industrial Park, Walmer, Gqeberha, South Africa

AEC AMERSHAM

AEC-Amersham SOC Ltd is a wholly owned subsidiary of NTP Radioisotopes SOC Ltd. The company supplies various laboratory equipment, instruments, and reagents to ensure robust water quality management, contributing towards water resources protection. Their specialised solutions support utilities, municipal laboratories and private laboratories in ensuring high-quality water treatment, compliance, and overcoming pollution bottlenecks.

Tel: 011 691 6500
Web: www.aecam.co.za
Address: 6 Indianapolis St, Khayalami Park, Midrand, 1684

AECI WATER

AECI Water is a leading African supplier of integrated water process treatment solutions, chemical products, and engineered equipment. Headquartered in Gauteng, South Africa, AECI Water serves the mining, industrial, and public sectors, helping clients optimise water use, ensure resource security, and minimise wastewater. The company leverages decades of expertise to deliver comprehensive, sustainable water treatment and management services across the African continent.

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AGRI-ENVIRO SOLUTIONS

Agri-Enviro Solutions (AES) is a leading South African supplier of laboratory and scientific analytical equipment, serving the SADC region for over 35 years. The company offers total solutions for physical and analytical testing across the grains, flour, feed, food, environmental, water, mining, and industrial industries. AES provides full installation, training, application support, and after-sales service, working with world-renowned agency partners that are international leaders in their respective fields of expertise.

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Address: Unit 6, Oxford Office Park, 3 Bauhinia Street, Highveld Technopark, Centurion, Gauteng, 0157

AMATOLA WATER

Amatola Water is an essential services utility operating in the water sector in the Eastern Cape. Established in terms of the Water Services Act 108 of 1997 and accountable to the Minister of Water and Sanitation as its Executive Authority, the Water Board's primary function is the provision of bulk water supply and sanitation services in order to advance the socio-economic potential of the people of the Eastern Cape.

In addition, as stipulated under the provisions of Section 30 of the Act, the utility also offers services in: operation and maintenance of water treatment works and dams; management services to water services institutions; project implementation; concessions; and advisory services.

Tel: 043 707 3700
Web: www.amatolawater.co.za

ANATECH INSTRUMENTS

Anatech Instruments is a South African scientific solutions provider established in 1982, supplying premium analytical instrumentation, consumables, and technical services to laboratories across Africa. The company supports eight core sectors, including chromatography, microbiology, spectroscopy, molecular biology, mass spectrometry, elemental analysis, water analysis, and sample preparation. With offices in major regional hubs and a specialist team in biological science and analytical chemistry, Anatech delivers application support, training, and maintenance to ensure reliable laboratory performance.

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Web: www.anatech.co.za/

AUTODESK

Autodesk is a global leader in design and engineering software, offering powerful tools for water infrastructure professionals across South Africa. Its solutions – including Civil 3D, AutoCAD, and InfoWorks — enable engineers, municipalities, and water specialists to design, model, and manage water systems with precision. Autodesk's integrated platform supports stormwater management, wastewater treatment, hydraulic modelling, flood risk assessment, and water distribution network planning, driving more sustainable and resilient infrastructure outcomes.

Tel: 0800 980 615
Email: gary.mansfield@autodesk.com
Email: geraldine.clark@autodesk.com

THE ASSOCIATION FOR WATER & SANITATION INSTITUTIONS OF SOUTH AFRICA (AWSISA)

AWSISA is the primary representative body for water boards, municipalities, and related institutions in the South African water sector.

- Representing 180+ member institutions across all 9 provinces
- Engaging with DWS, COGTA and national government on policy and regulation
- Running sector conferences, training, and knowledge-sharing programmes
- Maintaining a live GIS infrastructure map for national water assets
- Publishing legislative updates, sector reports, and tender bulletins

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Email: info@awsisa.org.za

BEIJING WORLD VOYAGE INTERNATIONAL EXHIBITION CO., LTD. (SHY EXPO)

Beijing World Voyage International Exhibition Co., Ltd. (Shy Expo) is a Chinese exhibition and event management company specialising in organising international trade shows, exhibitions, and business matchmaking events in the water, environment, and infrastructure sectors. The company facilitates business connections between Chinese manufacturers and international buyers by coordinating participation in key industry exhibitions across Africa and other global markets. Shy Expo helps Chinese water technology companies expand their international footprint and access new markets.

BENTLEY SYSTEMS

Bentley Systems is a global infrastructure engineering software company. Around the world, infrastructure professionals rely on Bentley software to design, build, and operate better and more resilient infrastructure for transportation, water, energy, cities, and more. Its comprehensive water and wastewater portfolio includes solutions for network modelling, asset management, hydraulic simulation, and real-time operational intelligence, supporting municipalities and engineers to deliver smarter, more sustainable water infrastructure.

Tel: 0800 980 615
Web: www.bentley.com/
Address: Spaces Byls Bridge, Byls Bridge Office Park, Building 14, Block B, Cnr Olievenhoutbosch & Jean Ave, Centurion, 0157

BISHUIKANG HEALTH TECH (SHANDONG) CO., LTD.

Bishuikang Health Tech (Shandong) Co., Ltd. is a Chinese technology company specialising in intelligent water quality monitoring and health-focused water treatment solutions. The company develops and manufactures advanced water purification systems, smart water quality sensors, and IoT-enabled monitoring platforms designed for residential, commercial, and municipal applications. Bishuikang is committed to delivering safe, clean, and intelligently monitored water solutions that enhance public health and environmental sustainability.

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Email: 2102953507@qq.com
Web: www.bishuikang.com

BOSCH PROJECTS

Bosch Projects delivers innovative consulting engineering and project management solutions across the industrial, infrastructure, and agricultural sectors, backed by more than 65 years of proven expertise. With a global track record including projects completed in over 100 countries, they consistently demonstrate their ability to deliver beyond expectations. At the core of the business are authentic, long-standing client relationships built on integrity, trust, and respect, guiding every project with a commitment to excellence and sustainable impact.

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Address: 2nd Floor, Tyger Valley Chambers One, 27 Willie van Schoor Drive, Bellville, 7530

BREEDE OLIFANTS CATCHMENT MANAGEMENT AGENCY (BOCMA)

The Breede-Olifants Catchment Management Agency (BOCMA), established under the National Water Act (Act 36 of 1998), manages water resources in the Breede-Olifants Water Management Area. As the operational arm of the Department of Water and Sanitation, BOCMA supports socio-economic development by addressing historical water sector imbalances. Its key focus areas include water resource planning, water use management, stakeholder relations, water allocation reform, resource protection, and governance.

Tel: 023-346 8000
Web: 022-346 8000

BVI CONSULTING ENGINEERS

BVi Consulting Engineers is a leading South African multi-disciplinary engineering firm established in 1967. Now a Level 1 BEE company with 55% black ownership, BVi has grown into a nationwide organisation with 16 offices across South Africa and operations in Sub-Saharan Africa. The firm offers professional civil, structural, electrical, mechanical, and water engineering services to the public and private sectors, with a strong track record in water supply, sanitation infrastructure, and sustainable development projects.

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Web: www.bvi.co.za

CALCAMITE

Calcamite is a South African industry leader with over 45 years of experience in safe, reliable, and sustainable wastewater and on-site sanitation management. Founded in 1976, Calcamite offers a wide range of SABS- and Agrément-certified products and services, including wastewater treatment plants, greywater recycling systems, septic tanks, conservancy tanks, and sand/oil/grease traps. Now part of the JoJo group, Calcamite provides turnkey solutions from design and manufacturing to installation and maintenance across South Africa.

Tel: +27 12 742 0900
Email: sales@calcamitetanks.co.za
Web: www.calcamite.co.za

CAMBI GROUP

Cambi is a Norwegian technology company and the world's leading provider of Thermal Hydrolysis Process (THP) systems for sewage sludge treatment. Founded in 1989, Cambi's technology breaks down sludge to improve anaerobic digestion, increase biogas production, and destroy harmful microorganisms. CambiTHP helps utilities reduce sludge volumes, lower energy consumption, and produce Class A, pathogen-free biosolids for land application, supporting sustainability, renewable energy generation, and net-zero ambitions at 90+ plants in 25+ countries.

Tel: +27 83 300 8688
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CAMPBELL SCIENTIFIC AFRICA

Campbell Scientific has provided measurement solutions since 1974, delivering information that helps mitigate severe weather casualties, supports climate change research, and assists organisations in providing more efficient meteorological and hydrological services. The company's instrumentation hardware is regarded as the best in the business, while its software services provide an unrivalled level of insight. Campbell Scientific offers an end-to-end solution encompassing hardware, software, and expert project delivery expertise.

Web: www.campbellsci.co.za
Email: sales@campbellsci.co.za

CENTER ENAMEL GLASS-LINED-TO-STEEL TANKS

Shijiazhuang Zhengzhong Technology Co., Ltd. (Center Enamel) is a professional manufacturer dedicated to the design and fabrication of bolted storage tanks since 1989. Products include Glass-Fused-to-Steel (GFS) tanks, fusion bonded epoxy tanks, stainless steel tanks, galvanised steel tanks, and aluminium geodesic dome roofs. With a professional enamelling R&D team and more than 200 enamelling patents, Center Enamel has become the leading bolted tank manufacturer in Asia, certified to ISO 9001, NSF/ANSI 61, and other international standards.

Web: www.cectank.com
Email: olivia@cectank.com

CESA

Consulting Engineers South Africa (CESA) is a voluntary association of over 580 consulting engineering member firms, employing approximately 17,000 people nationwide. CESA is the custodian of the consulting engineering industry's well-being, upholding integrity through a professional code of ethics. The organisation serves as a channel for clients to address industry concerns and provides a platform for sharing information to assist in optimising the planning and delivery of infrastructure projects in both the public and private sector.

Tel: +27 (011) 463 2022
Email: general@cesa.co.za
Web: www.cesa.co.za

CHENGDU HUIJIN INTELLIGENT TECHNOLOGY CO., LTD.

Chengdu Huijin Intelligent Technology Co., Ltd., founded in 1965 and based in Chengdu with a registered capital of RMB 100 million, is the first water meter metrology authorised enterprise in Sichuan. With a professional R&D team, flexible digital workshops, and MES/WMS systems, the company has annual production capacities of 1.5 million water meters and 0.8 million smart meters. Committed to water conservation and quality, it provides water metering products, leak detection, water quality monitoring, and smart water solutions.

Tel: +86 135 8677 0481
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Website: www.cdenvironment.com

THE CHEMISTRY SOLUTIONS COMPANY

The Chemistry Solutions Company was founded in 2020. We offer water testing and treatment solutions. We believe in the work we do. We believe every human being has a right to clean water. Water testing solutions should be accessible to everyone.

Our Vision: To build a brain hub with future solutions for water, sanitation and hygiene solutions, alternative energy, environmental pollution, and going green.

Our Mission: Our mission as The Chemistry Solutions Company (Pty) Ltd is to make water testing solutions accessible and available to vulnerable and marginalized communities. Water testing should not be a myth but a standard practice in everyday life.

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Website: www.thechemistrysolutioncompany.com

THE DEPARTMENT OF WATER & SANITATION

The Department of Water and Sanitation is mandated by Parliament to be the custodian of South Africa's water resources. It is primarily responsible for the formulation and implementation of policy governing the water and sanitation sector, development of water resources, and serves as the regulator of the sector. The department ensures that all South Africans gain access to clean water and dignified sanitation, and promotes effective and efficient water resources management to ensure sustainable economic and social development.

Tel: 012 336 7500 / 0800 200 200
Email: customercare@dws.gov.za
Web: ww.dws.gov.za

DEAZESU / NINGBO DEAZESU WATER METER CO., LTD.

Ningbo Deazesu Water Meter Co., Ltd. is a professional manufacturer specialising in smart water meters, mechanical water meters, and water management solutions. With advanced production technology and strict quality control, the company provides reliable, accurate, and durable products for global customers. Products are widely used in residential, commercial, and industrial applications. Deazesu is committed to innovation, customer satisfaction, and long-term partnerships, delivering efficient water metering solutions to markets worldwide.

Tel: +86 132 2188 8629
Email: info@dzswatermeter.com
Address: Ningbo, Zhejiang, China

ECOCHEM PUMPS (PTY) LTD

Ecochem Pumps is a South African market leader in chemical dosing and chlorination, dedicated to service excellence in the dosing and mixing fields. With over 50 years of combined intellectual property and project consultation expertise, the company supplies dosing equipment and specialist pumps across the petrochemical, mining, water treatment, and food processing industries throughout Sub-Saharan Africa. Ecochem holds exclusive distribution agreements with internationally renowned brands including Milton Roy, ControlMatik, Someflu, and Prochem.

Tel: 011 455 5710
Email: ecoinfo@ecochempumps.co.za
Address: 3 Sunrock Close, Sunnyrock, Germiston, Gauteng, 1401

EDAMS TECHNOLOGY

EDAMS Technology is an international IT company specialising in designing, developing, and supporting industry-specific, fully integrated management systems for water and energy infrastructure challenges. Products encompass best business practices and engineering methods, integrating commercial, technical, and planning functions to enable utilities, municipalities, and government departments to meet their client needs, enhance performance, and improve cost efficiency and sustainability. EDAMS operates across five vertical industries with over 1,000 active users across South Africa, Botswana, Egypt, and America.

Tel: +27 11 234 9404
Email: mapula@edams.co.za
Web: www.edams.com

ENVIRONMENTAL ASSESSMENT PRACTITIONERS ASSOCIATION OF SOUTH AFRICA (EAPASA)

EAPASA was established in 2012 to promote and advance the practice and quality of environmental assessment in South Africa in the public interest. It is a Registration Authority for Environmental Assessment Practitioners (EAPs) and Environmental Control Practitioners (ECPs), operating under the Section 24H Registration Authority Regulations of the National Environmental Management Act (NEMA). EAPASA is a Statutory Professional Body recognised by SAQA in terms of the NQF Act, Act 67 of 2008.

Tel: 012 880 2154
Email: registrar@eapasa.org
Web: www.eapasa.org

ERWAT

ERWAT provides bulk wastewater conveyance and treatment to industries and over 4.2 million people, operating 19 Water Care Works that discharge 700–1,000 Mℓ of treated effluent daily. Its Scientific Services division offers ISO/IEC 17025 accredited testing. In the most recent Green Drop awards, ERWAT received six of only fourteen national awards — 43% of all Green Drop awards in South Africa — along with gold, silver, and bronze awards for the three best wastewater systems in the country. ERWAT is a leader in sustainable water care and resource recovery.

Email: wanda.annandale@erwat.co.za

GUANGZHOU BEGREAT SMART LIFE CO., LTD.

Guangzhou Begreat Smart Life Co., Ltd. is a Chinese technology company specialising in smart home and intelligent living products with a focus on water quality and health-oriented solutions. The company develops and manufactures advanced water purification systems, smart water quality monitoring devices, and connected home water management solutions. Begreat Smart Life is dedicated to enhancing everyday living through innovative technology that ensures safe, clean, and intelligently monitored water for households and communities.

Tel: +86 13570998884
Email: mango@begreat001.com
Web: www.bgfilters.com

GZ TECH (XIAMEN) CO., LTD.

GZ Tech (Xiamen) Co., Ltd. is a Chinese engineering and technology company specialising in water treatment equipment and environmental solutions. The company designs, manufactures, and supplies a range of water and wastewater treatment systems, including filtration, purification, and recycling equipment for municipal and industrial applications. GZ Tech is committed to delivering cost-effective, high-quality water treatment technologies that support sustainable water management and environmental protection across global markets.

Web: www.xmgtech.com
Email: info@xmgtech.com

HACH

Hach South Africa supports wastewater utilities and industries with reliable solutions for monitoring, analysis, and process optimisation. From laboratory testing to online process monitoring and digital solutions, Hach helps operators improve treatment efficiency, ensure regulatory compliance, and make confident decisions based on accurate water quality data. With a comprehensive portfolio covering parameters such as ammonia, phosphorus, TOC, turbidity, pH, and dissolved oxygen, backed by local service and application expertise, Hach is a trusted partner throughout the wastewater treatment process.

Tel: +27 11 708 3705
Email: salesza@hach.com
Web: www.hach.com

HALL LONGMORE

Hall Longmore traces its history to 1924 and is now owned by the South Africa-based Barnes Group of Companies. Recognised worldwide as a leader in the manufacture of electric resistance welded (ERW) and spiral welded (H-SAW) steel pipes and casings, Hall Longmore's products are used across a wide range of applications including the transportation of raw and potable water, gas and petrochemicals, slurries and tailings, piling, structural fabrication, and solar installations.

Tel: +27 (0)11 874 7315
Email: callum.storar@hall-longmore.co.za
Web: www.hall-longmore.co.za

HANNA INSTRUMENTS

Hanna Instruments strives to create scientific testing equipment that is easy-to-use, accurate, and readily available. The company manufactures a wide array of testing equipment for various industries and applications, including pH, ORP, ISE, titration, conductivity, dissolved oxygen, turbidity, multiparameters, magnetic stirrers, chemical test kits, COD & vials, refractometers, and process instrumentation. Hanna Instruments provides supply and support across South Africa, Mozambique, Botswana, Zimbabwe, Eswatini, Namibia, and Lesotho.

Tel: +27 11 615 6076
Email: hanna@hanna.co.za

HEBEI CHENGDA WATER TECHNOLOGY

Hebei Chengda Water Technology Co., Ltd. (formerly known as Hebei Chengda Huamo Technology Co., Ltd.) is a prominent Chinese manufacturer specializing in industrial water treatment products and fiberglass (FRP) pressure vessels. Established in 1976 and headquartered in Zaoqiang County, Hebei, the company is a one-stop supplier for water purification, desalination, and wastewater treatment needs.

Tel: +86 188 4908 1125
Email: sales@winder1976.com
Web: www.winderpv.com

HEWI AFRICA PTY LTD

Hewi-Africa, the appointed African distributor of Hewitech Germany, delivers high-performance plastic solutions for wastewater systems, cooling towers, agriculture, and rainwater harvesting. The company supplies engineered media including lamella modules for clarifiers, structural support and fill media for biofilters, cooling tower components (drift eliminators, fill blocks, sprayer nozzles), and agricultural evaporative cooling pads. Designed for municipal and industrial applications, Hewi-Africa's solutions enhance treatment efficiency, improve process performance, and extend plant life.

Tel: 078 748 5692
Web: www.hewi-africa.co.za

HUNAN M&W ENERGY SAVING TECHNOLOGY & SCIENCE CO., LTD.

HUNAN M&W Energy Saving Technology & Science Co., Ltd. is a Chinese company specialising in energy-saving technologies and environmental engineering solutions for the water and wastewater treatment sector. The company develops and manufactures advanced energy-efficient equipment and systems designed to reduce energy consumption in water treatment processes while maintaining high performance and reliability. M&W is committed to delivering innovative, sustainable solutions that support environmental protection and resource conservation across industrial and municipal clients worldwide.

Tel: + 86-731-55599916

IDEXX LABORATORIES (PTY) LTD

IDEXX Laboratories is a global leader in rapid water microbiology testing, providing innovative, easy-to-use products that enable faster, more accurate detection of microbial contamination in water. Their Colilert and Quanti-Tray technologies are widely recognised industry standards for testing drinking water, wastewater, and recreational water, delivering reliable results in as little as 18–24 hours. IDEXX solutions are used by water utilities, municipalities, and environmental laboratories across South Africa and globally to ensure compliance and public health protection.

Web: www.idexx.co.za/water

IKUSASA WATER

Ikusasa Water, a division of Ikusasa Chemicals (Pty) Ltd, is a South African company founded in 2003 that excels in water treatment for potable use. Using proven and appropriate technologies, Ikusasa treats surface and groundwater, providing mobile, skid-mounted, and fixed installation treatment plants. Services range from ad hoc maintenance to full-time plant operation, including Build/Own/Operate and Build/Operate/Transfer contractual options. Ikusasa is committed to providing tailored, innovative, cost-effective, and reliable water solutions.

Tel: +27 (0) 21 851 6700
Email: info@ikusasa.co.za
Web: www.ikusasa.co.za

INDLELA CONSULTANTS (PTY) LTD

Indlela Consultants (Pty) Ltd is a proudly South African, 100% black-owned water treatment chemical company founded in 2013. Originally established in Thohoyandou, the company has grown into one of the leading suppliers of coagulants and disinfectants to the public water sector. In 2019, Indlela expanded by commissioning its own production facility near Rosslyn, Tshwane, enabling in-house manufacturing of key raw materials. The company holds ISO 9001, ISO 14001, ISO 45001, and NSF/ANSI/CAN 60 certification and employs experienced water treatment technicians.

Tel: +27 82 307 2544
Email: robertsonp@indlelasa.com
Web: www.indlela.com

INFRASTRUCTURE NEWS

Infrastructure News (infrastructurenews.co.za) is South Africa's leading digital media platform covering infrastructure development, water and sanitation, energy, transportation, and service delivery. As the publisher of the Infrastructure News newsletter, Water & Sanitation Africa magazine and ReSource magazine, Infrastructure News provides industry professionals, engineers, policymakers, and contractors with up-to-date news, technical articles, project updates, and event coverage. The platform serves as a vital knowledge-sharing hub for the infrastructure and water sectors across southern Africa.

Tel: +27 83 433 4475
Email: kirsten@infrastructurenews.co.za
Email: sindi@infrastructurenews.co.za
Web: www.infrastructurenews.co.za

INKOMATI- USUTHU CATCHMENT MANAGEMENT AGENCY (IUCMA)

Our purpose is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled as defined in section 80 of the National Water Act (NWA) since its establishment.

Our Vision: Sufficient, equitable, and quality water resources for all in the Inkomati-Usuthu Water Management Area.

Our Mission: Our mission is to efficiently manage water resources by empowering stakeholders in our quest to contribute towards transformation by promoting equal access to water and protecting the environment.

Tel: 013 753 9000
Email: information@iucma.co.za

INTECHEM

Intechem (Integrated Chemical Solutions Pty Ltd) is a distinguished Level 1 BBBEE-rated chemical distribution and solutions company operating across Sub-Saharan Africa. Founded in 2015 and headquartered in Johannesburg, Intechem supplies high-quality chemical commodities, specialty chemicals, and advanced water treatment systems to sectors including mining, water treatment, agriculture, food and beverage, and chemical manufacturing. The company's Water Technologies division provides comprehensive water and wastewater treatment solutions tailored to industry needs.

Tel: +27 (0) 10 594 3979
Email: management@intechem.co.za

JIANGSU SANAISI SCIENTIFIC INSTRUMENT

Jiangsu Sanaisi Scientific Instrument Co., Ltd., established in 2016 and based in Yancheng, Jiangsu, China, is a manufacturer specializing in laboratory and analytical equipment. Their primary product lines include glass burning, volumetric, and container instruments, as well as various filtration tools designed for laboratory applications.

JOJO

JoJo is South Africa's leading supplier of water storage and filtration solutions, with over 40 years of experience. The company manufactures a comprehensive range of vertical, horizontal, and slimline water tanks, chemical tanks, underground tanks, and rainwater harvesting systems for domestic, agricultural, and industrial use. JoJo's SABS-certified products are available through more than 1,200 stockists across South Africa and Zimbabwe. Through its acquisition of Calcamite, JoJo now also offers on-site wastewater treatment and sanitation solutions.

Tel: 012 527 2600
Email: productinfo@jojo.co.za
Web: www.jojo.co.za

KABE CONSULTING ENGINEERS

Kabe Consulting Engineers is a South African civil and water engineering consultancy providing professional services to the public and private sectors. The firm specialises in water supply, sanitation infrastructure, stormwater management, and related civil engineering disciplines. Kabe Consulting Engineers delivers end-to-end project management, design, and construction supervision, with a focus on technically sound, sustainable, and cost-effective infrastructure solutions that address the water and sanitation needs of South African communities.

Web: www.kabe.co.za
Tel: 087 809 0982

BORDA SOUTH AFRICA

BORDA South Africa is a non-profit engineering and advisory organisation delivering practical, sustainable water, sanitation and environmental solutions. We support governments, municipalities and partners with climate-resilient infrastructure, technical advisory services, decentralised wastewater treatment, resource recovery and circular economy solutions.

Transforming Challenges into Sustainable Infrastructure



Our expertise include

- Engineering planning, feasibility studies and design
- Wastewater and faecal sludge treatment solutions
- Technical advisory and project management
- Policy development and institutional strengthening
- Environmental and social assessments
- Capacity building, training and knowledge transfer
- Research, innovation and technology demonstration
- Resource recovery and circular economy solutions

Your trusted partner for sustainable water, sanitation and environmental consulting

031 940 4102 info-southafrica@borda-africa.org

KSB PUMPS AND VALVES

KSB Pumps and Valves (Pty) Ltd is a subsidiary of KSB Group, one of the world's leading producers of pumps, valves, and related systems. Established in South Africa in 1959, KSB operates advanced manufacturing and sales facilities in Johannesburg with nine additional branches across Cape Town, Durban, Nelspruit, Port Elizabeth, Secunda, Vereeniging, Richards Bay, Rustenburg, and Upington. KSB serves building services, industrial, water utility, energy, and mining sectors, and holds a B-BBEE Level 1 status in South Africa.

Tel: +27 11 876 5600
Email: info-za@ksb.com
Web: www.ksb.com

LAMBETCO

Created in 2012, with Over 14 years of experience and expertise in environmental monitoring environment. Lambetco Pty Ltd is 100% black Owned and falls within the legal requirements for a BEE classification and are proud to comply and implement such equity structures.

Lambetco Pty Ltd is one of the Regional leaders in distributing and supplying of environmental monitoring systems in Southern Africa, with over a decade of excellence in the sector.

Our competitive advantage lies in delivering environmental monitoring systems products, providing a foundation for decision-making and ensuring security

LEPELLE NORTHERN WATER

Lepelle Northern Water (LNW) is a state-owned water utility wholly owned by the South African government, established under the Water Services Act, Act No. 108 of 1997. Its mandate is to provide bulk water and sanitation services to municipalities in the Limpopo province. LNW serves Polokwane Local Municipality, Capricorn, Mopani, Sekhukhune, and Vhembe District Municipalities, among others. The entity reports directly to the Department of Water and Sanitation and is committed to delivering cost-effective, equitable, and quality water services.

Tel: 015 295 1800
Email: Information@lepelle.co.za
Web: www.lepellewater.co.za

LIANYUNGANG TENGYUE ELECTRONIC TECHNOLOGY CO., LTD

Lianyungang Tengyue Electronic Technology Co., Ltd. (also operating as Tengyue Metering) is a Chinese high-tech manufacturer specializing in R&D and the production of smart water meters, heat meters, and energy management systems. Founded in 2007 and based in Jiangsu, it supplies global utility, industrial, and agricultural markets.

Tel: +8618936729870
Email: lily@tengyuemetering.com
Web: www.tysmartwatermetering.com

LIQUID SCIENCE

Liquid Science is a South African water and wastewater engineering company providing specialist consulting, process design, and treatment solutions for the industrial and municipal sectors. The company applies advanced scientific and engineering expertise to develop innovative, practical water treatment solutions that address complex water quality challenges. Liquid Science is committed to delivering cost-effective, sustainable, and fit-for-purpose water management solutions that meet the specific needs of each client across southern Africa.

Tel: +27 21 824 3890
Email: info@aguaafrica.co.za
Web: www.liquidscience.co.za

MAINLINE SA

Mainline Civil Engineering is a specialist civil engineering contractor specialising in pipeline construction, trenchless installation of underground pipelines and utilities, and pipeline rehabilitation. With decades of experience nationally and internationally; the company and its staff offer cutting-edge infrastructure technology and state-of-the-art equipment to service providers and utilities owners. Mainline has earned prestigious recognition including the Joop van Wamelen Award of Excellence for their work on major projects like the R796 million Cape Flats Bulk Sewer Rehabilitation Project.

Tel: +27 461 7499
Web: www.mainlinesa.co.za

MASKAM WATER PTY (LTD)

Maskam Water is a leading Southern African provider of onsite wastewater reuse systems, with more than 450 installations. Its technology supports water-efficient sanitation by treating wastewater for safe non-potable reuse, including toilet flushing and irrigation. This reduces demand on fresh water supplies and reduce pressure on municipal sewage systems. The Fusion® wastewater treatment plant meets South African effluent discharge standards, helping protect ground and surface water. Cost-effective, energy efficient, and low maintenance, the modular system is adaptable for residential, commercial, and community developments. It also promotes sustainability in decentralised and underserved areas. Maskam Water® further offers greywater systems, UV-C disinfection units, and pumping solutions.

Tel: 083 701 9997
Email: info@maskam.co.za

MICROSEP

Microsep is a South African provider of advanced water and wastewater treatment technologies, specialising in membrane filtration, separation, and purification solutions. The company supplies and supports a range of membrane systems, including microfiltration, ultrafiltration, nanofiltration, and reverse osmosis, serving the industrial, municipal, mining, and food and beverage sectors. Microsep provides a complete service from system design and supply to installation, commissioning, and ongoing technical support, helping clients achieve stringent water quality targets.

Tel: 087 092 7300
Email: info@microsep.co.za
Web: www.microsep.co.za

MPAMOT AFRICA (PTY) LTD

MPAMOT is a leading consulting engineering and management firm that was formed in 2020 following the acquisition of Mott MacDonald Africa by Malani Padayachee and Associates (MPA) and Motseng Women Investments (MWI). As one of South Africa's largest 100% black women-owned and led firms of its kind, MPAMOT is committed to advancing equitable access to essential infrastructure. Backed by more than 28 years of built environment expertise, the firm delivers integrated solutions across Africa in Advisory, Energy, Infrastructure, Power, Transportation, Water, ESG and Digital Solutions. MPAMOT, structuring the future.

Tel: 011 052 1000
Email: www.mpamot.com

N&Z INSTRUMENTATION & CONTROL

N&Z Instrumentation & Control is a South African supplier of industrial instrumentation, control systems, and measurement solutions for the water, wastewater, and process industries. The company provides a comprehensive range of flow meters, level sensors, pressure transmitters, and analytical instruments, as well as system integration, installation, and calibration services. N&Z Instrumentation & Control supports water utilities and industrial clients in achieving accurate measurement, efficient process control, and regulatory compliance.

Tel: 011 435 1080
Email: info@nandz.co.za
Web: nz-online.co.za

NORTH-WEST UNIVERSITY

North-West University (NWU) is one of South Africa's leading research universities, with a strong focus on water-related research, education, and innovation. NWU's water research programmes span water treatment, water quality management, environmental science, and water governance, contributing to solving South Africa's water challenges through cutting-edge science and applied research. The university partners with industry, government, and the Water Research Commission to develop practical solutions and build the capacity of water professionals across Africa.

Tel: +27 18 299 1111
Email: studies@nwu.co.za
Web: www.nwu.ac.za

NUWATER

Nuwater is a South African provider of innovative water and wastewater treatment solutions, specialising in modular and containerised systems for decentralised applications. The company designs and supplies package treatment plants, advanced filtration systems, and water reuse solutions for industrial, mining, municipal, and off-grid clients. Nuwater is committed to delivering fit-for-purpose, cost-effective, and sustainable water treatment technologies that address the unique water challenges faced by South African industries and communities.

Tel: 021 788 3125
Email: othmaan@nuwater.com
Web: www.nuwater.com

RHEOCHEM

Rheochem is a South African manufacturer and supplier of specialty chemical solutions for water treatment, mining, and industrial applications. The company develops coagulants, flocculants, dewatering aids, and other customised chemical formulations designed to improve process efficiency, optimise sludge management, and ensure compliance with environmental standards. Rheochem provides technical expertise and application support to water utilities, municipalities, and industry, with a focus on cost-effective, fit-for-purpose chemical treatment programmes.

Tel: 031 700 3700
Email: gen@rheochem.co.za
Web: www.rheochem.co.za

ROTOCARB (PTY) LTD

Rotocarb (Pty) Ltd is a South African manufacturer and supplier of carbon and fibre-reinforced polymer (FRP) composite products for the water, chemical processing, and industrial sectors. The company produces corrosion-resistant tanks, vessels, pipes, and custom components designed for demanding water treatment environments. Rotocarb's products are manufactured to stringent quality standards and are used in a wide range of potable water, wastewater, and chemical storage applications across South Africa and the African continent.

Tel: 010 300 6235
Email: sales@rotocarb.co.za
Web: www.rotocarb.co.za

SAWW (SOUTH AFRICAN WATER WORKS)

South African Water Works (SAWW) is a proudly South African company managing two 30-year water concessions: Siza Water in Ballito and Silulumanzi in Mbombela. Through these subsidiaries, SAWW delivers reliable water and sanitation services while partnering with stakeholders to improve quality of life.

Guided by its vision of being a trusted utility delivering sustainable, world-class service, SAWW provides safe drinking water to approximately 500,000 people and treats wastewater to required standards. SAWW remains committed to innovation, responsible environmental practices, and long-term improvements in water and sanitation services across South Africa.

Tel: 032 946 7207
Email: info@saww.co.za
Web: www.saww.co.za

SHANDONG JINWANSHAN INTERNATIONAL TRADE

Shandong Jinwanshan International Trade Co., Ltd. (also operating as Shandong Wanshan Group) is a large-scale Chinese chemical and building materials manufacturer and trading company. Founded in 2004 and headquartered in Weifang, Shandong, they specialize in industrial chemicals, concrete and plaster additives, and citric acid products.

Tel: 15864572061
Email: ryan@sdws-chem.cn

allmech (Pty) ltd
润新 RUNXIN
THE ONLY AUTHORIZED
RUNXIN AGENT
IN SOUTH AFRICA
YOUR TRUSTED PARTNER IN WATER TREATMENT SOLUTIONS
EXCLUSIVE PARTNERSHIP
Allmech is the **only** authorized Runxin agent in South Africa.
UNMATCHED SUPPORT
Our team provides expert technical guidance, plant design integration, and after sales service no one else can match.
PROVEN RELIABILITY
Runxin's advanced valve technology, combined with Allmech's local expertise, ensures efficient, compliant water treatment solutions.
RUNXIN VALVES FOR EVERY APPLICATION
WATER SOFTENING VALVES
FILTRATION VALVES
SWIMMING POOL VALVES
069 267 6046
sales@allmech.co.za

SHANDONG TANGCHAO ENVIRONMENTAL PROTECTION TECHNOLOGY CO., LTD.

Shandong Tangchao Environmental Protection Technology Co., Ltd. is a Chinese company specialising in environmental protection technologies and equipment for water and wastewater treatment. The company designs and manufactures advanced treatment systems including integrated sewage treatment equipment, water purification units, and sludge processing technologies. Shandong Tangchao is committed to developing cost-effective, reliable, and environmentally friendly solutions for municipal and industrial water treatment challenges across global markets.

Tel: 13579919282
Email: ali@tangchaotech.com

SHANGHAI NUOSAI PUMP MANUFACTURING CO., LTD.

Shanghai Nuosai Pump Manufacturing Co., Ltd. is a Chinese manufacturer specialising in the design and production of a comprehensive range of industrial pumps for water supply, wastewater treatment, and process applications. The company produces centrifugal pumps, submersible pumps, sewage pumps, and chemical pumps, which are widely used in municipal water systems, industrial facilities, and environmental engineering projects. Shanghai Nuosai is committed to delivering reliable, energy-efficient, and high-quality pump solutions to clients worldwide.

Tel: +86 182 2169 7510
Email: sales2@nuosai.com
Web: www.nuosai.net

SHANGHAI PANDA MACHINERY (GROUP) CO., LTD.

Shanghai Panda Machinery (Group) Co., Ltd. is a leading Chinese manufacturer of dewatering equipment and sludge treatment machinery for the water and wastewater industry. The company produces belt filter presses, centrifuges, screw presses, and associated equipment used for sludge dewatering in municipal wastewater treatment plants, industrial facilities, and environmental remediation projects. Shanghai Panda Machinery is recognised internationally for its engineering quality, reliable performance, and commitment to advancing efficient sludge management solutions.

Tel: +86 17316517349
Email: lulu@panda-group.cn
Web: www.panda-meter.com

SHANGHAI QILEE ENVIRONMENTAL PROTECTION EQUIPMENT

Shanghai Qilee Environmental Protection Equipment Co., Ltd. (also known as QILEE) is an established Chinese manufacturer specializing in water and wastewater treatment systems. Founded in 2007, they design, engineer, and supply both modular treatment systems and standalone processing equipment.

Tel: +86 13370035529
Email: qilee@qileegroup.com

SHENZHEN WENZHAN

Shenzhen Wenzhan Electronic Technology Co., Ltd. (founded in 2009) is a specialized Chinese supplier and service provider for SMT (Surface Mount Technology) pick-and-place machines and electronics manufacturing equipment. They cater to global electronics manufacturers by providing machinery, spare parts, and maintenance services.

Tel: +8618823383970
Email: wenzhanhucai@163.com

SHIJIAZHUANG ZHENGZHONG TECHNOLOGY CO., LTD

ZZTANK (Shijiazhuang Zhengzhong Technology Co., Ltd) is an environmental and wastewater technologies company. We specialize in municipal water & wastewater, industrial wastewater treatment and biogas project across the world through advanced wastewater treatment solutions founded upon innovation and collaboration.

Tel: + 86-020-34061629
Email: sjzzztc@gmail.com

SINOMA INTERNATIONAL ENVIRONMENT ENGINEERING CO., LTD.

Sinoma International Environment Engineering Co., Ltd. is a Chinese company affiliated with the Sinoma Group, specialising in environmental engineering, flue gas treatment, and industrial wastewater treatment solutions. The company provides integrated environmental services and treatment technologies designed to reduce pollution and protect water resources in industrial settings. Sinoma International brings extensive engineering expertise and advanced technologies to address complex industrial water and wastewater treatment challenges for clients across China and international markets.

Tel: +8615011031941
Email: wangdapeng@sinoma.com.cn
Web: www.sinoma.com.cn

SINOWATEK

Sinowatek is a Chinese water treatment technology company specialising in intelligent and integrated water and wastewater treatment solutions. The company provides advanced treatment equipment, smart water management systems, and turnkey water engineering solutions for municipal, industrial, and residential applications. Sinowatek combines cutting-edge technology with engineering expertise to deliver efficient, reliable, and sustainable water treatment systems that meet international quality and environmental standards.

Tel: 0832711808
Email: nicoe@sinowatek.com
Web: www.sinowatek.com

SUZHOU PLOP ENVIRONMENTAL CO., LTD.

Suzhou Plop Environmental Co., Ltd. is a Chinese environmental technology company specialising in water and wastewater treatment equipment and systems. The company designs, manufactures, and supplies a comprehensive range of environmental protection products, including biological treatment reactors, filtration systems, and integrated wastewater treatment units for municipal and industrial clients. Suzhou Plop Environmental is committed to delivering innovative, cost-effective solutions that support sustainable water management and environmental compliance.

Tel: +86 400 188 6520
Web: www.plopwater.com

TALBOT

Founded in 1989, Talbot is a South African leader in water sustainability, supporting industries in over 20 countries. With more than 200 experts, we advance water security and ensure business continuity through smart water risk strategies; water treatment and management; water and product recovery; and environmental testing. We help clients maintain reliable performance, reduce risk, and meet compliance through technology, consulting, and strong partnerships. Serving mining, petrochemical, industrial, healthcare and more, Talbot is proudly Level 1 B-BBEE and committed to social responsibility and environmental excellence.

What we do:
- Smart water risk, strategy and optimisation
- Water treatment and management
- Water and product recovery
- Environmental testing

Tel: +27 87 802 5555
Email: talbot@talbot.co.za
Web: www.talbot.co.za

TECROVEER

Tecroveer is a South African water and process engineering company delivering specialist membrane filtration and water treatment solutions for the industrial, mining, and municipal sectors. The company provides reverse osmosis, ultrafiltration, and nanofiltration systems, as well as process engineering services for water reuse, desalination, and effluent management. Tecroveer is committed to advancing sustainable water management through the deployment of reliable, high-efficiency membrane technologies that reduce water consumption and meet stringent quality standards.

Tel: 011 7521191/ 0732150166
Web: www.tecroveer.co.za

TENGYUE METERING

Tengyue Metering is a Chinese manufacturer specialising in precision water meters and smart metering solutions for municipal water supply and management. The company produces a range of mechanical and electronic water meters, including ultrasonic smart meters, multi-jet meters, and AMR/AMI-enabled remote reading systems. Tengyue Metering is committed to providing accurate, durable, and technologically advanced metering products that support efficient water resource management, loss reduction, and billing accuracy for water utilities worldwide.

Tel: +86 17626980607
Web: www.tengyuemetering.com

TRA-COL SOLUTIONS

TRA-COL Solutions and Erhard Valves Germany proudly exhibit together at WISA 2026, showcasing a trusted local–international partnership in water sector innovation. TRA-COL Solutions delivers practical engineering, maintenance, and municipal wastewater equipment services, including pumps, gearboxes, mechanical screens, screw pumps, blowers, and broader mechanical and electrical maintenance solutions. Erhard, a global leader in water flow control since 1871, provides high-quality valves for water, wastewater, and industrial applications—including butterfly, gate, check, and diaphragm valves engineered for long-term reliability. Together, they offer integrated expertise and robust solutions that strengthen water infrastructure across Southern Africa.

Tel: 0216711953
Email: admin@tracol.co.za
Web: www.tracol.co.za

TRANS CALEDON TUNNEL AUTHORITY (TCTA)

The Trans Caledon Tunnel Authority (TCTA) is a South African state-owned entity established to implement bulk raw water infrastructure projects on behalf of the Department of Water and Sanitation. TCTA is responsible for the financing, construction, and operation of major water transfer schemes, including the Lesotho Highlands Water Project, and related infrastructure. The authority plays a critical role in augmenting South Africa's water supply, ensuring long-term water security for the country's growing urban and industrial needs.

Tel: +27 12 683 1200
Web: www.tcta.co.za

TROJAN TECHNOLOGIES

Trojan Technologies is a global leader in ultraviolet (UV) water treatment and disinfection solutions, providing advanced UV systems for drinking water, wastewater, and water reuse applications. The company's technology offers a chemical-free, energy-efficient method of disinfecting water and inactivating pathogens, including bacteria, viruses, and protozoa. Trojan Technologies serves municipal and industrial clients worldwide, helping water utilities improve water quality, meet regulatory standards, and reduce reliance on chemical disinfectants.

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UMEK ENVIRONMENT MACHINE

UMEK is a water and environmental engineering company providing specialist solutions for the treatment and management of water and wastewater. The company delivers engineering design, project management, and operational support for water treatment plants, wastewater systems, and related infrastructure. UMEK is committed to applying technical innovation and industry expertise to help municipalities, industries, and water utilities achieve their water quality objectives, improve operational efficiency, and meet environmental compliance requirements.

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VOCMA (VAAL ORANGE CATCHMENT MANAGEMENT AGENCY)

The Vaal-Orange Catchment Management Agency (VOCMA) is responsible for managing water resources in the Vaal-Orange Water Management Area, one of South Africa's most critical water-sharing regions. Established under the National Water Act, VOCMA coordinates water resource management, water use authorisation, and stakeholder engagement across its jurisdiction. The agency plays a vital role in balancing water supply and demand, protecting river ecosystems, and supporting equitable water access for agricultural, industrial, and domestic users.

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WATER&SANITATION AFRICA

Water&Sanitation Africa is a specialist trade publication and media platform dedicated to the water and sanitation sector across the African continent. Published by Infrastructure News, the magazine provides in-depth technical articles, project case studies, industry news, and expert opinion covering water treatment, wastewater management, sanitation, and water governance. Water & Sanitation Africa serves as a vital knowledge and networking platform for water professionals, engineers, policymakers, and industry stakeholders across Africa.

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WATER AND SANITATION SERVICES SOUTH AFRICA (WSSA)

Water and Sanitation Services South Africa (Pty) Ltd (WSSA) is a leading operations and maintenance company for water and wastewater infrastructure in South Africa. The company operates and maintains water treatment plants, wastewater treatment works, pump stations, and distribution networks on behalf of municipalities and water boards. With extensive experience in full-service operations contracts, WSSA ensures reliable, compliant, and efficient service delivery across a wide range of water and sanitation facilities.

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WAM SOUTH AFRICA

WAM South Africa is the local representative of WAM Group, an Italian manufacturer of industrial equipment for the handling, conveying, and processing of bulk materials in the water, wastewater, and environmental sectors. WAM products include screw conveyors, rotary valves, bucket elevators, mixers, and silo and storage equipment used in water and wastewater treatment plants for sludge handling, chemical dosing, and material transport. WAM South Africa provides equipment supply, technical support, and after-sales service to South African clients.

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WEC PROJECTS

WEC Projects is a South African consulting and project management firm specialising in water, wastewater, and civil engineering infrastructure. The company provides a full range of services from feasibility studies and design to construction management and commissioning for water supply schemes, wastewater treatment works, and bulk water infrastructure projects. WEC Projects is committed to delivering professional engineering solutions that improve water security, service delivery, and infrastructure resilience across South Africa.

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WETSPEC CC

WETSPEC CC is a South African specialist in wetlands assessment, ecological consulting, and environmental impact assessment. The company provides professional services for wetland delineation, rehabilitation, monitoring, and management, as well as ecological assessments related to water resources and aquatic environments. WETSPEC supports developers, municipalities, mining companies, and environmental practitioners in meeting their legal obligations under environmental legislation and ensuring the responsible management of South Africa's vital wetland ecosystems.

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WILO

Wilo is a German pump manufacturer and global provider of innovative pump solutions, founded in 1872. With a strong presence in South Africa through its local subsidiary Wilo Pumps SA, the company supplies a comprehensive range of pumps for building services, water supply, wastewater, and industrial applications. Wilo's energy-efficient solutions include circulation pumps, borehole pumps, sewage pumps, submersible pumps, and pressure booster systems, supported by nationwide technical service and sales representation across South Africa.

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WISA (WATER INSTITUTE OF SOUTHERN AFRICA)

The Water Institute of Southern Africa (WISA) was formed in 1987 and incorporated as a non-profit association in 2000. WISA is the premier professional body for the water sector in southern Africa, with over 3,000 members including individuals, government institutions, and private organisations. The institute promotes professional excellence in the water sector through knowledge sharing, skills development, and improving quality of life. WISA is the host organisation of the WISA Biennial Conference, Africa's leading water and sanitation event.

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WUHU HUAJI FILTRATION TECHNOLOGY CO., LTD.

WUHU HUAJI Filtration Technology Co., Ltd. is a Chinese manufacturer specialising in industrial filtration products and water treatment equipment. The company produces filter bags, filter cartridges, filter housings, and related filtration systems used in water purification, wastewater treatment, and industrial process applications. WUHU HUAJI is committed to delivering reliable, high-quality filtration solutions that meet stringent performance requirements for clients in the municipal, industrial, and environmental sectors worldwide.

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Xylem is a global water technology company delivering intelligent, integrated solutions and services that address the world's most critical water challenges. With expertise across the full water cycle, Xylem helps customers transport, treat, test, and use water more efficiently and sustainably. The company combines innovative products, digital intelligence, and service capabilities to improve system performance, conserve precious resources, and build more resilient communities. As a trusted partner to utilities, industries, and municipalities, Xylem works alongside the unsung heroes who keep water flowing every day, creating smarter systems, stronger infrastructure, and long-term value for customers and the environment around the world.

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YEKE AND CHHONE SCIENTIFIC INSTRUMENT CO., LTD.

Wuxi Chhone Scientific Instrument Co., Ltd. is a Chinese manufacturer specialising in precision water quality analysers and scientific instruments for environmental monitoring and water testing. The company produces a comprehensive range of water quality testing instruments, including turbidimeters, COD analysers, dissolved oxygen meters, and multi-parameter water quality monitors. Wuxi Chhone is committed to delivering accurate, reliable, and user-friendly analytical instruments that support water quality management, environmental compliance, and laboratory testing requirements worldwide.

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YUANJISOURCE

Yuanjisource is a Chinese sourcing and supply company connecting international buyers with Chinese manufacturers of water treatment equipment, environmental technology products, and industrial machinery. The company provides procurement services, quality inspection, logistics coordination, and supply chain management, enabling clients across Africa and other emerging markets to access cost-effective, high-quality water and environmental products from China's manufacturing base. Yuanjisource is committed to transparent, reliable, and efficient procurement solutions.

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ZAOQIANG YAXIN

ZaoQiang Yaxin is a Chinese manufacturer of fibre-reinforced plastic (FRP) and glass-fibre products used in the water treatment, chemical processing, and environmental protection industries. The company produces FRP tanks, pipes, vessels, and custom composite components that offer excellent corrosion resistance and durability for challenging water and chemical environments. ZaoQiang Yaxin's products are widely used in water storage, treatment plant infrastructure, and wastewater management systems across domestic and international markets.

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ZHANHUA

Zhanhua is a Chinese company operating in the water treatment and environmental technology sector, providing products and solutions for water purification, wastewater treatment, and related environmental applications. The company offers a range of water treatment chemicals, equipment, and systems designed for municipal and industrial clients. Zhanhua is committed to delivering effective, affordable water treatment solutions that support safe water supply and environmental protection standards both within China and in global export markets.

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SESSION 1 **Topic: Chemicals of Emerging Concern in Water** **Chair: Dr Swastika Surujlal-Naicker, CoCT**	Comprehensive GC×GC-TOFMS for Detecting Emerging Organic Contaminants in Environmental Water	**Authors:** Kannigadu C, Whaley A	**Institutions:** LECO Africa, LECO Corporation	
	An integration of 2,4,6-Trichlorophenol into an existing analytical method suite	**Authors:** Magubane M, Mnguni S	**Institutions:** Rand Water	
	Detection of chemical markers in rivers downstream of unsewered communities – a wastewater-based epidemiology approach	**Authors:** Nkone P, Coetzee L, Genthe B, Kemp G	**Institutions:** Waterlab Pty Ltd, Independent Researcher, LiquidTech University of the Free State	
SESSION 3 **Topic: Biological Treatment Processes and Nutrient Removal** **Chair: Prof David Ikumi, UCT**	Nitrate Removal by Ion Exchange Technology - Case Studies in South Africa	**Authors:** Mathibela M	**Institutions:** Cwenga Technogies, Tshwane University of technology	
	Integration of anaerobic digestion, nitrification with sulphide-driven partial denitrification/ANAMMOX process for domestic wastewater treatment	**Authors:** Msimango S, Rai P, Bux F, Kumari S	**Institutions:** Durban University of Technology, Institute for Water and Wastewater Technology	
	Leveraging calcium-NOM complexation phenomenon as RO fouling mitigation strategy during treatment of lake water	**Authors:** Mahlangu O, Ndzimandze S, Motsa M, Mamba B	**Institutions:** University of South Africa	
SESSION 4 **Topic: Measuring microbes and bacteria in exposed communities and workplaces** **Chair: Dr Shalene Janse van Rensburg, Midvaal Water NPC**	Surveillance of human pathogens and antibiotic resistance genes in South African non-sewered communities using dPCR	**Authors:** Myeko C, Hamiwe T, Coetzee L, Nkone P, Ehlers M	**Institutions:** University of Pretoria, Waterlab (Pty) Ltd, National Health Laboratory Service	
	Monitoring of enteric and respiratory virus circulation in non-sewered communities via environmental runoff and rivers	**Authors:** Manyisa N, Mans J, van Zyl W, Coetzee L, Nkone P	**Institutions:** Department of Medical Virology, Faculty of Health Sciences, University of Pretoria, National Health Laboratory Service - Tshwane Academic Division, Molecular Laboratory, Waterlab (Pty) Ltd	
	Metagenomic Profiling of Antibiotic Resistance in Wastewater Treatment Plant Bioaerosols	**Authors:** Kumalo P, Amoah I, Pierneef R, Ismail A, Bux F, Kumari S	**Institutions:** Institute for Water and Wastewater Technology, Durban University of Technology, University of Arizona, University of Pretoria, Centre for Bioinformatics and Computational Biology, University of Pretoria, Pretoria, South Africa	

SESSION 5 **Topic: Reimagining Potable Water Treatment Systems from Dosing to Microplastics** **Chair: Marcia Letlhake, Rand Water**	Rethinking Chemical Dosing at Faure Water Treatment Plant	**Authors:** Metcalfe L, Goho D, Jabaar Z	**Institutions:** Zutari	
	AMES Test Screening for Mutagenicity of Source and Drinking Water from South African Treatment Facilities	**Authors:** Hendricks R, Swanepoel A, Sithole L, Kgaladi J	**Institutions:** Rand Water, Scientific Services, Analytical Services	
	The removal efficiency of microplastics by conventional water treatment processes	**Authors:** Motaung C	**Institutions:** Rand Water	
SESSION 6 **Topic: Rethinking governance legislation, reponsibility, and accountability** **Chair: Dr Cornelius Ruiters, CEO, Lepelle Water**	Groundwater Governance for Potable Use in South African Cities: A Critical Evaluation of Municipal Bylaws	**Authors:** Bosman C, Viljoen G, Laher A	**Institutions:** CBSS cc	
	The Responsibilities of a Municipality in terms of Groundwater Governance	**Authors:** Barrow D, Rose J, Gool S, Ewart-Smith J, Cerfonteyn M	**Institutions:** GEOSS	
	Rethinking Sanitation Accountability: Institutional Fragmentation, Regulatory Barriers, and Climate Stress in Cape Town's Informal Settlements	**Authors:** Dube M, Carden K, Naidoo V	**Institutions:** University of Cape Town	
SESSION 13 **Topic: Efficiency in nutrient recovery: Urine, Ammonia and Nitrates** **Chair: Nico van Blerk, ERWAT**	Ion exchange urine treatment: Resin form effects on nutrients, scaling compounds, and pharmaceuticals	**Authors:** Courtney C, Adams T, Randall D	**Institutions:** Stellenbosch University, University of Cape Town	
	Surface-Modified Clinoptilolite with HDTMA for Enhanced TOC and Ammonia Removal in Water Treatment.	**Authors:** Ngubo A, Sibiya M, Musekwa M	**Institutions:** Rand Water	
	Optimizing pre-treatment of a reverse osmosis-based urine-to-fertilizer treatment process to reduce operating costs.	**Authors:** Thela N, Courtney C, Randall D	**Institutions:** Stellenbosch University, University of Cape Town	

SESSION 14 **Topic: Measuring microbes and bacteria in rivers and aquatic environments** **Chair: Dr Liz Day, LDC**	Metagenomic insights into microbial succession, stress response, and resistome dynamics across an aquatic continuum	**Authors:** Osman A	**Institutions:** Durban University of Technology, Institute for Water and Wastewater Technology	
	Molecular characterisation of multidrug-resistant genes in the Apies River water impacted by anthropogenic activities	**Authors:** Mpenyana-Monyatsi L, Thulo L, Mboyi A	**Institutions:** Tshwane University of Technology	
	Mitigating Water Security Risks through Algal Bio-assessment: A Case Study of Apies River, South Africa	**Authors:** Kgosana T	**Institutions:** University of South Africa, Department of Water and Sanitation	
SESSION 15 **Topic: Becoming climate resilient with better stormwater and wastewater management** **Chair: Dr Thandi Mmachaka, VOCMA**	Governing multifunctional stormwater infrastructure to build resilience and promote just outcomes in South African cities	**Authors:** Carden K, Mguni P, Herslund L, Mclachlan J, Abrams A	**Institutions:** University of Cape Town, University of Copenhagen	
	Modelling water quality and quantity in a peri-urban South African catchment - Stiebeuel River, Franschhoek	**Authors:** Levy R, Carden K	**Institutions:** University of Cape Town	
	Application of Hybrid Model to Assess the Resilience of Sustainable Drainage Systems to Climate Change	**Authors:** Anano G, Okedi J	**Institutions:** University of Cape Town	
SESSION 23 **Topic: Enhancing Water Security through Infrastructure care** **Chair: Ian Palmer, Good Governance Africa**	Smart Asset Care for Resilient Wastewater Infrastructure: Integrating Condition-Based Monitoring in Ageing Systems	**Authors:** Sityoshwana M, Nyekendala B, Mtotoyi N, Sityoshwana V, Bhooshun D	**Institutions:** City of Cape Town	
	ONE Plan District Development Model in Action: A Multi-Component Infrastructure Upgrade Bulk Water Supply Scheme	**Authors:** Clark R	**Institutions:** Ensync Engineers, Engineering Council SA	
	Barriers to Mainstreaming Water Sensitive Urban Design in Municipal Infrastructure Delivery: Analysis from Western Cape	**Authors:** Edathoot A, Dickhaut W	**Institutions:** Hafencity University Hamburg	

	Enhancing Rural Water Security through a Solar-Powered Borehole System in uMzumbe, South Africa	**Authors:** Madlala M	**Institutions:** uMngeni-uThukela Water	
SESSION 24 **Topic: Measuring algae and nutrients** **Chair: Robert Siebritz, CoCT**	Assessing Voëlvlei Dam algal communities and nutrient trends (2010–2023) to determine seasonal treatment risks	**Authors:** Okkers N, Siebritz R, Volschenk M, Surujlal-Naicker S	**Institutions:** City of Cape Town	
	Investigating causes of algal growth in water treatment processes and their effect on treated water	**Authors:** Maduna E	**Institutions:** Student, Tshwane University of Technology	
	Occurrence of toxic and non-toxic cyanobacteria species in water supplies destined for food processing	**Authors:** Mutoti M, Jideani A, Gumbo J	**Institutions:** Department of Environmental, Water and Earth Sciences, Faculty of Science, Tshwane University of Technology, Department of Food Science and Technology, Faculty of Science, Engineering and Agriculture, University of Venda, Research and Innovation Department, Bindura University of Science Education, Bindura, Zimbabwe	
	Integrating satellite remote sensing into cyanobacteria monitoring protocols for the Vaal Dam	**Authors:** Swanepoel A, Hendricks R, Sithole L, Kgaladi J	**Institutions:** Rand Water	
SESSION 25 **Topic: Cape Flats Aquifer as alternative source of water** **Chair: Prof Thokozani Kanyerere, UWC**	Cape Flats Managed Aquifer Recharge Project, Part 1: Background and treatment train selection	**Authors:** Wise C, Marais P	**Institutions:** JG Afrika (Pty) Ltd, Water and Wastewater Engineer	
	Cape Flats Aquifer Management Scheme Advanced Water Treatment Plant using Treated Effluent (Part 2)	**Authors:** Marais P	**Institutions:** Water & Wastewater Engineering	
	Cape Flats Aquifer Management Scheme –MAR and groundwater building a resilient future (Part 3)	**Authors:** Mcgibbon D, Riemann K, Woolf K, Allpass D	**Institutions:** Umvoto, Cape Town Municipality - Water and Sanitation - Bulk Water	
	An assessment of Groundwater Contamination Sources in the Cape Flats Aquifer, Cape Town, SA	**Authors:** Mukhwathi U, Nethenzheni S, Petersen C, Surujlal-Naicker S, Mackenzie S	**Institutions:** City of Cape Town	

SESSION 26 **Topic: Local knowledge, citizen science, education and stakeholder engagement** **Chair: Nqobile Simelane, CoCT**	The Contribution of Local Knowledge to Adaptive and Collaborative Groundwater Governance in Rural South Africa	**Authors:** McCulloch-Jones S	**Institutions:** CSIR, Nelson Mandela University	
	Water Education as a Collaborative Tool for Water Security in Gauteng Schools	**Authors:** Mndawe S	**Institutions:** Rand Water	
	The Role of Alumni in Academic Advisory Boards for Professionalisation of the Water Sector	**Authors:** Mothobi L, Motaung L	**Institutions:** Rand Water, Ekurhuleni Water Care Company	
	Enviro Champs: Citizen Capacity for Catchment Management	**Authors:** Curtis T, Baleta H	**Institutions:** DUCT, Agulhas Biodiversity Initiative, Cross-Catchment Collective	
SESSION 31 **Topic: Water reuse, our resilient future resource** **Dr Esper Ncube, Rand Water**	Enhanced catchment management: The first line of defence in an urban drinking water reuse scheme	**Authors:** Nacerodien T	**Institutions:** Zutari	
	Modelling for Water Reuse: From Ancient to Modern Times and the Future	**Authors:** Angula S, Richards E, Manoharan K, Okedi J, Ikumi D	**Institutions:** Department of Civil Engineering, University of Cape Town, Department of Civil and mining Engineering, University of Namibia, WEC-Consult	
	CEC Removal in Potable Reuse Treatment Plants	**Authors:** Wise C	**Institutions:** JG Afrika (Pty) Ltd	
	Reusing Greywater for Concrete Production: Advancing Sustainable Infrastructure in Informal Settlements	**Authors:** van Reenen W, Barnard T	**Institutions:** Independent Institute of Education, Emeris, Faculty of Science and Technology, Water and Health Research Centre, University of Johannesburg	
SESSION 33 **Topic: Nature based solutions for a better water future**	Nature-based solutions for treating and reusing surface waters contaminated with emerging pollutants	**Authors:** Nicklin E	**Institutions:** University of Cape Town/ Future Water Institute	

Chair: Prof Kirsty Carden, UCT	Laboratory pilot study assessing slow-release bioremediation products for sewage-polluted stormwater treatment	**Authors:** Rolihlahla B, Volschenk M, Pearce B, Kotze H, Surujlal-Naicker S	**Institutions:** City of Cape Town, Water and Sanitation Directorate, Technical Services Dept, Scientific Services Branch, South Africa	
	Evaluating a Liquid Microbial Bioremediation Product to Improve Maturation Pond Effluent Quality: A Lab-scale trial	**Authors:** Currie D, Surjulal-Naiker S, Kotze H, Pearce B, Volschenk M	**Institutions:** City of Cape Town	
	Resilient Water Infrastructure: Assessing Nature-based Solutions and Blue-Green Infrastructure in Cape Town, South Africa	**Authors:** Theron C, Boogaard F	**Institutions:** Hanze University of Applied Sciences, Deltares	
SESSION 34 **Topic: Rethinking urban and recreational water spaces: urban catchments, rivers, wetlands, dams, beaches** **Chair: Shanna Nienaber, WRC**	Sedimentary Accumulation and Vertical Profiling of Current-Use Pesticides in Eastern Cape Coastal Bays	**Authors:** Matongo S	**Institutions:** University of KwaZulu-Natal	
	Assessment and Enhancement of Beach Water Quality Management Strategies in eThekwini Municipality	**Authors:** Mbatha S	**Institutions:** Ethekwini Municipality	
	Establishing the Baseline Ecological Status of Selected Rivers to Support the Liveable Urban Waterways Programme.	**Authors:** Malusi L, Petersen C, Surujlal-Naicker S	**Institutions:** City of Cape Town	
	An integrated control strategy as a management tool for aquatic Invasive Alien Plants (IAP) management	**Authors:** Mayinga N, Mhlongo L	**Institutions:** Rand Water	
SESSION 35 **Topic: Becoming climate resilient: Rethinking Groundwater and Managed Aquifer Recharge (MAR)**	Rethinking managed aquifer recharge at Atlantis: residence time and water-quality resilience	**Authors:** Louw K, Vermaak N, Louw K	**Institutions:** Stellenbosch University, CSIR	
	Microbial And Geochemical Dynamics of Atlantis MAR Site: Insights into a Biosurveillance Framework.	**Authors:** Makhahlela B	**Institutions:** University of Cape Town	

Chair: Dr Kevin Pietersen, UWC	MAR and the Microbiome: integrating microbial biodiversity analysis into aquifer management	**Authors:** Bryan C, Makhahlela B, Harris J, Thouin H, Schneuwly R, Fernandes S, Msimango P, Prinsloo K, Carden K	**Institutions:** BRGM	
	Assessment of potential recharge enhancement sites in Limpopo	**Authors:** Mathabela N, Fourie F	**Institutions:** Department of Water and Sanitation, Department of Water and Sanitation	
SESSION 36 **Topic: Resilient and efficient water infrastructure** **Chair: Ayesha Laher, AHL Water**	Water Pinch, a tool to reduce freshwater demand and improve water use efficiency for mining	**Authors:** de Beer M, Ramasur A, Dama-Fakir P, Osman M, Talanda C, Rademeyer T	**Institutions:** WSP Group Africa (pty) Ltd, WSP Canada Inc, WSP Australia Pty Ltd, Valterra Platinum Limited	
	From Risk to Resilience: Alternative Supply in Action at La Lucia Mall, Durban	**Authors:** Biggs B	**Institutions:** JG Afrika	
	Integration of Green Infrastructure into Municipality Asset Registry for Resilient City Management: City of Tshwane	**Authors:** Madikizela B	**Institutions:** Water Research Commission of South Africa	
	A Multi-Pronged Approach to Incorporate Climate Friendly Solutions at the Coega Wastewater Treatment Works	**Authors:** Kruger M, Xate N, Kampman J	**Institutions:** SMEC, Coega SEZ	
SESSION 37 **Topic: Abattoir wastewater reuse and management** **Chair: Ralph Richards, SFWISA**	Addressing Abattoir Waste through Integrated Wastewater Treatment and COD-Based Modelling of Black Soldier Fly Larvae	**Authors:** Gutu L, Ikumi D	**Institutions:** University of Cape Town	
	Direct Potable Reuse from Poultry Abattoir Wastewater: A Model for Resilient, Decentralised Water Infrastructure	**Authors:** Kay L	**Institutions:** Talbot Group (pty) Ltd	
	Post-treatment effects on polyethyleneimine/ poly (sodium styrene sulfonate)-silver modified ultrafiltration membranes for slaughterhouse wastewater reuse	**Authors:** Mudau F	**Institutions:** University of South Africa Science Campus	

	Towards enhanced hydrophilicity and antifouling propensity of PES-based membranes using Fe-BTCA@GO for abattoir wastewater remediation	**Authors:** Phadagi R	**Institutions:** Institute for nanotechnology and water sustainability, University of South Africa	
SESSION 43 **Topic: Rethinking performance in conventional water treatment** **Chair: Natasia van Binsbergen, AL Abbott**	Comparing conventional clarification and dissolved air flotation for algae related turbidity and TOC removal efficiency	**Authors:** Cloete T	**Institutions:** Not specified	
	Process Adaptation and Resilience to Extreme Turbidity Loading at a Water Treatment Plant	**Authors:** Reddy E	**Institutions:** uMngeni-uThukela Water	
	Optimising Ozonation Pre-Treatment for Enhanced Sludge Solubilisation and Anaerobic Digestion Efficiency	**Authors:** Lephallo J	**Institutions:** Ekurhuleni Water Care Company, Vaal University of Technology	
SESSION 44 **Topic: Water microbiomes** **Chair: Dr Rahzia Hendricks, Rand Water**	Building future-ready communities through Groundwater Microbiome Education.	**Authors:** Makhahlela B	**Institutions:** University of Cape Town	
	Identifying Microbial Signatures in Urban River Biofilms: Understanding Short-Chain Chlorinated Paraffins Bioaccumulation and Stress Response	**Authors:** Zwane F, Monyatsi L, Okonkwo J, Dzerefos C	**Institutions:** Tshwane University of Technology	
	Occurrence of antifungal-resistant opportunistic fungal pathogens in raw and treated wastewater in KwaZulu Natal	**Authors:** Thwala T, Omatola C, Bux F, Pillai S, Kumari S	**Institutions:** Institute for Water and Wastewater Technology, Durban University of Technology, Department of Biotechnology and Food Science, Faculty of Applied Sciences, Durban University of Technology	
SESSION 45 **Topic: Circular Economy and Resource Recovery** **Chair: Dr Ashton Mpofu, AfriVolve**	Implementing Granular Activated Carbon as a Circular Economy and Environmentally Sustainable Solution for PFAS	**Authors:** Motha P, Rolfe W, Falconer J	**Institutions:** Cwenga Technologies (Pty) Ltd	
	Transforming Forestry By-Products into High-Performance Natural Coagulants: A Circular Bioeconomy Approach to Water Treatment	**Authors:** Zuma N, Dilonardo S, van Kralingen L, Hunkeler D	**Institutions:** NTE, AQUA+TECH Specialties SA	

	Taguchi-based optimisation of the solar Photo-Fenton process for the treatment and reuse of effluents	**Authors:** Sithole N, Setshabe C, Masindi V, Mpenyana-Monyatsi L	**Institutions:** Department of Environmental, Water and Earth Science, Faculty of Science, Tshwane University of Technology, Council for Scientific and Industrial Research (CSIR), Built Environment (BE), Hydraulic infrastructure engineering (HIE)	
SESSION 46 **Topic: Energy efficiency, recovery, and generation** **Chair: Burnett Persens, WSSA**	Co-digestion of Sewage Sludge and industrial effluent for potential energy generation: Darvill WWW Case Study.	**Authors:** Makhanya T, Motalingoane R, Mnguni M, Ndwabu S	**Institutions:** uMngeni-uThukela Water	
	Surface aeration Energy Efficiency (EE): Study and Implementation at a municipal wastewater treatment plant	**Authors:** Molefe H, Rössle W, Sötemann S, Jacobs C, Bekker A, Newman C, van der Merwe-Botha M	**Institutions:** Water and Sanitation Services South Africa (WSSA), City of Cape Town, Wastewater Branch, Water and Sanitation Directorate, WaterGroup Holdings (Pty) Ltd	
	Evaluation of a Membrane Aerated Biofilm Reactor Technology in Achieving Energy-Efficient Wastewater Treatment	**Authors:** Mnguni M, Mpanza M, Langa S, Nxumalo N	**Institutions:** uMngeni-uThukela Water	
SESSION 53 **Topic: Water and Wastewater treatment: Remove micro-contaminants and metals** **Chair: Jason Minnie, UCT**	Evaluation of unit process modules employed in drinking water treatment plant to remove the contaminants	**Authors:** Dikobe P	**Institutions:** Not specified	
	Tio_2/Ag Nanoparticles-Grafted Polyamide Reverse Osmosis Membranes: Enhancing Hydrophilicity and Antifouling Properties	**Authors:** Makwela G, Aziz M, Kasongo G	**Institutions:** CPUT	
	Exploring the potential of Lippia javanica as sustainable bio-adsorbent for removing heavy metals in wastewater	**Authors:** Mngadi S, Ndlovuv F, Mahlambi M, Zondo S	**Institutions:** uMngeni-uThukela Water, UKZN, Dept of Agriculture and Land reform	
SESSION 54 **Topic: Climate change impacts: dealing with Droughts & Floods** **Chair: Dr Daniel Kibirige, CSIR**	Introducing a new Multi-Index Approach for Integrated Drought Monitoring in South Africa using the NIWIS	**Authors:** Mukhawana M, Kiva L, Masilela N, Lebelo N, Dlamini S	**Institutions:** Department of Water and Sanitation	
	Assessing Impacts of Land Surface Temperature on Groundwater Resources using Remote Sensing	**Authors:** Marufu L	**Institutions:** Future Water Institute/ University of Cape Town	

	Assessment of groundwater level fluctuations in the Namaqualand region	**Authors:** Fourie R, Lalumbe L	**Institutions:** Department of Water and Sanitation	
SESSION 55 **Topic: Thermal Treatment and Resource Recovery** **Chair: Christina Mazivila, UCT**	Treatment of saline water with evaporation as pre-treatment to freeze crystallization	**Authors:** Mokoena M	**Institutions:** University of South Africa	
	Treatment of Pyrolysis Process Water with Freeze Crystallization for Sodium Sulphate Recovery	**Authors:** Mahlangu M, Maree J, Mamba B	**Institutions:** University of South Africa	
	Recovery of Energy from Macro and Microplastics Isolated from Wastewater Treatment	**Authors:** Masala M, Mphaga T	**Institutions:** Erwat	
SESSION 56 **Topic: Rethinking the protection of soil to protect water resources** **Chair: Dr Johan van der Waals, Real IPM**	"When nature fights back": Kinetic modelling of biogenic nanomaterials disrupting antibiotic resistance dynamics in soil.	**Authors:** Mboyi A, Kamika I, Mokgalaka-fleischmann N, Momba M	**Institutions:** Tshwane University of Technology, University of South Africa	
	Upper uMkhomazi Soil Conservation and Restoration Project	**Authors:** Ngcobo S	**Institutions:** uMngeni-uThukela Water	
	Phosphate storage capacity of Cape Flats soils and their role in protecting urban water quality	**Authors:** Schneuwly R, Maraj K, Carden K	**Institutions:** Future Water Institute, University of Cape Town	
SESSION 63 **Topic: Water infrastructure – planning, partnerships, and maintenance**	Lessons learnt from 20 years of WWTW auditing: What do we do now?	**Authors:** Wise C, Xaba Z, Smith D	**Institutions:** JG Afrika (Pty) Ltd	
	Expanding the Scope of Water Operators' Partnerships: from Peer-to-Peer Learning to Systemic Resilience	**Authors:** Chandaka S, Kunene P, Edathoot A, Xaso M, Aol A, Wendland C	**Institutions:** Stellenbosch Municipality, eThekwini Municipality, HafenCity University, Hamburg Wasser	

Chair: Mpheteng Mokubung, COO Midvaal Water NPC	Virtual and Augmented Reality for Water and Wastewater Treatment Design and Training	**Authors:** Maduray P	**Institutions:** uMngeni-uThukela Water	
	Development of a Maintenance Strategy for Wastewater Treatment Works in	**Authors:** Kosi-Mabuza D, Mdluli N, Thabeng T, Tselane G	**Institutions:** City of Johannesburg	
SESSION 64 **Topic: Rethinking governance institutions** **Chair: Abri Vermeulen, ACV Water**	Institutional Fragmentation and Equity in Water Allocation: Governance of Joint Venture in Lower Sundays Catchment	**Authors:** Ngilana S	**Institutions:** National Department of Water and Sanitation	
	Institutionalising Water Stewardship: Aligning Technical and Governance Feasibility with Botswana's Priorities	**Authors:** Tompkins R, Jacklin D, Biggs B, Cumberledge J, Masunga T	**Institutions:** JG Afrika (Pty) Ltd, JG Afrika (Pty) Ltd	
	Scaling Excreta Flow Diagrams (EFDs): Institutional Ownership Supporting South Africa's National Faecal Sludge Management Strategy	**Authors:** Cumberledge J, Tompkins R	**Institutions:** JG Afrika (Pty) Ltd	
	Climate change, water security, and transboundary agreements: Inkomati Maputo basin.	**Authors:** Mchunu S	**Institutions:** IUCMA	
SESSION 65 **Topic: Water and Wastewater treatment: dealing with sludge** **Chair: Laurah Gutu, UCT**	A Systematic Review of Wastewater Sludge Management Practices: A Case Study in eThekwini Municipality	**Authors:** Mathenjwa S, Richmond S	**Institutions:** Ethekwini Municipality - Water and Sanitation Unit, Mechanical and Mechatronic Engineering Department, Stellenbosch University, Stellenbosch, South Africa	
	Pilot Evaluation of Hopper Design Modifications to Mitigate Sludge Accumulation at Durban Heights WTW	**Authors:** Mzobe N, Mazibuko N, Shabalala N, Shangase T	**Institutions:** uMngeni-uThukela Water	
	Effect of Solids Concentration on Dewatering Performance of Water Treatment Residue	**Authors:** Mungwe N, Mokgaditse C, Pofane A, Sibiya M, Ndlovu S, Sigudu K	**Institutions:** Rand Water	

	Integrated Modelling of Filamentous Bacteria Dynamics in Activated Sludge and Secondary Setting Tanks Systems	**Authors:** Ikumi D	**Institutions:** University of Cape Town	
SESSION 66 **Topic: From monitoring to management: data accuracy, transparency, and accountability** **Chair: Carin Bosman, CBSS**	Reflection on the 2022 National Water Monitoring Plan and roadmap for developing the 2027 Plan.	**Authors:** Chabalala S, Kiva L, Narain S, Mofokeng S	**Institutions:** Department of Water and Sanitation	
	Strengthening water governance through ISO/IEC 17025: Enhancing data transparency and accountability.	**Authors:** Sithole L, Bosae J, Hendricks R, Swanepoel A	**Institutions:** Rand Water	
	How accurate are water quality test strips?	**Authors:** Mayet R, Sheridan C, Dahms-Verster S	**Institutions:** University of the Witwatersrand, Claude Leon Foundation Chair in Water Research, Wits: H2O	
	Review and update of the 1:500 000 hydro-geological map series of Queenstown and information brochure	**Authors:** Lalumbe L, Mafanya T, Fourie R, Mabula T, Mashishi K	**Institutions:** Department of Water and Sanitation	
SESSION 67 **Topic: Rethinking Safe Water for Facilities** **Chair: Mendi Shozi, BORDA**	Guidelines for the Development of Water Safety Plans for Buildings	**Authors:** Laher A, Damons M	**Institutions:** AHL Water	
	Legionella – the legio problem	**Authors:** van Staden D	**Institutions:** Foodfacts	
	Smart Water for Smart Facilities: Demand Management and Harvesting in Botswana's Limpopo Basin	**Authors:** Biggs B, Jacklin D, Tompkins R	**Institutions:** JG Afrika	
	Demonstrating Circular Water Systems Through a Campus-Based Containerised MBR at UCT	**Authors:** Symington C, Petrie D, Carden K, Randall D, Braune M	**Institutions:** Alveo Water, Zutari, University of Cape Town	

SESSION 68 **Topic: Rethinking groundwater monitoring** **Chair: Dr John Okedi, UCT**	Water Stable Isotopes: Determining groundwater recharge, pipe leakage, mine water flows, evaporation, and other applications.	**Authors:** Diamond R	**Institutions:** BIOGRIP, University of Cape Town	
	Assessment of groundwater quality in compliance with SDG 6.3.2 targets: Case study of South Africa	**Authors:** Lalumbe L, Mabula T	**Institutions:** Department of Water and Sanitation	
	The review of the current groundwater monitoring network: Northern Cape Region case study	**Authors:** Mashishi K, Mokeona-Fuku P	**Institutions:** Department of Water and Sanitation	
	Managing groundwater use allocation using groundwater monitoring data.	**Authors:** Mafanya T, Lindelani L	**Institutions:** Department of Water and Sanitation	
SESSION 69 **Topic: Using AI and ML in water management and infrastructure maintenance** **Chair: Hope Mudau, UCT**	Smart Predictive Maintenance: AI and ML for Medium Voltage Pump Reliability	**Authors:** Singh R, Tshitema N, Padayachee M	**Institutions:** Rand Water	
	Application of Machine Learning (ML) Techniques for Water Quality Assessment in a Water Treatment Plants	**Authors:** Ndhlovu L	**Institutions:** Department of Water and Sanitation	
	Use of a generative AI assistant & a Knowledge Twin to improve asset maintenance efficiency	**Authors:** Padayachee M, Singh R, Tshitema N, Wong R, Allen M, Iqbal M	**Institutions:** Rand Water	
	Development of a machine learning decision support system for water quality management in South Africa	**Authors:** Mogane K, Ncube E, Msagati T, Masebe T	**Institutions:** Ehlanzeni District Municipality, University of Pretoria, University of South Africa	

SESSION 72 **Topic Chemicals of Emerging Concern in Wastewater** **Chair: Leanne Coetzee, Waterlab**	Extension of PWM_SA Model for Tracking Micropollutants in Wastewater Treatment Plants	**Authors:** Matesun J, Ikumi D, Petrik L, Musvoto E	**Institutions:** University of Cape Town, University of Western Cape, TruSense Consulting Services	
	Assessment of Industrial Organic Micropollutants and Potentially Toxic Elements Across Two Wastewater works in Ekurhuleni	**Authors:** Nhlapo S, Mutoti M, Mboyi A, Monyatsi L	**Institutions:** Tshwane University of Technology	
	Rethinking Disinfection: Data Driven Chlorine Dosing for Resilient Water	**Authors:** Esop A, Daya V, Naicker S, Sewnarain S	**Institutions:** Universal Water Solutions	
SESSION 73 **Topic: Rethinking Finance & Investments** **Chair: Rajiv Paladh, Bosch Capital**	Rethinking NRW: Integrating Debt Recovery into Demand Management	**Authors:** Poona V	**Institutions:** Msunduzi Local Municipality	
	Financial, Sustainability & Business Model Considerations for WTR Management	**Authors:** Kotze C, Coppin R, Pillay N	**Institutions:** PFI	
	Understanding Cost Drivers in Small Wastewater Plants Through Operational and Historical Data Analysis	**Authors:** Xaba Z	**Institutions:** JG Afrika	



BUILDING SOUTH AFRICA'S WATER FUTURE

Why resilient, decentralised and circular water infrastructure is key to South Africa's water security. **By James Morrise, business development specialist, NuWater**

South Africa doesn't have a water crisis on the horizon. It has one right now.

Ageing pipes, rapid urbanisation, erratic rainfall, and growing industrial demand have converged on a system that was never built for this kind of pressure. The gap between what existing infrastructure can deliver and what the country actually needs is widening, and patching old networks isn't going to close it.

What's needed isn't more of the same, built bigger. It's a different approach entirely.

The limits of centralised thinking

The logic behind large, centralised treatment plants made sense when it was designed. Water moves one way,



from source, through treatment, to tap. Simple, scalable, controllable.

The problem is that this model assumes stability: consistent water quality, predictable demand, reliable supply. South Africa has none of those things in abundance right now, and is likely to have less of them in the future.

Decentralised infrastructure doesn't replace centralised systems, it takes pressure off them. Smaller treatment plants, deployed closer to where water is actually needed, can come online faster, adapt to local conditions, and keep communities and industries running when the main network falters. Membrane filtration, modular treatment units, and advanced potable water systems have matured to the point where this is no longer an experimental approach. It's a practical one.

Wastewater isn't waste

The clearest opportunity in South Africa's water sector is also one of the most underused: the water that's already been used once.

For decades, wastewater management meant treatment and discharge. The



WHO IS NUWATER?

NuWater is a South African smart water treatment company specialising in modular, mobile and rapidly deployable treatment plants. Its solutions cover water, wastewater, seawater desalination, groundwater, surface water, industrial effluent and water reuse. The company designs, builds, finances, operates and maintains plants, helping clients improve water security through decentralised, scalable treatment solutions.

goal was to meet compliance standards and move on. That framing is shifting, partly because the technology to recover high-quality water from wastewater streams has improved dramatically, and partly because the alternative, drawing indefinitely on declining freshwater reserves, is no longer viable.

It's worth being direct about something that still makes people uncomfortable: almost every water source in South Africa is, in some sense, already recycled. Water discharged upstream gets abstracted downstream. The question isn't whether water gets reused, it's whether it gets treated properly before it does. Deliberate reuse with proper treatment is safer and more controlled than the unplanned reuse that's already happening by default.

Industrial water recovery, mine water treatment, advanced membrane systems, these aren't niche technologies. Across the country, they're already supplementing traditional supply, cutting costs, and reducing the environmental footprint of water-intensive operations.

The case for circular water management isn't theoretical. It's playing out on the ground.

Efficiency isn't a target, it's a competitive advantage

Water productivity rarely gets the same attention as water supply, but it should. In mining, manufacturing, agriculture, and municipalities alike, the fastest and most cost-effective way to extend water security is to use what you already have more carefully.

Non-revenue water losses in many South African municipalities exceed 40%. Process inefficiencies in industry mean significant volumes of water, and the energy and chemicals used to treat it, are effectively written off. Fixing these problems doesn't require new infrastructure. It requires operational discipline and, increasingly, the data to support better decisions.

Technology that actually helps

Real-time monitoring, digital twins, and predictive analytics are changing what's operationally possible in water treatment. Instead of responding to failures after they happen, operators can identify problems early, optimise performance continuously, and extend the working life of assets that would otherwise degrade unnoticed.

But technology only works if people know how to use it. The water sector faces a skills challenge that infrastructure investment alone won't solve. Operators need training. Support teams need modern tools. And the sector needs to become the kind of career that attracts strong engineers and process specialists, people who see water treatment as an interesting problem worth solving, not a utility function to manage.

What's actually required

South Africa's water future gets secured through specifics, not slogans. It gets secured by municipalities and industries choosing to treat water as a recoverable resource rather than a consumable. By infrastructure decisions that prioritise flexibility over scale. By operators equipped with better data and better skills. And by a sector willing to adopt solutions that are available now rather than waiting for circumstances to force the issue.

The technology exists. The case is proven. What's needed is the will to implement it, at pace, and at scale. ●



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uMngeni-uThukela Water is a leading state-owned water utility and the largest supplier of bulk potable water in KwaZulu-Natal, committed to providing sustainable, safe and reliable water and related services across the province. Established through the merger of Umgeni Water and Mhlathuze Water on 1 July 2023, the organisation plays a critical role in supporting municipalities with bulk water supply and water services to improve community wellbeing and economic growth.

With a vision to lead in sustainable water services, uMngeni-uThukela Water delivers quality water to support development, working with government and communities to uphold water as a basic human right and driver of prosperity.

WHAT WE DELIVER

- Supplies bulk water to major municipalities and water services authorities across KwaZulu-Natal
- Delivers water quality management programmes that protect public health and environmental safety
- Provides specialist support services, training and management to water institutions
- Drives sustainable infrastructure development and expansion to meet future demand
- Partners with communities and governments to support economic development and quality of life improvements



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- Several Ranges for Multiple Applications
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Purpose

To provide world class activated carbon products to the filtration and purification industries whilst contributing to the socio-economic development of South Africa in an environmentally friendly and sustainable manner.

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