



Corporate Plan

2019/20 to 2023/24

Version: 28 May 2019



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Strategic Highlights by the Chairperson of the Board

Water issues have become a crucial part of the dialogue in South Africa, dominating both the news bulletins and research projects to find affordable and sustainable ways of safe-guarding existing resources and securing future supply. This reflects the strategic nature of water and its critical importance to economic growth and a sustainable future. Umgeni Water is considered a water leader in South Africa, after having built its credibility through solid performance track record of delivering high quality and adequate bulk potable water to customers. The organisation's expertise and experience are essential to successful execution of its mandate.

This five-year corporate plan period is rich with new opportunities - and challenges - for Umgeni Water as it accelerates initiatives to consolidate and grow its position as a sector leader. Opportunities include developing and implementing service delivery plans for new customer areas in adjacent catchments, notably the area covered by the uThukela District Municipality for which a supply agreement has been concluded, as well as expansion of reach to areas beyond the traditional supply catchments.

The Minister of Water and Sanitation, Minister Gugile Nkwinti (MP), has provided policy direction and focus areas for water and sanitation delivery through the five strategic pillars:

A National Water Resources and Services Authority:	This Authority will be established to finance, develop, manage and operate national water resource infrastructure and sanitation.
A National Water Resources and Services Regulator:	The possibility of an independent economic regulator to regulate tariffs, standards and performance in the water services sector has been proposed and processes are underway to consult on the appropriateness of such an institution.
A Water Resources and Services Value Chain:	The water and sanitation sector is currently comprised of a large number of institutions with a complex suite of functions divided amongst them, which creates an overly complex value chain (currently 428 entities) which we need to streamline.
A Water Resources and Services Master Plan:	A Plan which sets out prioritised actions and investments we must implement between now and 2030 to overcome challenges and ensure a water secure future supporting inclusive development across the country, and also to ensure that universal sanitation coverage protects the health of our people.
Institutional Rationalisation and Organisational alignment:	An early action will be to establish a business case for streamlined institutional rationalisation and organisational alignment in the water sector in accordance with the outcomes of the Presidential review of State Owned Enterprises (SOEs).

A looming change at Umgeni Water is the imminent appointment of a new Board. The previous Board's term ended in 2017 and a Board was appointed whilst the Minister continued with the process of appointing a permanent Board, in line with the Water Services Act. That process is underway with recruitment expected to be completed in 2019.

The Board of Umgeni Water is mindful that water is a cross-cutting resource, crucial for building a non-racial, democratic South Africa through expansion of and access. The key focus for this Corporate Plan period, therefore, is **enabled and innovative** growth of Umgeni Water to increase its value as an entity of State, in order to realise the objectives of the National Development Plan (NDP), vision for South Africa and the United Nations' Sustainable Development Goals. This is to be achieved through formulating and implementing a

strategy that responds to its SOE mandate and the needs and priorities of its target markets, customers, stakeholders and the public of KwaZulu-Natal.

The Board of Umgeni Water remains committed to providing support and strategic guidance to the Executive Management during this evolutionary period that will enable Umgeni Water to progressively expand its customer base and service provision to all municipalities in KwaZulu-Natal and beyond.

Ms Ziphozethu Mathenjwa

Chairperson of the Board

30 April 2019

Foreword by the Chief Executive

Umgeni Water's strategy and plans for the coming period embrace enabled and innovative growth in order to respond to the opportunities and challenges as articulated by the Board.

Enabled and **innovative growth** are themes that are closely aligned to the agenda of government, including the National and Provincial Development Plans, Medium-Term Strategic Framework and water mandate as espoused by the Executive Authority and Department of Water and Sanitation.

Government advocates for state-owned enterprises to play a key role in advancing important national objectives, particularly through providing economic and social infrastructure. This needs to be done in an equitable and cost-effective manner, to enable state-owned enterprises to contribute to both economic growth and overcoming spatial inequalities.

Umgeni Water's vision is aligned to the vision government has for SOEs which is for South Africa to be served by efficient, effective, financially sound and well-governed state-owned enterprises that address the country's developmental objectives.

In view of this, this Corporate Plan supports an agenda of socio-economic transformation and water infrastructure investment, whilst ensuring the entity maintains sound financials that will ensure water services can continue to be sustained into the future.

The infrastructure investment for this five-year Corporate Plan period totals R8.7 billion and includes numerous infrastructure developments in various phases of planning and implementation. A total of R2.8 billion (32%) of this investment is specifically targeted at rural water infrastructure development. In particular, the following **six (6)** key rural development infrastructure projects are targeted during this period:

1. Design of the **uMshwathi Bulk Water Supply Scheme Phase 4 – Southern Ndwedwe**, serving iLembe DM, planned for completion in 2022,
2. Construction of the **Mpophomeni WWTW**, serving uMgungundlovu DM, planned for completion in 2023,
3. Design and construction of the **Vulindlela Scheme upgrade**, serving Msunduzi LM, planned for completion in 2023,
4. Construction of the **Greater Mpofana Regional Scheme Phase 1**, serving uMgungundlovu DM, planned for completion in 2019,
5. Design and construction of the **Impendle Bulk Water Supply System – Stepmore Supply Scheme**, serving uMgungundlovu DM, planned for completion in 2022, and
6. Construction of the **Maphumulo Bulk Water Supply Scheme Phase 3**, serving iLembe DM planned for completion in 2022.

The funding and financing plan remains core to sustainable development of infrastructure targeting the municipalities that have a large rural base.

The infrastructure development programme includes a further **seven (7)** key projects that target augmentation, upgrade and rehabilitation during the Corporate Plan period:

1. Construction of the **Darvill WWTW upgrade**, serving Msunduzi LM, to be completed in 2020,
2. Design and construction of the **South Coast Phase 2b (Kelso to Umdoni) pipeline**, serving eThekweni MM and Ugu DM, planned for completion in 2020,
3. Upgrades and refurbishments of **uMzinto WTW**, during 2020,
4. Upgrades and refurbishments of **Durban Heights WTW key installations**, during 2020,
5. Repair and refurbishment to the **Nungwane Raw Water Pipeline**, planned for completion in 2020,
6. Design and construction of the **Lower uMkhomazi Bulk Water Supply Scheme**, serving eThekweni MM and Ugu DM, with construction to commence in 2020 for completion in 2023, and

7. Design and construction of the **uMkhomazi Water Project Phase 1**, serving eThekweni MM, uMgungundlovu DM, Msunduzi LM, Ugu DM, iLembe DM, planned for completion in 2030.

Water resources developments in support of bulk schemes during this corporate plan period include:

1. The **uMkhomazi** Water Project Phase 1 – Smithfield Dam (DWS) (design),
2. The Lower uMkhomazi Bulk Water Supply Scheme - **Ngwadini** Dam (detailed design),
3. Phase 2 Augmentation of **Mhlabatshane** Regional Scheme from the uMzimkhulu River (detailed design), and
4. **Maphumulo** Bulk Water Supply Phase 4 - Water transfer from Hlimbitwa River to iMvutshane Dam (design).

The treatment and provision of potable water to customers as well as sustainable wastewater treatment remain the primary priorities of Umgeni Water. Water is currently treated at seventeen (17) potable water treatment works and nine (9) wastewater treatment works. Over this corporate plan period, Umgeni Water will conclude the acquisition of targeted bulk supply schemes from Water Services Authorities and invest in refurbishments, upgrades and construction to ensure bulk supply or discharge from these systems is sustainable.

Umgeni Water remains mindful of the impact of the full water value-chain sustainability on downstream community, customer and water supply sustainability as a whole. Several investigations, notably relating to improving wastewater treatment are underway and will be concluded over this five-year corporate plan period.

Investment in infrastructure asset maintenance remains crucial to ensure that no assets pose risk to supply and service disruptions do not arise through lack of maintenance. Over R2.01 billion is invested in repairs and maintenance over the five-year Corporate Plan period.

Water sector partnerships and collaborations to be innovative will be leveraged to respond to the challenges facing the region including water availability, redistribution, demand management, drought mitigation and resilience planning in the face of climate change.

Umgeni Water will also continue to strengthen and drive a transformation agenda that supports inclusivity and reduces inequality and unemployment through its various corporate plan programmes.

The growth outlook for South Africa remains low but buoyant. Amidst this, Umgeni Water will need to continue to strengthen and leverage its balance sheet, whilst managing revenue and costs to affordably deliver the target goals, objectives and outputs.

This corporate plan will be driven in a enabled and innovative manner to achieve the entity's strategic objectives by targeting plans, projects, programmes and initiatives that respond to the needs and priorities of government and in particular the people of KwaZulu-Natal.

Mr Thami Hlongwa CA(SA)

Chief Executive

30 April 2019

Chapter 1: Introduction



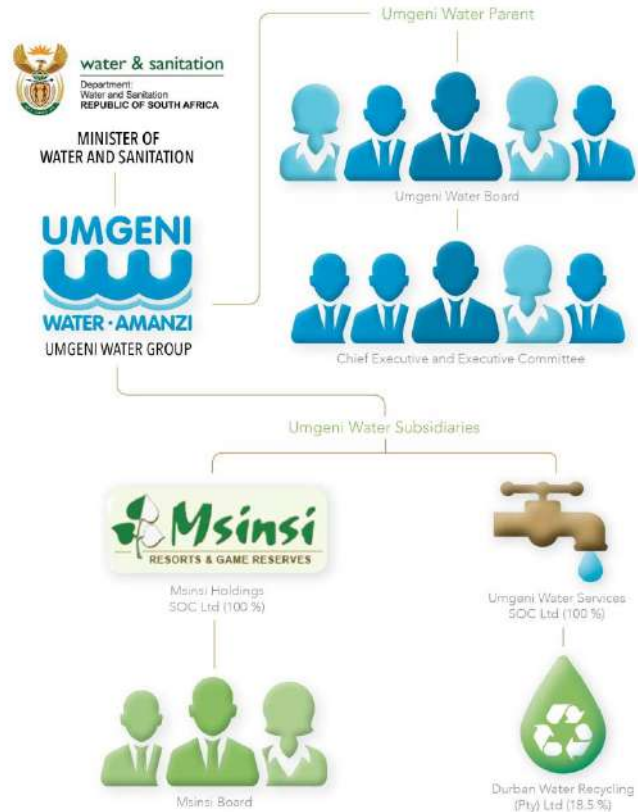
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1.1 Legislative mandate

Umgeni Water is a state-owned entity (SOE) established in 1974 to provide water services - water supply and sanitation services - to other water services institutions in its service area. 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. Umgeni 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.



1.2 Activities of Umgeni Water

The primary activities of Umgeni Water, as pronounced in section 29 of the Water Services Act, is to provide water services (water supply and sanitation services) to other water services institutions in its service area.

In addition, section 30 of the Water Services Act, enables Umgeni Water to undertake other activities, provided these do not impact negatively on the entity's ability to perform its primary activity. These include:

- Providing management services, training and other support services to other water services institutions, in order to promote co-operation in the provision of water services,
- Supplying untreated or non-potable water to end-users who do not use the water for household purposes,
- Providing catchment management services to or on behalf of the responsible authority,
- With the approval of the water services authority having jurisdiction in the area, supplying water directly for industrial use, accepting industrial effluent and acting as a water services provider to consumers,
- Providing water services in joint venture with water services authorities, and
- Performing water conservation functions.

Umgeni Water has 100% investment in two subsidiaries; Msinsi Holdings and Umgeni Water Services. Refer to the chapter on Participation in Companies for further details regarding these companies.

1.3 Supply Area and Customers

KwaZulu-Natal is the gazetted supply area of Umgeni Water and Mhlathuze Water and straddles a total geographical area of 94 359 km², which is home to 11.1 million people and 2.9 million households.

The KwaZulu-Natal Province comprises one (1) Metropolitan Municipality, ten (10) District Municipalities and forty-three (43) Local Municipalities. Fourteen (14) of these municipalities are Water Services Authorities (direct retail customers) as defined in the Water Services Act.

The Executive Authority has initiated a process that is proposed to culminate in the establishment of a single water board for KwaZulu-Natal. The proposal is to amalgamate the areas served by both Umgeni Water and Mhlathuze Water into one regional water utility for KwaZulu-Natal. The process of service expansion to municipalities in KwaZulu-Natal is expected to follow timeframes proposed by the Executive Authority.

In the prior period Umgeni Water focused service delivery and largely derived revenue from six (6) customers:

- eThekweni Metropolitan Municipality
- iLembe District Municipality
- Ugu District Municipality
- Harry Gwala District Municipality
- uMgungundlovu District Municipality
- Msunduzi Local Municipality.

In 2017, Umgeni Water successfully concluded a supply agreement with an additional municipality:

- uThukela District Municipality

Umgeni Water will therefore focus service delivery to seven (7) customers in the near-term of this Corporate Plan period.

Water Utility / Municipality	Supply Areas (km ²)	Area (%)	Population	Households	Households (%)
Umgeni Water (current)	41 738	44%	7 426 467	2 077 035	73%
Mhlathuze Water	36 867	39%	2 552 535	555 558	19%
uThukela Water (Pty) Ltd	15 754	17%	1 086 209	243 252	8%
Total KZN	94 359		11 065 241	2 875 845	

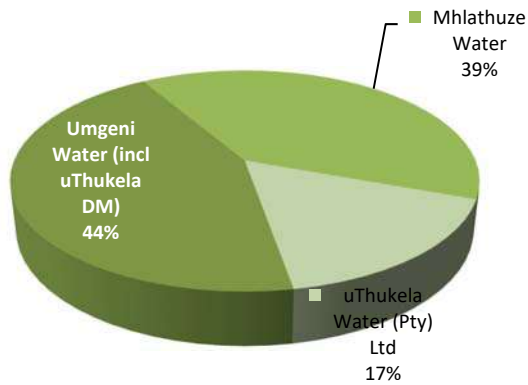
Umgeni Water's seven (7) customers cover 44% of KZN geographical area and is home to 73% households.

Umgeni Water's infrastructure assets in support of its bulk water services business comprise:

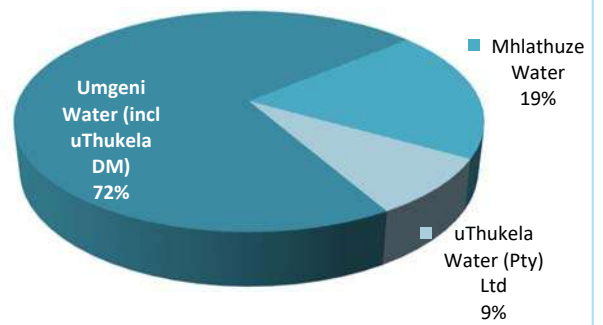
- Approximately 1260 kilometres of pipelines and sixty-seven (67) kilometres of tunnels,
- Fourteen (14) impoundments,
- Seventeen (17) water treatment works, and
- Nine (9) wastewater treatment works.



Supply Area Contribution to KZN



Households Distribution



Chapter 2: Operating Environment and Strategy



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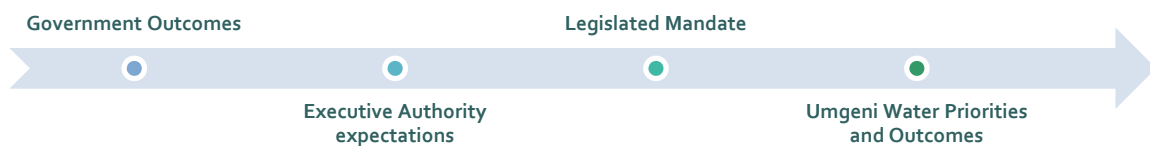
2.1 Operating Environment and Alignment to Government Mandate

This strategy is informed by the operating environment, cognisant of the minister's expectations as implicitly and explicitly pronounced in the following statements and publications:

- The 2018 State of the Nation and National Budget Addresses,
- The Fourteen Strategic Outcomes of Government and pertinent Outputs cascading to the Executive Authority.
- The National Development Plan (NDP) for South Africa for 2030, the MTSF 2014-2019 and the NWRS2.
- The key focus areas highlighted by the Minister of Water and Sanitation and the Department of Water and Sanitation.
- KwaZulu-Natal Provincial Growth and Development Strategy and Plans, as updated in 2018,
- Presidential Review Committee Report (2013) on reshaping state-owned-entities.

The combined efforts of government and state-owned entities during this period are aimed at addressing the compounded challenge of poverty, unemployment and inequality in the country and operational regions, all of which are aligned to the NDP 2030 and the MTSF 2014-2019. In this regard Umgeni Water will continue to align to government outcome goals and the focus areas and mandates of water boards as communities by the Executive Authority.

Details of national, provincial DWS priorities are summarised below.



2.1.1 14 priority outcomes of government

National government targets fourteen (14) priority outcomes. These outcomes are:

- **Outcome 1 (Education)** "Quality of our basic education"
- **Outcome 2 (Health)** "A long and healthy life for all South Africans"
- **Outcome 3 (Security)** "All people in South Africa are, and feel safe"
- **Outcome 4 (Employment)** "Decent employment through inclusive economic growth"
- **Outcome 5 (Skills)** "Skilled and capable workforce to support an inclusive growth plan"
- **Outcome 6 (Infrastructure)** "An efficient, competitive and responsive infrastructure network"
- **Outcome 7 (Rural Development)** "Vibrant, equitable, sustainable rural communities, contributing towards food security for all"
- **Outcome 8 (Human Settlement)** "Sustainable human settlements and improved quality of household life"
- **Outcome 9 (Local Government)** "Responsive, accountable, effective and efficient local government system"
- **Outcome 10 (Environment)** "Protect and enhance our environmental assets and natural resources"
- **Outcome 11 (International)** "Create a better South Africa, a better Africa and a better world"
- **Outcome 12 (Public Service)** "An efficient, effective and development oriented public service and an empowered, fair and inclusive citizenship"
- **Outcome 13 (Social Protection)** "An inclusive and responsive social protection system"
- **Outcome 14 (Social Cohesion)** "Nation Building and Social Cohesion"

2.1.2 Medium Term Strategic Framework (MTSF)

Government's strategic plan for 2014-2019 reflects commitments made including implementation of the National Development Plan (NDP) and sets out the actions Government will take and targets to be achieved. Government mandate is to:

- Deepen transformation and implement the NDP.
- Accelerate growth, create decent work and promote investment in a competitive economy.
- Improve the quality of life of all citizens and free the potential of each person

The Twenty Year Review and the National Planning Commission's 2011 Diagnostic Report highlight:

- Poverty, inequality and unemployment continue to negatively affect the lives of many people.
- Too few people have work, investment is too slow and education lags behind requirements.
- The weak state of the economy impedes efforts to reach development goals.

The second phase of government's democratic transition is reported to call for bold and decisive steps to place the economy on a qualitatively different path that eliminates poverty, creates jobs and sustainable livelihoods, and substantially reduces inequality. This requires what government terms radical economic transformation and a sustained focus on addressing the uneven quality of service delivery.

2.1.3 Water Mandate (DWS Priorities)

The following key actions are targeted by national government and DWS in the MTSF period (2014- 2019) to achieve the 2030 NDP goals:

Implement the National Water Resources Strategy (NWRS2)

The NWRS2 is aligned to the National Development Plan (NDP) through ensuring, amongst other aspects:

- Water supports development and the elimination of poverty and inequality,
- Water contributes to the economy and job creation, and
- Water is protected, used, developed, conserved, managed and controlled sustainably and equitably.

Reconciliation Strategies developed (NWRS2) to assess water balance against projected future needs and guide future water resource planning, management and investment requirements have identified the following key issues: (1) A greater focus on WC/WDM; (2) Increased value and utilisation of groundwater; (3) Reuse of wastewater at both coastal and inland systems; (4) Opportunity for more dams and transfer schemes; (5) Desalination; (6) Catchment rehabilitation; and (7) Rainwater harvesting.

Define future institutional arrangements for water resources management

These include:

- A national water-resource infrastructure agency that will develop and manage large economic infrastructure systems (national significance).
- Catchment management agencies to undertake resource management on a decentralised basis, with the involvement of local stakeholders.
- National capacity to support research, development and operation of water reuse and desalination facilities.
- A dedicated national water-conservation and demand-management programme and sub-programmes focused on municipalities, industry and agriculture.

Strengthening water management and establishing Regional Water Utilities (RWU)

This includes expanding the mandates of existing water boards to better support municipalities.

- The primary function of the Regional Water Utility (RWU) will be to plan, construct, operate and maintain Regional Bulk Infrastructure.
- The Regional Water Utility will take on more responsibility for regional water resources infrastructure to achieve greater integration with regional systems.
- In addition, the RWU will provide support functions to municipalities.

Ensuring licensing procedures for water: Ensuring licensing procedures for water avoid unnecessary delays and blockages to projects that can support employment creation, productive investment and export growth.

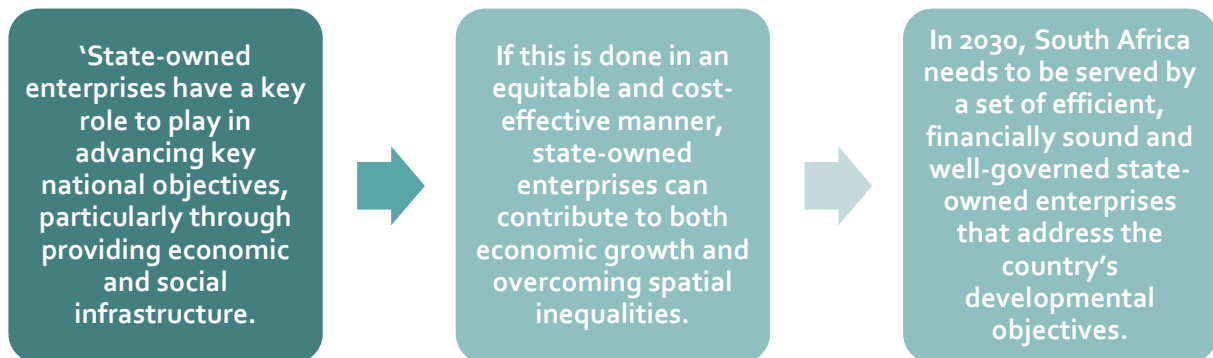
Finalise the comprehensive investment programme for Water Resources Development, bulk-water supply and wastewater management for major centres: This programme includes major infrastructure investment projects.

2.1.4 South Africa's Vision for 2030 and vision for State-owned-enterprises

South Africa's long term vision:

'By 2030, all South Africans have affordable access to sufficient safe water and hygienic sanitation to live healthy and dignified lives'

South Africa's Vision for state-owned enterprises



2.1.5 KZN Province’s Vision for 2035 and water related strategy and targets

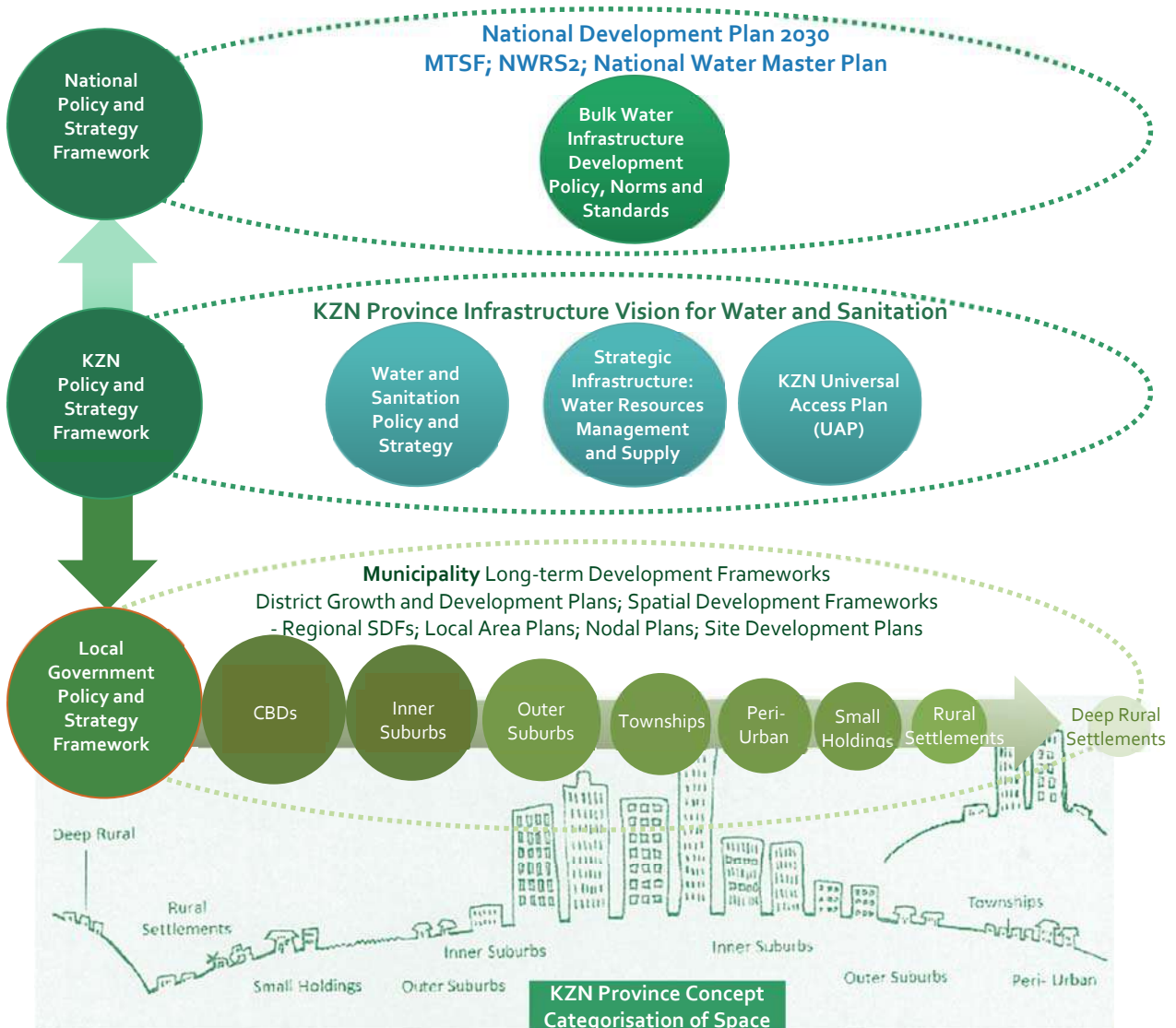
KwaZulu-Natal’s long term vision:

‘By 2035 KwaZulu-Natal will be a prosperous Province with a healthy, secure and skilled population, living in dignity and harmony, acting as a gateway to Africa and the World’

The KZN Province Strategy and Plans are informed by national strategy and planning considerations and ensures there is cascading to local development strategy and plans:

- National Development Plan (NDP), Medium-term Strategic Framework (MTSF), National Water Resources Strategy (NWRS2),
- Informs Provincial Growth and Development Strategy (PGDS), Provincial Growth and Development Plan (PGDP), and Universal Access Plan for Water and Sanitation, and
- Integrated Development Plans for KZN Local Municipalities that straddle the landscape from CBDs to deep rural areas.

Water is identified as a cross-cutting resource and Goal 4 of the Province’s seven (7) goals ‘Infrastructure Development’ has a strategic objective: ‘Ensure availability and sustainable management of water and sanitation for all.’



2.1.6 Customer Environment: Coverage of Water and Sanitation

Figure 2.1: Water infrastructure quality index (IQI) (Source: StatsSA Community Survey 2016)

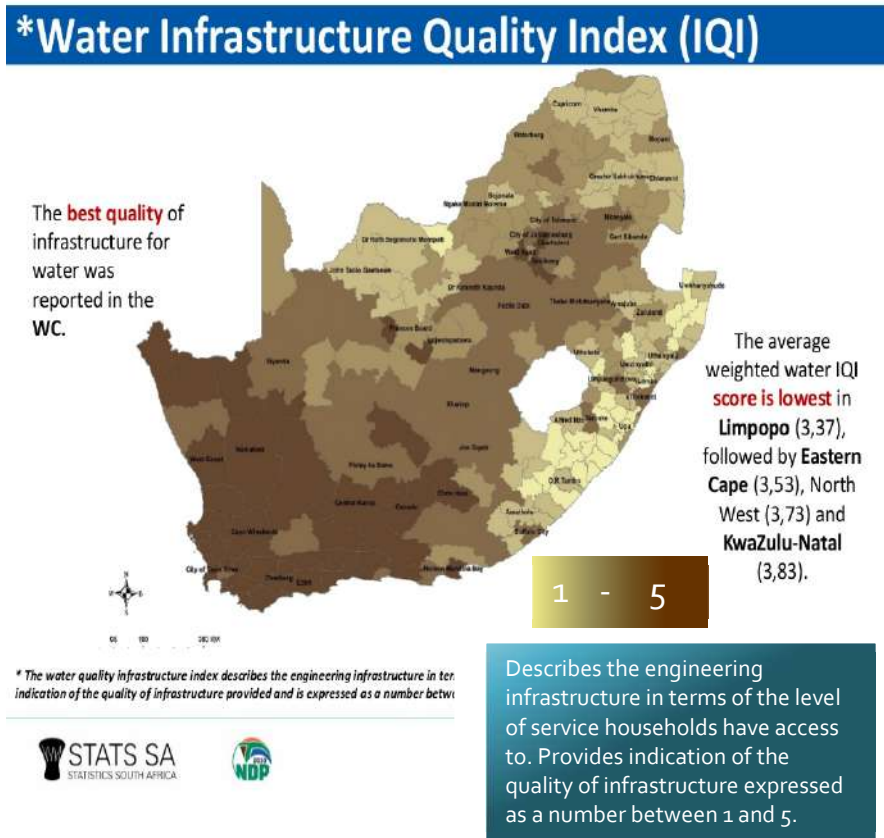
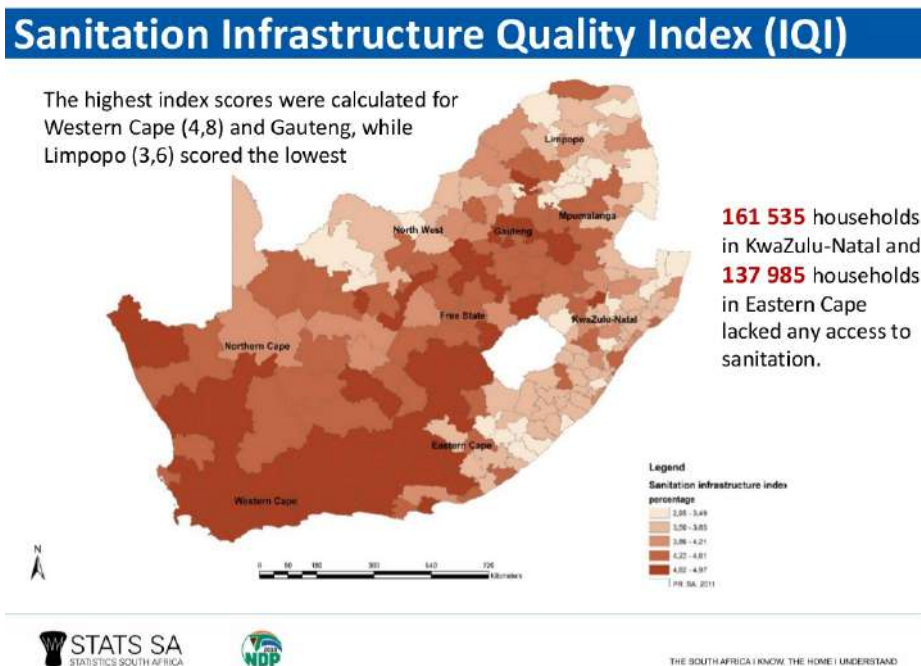


Figure 2.2: Sanitation infrastructure quality index (IQI) (Source: StatsSA Community Survey 2016)



2.2 Umgeni Water Strategy

2.2.1 Umgeni Water SWOT (April 2019)

Table 2.1: Summary of operating environment opportunities and constraints, together with Umgeni Water's strengths and constraints

Opportunities (External Enablers)	Strengths (Internal Enablers)
<ol style="list-style-type: none"> 1. National Development Plan, MTSF, NWRS-2, NWSMP and SOE Mandate <i>Reduce poverty, unemployment and inequity. Improve social cohesion through water services.</i> 2. KZN Service Area <i>Plan, construct, operate and maintain regional infrastructure. Increase customer base and access. Implement integrated planning. Water value-chain functions.</i> 3. Support to Municipalities <i>Enhance value proposition. Non-revenue water management. Asset management support. Provide more water related services.</i> 4. Water Resources development <i>Regional water resources development. Diversification of water resources mix.</i> 5. Innovation and Technology <i>Research and development. New technology. Integrated Energy Plan. Digital revolution, the future of connectivity and the future of work.</i> 6. Strategic Partnerships <i>Public-Private, Public-Public, project funding-financing, including global partners, skills sharing and other integrated service partnerships.</i> 	<ol style="list-style-type: none"> 1. Bulk Water and Wastewater Treatment Competencies <i>Distinctive competencies in bulk water and wastewater treatment.</i> 2. Brand Value <i>Strong Umgeni Water brand.</i> 3. Business Model <i>Sustainable business model.</i> 4. Financial Strength and Integrity <i>Strong balance-sheet, good credit rating, strong governance systems and risk management.</i> 5. Bulk Infrastructure <i>Well maintained bulk infrastructure network. Sound asset management strategy and infrastructure development plans. Infrastructure operational standards and quality assurance.</i> 6. Resource Mobilisation <i>Experienced and committed people. Capacity and capability meets needs. On-going Human Capital development</i>
Threats (External Constraints)	Weaknesses (Internal Constraints)
<ol style="list-style-type: none"> 1. Low economic growth (Global, National) inability to address poverty, unemployment and inequity <i>Low growth impacts sovereign credit-rating. Negative impact on cost of capital. Low job creation increasing poverty and inequity.</i> 2. Customers capacity and indigent consumer base <i>Customer vulnerability and sustainability. Non-payment for services. Customer areas with insufficient economy of scale / densities. Tariff issues, unsustainable infrastructure model. Water pricing / true cost of water.</i> 3. Water loss / non-revenue water <i>Significant water loss in retail systems threatening sustainability of service delivery. Poorly maintained municipal water systems / aging infrastructure.</i> 4. Poorly maintained wastewater /sewer networks <i>Pollution from poorly maintained municipality sewer network impacts resource water quality / sustainability.</i> 5. Climate change <i>Increase in the severity and frequency of floods and drought. Long-term water resources sustainability.</i> 6. Water resources development <i>Delay in national water resources developments.</i> 7. Institutional arrangements <i>Weakness in institutional arrangements conflating bulk water mandate of water boards and municipality reticulation mandate.</i> 8. Value Chain Alignment (tie-in of bulk and reticulation) <i>Misaligned planning – delay in reticulation implementation delaying community / end-user realising access.</i> 	<ol style="list-style-type: none"> 1. Distinctive competencies in full water-value chain functions <i>Insufficient or no track record / experience in wastewater recycling, alternate water resources and other water value-chain functions.</i> 2. Innovation and Technology <i>Lag in embracing and applying innovation. Conservative approach to new technology. Slow response to potential impact of the digital revolution, future of connectivity and future of work.</i> 3. Systems, Processes and People <i>Structure, systems, processes, skills and capacity for growth. Aging workforce - targeted mentoring, succession planning and knowledge management. Reskilling for future of work.</i> 4. Funding and Financing of Universal Access Plan (UAP) <i>Funding and financing model for KZN Universal Access.</i>

2.2.2 Our Strategy Narrative

Preamble

Umgeni Water is faced with unprecedented growth opportunities. These include regionalisation and geographical expansion as well as integration across the water value-chain.

Our survival as an entity is reliant on us embracing these opportunities and being the nucleus and catalyst for growth.

How we position ourselves is key to becoming the regional water entity of choice.

Technology and innovation, associated with capable human resources will give us the opportunity and edge for the above.

Given this, to realise the future we want we will do the following:

1. Who do we want to be?

- *An entity that invests in its people / skills*
- *An entity that invests in technology and innovation*
- *An entity that invests in its relationships and partnerships*

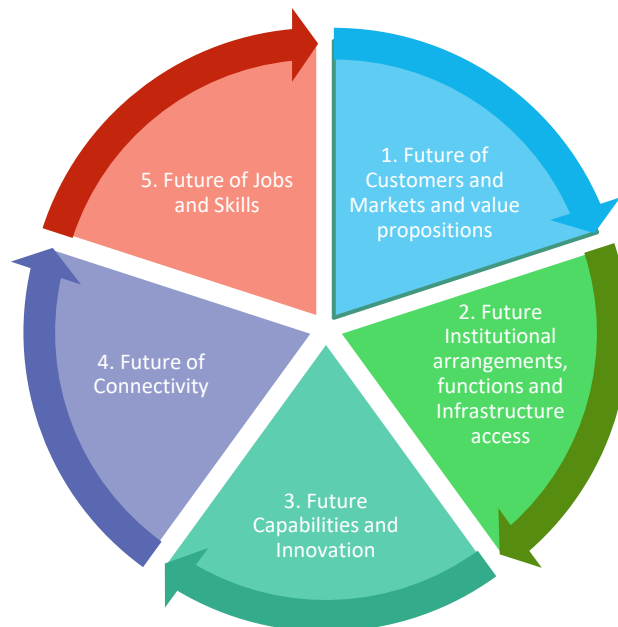
2. We need to change the way we do things

- *An entity that adapts its culture and increases its commitment*

3. We need to position ourselves differently

- *An entity that positions itself through an aggressive and agile growth strategy*

2.2.3 Our Strategic Themes for Enabled Growth and Innovative Growth



Our Strategic Themes

Strategic theme 1: Future of customers and markets and value propositions

Macroeconomic and technological trends. Entity's comparative advantage in markets to drive growth and future economy.

Deeper customer and stakeholder insights – current and future – thinking and aspirations, what is seen and heard about entity and customer gains using our products / services.

Enabled and Innovative growth

Strategic theme 2: Future institutional arrangements, functions and infrastructure access

Migrate to new institutional arrangement to sustain growth opportunities as a leading entity.

Craft and implement plans to enhance water infrastructure, overcome water resource constraints and ensure sustainable access.

Drive implementation to contribute to a highly liveable environment aligned to KZN Vision and RSA Vision to provide citizens with a sustainable home to live, work and play in.

Strategic theme 3: Future Capabilities and Innovation

Innovate to stay relevant (Don't become a Nokia and Motorola)

Embrace technology to create value

Craft new partnerships and business models to create value

Strategic theme 4: Future of Connectivity

Remain well-connected as a competitive key entity in the future economy

Take into account trends that will affect how the global economy is configured

Strategic theme 5: Future of Jobs and Skills

Trends, including key demographic and emerging technology will affect the landscape for jobs and the future of skills / requirements for workers (e.g. robotics, automation, the GIG economy)

Craft or recommend strategies to prepare workers for the future (Re-Skilling of our employees and different institutional arrangements)

2.2.4 Our Strategic Thrusts

1. Align to developmental mandate to contribute to reduction in poverty, unemployment and inequity. Implement infrastructure developments to increase access and for growth to progressively expand services into KwaZulu-Natal.
2. Implement integrated planning and water value chain functions that ensure long-term water resources adequacy and supply sustainability. Develop sustainable water resources and investigate diversification of water resources mix.
3. Provide support to municipalities to improve capacity and off-take sustainability. Implement water loss / non-revenue water (NRW) management initiatives. Enhance customer value-proposition, communication and brand value.
4. Engage in strategic partnerships (both public and private) including for water services, skills sharing, funding and financing, innovation, research and development.
5. Embrace innovation and the digital revolution to improve resiliency of processes, infrastructure and the way we work.
6. Continue to improve governance, risk and compliance systems.
7. Leverage the balance sheet for growth, whilst carefully managing debt.
8. Invest in infrastructure maintenance to ensure a well maintained bulk infrastructure network.
9. Understand the future of jobs and skills and invest in leadership, management, skills development and reskilling and evolve with a transforming workforce.
10. Continue to strengthen and drive a transformation agenda that supports inclusivity and reduces inequality and unemployment.

2.2.5 Umgeni Water Vision, Mission and Values

Vision

Leading water utility that enhances value in the provision of bulk water and sanitation services

We strive to be an effectively run, public-oriented and socially accountable water utility, which has its heart and mind, focused on the provision of bulk water services. We will achieve leadership based on our performance and the sustainable value we co-create with our customers and stakeholders and continue to leave a positive legacy in our communities, region and country.

Mission

Provide innovative, sustainable, effective and affordable bulk water and sanitation services

Our business is the provision of bulk water services – both potable and wastewater - to support government service delivery to the people of South Africa and providing water for life. This includes providing all bulk water services to our customers, facilitating integrated planning in the region, supporting municipalities and contributing to water knowledge that will lead to sustainability from source-tap-source.

Strategic Intent

Key Partner that enables government to deliver effective and efficient bulk water and sanitation services

Umgeni Water intends to be recognised as a strategic and sustainable partner of government, co-creating value through providing bulk water and sanitation services as a catalyst for local economic development and government's developmental agenda.

Benevolent Intent

Provide bulk water and sanitation services to improve quality of life and enhance sustainable economic development.

Umgeni Water intends to be recognised as an organisation that has legitimate leadership and cultivates accountability. Through this people-centred approach Umgeni Water will achieve water services delivery. Bulk water services will be provided for both health and economic benefits, which contribute to addressing poverty, under-development and inequality.

Values

Customer focus

We invest in partnerships with our customers and all stakeholders for sustainable value creation.

Integrity

We commit ourselves to the highest ethical conduct.

Developmental approach

We deliver solutions consistent with the development agenda of the country.

People-centred

We value and respect all people equally, cultivate accountability, invest in our people and engage the will of all our people.

Environmentally sustainable

We are committed to conserving our diminishing natural resources.

Innovation, knowledge, wisdom and Excellence

We value innovation, knowledge and wisdom to lead, grow and achieve excellence.

2.2.6 Umgeni Water Strategic Goals

Strategic Goal 1: Provide reliable, responsive and affordable services and expand infrastructure to increase access, whilst ensuring stable water resources to meet current and future needs.

Strategic Goal 2: Develop strategic partnerships, increase support to customers, improve visibility and be a regional leader in the provision of bulk water and sanitation services.

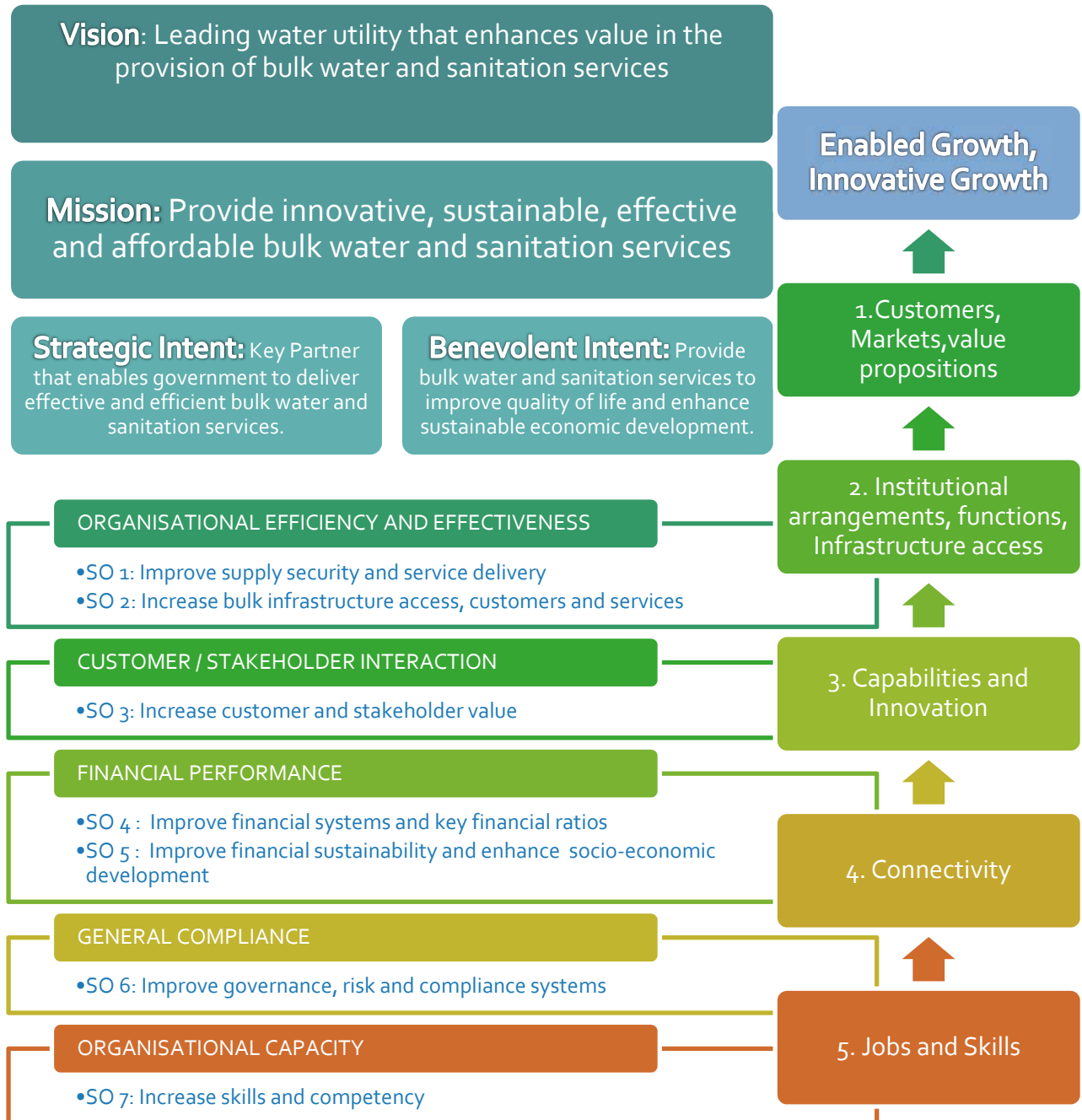
Strategic Goal 3: Ensure sufficient operating cash flows, manage key cost drivers and leverage debt and assets to provide for future expansion, whilst supporting socio-economic development.

Strategic Goal 4: Ensure a well-governed and resilient entity that innovates, educates and supports community development and contributes to environmental sustainability.

Strategic Goal 5: Strengthen and develop quality human resources and ensure a participatory, collaborative organisation dedicated to continual learning and improvement.

2.2.7 Umgeni Water Strategy Map

The Umgeni Water Strategy Map has been realigned to DWS perspectives for Water Boards. This affects the packaging / grouping and does not materially change the strategy of Umgeni Water.



- We will be an entity that:**
- Invests in its people / skills
 - Invests in technology and innovation
 - Invests in its relationships and partnerships
 - Adapts its culture and increases its commitment
 - Positions itself through an aggressive and agile growth strategy

The realigned strategy has five (5) perspectives and goals and seven (7) strategic objectives that realise Umgeni Water's strategy. DWS performance objectives for Water Boards underlie the Strategic Objectives.

ORGANISATIONAL EFFICIENCY AND EFFECTIVENESS

Strategic Goal 1: Provide reliable, responsive and affordable services and expand infrastructure to increase access, whilst ensuring stable water resources to meet current and future needs.

SO 1: Improve supply security and service delivery

PERFORMANCE OBJECTIVE 1: BULK POTABLE WATER QUALITY COMPLIANCE

PERFORMANCE OBJECTIVE 2: MANAGE AVOIDABLE WATER LOSSES

PERFORMANCE OBJECTIVE 3: RELIABILITY OF SUPPLY

SO 2: Increase bulk infrastructure access, customers and services

PERFORMANCE OBJECTIVE 4: INCREASED ACCESS TO SERVICES

Key outcomes: Product Quality, Water Resources Adequacy, Customer Satisfaction and Stakeholder Understanding and Support, Community and Environmental Sustainability, Infrastructure stability, Operational Optimisation

CUSTOMER / STAKEHOLDER INTERACTION

Strategic Goal 2: Develop strategic partnerships, increase support to customers, improve visibility and be a regional leader in the provision of bulk water and sanitation services.

SO 3: Increase customer and stakeholder value

PERFORMANCE OBJECTIVE 5: BULK SUPPLY AGREEMENTS CONCLUDED WITH MUNICIPALITIES / OTHER CUSTOMERS

PERFORMANCE OBJECTIVE 6: IMPLEMENTATION OF MINISTERIAL DIRECTIVES

PERFORMANCE OBJECTIVE 7: SUPPORT RURAL DEVELOPMENT

PERFORMANCE OBJECTIVE 8: ACHIEVE STATUTORY REPORTING COMPLIANCE

Key outcomes: Stakeholder Understanding and Support, Customer Satisfaction, Community and Environmental Sustainability.

FINANCIAL PERFORMANCE

Strategic Goal 3: Ensure sufficient operating cash flows, manage key cost drivers and leverage debt and assets to provide for future expansion, whilst supporting socio-economic development.

SO 4: Improve financial systems and key financial ratios

PERFORMANCE OBJECTIVE 9: FINANCIAL REPORTING COMPLIANCE

PERFORMANCE OBJECTIVE 10: IMPROVE KEY FINANCIAL RATIOS

SO 5: Improve financial sustainability and enhance socio-economic development

PERFORMANCE OBJECTIVE 11: INCREASE BBBEE EXPENDITURE IN RELATION TO OPERATIONAL PROJECTS

PERFORMANCE OBJECTIVE 12: MANAGE COSTS WITHIN APPROVED BUDGET

PERFORMANCE OBJECTIVE 13: CAPITAL EXPENDITURE PROGRAMME

PERFORMANCE OBJECTIVE 14: ENGAGEMENT IN SECONDARY ACTIVITIES

Key outcomes: Financial Viability, Infrastructure Stability, Community Sustainability.

GENERAL COMPLIANCE

Strategic Goal 4: Ensure a well-governed and resilient entity that innovates, educates and supports community development and contributes to environmental sustainability.

SO 6: Improve governance, risk and compliance systems

PERFORMANCE OBJECTIVE 15: BOARD EFFECTIVENESS

PERFORMANCE OBJECTIVE 16: EFFECTIVE INTERNAL CONTROLS, COMPLIANCE AND RISK MANAGEMENT

PERFORMANCE OBJECTIVE 17: GOOD GOVERNANCE

PERFORMANCE OBJECTIVE 18: CORPORATE SOCIAL RESPONSIBILITY INITIATIVES

PERFORMANCE OBJECTIVE 19: BULK WASTEWATER COMPLIANCE

PERFORMANCE OBJECTIVE 20: ENVIRONMENTAL SUSTAINABILITY, RESEARCH AND INNOVATION

Key outcomes: Operational Resiliency, Community and Environmental Sustainability

ORGANISATIONAL CAPACITY

Strategic Goal 5: Strengthen and develop quality human resources and ensure a participatory, collaborative organisation dedicated to continual learning and improvement

SO 7: Increase skills and competency

PERFORMANCE OBJECTIVE 21: TRAINING AND SKILLS DEVELOPMENT

PERFORMANCE OBJECTIVE 22: JOBS CREATED

PERFORMANCE OBJECTIVE 23: STAFF LEVELS

PERFORMANCE OBJECTIVE 24: EMPLOYEE / UNION ENGAGEMENT

Key outcome: Leadership and Employee Development

2.2.8 Umgeni Water Strategy Outcomes

Product Quality (Water and Wastewater)

Achieved when Umgeni Water produces potable water and wastewater in full compliance with statutory and reliability requirements and consistent with customer and environmental needs

Water Resources Adequacy

Achieved when Umgeni Water assesses the scarcity of freshwater resources, investigates sustainable alternatives, manages water abstractions assiduously and has access to stable raw water resources to meet current and future customer needs.

Operational Optimisation

Achieved when Umgeni Water has on-going, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations, minimises resource use, loss, and impacts from day-to-day operations and maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements

Customer Satisfaction

Achieved when Umgeni Water provides reliable, responsive, and affordable services in line with explicit, customer-agreed service levels and receives timely customer feedback to maintain responsiveness to customer needs and emergencies.

Stakeholder Understanding and Support

Attained when Umgeni Water engenders understanding and support from statutory, contracted and non-contracted bodies for service levels, tariff structures, operating budgets, capital improvement programmes, risk management decisions, and water resources adequacy.

Financial Viability

Achieved when Umgeni Water understands the organisational life-cycle costs and maintains a balance between debt and assets while managing operating expenditures and increasing revenues. In addition, the organisation aims at a sustainable tariff that is consistent with customer expectations, recovers costs and provides for future expansion.

Infrastructure Stability

Achieved when Umgeni Water's understands the condition and costs associated with critical infrastructure assets and maintains and enhances the condition of all assets over the long-term. This is done at the lowest possible life-cycle cost and acceptable risk levels, is consistent with customer service and statutory-supported service levels, and consistent with anticipated growth and system reliability goals. The organisation further assures that asset repair, rehabilitation, and replacement efforts are coordinated to minimise disruptions and other negative consequences.

Operational Resiliency

achieved when Umgeni Water's leadership and staff work together to anticipate and avoid problems and proactively identify, assess, and establish tolerance levels for, and proactively and effectively manages a full range of business risks, consistent with industry trends and system reliability goals.

Community and Environmental Sustainability

achieved when Umgeni Water is explicitly cognisant of and attentive to the impacts it has on current and future community sustainability, supports socio-economic development, and manages its operations, infrastructure, and investments to protect, restore, and enhance the natural environment, whilst using energy and other natural resources efficiently.

Leadership and Employee Development

Achieved when Umgeni Water is a participatory, collaborative organisation dedicated to continual learning and improvement, recruits and retains a workforce that is competent, motivated, and adaptive and works safely, ensures institutional knowledge is retained and improved; provides opportunities for professional and leadership development, and creates an integrated and well-coordinated senior leadership team.



Chapter 3: Balanced Scorecard



*Umgeni Water Corporate Plan
2019/20 to 2023/24*



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Strategic Goal 1

Provide reliable, responsive and affordable services and expand infrastructure to increase access, whilst ensuring stable water resources to meet current and future needs.

BALANCED SCORECARD PERSPECTIVE:	ORGANISATIONAL EFFICIENCY AND EFFECTIVENESS
OUTCOMES:	Product Quality, Water Resources Adequacy, Customer Satisfaction, Stakeholder Understanding and Support, Community and Environmental Sustainability, Infrastructure stability, Operational Optimisation
STRATEGIC OBJECTIVES:	<u>SO 1: Improve supply security and service delivery</u> <u>SO 2: Increase bulk infrastructure access, customers and services</u>

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
SO1	PO 1: BULK POTABLE WATER QUALITY COMPLIANCE	Improve water quality compliance.	1.1	Per cent compliance of WTW systems with SANS 241 water quality standard per risk category (SHC) ★	12 WTW systems 100% compliant with Excellent SANS 241. 1 WTW system (Mhlabatshane WTW) Operational Category 90.43% Four (4) UMDM schemes compliant with Good SANS 241.	13 WTW systems 100% compliant with Excellent SANS 241 Four (4) UMDM schemes compliant Excellent SANS 241 in three categories and with Good SANS 241 only in operational and aesthetic.	13 WTW systems 100% compliant with Excellent SANS 241 Four (4) UMDM schemes compliant Excellent SANS 241 in three categories and with Good SANS 241 only in operational and aesthetic.	> 17 WTW systems 100% compliant with Excellent SANS 241 Three (3) uTDM schemes compliant with Good SANS 241.	> 17 WTW systems 100% compliant with Excellent SANS 241 Three (3) uTDM schemes compliant with Good SANS 241.	> 20 WTW systems 100% compliant with Excellent SANS 241	> 20 WTW systems 100% compliant with Excellent SANS 241

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
						Targeted UTDM schemes monitoring and reporting system established.	Three (3) uTDM schemes compliant with Good SANS 241.				
	PO 2: MANAGE AVOIDABLE WATER LOSSES	Reduce water loss / unaccounted for water per system.	2.1	Avoidable water lost (mil m ³) over total water produced (mil m ³). (SHC) ★	2.17%	≤ 5%	≤ 5%	≤ 5%	≤ 5%	≤ 5%	≤ 5%
	PO 3: RELIABILITY OF SUPPLY	Develop integrated water resources plans for each supply system and region for long term sustainability.	3.1	Supply and demand status and projections demonstrating long-term water resources adequacy per system and region.	Updated Infrastructure Master Plan.	Updated Infrastructure Master Plan.	Updated Infrastructure Master Plan.	Updated Infrastructure Master Plan.	Updated Infrastructure Master Plan.	Updated Infrastructure Master Plan.	Updated Infrastructure Master Plan.
Short-Term Water Resource Status Report.					Short-Term Water Resource Status Report.	Short-Term Water Resource Status Report.	Short-Term Water Resource Status Report.	Short-Term Water Resource Status Report.	Short-Term Water Resource Status Report.		
0 days > 24 hours					0 days > 24 hours	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours		
		Improve supply reliability and asset management to eliminate unplanned supply disruptions.	3.2	Number of days (> 24 hours) supply disrupted over total supply days (365 days per year). (SHC) ★	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours	0 days > 24 hours
SO2	PO4: INCREASED ACCESS TO SERVICES	Investigate new markets and products for growth	4.1	Investigations for new services or products completed	-	Infrastructure master plan for one new KZN WSA (uThukela DM area) complete	Scope for new bulk services for existing customers.	-	-	-	-
		Implement infrastructure to meet national objectives of increasing access.	4.2	Capex spend on rural expansion related projects as % of CAPEX Spend. (SHC) ★	R367m of R927m spent on rural expansion projects 40% of annual capex budget	R501m ±30% of annual capex spend.	R408m ±30% of annual capex spend.	R518m ±29% of annual capex spend.	R731m ±41% of annual capex spend.	R856m ±48% of annual capex spend.	R308m ±15% of annual capex spend.

(SHC) ★ Shareholder Compact Indicator

Strategic Goal 2

Develop strategic partnerships, increase support to customers, improve visibility and be a regional leader in the provision of bulk water and sanitation services.

BALANCED SCORECARD PERSPECTIVE:	CUSTOMER / STAKEHOLDER INTERACTION
OUTCOMES:	Stakeholder Understanding and Support Customer Satisfaction Community and Environmental Sustainability
STRATEGIC OBJECTIVES:	<u>SO 3: Increase customer and stakeholder value</u>

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
SO3	PO 5: BULK SUPPLY AGREEMENTS CONCLUDED WITH MUNICIPALITIES / OTHER CUSTOMERS	Conclude supply agreements with all customers.	5.1	Total number of signed contracts (bulk supply agreements) in place as a % of total customers. (SHC) ★	7 customers, 100% signed agreements.	7 customers, 100% signed agreements.	7 customers, 100% signed agreements.	7 customers, 100% signed agreements.	7 customers, 100% signed agreements.	7 customers, 100% signed agreements.	7 customers, 100% signed agreements.
		Engage Contractual Stakeholders and create customer and stakeholder value.	5.2	Number of engagements with customers	≥ 1 engagement with all 7 customers	≥ 1 engagement with all 7 customers	≥ 1 engagement with ≥ 7 customers	≥ 1 engagement with ≥ 7 customers	≥ 1 engagement with ≥ 7 customers	≥ 1 engagement with ≥ 7 customers	≥ 1 engagement with ≥ 7 customers
	PO 6: IMPLEMENTATION	Implement Ministerial	6.1	Directives implemented in	One (1) directive	One (1) directive	-	-	-	-	-

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
	OF MINISTERIAL DIRECTIVES	Directives		accordance with plan (SHC) ★							
	PO 7: SUPPORT RURAL DEVELOPMENT	Implement projects that support vulnerable municipalities.	7.1	Number of signed contracts/MOUs with rural Municipalities for provision of support. (SHC) ★	Contracts/MOUs for 3 projects or service implemented	Contracts/MOUs for ≥ 1 project or service implemented	Contracts/MOUs for ≥ 1 project or service implemented	Contracts/MOUs for ≥ 1 project or service implemented	Contracts/MOUs for ≥ 1 project or service implemented	Contracts/MOUs for ≥ 1 project or service implemented	Contracts/MOUs for ≥ 1 project or service implemented
	PO 8: ACHIEVE STATUTORY REPORTING COMPLIANCE	Develop and submit all statutory accountability documents.	8.1	Number of submissions in respect of Monthly Reports, Quarterly Reports, Annual Report, Tariff, Corporate Plan, SHC and Policy Statement. (SHC) ★	20 reports on time	20 reports on time	20 reports on time	20 reports on time	21 reports on time	20 reports on time	20 reports on time
		Engage Statutory Stakeholders and create stakeholder value.	8.2	Number of engagements with statutory stakeholders: Minister, DWS, PC and NT.	12 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements
		Collaborate with Strategic stakeholders and create stakeholder value.	8.3	Number of engagements with strategic stakeholders, including KZN Province	14 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements	≥ 4 engagements
		Collaborate with Non-Contractual stakeholders and create stakeholder value.	8.4	Number of Engagements with non-contractual stakeholders, including Communities, Media, General Public and other institutions.	1 Community 14 engagements with media 1 Business 1 National	≥ 1 Community ≥ 4 Media ≥ 1 Business ≥ 1 National	≥ 1 Community ≥ 4 Media ≥ 1 Business ≥ 1 National	≥ 1 Community ≥ 4 Media ≥ 1 Business ≥ 1 National	≥ 1 Community ≥ 4 Media ≥ 1 Business ≥ 1 National	≥ 1 Community ≥ 4 Media ≥ 1 Business ≥ 1 National	≥ 1 Community ≥ 4 Media ≥ 1 Business ≥ 1 National

(SHC) ★ Shareholder Compact Indicator

Strategic Goal 3

Ensure sufficient operating cash flows, manage key cost drivers and leverage debt and assets to provide for future expansion, whilst supporting socio-economic development.

BALANCED SCORECARD PERSPECTIVE:

FINANCIAL PERFORMANCE

OUTCOMES:

Financial Viability, Infrastructure Stability, Community Sustainability.

STRATEGIC OBJECTIVE:

SO 4: Improve financial systems and key financial ratios

SO 5: Improve financial sustainability and enhance socio-economic development

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
SO4	PO 9: FINANCIAL REPORTING COMPLIANCE	Monitor and review systems for performance and financial controls.	9.1	Unqualified report with no emphasis of matters (Clean Audit) (SHC) ★	Unqualified external audit report in respect of financial statements and pre-determined objectives.	Unqualified report with no of emphasis of matter (Clean Audit).	Unqualified report with no of emphasis of matter (Clean Audit).	Unqualified report with no of emphasis of matter (Clean Audit).	Unqualified report with no of emphasis of matter (Clean Audit).	Unqualified report with no of emphasis of matter (Clean Audit).	Unqualified report with no of emphasis of matter (Clean Audit).
	PO 10: IMPROVE KEY FINANCIAL RATIOS	Manage liquidity and solvency	10.1	Operating cash flows, Rm	R1324m	≥ R1200m	≥ R1500m	≥ R1800m	≥ R2100m	≥ R2400m	≥ R2700m
10.2			Current Ratio (SHC) ★	2.74	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1
10.3			Debt to Equity ratio. (SHC) ★	0.23	≤ 0.4	≤ 0.2	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
10.4			Interest cover ratio.	4.94	≥ 2.5	≥ 5.7	≥ 7.9	≥ 12.7	≥ 15	≥ 12.7	

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
		Manage debtor days.	10.5	Number of debtor days. (SHC) ★	47 days	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40
		Increase return on investment.	10.6	Per cent return on assets. (SHC) ★	11.11%	≥ 7.5%	≥ 9.5%	≥ 9.8%	≥ 10%	≥ 10%	≥ 10%
		Manage primary business performance	10.7	Gross profit margin % for primary activity (SHC) ★	60% (R1.6gobn)	≥ 50%	≥ 57%	≥ 59%	≥ 60%	≥ 61%	≥ 61%
			10.8	Net profit margin % for primary activity (SHC) ★	42% (R1,177m)	≥ 20%	≥ 30%	≥ 31%	≥ 31%	≥ 32%	≥ 33%
		Manage secondary business performance	10.9	Gross profit margin % for secondary activity (SHC) ★	15% (R7.5m)	≥ 2%	≥ 19%	≥ 7%	≥ 7%	≥ 6%	≥ 6%
			10.10	Net profit margin % for secondary activity. (SHC) ★	11% (R5.6m)	≥ 1%	≥ 17%	≥ 4%	≥ 3%	≥ 3%	≥ 3%
		Invest timely and appropriately in infrastructure asset repairs and maintenance.	10.11	Repairs and maintenance Rm over PPE Rm. (SHC) ★	R213m 2.56% of PPE	R277m ±10% ≥ 2% of PPE	R356m ±10% ≥ 3% of PPE	R378m ±10% ≥ 3% of PPE	R403m ±10% ≥ 3% of PPE	R427m ±10% ≥ 3% of PPE	R452m ±10% ≥ 2% of PPE
		Increase staff efficiency and productivity.	10.12	Staff remuneration as a % of total operating expenditure (SHC) ★	35%	≤ 35%	≤ 35%	≤ 35%	≤ 35%	≤ 35%	≤ 35%
SO5	PO 11: INCREASE B-BBEE EXPENDITURE IN RELATION TO OPERATIONAL PROJECTS	Increase participation, B-BBEE spend and new entrants.	11.1	Per cent PSP and contractor order values (CPGs) awarded to B-BBEE suppliers	39% (R174m of R451m)	≥ 35%	≥ 35%	≥ 35%	≥ 35%	≥ 35%	≥ 35%
				Per cent PSP and contractor order values (CPGs) awarded to B-BBEE suppliers that are women.	55% (R95m of R174m)	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%
			11.2	Actual B-BBEE spend as a % of total discretionary expenditure. (SHC) ★	>80%	>80%	>80%	>80%	>80%	>80%	>80%

UW	Performance Objective	Strategic Initiative / Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
				Number of new B-BBEE entrants awarded work. (SHC) ★	3 new entrants awarded work.	≥ 2 new entrants awarded work.	≥ 2 new entrants awarded work.	≥ 2 new entrants awarded work.	≥ 2 new entrants awarded work.	≥ 2 new entrants awarded work.	≥ 2 new entrants awarded work.
		Create supplier value.	11.3	Number of engagements with Suppliers.	1 Supplier forum	≥ 1 Supplier forum	≥ 1 Supplier forum	≥ 1 Supplier forum	≥ 1 Supplier forum	≥ 1 Supplier forum	≥ 1 Supplier forum
	PO 12: MANAGE COSTS WITHIN APPROVED BUDGET	Ensure sustainable operations.	12.1	Total revenue, Rbn and per cent variance.	R2.89bn	R3.36bn±10%	R4.16bn±10%	R4.67bn±10%	R5.19bn±10%	R5.73bn±10%	R6.33bn±10%
12.2			Total expenditure, Rbn and per cent variance. (SHC) ★	R1.718bn	R2.45bn±10%	R2.93bn±10%	R3.25 bn±10%	R3.61bn±10%	R3.92bn±10%	R4.27bn±10%	
12.3			Total surplus (loss) Rm and per cent variance	R1,183m	R931m±10%	R1.23bn±10%	R1.42bn±10%	R1.58bn±10%	R1.82bn±10%	R2.07bn±10%	
	PO 13: CAPITAL EXPENDITURE PROGRAMME	Implement capital infrastructure to meet demands and for growth.	13.1	CAPEX Rm against budget and % variance. (SHC) ★	R927m 30% variance	≥ 80% of R1650m, ≤ 20% variance	≥ 80% of R1505m, ≤ 20% variance	≥ 80% of R1823m, ≤ 20% variance	≥ 80% of R1794m, ≤ 20% variance	≥ 80% of R1796m, ≤ 20% variance	≥ 80% of R1995m, ≤ 20% variance
13.2			Number of CAPEX projects within target completion dates against planned number and % variance. (SHC) ★	33% variance	≤ 15%	≤ 15% for 14 Strategic Infrastructure Projects	≤ 15% for 14 Strategic Infrastructure Projects	≤ 15% for 14 Strategic Infrastructure Projects	≤ 15% for 14 Strategic Infrastructure Projects	≤ 15% for 14 Strategic Infrastructure Projects	
		Benchmark procurement system for engineering and construction and improve turnaround time.	13.3	Turnaround time (working days) for awarding of capex programme tenders, contract negotiations and issuing of signed contract.	89 days for award; 50 days for CPG negotiations 23 days for signed contract	≤ 90 days for award; ≤ 45 days for CPG negotiations ≤ 15 days for signed contract	≤ 90 days for award; ≤ 45 days for CPG negotiations ≤ 15 days for signed contract	≤ 90 days for award; ≤ 45 days for CPG negotiations ≤ 15 days for signed contract	≤ 90 days for award; ≤ 45 days for CPG negotiations ≤ 15 days for signed contract	≤ 90 days for award; ≤ 45 days for CPG negotiations ≤ 15 days for signed contract	≤ 90 days for award; ≤ 45 days for CPG negotiations ≤ 15 days for signed contract
	PO 14: ENGAGEMENT IN SECONDARY ACTIVITIES	Manage s30 revenue.	14.1	Total s30 revenue, Rm and per cent of turnover. (SHC) ★	R51m 2% of turnover	R32m ±10%, ≥ 1% of turnover	R37m ±10%, ≥ 1% of turnover	R27m ±10%, ≥ 1% of turnover	R29m ±10%, ≥ 1% of turnover	R31m ±10%, ≥ 1% of turnover	R33m ±10%, ≥ 1% of turnover

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Strategic Goal 4

Strategic Goal 4: Ensure a well-governed and resilient entity that innovates, educates and supports community development and contributes to environmental sustainability.

BALANCED SCORECARD PERSPECTIVE:

GENERAL COMPLIANCE (RISK AUDIT
AND GOVERNANCE)

OUTCOMES:

Operational Resiliency, Community and Environmental Sustainability

STRATEGIC OBJECTIVE:

SO 6: Improve governance, risk and compliance systems

UW	Performance Objective	Strategic Initiative /Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
SO6	PO 15: BOARD EFFECTIVENESS	Monitor and improve fiduciary duties and governance.	15.1	Board / Committee meetings attended as a % of planned meetings. (SHC) ★	95% attendance	≥ 80%	≥ 80%	≥ 80%	≥ 80%	≥ 80%	≥ 80%
				Resolutions taken by the board as a % of resolutions required. (SHC) ★	≥ 80%	≥ 80%	≥ 80%	≥ 80%	≥ 80%	≥ 80%	
	Monitor and improve ethics and governance.	15.2	All ethical issues addressed as assessed against key ethics areas.	Seven (7) key ethics areas assessed and issues dealt with.	Seven (7) key ethics areas assessed and issues dealt with.	Seven (7) key ethics areas assessed and issues dealt with.	Seven (7) key ethics areas assessed and issues dealt with.	Seven (7) key ethics areas assessed and issues dealt with.	Seven (7) key ethics areas assessed and issues dealt with.	Seven (7) key ethics areas assessed and issues dealt with.	
	PO 16: EFFECTIVE INTERNAL CONTROLS,	Monitor and review internal controls and risk system.	16.1	Number of repeat and number of unresolved	7 findings.	≤ 7 findings.	≤ 7 findings.	≤ 5 findings	≤ 5 findings	≤ 5 findings	≤ 5 findings

UW	Performance Objective	Strategic Initiative /Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
	COMPLIANCE AND RISK MANAGEMENT			findings. (SHC) ★							
		Develop compliance registers and monitor and improve legal compliance.	16.2	Per cent compliance against legal Compliance Register.	95% compliance.	100% compliance.	100% compliance.	100% compliance.	100% compliance.	100% compliance.	100% compliance.
		Monitor and improve health and safety.	16.3	Disabling Injury Frequency Ratio (DIFR).	0.16	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
	PO 17: GOOD GOVERNANCE	Improve controls and risk mitigation	17.1	Number of breaches in materiality and significance framework. (SHC) ★	The entity incurred Fruitless and Wasteful Expenditure, Irregular Expenditure and breaches or instances of non-compliance with the materiality and significance framework.	Nil	Nil	Nil	Nil	Nil	Nil
	PO 18: CORPORATE SOCIAL RESPONSIBILITY INITIATIVES	Plan and implement CSR/CSI initiatives	18.1	Number of CSR/CSI initiatives undertaken. (SHC) ★	1 CSR/CSI initiative	≥ 2 CSR/CSI initiatives	≥ 2 CSR/CSI initiatives	≥ 2 CSR/CSI initiatives	≥ 2 CSR/CSI initiatives	≥ 2 CSR/CSI initiatives	≥ 2 CSR/CSI initiatives
		Plan and implement collaborative water education initiatives	18.2	Number of schools / community initiatives undertaken.	3 initiatives implemented	3 initiatives implemented	3 initiatives implemented	3 initiatives implemented	3 initiatives implemented	3 initiatives implemented	3 initiatives implemented
	PO 19: BULK WASTEWATER COMPLIANCE	Improve wastewater quality compliance.	19.1	Per cent compliance of WWTW systems with discharge licence or General Authorisation requirements. (SHC) ★	6 WWTW ≥ 85% compliant 1 WWTW ≥ 60% compliant	7 WWTW ≥ 85% compliant 1 WWTW ≥ 80% compliant 1 WWTW ≥ 60% compliant	7 WWTW ≥ 85% compliant 3 WWTW ≥ 80% compliant	> 10 WWTW ≥ 85% compliant	> 11 WWTW ≥ 85% compliant	> 11 WWTW ≥ 85% compliant	> 11 WWTW ≥ 85% compliant
	PO 20: ENVIRONMENTAL SUSTAINABILITY, RESEARCH AND INNOVATION	Develop and implement environmental sustainability, research and innovation plans.	20.1	Number of environmental sustainability, research and innovation initiatives implemented.	1 initiative completed	≥ 2 initiatives in planning (≥ 1 environmental and ≥ 1 innovation)	1 initiative in planning. 1 initiative implemented.	1 initiative in planning. 1 initiative implemented.	1 initiative in planning. 1 initiative implemented.	1 initiative in planning. 1 initiative implemented.	1 initiative in planning. 1 initiative implemented.

(SHC) ★ Shareholder Compact Indicator

Strategic Goal 5

Strengthen and develop quality human resources and ensure a participatory, collaborative organisation dedicated to continual learning and improvement.

BALANCED SCORECARD PERSPECTIVE:

ORGANISATIONAL CAPACITY

OUTCOMES:

Leadership and Employee Development

STRATEGIC OBJECTIVES:

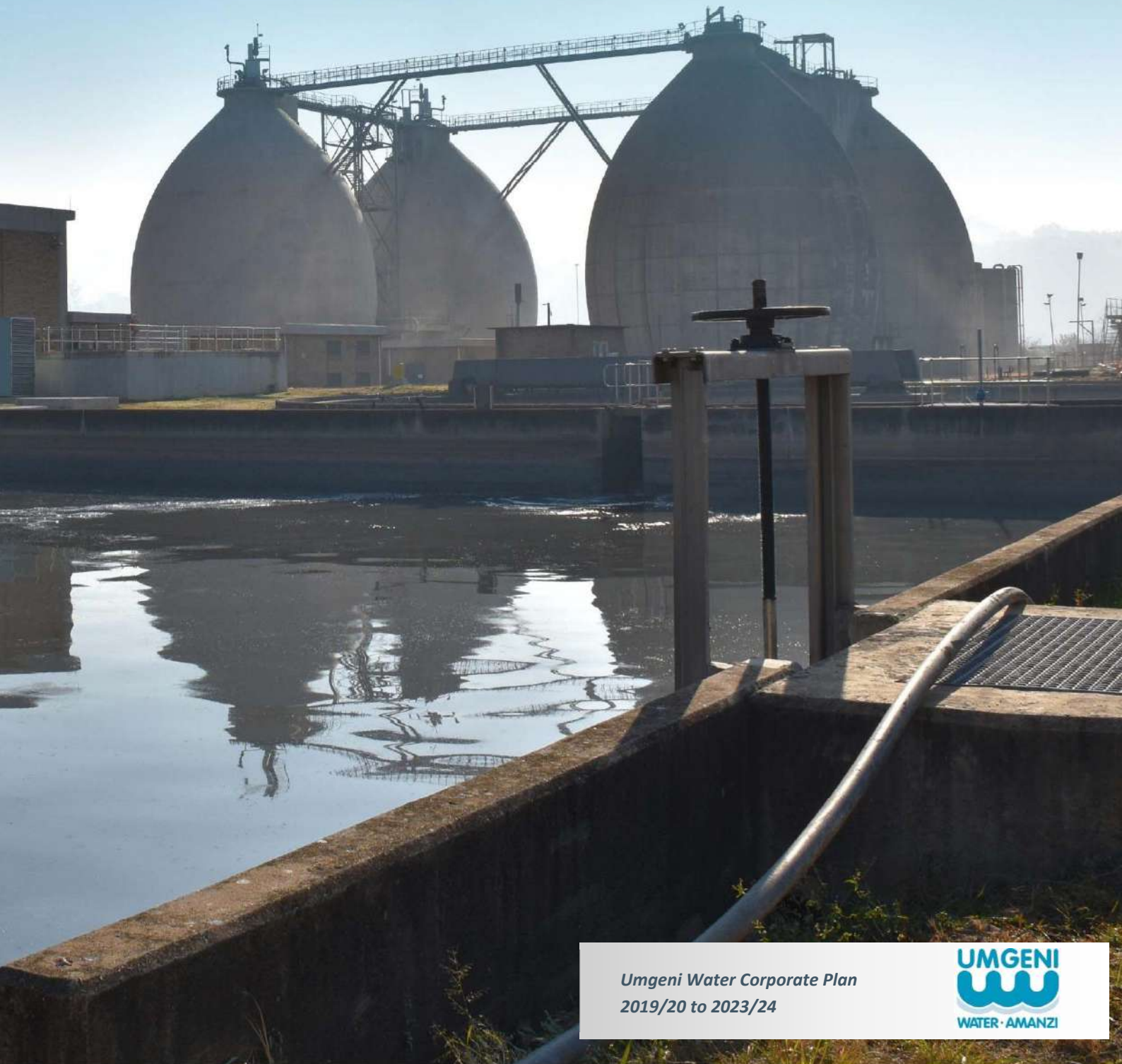
SO 7: Increase skills and competency

UW	Performance Objective	Strategic Initiative /Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
SO7	PO 21: TRAINING AND SKILLS DEVELOPMENT	Build leadership, management and functional competence.	21.1	Number of employees enrolled and developed through Management Development Programmes.	> 90% enrolled candidates attended target modules for the year	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.
		Develop targeted leadership, management and technical skills for youth.	21.2	Number of Young Professionals (YPs) enrolled and developed through Youth Development Programmes.	30 YPs successfully completed. 39 new YPs registered.	≥ 30 YPs successfully completed. ≥ 10 new YPs registered.	-	-	-	-	-

UW	Performance Objective	Strategic Initiative /Plan	#	Result Indicator	Actual 2017/2018	Projected 2018/2019	Projected 2019/2020	Projected 2020/2021	Projected 2021/2022	Projected 2022/2023	Projected 2023/2024
		Develop technical skills to capacitate municipalities	21.3	Numbers of (NT) graduates	30 enrolled / developed	≥ 25 enrolled / developed	≥ 25 enrolled / developed	≥ 25 enrolled / developed	≥ 25 enrolled / developed	≥ 25 enrolled / developed	≥ 25 enrolled / developed
		Develop technical skills through Learnerships	21.4	Number of Artisans and Apprentices and Process Controllers (Learnerships). (SHC) ★	58 Apprentices 12 Artisan Trainees 68 Process Controllers	≥ 50 Artisans and Apprentices ≥ 20 Process Controllers	≥ 50 Artisans and Apprentices ≥ 20 Process Controllers	≥ 50 Artisans and Apprentices ≥ 20 Process Controllers	≥ 50 Artisans and Apprentices ≥ 20 Process Controllers	≥ 50 Artisans and Apprentices ≥ 20 Process Controllers	≥ 50 Artisans and Apprentices ≥ 20 Process Controllers
		Implement bursary programme	21.5	Number of Bursar degree plans met. (SHC) ★	10 Bursars	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
		Develop Graduates and Interns	21.6	Number of Graduate Trainees, In-service Trainees and Interns' development plans met. (SHC) ★	24 Graduate Trainees 50 In-Service Trainees 17 Interns	≥ 20 Graduate Trainees ≥ 20 In-service Trainees ≥ 5 Interns	≥ 20 Graduate Trainees ≥ 20 In-service Trainees ≥ 5 Interns	≥ 20 Graduate Trainees ≥ 20 In-service Trainees ≥ 5 Interns	≥ 20 Graduate Trainees ≥ 20 In-service Trainees ≥ 5 Interns	≥ 20 Graduate Trainees ≥ 20 In-service Trainees ≥ 5 Interns	≥ 20 Graduate Trainees ≥ 20 In-service Trainees ≥ 5 Interns
	PO 22: JOBS CREATED	Create jobs	22.1	Number of permanent and temporary jobs created. (SHC) ★	5 permanent	N/A	-	-	-	-	-
599 capex jobs					≥ 700 capex jobs.	≥ 600 capex jobs.	≥ 400 capex jobs.	≥ 400 capex jobs.	≥ 400 capex jobs.	≥ 400 capex jobs.	
	PO 23: STAFF LEVELS	Manage staff / skills retention.	23.1	Number of staff terminations, excluding normal retirements, as a % of the total staff complement. (SHC) ★	3.14%	≤ 8%	≤ 8%	≤ 8%	≤ 8%	≤ 8%	≤ 8%
	PO 24: EMPLOYEE / UNION ENGAGEMENT	Create employee value.	24.1	Number of engagements with Employees and Union.	1 Staff Session 3 Union Meetings 1 Executive Site Visit.	≥ 3 Staff ≥ 3 Union ≥ 1 Executive Site Visit	≥ 3 Staff ≥ 3 Union ≥ 1 Executive Site Visit	≥ 3 Staff ≥ 3 Union ≥ 1 Executive Site Visit	≥ 3 Staff ≥ 3 Union ≥ 1 Executive Site Visit	≥ 3 Staff ≥ 3 Union ≥ 1 Executive Site Visit	≥ 3 Staff ≥ 3 Union ≥ 1 Executive Site Visit

(SHC) ★ Shareholder Compact Indicator

Chapter 4: Marketing Branding and Communication



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4.1. Marketing and Branding Plan

4.1.1 Approach to Marketing and Branding

Umgeni Water's marketing approach responds to its operating environment requirements and mandates. The overall value proposition is premised on securing mutually beneficial relationships. Building its brand identity involves Umgeni Water positioning itself relative to its customers and stakeholders in such a way that they choose to purchase or acquire services and associated products from Umgeni Water in preference to others.

The water board consolidation strategy led by the Minister of Water and Sanitation has provided an enabling environment for expansion of services into the KwaZulu-Natal province. Mindful of the expanded mandate and target market Umgeni Water will strive to ensure that:

- There is coherent linkage between the reputation of the entity and its services and products,
- All brand activity has a common aim and is supported by clear and relevant communication,
- All activity is guided, directed and delivered by the brand's benefits/reasons to buy, and
- All activity focuses on all points of contact with the customer.

Branding of Umgeni Water provides the foundation for delivery of the strategy of Umgeni Water, the provision of water services, stakeholder interaction and communication, all business systems and processes and new business development.

A key aspect of Branding activities and initiatives is the need for Umgeni Water to demonstrate that it has a holistic and fully integrated approach to effective, efficient and reliable service delivery, a positive reputation for building of strong and enduring relationships with all customers and stakeholders and it is recognised as a strategically relevant entity that adds value to its customers and ultimately communities through its services and products.

4.1.2 Umgeni Water Brand Building

Umgeni Water will build its brand by \ its staff "walking the talk" and demonstrating, in the context of customers and stakeholders, that it is indeed a reliable, capable, competent, efficient and effective service provider. This will be underpinned by a clear and deliverable Value Proposition for all Market Development and Market Penetration activities, services and products.

Umgeni Water will build its brand by incorporating the following key elements:

- Delivering on mandate. Building on and reinforcing the track record / reputation and capability of Umgeni Water will be seen as irrelevant if the customer does not believe that the entity can deliver what it says it can.
- Matching the strengths of the entity to the products and services offered – through leveraging the technical, managerial and financial capability and public status of an entity of State.
- Identifying and understanding key customer needs, expectations, priorities and passions. This requires knowledge and information regarding the status of water and wastewater in KwaZulu-Natal, in target areas and for target customers. Umgeni Water will succeed by progressive implementation, focusing on high priorities in the first instance.
- Designing and offering services and products that will give customers optimal results and experiences. Umgeni Water needs to ensure that there is a clear and mutual Value Proposition for the service provided.
- Ensuring there is enterprise-wide alignment to consistently deliver on the strategy and customer experience.

A key requirement in this regard is realisation that every service or product brought to market will yield a customer experience that Umgeni Water intended and an experience that fulfils and/or exceeds the promise made to the marketplace/customer (the Value Proposition).

By identifying the people, processes and tools that drive the customer experience, Umgeni Water will actively design and control a unique, optimised experience. The Brand promise made to the marketplace will be kept and consistently maintained, thus building a strong Brand and securing customer loyalty.

Notwithstanding the range and diversity of customers, a consistent and coherent Brand will be projected into the market place. This is critical to ensure that there is clear understanding of who and what Umgeni Water is, thereby eliminating possibility of confused positioning.

Customers, at times, have a confused opinion of the brand identity of Umgeni Water and what it means. In order to achieve consistency, it is necessary for Umgeni Water to strengthen its Core Brand. The Core Brand must be aligned to the Vision, Mission, Values and Strategic Intent of Umgeni Water. This is critical to ensure a consistent and coherent message that informs customers' views and expectations of Umgeni Water. The Core Brand, as a minimum, will clearly reinforce or create awareness of the following:

- The profile and history of Umgeni Water as a world-class Water Services Provider,
- Over 45 years of success and experience,
- The Vision, Mission, Strategic Intent and Benevolent Intent of Umgeni Water, together with its Values,
- The core and distinctive competencies and capabilities of Umgeni Water,
- The reliability and quality of Umgeni Water's services and people, and
- Umgeni Water's focus on research, innovation and capacity building.

4.1.3 Products and Services

Umgeni Water, as an entity of State operates within prescribed legislation and national Government frameworks and mandates. Within this framework, the basket of water products and related services vary in response to local and regional needs. The core products Umgeni Water will continue to focus on are:

- Bulk potable water supply
- Bulk wastewater treatment

Umgeni Water will, based on need and demand, provide other water-related services and products including:

- Water treatment process and related training
- Water sampling and laboratory analyses
- WC/DM and NRW management support
- Other support services to municipalities
- Integrated water resources planning and integrated catchment management
- Waste management, water reclamation and desalination

4.1.4 Geographical Markets, Marketing Matrix and Customers

Umgeni Water has identified the following markets for growth of water services (water and wastewater) and water related services:

1. KwaZulu-Natal: for water services and other related activities.
2. South Africa: water services and other related activities on demand.
3. Rest of Africa: knowledge management, networking and responding to bi-lateral agreements between South Africa and other countries.

Within KwaZulu-Natal bulk water and wastewater services and/or water related services will progressively be increased in customer areas, driven by the regionalisation timeframe:

- | | |
|---|---|
| 1. eThekweni Metropolitan Municipality: | Retain and grow |
| 2. Msunduzi Local Municipality: | Retain and grow |
| 3. iLembe District Municipality: | Retain and grow |
| 4. uMgungundlovu District Municipality: | Retain and grow |
| 5. Harry Gwala District Municipality: | Market penetration |
| 6. Ugu District Municipality: | Market penetration |
| 7. uThukela District Municipality: | Market development |
| 8. Newcastle Local Municipality: | Market Development (Demand driven) |
| 9. Amajuba District Municipality: | Market Development (Demand driven) |
| 10. uMzinyathi District Municipality: | Market Development (Demand driven) |
| 11. King Cetshwayo District Municipality: | Market Development |
| 12. uMkhanyakude District Municipality: | Market Development |
| 13. uMhlathuze Local Municipality: | Market Development |
| 14. Zululand District Municipality: | Market Development |

		Products	
		Existing	New
		Market Penetration	Product Development
Markets	Existing (6 WSAs)	<ul style="list-style-type: none"> Bulk potable water services Bulk wastewater services Water related services (e.g. training, laboratory analyses, working-for-water and related programmes) 	<ul style="list-style-type: none"> Water resources development <ul style="list-style-type: none"> Local and regional dams Alternate water resources <ul style="list-style-type: none"> Wastewater reclamation / water recycling Desalination
	New (14 WSAs)	<ul style="list-style-type: none"> Bulk potable water services Bulk wastewater services Water related services 	<ul style="list-style-type: none"> Reticulation Retail services Non-revenue water management Energy co-generation
		Market Development	Diversification

4.1.5 Market Development: Customer Engagement Approach

Umgeni Water’s customer engagement model entails meaningful contact at various levels for different purposes.

4.1.6 Market Development: Engagement Approach during Development Phase

Umgeni Water will foster trust, consolidate and form relationships with customers in KwaZulu-Natal through open and honest interactions.

Validation of Water Services Authorities' (WSAs) interests in target areas will continue through presentation of the service delivery model, its costs and tariffs and through gaining deeper understanding of the WSAs' needs. This will further validate the information previously gleaned and notably:

- i. Confirm that there is complete understanding of the WSAs' problems, priorities, needs and passions,
- ii. Confirm that the value proposition solves the bulk problem with a vision that addresses future needs,
- iii. Confirm that there is a sizeable market or the size of scheme contemplated is sufficient to deliver a sustainable business for each customer and for the entire region,
- iv. Confirm that the WSAs are willing to pay for the services, confirm how the WSAs are planning to pay for the services, solicit information/confirmation of available funding and financing options that exist and agree / develop mechanisms for sourcing additional funds needed to ensure sustainable service provision.

Feedback gained will continue to be used to review assumptions, refine service delivery plans and mitigate any additional risks identified. Once successful, development of a long-term bulk supply agreement (SALGA-approved) with customers, preferably 20 years, will be undertaken to ensure sustainable capital investments can be made.

4.1.7 Market Development: Engagement Approach during Operational phase

Umgeni Water will replicate and improve on existing successful customer experience models. Experience has shown that sustainable-positive outcomes arise when:

- i. Honest responses and answers to questions are provided, notably when these relate to supply disruptions and quality problems,
- ii. The easy problems are solved quickly,
- iii. There is timely follow up and feedback on progress toward solutions for the harder problems,
- iv. There is collaboration, support and assistance provided to address the WSAs' needs in time of water crises, such as droughts and floods.

4.1.8 Market Development: Engagement Approach during future planning phase.

Umgeni Water will continue to assess that the service delivery model is adding the intended value and is the best cost and most sustainable option for the WSAs, end-users and region as a whole. The tariff and pricing of the bulk water service will be linked to changes in cost components, changes in resource allocation, and increases in investments relating to changes in demand, whilst continuing to provide a service and tariff that reflects the WSA's preference for price stability, efficiency and security of supply.

The regional schemes / Universal Access Plan concept will be further refined over this period in terms of the phased approach to water access as follows:

- o Alleviating the immediate need through implementing stand-alone regional schemes;
- o Integrating existing stand-alone schemes into sub-regional schemes; and
- o Integrating all of the latter into sustainable regional schemes.

4.2. Communication Plan

The objectives of Umgeni Water's Communication Plan are to:

- o Ensure that relevant and appropriate strategic approaches are adopted for interaction with each distinct group of Stakeholders,
- o Enhance internal policies, projects and services provided through Stakeholder engagement,
- o Facilitate effective collaboration and knowledge sharing between Umgeni Water and its Stakeholders, and

- Ensure that the entity is aware of Stakeholder needs and priorities through timeous receipt and provision of relevant information.

4.3. Water Sector Stakeholders

As a regional bulk water service provider, Umgeni Water plays a significant strategic role in underpinning and supporting social and economic development within its service area. In the execution of its mandate for undertaking primary and secondary activities, the entity is required to interact with a number of stakeholders who are impacted on by Umgeni Water, either directly or indirectly.

Umgeni Water's stakeholders are categorised and clustered as Statutory Stakeholders, Strategic Stakeholders, Contracted Stakeholders and Non-Contracted Stakeholders as shown in Figure 4.1.

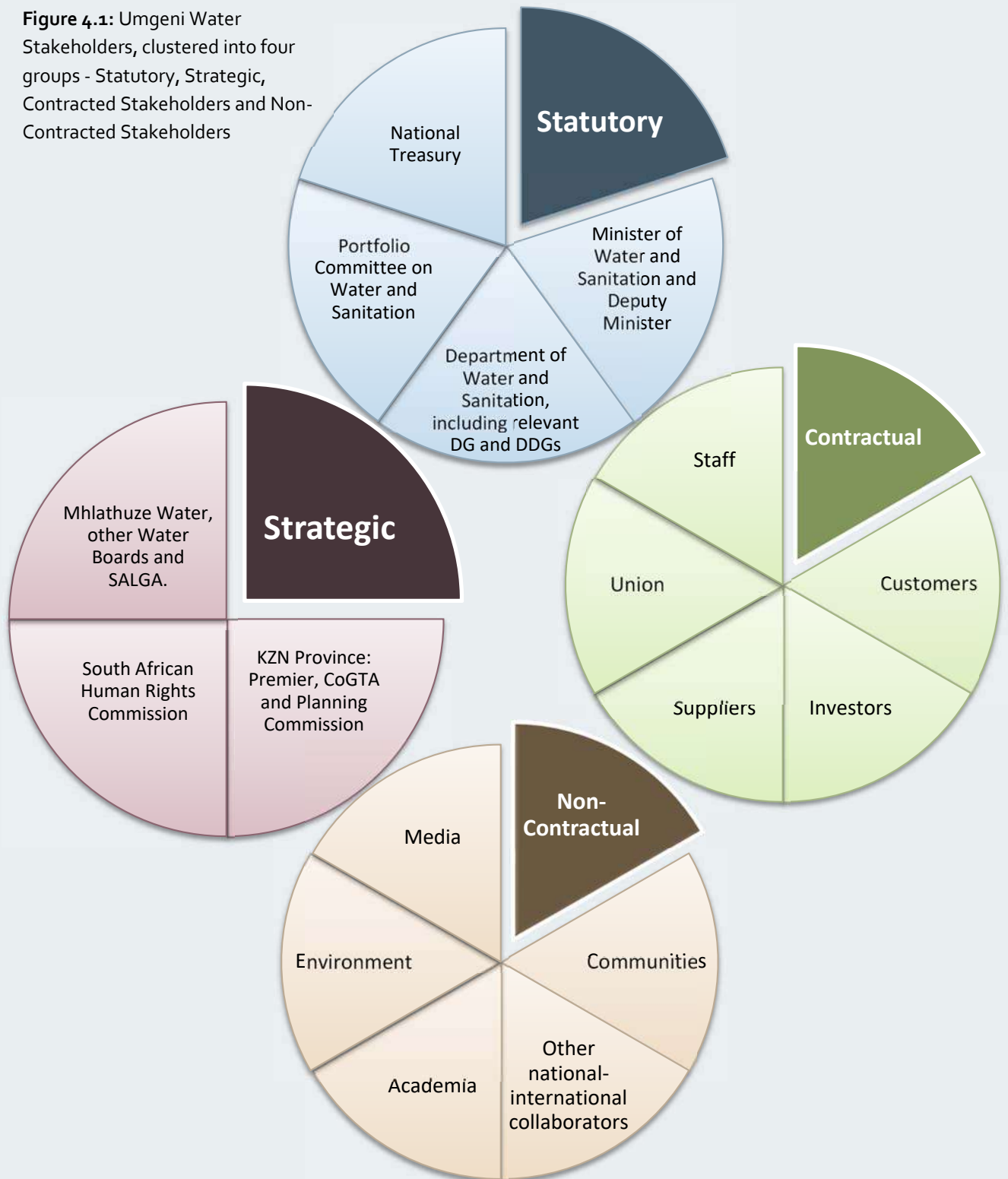
Statutory Stakeholders: Stakeholders who have a regulatory or oversight function over Umgeni Water, among them the Minister of Water and Sanitation, the Department of Water and Sanitation, the Portfolio Committee on Water and Sanitation and National Treasury. As a State-owned entity, Umgeni Water is required to interact with these stakeholders on a formal and regular basis in order to ensure that statutory requirements are met and there is alignment with Government's objectives, strategies and plans.

Strategic Stakeholders: Provincial and some National Stakeholders to whom Umgeni Water provides information relating to entity performance, capital infrastructure plans, solutions to prolonged bulk water supply interruptions and expertise available to assist vulnerable water boards and municipalities. These stakeholders include the Office of the Premier of KwaZulu-Natal, KwaZulu-Natal Department of Co-operative Governance and Traditional Affairs, Provincial Planning Commission, South African Local Government Association, Trans-Caledon Tunnel Authority, South African Association of Water Utilities and all other Water entities in South Africa and others and the South African Human Rights Commission.

Contractual Stakeholders: Stakeholders with whom Umgeni Water has contracted for the provision of products, services and goods, including customers, suppliers and investors and, in the case of employees and organised labour, the provision of employment and accompanying service benefits.

Non-Contractual Stakeholders: Stakeholders to whom Umgeni Water demonstrates its value as a socially responsible, efficient and high performing entity. These Stakeholders include the media, community-based organisations, environmental groups, academia, civil society in general and military veterans' formations affiliated to or recognised by the Department of Defence and Military Veterans.

Figure 4.1: Umgeni Water Stakeholders, clustered into four groups - Statutory, Strategic, Contracted Stakeholders and Non-Contracted Stakeholders



4.4. Stakeholder Value Proposition and Engagement Plans

Umgeni Water has embarked on a growth and expansion plan which is being accompanied by increased engagements with municipalities identified as future customers. The entire Province of KwaZulu-Natal has been declared as the service area of Umgeni Water and Mhlathuze Water by the Minister of Water and Sanitation. In light of this, the frequency of engagements with Water Services Authorities (WSAs) in KZN will increase to initially familiarise the WSAs with Umgeni Water's service delivery approach to be followed later by the marketing and positioning of the regional water utility once it has been established.

4.5. Statutory Stakeholders Value Proposition and Planned Engagements

- 4.5.1. Minister of Water and Sanitation (Executive Authority)
- 4.5.2. Deputy Minister of Water and Sanitation
- 4.5.3. Department of Water and Sanitation
- 4.5.4. Portfolio Committee on Water and Sanitation
- 4.5.5. National Treasury

Umgeni Water and National Government both desire:

A high performing, well governed State-owned enterprise that mobilises resources in an equitable and cost-effective manner to advance key national objectives

- o Responsive to Water Services Act, Public Finance Management Act and other pertinent legislation and regulations and delivering on mandate,
- o Alignment of Strategy and Plans to Government outcomes and Executive Authority expectations (including NDP, MTSF, NWRS2),
- o Demonstrating adequate resource planning and mobilisation,
- o Investing in infrastructure,
- o Ensuring efficient water usage and conservation and water quality management,
- o Demonstrating a well-governed and efficiently run entity,
- o Ensuring performance with financial and predetermined objectives for long-term sustainability,
- o A partner that is aligned to water sector communication initiatives,
- o A leader that contributes to establishing synergies in the water sector value change.

Planned Engagements for 2019/20 to 2024/25

- o Regular communication with oversight departments and inputs into water sector policy and strategy at scheduled Ministerial, Director-General and DWS forums,
- o Provision of all key reports aligned to National Government's accountability cycle, including, Strategy, Performance Indicators, Corporate Plan, Policy, Shareholder Compact, Monthly, Quarterly and Annual Reports.
- o Engagement at relevant DWS Portfolio Committee appraisal sessions on Corporate Plan, Shareholder Compact, Annual Performance and Proposed Tariffs,
- o Engagements in response to other statutory / mandate issues that arise in the course of the year.

4.6. Strategic Stakeholders Value Proposition and Planned Engagements

4.6.1. CoGTA, Provincial Planning Commission and other Provincial Departments,

4.6.2. Mhlathuze Water,

4.6.3. SALGA

- Structured implementation plan for supply assurance and extension of water services to previously un-served,
- Affordable tariff,
- Delivery on mandate and alignment to policy and National and Provincial Development Plans,
- Water supply as a catalyst for economic expansion,
- Sound corporate governance,
- Service delivery partner, benchmarking and strategic information exchanges,
- Collaboration for major event and celebrations, and
- Proactive measures to mitigate the effects of prolonged water shortages and supply interruptions.

Umgeni Water, KZN Province and other Strategic Stakeholders desire:

Sound water services delivery partnerships, providing affordable services, contributing to regional economic growth and development and exchanging strategic information

Planned Engagements for 2019/20 to 2024/25

- Provision of key inputs, presentations and reports aligned to Provincial Government's cycle, including inputs into the Provincial Lekgotla and key addresses,
- Focused Provincial communication,
- Alignment of Strategy and Corporate Plan, including Infrastructure Master Plan and Five-Year Capital Investment Programme to the Provincial Growth and Development Strategy and Plan,
- Affordable and equitable distribution of water to communities,
- Projects contributing to elimination of water backlogs and achievement of goals,
- Outlining water assurance plans for the Province, sharing growth and expansion plans aligned to plans to meet future water demands and impact on bulk tariff
- Benchmarking and strategic information exchange with SALGA and SAAWU and related stakeholders,
- Collaboration for major water sector events and celebrations, including National Water Week
- Collaboration with Mhlathuze Water for service delivery approach in KZN.

Umgeni Water and WSA Customers both desire:

A high performing, efficient, effective and responsive Water Services Provider

4.7. Contracted Stakeholders Value Proposition and Planned Engagements

4.7.1. Customers

- Service Level Agreements,
- Assurance of supply, both quality and quantity,
- Tariff consultation,
- Responsive to needs,
- New products and services
- Care and support,
- Partnerships in other socio-development initiatives,
- Partnerships in CSI initiatives.

- Regular monitoring of customer and stakeholder perceptions

Planned Engagements for 2019/20 to 2024/25

- Engagements for service delivery plans, progress, performance, challenges, enhancements and new requirements and needs and service delivery agreements,
- Soliciting customer demand projections, engagement for infrastructure plans, funding and financing engagements and tariff consultations,
- Response and collaboration for restoring water supply failures, support services, including water quality and process and support for customer water programmes,
- Collaboration for water education and awareness, Corporate Social Investment projects and partnerships in community-focused job-creation programmes, among them Working-for-Water, Adopt-a-River and War-on-Leaks Programmes,
- Collaboration and partnerships for launch of construction projects and commissioning of projects,
- Joint communications and media releases,
- Input to customer satisfaction surveys, and
- Annual performance presentations during road shows.

4.7.2. National Education, Health and Allied Workers' Union, unionised Staff and non-unionised Staff

- Compliance with Collective Agreement,
- Demonstrating relevance as an entity that adds value to the sector,
- Regular feedback and communication regarding sector issues and entity performance,
- Regular information sharing and feedback on entity events planned and held,
- Equitable jobs, fair labour practice, good working conditions / enabling work environment and communication, fair market-related compensation and service conditions,
- Sound performance management and recognition systems,
- Engaged employees, productivity, delivery and return on investment.

Planned Engagements for 2019/20 to 2024/25

- Engagement relating to internal climate surveys,
- Quarterly Staff Information Sessions,
- Site Visits,
- Internal electronic and hard-copy communiqués,
- Bi-annual Wellness Days and other corporate special days, and
- Annual Staff Awards.

Umgeni Water Management, Union and Staff all desire:

An equitable company, whose policies, practices, systems and feedback create motivated, engaged and aligned employees.

Umgeni Water and Suppliers both desire:

An equitable company, whose policies, practices, systems and feedback create responsive and high performing suppliers delivering against contractual agreements.

4.7.3. Suppliers

- Compliance with legislation for fair and equitable procurement,
- Supplier development,
- Business opportunities,
- Transparency, integrity, fair treatment, fair pricing, fair payment terms,
- Capacity building towards more inclusive economic participation,
- Implementation of B-BBEE and CPG partnerships,
- Support to co-operatives, CSR, CSI, environmental management, and
- Supplier footprint reduction – water, energy and materials.

Planned Engagements for 2019/20 to 2024/25

- Annual engagements at Umgeni Water Supplier Forum,
- Advertising features on Umgeni Water's Five-Year Capex and implementation programme, and
- Identification of business opportunities through engagements and support for SMMEs and co-operatives

4.8. Non-Contracted Stakeholders Value Proposition and Planned Engagements

4.8.1. Community and Civil Society Institutions

- Umgeni Water demonstrates conservation and responsible use of resources,
- Provision of a clean and safe environment,
- Exercising responsible citizenship,
- Demonstrating transparency in corporate governance,
- Creating jobs,
- Providing information and opportunities,
- Social licence to operate,
- Recognition for creating value,
- Respect for property and
- Collaboration in protecting remotely situated water assets.

Planned Engagements for 2019/20 to 2024/25

- Implementation of the entity's water education and awareness programmes with schools and wider community,
- Providing vital information and assistance to safeguard public health in the event of water supply failures, notably due to adverse climate conditions,
- Engagement and soliciting input during construction planning,
- Communicating opportunities for jobs and local participation,
- Sharing of information on water supply projects to provide or improve access to safe water services,
- Special advertising and communication features covering: Risks/dangers associated with construction close to dwellings, need for collaborative management of servitudes, protection and safe-guarding water treatment assets, and
- Celebration of completion of major infrastructure projects, at which communities will be provided information about projects' importance and why vandalism should not be allowed.

Umgeni Water and
Communities /
Civil Society desire:

A sustainable entity that adds value to society through a sound balance of economic growth, social development and environmental sustainability.

4.8.2. Chambers of Business and Industry

- Assurance of supply, both quality and quantity,
- Information on tariff,
- Responsible citizenship,
- Recognition for creating value,
- Pollution prevention, and
- Safe-guarding of water supply resources.

Planned Engagements for 2019/20 to 2024/25

- Participation in Chamber of Business forums to identify and align to business water needs, discuss business role in curbing pollution of water supplies,
- Sharing of information and water treatment expertise,
- Communication of supply interruptions and provision of water quality information,
- Sharing of information on Five-Year Capital Expenditure Programme as it relates to provision of infrastructure to enhance future water supply and eliminate backlogs, and
- Partnerships on strategic ventures, such Business of the Year competitions.

Umgeni Water and Business both desire:

A sustainable entity that adds value to society through a sound balance of economic growth social development and environmental sustainability

4.8.3. Media and general public

- Access to information,
- Accountability, transparency and good governance, and
- Responsible reporting and media integrity.

Planned Engagements for 2019/20 to 2024/25

- Using media as an opportunity to increase visibility of the entity and as a positioning, marketing and branding platform,
- Providing information on entity performance in meeting service delivery objectives and financial performance,
- Transparently providing vital information regarding water supply interruptions and water quality,
- Dissemination of information in emergency and disaster situations relating to support and measures to safeguard public health, and
- Providing information on project status and engagement during public events.

Umgeni Water and Media / Public desire:


A sustainable entity that adds value to society.

4.8.4. Water sector, related institutions and academia in South Africa and Africa

- Exchange and expansion of water sector knowledge,
- Benchmarking on best practices,
- Partnerships and collaborative water and wastewater research, and
- Entity learning and growth.

Planned Engagements for 2019/20 to 2024/25

- Information exchange and knowledge management,
- Collaboration in water research and development,
- Support to water centres of excellence.
- Student internships and experiential training and exposure,
- Study tours and site visits,
- Collaboration for major events, such as National Water Week and participation in international exhibitions, and
- Specifically in Africa: knowledge management, networking and responding to bi-lateral agreements between South Africa and other African countries and Water Utilities in partnership with national and provincial government.



Umgeni Water and water sector - related institutions desire:

A partner and sector collaborator that contributes to knowledge and skills development for the country, province and region.

Chapter 5: Policy Statement



Policy Statement

The policy statement was updated in 2017. There have been no significant changes to Umgeni Water policies in the past year.

Chapter 6: Corporate Governance



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6.1 Composition and Functioning of the Board

In terms of the Water Services Act (Act 108 of 1997), Board members (except the Chief Executive who is appointed by the Board) are appointed by the Minister of Water and Sanitation (as of May 2014) (“the Minister”).

The Umgeni Water Board term ended in June 2017 and the Minister appointed an interim Board, effective from 28 September 2017. The interim Board comprises six (6) non-executive Board members and one (1) Executive Board member, namely the Chief Executive.

The process of appointing a permanent Board has not been concluded yet. The Minister is expected to make an announcement once all legislative and government processes have been complied with.

The Chairperson of the Board and all other Board members (with the exclusion of the Chief Executive), are independent non-executive directors in the manner described in the King IV Report on Corporate Governance (hereinafter referred to as “King IV”) to ensure the independence of the two positions and the clear definition of roles and responsibilities. All Board members execute their legal duties in a professional manner, with integrity and enterprise.

The Board has established four (4) standing committees to assist it in discharging its responsibilities, namely:

- Audit Committee
- Capital Projects, Fixed Assets and Procurement Committee
- Human Resources and Remuneration Committee
- Governance Committee

The list of Board and Committee members is shown in **Table 6.1**. The Board is accountable for the leadership and control of Umgeni Water. Its responsibilities include the development, review and monitoring of strategic objectives, the approval of major capital expenditure, risk management and monitoring of operational and financial performance. The government of the Republic of South Africa, represented by the Minister, and the Department of Water and Sanitation, is the sole shareholder of Umgeni Water.

The Board contracts with the Executive Authority, the Minister, through an annually approved shareholder compact. The Board / Interim Board will continue to actively engage with the shareholder through various forums during the year.

A Board Charter (reviewed in 2017) provides a framework for fiduciary duties, responsibilities and overall functioning of the Board. The Board Charter is read in conjunction with:

- The Public Finance Management Act (Act 1 of 1999), as amended by the Public Finance Management Amendment Act (Act 29 of 1999), hereinafter referred to as the PFMA,
- Treasury Regulations (GG 27338) as amended from time to time,
- The Water Services Act (Act 108 of 1997), as amended, and
- The King Code of Governance Principles, 2016 (King IV).

Non-executive board members receive remunerative benefits and fees as determined by the Minister on an annual basis and in line with their terms of appointment. Therefore no Board member is involved in determining his / her own remuneration. Board Members’ remuneration is fully disclosed in Umgeni Water’s Annual Report.

Table 6.1: Board and Committee Memberships

Board Member	Gender	Audit	REMCO	Capex
1. Ms Z Mathenjwa ¹	F			
2. Ms Z Manase ²	F	✓		
3. Mr V Reddy ³	M		✓	✓
4. Ms N Chamane ⁴	F	✓	✓	
5. Mr M Tshivhase	M	✓	✓	
6. Mr M Dikoko	M		✓	✓
7. Mr T Hlongwa ⁵	M		✓	✓

✓ Denotes Committee Member

¹ Interim Board Chairperson

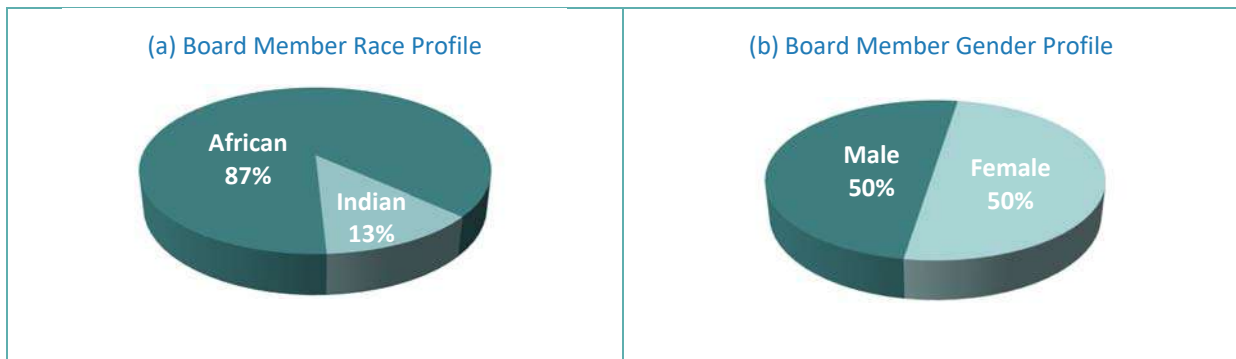
² Interim Audit Committee Chairperson

³ Interim Capex, Fixed Assets and Procurement Committee Chairperson

⁴ Interim Human Resources and Remuneration Committee Chairperson

⁵ Chief Executive

Figure 6.1: Board (a) Race and (b) Gender Profiles



6.1.1 Meetings Scheduled for 2018/2019

Five (5) normal Board meetings are scheduled, six (6) normal Audit Committee meetings are scheduled, five (5) normal HR and Remuneration Committee meetings are scheduled, five (5) normal Procurement, Fixed Assets and Capital Projects Committee meetings are scheduled and Governance Committee meetings will be scheduled as needed.

Table 6.2: Scheduled meetings of the Board and Committees 2019/2020

Board / Committee Meetings	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Board Meetings	1		2		3				4	5		
Board Strategy Review								1				
HR and Remuneration		1		2				3		4		5
Capex, Fixed Assets, SCM		1			2			3	4			5
Audit	1		2		3			4		5	6	

6.1.2 Summary of Meetings and Attendance

The prior year (2018/2019) attendance at Board and Committee meetings is as follows:

- 100 % for Board, based on four normal meetings and one special meeting,
- 88.9 % for Audit Committee, based on four normal meetings,
- 90 % for HR and Remuneration Committee, based on two normal meetings, and
- 83.3 % for Capital Projects, Fixed Assets and Procurement Committee, based on three normal meetings

Table 6.3: Interim Board Meeting Attendance in 2018/2019

Board Member	Gender	25-Jul-2018	19-Sep-2018	28-Nov-2018	11-Jan-2019	24-Apr-2019
1. Ms Z Mathenjwa ¹	F	✓	✓	✓	✓	
2. Ms Z Manase ²	F	✓	✓	✓	✓	
3. Adv. M Hashatse ^{N1}	F	✓	-	-	-	
4. Mr V Reddy ³	M	✓	✓	✓	✓	
5. Ms N Chamane ⁴	F	✓	✓	✓	✓	
6. Mr M Tshivhase	M	✓	✓	✓	✓	
7. Mr M Dikoko	M	✓	≠	✓	✓	
8. Mr T Hlongwa ⁵	M	✓	✓	✓	✓	

✓ Denotes Attendance

≠ Denotes absence with apology

¹ Interim Board Chairperson

² Interim Audit Committee Chairperson

³ Interim Capex, Fixed Assets and Procurement Committee Chairperson

⁴ Interim Human Resources and Remuneration Committee Chairperson

⁵ Chief Executive

^{N1} Resigned in August 2018 and replaced by Mr V Reddy as Chair of Capex Committee

- Not a member

The critical issues dealt with are the formulation of organisational strategy, oversight of organisational performance and the expectations of the Executive Authority, among others. As recommended by King IV the Board evaluates the performance of all divisions including the finance division. This is planned for twice in the reporting year. The Members of the Board have skills that are put to good use in providing leadership, guidance and directing strategy during the period. Overall the Board functions at a strategic level and delivers outputs in line with its mandate.

6.2 Board Committees

The Board Committees are formally constituted and are chaired by non-executive Board members. The Board Committees assist the Board in the performance of duties and enables effective decision-making through providing more detailed attention to matters within the terms of reference. The committees report to the Board on activities at every meeting. In terms of the Water Services Act, the Board is authorised to delegate powers to the Committees established by the Board. The functions and powers delegated to Committees are set out in the written Terms of Reference which are formally approved by the Board.

6.2.1 Audit Committee

The Committee consists of three (3) non-executive Board members and its chairperson is Ms Z Manase.

Member	Gender
1. Ms Z Manase	F
2. Ms N Chamane	F
3. Mr M Tshivhase	M

The Committee is mandated to achieve the highest level of financial management, accounting and reporting to the shareholder and to meet the requirements prescribed in section 51(1)(a)(ii) and 76(4)(d) of the Public Finance Management Act (Act 29 of 1999), as well as Treasury Regulations, 2005 (Chapter 27.1). The Audit Committee further performs a critical function of risk management by ensuring the effectiveness, quality, integrity and reliability of Umgeni Water's risk management processes.

The terms of reference of the Audit Committee takes into account the recommendations in King IV, the Companies Act (Act 71 of 2008), the Public Finance Management Act (Act 29 of 1999) as amended and Treasury Regulations, 2005, to ensure alignment to best practice and legislation.

The Ethics Committee and Corporate Risk Committee also report through the Audit Committee.

6.2.2 Ethics Committee

Umgeni Water has formally adopted best practice principles as contained in King IV with respect to fraud prevention planning. The change to King IV will enable, amongst other aspects: greater accountability and transparency as a broader stakeholder within society; an integrated approach to corporate governance in view of economic, social and environmental spheres; and proposed greater integration between the role and function of the Social and Ethics Committee and other Board committees.

In line with this, the Board acknowledges its responsibility to ensure that Umgeni Water is a fair, transparent and ethical entity and will continue to exercise oversight through its already fully functional Ethics Committee as prescribed in Section 29.1.1 of the Treasury Regulations in the PFMA as well as in line with the requirements of section 72 (4) of the Companies Act (Act No.71 of 2008).

The Ethics Committee ensures the implementation of the Integrated Fraud Management Framework and accounts to the Board through the Audit Committee. The Committee provides assurance to the Board that there is effective institutional-wide prevention of fraud and corruption; and complaints are effectively managed, appropriately followed-up and efficiently investigated. The committee is satisfied that it has fulfilled all its statutory duties and duties assigned to it by the Board, through the Audit Committee, during the reporting period.

The Ethics Committee has an Independent Chairman - who is neither a member of management nor a member of the Board. The Chairman, Mr S Shabalala, is a qualified Chartered Accountant and has extensive public and private sectors experience in Financial Management and Corporate Governance matters. He is currently a Managing Director of Ukukhanya Advisory Services, an Accounting and Auditing company based in Durban. The Ethics Committee reports matters within its scope of mandate to the Board through the Audit Committee which include, environmental, financial and social ethics.

A code of ethics provides guidelines for ethical decision-making by all employees, board members and stakeholders. The code formally acknowledges the organisation's intent to undertake business in an ethical manner and is communicated to all employees through various awareness and communication forums and programmes.

The Ethics Committee met four times during the year to execute its role and responsibility as prescribed by applicable legislation and included monitoring the entity's activities against legal or best practice requirements relating to:

- Social and economic development, including, EE and B-BBEE,
- Good corporate citizenship, including promotion of equality, prevention of unfair discrimination, Corporate Social investment and reduction of corruption, sponsorship, media and advertising,
- Environment, health and public safety, including, impact of the organisation's activities, products and services, biodiversity management, waste management, energy efficiency and carbon footprint reduction,
- Consumer relationships, including, advertising, public relations and consumer protection,
- Labour and employment, including, the organisation's standing in terms of the International Labour Organisation Protocol on decent work and working conditions, employment relationships and contribution toward education and development of its employees and disciplinary handling,
- Financial ethics, including, irregular and wasteful and fruitless expenditure, and
- Fraud and hotline call management.

Umgeni Water uses its external whistle-blowing hotline service managed by an external service provider as a means of fraud detection and as a means of encouraging an ethical culture. This 24 hour - 365 day facility provides an anonymous and confidential communication channel for all stakeholders to report suspicions of fraud or otherwise unethical conduct.

All hotline calls are investigated and appropriately followed through using a hotline protocol which ensures that all calls received are dealt with in a transparent and consistent manner. Trends and information of the

hotline calls are further used to improve internal controls. Umgeni Water endeavours to create and maintain awareness of this facility and ensures that the phone number is adequately advertised by means of posters, intranet, staff information and induction sessions, supplier forums as well as and other means deemed effective and appropriate.

6.2.3 Corporate Risk Committee

The Corporate Risk Committee includes the Chief Executive, Executive Management, Company Secretary and senior Management Members including the Risk Manager. The Committee assists the Audit Committee in discharging its duties relating to implementation of the integrated risk management framework.

6.2.4 Internal Control

The Board is accountable for the systems of internal control. Umgeni Water policies, procedures, structures and delegation of authority framework clearly define and provide appropriate levels of responsibility.

The internal control systems are designed to provide reasonable assurance that assets are safeguarded and that liabilities and working capital are efficiently managed. Principal features of the entity's internal finance controls are:

- A system of financial planning, budgeting and reporting which allows continuous monitoring of performance;
- A materiality and significance framework;
- Clearly-defined delegations of authority;
- The establishment of a short, medium and long-term funding strategy;
- The tariff model which determines the financial impact of capital expenditure and the bulk water tariff on Umgeni Water's debt curve; and
- Established policies and procedures.

To assist the Board in the discharge of its responsibilities, Internal Audit undertakes an independent assessment of the internal control systems and business risks and reports to the Board through the Audit Committee. The audit plan covers major financial and commercial risks and responds to any changes emanating from Umgeni Water's integrated risk management process.

6.2.5 Internal Audit

Internal Audit is an independent assurance function, the purpose, authority and responsibility of which is formally defined in a charter approved by the Board in line with stipulations of the Institute of Internal Auditors. In line with the requirements of the Public Finance Management Act (PFMA) and Good Governance, the internal auditors give the Audit Committee and management assurance on the appropriateness and effectiveness of internal controls.

The internal auditors report regularly to the Audit Committee and have unrestricted access to the Committee chairman. An internal audit charter has been approved by the Committee.

6.2.6 External Audit

The external auditors are responsible for undertaking procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements, the report on predetermined objectives and compliance with laws and regulations applicable to the entity. This is based on, amongst other:

- Assessment of the risks of material misstatement of the consolidated financial statements, the report on predetermined objectives and material non-compliance with laws and regulations;
- Considering internal controls relevant to Umgeni Water's preparation and fair presentation of the financial statements, the report on predetermined objectives and compliance with laws and regulations;
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by Management; and

- Evaluating the appropriateness of systems and processes that ensure the accuracy and completeness of the financial statements, the report on predetermined objectives and compliance with laws and regulations.

The external auditors express an opinion on the consolidated financial statements and report on findings relating to their audit of the report on predetermined objectives and compliance with material matters in laws and regulations applicable to the entity.

6.2.7 Compliance Management

In the previous period Umgeni Water developed a Compliance Framework and determined its Compliance Universe. In addition a formal organisation-wide compliance register has been developed together with individual divisional compliance registers. These registers will be consistently used as the basis for reporting compliance in a structured manner for this Corporate Plan period.

6.2.8 Delegation of Authority

A comprehensive Delegation of Authority Framework governs the authority levels for the Board and management. These are exercised through various board and management committees. This framework assists the Board to discharge its duties with Board members' accountability and responsibility. The Board reviews the framework regularly.

6.2.9 Remuneration and Human Resources Committee

This Committee comprises of four (4) non-executive directors and the Chief Executive and its chairperson is Ms Nompumelelo Chamane.

The Committee reviews and recommends to the Board all matters relating to:

- Human Resources policies, organisational structure and compliance with the Employment Equity Act, (Act 55 of 1998) and other labour legislation,
- Conditions of employment of executive management,
- Appointment of the Chief Executive and members of executive management,
- Remuneration packages for the Chief Executive, members of executive management and staff,
- Succession planning for executive management,
- Policies and practices for Performance Management
- Strategic Human Resource related matters, and
- Special rewards recommended by the Chief Executive.

6.2.10 Capital Projects, Fixed Assets and Procurement Committee

This Committee is chaired by Mr V Reddy and comprises three (3) non-executive directors and the Chief Executive.

The Committee assists the Board with capital expenditure related/programme related decisions, and recommends Procurement Policies to the Board for approval and approves the release of capital expenditure above executive management's delegated authority but within the Committee's delegated authority. It ensures that the organisation's supply chain policy and procedures are equitable, transparent, competitive and cost effective. It reviews the organisation's infrastructure asset maintenance programme/performance. Contracts which exceed the Committee's Delegation of Authority are referred to the Board for approval. The Committee reviews and recommends amendments to the limits in the delegation of authority, relating to budget approvals for capital projects and procurement, to enable management to expedite the implementation of projects.

6.2.11 Governance Committee

The Governance Committee meets on an ad-hoc basis. The Committee is chaired by the Chairperson of the Board and comprises four (4) non-executive Committee Chairs.

The Committee assists the Board in monitoring and assessing the performance of executive management to ensure that performance objectives and targets are met. Performance results are considered by the Remuneration and Human Resources Committee in determining the remuneration of the Chief Executive and other executives to be recommended to the Board for approval.

6.2.12 Board Member Appointment Dates and Details

Ms Ziphozethu (Gabsie) Mathenjwa

MSc in International Business Management (University of London); MBA (UKZN); BSc (UZ); Post-Graduate Diploma in Business Management (UKZN); Post-Graduate Diploma in Strategic Management and Corporate Governance (UNISA/ICSA); Certificate in Financial Management and Investment (UNISA).

Appointed as an Interim Board Member in September 2017.

Umgeni Water Board member from 2009 to 2017. Board Member of Mitsui African Rail Solutions, Chairperson of the Sinafuthi Group. Former Board Member Denel SOC (Ltd). Former Board Member Safran Turbomeca Africa. Former Board Member of the Water Research Commission. Former Audit Committee Chairperson of the Mpumalanga Provincial Department of Economic Development, Environment and Tourism.

Mr Matshedisho David Dikoko

Executive Leaders on Local Government 2000, WITS; Certificate in Development planning and Management for Local Government Councillors PU for CHE; Study Tour Water Management in Denmark Geological Survey of Denmark and Greenland; Assistant Personnel Officer and Work Study Practitioner, Anglo American Corporation; Economic and Management Science Technikon South Africa.

Appointed as an Interim Board Member in September 2017.

Chairperson of Midvaal Water Company since September 2004. Board Member Midvaal Water Company from June 2001 to August 2004. Board Member of Botshelo Water from June 2001 to August 2004. Director New Business Development OMV Crushers / Matlosana Industries since May 2006.

Ms Nompumelelo Chamane

Appointed for 1st Board term in June 2009.

Chairperson of Umgeni Water Board HR and Remuneration Committee since 2009. Councillor with eThekweni Municipality. Experienced liaison officer with provincial structures of COSATU. Member of Albert Luthuli Hospital Committee. Board member of EU-funded Cato Manor Development Association (CMDA); Chairperson of Finance Committee of St Benedict Catholic Church.

Mr Visvin Reddy

Educator (Mathematics & Computer Science) by profession. Various Diplomas and Certificates in Management and Communications.

Appointed for 1st Board term in June 2009.

Seventeen years local government experience. National Convenor of People Against Petroleum Price Increases. Worked at KZN CoGTA as Deputy Director: Governance. Served on the Executive Committee of eThekweni Metropolitan Municipality as well as Chairman of the Infrastructure Committee. A member of various community bodies.

Mr Thovhele Vho-Midiyavhathu Tshivhase

Juris Diploma in Law University of Zululand. BA Law University of Limpopo (previously University of the North / Turfloop).

Appointed as an Interim Board Member in September 2017.

South African Nuclear Energy Corporation (NECSA), Chairperson of Investment and Finance Committee and Research Development and Technology since 2016. Chairperson of Lepelle Northern Water since 2016. Road Agency Limpopo (RAL): Member of the Board of Directors, Chairperson of the Social and Ethics Committee and Member of Human resources and Remuneration Committee since 2015. South African Broadcast production Advisory body Board Member since 2014. Deputy Chair of Council University of Venda since 2014. Limpopo Provincial Legislature Chairperson of Portfolio Committee on Transport from 2005-2013 and Chairperson of Committee Portfolio on Public Works from 2013-2014. Chairperson of Congress of Traditional Leaders (Contralesa) Vhembe District from 2004-2009. Soutpansberg Petroleum Board (SBP) Chairperson from 2002-2009. Limpopo Provincial Legislature Chairperson of Portfolio Committee on Transport 1999-2004.

Ms Z Manase

B.Compt. (Hons), H.Dip (Tax), CA (SA).

Appointed as an Interim Board Member in September 2017.

Currently serves as TCTA Board Chairperson, CEO (Manase and Associates), Risk and Finance Committee (Chairman), Audit Committee, Governance Committee. Other Directorships / Trustees / Committee Memberships include Nelson Mandela Children's Hospital Trust Fund (Trustee), PRASA, State Diamond Trader, Department of International Relations and Co-operation (Audit Committee Chairperson).

6.3 Company Secretariat

The Company Secretary oversees the portfolio of secretariat, governance advisory services and plays a critical role in legal and governance advisory to the board, risk and compliance management, and attends all Board and Committee meetings as secretary.

The Board as a whole and individual Non-Executive Directors and members of the Executive have access to the Company Secretary who is enjoined to provide guidance on how members should discharge their duties and responsibilities in the best interests of the Company. The Company Secretary continues to oversee the preparation and coordination of the induction and on-going training of Board members and assists the Board and its Committees in formulating annual plans, agendas, minutes, and terms of reference as warranted.

The Company Secretary is not a Director of the Company or any of its subsidiaries and accordingly maintains an independent and arm's length relationship with the Board and the Executives.

Mr Sbusiso Madonsela

*Admitted Attorney of the High Court of South Africa.
LLB (UZ); Postgraduate Diploma in Compliance (UJ).*

**Appointed as Company Secretary from
1 January 2014.**

Upon leaving Private Legal Practice in 2007, he joined the Competition Commission and occupied various portfolios, the most recent being the Commission's Legal Counsel. In 2011 he joined Umgeni Water as Legal Services Manager, a position he held until December 2013.

He has also served as a Trustee of the Umgeni Water Provident Fund and is now the current Fund Principal Officer.

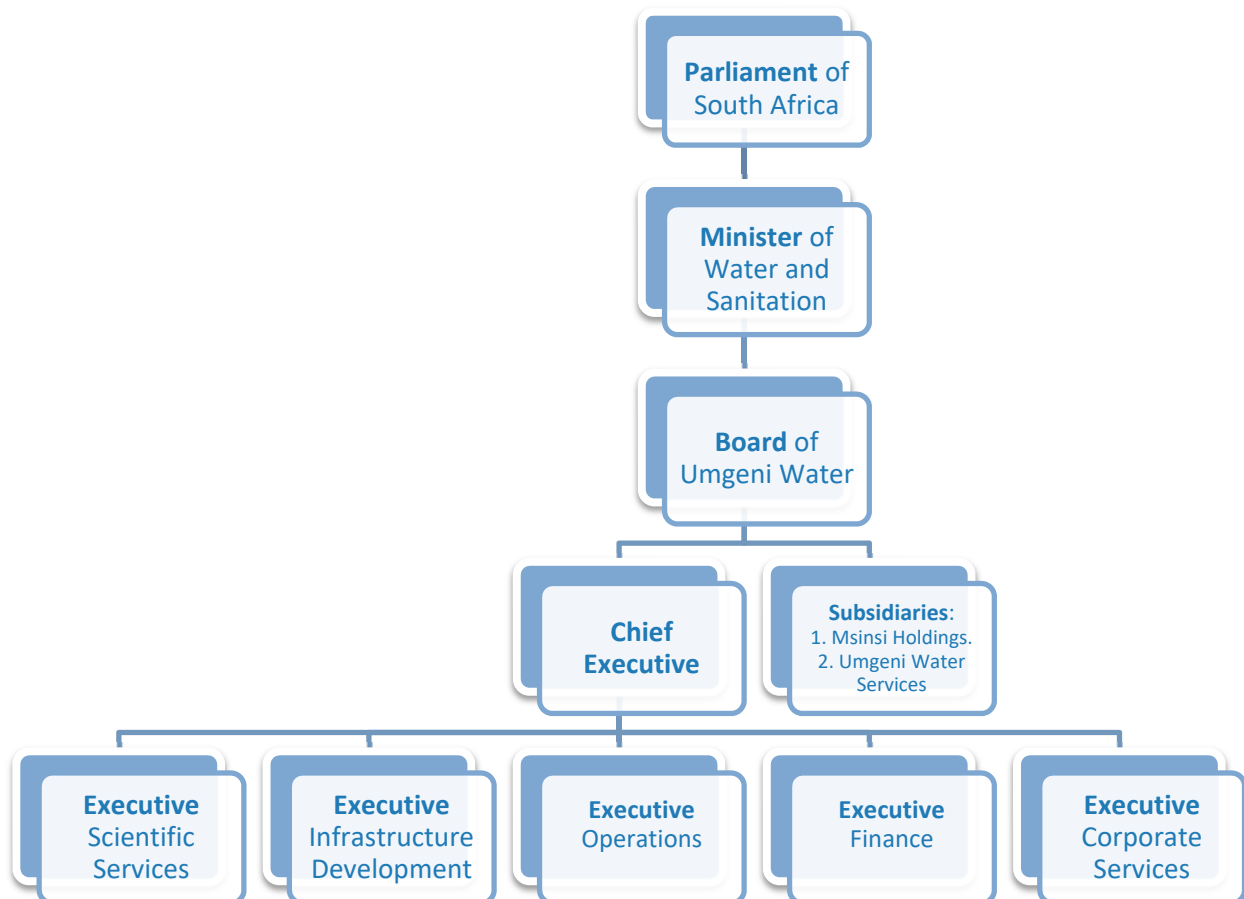
6.4 Executive Committee

The Board has delegated the day-to-day running of the Company to the Chief Executive who works with Executives, each heading up a Division, to assist him in this task. The Executive Committee is the highest executive decision-making structure in the entity and central to its role is the formulation and implementation of the Board's strategy and policy direction and ensuring that all business activities are aligned in this respect.

6.4.1 Functions and Management Structure

Each Division works towards the achievement of set strategic objectives for a predetermined period. The organisation's wholly owned operating subsidiary also works, independently, towards enabling Umgeni Water to fulfil its mandate and contracted obligations.

Umgeni Water has the following structure that responds to its strategy. The core functions pertaining to each is articulated in the strategic statements that follow. Umgeni Water will continue to ensure a structure that is aligned to functions and mandate of a regional water utility.



Umgeni Water Strategic Statement

"We will lead the process of providing solutions via an innovative, vigorous growth path, to increase sustainable water supply in order to satisfy the developmental water services requirements in our region, which contribute to government objectives"

Board Strategic Statement

“We will consider internal and external factors, consult with stakeholders, develop a strategy, provide oversight over strategy implementation and resource usage and manage risks, to produce a valid and approved strategic plan, deliver on strategic objectives and provide sound corporate governance, to achieve our vision and mission in order to contribute towards Government Objectives”

Chief Executive Office Strategic Statement

“We will position and lead the organisation, plan activities and allocate resources, implement strategy, champion corporate governance, partner with stakeholders, to deliver organisational objectives, to achieve a well governed, vibrant, committed, sector-relevant and engaged organisation that delivers on its mandate”

Operations Strategic Statement

“We will position ourselves, plan, structure, mobilise resources, source, specify, operate and maintain our infrastructure, abstract, treat, sell, distribute, monitor, conserve and re-use water, to deliver quality, effective, affordable water services to our stakeholders, which will deliver on organisational objectives”

Scientific Services Strategic Statement

“We will undertake water sampling and laboratory analysis, assess water quality and, environmental health, catchment health, leverage technology, optimise water treatment processes, to achieve sustainability, water resources security and public health and provide innovative and optimal scientific solutions, in order to meet organisational objectives”

Infrastructure Development Strategic Statement

“We will reconcile water demand and water resources, plan infrastructure, provide optimal and innovative engineering solutions, implement capital infrastructure programmes, to deliver water infrastructure in an environmentally sustainable manner, in order to meet organisational objectives”

Finance Strategic Statement

“We will plan; mobilise; account for and report on resources; manage risk; proactively implement procurement strategies; and maintain internal control and systems, which result in funding, control, efficient, effective and economical supply of requisites, support and monitoring of the business, to deliver sound financial management and corporate governance, to contribute towards organisational objectives”

Corporate Services Strategic Statement

“We will provide a specialised, diverse and essential enabling service through the provision of holistic human capital management, property and security management, public relations management, brand management, management of ICT systems and computing infrastructure and provision of legal services, to enhance organisational service delivery capacity”

6.4.2 EXCO Member Appointment Dates and Details

Mr Thamsanqa Hlongwa

Chartered Accountant (SA); BCom Honours.

Appointed as Chief Executive in July 2018

Umgeni Water Acting Chief Executive from September 2017 to June 2018. Umgeni Water Executive Finance from July 2013. Director of Msinsi Holdings SOC Ltd since 2014. Chief Financial Officer KZN CoGTA from March 2007 to June 2013. Completed articles with Deloitte from 2002 to 2004. Audit Senior in Deloitte New York Office from 2004 to 2005. Senior Manager at Siyaya Management Services from 2005 to 2007. Served in other Governance Structures, including the DUT Council and the Board of PetroSA where he also chaired the Audit and Risk Committees of the Board.

Mr Sbusiso Mjwara

National Diploma (Civil Engineering); Professional Engineering Technologist (ECSA); Project Management Programme; Certificates in Municipal Finance Management and Labour Intensive Construction.

Appointed as Executive Infrastructure Development in November 2018.

Executive Member and KZN Branch Chairman of The Institute of Municipal Engineering of Southern Africa (IMESA). ECSA Moderator/Assessor/Interviewer. Senior Contracts Engineer at Royal HaskoningDHV from 2017 to 2018. Senior Manager: Construction at eThekweni Water & Sanitation from 2016 to 2017. Divisional Head: Water & Sanitation Infrastructure Planning & Development at UMDM from 2006 to 2016. Project Management Unit Manager, Municipal Infrastructure Grant at UMDM from 2004 to 2006. Chief Civil/Structural Technician at Emzansi Consulting Engineers from 2002 to 2004. Civil Engineering Technician at BCP Engineers from 1998 to 2002.

Ms Nomalungelo Mkhize

Chartered Accountant (SA); BCom Honours.

Appointed as Executive Finance in December 2018.

Has held various roles including Audit Manager in one of the big four audit firms (Deloitte), Commercial Manager for a packaging company (Nampak), Group Assistant Finance Manager for a listed company in the agricultural sector (Crookes Brothers Limited), and various senior management positions in consulting firms, the latest being an Executive for Product Development (Bonakude Consulting) and Director (Morar Incorporated).

Mr Msizi Cele

BSc (Eng) Mechanical; Registered Professional Engineer (ECSA); Government Certificate of Competency – Machinery.

Appointed as Executive Operations in November 2014.

Managing Director of uThukela Water from 2007 to 2014. Executive Director – Engineering at uThukela Water from 2005 to 2007. Area Manager at Umgeni Water from 1996 to 2005. Senior Design Engineer at Umgeni Water from 1993 to 1996. Professional engineering development and management of unit processes at Shell And BP SA Petroleum Refineries from 1987 to 1993.

Mr Thulasizwe Derrick Shangase

Master HR Professional (SABPP); PgDip (Forensic Investigation and Criminal Justice); LLM (Labour Studies); Graduate Diploma in Industrial Relations; BSocSc (Business Administration); various qualifications in Nursing Sciences.

Appointed as Acting Executive Corporate Services in January 2019.

Senior Manager: Human Resources at Umgeni Water from 2009. Has held various management positions within Human Resources and Industrial Relations.

Ms Manu Pillay

Professional Natural Scientist (SACNASP); MSc Eng (Chem)

Appointed as Executive Scientific Services in December 2018.

Non-Executive Director of Msinsi Holdings SOC Ltd from January 2019. Trustee of the Umgeni Water Retirement Fund from April 2016. Manager: Strategy & Special Projects at Umgeni Water from 2008 to 2018. Manager: Water and Environmental Services from 1998 to 2008.

Chapter 7: Ministerial Directives



7.1 Current Directives

Umgeni Water has has (o) ministerial directive relevant to this Corporate Plan period.

Chapter 8: Self-Appraisal



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8.1 Umgeni Water KPIs

Umgeni Water's strategy in 2018/2019 was implemented through a balanced scorecard comprising Five (5) Strategic Perspectives and Goals, Seven (7) Strategic Objectives (SOs) and Twenty-Four (24) Performance Objectives (POs).

The Performance Objectives are further made up of Sixty (60) total annual measurable Result Indicators. Responsibilities and accountabilities for these are agreed upfront and Quarterly Targets approved for 2018/2019. These Result Indicators include all statutory indicators specifically targeted by the Executive Authority.

Collectively the scorecard enabled Umgeni Water to achieve its ten (10) Outcomes and ultimately its Mission / Mandate to provide innovative, sustainable, effective and affordable bulk water and sanitation services to customers.

Going forward, Umgeni Water has repackaged / re-organised its balanced scorecard to fully align with the DWS perspectives for water boards.

8.1.1 2018/2019 Projected Performance (Full UW Scorecard inclusive of SHC Indicators)

Overall, Umgeni Water performance for 2017/2018 is projected to be $\geq 90\%$ with a $< 10\%$ variance. Variance (as at mid-term) comprised a total of eleven (11) indicators that were not 100% met, several with slight variance.

SO 1: Improve supply security and service delivery

1. PO 3: Reliability of supply (achieved 99%)

SO2: Increase bulk infrastructure access, customers and services

2. PO 4: Increased access to services (achieved 95%)

SO 4: Improve financial systems and key financial ratios

3. PO 10: Improve key financial ratios (achieved 99%)

SO 5: Improve financial sustainability and enhance socio-economic development

4. PO 11: Increase B-BBEE expenditure in relation to operational projects (achieved 78%)
5. PO 12: Manage costs within approved budget (achieved 94%)
6. PO 13: Capital expenditure programme (achieved 83%)

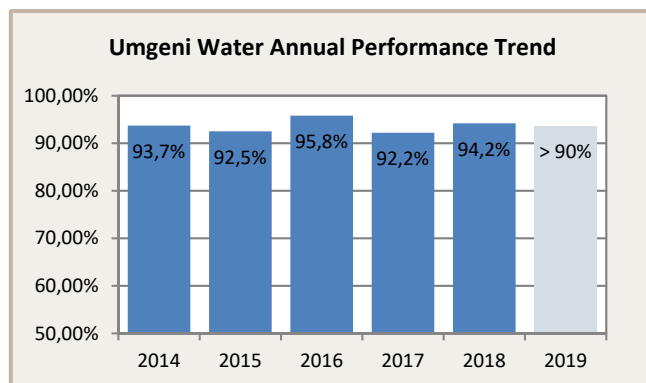
SO 6: Improve governance, risk and compliance systems

7. PO 16: Effective internal controls, compliance and risk management (achieved 92%)
8. PO 18: Corporate social responsibility initiatives (achieved 82%)
9. PO 19: Bulk wastewater compliance (achieved 97%)
10. PO 20: Environmental sustainability, research and innovation (achieved 60%)

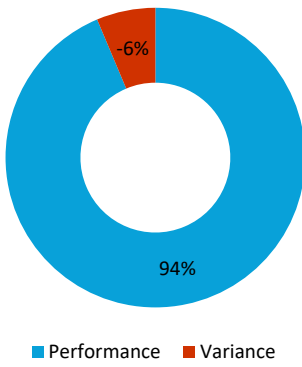
SO 7: Increase skills and competency

11. PO 21: Training and skills development (achieved 86%)

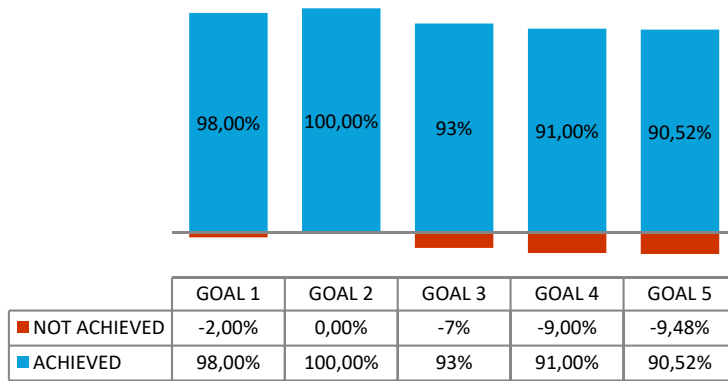
Figures 8.1 (a), (b) and (c), respectively show Overall Compliance, Compliance by Strategic Goal and Compliance by Strategic Objective. This is followed by analysis of variance and turnaround plans. Information is based on mid-term performance (as at 31 December 2018).



Overall Performance



Performance per Strategic Goal



Strategic Perspectives and Goals

ORGANISATIONAL EFFICIENCY AND EFFECTIVENESS

GOAL 1: Provide reliable, responsive and affordable services and expand infrastructure to increase access, whilst ensuring stable water resources to meet current and future needs.

CUSTOMER / STAKEHOLDER INTERACTION

GOAL 2: Develop strategic partnerships, increase support to customers, improve visibility and be a regional leader in the provision of bulk water and sanitation services.

FINANCIAL PERFORMANCE

GOAL 3: Ensure sufficient operating cash flows; manage key cost drivers and leverage debt and assets to provide for future expansion, whilst supporting socio-economic development.

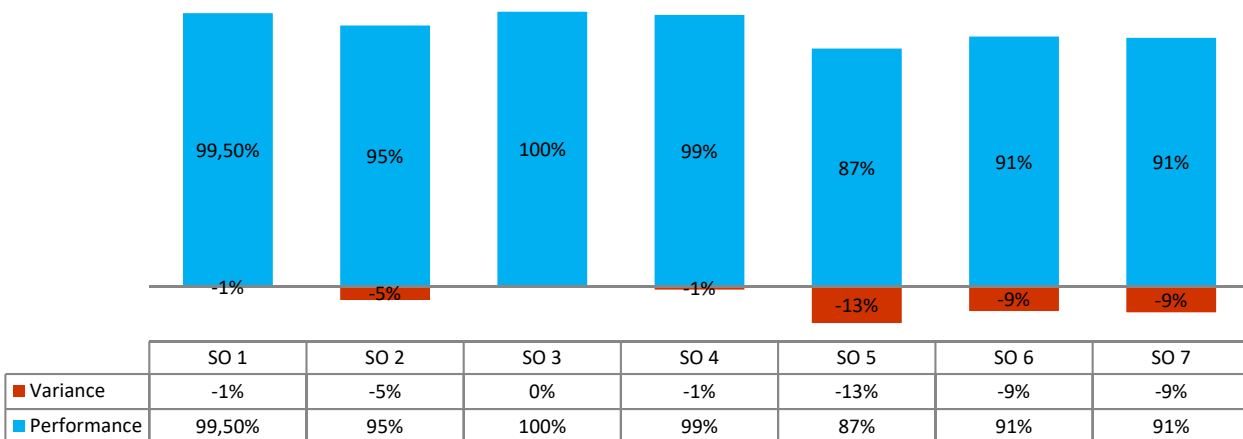
GENERAL PERFORMANCE (RISK AUDIT AND GOVERNANCE)

GOAL 4: Ensure a well-governed and resilient entity that innovates, educates and supports community development and contributes to environmental sustainability.

ORGANISATIONAL CAPACITY

GOAL 5: Strengthen and develop quality human resources and ensure a participatory, collaborative organisation dedicated to continual learning and improvement.

Performance per Strategic Objective



Strategic Objectives

- SO 1: Improve supply security and service delivery
- SO 2: Increase bulk infrastructure access, customers and services
- SO 3: Increase customer and stakeholder value
- SO 4: Improve financial systems and key financial ratios
- SO 5: Improve financial sustainability and enhance socio-economic development
- SO 6: Improve governance, risk and compliance systems
- SO 7: Increase skills and competency

8.1.2 Variance Report per Indicator (Mid-term Performance)

SO 1: Improve supply security and service delivery

Performance Objective 3: Reliability of supply (achieved 99%)

Result Indicator: Number of days (> 24 hours) supply disrupted over total supply days (365 days per year) (*SHC)

Target	Actual	Variance	Turnaround Plan
0 days > 24 hours	3.5 of 184 supply days disrupted (2%)	3.5 of 184 supply days disrupted in 1 of 17 supply systems.	<p>Disruption due to power supply upgrade at Maphumulo Raw Water Pump station taking longer than the planned 12 hours (Q1).</p> <p>Pumpstation upgrade was completed successfully and power was restored at Maphumulo Raw Water Pump station.</p>

SO2: Increase bulk infrastructure access, customers and services

Performance Objective 4: Increased access to services (achieved 95%)

Result Indicator: Investigations for new services or products completed

Target	Actual	Variance	Turnaround Plan
Growth Framework Document updated for 2018/2019 Strategy	Growth Framework Document updated	Update of Growth Framework Document in progress	Document to be completed by Q3

SO4: Improve financial systems and key financial ratios

Performance Objective 10: Improve key financial ratios (achieved 99%)

Result Indicator: Repairs and maintenance as % of PPE and Investment Property (Carrying Value) (*SHC)

Target	Actual	Variance	Turnaround Plan
≥ R120m	R104m	R16m below target	<p>Delay in operating uThukela DM schemes resulted in maintenance underspend of R13m.</p> <p>Lower than expected internal workshop recoveries have also affected maintenance spend.</p> <p>Spend is expected to increase by Jun 2019.</p> <p>Risk that annual target will not be met.</p>

SO 5: Improve financial sustainability and enhance socio-economic development

Performance Objective 11: Increase B-BBEE expenditure in relation to operational projects (achieved 78%)

Result Indicator: Enterprise Development Strategy and Plan Developed and Implemented.

Target	Actual	Variance	Turnaround Plan
Enterprise Development Strategy and Plan Approved: Final document.	Enterprise Development Strategy developed	<p>Approval of Enterprise Development Strategy and Plan behind schedule.</p> <p>No progress report on development of Supplier Database</p>	<p>The Strategy document will be submitted for EXCO approval in Q3, with subsequent submissions for Capex and Board approval planned for Q3.</p> <p>Final progress report on development of Supplier Database expected in Q3.</p>

Performance Objective 12: Manage costs within approved budget (achieved 94%)**Result Indicator: Ugu DM surplus (loss), Rm and per cent variance**

Target	Actual	Variance	Turnaround Plan
R6m±10%	Loss of R2m	Loss of R2m incurred, against budget of R6m	Bad debt provision for Ugu DM of R19m due to continual non-payment and late payment by municipality. Executive and operational engagements will be necessary to resolve the challenges encountered with WSA.

Performance Objective 13: Capital expenditure programme (achieved 83%)**Result Indicators: CAPEX Rm against budget and % variance (*SHC)****Number of CAPEX projects within target completion dates against planned number and % variance (*SHC)**

Target	Actual	Variance	Turnaround Plan
R854m±20% ≥ 85% projects within target dates ≤ 15% variance	R595m 70% of strategic projects (as per Corporate Plan 30% variance	R259m below target 30% variance against allowed variance of 15%	Project delays in strategic infrastructure projects and rehabilitation, renewal projects adversely affected CAPEX spend and project delivery milestones. Action plans in place to resolve delays and successfully manage progress towards meeting target dates as per the 2018/2019 Capex programme, with turnaround expected by Jun 2019.

SO 6: Improve governance, risk and compliance systems**Performance Objective 16: Effective internal controls, compliance and risk management (achieved 92%)****Result Indicator: Per cent compliance against Legal Compliance Register**

Target	Actual	Variance	Turnaround Plan
100% against compliance register	Annual Compliance Monitoring Plan developed 93% against compliance register Non-compliance with legislation, namely National Water Act Regulations and PAIA pertaining to the following: - Wastewater quality compliance (Darvill WWTW), - Sludge/residues disposal - Mpofana WWTW operating without a licence - Abstracting without water use licences in Ixopo, EJ Smith and Mthwalume, and Translation of PAIA manual into three official languages.	7% below target	- Applications for Water Use Licences submitted and are expected by June 2019; - Mpofana WWTW licence expected by Jun 2019; - Darvill upgrade expected to be complete by June 2019; - Sludge Management Plan to be completed by June 2019 Translation of the PAIA manual will be completed by Q3 of 2018/2019.

Performance Objective 18: Corporate social responsibility initiatives (achieved 82%)**Result Indicator: Number of CSR/CSI initiatives undertaken (*SHC)**

Target	Actual	Variance	Turnaround Plan
≥90% implemented as per programme	26% (7 of 27) Nelson Mandela Centenary projects implemented and handed over	64% below target	Action plans in place to complete and hand over the remaining 20 projects by Q4.

Performance Objective 19: Bulk wastewater compliance (achieved 97%)**Result Indicator: Per cent compliance of WWTW systems with discharge licence or General Authorisation requirements (*SHC)**

Target	Actual	Variance	Turnaround Plan
7 WWTW ≥ 85% compliant 1 WWTW ≥ 80% compliant 1 WWTW ≥ 60% compliant	6 WWTW ≥ 85% compliant 1 WWTW ≥ 60% compliant	1 WWTW < 85% compliant (Appelsbosch WWTW: 4.44%); 1 WWTW < 80% compliant (Darvill WWTW: 13.48%)	Appelsbosch WWTW: Installation of the second aerator and re-design of the clarifier pump are in progress, with completion expected during 2018/2019. Darvill WWTW: Process failures will be addressed with the completion of the WWTW upgrade, expected in Oct 2019.

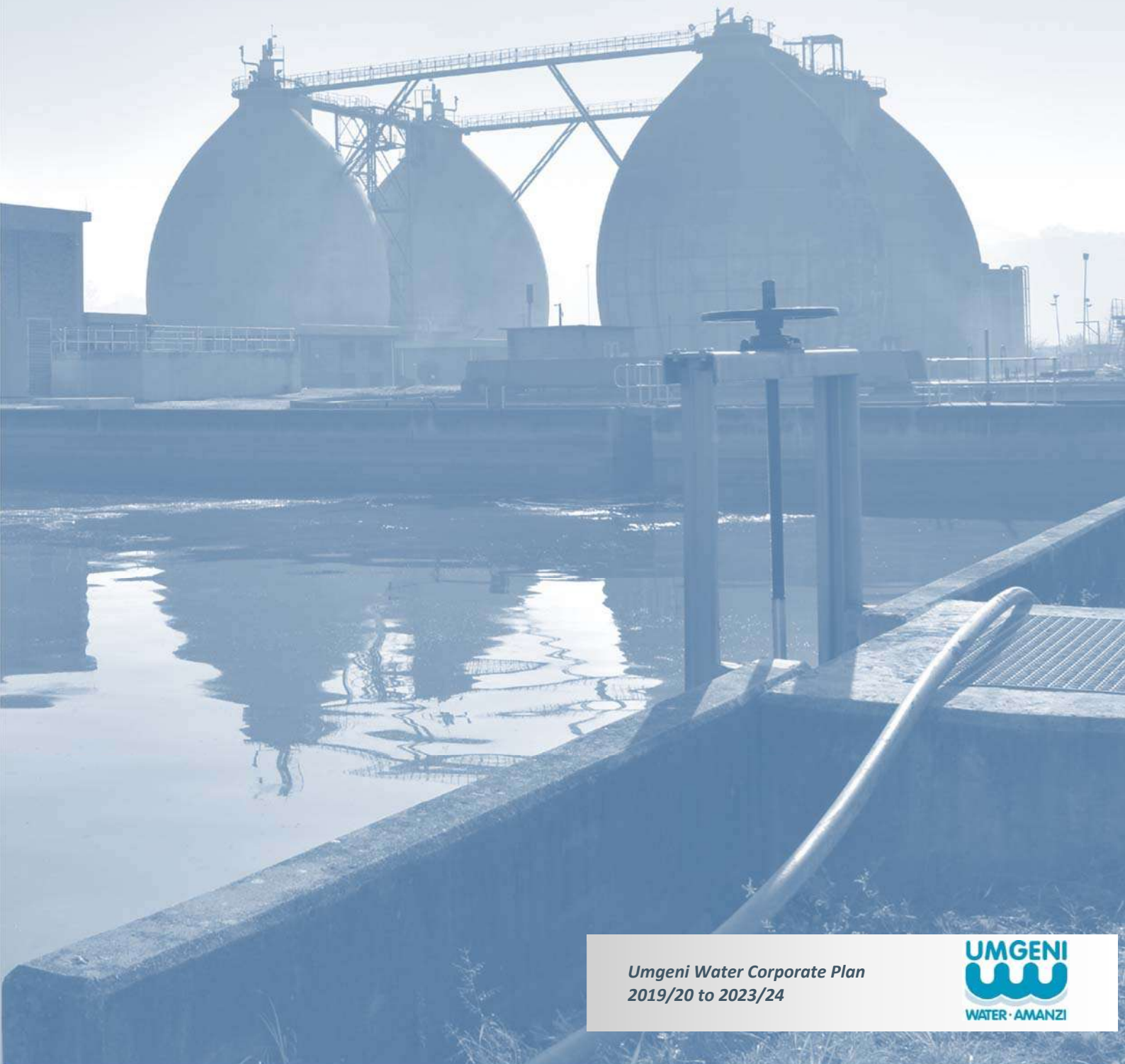
Performance Objective 20: Environmental sustainability, research and innovation (achieved 60%)**Result Indicator: Number of environmental sustainability, research and innovation initiatives implemented.**

Target	Actual	Variance	Turnaround Plan
Draft Proposal for water and wastewater solutions developed. List of partnerships and intentions Progress against 2018/19 Work Plan. Draft progress reports on UW Environmental Projects / Initiatives	Draft Proposal for water and wastewater solutions developed. List of partnerships and intentions 1 initiative in progress: Green Buildings: installation of meters at WTWs in progress (led by OPS)	Development of R&D proposal in progress. Sludge Management: drafting of Corporate Sludge Management Plan in progress.	R&D Proposal to be developed by Q4 Sludge Management Framework / Plan will be completed in Q3.
Draft Business Model for wastewater	Desktop Research conducted for Wastewater Business Model	Desktop Research conducted for Wastewater Business Model	Action plans in place to complete Business Model by Jun 2019.
Draft Paper on Infrastructure Funding and Financing Model.	Drafting of Paper in progress: assessment of wastewater funding and pricing model in progress	Drafting of Paper in progress: assessment of wastewater funding and pricing model in progress	Action plans in place to complete exercise by Jun 2019.

SO 7: Increase skills and competency**Performance Objective 21: Training and skills development (achieved 86%)****Result Indicators: Number of employees enrolled and developed through management development programme.****Number of Professionally Registered Young Professionals.****Number of Graduate Trainees (Graduates, In-service Trainees, Interns) development plans met (*SHC)**

Target	Actual	Variance	Turnaround Plan
Draft Paper of the Future World of Work.	Development of Draft Paper of the Future World of Work in progress	Development of Draft Paper of the Future World of Work in progress	Action plans in place to complete Final Paper by Q3
≥ 80% of Young Professionals have a development programme for Professional Registration.	34% (49 of 146) Young Professionals with Professional Registrations.	Reconciliation of development plans and professional registration status was not completed for all Young Professionals.	Reconciliation to be completed by Q3.
≥ 20 Graduate Trainees ≥ 20 In-Service Trainees ≥ 5 Interns	18 Graduate Trainees 25 In-Service Trainees 9 Interns	< 20 Graduate Trainees	Recruitment is in progress and will be finalised by Q3

Chapter 9: Participation in Companies



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9.1 Umgeni Water Subsidiaries

Umgeni Water has a 100% shareholding in Msinsi Holdings SOC Ltd ("Msinsi") and a 100% shareholding in Umgeni Water Services (UWS) SOC Ltd. This subsidiary holds an 18.5% investment in Durban Water Recycling.



9.2 Msinsi Holdings SOC Ltd

Umgeni Water has a 100% shareholding in Msinsi Holdings SOC Ltd ("Msinsi").

Umgeni Water continues to provide support to Msinsi as its going concern status is dependent upon Umgeni Water's continued support in terms of contracting / engaging Msinsi to undertake the resource management function for dams. A shareholder compact, memorandum of incorporation and service level agreement have been developed and approved by the relevant structures for implementation during the contract period.

The financial status of the operations of Msinsi is contained in the financial statements in the financial plan of this Corporate Plan.

Umgeni Water signed a 10-year renewable agreement for the operation, administration and maintenance of dams with DWS in 2013 encompassing Midmar Dam, Albert Falls Dam, Inanda Dam, Hazelmerer Dam, Spring Grove Dam and the Mearns Diversion Weir, Mearns Pumping Station, Transfer Pipeline and Receiving Streams. Several of these dams are to be managed by Msinsi in terms of the shareholder compact and service level agreement.

A governance framework clarifying the respective roles of Umgeni Water and Msinsi confirms Umgeni Water's commitment to the partnership, which will continue for the duration of the contract and as long as Msinsi remain a wholly-owned subsidiary of Umgeni Water.

Contribution to Umgeni Water Objectives and Strategic Initiatives over next five years

The initiatives to be undertaken by Msinsi Holdings, in terms of the shareholder compact and service level agreement will include supporting Umgeni Water's strategy outcome of Environmental and Community Sustainability:

- The maintenance and enhancement of the natural environment around Umgeni Water managed dams:
 - Control of alien invasive plants.
 - Management of game species according to the carrying capacity of each reserve.
 - Grassland management.
- The control of pollution inside the purchase area surrounding Umgeni Water managed dams.
 - Ensuring that infrastructure developments takes place with minimum impacts on the environment.
 - Ensuring that there is no illegal dumping by industries within the purchase line.
- Controlling visitor access and activities on the water surface and within the purchase line.

9.3 Umgeni Water Services SOC Ltd

Umgeni Water has a 100% shareholding in Umgeni Water Services (UWS) SOC Ltd. This subsidiary holds an 18.5% investment in Durban Water Recycling.

A governance framework, in the form of a memorandum of incorporation, has been developed and approved by relevant structures within Umgeni Water will be implemented and complied with for as long as UWS remain a wholly owned subsidiary of Umgeni Water

The financial information associated with Umgeni Water Services (UWS) SOC Ltd is contained in the financial plan of this Corporate Plan.

Contribution to Umgeni Water Objectives and Strategic Initiatives over the next five years

The initiatives undertaken by Durban Water Recycling (Pty) Ltd (through Umgeni Water Services (Pty) Ltd), contribute to Umgeni Water's strategy outcome of Water Resources Adequacy, specifically focussing on reuse/recycling.

Chapter 10: Water Resources



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10.1 Water Availability

Umgeni Water sources water primarily from fourteen (14) impoundments (includes dams, weirs and run of river abstractions) on three (3) major water resource systems, namely, the Mgeni System (Mooi and Mgeni rivers), the North Coast System (uMdloti, iMvutshane and uThukela Rivers) and the South Coast System (Nungwane, Mzimayi, uMuziwezinto and Mhlabatshane rivers). Two impoundments (on the uMlazi and Msunduzi rivers) are not in use for water supply purposes. These water resource systems, together with the capacities of the impoundments within these systems, are shown in **Table 10.1**.

Table 10.1: Capacity of Water Resource Systems

System	Catchment	Impoundment	Gross Capacity (million m ³)	Owner	Manager
Mgeni	Mooi	Mearns Weir	5.1	DWS	UW
	Mooi	Spring Grove Dam	139.4	DWS	UW
	Mgeni	Midmar Dam	235.4	DWS	UW
	Mgeni	Albert Falls Dam	290.1	DWS	UW
	Mgeni	Nagle Dam	24.6	UW	UW
	Mgeni	Inanda Dam	251.6	DWS	UW
	Mlazi	Shongweni Dam [#]	3.8	UW	UW
	Msunduzi, Mgeni	Henley Dam [#]	1.5	UW	UW
Total for Central System			951.5		
uThukela	uThukela	Spioenkop Dam	270.6	DWS	DWS
Total for uThukela System			270.6		
North Coast	uMdloti	Hazelmere Dam	17.9	DWS	UW
	iMvutshane	iMvutshane Dam	3.1	UW	UW
Total for North Coast System			21.0		
South Coast	Nungwane, Lovu	Nungwane Dam	2.2	UW	UW
	Mzimayi	E J Smith Dam	0.9	Ugu DM	UW
	uMuziwezinto	Umzinto Dam	0.4	Ugu DM	UW
	Mhlabatshane	Mhlabatshane Dam	2.5	UW	UW
Total for South Coast System			6.0		
Other	Ixopo, uMkhomazi	Ixopo Dam	0.6	UW	UW
Total for Umgeni Water Systems			979.1		

[#] These impoundments are owned and managed by Umgeni Water, but are no longer utilised for water supply purposes.

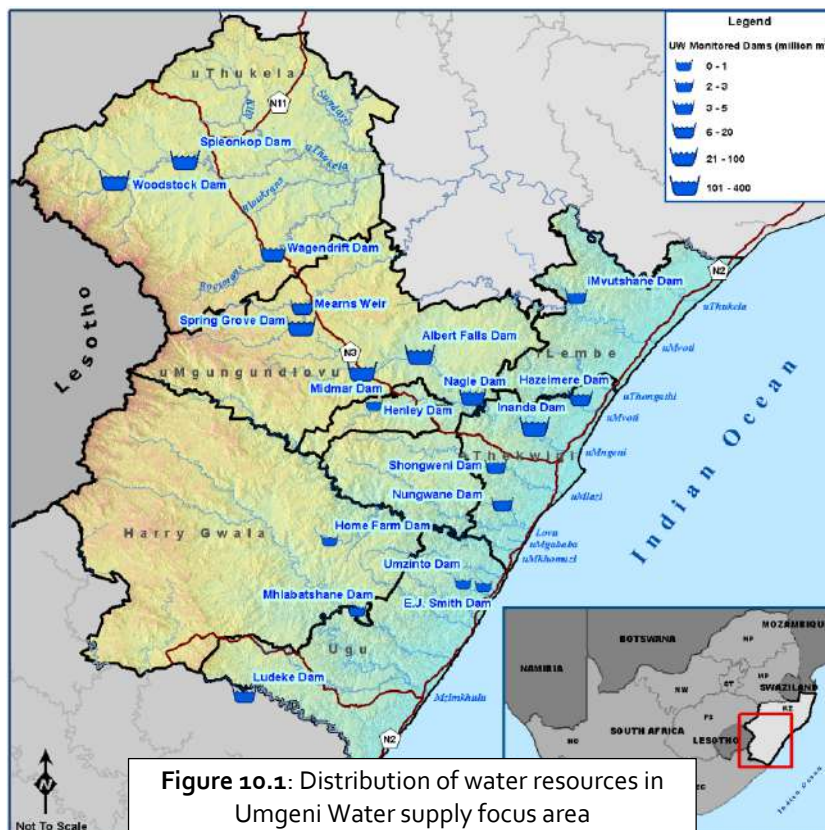


Figure 10.1: Distribution of water resources in Umgeni Water supply focus area

10.1.1 Mgeni System

The Mgeni System comprises four (4) dams on the Mgeni River, namely Midmar Dam, Albert Falls Dam, Nagle Dam and Inanda Dam. It is augmented by the Mooi-Mgeni Transfer Scheme (MMTS) which consists of the Spring Grove Dam and Mearns Weir on the Mooi River, pump stations with a maximum transfer capacity of 4.5 cubic metres per second and raw water transfer pipelines that discharges into the Mpofana River, which flows into the Lions River and then into the Mgeni River upstream of Midmar Dam. The total yield of the Mgeni System (at a 99% level of assurance), together with the MMTS, is 394 million cubic metres per annum (1080 Ml/day).

10.1.2 North Coast System

The North Coast System comprises a number of interlinked operational entities. Major water resources for this area are the Hazelmere Dam on the uMdloti River; iMvutshane Dam on the iMvutshane River and supply from the Lower Thukela Bulk Water Supply Scheme on the uThukela River. The Hazelmere Dam serves a dual-purpose of providing water for both potable and irrigation requirements. The dam has a yield (at a 98 % level of assurance) of 19.0 million cubic metres per annum available for treatment and potable usage, provided the reserve allocation is not imposed. The Lower Thukela Bulk Water Supply Scheme (which uses run of river flow that can be augmented from Spioenkop Dam. The first phase of Lower Thukela Scheme has a river abstraction capacity of 55 Ml/d and there is sufficient water in this resource to upgrade this abstraction to 110 Ml/d if needed (Lower Thukela Phase 2).

The Department of Water and Sanitation (DWS) is raising the Hazelmere Dam wall. Construction of this project began in 2015 but was put on hold in 2018. The project can only be completed once DWS appoint a contractor to complete the project. The raised height will increase the yield to 28 million cubic metres per annum.

The Maphumulo Bulk Water Supply System, which was commissioned in May 2013, utilises raw water from the iMvutshane Dam in the iMvutshane Catchment (a tributary of the Hlimbithwa and Mvoti Catchments). The iMvutshane Dam has a yield (at 98% level of assurance) of 2.4 million cubic metres per annum. An inter-basin transfer from the Hlimbithwa River is being planned to augment supply to the iMvutshane Dam and is expected to be constructed within the next five years.

10.1.3 South Coast System

The South Coast System comprises a number of interlinked operational entities. Water resources for this area are obtained from the Nungwane Dam on the Nungwane River (a tributary to the Lovu River), the Mzinto and E J Smith dams on the Mzinto and Mzimayi rivers respectively, and a sand abstraction system on the Mtwalume River. This system is substantially augmented by the Mgeni system via the South Coast Augmentation Pipeline and the South Coast Pipeline.

The Nungwane Dam has a yield of 3.6 million cubic metres per annum. The E J Smith and Mzinto Dams, together, have a yield of 3.2 million cubic metres per annum and Mtwalume River abstraction point has a yield of 1.2 million cubic metres per annum.

The Mhlabatshane Dam on the Mhlabatshane River has a yield of 2.7 million cubic metres per annum and provides water to the Mhlabatshane Bulk Water Supply Scheme.

North-West Region Systems: Amajuba, Umzinyathi and uThukela DMs

The North-West Region covers a total area of 26 833 km². The area has a population of 1.7 million people and 371 718 households. There are four (4) water service authorities in the region. Umgeni Water has recently signed a Bulk Supply Agreement with uThukela District Municipality.

Other than infrequent isolated instances of water shortages, in severe drought periods, there is a surplus of water available in this area. Four major dams have been constructed for water supply purposes, namely, Wagendrift Dam for water supply to Estcourt and Weenen, Spioenkop Dam for water supply to Ladysmith and regulating the Thukela River downstream, Woodstock Dam for storage of water to feed into the existing

Transfer to the Vaal River System via the uThukela Vaal Inter-basin Transfer Scheme (i.e. via the Drakensberg Pumped Storage Scheme), and Ntshingwayo Dam supplying Newcastle. Most of the dammed water in the North-West area is allocated to the Gauteng Province via the Tugela-Vaal Transfer scheme.

Uthukela DM Systems

There is one (1) water service authority in the region.

- o uThukela DM / WSA with five (5) local municipalities: Indaka LM, Emnambithi/Ladysmith LM, Umtshezi LM, Okhahlamba LM and Imbabazane LM.

Table 10.2: uThukela DM Existing Water Resource Systems

System	Catchment	Impoundment	Abstractions (million m ³ /annum)
Zwelisha / Moyeni	uThukela	Khombe River Abstraction	1
Winterton		Little uThukela River	0.37
Bergville		uThukela River	0.44
Loskop		uThukela River	1.9
Ladysmith		Spioenkop Dam	8.2
Ezakheni		Spioenkop Dam	12.5
Colenso		uThukela River	0.23
Escort	Bushman's	Bushman's River, Wagendrift	5.6
Weenen		Bushman's River, Wagendrift	0.7
Ekuvukeni	Sunday	Sunday's River	9.0
Total for uThukela DM Water Systems			39.94

Systems still need to be defined for this customer.

10.2 Water Resource Assurance and Supply Security per Water Services Authority

10.2.1 eThekweni Metropolitan Municipality

The Mgeni system, supported by the Mooi Mgeni transfer scheme, is the primary resource for this municipality. Water in the municipality's northern areas is also secured from the Hazelmere Dam on the Mdloti River, as well as from the Tongati River. The Nungwane Dam on the Nungwane River provides a small portion of the municipality's water requirements in its southern areas. Groundwater is also used to a limited extent. Water transfers from the uMkhomazi River, wastewater reuse and seawater desalination are potential future sources of water for this area. Water from the uThukela River could also be utilised to a limited extent.

10.2.2 Msunduzi Local Municipality

The Midmar Dam on the Mgeni River is the only source of surface water for this municipality. Water transfers from the Mooi River are used to augment this resource. Groundwater is used to a limited extent.

10.2.3 uMgungundlovu District Municipality

The Midmar Dam on the Mgeni River, supported by the Mooi-Mgeni Transfer Scheme, is the primary source of water for this municipality. A number of minor abstractions on other rivers and tributaries are also undertaken and groundwater is used extensively for many of the rural and outlying peri-urban areas. The uMkhomazi River is a potential future source of water for this area.

10.2.4 iLembe District Municipality

The main sources of water that serve this municipality include the Hazelmere Dam, the iMvutshane Dam and the uThukela River. Groundwater and small run of river schemes are also used extensively in the outlying rural areas. The Lower Thukela Bulk Water Supply Scheme, which abstracts water from the uThukela River, will become a dominant source of water for the coastal areas of this municipality as additional water is supplied from Hazelmere Dam to the northern eThekweni areas. Other long term supply is also proposed from a scheme on the Mvoti River as well as through the use of seawater desalination.

10.2.5 Ugu District Municipality

There are a number of rivers that are utilised in this area. The southern areas (not served by Umgeni Water) utilise water from the Umzimkhulu and Mtamvuna Rivers, while the central area primarily receives water from the Mzinto Dam and EJ Smith Dam on the uMzinto and Mzimayi rivers respectively and from the Mtwalume River. The northern area primarily receives water from the Mgeni System via Inanda Dam and the Nungwane Dam on the Nungwane River. Groundwater is used extensively within this municipality to supply many of the rural areas. The uMkhomazi and uMzimkhulu Rivers and seawater desalination are potential future sources of water for this municipality. The inland area of Mzumbe and Ray Nkonyeni Local Municipalities receive water from the Mhlabatshane Dam.

10.2.6 Harry Gwala District Municipality

Numerous small abstractions on the uMkhomazi, Umzimkhulu and Mzintlava rivers and their tributaries are utilised within this area. The town of Ixopo is supplied from Ixopo Dam (Home Farm) and a borehole. Groundwater is also used extensively within this municipality to supply many of the rural areas. The uMkhomazi, Mzintlava and Umzimkhulu rivers are potential future sources of water for this municipality.

10.2.7 uThukela District Municipality

Water supplied to uThukela DM communities is sourced from within the DM's boundary. With a household count of approximately 115 000 the DM requires 46ML/d to supply the population with a basic service of 100 litres per capita per day. This does not account for increased consumption in urban areas or industrial requirements.

Much of the water resource within the DM is transferred to the Gauteng Province as part of the uThukela Vaal Inter-basin Transfer Scheme. Most of the surface water resource, which is used internally in the DM, is abstracted from the uThukela River or one of its tributaries, such as the Klip, Little uThukela or Bushmans River. Urban areas treat this water prior to distribution, with continuous quality testing being conducted at the treatment plants.

Approximately 52% of current rural water schemes utilise surface water as a resource. Some 79% of these schemes have water treatment facilities such as the Limehill Complex in the northeast of Indaka LM, which relies on the Oliphantskop Dam to supply water to most of its communities. The remaining schemes treat water through manual dosing of chlorine into the reservoirs, however, very little monitoring of the water quality is conducted.

10.3 Water Quality of Raw Water Supplies

The status of water quality per supply source is shown in **Table 10.3**.

Table 10.3: Resource Water Quality

System	Catchment	Impoundment/ Abstraction	Abstraction Water Quality Status and Trends					Comments
			2014	2015	2016	2017	2018	Adverse Raw Water Quality
Inland & Central Coast	Mooi	Spring Grove Dam	-	Filling	Excellent	Excellent	Excellent	-
		Mearns Dam	Good	Good	Good	Good	Excellent	-
		Midmar Dam	Good	Good	Excellent	Excellent	Good	-
	uMgeni	Albert Falls Dam	Good	Good	Good	Good	Moderate	Increased turbidity, nutrient concentrations and algal counts were associated with sustained low water levels. The refilling of the dam and flooding of exposed vegetation and soils contributed to adverse water quality.
		Nagle Dam	Moderate	Good	Good	Excellent	Good	-
		Inanda Dam	Moderate	Moderate	Moderate	Moderate	Good	Upper dam reaches unsatisfactory but good at abstraction point
North Coast	uMdloti	Hazelmere Dam	Good	Excellent	Moderate	Poor	Excellent	-
	uMvoti	iMvutshane Dam & River abstraction	-	Good	Good	Moderate	Good	-
	uThukela	River abstraction	-	Poor	Poor	Moderate	Unsatisfactory	Elevated turbidity, total organic carbon, aluminium and <i>E. coli</i> counts due to inputs associated with poor agricultural practices in the catchment.
South Coast	iLovu	Nungwane Dam	Moderate	Moderate	Good	Good	Good	-
	uMzimayi	EJ Smith Dam	Poor	Poor	Poor	Moderate	Unsatisfactory	Elevated <i>E. coli</i> , turbidity, iron and total organic carbon concentrations associated with rainfall events and sewer inputs from Umzinto Town.
	uMhlabatshane	Mhlabatshane Dam	-	-	Filling	Moderate	Unsatisfactory	Elevated <i>E. coli</i> , turbidity, iron and total organic carbon concentrations due to inputs from the catchment arising from poor agricultural practices.
	uMzinto	uMzinto River abstraction downstream of uMzinto Dam	Moderate	Moderate	Moderate	Good	Moderate	Occasional elevated <i>E. coli</i> counts and iron concentrations associated with significant rainfall events in the catchment.
	uMtamvuna	Ludeke Dam	-	-	-	Good	Moderate	Intermittent nutrient and turbidity inputs from the catchment.
	uMthwalume	uMthwalume River abstraction	Moderate	Moderate	Moderate	Good	Good	Variable quality associated with run-of-river abstraction, with elevated turbidity, total organic carbon and iron concentrations arising from rainfall events in the catchment.
	iXobho	Home Farm Dam	Poor	Poor	Poor	Poor	Unsatisfactory	Eutrophication associated with sewer inputs from Ixopo Town and the iXobho catchment. Extensive alien aquatic weed infestation poses a significant risk to the sustainability of this resource.

Water quality management plans include:

- Monitoring quality of raw water resources to mitigate treatment risks.
- Assessing trends in eutrophication, chemical contaminants, pathogens and suspended solids, and effectiveness of raw water quality objectives.
- Engaging catchment management stakeholders to further influence resource quality and quantity objectives to safeguard consumer water quality.

- o In addition, Umgeni Water will continue to improve quality of waste discharges from its own sites.

Umgeni Water has set resource quality objectives for water treatment abstraction sites. These will continue to be used to provide early warning information to mitigate risks to water treatment and public health. DWS is kept continuously apprised of the quality and risks associated with the source water and need to continue to regulate catchment practices and waste discharges to ensure long-term sustainability of these water resources.

10.4 Water Use Rights, Licences by Resource

Umgeni Water's registered and licenced abstractions as well as licence applications are shown in **Table 10.4**. The current abstraction volumes are greater than the registered volumes for a number of water resources. In this regard, Umgeni Water has submitted licence applications to DWS in order to operate within legal limits; however some of the submissions date as far back as 2006 and are still under review.

Table 10.4: Registered Abstractions and Status of Licence Applications.

System	Abstraction Point	Currently Registered / Licenced use (latest issue date) (Ml/day)	Actual use (as at Jan 2017 – Jan 2018)	Status of Water Use	Long-term Demand projection and date submitted application to DWS (Ml/day)
Mgeni	Midmar Dam Nagle Dam (Albert Falls Dam) Inanda Dam	Licenced for 1,287 (13-11-2017)	1063.8	Licenced	Same as Licenced. No further applications made.
North Coast	Hazelmere Dam	Active and registered for 45 (2009-12-11)	59.5	Application submitted-Approved and awaiting licence copy.	Application for 92 made in July 2017 – approved and official document expected in 2018.
	iMvutshane Dam	Active and Licenced for 7 (30-08-2012)	3.9	Licenced	Same as Licenced.
	Lower Thukela	Active and Licenced for 110 (12-07-2018)	23.9	Licenced	Same as Licenced.
South Coast	Nungwane Dam	Active and registered for 26.5 (prior to 1994)	17.6	Registered Water	Combined licence to be submitted in 2018
	Ilovu Emergency Scheme	-	-	Unlicenced	
	E J Smith Dam Mzinto Dam	Active and registered for 12.5 (prior to 1994)	13.9	Unlicenced for current use	Application for 14 made in July 2017. Reserve Determination in progress
	Mtwalume River Run-off River Abstraction	Active and registered for 12.5 (27-07-2017)	11.8	Licenced	Application for 14 made in July 2017. Reserve Determination in progress
	Mhlabatshane Dam	Active and Licenced for 4.1 (06-02.2009)	4	Licenced	Same as Licenced.
Other	Ixopo Dam	Active and registered for 2.3	2.5	Unlicenced for current use	Application for 2.7 made in March 2017. Reserve Determination in progress

10.5 Water Demands, Planned Developments and Shortfalls

The sales forecast for 2018/2019 and 2019/2020 are estimated to be 1 266 Ml/day and 1 298 Ml/day, respectively. This represents a 6.3% year-on-year decrease in growth for the first year followed by a 2.6% increase in growth in the second year. The expected decrease in growth is as a result of drought curtailments which have been implemented in Umgeni Water's largest system, the Mgeni Catchment.

Umgeni Water, as a bulk water services provider, requires sustainable and cost-effective water resources to meet its customer's demands. In view of the significant lead times required to plan, design, construct and commission major water resource development projects, future medium to long-term water resources from the Department of Water and Sanitation (DWS), as the custodian of the country's water resources, have to be secured in a timely manner.

DWS has, to date, undertaken regional water resource development investigations within Umgeni Water's area of operation in close collaboration with Umgeni Water and its major customers. A number of these studies were co-funded by Umgeni Water. The status of water demand within Umgeni Water's area of supply, however, requires several of these water resource investigations to be completed, failing which, customers could be faced with severe water shortages in coming years. A summary of resource needs is shown in **Table 10.5** and described further in the sections that follow.

Table 10.5: Summary of Water Resource/Supply needs, Timing and Estimated Cost

Scheme	Date Needed	Timing	Estimated Cost	Responsibility
Phase 1 uMkhomazi Water Project: Smithfield Dam	2010	Behind Schedule	R 30 billion	DWS
Lower uMkhomazi Bulk Water Supply Scheme	2019	Behind Schedule	R 3.2 billion	UW
Lower Mvoti Bulk Water Supply Scheme: Welverdiend Dam	2030	On Schedule	R 4 billion	DWS

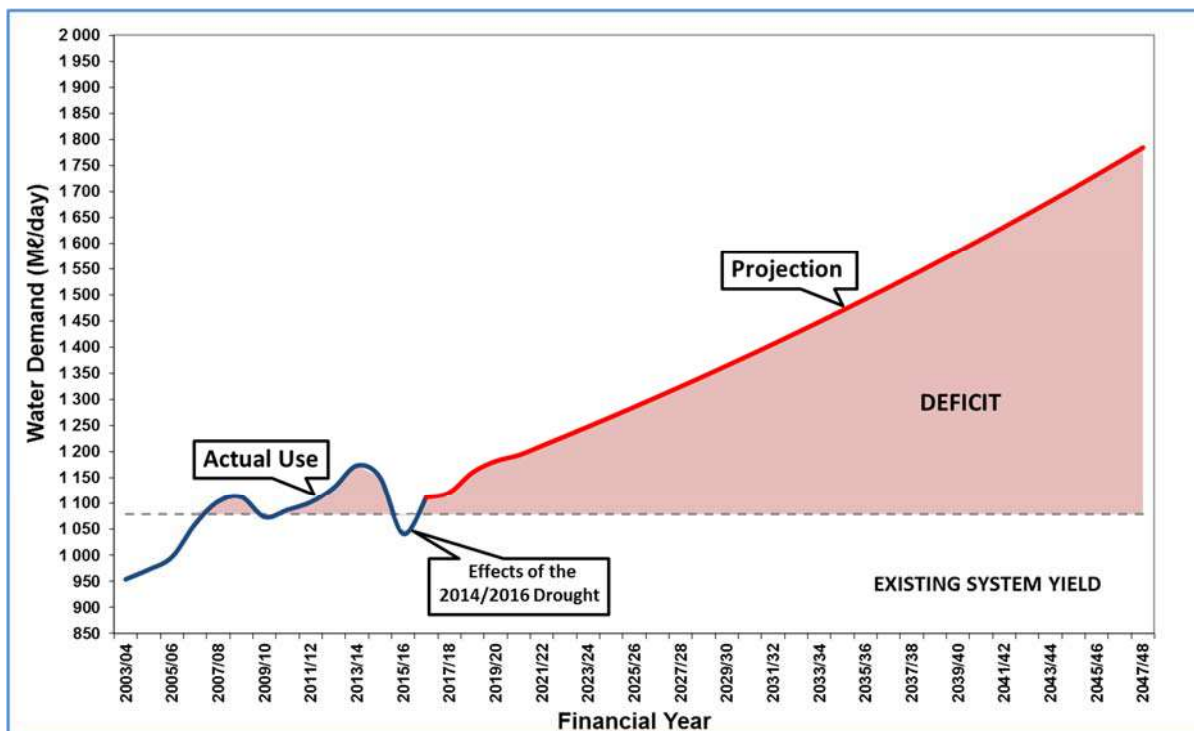
Umgeni Water will continue to manage its existing resource supplies with the utmost diligence. In addition, Umgeni Water is investigating alternative sources to assist with meeting the medium and long-term water requirements of the region, including the long term implementation of two large-scale seawater desalination plants for the East Coast Region. Further initiatives are described in the water conservation and demand management plan later in this Corporate Plan.

10.5.1 Mgeni System: Planned Developments and Shortfalls

The long-term water demand projections for the Mgeni system are shown in **Figure 10.2**. The existing yield, shown in **Figure 10.2**, includes inter-basin transfers from Mooi-Mgeni Transfer Scheme (MMTS). The MMTS includes: Spring Grove Dam (full supply capacity of 139.4 million cubic metres) on the Mooi River, a pumping station at Spring Grove Dam and a new pipeline to transfer water directly into the Mpofana River in the Mgeni catchment. The overall transfer capacity of the MMTS is 4.5 cubic metres per second.

Figure 10.1 also indicates that, outside of drought periods, demands are slightly greater than the 99% assurance of supply level, even with the MMTS-2, and further augmentation of the Mgeni System is therefore needed. The long term augmentation option for the Mgeni system would comprise the construction of Phase 1 of the uMkhomazi Water Project: Smithfield Dam which is detailed in the next section.

Figure 10.2: Long-Term Water Demand Projections for the Mgeni System



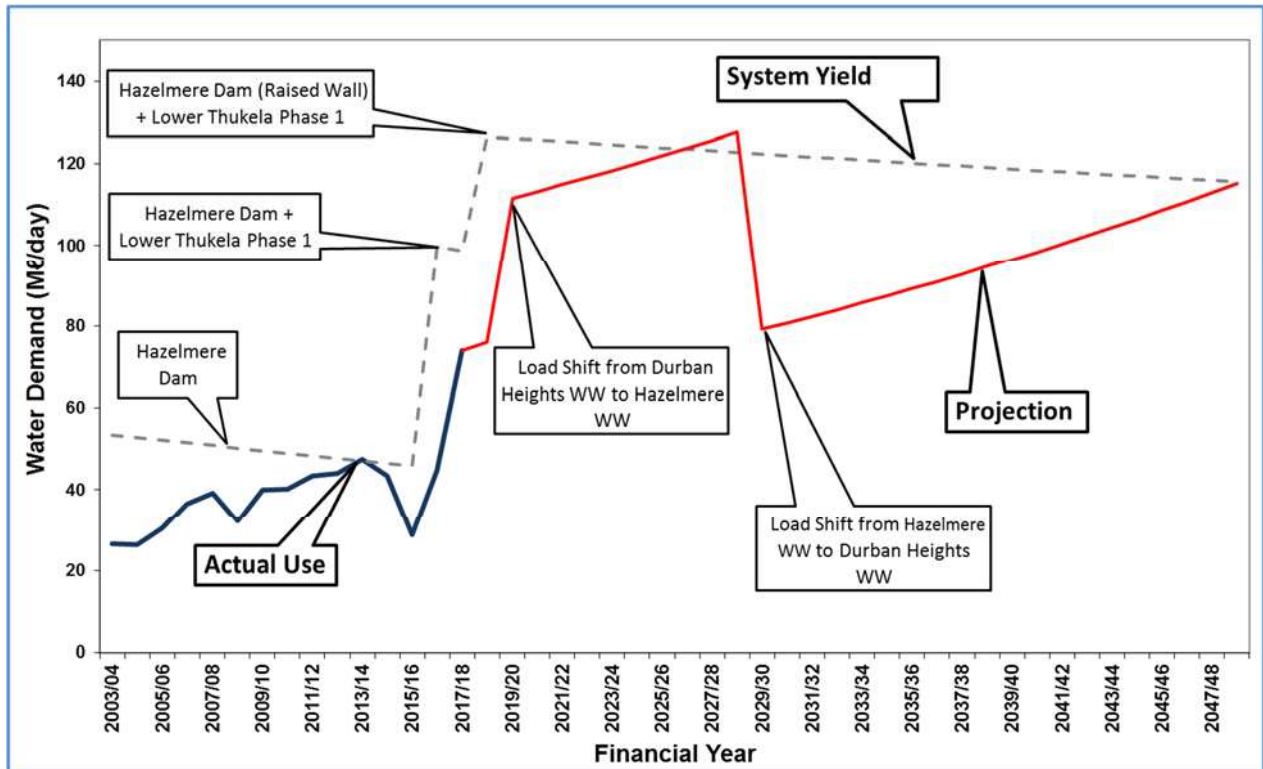
Phase 1 of the uMkhomazi Water Project: Smithfield Dam

The current and projected water demand trends (**Figure 10.2**) show that the planning of the next major water resource development, the uMkhomazi Water Project, to support the Mgeni system, urgently needs to be brought to a stage of implementation. Without this augmentation of the Mgeni system, Umgeni Water will be unable to ensure that future water demands can be met at the appropriate level of assurance. DWS has completed the detailed feasibility level investigation into this augmentation option and Umgeni Water has also completed a detailed feasibility level investigation into the associated bulk potable water component in an integrated manner with the DWS water resource component. An environmental impact assessment of the entire project is currently underway and environmental authorisation will be applied for in 2019. If the authorisation is successful then the project would move to the detailed design phase in 2019/2020.

10.5.2 North Coast System: Planned Developments and Shortfalls

Water demand in the North Coast region - the coastal strip between Veralum, to the north of Durban, and the town of KwaDukuza - has risen over the past few years and is expected to continue to grow in the future (refer to Figure 10.3).

Figure 10.3: Long-Term Water Demand Projection for the Hazelmere (Mdloti) System



DWS commissioned the KwaZulu-Natal Coastal Metropolitan Areas Water Reconciliation Strategy Study, which amongst other things, considered strategies for augmenting the North Coast water supplies. The augmentation options included:

- Raising of Hazelmere Dam which is in construction with commissioning expected in 2018,
- Implementing the Lower Thukela Bulk Water Supply Scheme, and
- Building a new dam on the Mvoti River (either the Welverdiend Dam or Isithundu Dam) which is in planning.

Raising of Hazelmere Dam

Raising the full supply level of Hazelmere Dam by seven metres will increase the firm yield of the resource to approximately 27.3 million cubic metres per annum (at a 98 % level of assurance). Construction activities related to the raising of the dam commenced in 2015, although the contract was discontinued in 2018. The dam wall has been raised, however, rock anchors in the dam wall still have to be completed before the dam can be fully impounded to the new full supply level. DWS will have to appoint a contractor to complete the rock anchors so that the full dam capacity can be realised.

Lower Thukela Bulk Water Supply Scheme

The recently completed first phase of the Lower Thukela Bulk Water Supply Scheme (2017) is a practical solution to implement to supply additional water to the area. This scheme can augment the water supplies of the Mdloti System, as the raising of Hazelmere Dam, on its own, will not provide sufficient resources to supply this area in the medium term. The Lower Thukela Bulk Water Supply Scheme draws water from the uThukela

River and does not require raw water storage. A second phase to this project can increase the capacity of the water treatment plant from 55MI/d to 110MI/d and would be implemented as and when demand dictates.

iMvutshane Dam

Umgeni Water constructed the Maphumulo Bulk Water Supply Scheme (BWSS) to supply the communities of Maphumulo, Maqumbi and Ashville. This scheme draws water from iMvutshane Dam. The existing 6MI/d yield of the system can be further increased with the construction of an inter-basin transfer from the Hlimbitwa River which is planned within the next five years.

Lower Mvoti Bulk Water Supply Scheme: Welverdient Dam

DWS and Umgeni Water conducted numerous water resource and supply infrastructure investigations of the lower Mvoti River catchment during the latter half of the 1990s. At the time, the proposed Isithundu Dam (serving both irrigation and potable water demands) with a downstream abstraction works located near the town of KwaDukuza was identified as being the preferred infrastructure development configuration. However, a number of critical assumptions have since changed. Most significantly, legislative changes governing national raw water pricing led to the irrigation sector withdrawing from the proposed scheme on affordability grounds. The implication is that storage options serving only the potable water sector now need to be considered.

Umgeni Water has therefore requested DWS to review the findings of the previous investigations and develop detailed feasibility plans for the next phase of water resource augmentation for the North Coast System – most likely to be the proposed Isithundu Dam option. Umgeni Water will undertake concurrent detailed feasibility level investigations into the associated bulk water transfer infrastructure. It is envisaged that both investigations will proceed simultaneously and in an integrated manner.

10.5.3 South Coast System: Planned Developments and Shortfalls

The water resources that support the Middle South Coast area lack substantial storage capacity, making the area especially susceptible during periods of drought as witnessed during the latter part of 2010, 2014, 2015 and 2016. While the infrastructure linkages between the Mzinto, Mtwalume and Craigieburn water treatment works' are able to alleviate localised supply shortages for short periods, they are not able to sustain supply over longer periods and this increases the risk of non-supply and the need for water restrictions.

Several localised solutions have been investigated, including an assessment by DWS of the feasibility of a low-level weir on the Mtwalume River to improve abstractions at this point during low flow periods. These minor water resource developments address the constraint in the short-term only. As with the North Coast area, the Middle South Coast area is experiencing strong growth in water demand and this is being driven by economic growth in the region. A major water resource development will be required to provide a long-term solution to water scarcity in the area. An emergency scheme was developed to pump water from the Mpambanyoni River to the E J Smith Dam although this 8MI/d inter-basin transfer can only be used during drought periods.

Lower uMkhomazi Bulk Water Supply Scheme

It is recognised that the Mgeni System has insufficient resources to support the Middle South Coast Region in the medium to long-term and that a local, sustainable, long-term scheme will have to be developed to support this supply. The uMkhomazi River is best suited for this purpose. Umgeni Water has recently concluded a detailed feasibility investigation of the Lower uMkhomazi Bulk Water Supply scheme for this purpose. This scheme will abstract water from the lower reaches of the uMkhomazi River for treatment and supply into the South Coast Pipeline.

The availability of a local sustainable source will then allow the extension of the South Coast Pipeline (Phase 2 and 3) further southwards to increase the area of supply and enable a linkage to other supply systems in the south. Following the detailed feasibility study of the Lower uMkhomazi Bulk Water Supply Scheme the

project has progressed to detailed design stage and it is expected that this will be concluded within the next year.

Mhlabatshane Bulk Water Supply Scheme

Umgeni Water has constructed the Mhlabatshane BWSS as part of a larger regional scheme development by Ugu District Municipality. The aim of the project is to reduce water services backlogs in certain rural areas in the Mzumbe and Ray Nkonyeni Local Municipalities. This scheme is situated within the Lower South Coast Sub-Region. The Ugu District Municipality is responsible for the reticulation component of the scheme, which, in its entirety, is planned to serve an estimated 101,000 people (approximately 15,300 households) of which approximately half are currently classified as having a water service backlog.

The bulk component of the scheme comprises of a dam on the Mhlabatshane River (a tributary of the Mzumbe River), from where water is pumped to a water treatment works situated in close proximity to a command reservoir. Potable water is then supplied to Ugu District Municipality from the command reservoir for reticulation through an extensive gravity-fed network to the various communities in the area. Some of the reticulation components currently exist as stand-alone schemes, with the remainder still to be installed.

A second phase of the project needs to be developed as current water demands, from this scheme, exceed the assured yield of the dam. Under phase 2, water will be abstracted directly from the Umzimkhulu River, pumped to the existing water treatment works (which will have to be upgraded) and then fed into the reticulation system via the command reservoir. A detailed feasibility of this second phase of the project has been concluded and the detailed design phase is being commissioned.

10.5.4 Alternate Resource Options

Umgeni Water is highly reliant on surface water resources as a raw water source. The Mgeni System is now completely utilised and additional storage in the catchment will offer no additional yield. Augmentation of the Mgeni system resource is now reliant on inter-basin transfers from adjoining catchment areas, most notably the Mooi-Mgeni Transfer Scheme Phases 1 and 2. As alternatives to using surface water as a resource, Umgeni Water is now committed to investigating other diversified resource options for augmenting the system with the intention of implementing viable options. These augmentation options include Wastewater Reuse and Seawater Desalination.

Wastewater Reuse

A 2 Ml/day Water Recovery Plant has been constructed at Darvill WWTW. This plant will be fully commissioned in October 2019. Approximately half the water produced (1 Ml/day) will be used as process water (wash water) for the Darvill WWTW. Additionally the plant will be used as a demonstration facility for research and educational purposes. Water recovery will be promoted as an important and safe water resource to augment our existing supplies.

The project plan includes installation of advanced treatment technologies and the facility will provide valuable opportunity to gain experience into the operation of a Water Recovery Plant.

Seawater Desalination

Umgeni Water has recently completed a feasibility study on two large-scale desalination plants. The objective of this study was to investigate the viability of constructing these desalination plants (150 Ml/d each), in the eThekweni area, as possible alternatives to the proposed uMkhomazi Water Project and the Lower uMkhomazi Bulk Water Supply Scheme. The capacity of these plants is based on the capacity of existing and proposed bulk water supply infrastructure which would be utilised to convey the potable water from the desalination plants to the various distribution points. eThekweni Metropolitan Municipality, Ugu District Municipality and iLembe District Municipality would be the beneficiaries of this project.

Following the detailed feasibility study, a financial and risk analysis was undertaken to compare both the desalination options with the "traditional" bulk water supply projects and it was concluded that it would not

be beneficial to construct either of these desalination plants at this stage. These projects will still be considered as long term augmentation options.

A desalination plant is being planned for implementation at Elysium on the South Coast of KwaZulu-Natal within the Ugu District Municipality. This 2.5 to 10Ml/d project is being planned to augment water resource supply to areas currently supplied by Mtwalume WTW. A Detailed Feasibility Study of this scheme has been completed and detailed design of this project will now be undertaken. Following the detailed design a decision will be made on whether to construct this scheme

10.5.5 Research to assess the impacts of climate change on water security

Climate change could pose a threat to water availability within the Umgeni Water Supply Area. Research into these possible impacts must be undertaken so that mitigation and adaptation measures can be incorporated into planning and design if needed. This is of particular importance given the significant costs and long planning period required for major infrastructure investments such as dams, pipelines, structures, buildings and transport infrastructure. Since 2006, Umgeni Water has been taking a proactive approach by investigating the impacts of climate change and incorporating the recommended control measures into operations planning. The climate change initiatives undertaken by UW are outlined below.

Umgeni Water's Climate Change Initiatives

DWS and Umgeni Water acknowledged the impacts of climate change on hydrological variability in 2010 in the KwaZulu-Natal Coastal Metropolitan Area Reconciliation Study (2010) although, at the time of that study, the "results of climate change could not be determined accurately" (DEA, DWS, GIZ and SANBI 2013:67). In 2010, Umgeni Water commenced with research into the impacts of climate change on hydrological variability viz. the Water Research Commission study on the potential impacts of climate change on the Mgeni System (2012). Unfortunately, the high variability of results meant that distinct conclusions could not be drawn on the subject, although the potential for an increase in extreme events (floods and droughts) seems possible.

In alignment with the 2017 KZN Climate Action Adaptation Plan Programmes 2 and 3 regarding the need to further develop existing early warning systems, Umgeni Water together with the South African National Biodiversity Institute (SANBI) and uMgungundlovu District Municipality (UMDM) are undertaking a project to develop a flood forecasting and early warning system at three pilot sites located within UMDM. The duration of this project is three years and the deliverable is to provide a real-time flood forecasting and early warning system to alert communities of impending flood events. The design of this system commenced in May 2017 and the project is anticipated to be completed in April 2020.

In alignment with the 2017 KZN Climate Action Adaptation Plan Activity 1.1 regarding the need to identify alternative water sources, Umgeni Water has identified desalination as a viable alternative water source and has a long term plan to construct desalination plants at Lovu and Tongaat, on the South Coast and North Coast of the eThekweni Municipality, respectively. The proposed plants will produce a total of 300 Ml/day of water when at final capacity (150 Ml/day each).

Furthermore Umgeni Water has just completed an investigate of the potential impacts of climate change on future water supply based on (1) the multiple hybrid frequency distribution (HFD) risk approach, and/or (2) the latest long term adaptation scenarios using a more detailed and complex water resources system model.

The HDF approach predicts the possible climate change futures for South Africa based on the numerical hybridisation of the zonal trends derived from the Integrated Global System Model (IGSM) with a set of pattern kernels of regional climate change from the global circulation models (GCMs) (DEA, DWS, GIZ and SANBI 2013).

10.6 Management Arrangements

Umgeni Water operates many water supply resources infrastructure in its operational area on behalf of the Department of Water and Sanitation (as per **Table 10.1**). This is currently undertaken with a signed agency agreement that Umgeni Water concluded with DWS in 2013.



Chapter 11: Bulk Potable Water Supply Plan



*Umgeni Water Corporate Plan
2019/20 to 2023/24*



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11.1 Water Treatment Works Capacity, Condition and Water Quality Produced

Umgeni Water treats water at seventeen (17) bulk water treatment works, for which works capacities and utilisation are shown in **Figures 11.1** and **11.2** respectively. Water quality produced per water treatment works is shown in **Table 11.1**.

Figure 11.1: Water Treatment Works Design Capacity (Ml/d).

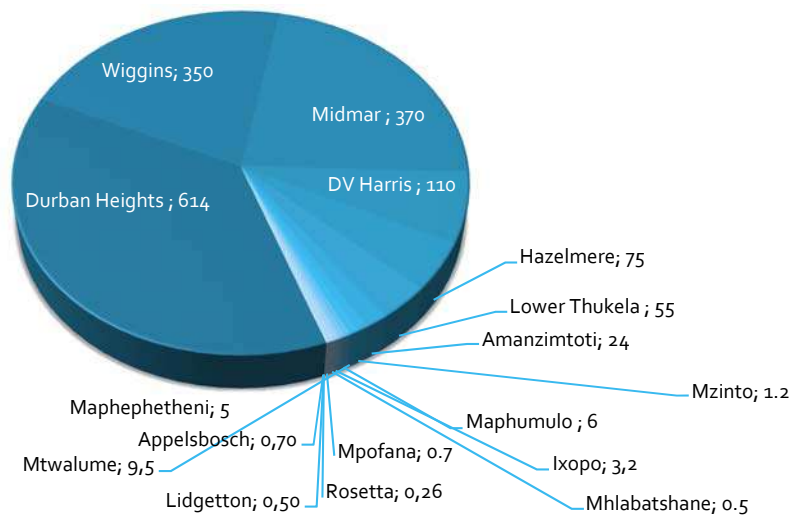


Figure 11.2: Water Treatment Works Capacity Utilisation.

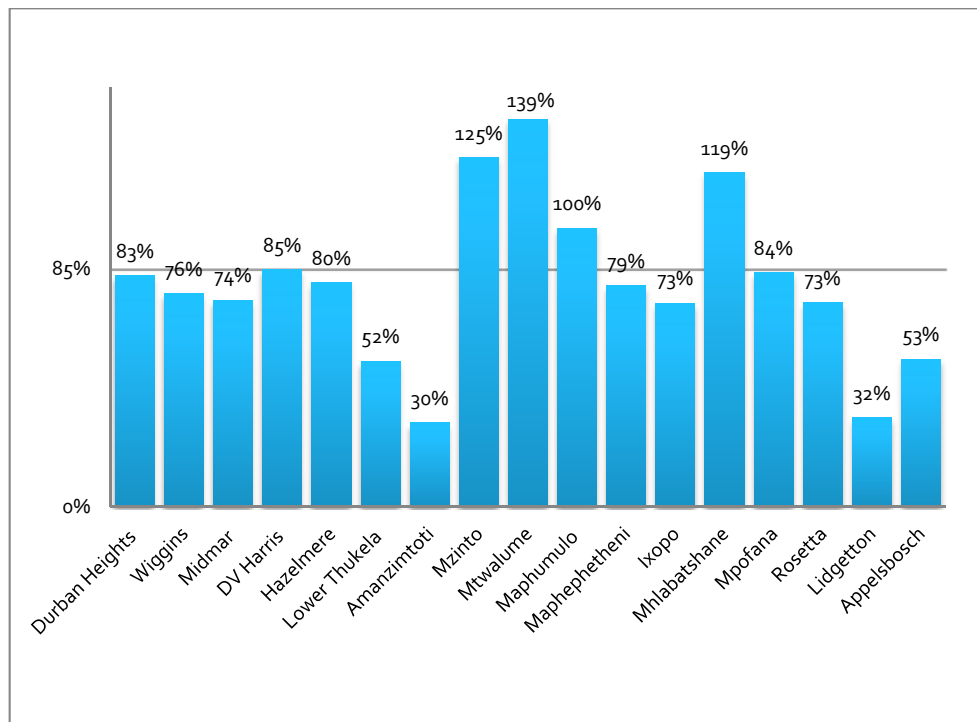


Table 11.1: Water quality produced per water supply system for the period (as at December 2018)

Water Supply System	Average Daily Volume Treated (Ml/d)	% Total Supply Volume	Per cent Compliance with SANS 241:2015				
			Acute Health Microbiological	Acute Health Chemical	Chronic Health Chemical	Operational	Aesthetic
Durban Heights WTW	439.0	41.39	100.00	100.00	100.00	100.00	100.00
Wiggins WTW	268.9	23.59	100.00	100.00	100.00	99.68	100.00
Midmar Water Supply System	227.5	16.85	100.00	100.00	100.00	99.63	100.00
DV Harris Water Supply System	78.5	7.41	99.59	100.00	100.00	99.66	100.00
Hazelmere Water Supply System	37.5	5.06	100.00	100.00	99.74	99.86	100.00
Amanzimtoti Water Supply System	15.0	1.62	100.00	100.00	100.00	99.66	99.89
Lower Thukela Supply System			100.00	100.00	99.74	99.54	100.00
Mzinto WTW	11.9	0.81	100.00	100.00	100.00	100.00	100.00
Mtwalume WTW	10.3	0.51	100.00	100.00	100.00	100.00	100.00
Maphumulo Water Supply System	5.0	0.40	100.00	100.00	99.58	99.73	99.12
Maphephetheni WTW	3.25	0.27	100.00	100.00	100.00	100.00	100.00
Ixopo WTW	1.6	0.22	100.00	100.00	100.00	100.00	100.00
Mhlabatshane WTW	3.5	0.27	100.00	100.00	100.00	99.39	100.00
uMgungundlovu Schemes	6.95	0.63	100.00	100.00	100.00	98.72	100.00

11.2 Summary of Interventions to address Capacity and Water Quality Constraints

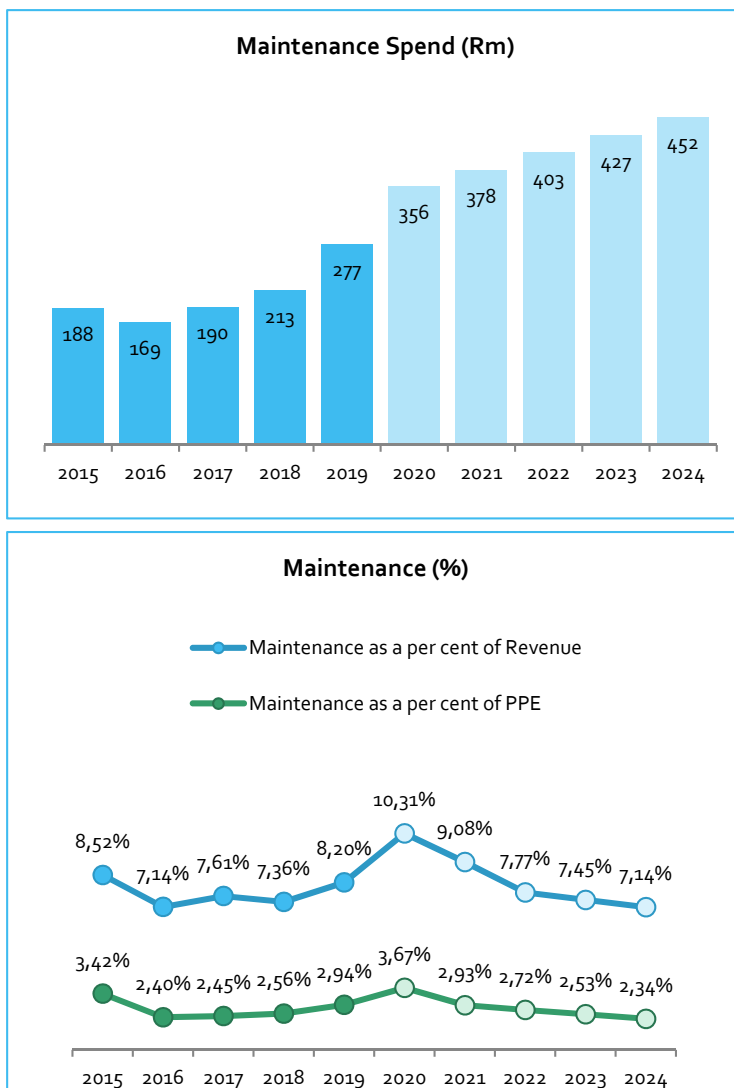
Several works, as shown in Figure 11.2 are currently operated above their design capacity in response to demands and this also impacts on water quality. Specific interventions to address this in the five-Year Corporate Plan period including some associated raw water supplies are:

- *Mgeni System – Midmar WTW:* A works upgrade is currently underway and is scheduled to be completed during 2019.
- *Mtwalume WTW:* Operational and process enhancements will alleviate constraints. The load on the Mtwalume system will be shed to the South Coast Pipeline when the Pennington Link is completed by Ugu DM. The long-term solution to address the Mtwalume capacity constraints is the extension of the South Coast Pipeline and related system, which will coincide with the commissioning of the Lower uMkhomazi Bulk Water Supply Scheme in 2023.
- *Ixopo System:* Umgeni Water provides bulk potable water to the town of Ixopo from a 2.8 Ml/day Water Treatment Works (WTW), supplemented with a 0.4 Ml/day borehole.
- *Mhlabatshane System:* A detailed feasibility study for Phase 2 (augmentation from the uMzimkhulu River) of this regional supply scheme has been completed and this project will now progress to the Detailed Design level.
- *Mgeni System - Lower uMkhomazi Bulk Water Supply Scheme:* A detailed feasibility study has been completed on this project and a detailed design of the scheme will now be undertaken.
- *Hazelmere WTW:* The Dam Wall Raising project is currently underway. This will increase the dam capacity from 17.18 million m³ to 36.1 million m³.
- *Maphumulo System:* The upgrade the WTW from 6 Ml/d to 12 Ml/d is in progress. Construction is in progress and is expected to be complete by 2020.

11.3 Asset Condition, Maintenance and Management

Umgeni Water remains highly committed to meeting all obligations of its Bulk Supply Agreements and conducts regular maintenance and inspection of all its assets as an intrinsic part of continued operations management. This comprises planned maintenance, which is inclusive of preventative maintenance, repairs, redesign and modifications, which are complemented by on-going unplanned, reactive and corrective maintenance in line with an asset management implementation plan for the year. The asset management strategy further drives the focus of condition assessments of the various components of key strategic and critical infrastructure to its various sub-components i.e. civil, mechanical, electrical, instrumentation and control.

Figure 11.3: Maintenance spend current and planned (Rm) and spend (%) in respect of Revenue and PPE



A key output of these assessments is establishment of the condition status of assets. This status is vital in determining the useful life and future investments required to maintain our level of service to all our customers. The intention is to ensure there are no assets that pose significant risk to supply and there will be no major interruptions to business over the next five years and beyond.

Umgeni Water continues to invest on asset maintenance. The average expenditure planned for this period is 2.84 % of PPE and 8.35 % of revenue, based on prior assessments conducted. There are no assets that pose significant risk to supply and the entity envisages no major interruptions to its business over the next five years and beyond.

Water Loss Management and Metering

Umgeni Water has maintained overall non-revenue water below 5% over the years and continues to target this level. This has been a result of a metering strategy which focuses on metering all critical nodes and monitoring of meter accuracy. This initiative will continue through meters installed by Umgeni Water at various critical points in its systems.

For raw and potable water applications this includes meters at abstraction points, treatment works inflow, treatment works outflow, within the distribution system and at the point of sale. These provide value information for abstraction, storage

monitoring and adequacy, water balancing purposes, computation of water loss between the various points and water loss management, distribution control sales and billing purposes.

In addition, measurement provides information for on-going operations and efficiency improvements including unit processes management, ensuring correct filter backwashing rates, pump efficiencies, pipeline operation and other information to inform asset management.

Equally for wastewater applications meters at influent and effluent points provide valuable information for assessing plant loading, process control management, storage and treatment, including storm dam, billing and discharge information. On-going operational efficiency improvements will be made including unit processes, pump efficiencies and asset management.

Meter Accuracy Testing and Replacement

Meters utilised by Umgeni Water for the purposes of trade in raw and potable water, will be tested at intervals prescribed by regulation or at agreed frequencies as stipulated in Contractual Agreements. Interventions for meter verification and testing have been identified. All testing is followed by an analysis which will be undertaken according to a recognised testing protocol and procedure and interventions to provide assurance of meter accuracy. A prioritised meter replacement programme is instituted for meters older than five-years and /or as per the asset renewal requirements of the Bulk Supply Agreement with customers.

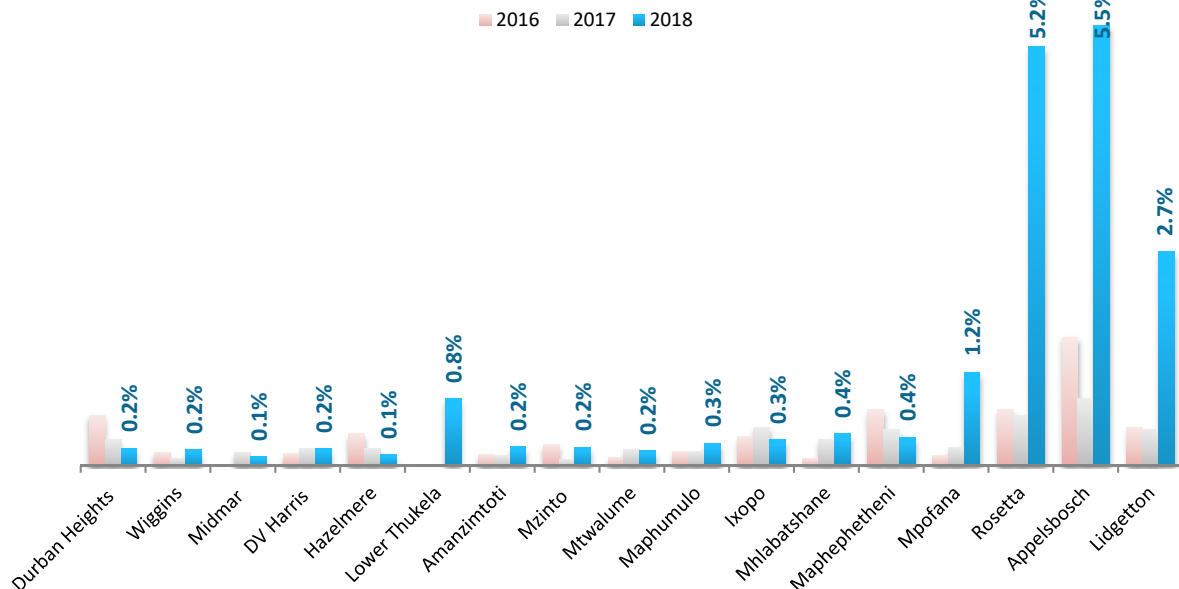
Planned Technology to Improve Metering Accuracy and Water Loss Management

Umgeni Water is planning to leverage technology - spatial water balance - to simplify identification and make further gains in water loss management. Using GIS, spatial meters data is currently being verified and will be followed by extensive capturing of other network infrastructure spatial attributes.

To improve the accuracy and frequency of meter reading, Umgeni water is investigating the use Automated Meter Reading (AMR). This will result in more efficient and almost real time meter reading and metering data that will speed up fault finding and water loss identification.

To improve the accuracy and frequency of meter reading, Umgeni water is investigating the use Automated Meter Reading (AMR). This will result in more efficient and almost real time meter reading and metering data that will speed up fault finding and water loss identification. The organisation has piloted battery operated Magflow meters with full GSM capabilities in the South Coast area. This installation gives an additional 2% meter accuracy than mechanical meter installation. This also has a benefit eliminating head loss on the pipeline. Learning from the success of the GSM pilot plants, Umgeni Water is planning to roll out this technology to all meters by 2019.

Figure 11.4: Water Loss % by System



11.4 Water Quality Management Plan

Umgeni Water is committed to providing all its customers with safe potable water which is suitable for lifetime consumption as required by legislation. This is achieved through implementing a rigorous water quality management programme throughout the supply system. This includes carefully planned monitoring programmes, system audits and compliance reporting and water quality assessments – conducted using a catchment to consumer approach and governed by the implementation of Water Safety Plans. This in turn ensures that all existing Blue Drop certifications for bulk sites are maintained. Umgeni Water is committed to supporting municipalities to progressively improve all systems toward joint Blue Drop Certification.

Monitoring programmes are reviewed each year in accordance with legislative requirements, customer bulk supply agreements, requirements for water treatment processes and in accordance with water quality risks previously identified in the system. Umgeni Water continually reviews water quality risks associated with abstraction, conveyance, treatment and bulk distribution to ensure the effectiveness of controls is maintained and that water quality is assured. All operational sites are equipped with an Incident Management Protocol aligned to SANS 241: Drinking Water Specification.

Sampling and analysis is currently undertaken in accordance with an ISO 9001 certified monitoring programme and SANAS 17025 Accredited laboratory methods. Umgeni Water will endeavour to maintain its certification and accreditation status through on-going quality assurance processes.

The calculation and reporting of potable water quality compliance is in accordance with the requirements of the SANS 241: 2015 drinking water specification. Performance is assessed against five risk categories:

- (1) Acute Health Microbiological,
- (2) Acute Health Chemical,
- (3) Chronic Health Chemical,
- (4) Aesthetic, and
- (5) Operational categories.

Information on water quality performance is conveyed as per communication plan to all customers, stakeholders and legislative decision makers.

Blue Drop Certification Trends for KZN Municipalities

The KZN Province has fourteen (14) Water Services Authorities providing water supply through 209 systems. Of the 209 systems, 67 are operated by water utilities: Umgeni Water (31), Mhlathuze Water (2) and uThukela Water Company (34).

The provincial Blue Drop score decreased from 92.1% in 2012 to 86.1% in 2014 (by 6%). Furthermore 61 systems have a Blue Drop score below 50% compared to 19 in 2012, while 18 water supply systems are in crisis achieving scores below 31%. The Blue Drop certified systems halved from 16 to 8. **Table 11.10** shows the Provincial performance trends for the period 2009 to 2014.

Table 11.10: Provincial performance trends from 2009 to 2014 (source DWS)

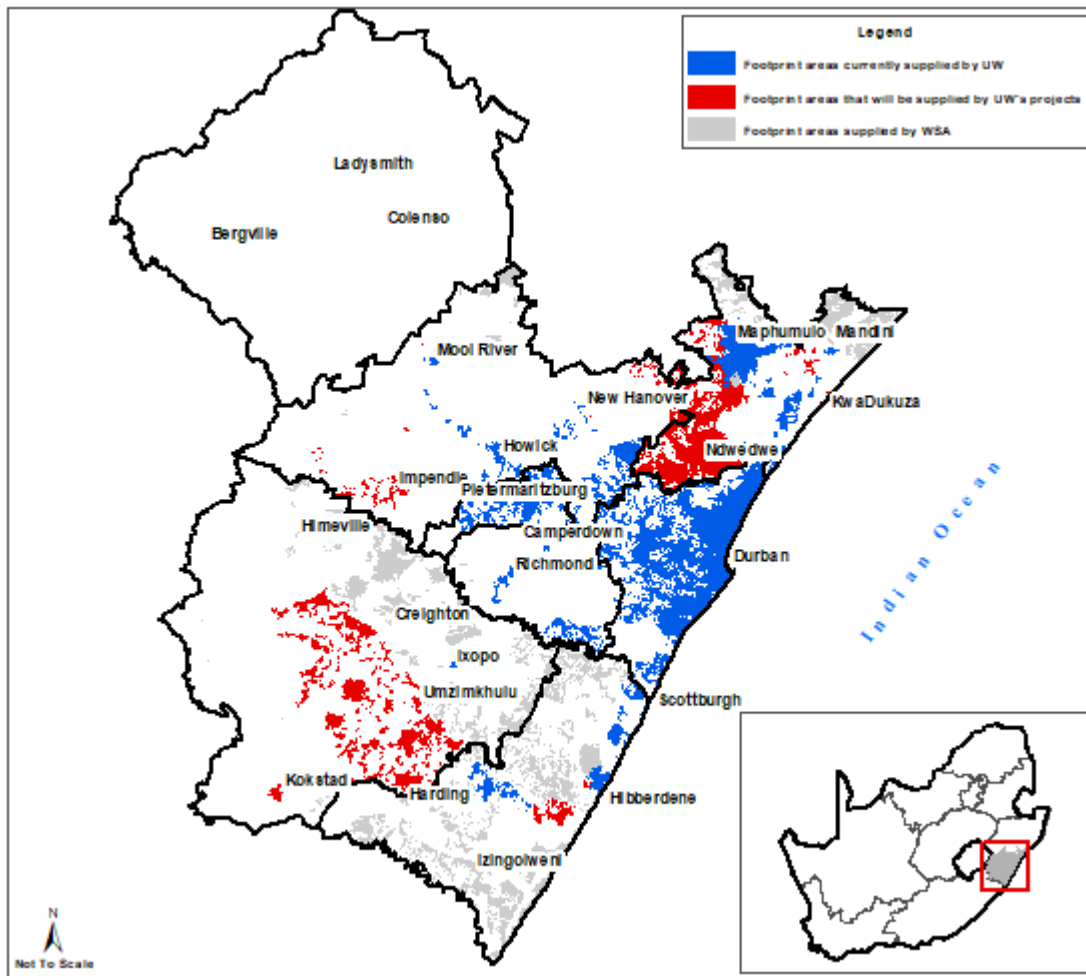
Water Services Authority	2009	2010	2011	2012	2014
Msunduzi Local Municipality	N/A	73%	96%	95%	98%
eThekweni Metropolitan Municipality	97%	96%	96%	99%	96%
uMgungundlovu District Municipality	21%	65%	56%	92%	90%
City of uMhlatuze Local Municipality	N/A	80%	89%	93%	90%
Newcastle Local Municipality	71%	75%	76%	97%	89%
iLembe District Municipality	100%	51%	86%	88%	87%
uMzinyathi District Municipality	80%	66%	70%	93%	78%
uThungulu District Municipality	78%	37%	71%	73%	74%
Ugu District Municipality	94%	87%	93%	93%	66%
Harry Gwala District Municipality	34%	54%	40%	69%	63%
Amajuba District Municipality	68%	56%	84%	83%	58%
uMkhanyakude District Municipality	N/A	22%	32%	78%	58%
Zululand District Municipality	92%	60%	72%	83%	51%
uThukela District Municipality	55%	54%	55%	57%	35%

11.5 Demand of Major Consumers by Scheme

11.5.1 Potable Water Demand

Umgeni Water's current supply footprint is shown as in **Figure 11.5**. The figure also shows future supply areas discussed in Section 11.2.3.

Figure 11.5: Footprint areas of Umgeni Water current supply together with proposed future expansion areas



Umgeni Water continues to develop water sales volume projections in consultation with its major consumers. This is undertaken annually to enable Umgeni Water to project revenues and future capital expenditure. For areas within the existing supply footprint area, the bulk water supply agreements require the water services authorities to provide Umgeni Water with projected demands at set intervals for each sales point, based on expected growth over the contract period. The two major urban areas, the eThekweni Metropolitan Municipality and the Msunduzi Local Municipality, currently account for approximately 87% of the water supplied by Umgeni Water. Consequently, these customers remain the main drivers of demand within Umgeni Water's operational area.

Descriptions of Umgeni Water's overall short and long-term sales forecast are provided in the section that follows, as well as for the Water Service Authorities currently served by the organisation. These forecasts apply to the current supply footprint area.

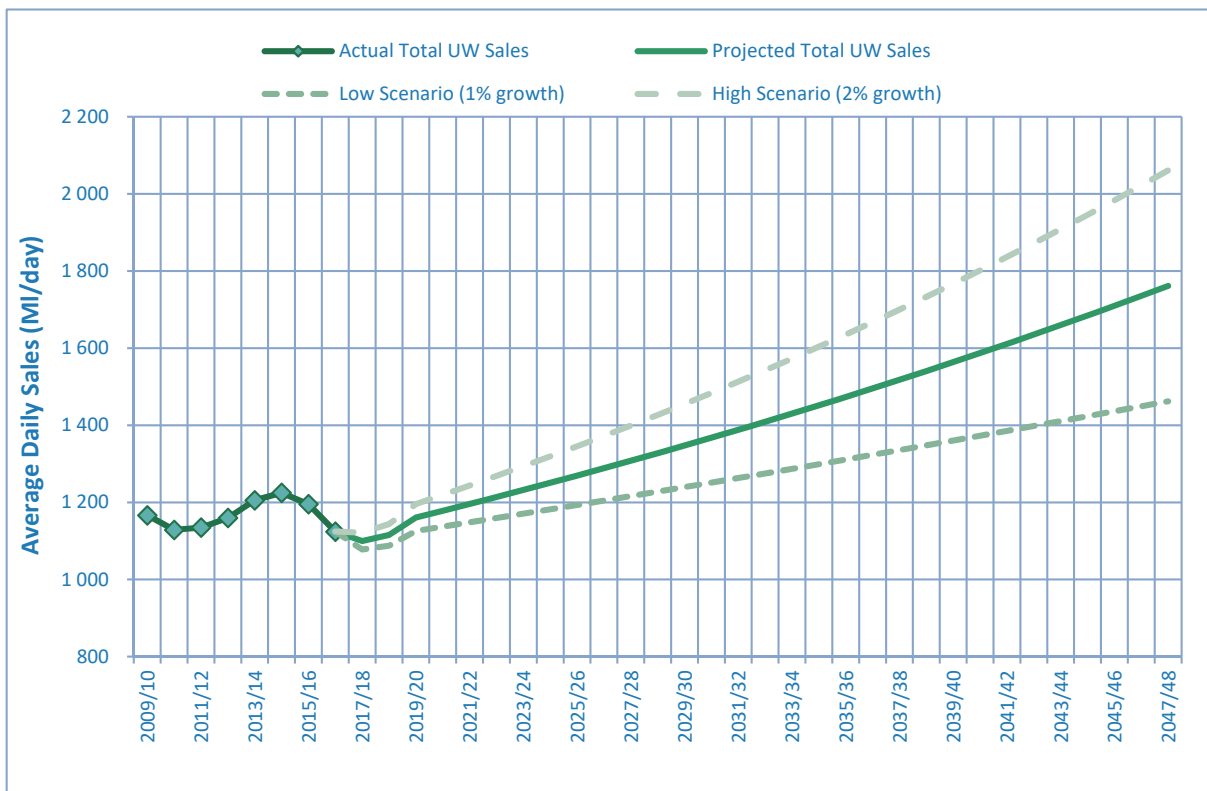
11.5.2 Umgeni Water Short and Long-Term Bulk Sales Forecast

In the short-term, growth in water demands continue to be tempered by water restrictions that are being enforced to mitigate the impacts of the recent drought. Demand growth is, therefore, not expected to be significant over the next few years.

The 30-year long-term sales forecast for Umgeni Water’s supply area, **Figure 11.6**, has been based on the anticipated natural growth from the existing supply system, plus bulk sales from new supply infrastructure that would extend the area supplied. The base projection has been developed from the short-term forecasts and then extended at a compounded 1.5% per annum growth rate until 2048. This growth rate has been agreed to by the major water users in the region and is considered acceptable for this long-term forecast as it closely matches the forecast that was independently derived as part of the “Water Reconciliation Strategy Study for the KwaZulu-Natal Coastal Metropolitan Areas” completed by the Department of Water and Sanitation, which used a population projection technique to estimate demand forecasts.

The long-term sales projections present an average view. Fluctuations around the mean values can be substantial and this can give rise to localised infrastructure or water resources constraints. Sales are monitored on a regular basis to assess actual demand patterns.

Figure 11.6: Short and Long-Term Water Sales Projections



11.5.3 eThekweni Metropolitan Municipality: Short-Term Bulk Sales Forecast

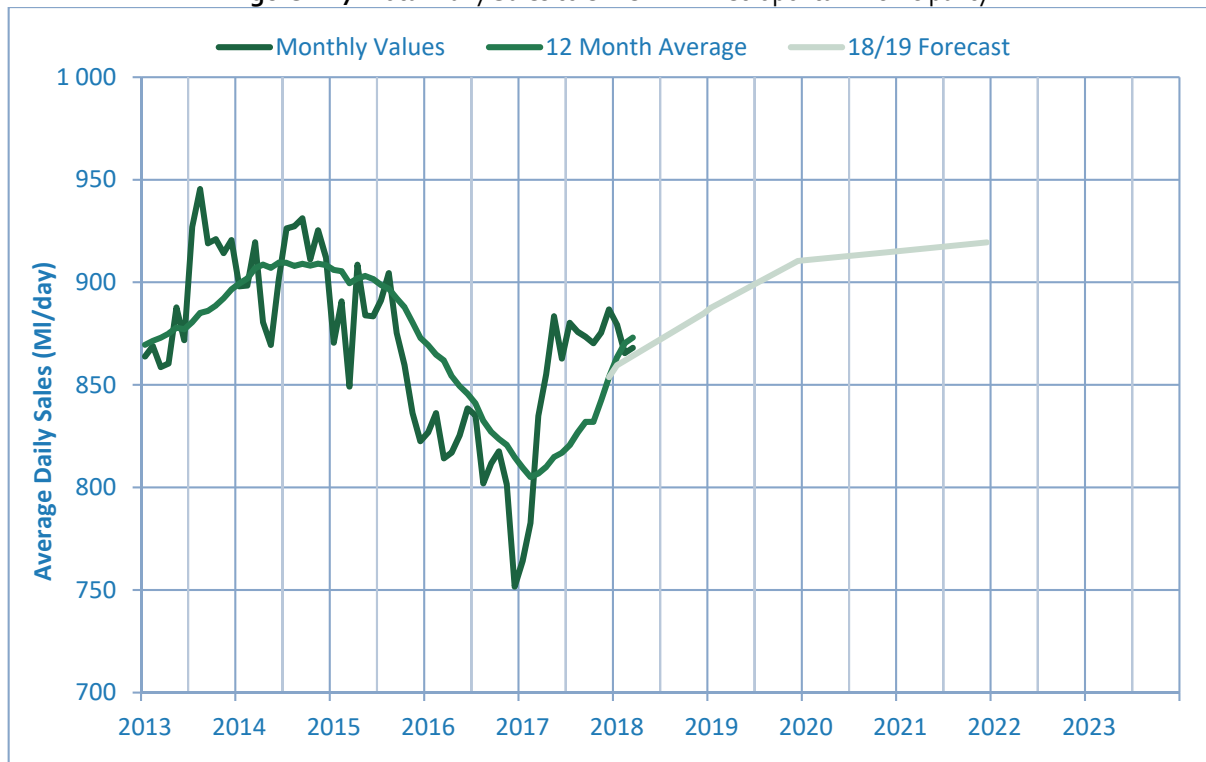
In the 2017/2018 financial year, the year-on-year growth in sales to eThekweni Municipality increased by 4.78%. The increase in sales is attributed to the lifting of curtailments in the Mgeni System during the first half of 2018. The growth in sales is shown in Error! Reference source not found., where the twelve-month moving average of sales increased from 810 Mℓ/day in July 2017 to 854 Mℓ/day in June 2018.

Proposed developments and the associated demand required to supply these developments were discussed with eThekweni during August 2018. The subsequent demand projection includes increases related to the relaxation of the recent drought curtailments and observed consumer behaviour over the previous quarter.

The official ENSO forecast Probabilities for weather outlook suggests a 70% chance of an EL Nino effect over the ensuing six months. Whilst this does not look promising in respect of above-average rainfall, the Mgeni System storage has increased to levels consistent with a system that does not require restrictions (greater than 70% at the beginning of May).

As a result eThekweni Municipality have predicted a demand scenario by growing the historical demands observed over the past 4 months by 1% for the next year, with an additional 20 Mℓ/day growth for demand taken up in the Western Aqueduct in 2020. Beyond June 2020 an organic growth in demand of 0.5% was assumed until June 2022. The growth figure is inclusive of the likely effect from the NRW interventions currently being implemented. There is a predicted increase in demand from 855 Mℓ/day to 885 Mℓ/day over the 2018/2019 financial year. This is then anticipated to increase to 910 Mℓ/day in 2019/2020 (pre-drought demand). The historical sales and future demand projection for eThekweni Municipality are presented in Error! Reference source not found..

Figure 11.7: Total Daily Sales to eThekweni Metropolitan Municipality



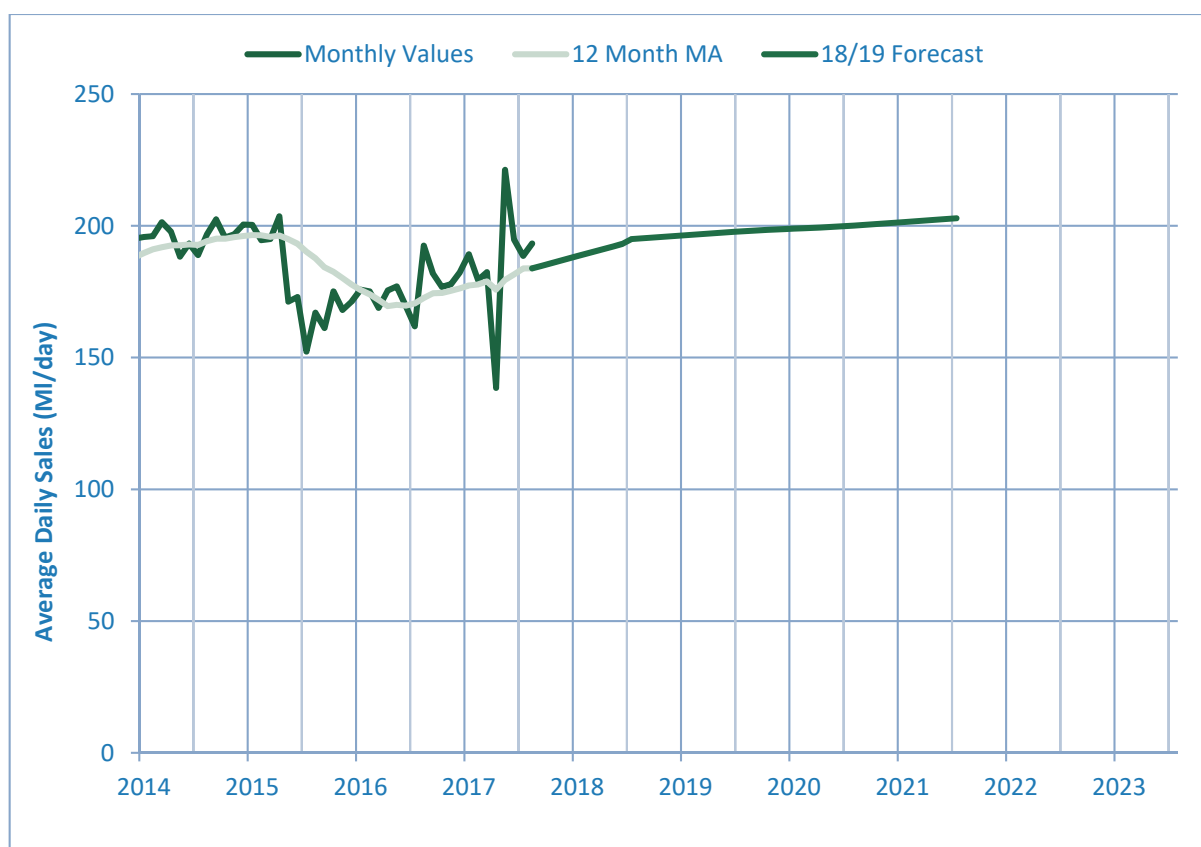
11.5.4 Msunduzi Local Municipality: Short-Term Bulk Sales Forecast

The projection for Msunduzi Local Municipality is shown in **Figure 11.8**. The projected demands were determined in consultation with the municipality. It is envisaged that there will be zero growth in demand for 2018 and a 0.5% per annum growth in demand for the period 2019 to 2021. Thereafter the demand is predicted to grow at 1.0% per annum.

The Msunduzi Municipality is implementing water demand management (WDM) initiatives within the Vulindlela area. It is estimated that savings from these initiatives will offset other growth in sales for the area.

The bulk of the demand for Msunduzi Local Municipality will be taken up by the Midmar Supply System and the balance by DV Harris WTW. The only growth node along this system will be the RDP housing development in the Copesville area over the next 4 years, with total growth remaining constant at 1.5% year-on-year.

Figure 11.8: Total Daily Sales to Msunduzi Local Municipality



11.5.5 uMgungundlovu District Municipality: Short-Term Bulk Sales Forecast

The projection for uMgungundlovu District Municipality is shown in Figure 11.9. The projected demands for 2017/2018 were determined in consultation with the municipality and it was agreed that the demand would remain constant for the short term forecast.

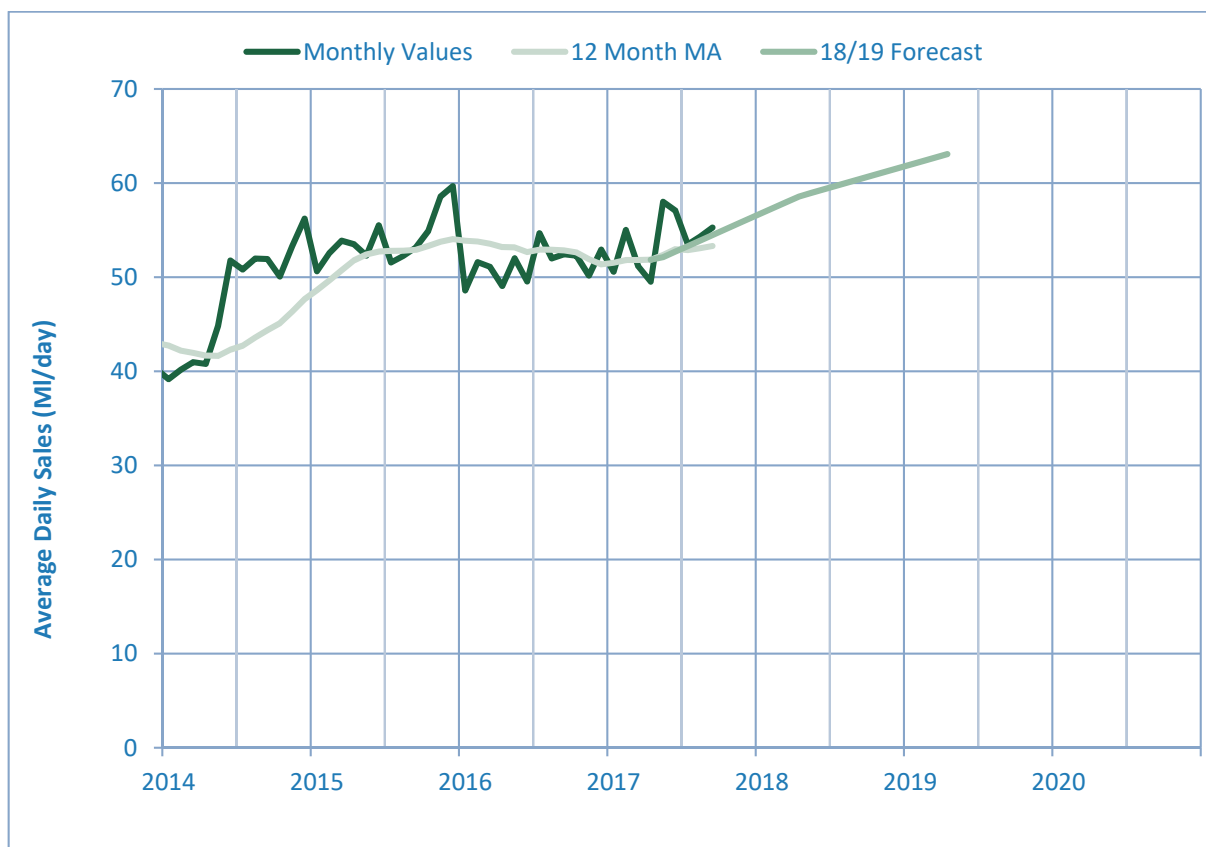
Significant growth in demands is envisaged in the Lion Park/Manyavu, Mid Illovo and Greater Vulindlela areas, resulting from the upsurge in housing developments over the next five years.

The District Municipality is planning to improve the level of service in the Greater Richmond area by rolling out yard connections for potable water access and installation of waterborne sanitation sewerage systems in this area. This will start by mid-2021.

Umgeni Water is in the process of commissioning Phase 1 of the uMshwathi Regional Bulk Water Supply Scheme (MRBWSS) and it is anticipated to be fully operational by mid-2019. In conjunction with this, Umgeni Water is implementing the upgrade of the Wartburg to Bruyns Hill Supply System. The commissioning of these systems will ensure a sustainable supply to uMgungundlovu District Municipality in the areas of Wartburg, Albert Falls, Mpolweni and Swayimana by the end of 2019.

The expected demand for 2017/2018 is 55 MI/day and this will remain constant for the 2019/2020 financial year

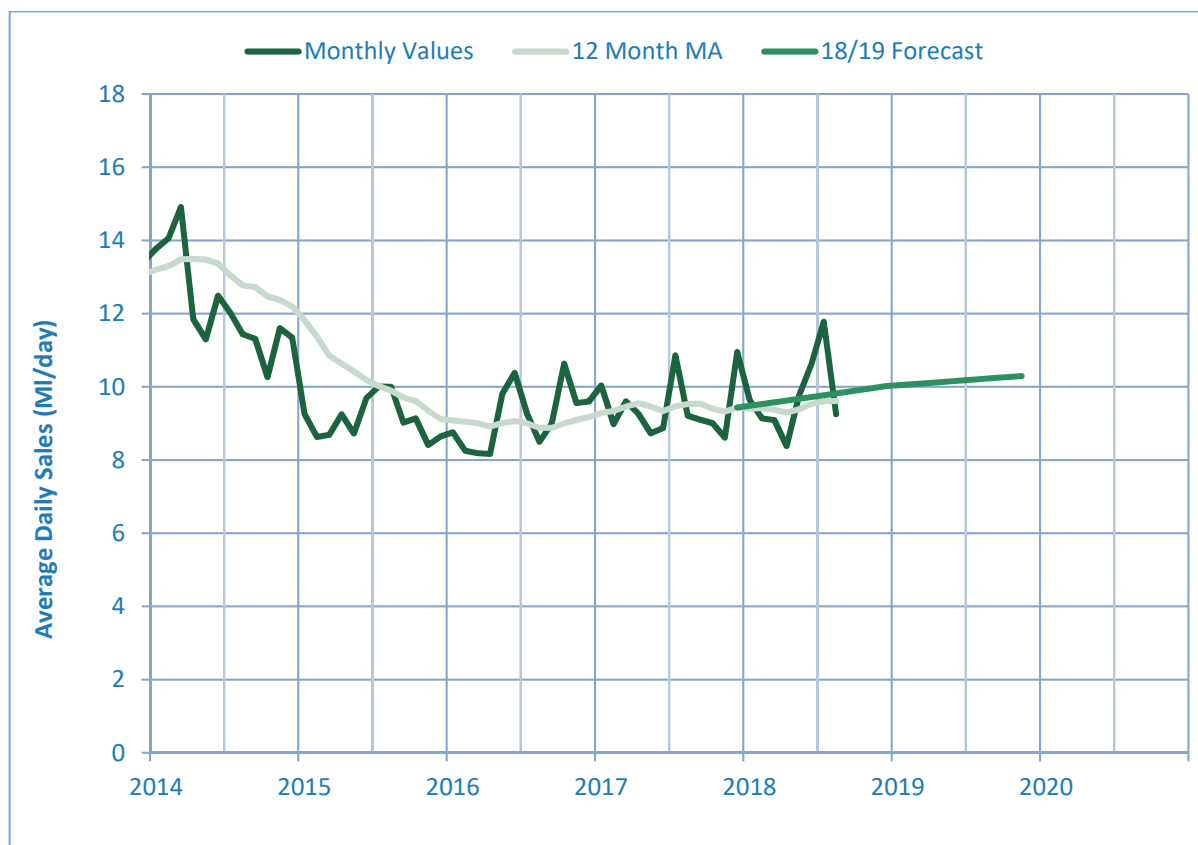
Figure 11.9: Total Daily Sales to uMgungundlovu District Municipality



11.5.6 iLembe District Municipality: Short-Term Bulk Sales Forecast

The historical and future predicted increase in demand for Sembcorp Siza Water is presented in **Figure 11.10**. The demand for Sembcorp Siza Water is expected to be 10.01 MI/day in 2018/2019 and 10.31 MI/day in 2019/2020.

Figure 11.10: Total Daily Sales to Sembcorp Siza Water

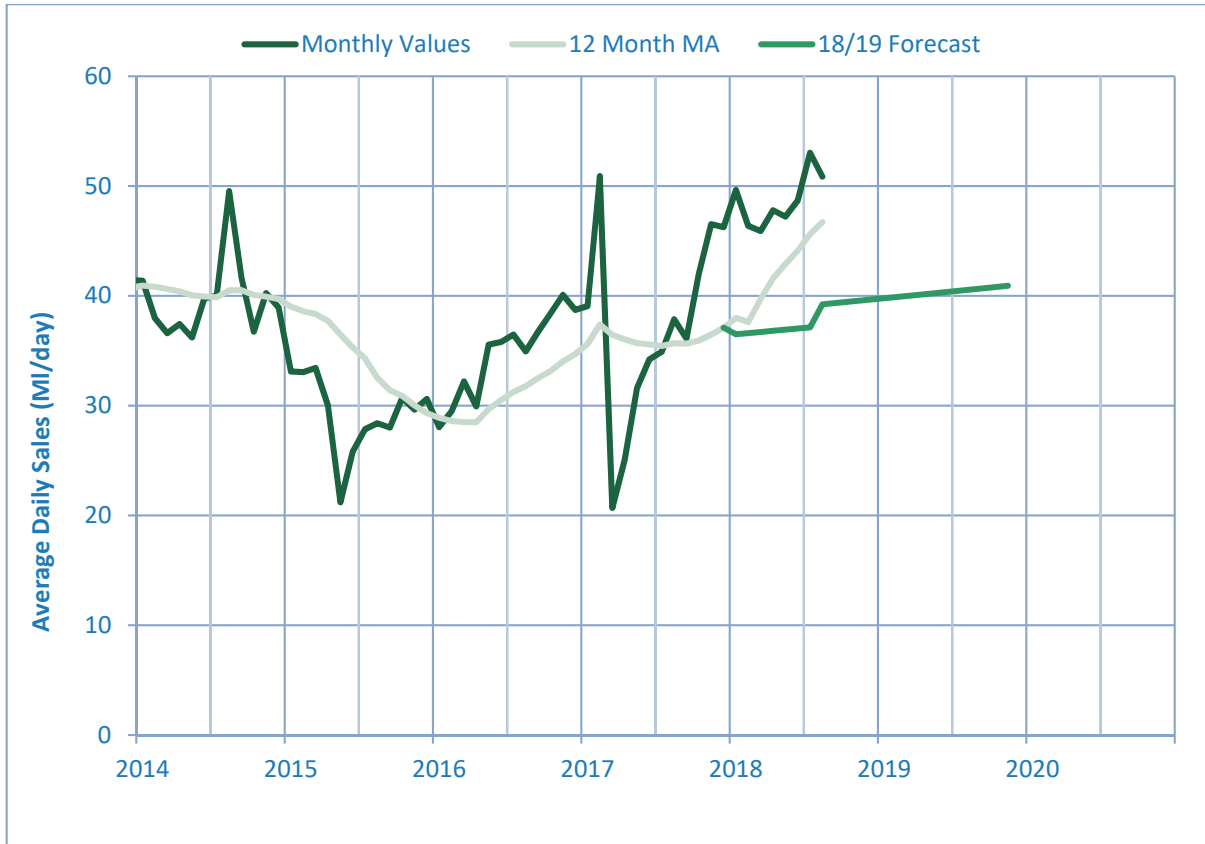


Sales to iLembe District Municipality can be described as sales to the Coastal Area of iLembe through:

- Sembcorp Siza Water, and
- iLembe District Municipality.

A growth rate of 2% in sales is expected over the short term. Sembcorp Siza Water has implemented a wastewater recycling plant that injects up to 3 MI/day into its potable water system.

The demand at iLembe District Municipality is expected to be 37.86 MI/day in 2018/2019 and this is expected to climb to as high as 41 MI/day in 2019/2020, as more off-takes are commissioned off the Lower Thukela Pipeline. The historical and future predicted increase in demand for iLembe District Municipality is presented in **Figure 11.11**.

Figure 11.11: Total Daily Sales to iLembe District Municipality

11.5.7 Ugu District Municipality: Short-Term Bulk Sales Forecast

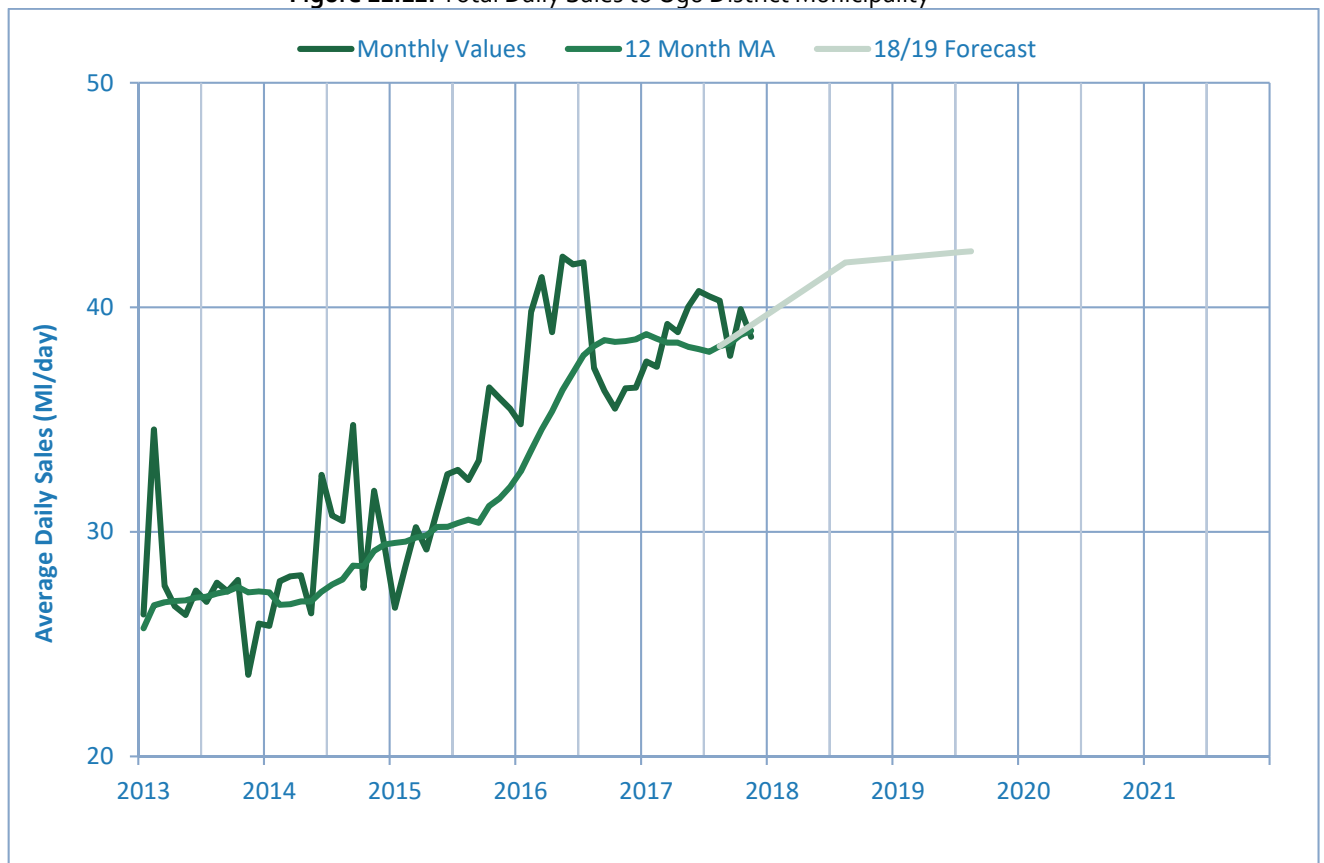
Total sales to the Ugu District Municipality remained “constant” during the 2017/2018 financial year. The growth in sales to Ugu DM includes those sales transferred to the other WSA’s following the change in municipal boundary demarcation legislation.

The expected growth in sales to the Municipality is estimated at 10% in the 2018/2019 financial year and 1.2% in 2019/2020 (Error! Reference source not found.). The current water resources are insufficient to meet the projected water demands. Furthermore, the water requirements exclude an estimated 25 Mℓ/day suppressed demand within the supply area as a result of infrastructure constraints. Although the water resources within the local rivers and dams have recovered, the area is still augmented by up to 70% from the Mgeni System via the South Coast Augmentation Pipeline and the South Coast Pipeline.

The demand projection scenario was based on operating the local Water Treatment Plants at design capacity. The increase in supply forecast assumed the construction and commissioning of Phase 2B of the South Coast Pipeline during 2018/2019.

The recommended augmentation for the Upper and Middle South Coast Supply area is the Lower uMkhomazi Bulk Water Supply Scheme (LUBWSS). A shortfall in water supply is projected from 2017 until the LUBWSS is implemented.

Figure 11.12: Total Daily Sales to Ugu District Municipality



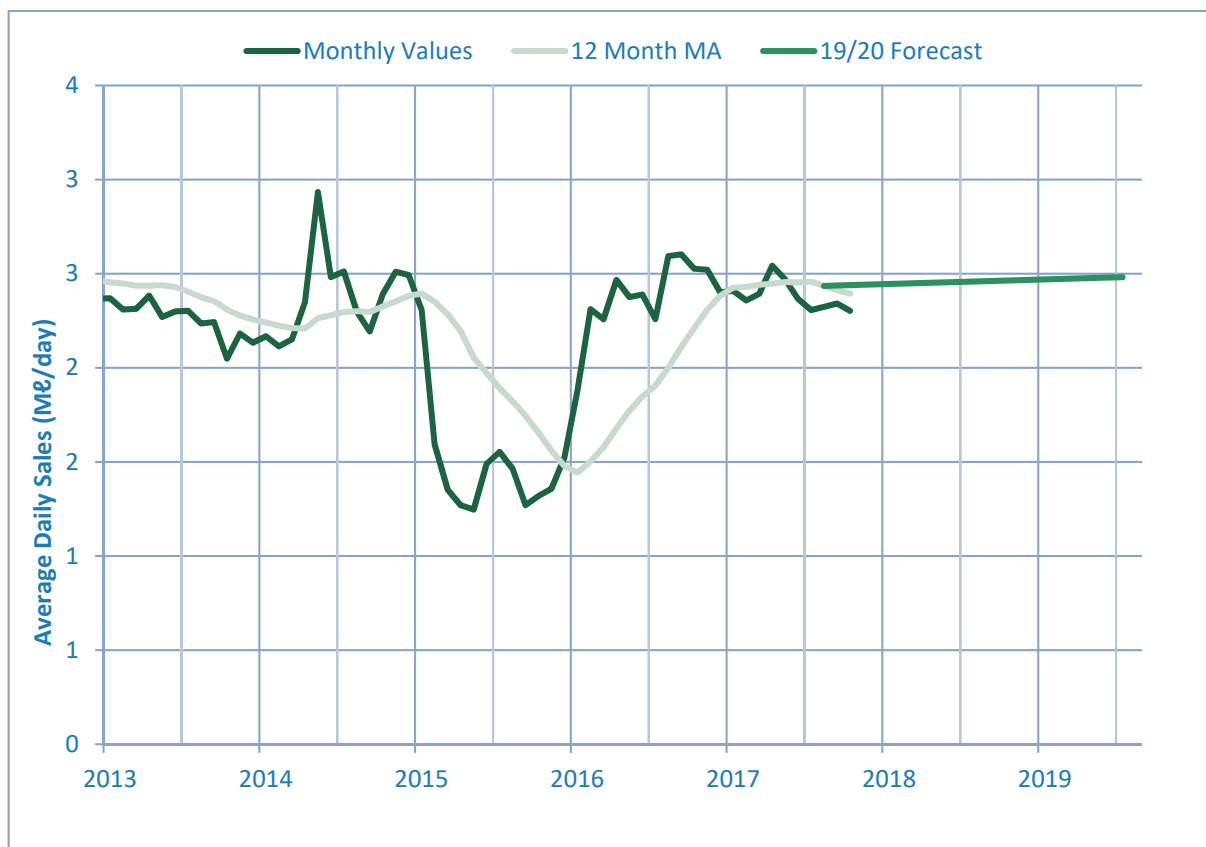
11.5.8 Harry Gwala District Municipality: Short-Term Bulk Sales Forecast

The Ixopo WTP supplies the Greater Ixopo area. Average daily sales from the WTP currently amount to approximately 2.43 Ml/day.

The sales growth projection is shown in **Figure 11.13** and is based on discussions with the municipality.

A projected growth of 1% has been predicted for Harry Gwala District Municipality as a result of the uncertainty of rainfall and the persistent drought conditions throughout the province. All curtailments have been lifted and the supply to the area has returned to normal levels. There is a proposed development within the town of Ixopo and sales will increase once the new development is commissioned.

Figure 11.13: Total Daily Sales to Harry Gwala District Municipality



11.6 Bulk Water Supply Infrastructure Constraints and Requirements

This section describes the major constraints within Umgeni Water's bulk supply infrastructure and the proposed infrastructure development to overcome these and provide capacity required for expansion of the supply footprint. The proposed water supply infrastructure links directly to the proposed water resources infrastructure discussed in Chapter 10.

11.6.1 Mgeni System

In the past years the eThekweni Metropolitan Municipality has put considerable effort into optimising the operation of its distribution systems that are served by the Lower Mgeni System. This has led to the municipality implementing new infrastructure to undertake load shifting. The municipality's western aqueduct development, expected to be fully commissioned in mid-2018, will be the most significant of these load-shifting operations. Areas currently being served under pumping from the Lower Mgeni System, namely, from Durban Heights Water Treatment Works, will be transferred to the Upper Mgeni System, to be served under gravity from Midmar Water Treatment Works via the western aqueduct.

eThekweni Metropolitan Municipality further plans to link the western aqueduct to its northern aqueduct thereby extending this supply to the municipality's northern areas as far as the Dube TradePort development zone. This measure will free up additional capacity within the Lower Mgeni System to be redirected elsewhere within the Municipality, but places considerable additional load on the Upper Mgeni System, including the '57, '61 and '251 Pipeline systems, Midmar Water Treatment Works, and ultimately on the water resources available from Midmar Dam.

Augmentation of the '57 and '61 Pipelines has been completed and an upgrade of the Midmar WTW will be completed in 2018 to allow additional water to be served to the Western Aqueduct. However, the yield at Midmar Dam, even with the additional water provided by the MMTS-2 will be insufficient to support the imposition of the proposed full Western Aqueduct load shift for any significant period of time, and further water resource developments will be required.

The option being investigated, jointly by DWS and Umgeni Water, is the uMkhomazi Water Project which will transfer raw water from the uMkhomazi River to a Water Treatment Works (WTW) in the adjacent catchment. Potable water from this WTW will then be supplied to the Umlaas Road area to feed into the '57 Pipeline and subsequently into the western aqueduct. A Detailed Feasibility Study of the uMkhomazi Water Project has now been completed and an EIA for the project is being finalised following which it will be submitted to the Department of Environmental Affairs for authorisation. If the EIA is obtained then the project will proceed to the design phase. Both technical and political steering committees have been created to drive this project. The earliest date envisaged for the scheme to be completed and operational is 2028.

The yield from Midmar Dam is fixed and all future bulk infrastructure upgrades within the Upper Mgeni System (Midmar Water Treatment Works - Umlaas Road) are limited to the dam's water resources capacity. The water available to meet demands downstream of Umlaas Road Reservoir is therefore limited until such time as the uMkhomazi Water Project is commissioned. The available water will continue to 'decrease' over time as the demands upstream of the Umlaas Road Reservoir increase.

Another major infrastructure development required to address capacity constraints is the uMshwathi Bulk Water Supply Scheme. This scheme includes the augmentation of the existing '69 Pipeline (Claridge to Wartburg), an increase in the capacity of Wartburg Reservoir and upgrade of the Wartburg Pump Station. In addition, an upgrade of the Bruyns Hill Pump Station and pipeline is being undertaken. The final phase of the uMshwathi Bulk Water Supply Scheme will be to extend the system to the rural areas of Efaye, Ozwathini and Ndwedwe. Some components of the uMshwathi Bulk Water Supply Scheme have already been completed and the remainder will be commissioned by 2018.

11.6.2 South Coast System

The water resource constraint at Nungwane Dam and the limited capacity of the Amanzimtoti Water Treatment Works has made it necessary to augment supply to areas downstream of Amanzimtoti. This supply is provided by the Wiggins Water Treatment Works via the South Coast Augmentation Pipeline and should have sufficient capacity to meet the short-term demands of Amanzimtoti and the South Coast Pipeline. The Lower uMkhomazi Bulk Water Supply Scheme is currently being designed and is expected to be commissioned by 2024. This project will supply the long term needs for the area.

The main issue that needs to be addressed in this region is the continued reliance on the already stressed Lower Mgeni System as the primary water source for this region. The Amanzimtoti Water Treatment Works will thus need to continue to operate together with the South Coast Augmentation Pipeline in order to meet demands until the Lower uMkhomazi Bulk Water Supply Scheme is commissioned.

Umgeni Water has implemented Phase 2a of the South Coast Pipeline (SCP-2a), which partially relieves the demand of the Umzinto Water Treatment Works. This allows the capacity gained to be utilised for growth further inland. In addition, Umgeni Water has also implemented a link from Scottburgh South Reservoir, via Ellingham Reservoir, to Umzinto Water Treatment Works to mitigate the risk of non-supply during dry periods and to meet future increases in water demand from the Umzinto Water Treatment Works. This link provides an additional 4.5 Ml/d to augment the supply from the Umzinto Water Treatment Works.

The demand in the area immediately south of Mtwalume, under the jurisdiction of Ugu District Municipality, has recently increased significantly. This has placed excessive stress on the Mtwalume Water Treatment Works. The development plans for the Upper and Middle South Coast regions is outlined below. This plan utilises the available resources from the Lower Mgeni, Nungwane, uMkhomazi, Mzimayi, Mzinto and Mtwalume systems in the most sustainable and cost effective manner.

- Water from the South Coast Augmentation Pipeline is expected to be available at the Amanzimtoti Water Treatment Works, in ever reducing amounts, until 2020. Therefore, the Amanzimtoti Water Treatment Works will need to remain operational in the short to medium-term.
- Replacement of the pipeline from Nungwane Dam to the Amanzimtoti Water Treatment Works is being undertaken.
- The long-term strategy is to develop a regional bulk water supply scheme that will receive raw water from the lower uMkhomazi River for distribution into the South Coast Pipeline. Potable water would be fed northwards to the Upper South Coast region and Amanzimtoti, and southwards to the Middle South Coast region.
- The South Coast Pipeline is to be further extended southwards. The South Coast Phase 2b project will tie into the end of SCP-2a and extend from Park Rynie to Pennington. Construction of this phase of the pipeline will start in 2019. The South Coast Pipeline Phase 3 will link this pipeline to the Ugu District Municipality supply system at Hibberdene and will add a measure of flexibility and a contingency for drought situations to the Mzimkhulu system. The timing of SCP-3 is dependent on the development of the Lower uMkhomazi Bulk Water Supply Scheme.
- A Detailed Feasibility Study for the SCP-3 is planned to start in 2019. If implemented this pipeline will reduce the load placed on the Mtwalume WTW.
- The Umzinto Water Treatment Works will continue to function in order to supply potable water to communities in the adjacent inland areas of Ugu District Municipality.
- To augment the supply from Umzinto Water Treatment Works, especially during low rainfall periods, the supply to Umzinto Water Treatment Works must be supplemented from the South Coast pipeline via Scottburgh South and Ellingham reservoirs.

11.6.3 North Coast System

The North Coast Supply System (NCSS) is supplied from two sources, namely the 75 Ml/day Hazelmere WTW and the 55 Ml/day Lower Thukela Bulk Water Supply Scheme. The Department of Water and Sanitation is leading the project of raising the Hazelmere Dam wall and this is expected to be completed in the mid-term of this corporate plan period.

The town of KwaDukuza has historically been supplied from the Mvoti Water Treatment Works via the Mvoti Balancing Reservoirs. This area can now also be served from the Lower Thukela Bulk Water Supply Scheme.

The strategic 30-year development plan for the region, that would utilise the available resources from the Hazelmere, Lower Thukela and Mvoti systems in the most sustainable and cost effective manner, is detailed below.

- Raising of full supply level of Hazelmere Dam to increase its firm yield to 75 Ml/d. The Hazelmere Water Treatment Works as well as the pump stations and pipelines within the NCSS have been augmented to ensure the demand placed on the system does not exceed the capacity of the infrastructure. Pipelines that are constructed as part of this augmentation process have been built with the ability to allow for bi-directional flow to ensure that water can be brought south from the Lower Thukela Bulk Water Supply Scheme if needed.
- The Lower Thukela Bulk Water Supply Scheme has recently been commissioned and can supply water south to KwaDukuza Local Municipality. This system can also be upgraded to supply north to Mandeni Local Municipality and King Cetshwayo District Municipality. The current WTW can provide 55 Ml/d and when demands dictate it will be upgraded to 110 Ml/d.
- Develop water resource infrastructure on the Mvoti River, at Welverdient, with a regional Water Treatment Works and associated supply infrastructure to further augment the NCSS. At some stage in the future, the long-term water demands to the north of the uThukela River may require the full allocation from the Lower Thukela Water Treatment Works. In this scenario potable water may need to be supplied northwards from the NCSS to meet the demands on the southern side of the uThukela River.
- An upgrade of the Maphumulo WTW to 12 Ml/day, is planned to be constructed by 2020 with an inter-basin transfer from the Hlimbitwa River planned for implementation within the next five years.

11.6 New areas to be supplied

Umgeni Water has recently signed a Bulk Supply Agreement with uThukela District Municipality and is currently undertaking an assessment of potential expansion areas. This expansion could pertain to areas currently supplied with bulk potable water by a WSA or it could include backlog areas which don't have supply or where current supply is not sustainable.

Figure 11.14 highlights the high and low density areas within the WSAs currently supplied by Umgeni Water. (The uThukela District Municipality is not yet included). There are many areas outside the current supply 'footprint' area that contain notable populations that need to be served. The sections that follow highlight some of the future expansion projects which Umgeni Water is undertaking that impact services to each WSA.

Figure 11.14: Water Access Status (after Census 2011 and EKZNW 2011)

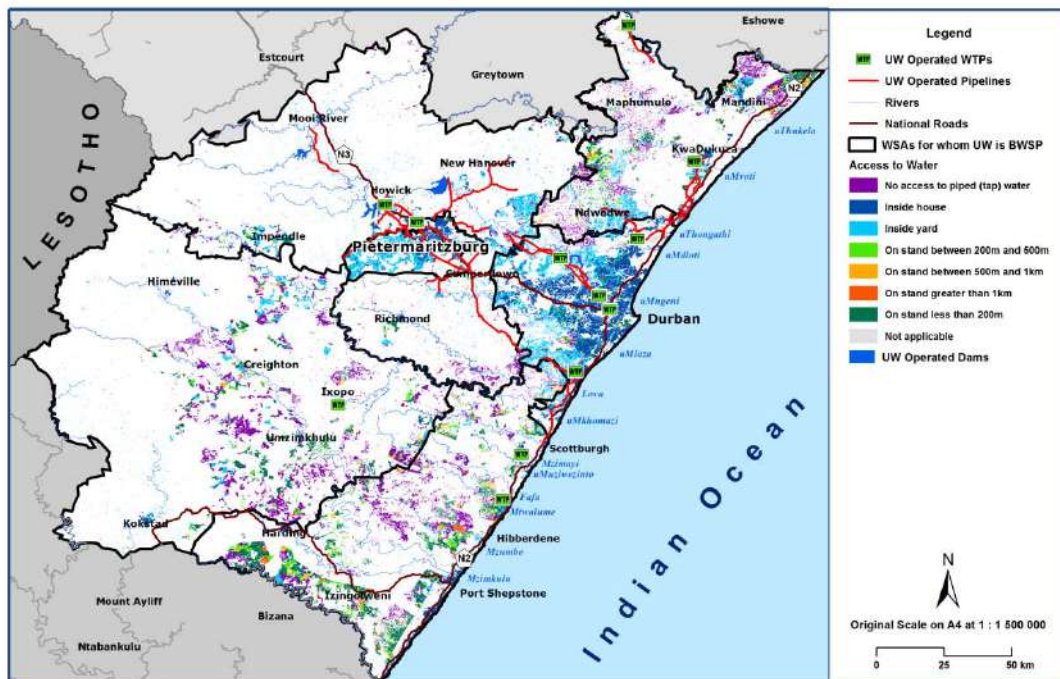


Table 11.3: Main Source of Water for Drinking (Source: Community Survey 2016 with 2016 Municipal Boundaries - Statistics SA 2017)

WSA	Total Number of People	Number of people with piped (tap) water inside the dwelling/house	Number of people with piped (tap) water inside yard	Number of people with piped (tap) water outside yard	Number of people with borehole/rain-water tank inside yard	Number of people with other water sources outside yard	% population with other water sources outside yard
eThekweni MM	3 702 231	2 205 755	992 591	432 317	14 158	57 410	2%
Msunduzi LM	679 039	267 470	361 535	41 306	1 581	7 147	1%
uMgungundlovu DM	416 825	108 140	129 268	98 275	7 828	73 314	18%
iLembe DM	657 612	118 349	145 753	203 271	15 426	174 813	27%
Ugu DM	753 336	125 739	95 485	423 606	11 645	96 860	13%
Harry Gwala DM	510 865	45 814	105 593	168 572	20 700	170 185	33%
uMhlathuze LM	410 465	146 785	212 208	24 277	2 999	24 196	6%
Newcastle LM	389 117	163 537	204 021	15 810	668	5 080	1%
Amajuba DM	142 210	17 437	77 090	19 402	2 199	26 082	18%
uThukela DM	706 588	120 240	227 213	159 188	12 677	187 270	27%
King Cetshwayo DM	560 670	46 415	212 062	141 356	12 276	148 561	26%
Zululand DM	892 310	92 233	323 751	124 161	26 325	325 840	37%
uMzinyathi DM	554 882	60 579	127 368	146 392	18 997	201 545	36%
uMkhanyakude DM	689 090	31 288	153 530	147 918	55 223	301 132	44%
KwaZulu-Natal	11 065 240	3 549 782	3 367 469	2 145 850	202 703	1 799 436	16%

11.7.1 eThekweni Metropolitan Municipality

The strategic infrastructure development projects within eThekweni Metropolitan Municipality, to either consolidate existing supplies or to expand into new areas, are listed in **Table 11.4**. Potential expansion areas are shown in **Figure 11.15**.

Figure 11.15: Umgeni Water’s Supply ‘Footprint’ within the eThekweni Metropolitan Municipality

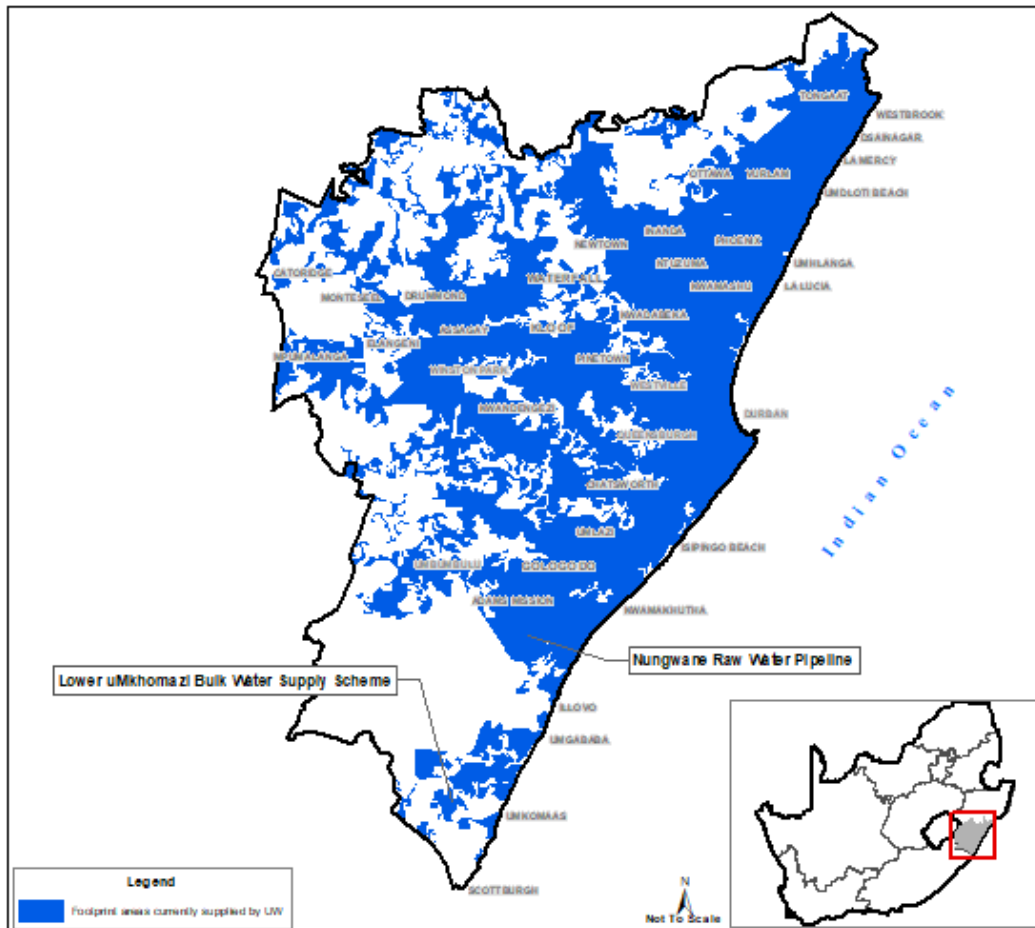


Table 11.4: Projects to be implemented in eThekweni Metropolitan Municipality within the next five years

Objective	Major Project	Project Total (R'm)	2020	2021	2022	2023	2024
			R'm	R'm	R'm	R'm	R'm
Augmentation	Mkhomazi Water Project Phase 1 ¹	6,132	10	131	150	390	1,066
Augmentation	Lower Mkhomazi Bulk Water Scheme ²	4,209	60	264	414	414	500
Rehabilitation	Rehabilitation of Aqueduct No 1, 2, 3 & 4	251	105	43	30		
Upgrade	Durban Heights WTW – old and new degremont filter	220		110	110		
Rehabilitation	Durban Heights WTW – Rehabilitation of key installations	179	89				
Upgrade	Durban Heights WTW – Shaft Pumps	125				10	13
Rehabilitation	Wiggins WTW – Rehabilitation of key installations	122	50	72			
Upgrade	Wiggins High Lift Pump Station Upgrade	113	59	52			

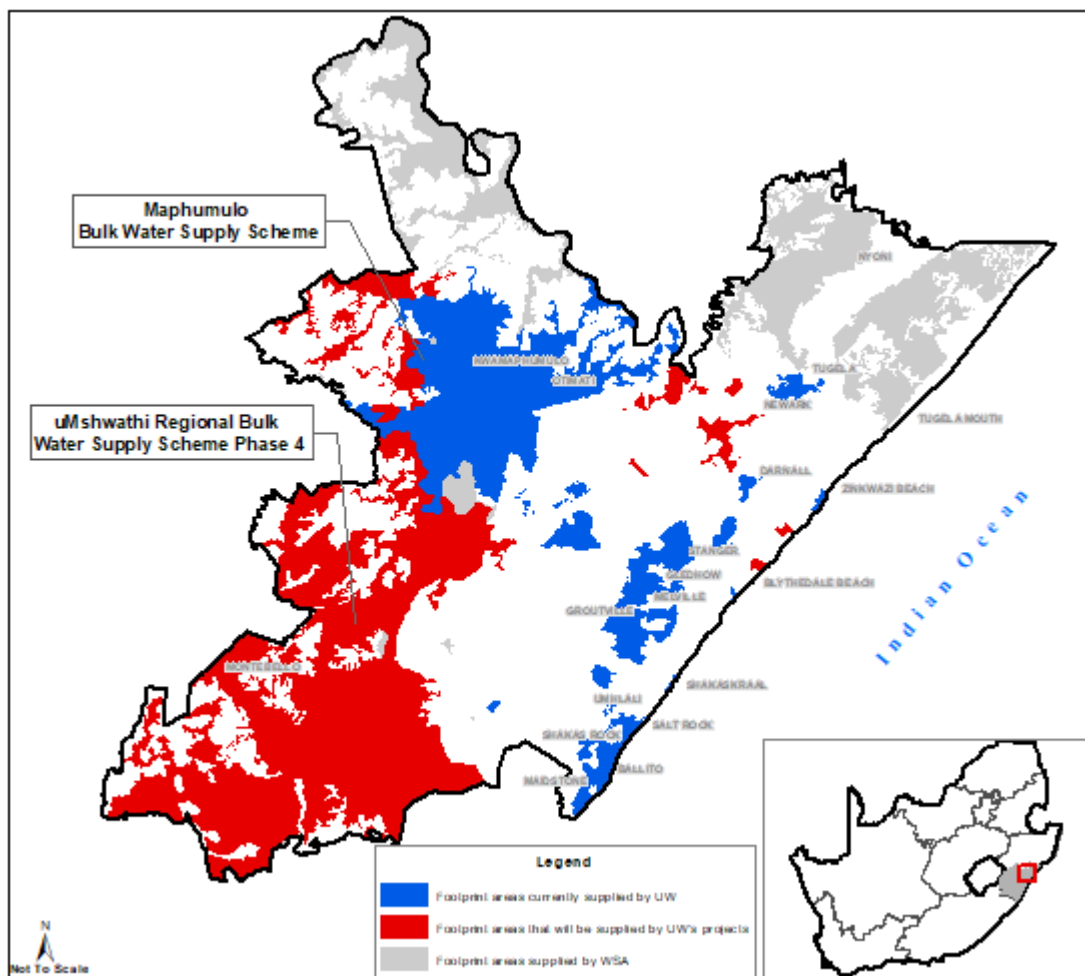
¹ Project will also serve UMDM

² Project will also serve Ugu DM

11.7.2 iLembe District Municipality

The strategic infrastructure development projects within iLembe District Municipality, to either consolidate existing supplies or to expand into new areas, are shown in **Table 11.5**. Potential expansion areas are shown in **Figure 11.16**.

Figure 11.16: Proposed extensions to Umgeni Water’s Supply ‘Footprint’ within iLembe District Municipality



Table

11.5: Projects to be implemented in iLembe District Municipality within the next five years

Objective	Major Project	Project Total (R'm)	2020	2021	2022	2023	2024
			R'm	R'm	R'm	R'm	R'm
Development	Lower Thukela BWSS Phase 2	773	3	12			
Development	uMshwathi BWSS Phase 4 (Southern Ndwedwe)	678	20	50	150	200	100
Development	Maphumulo BWSS Phase 3: WTW Upgrade (6 MI/d to 12 MI/d)	200	80	46	32		
Development	uMshwathi BWSS Phase 6	151	1	20	50	50	30
Development	uMshwathi BWSS (Wartburg Phases 1 - 3) ¹	115					
Development	Maphumulo BWSS Phase 4: Weir on Hlimbithwa River	99	200		49	48	315

¹ Also see UMDM projects

11.7.3 uMgungundlovu District Municipality

The strategic infrastructure development projects within uMgungundlovu District Municipality, to either consolidate existing supplies or to expand into new areas, are shown in **Table 11.6**. Potential expansion areas are shown in **Figure 11.17**.

Figure 11.17: Proposed extensions to Umgeni Water's Supply 'Footprint' within uMgungundlovu District Municipality

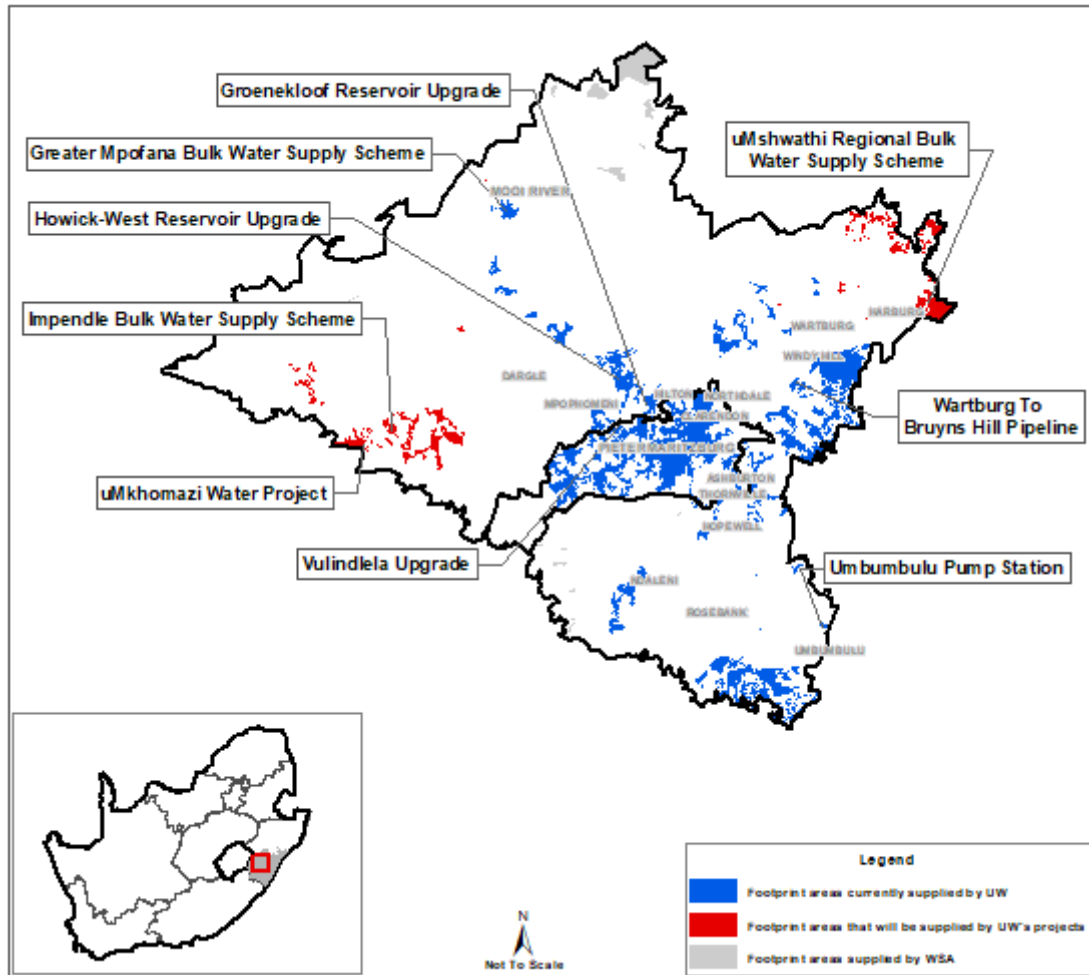


Table 11.6: Projects to be implemented in uMgungundlovu District Municipality within the next five years

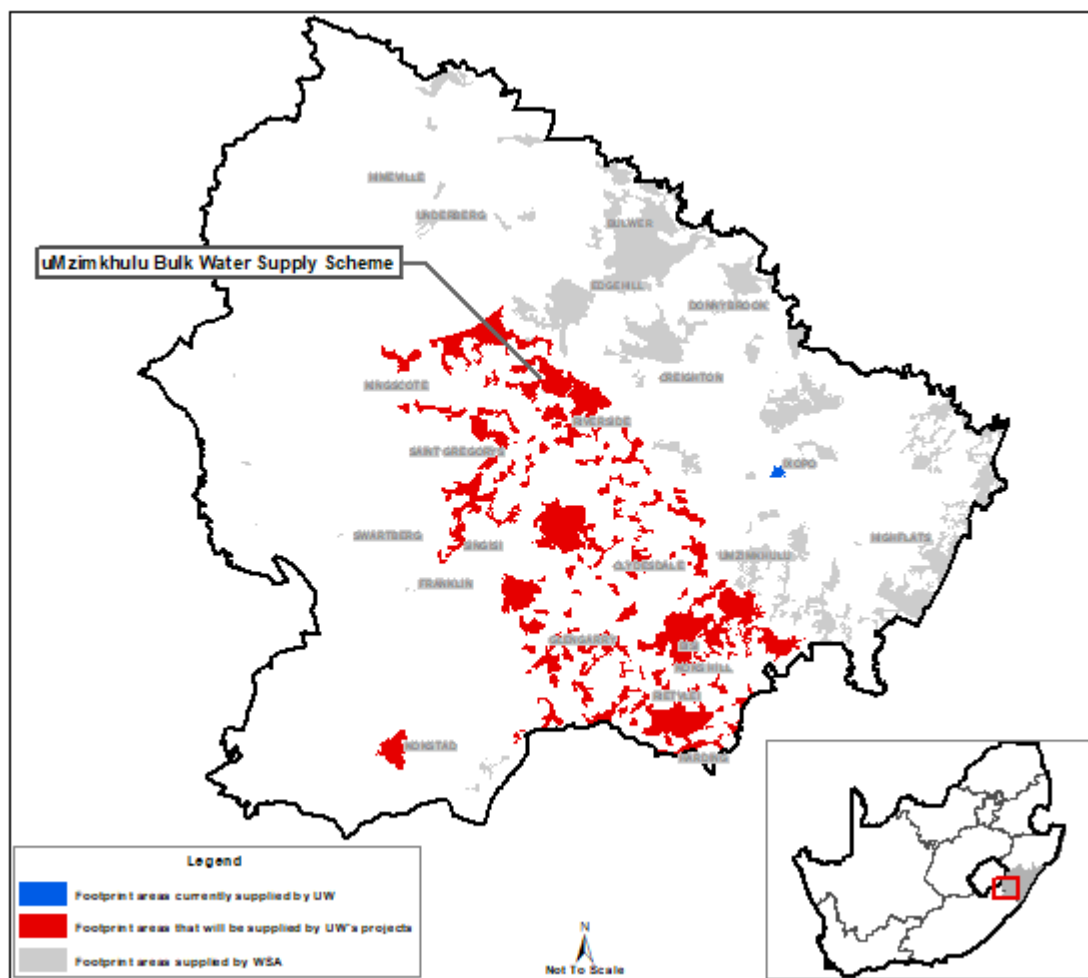
Objective	Major Project	Project Total (R'm)	2020	2021	2022	2023	2024
			R'm	R'm	R'm	R'm	R'm
Rural Development	Umbumbulu Pipeline Augmentation	904	2	3	10	10	
Rural Development	Greater Mpofana Regional Scheme Phase 1	757	103	12			
Rural Development	Vulindlela Pumpstation and Reservoir	349	50	100	100	78	
Rural Development	Impendle - Nzinga	292	6	2	5	50	95
Rural Development	uMshwathi Bulk Water Supply Scheme (Wartburg Phases 1 - 3) ¹	115					
Rural Development	Impendle - Stepmore	109	5	51	44		
Augmentation	Howick West Reservoir Upgrade (16 MI)	108	46	23			
Rural Development	Umbumbulu Pumpstation	85	9	27	53		
Rural Development	Greater Mpofana Regional Scheme Phase 2	75	1	1		31	19

¹ Also see iLembe DM projects

11.7.4 Harry Gwala District Municipality

The Umzimkhulu Bulk Water Supply Scheme will supply water from the Umzimkhulu River to areas throughout the Umzimkhulu and the Dr Nkosazana Dlamini Zuma Local Municipalities. Umgeni Water will work in partnership with the Harry Gwala District Municipality to increase water access. Umgeni Water has completed the feasibility study which identifies the best possible regional bulk water solution to supply the Umzimkhulu and Dr Nkosazana Dlamini Zuma Local Municipalities. The potential expansion area of the scheme is shown in **Figure 11.18**. A business plan is also being reviewed for submission to the Department of Water and Sanitation.

Figure 11.18: Proposed extensions to Umgeni Water's Supply 'Footprint' within the Harry Gwala District Municipality



11.7.5 Ugu District Municipality

The strategic infrastructure development projects within Ugu District Municipality, to either consolidate existing supplies or to expand into new areas, are shown in **Table 11.8**. Potential expansion areas are shown in **Figure 11.19**.

Figure 11.19: Proposed extensions to Umgeni Water's Supply 'Footprint' within the Ugu District Municipality

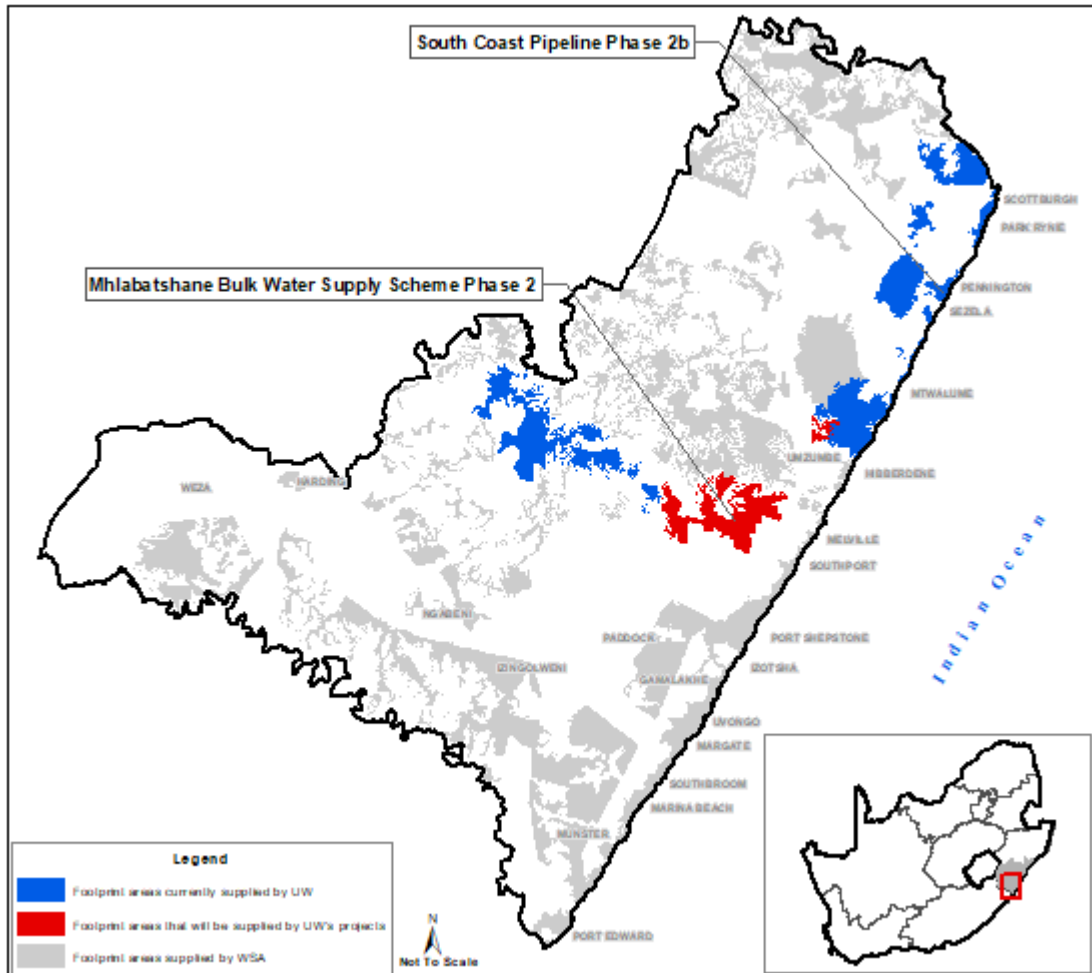


Table 11.8: Projects to be implemented in Ugu District Municipality within the next five years

Objective	Major Project	Project Total (R'm)	2020	2021	2022	2023	2024
			R'm	R'm	R'm	R'm	R'm
Rural Development	Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu River abstraction	571	1	11	25	47	62
Expansion	South Coast Ph 3	555	6	4	20	4	79
Rehabilitation	Nungwane Raw Water Aqueduct	185	32				
Expansion	South Coast Ph 2b (Kelso to Umdoni)	165	4	58	48	19	
Upgrade	Umzinto WTW Upgrade	61	13				

11.7.6 uThukela DM

Umgeni Water has recently signed a Bulk Supply Agreement with uThukela District Municipality. The following are interventions that are planned within this DM

uThukela DM, Okhahlamba LM

Medium-Term (Six to Ten years): The WTW at Zwelisha will be upgraded to a capacity of 4 Ml/d and the supply area extended to include Okhombe, Obonjani, and the Busingatha communities. Some of these communities also require reticulation development. The WTW will also link into the existing reticulation schemes of Newstand and Langkloof. A large bulk reservoir will be constructed above Langkloof to supply large areas north of the Woodstock Dam via a gravity pipeline.

The Emmaus area will be supplied via a pumping main from the Bergville WTW to a single bulk reservoir located in Emmaus. The Bergville WTW will require an upgrade to accommodate this additional supply. The households not already supplied with VIPs in these areas will be partially accommodated in this phase. Most of the households within Okhahlamba LM will be supplied with basic sanitation by the end of this period.

Long-Term (Eleven to Twenty years): Construction of a gravity feed pipeline from the bulk reservoir at Langkloof to the land reform areas of Waterloo and Kameel Draai, with associated reticulation. A gravity connection into the existing Rookdale, Woodford and Bethany schemes will reduce the demand on the Bergville WTW. The excess capacity generated at the WTW will allow water from Bergville to be pumped to Hambrook and the Greenpoint Complex via Acton Homes which will need a reticulation scheme.

uThukela DM, Inkosi Langalibalele LM

Medium-Term (Six to Ten years): Completion of both the Amangwe / Loskop scheme and the Ntabamhlope North scheme will occur during this period offering a standpipe level of service to a total of approximately 115,000 people. The households not already supplied with VIPs in these areas will be partially accommodated in this phase.

Long-Term (Eleven to Twenty years): The entire Ntabamhlope South area, except for the Power community, currently has a basic level of service in the form of stand-alone schemes. It is planned to incorporate these schemes into the Ntabamhlope North bulk supply and reticulate to Power during this period.

Long-Term (Eleven to Twenty years): It is planned to supply bulk water to Frere during this period and to construct reticulation and bulk supplies to the Wembezi North area. The gravity pipeline from the Cromley Bank reservoir and the reticulation supplying the "Ganna Hoek" land "Klip Berg" land reform areas will be constructed during this period.

uThukela DM, Alfred Duma LM

Medium-Term (Six to Ten years): A portion of the Driefontein block, north of Ladysmith, is currently served by independent borehole supply schemes. It is planned to extend the Burford scheme into the Compensation and Klipfontein communities. The Driefontein extension, incorporating all the outlying communities around Driefontein, will be developed as stand-alone borehole schemes. The schemes will be designed to accommodate the pressures generated from the future bulk reservoirs. Three of the four Driefontein extension phases will be constructed during this period. A gravity feed pipeline will be constructed from the Aasvoelkop reservoir to the Mthembu West and East communities with new reticulation networks.

Long-Term (Eleven to Twenty years): The current underutilised capacity at the Ladysmith WTW will be used to supply bulk water to the Driefontein block via a rising main and three large bulk reservoirs located north of Burford, Driefontein and Amahuku. This bulk system will connect into the existing reticulations currently in place and infrastructure constructed in Phase 2 (6 – 10 years). The boreholes currently supplying these schemes will be decommissioned and where possible pumps will be relocated to outlying stand-alone schemes. The fourth phase of the Driefontein extension will be completed during this period.

A gravity pipeline will be constructed from Aasvoelkop reservoir to the Colenso area. This pipeline will connect into the existing bulk infrastructure and the Colenso WTW will be decommissioned. This will improve the quality of service currently experienced in Colenso.

Ekuvukeni BWSS

It is planned to supply the Waaihoek North area directly from a connection on the Oliphantskop rising main. In addition the Ekuvukeni South area will be supplied via pipelines extending from the Rockcliff reservoir. The uMhlumayo East and Tugela Estates areas will be supplied from the previously constructed uMhlumayo scheme, and the existing package treatment works at Tugela Estates can be decommissioned and utilised elsewhere. These areas will also be supplied with VIPs during this period, possibly extending past the ten years.

Long-Term (Eleven to Twenty years): It is planned to supply the Ekuvukeni North area via a pumped pipeline from the existing reservoirs supplying Ekuvukeni. The Waaihoek Extension will be supplied via a pumped pipeline supplying a new reservoir located above Isoye.

Spioenkop Bulk Water Supply Scheme

The current supply to the uThukela District Municipality area is unable to address future demands. The proposed Spioenkop Bulk Water Supply Scheme will therefore provide a reliable and sustainable regional bulk water supply to the primary and regional areas of the uThukela District Municipality.

The proposed project will supply water to a range of consumer levels including: Rural, Residential, Commercial and Industrial. The scheme is designed to supply up to 150 000 households per day (approximately 600 000 people) with a minimum of 100 litres per capita per day in rural areas and up to 250 litres per capita per day in residential areas.

Stage 1 is proposed to comprise:

- A new raw water transfer system from Spioenkop Dam to a proposed new Central Water Treatment Works.
- A new 100 Ml/d Central Water Treatment Works near Spioenkop Dam and located on the Brakfontein Farm.
- A new bulk water transfer system from Spioenkop Dam to Ladysmith.

11.7.7 Summary of Major Bulk Water Supply Infrastructure Projects

Table 11.9: Planned Major Infrastructure in Five-Year Corporate Plan Period.

Major Project	Objective	Key Municipality Beneficiary	Project Total R'm	Five-Year R'm
Mkhomazi Bulk Water Supply Scheme	Augmentation	eThekwini MM, uMgungundlovu DM	6,132	1,747
Lower Mkhomazi Bulk Water Scheme	Augmentation	eThekwini MM, Ugu DM	4,210	1,651
Umbumbulu PL Augmentation	Development	uMgungundlovu DM	904	25
Lower Thukela BWSS Phase 2	Development	iLembe DM	773	15
Greater Mpofana Regional Scheme Phase 1	Rural Expansion	uMgungundlovu DM	757	114
uMshwathi BWSS Phase 4 (Southern Ndwedwe)	Rural Expansion	iLembe DM	677	521
Mhlabatshane Sub-Regional Scheme Ph 2 - UMzimkhulu River abstraction	Development	Ugu DM	571	147
Vulindlela Upgrade	Augmentation	Msunduzi LM	349	328
Impendle-Nzinga	Rural Expansion	uMgungundlovu DM	292	159
Rehabilitation of Aqueduct No 1,2,3 &4	Rehabilitation	eThekwini MM	251	177
Maphumulo BWSS Phase 3: WTW Upgrade (6 MI/d to 12 MI/d)	Rural Expansion	iLembe DM	200	158
Nungwane Raw Water Aqueduct	Rehabilitation	Ugu DM	185	32
Durban Heights WTW – Rehabilitation of key installations	Rehabilitation	eThekwini MM	179	89
South Coast Ph 2b (Kelso to Umdoni)	Expansion	eThekwini MM, Ugu DM	165	128
uMshwathi BWSS Phase 6	development	iLembe DM	151	151
Durban Heights WTW – Shaft Pumps	Upgrade	eThekwini MM	125	23
Wiggins WTW – Rehabilitation of key installations	Rehabilitation	eThekwini MM	122	122
Durban Heights WTW – Sludge Plant Upgrade	Upgrade	eThekwini MM	119	119
uMshwathi BWSS (Wartburg Phase 1 - 3)	Rural Expansion	uMgungundlovu DM iLembe DM	115	84
Wiggins High Lift Pump Station	Upgrade	eThekwini MM	113	111
Impendle-Stepmore	Rural Expansion	uMgungundlovu DM	109	99
Maphumulo BWSS Phase 3: Weir on Hlimbithwa River	Development	iLembe DM	99	97
Greater Mpofana Regional Scheme Phase 2	Rural Expansion	uMgungundlovu DM	75	52
Umzinto WTW	Upgrade	Ugu DM	61	13
Durban Heights WTW – Unit Process Valves	Upgrade	eThekwini MM	50	50

11.7 Status of Bulk Supply Agreements with Major Customers

Umgeni Water has signed Bulk Supply Agreements with all of the six Water Service Authorities it currently supplies, namely eThekweni Metropolitan Municipality, iLembe District Municipality, Ugu District Municipality, uMgungundlovu District Municipality, Harry Gwala District Municipality and the Msunduzi Local Municipality.

These agreements cover obligations of both Umgeni Water and its customers for the management of bulk treated water services in respect of implementation operational plans to achieve agreed quality, quantity and pressure standards as per the obligations set out in the Bulk Supply Agreements.

Umgeni Water's levels of service will continue to be regulated and monitored at a micro level at the water treatment works where the final treated water is distributed, as well as, at a macro level where regional systems are integrated for water supply. Monitoring frameworks have been formulated in response to the formal agreement and are incorporated into operating rules, schedules and plans.

Monthly Customer Operational Liaison meetings as well Quarterly Bulk Supply Agreement meetings with the municipalities will continue, to ensure that customer requirements are continuously met and responses to new requirements are provided.

Monthly Operational Liaison meetings are held to discuss operational issues that occur at during the course of the month, and that which can be dealt with at an Area / System levels between the Umgeni Water and Customer Operations managers. This agenda of this forum generally includes any operational issues that cannot be resolved by the Plant Superintendents and Systems Managers and require escalation to the Operations Area Managers.

The Bulk Supply Agreement Quarterly Liaison meetings are chaired on a rotational basis by top Managers from Umgeni Water and the Customer. Items of strategic nature as well as Operational Matters escalated from the Monthly Liaison meeting are included in the Agenda. A Quarterly BSA Compliance Report is presented at these meetings, highlighting performance against the clauses in the Bulk Supply Agreement. An endorsement by both Umgeni and the Customer is recorded by signing off the report once joint agreement is reached on the performance per quarter.

Umgeni Water recently concluded a Bulk Supply Agreements with a uThukela DM bringing the total Water Service Authorities to seven (7).

Chapter 12: Bulk Wastewater Treatment and Disposal Plan



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12.1 Wastewater Treatment Works Capacity, Condition and Effluent Quality

Umgeni Water treats wastewater at nine (9) Wastewater Treatment Works of varying sizes and complexities, ranging from 0.5 Ml/d to 75 Ml/d (Figures 12.1 and 12.2). Effluent quality achieved also varies (Table 12.1) largely associated with infrastructure condition and capacity. Several infrastructure upgrade/expansion projects and one new infrastructure development project are being planned or implemented during this Corporate Plan period (Table 12.2). Information per works is provided in the section that follows.

Figure 12.1: Wastewater Treatment Works Design Capacity (Ml/d).

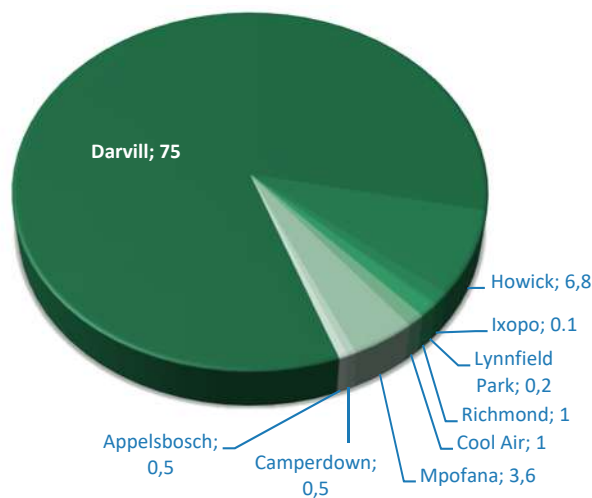


Figure 12.2: Wastewater Treatment Works Inflows relative to Works Capacity.

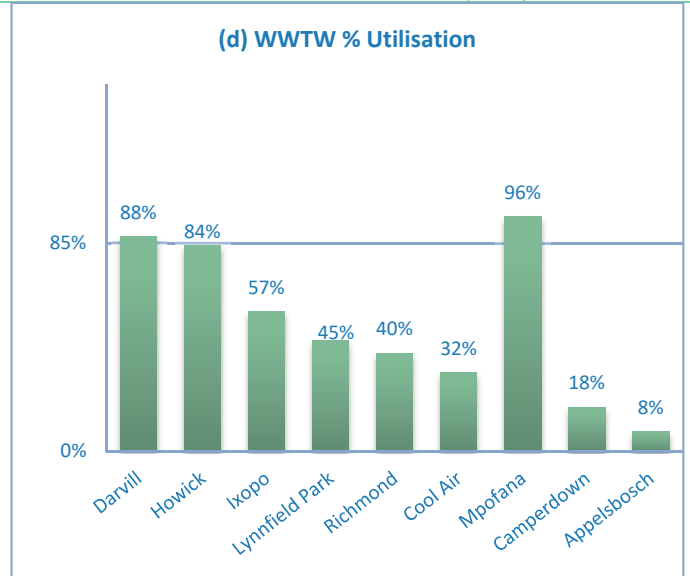


Table 12.1: Wastewater Compliance

Wastewater Treatment Works	Design Capacity Ml/d	July 2018– December 2018	2014 Green Drop Risk Rating
Darvill	75.0	66.52%	65.6% (↓)
Howick	6.8	91.74%	54.5% (↑)
Mpofana	3.5	82.58%	64.7% (↑)
Ixopo	1.0	91.11%	52.9% (↑)
Richmond	1.0	93.33%	47.1% (↑)
Cool Air	1.0	99.23%	29.4% (↓)
Lynnfield Park	0.5	90.74%	52.9% (↑)
Camperdown	0.5	91.67%	52.9% (↑)
Appelsbosch	0.5	80.56%	23.5% (↓)

12.2 Wastewater monitoring and water quality management

Water quality monitoring programmes are developed and implemented to ensure sites are covered and programmes aligned to risk-based methodology that yields reliable information for treatment mitigation.

Sampling and laboratory analysis are undertaken in accordance with the organisation's ISO 9001 certified monitoring programme and SANAS 17025 Accredited laboratory.

Alert levels are categorised in terms of levels, with 0 as the lowest level - indicates no issues and 3 as the highest level – indicating there is high likelihood of an impact.

Implementation of monitoring programmes, alert level response protocols and development of action plans in response to directives helps ensure systems deliver safer quality effluent that benefits all downstream uses including vulnerable communities.

12.3 Darvill Wastewater Treatment Works

Treatment issues, constraints and response

The average daily inflow to the Darvill Wastewater Treatment Works (WWTW) is 74 MI/d with Peaks estimated to exceed 300 MI/d during heavy rainfall events as a result of storm ingress. Even under optimal conditions, flows over 110 MI/d cannot be processed through the treatment works, and the excess flow is diverted to the storm dam for later return. In some instances, the storm dam fills and the untreated sewage in the storm dam spills over to the treated effluent thus compromising the outgoing effluent quality significantly. Average dry weather flows have, however, not been increasing over the last number of years. This is partly attributable to the drought and to losses in the system. It is believed that leaks in the sewer network may be contributing to the reduction in flows at Darvill as has been experienced at other wastewater treatment works being operated by Umgeni Water.

The 33% increase in the organic load has put a strain on the capacity of the works to biologically treat and remove nutrients, especially nitrogen in the form of ammonia, from the wastewater. A number of the unit processes are currently operating well above nominal capacity, with the key limiting factor being the aeration capacity, leading to the discharge of non-compliant effluent into the Msunduzi River at times, especially in winter when biological processing is slower. Related sludge age issues, sludge bulking and sludge carryover problems are also increasing significantly.

To alleviate these issues and constraints, the Darvill WWTW is currently undergoing a capacity upgrade to 100 MI/d and this is expected to be complete by 2019. Current construction work within the existing plant has resulted in a number of problems affecting the existing processing capacity and causing some serious non-compliant effluent discharges. Mitigation is on-going, but problems are likely to continue until the construction work has been concluded. Delays in the completion of some components have also severely stressed the old equipment, leading to further non-compliances.

Discharge Licence

Umgeni Water has been issued with a 20 year licence (No. 21065561) from 24 June 2010, renewable every five years. The permitted discharge is 75 MI/d however; this is being reviewed as part of the licensing process for the upgraded site. Umgeni Water applied to DWS for a new discharge licence in April 2016, and DWS is busy working on this agreement.

Steps to progressively achieve Green Drop Certification for Darvill WWTW

- Complete the upgrade to 100 MI/d capacity. This project is to include the sludge secondary treatment and disposal component.
- Multiple process optimisation interventions are in progress to address inefficient treatment processes and practical operational problems during the upgrade, but this is only able to limit some non-compliances.
- The annual risk assessment review of the entire wastewater collection and treatment system was undertaken in conjunction with the Msunduzi Local Municipality. This exercise is a crucial aspect of the Wastewater Risk Abatement Plan (WRAP) that was previously developed for this system. This Municipality has identified storm water ingress as a high risk.
- Development an artificial wetland system for improvement of untreated spillages out of the storm dam at times of high inflow.
- Interim projects have been unable to meet the current load demands, and construction has caused further problems. Green Drop Certification for the Darvill WWTW can only be expected after completion of the major plant upgrade work.

12.4 Ixopo Wastewater Treatment Works

Treatment issues, constraints and response

The initial design capacity of the Ixopo WWTW was approximately 1 Ml/d, and an addition of a third aerator has increased this to 1.3 Ml/d. The average daily inflow to the Ixopo WWTW in 2017 was only 0.34 Ml/d due to major problems in the municipal sewer system. The estimated normal inflow is expected to exceed the wastewater treatment works capacity if all the sewage generated in the town is consistently delivered to the works. Umgeni Water is continuing to engage with the Harry Gwala DM in order to develop mutually-beneficial and sustainable wastewater solutions.

Discharge conditions

The wastewater treatment works inflow is currently well below 2 Ml/d and is operated under a General Authorisation.

Steps to achieve / maintain Green Drop Certification for Ixopo WWTW

- The plant treatment capacity has been upgraded through the installation of a third aerator and construction of a second clarifier.
- Implementation of a return pumping system from the storm dam.
- The annual risk assessment review of the entire wastewater collection and treatment system was undertaken. This exercise is a crucial aspect of the Wastewater Risk Abatement Plan (W2RAP) that was previously developed for this system. Wastewater discharges due to leaks in the sewer reticulation system were again highlighted as a high risk during the risk assessment review.
- Chlorination equipment capable of proper dosing at significantly low flows is under construction.

12.5 Lynnfield Park Wastewater Treatment Works

Umgeni Water has an Operations and Maintenance Contract with the Msunduzi Local Municipality for the Lynnfield Park WWTW. This is a small plant serving a residential area to the east of Ashburton. Construction of a new sequencing batch reactor process, with new inlet works and sludge handling system on the existing site has been completed. This has increased capacity to at least 0.5 Ml/d, and the compliance has significantly improved.

Further work on maintaining and improving the compliance including process optimisation of the new wastewater works process is on-going.

12.6 Albert Falls Wastewater Package Plants

Umgeni Water operates two small package plants, namely North and South with capacities of 0,04Ml/d and 0,05 Ml/d respectively at Albert Falls Dam.

12.7 uMgungundlovu Wastewater Treatment Works'

Howick Wastewater Treatment Works

Effluent quality non-compliance at the Howick WWTW is primarily due to COD overloading and an inadequate sludge dewatering process. COD overloading is due to an increase in industrial activity bringing in high-strength waste. Various treatment process improvements are required to improve the wastewater quality compliance. Sewage tankers have been re-routed to dispose at the Darvill WWTW to alleviate pressure on the Howick Works. Upgrading of the solids removal process is in progress. Umgeni Water is in consultation with the District Municipality to institute and implement effective trade effluent controls.

The Mpophomeni sewer pipeline does not have adequate capacity to transfer the township's sewage to Howick WWTW. This results in sewage overflows at Mpophomeni pump station that are contaminating Midmar Dam. The construction of the new Mpophomeni WWTW will be a sustainable solution for this challenge.

In addition, sewage spillages at Howick pump stations and the Mpophomeni area remain a challenge. Plans to address these issues and constraints are summarised below:

Summary of plans to improve Licence Compliance for Howick WWTW over Corporate Plan Period

- Multiple process optimisation and equipment repair interventions are continuously undertaken. The capacity of the existing sludge dewatering units is being increased.
- Pumpstation issues are being addressed in the short term, whilst a longer-term project to upgrade these is in progress with uMgungundlovu District Municipality.
- Follow up on persistent sewer reticulation problems is on-going with the municipality.
- Telemetry has been implemented by Umgeni Water to allow rapid response to pumpstation problems. However, this still needs to be further improved and extended to include additional on-line instrumentation that will improve plant process control.
- The annual risk assessment review of the entire wastewater collection and treatment system was undertaken in conjunction with the uMgungundlovu District Municipality. This exercise is a crucial aspect of the Wastewater Risk Abatement Plan that was previously developed for this system.
- The construction of the new 6 Ml/d Mpophomeni WWTW expected by mid-2020 is expected to reduce loads to the Howick WWTW. This load shift will unlock additional wastewater treatment capacity at Howick WWTW to allow further residential and industrial developments in the area.
- Green Drop Certification for the Howick WWTW is not expected to be achieved until the Mpophomeni WWTW is operational.

Mpofana WWTW

This is a plant with severe challenges. Although the process might be capable of treating as much as 7 Ml/d under ideal conditions, the current plant design capacity is only 3.6 Ml/d and average inflows significantly exceed this. Compliance has been improving year on year.

Aged infrastructure, a compromised treatment process and other issues have all contributed to the poor compliance. The discharge from the textile industry routinely compromises compliance as the plant cannot adequately treat the industrial influent. Sludge removal and disposal is also a major concern.

Multiple interventions are on-going. Either a major upgrade or, given the existing site constraints, a new WWTW, is needed. Increased dewatering unit and new chlorination system are being implemented as priority to mitigate some process challenges. Also an exercise is being conducted for unit processes that could be refurbished or constructed for short-term while a feasibility study is in progress and is expected to be completed by November 2019.

Richmond WWTW

At Richmond, the plant can operate well, but still needs a number of improvements to ensure full compliance. There is a project to upgrade the Plant to 2ML/d to cater for demands until 2045. There has been an improved Quality compliance after the chlorine contact tank and clarifier repairs.

Cool Air WWTW

For the town of Cool Air, components of the effluent treatment works may be somewhat old and some of the equipment is in the process of being replaced, but the fully treated effluent compliance has been good. This Plant currently met Green Drop System requirements in the last financial year.

Trust Feeds WWTW

The Trust Feeds housing development, located in uMshwathi Local Municipality, was upgraded from 800 to 3800 houses in 2016. The housing development is home to over 23 000 people. The 1 ML/d Trust Feeds WWTW is being constructed to provide waterborne sanitation for this community, with completion expected in 2020.

Appelsbosch and Camperdown WWTW

Both the Appelsbosch and Camperdown WWTW are small, in design capacity and in the inflow volume actually being received. They both quite old systems and need a number of interventions to keep them adequately functional in the long term, but both are capable of producing fully compliant effluent discharges. Work is on-going to address the identified problems, and dredging of the Appelsbosch ponds was undertaken recently.

Mkhambathini Wastewater Treatment Works

The town of Camperdown requires additional wastewater treatment capacity in response to increasing domestic and industrial demand. Design of a 2 ML/d WWTW and bulk sewer line is in progress with construction expected to start in April 2019.

Wastewater Treatment Plans and Initiatives

A wastewater master plan for uMgungundlovu District Municipality is being developed as a pilot and will be completed during this corporate plan period.

12.8 Summary of Wastewater Projects / Capital Expenditure Plan

Wastewater Capex for the five-year corporate plan period is R1,076 million. Allocations per works in indicated in **Table 12.2**

Table 12.2: Wastewater Capex projects to be implemented during 2019/20 to 2023/24

Objective	Major Project	Project Total (R'm)	2020	2021	2022	2023	2024
			R'm	R'm	R'm	R'm	R'm
Upgrade	Darvill WWTW: Capacity Increase	977	22				
Rural Development	Mpophomeni WWTW	390	56	93	103	115	
Rural Development	Mpofana WWTW	330	6	10	88	223	
Upgrade	Richmond WWTW	157	8	4	56	45	20
Rural Development	Trust Feeds WWTW	103	40				
Upgrade	Darvill Sludge Handling Facility	87	40	23			
Rural Development	N3 Corridor WWTW	53	9	31	12		
Rural Development	Mpophomeni Sewer Outfall	39	15	23			
Rural Development	Cedara - Khanya Village WWTW	34	2	26	6		

12.9 Wastewater Sludge Management Plan

Umgeni Water has commissioned a study to identify cost effective and sustainable management options for water treatment residue and sludge produced in the water and wastewater treatment works respectively. The study, to be completed in April 2018, will provide input for sludge management plan. Currently, interventions are in place to mitigate any potentially negative impacts on daily operations.

The sludge management plan will be finalised in December 2019.

12.10 Status of Wastewater Licence Applications

Table 12.3: Status of Wastewater Treatment Works licences and General Authorisations

WWTW	Current Design Capacity (Ml/day)	Date of issue of Licence	Expiry Date	Comment
Darvill	75	24 Oct 2010	24 Oct 2030	Application for new Discharge Licence (in line with WWTW upgrade) was submitted in 2016. Licence review in progress
Howick	6.8	24 Jun 2010	24 Jun 2030	
Mpofana	3.5	Licence application in progress	N/A	Plant currently is monitored using Howick Licence. Plans are in place to apply for a site specific licence.
Cool Air	1.0	General Authorisation applies	N/A	
Ixopo	1.0	General Authorisation applies	N/A	
Richmond	1.0	General Authorisation applies	N/A	
Lynnfield Park	0.5	General Authorisation applies	N/A	
Camperdown	0.5	General Authorisation applies	N/A	
Appelsbosch	0.5	General Authorisation applies	N/A	

Chapter 13: Retail Supply



Retail Supply

Umgeni Water does not provide any retail water supplies.

Chapter 14: Other Activities (Section 30)



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14.1. Operation and Maintenance of Raw Water Supply System for Greater Mbizana Regional Bulk Water Supply Scheme

The Department of Water and Sanitation has extended its agreement with Umgeni Water to operate and maintain the Raw Water Supply System (including the Ludeke Dam and Raw Water Pump Station and Rising Main up to, but excluding, the Nomlacu Water Treatment Works) for a further twelve-month period (which ends December 2018) on a cost recovery basis.

14.2. Agreement with DWS for Operation, Administration and Maintenance of Dams

Umgeni Water signed a 10-year renewable agreement for the operation, administration and maintenance of dams with DWS in 2013. This encompasses: Midmar Dam, Albert Falls Dam, Inanda Dam, Hazelmere Dam, Spring Grove Dam and the Mearns Diversion Weir, Mearns Pumping Station, Transfer Pipeline and Receiving Streams.

14.3. Implementing Agent for DWS: KZN River Health (RHP) and Adopt a River Programmes (AaRP)

DWS has submitted a new Implementing Agent agreement to DWS head office for approval. The agreement has been returned to DWS Regional Office for changes, these have been completed and DWS Regional Office is awaiting approval.

The focus of the RHP is monitoring 43 sites for the programme. This includes both reference and monitoring sites for WMA 6, WMA 7 and WMA 11 catchment management areas. The primary focus of this study is to conduct appropriate assessments of diatoms, macro invertebrates, fish, riparian vegetation and habitat integrity and develop an appropriate monitoring plan and sampling frequency per monitoring site.

14.4. Laboratory Services

Umgeni Water provides an extensive array of ISO/IEC 17025 accredited laboratory testing services to various municipalities in KZN. The primary objective of the partnership with the WSAs is to improve the level of compliance in terms of the Integrated Regulatory Information System – IRIS (Blue Drop and Green Drop) Systems.

Currently, fixed-term contracts/MoUs are in place for water and/or wastewater quality monitoring with the Harry Gwala DM, Ugu DM and uMhlathuze Water.

Laboratory services are also provided to various other water sector entities including eThekweni MM, Alfred Nzo DM, Mhlathuze Water and Amatola Water, as well as to over 2800 other clients (industries, academic institutions, commercial labs, farmers, private individuals).

The laboratory also partners with academic institutions and other municipalities to provide in-service and National Treasury graduate training to various students annually.

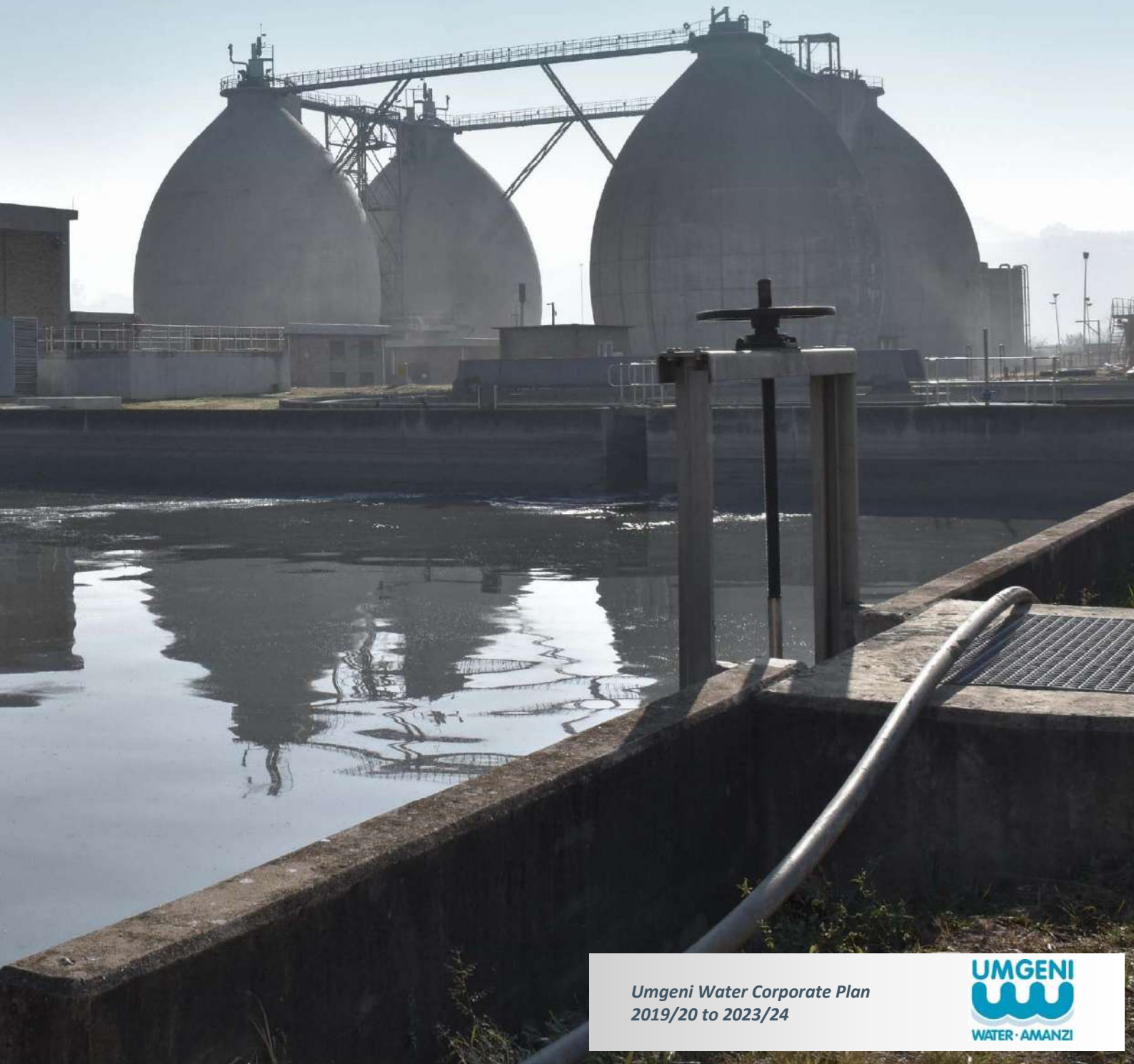
14.5. Support to Municipalities

Umgeni Water is supporting vulnerable customers implement projects to improve water service delivery. Interventions vary from emergency refurbishment of reticulation infrastructure to upgrades of municipal wastewater systems.

Umgeni Water has signed an agreement with uMgungundlovu District Municipality to develop and implement a flood early warning system for selected local communities for duration of three years ending in April 2020. The project aims to increase the resilience of vulnerable communities through interventions that include community-based early warning systems, climate-smart agriculture and climate proofing human settlements.

Umgeni Water also provides IRIS, Sampling and SANS 241 training to various municipal staff to enable better understanding of legislation and general requirements; thus enabling better monitoring of their performance.

Chapter 15: Human Resources Plan



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15.1 Human Resources Strategy

Umgeni Water's Human Resources strategy is aligned to consolidation and growth and remains relevant to the changing Human Capital needs of the organisation. The purpose of the human resources strategy is to direct the organisation to respond to its people needs to deliver on its business strategies and plans, amid the critical skills challenges in the water sector and country as a whole. This strategy had been developed following consideration of the operating environment and organisation's vision, mission, strategies and plans.

This strategy comprises eleven human resource focus areas with specific objectives for each:

- **Workforce Planning:** *Maintain a workforce that will enable Umgeni Water to deliver quality services to all its stakeholders.*
- **Employee Resourcing and Human Resources Administration:** *Ensure effective attraction, retention and engagement of staff with expertise, experience and skills, within a framework that ensures equity and diversity.*
- **Learning and Development:** *Create an environment in which all employees are recognised as well qualified, professionally engaged and committed to high quality and standards*
- **Performance Management:** *Ensure achievement of Umgeni Water's strategic goals by managing skills, competencies, commitment of employees, recognising good performance and managing poor performance effectively.*
- **Reward and Recognition:** *Ensure that Umgeni Water pays employees market related salaries and has in place career advancement and reward systems that remain attractive to employees.*
- **Employee Wellness:** *Manage all aspects of employee wellness that can have a negative impact on employee's ability to deliver on organisational objectives*
- **Employee Relations:** *Create an environment in which our employees feel valued and support the organisation's values, strategies and priorities.*
- **Organisational Development:** *Improve on organisational effectiveness and efficiency by utilising diagnostic data, designing and implementing appropriate organisational development solutions and interventions to enable the organisation to optimise its strategy.*
- **Human Resources Information Technology:** *Provide real time reliable information and intelligence with improved discretion towards developing and delivering.*
- **Human Resources Risk Management:** *Provide a foundation for risk to be part of the HR Agenda and enhances Human Resources value proposition to the business.*
- **Care and Growth Leadership Model:** *Management Development Programme and Emerging Development Programme.*

The entity's Workforce Plan, Employment Equity, Training and Development, HIV/AIDS and Wellness, and Employee Relations plans are described further in this plan.

15.2 Future World of Work

New forces are transforming the world of work. The transitions involved call for decisive action. Countless opportunities lie ahead to improve the quality of working lives, expand choice, close the gender gap, reverse the damages wreaked by global inequality, and much more.

Technological advances – artificial intelligence, automation and robotics – will create new jobs, but those who lose their jobs in this transition may be the least equipped to seize the new opportunities. Today's skills will not match the jobs of tomorrow and newly acquired skills may quickly become obsolete. Changes in demographics are no less significant.

Expanding youth populations in some parts of the world and ageing populations in others may place pressure on labour markets and social security systems, yet in these shifts lie new possibilities to afford care and inclusive, active societies.

The International Labour Organisation (ILO) proposes a human-centred agenda for the future of work that strengthens the social contract by placing people and the work they do at the centre of economic and social policy and business practice. This agenda consists of three pillars of action, which in combination would drive growth, equity and sustainability for present and future generations. The three pillars are defined as follows:

- 1. Continuous investment in people`s capabilities;**
 - *A universal entitlement to lifelong learning that enables people to acquire skills and to reskill and upskill.*
 - *Stepping up investments in policies and strategies that will support people through future of work transitions*
 - *Implementing a transformative and measurable agenda for gender equality.*
- 2. Increased investment in institutions of work, and**
 - *Establishing a Universal Labour Guarantee.*
 - *Expanding time sovereignty*
 - *Ensuring collective representation of workers and employers through social dialogue as a public good, actively promoted through public policies.*
 - *Harnessing and managing technology for decent work.*
- 3. Increased investment in decent and sustainable work.**
 - *Incentives to promote investments in key areas for decent and sustainable work.*
 - *Reshaping business incentive structures for longer-term investment approaches and exploring supplementary indicators of human development and well-being.*

Based on the above and in line with the entity's Enabled and Innovative Growth strategic theme, strategies and plans are being developed to prepare the workforce for the future world of work.

15.3 Workforce Profile

Umgeni Water will continue to maintain and enhance its core business functions, in support of implementation of this Corporate Plan.

The workforce plan has been used as the basis to develop the Human Resources Plan which includes projected human resource requirements shown in **Table 15.1** and **Figure 15.1**.

Table 15.1: Umgeni Water Projected Workforce Profile (includes contract employees)

Occupational Levels	Baseline	2019/20	2020/21	2021/2022	2022/2023	2023/2024
Top management (2-3)	6	6	6	6	6	6
Senior management (4-5)	30	30	30	30	30	30
Professionally qualified and experienced specialists and mid-management (6-8)	320	320	320	320	320	320
Skilled technical and academically qualified workers, junior management, supervisors, foremen, and superintendents (9-12)	514	514	568	568	568	568
Semi-skilled and discretionary decision making(13-15)	261	261	261	263	263	263
Unskilled and defined decision making(16)	101	101	141	141	141	141
Total (excluding Board members)	1232	1232	1326	1328	1328	1328

Figure 15.1: Umgeni Water (Parent) Projected Employment by Occupational Category 2022/2023

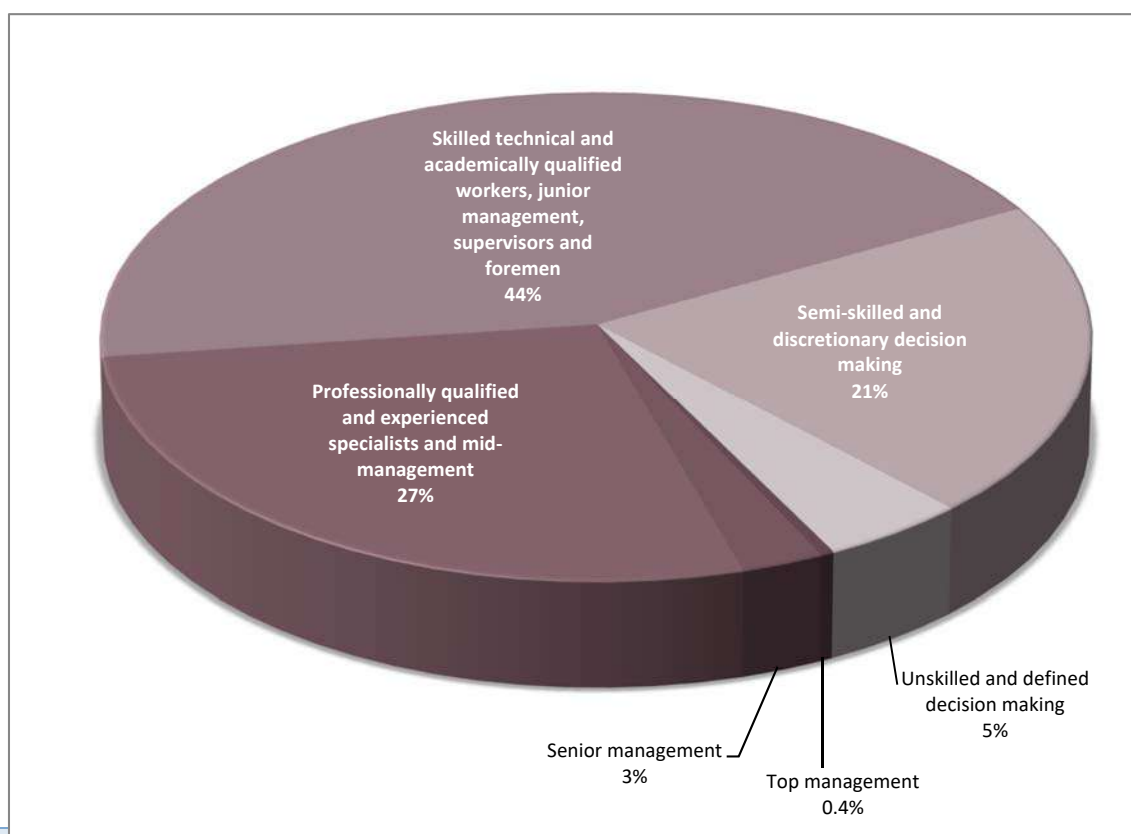
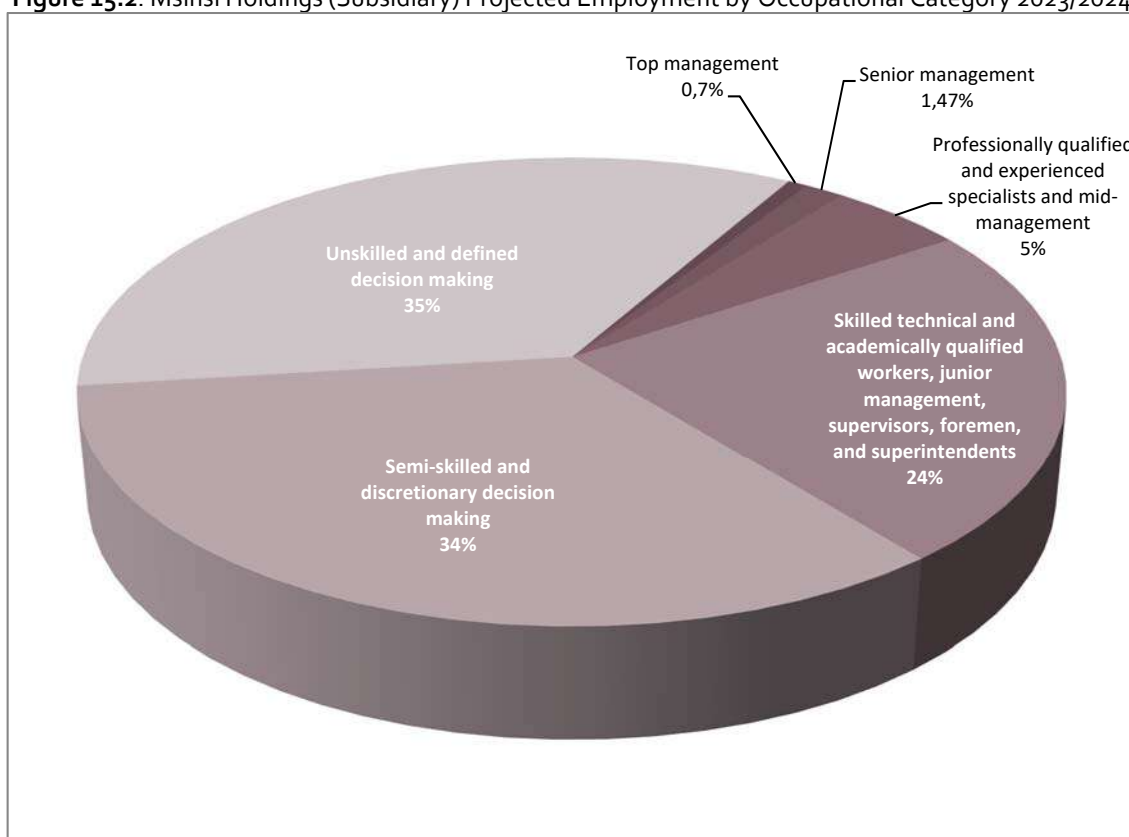


Table 15.2: Msinsi Holdings Projected workforce profile (permanent employees only)

Occupational Levels	Baseline	2019/20	2020/21	2021/22	2022/23	2023/2014
Top management (MD)	1	1	1	1	1	1
Senior management (Divisional Heads)	2	2	2	2	2	2
Professionally qualified and experienced specialists and mid-management (Grades 6-8)	7	7	7	7	7	7
Skilled technical and academically qualified workers, junior management, supervisors, foremen, and superintendents (Grades 9-12)	32	32	32	32	32	32
Semi-skilled and discretionary decision making (Grades 13-15)	46	46	46	46	46	46
Unskilled and defined decision making (Grade 16)	48	48	48	48	48	48
Total (excluding Board members)	136	136	136	136	136	136

Figure 15.2: Msinsi Holdings (Subsidiary) Projected Employment by Occupational Category 2023/2024

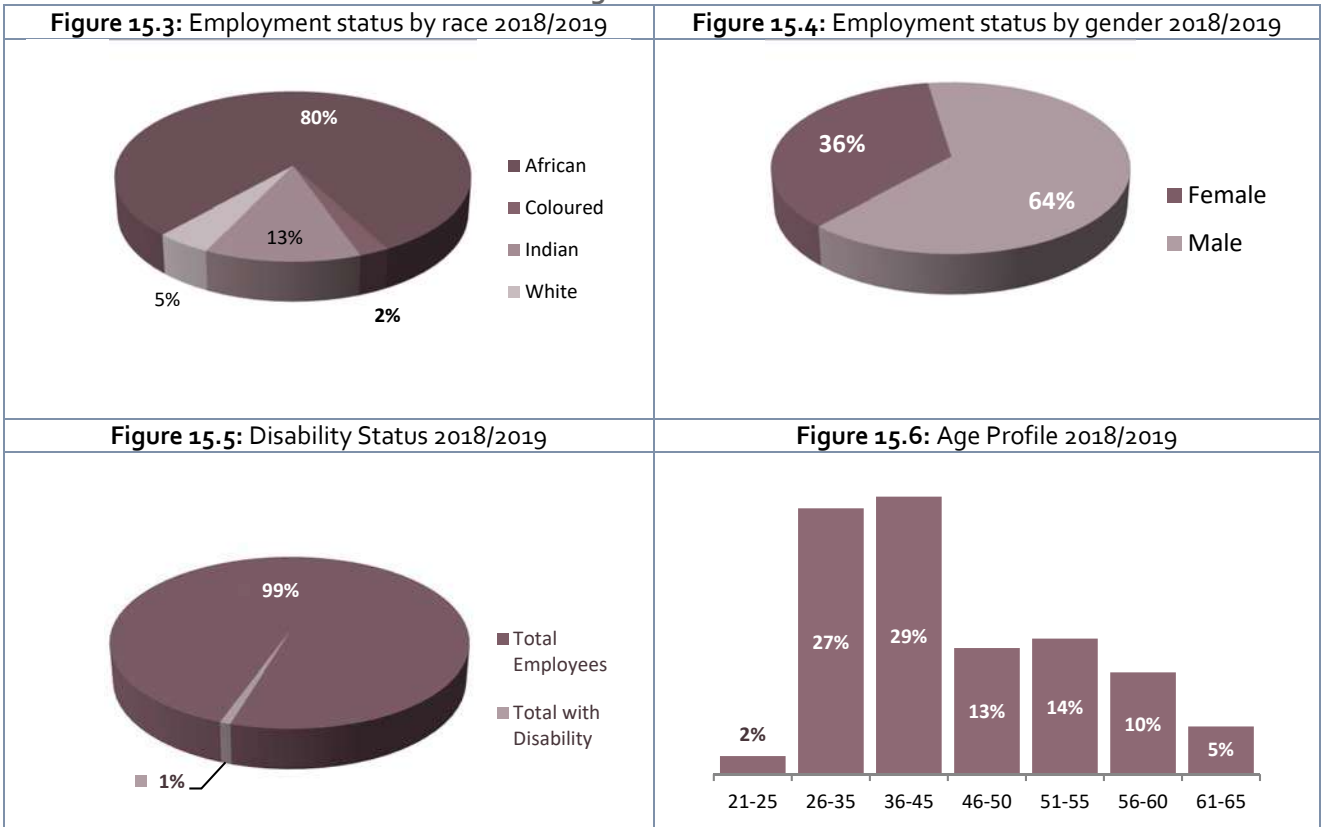


15.4 Employment Equity and Profiles by Race, Gender, Disability and Age

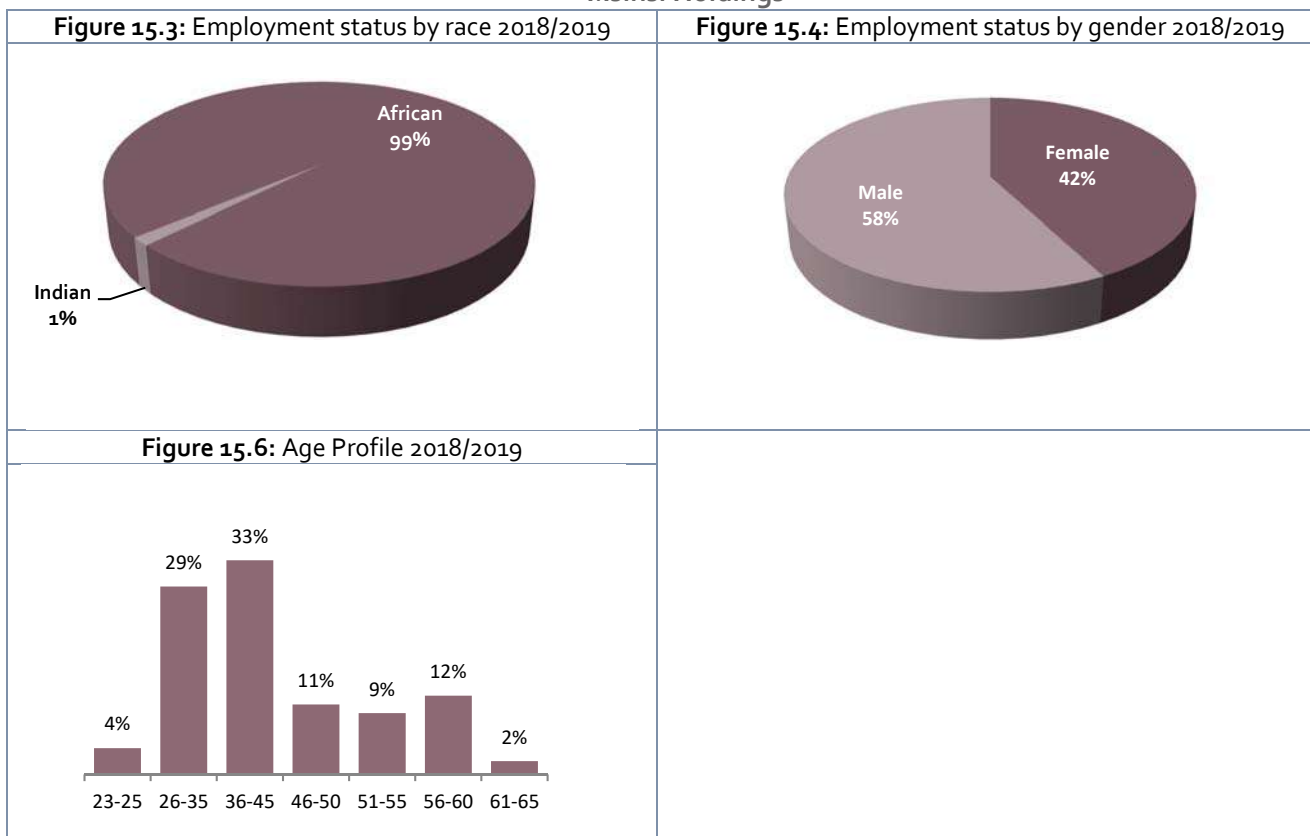
Current profiles, including by race, gender and disability are depicted in **Figures 15.3 to 15.5**. Forty five (45) employees of the total workforce are also anticipated to retire normally from the organisation during this five Corporate Plan period.

The entity has plans in place to continue to diversity its workforce over the five-year period. These include succession planning, skills development interventions and leadership / employee development programmes. These will mitigate the loss of skills and institutional memory from normal retirement. The skills development interventions aim to introduce more young employees into the organisation.

Umgeni Water Parent



Msinsi Holdings



15.5 Training and Development

Skills development is essential to enable staff to excel in their individual and organisational roles and functions to deliver on the entity's strategy. The entity's recruitment and retention interventions are intended to ensure the organisation has sufficient flexibility to obtain the skills that it needs to implement its Corporate Plan.

The convert strategy will focus on core, scarce and critical skills. Through continuous development, the approach will include options for buying, converting and creating skills, whilst continuing to ensure diversity is increased in under-represented areas. .

Umgeni Water will continue to develop and retain strong partnerships with Universities, Universities of Technology, TVET colleges, NGOs and SETAs; in support of its skills development initiatives. The entity will also continue to maintain a strong partnership with National Treasury to assist in training of Graduate Technicians, Technologists, Engineers and Scientists towards formal registration with the relevant professional bodies. These skills will be deployed to address the skills shortage in targeted rural municipalities in KwaZulu-Natal and Eastern Cape.

15.4.1 Build leadership, management and functional competence for KZN.

In partnership with a reputable institution of higher learning, Umgeni Water will implement the Leadership and Management Development Programmes which will comprise: Emerging Development Programme (EMP), Management Development Programme (MDP), and Senior Management Development Programme (SMDP).

For this Corporate Plan period:

In partnership with the Duke Corporate Education, thirty (30) Young Professionals were enrolled in the leadership program, and successfully completed in 2019

- Twenty five (25) Middle Managers will be enrolled in the Management Development Programme in 2019/20.

Table 15.4: Leadership and Management Development Programmes

Initiatives/ plans	Baseline	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Implement Leadership and Management Development Programmes	>100% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.	> 90% enrolled candidates attended target modules for the year.

The staff skills development plan for the Five-Year Period is summarised in **Table 15.5**.

15.4.2 Artisan Learnership and Apprenticeship Programmes

The Umgeni Water Artisan Learnership/Apprenticeship Programme consists of two phases:

Phase 1: Learners are trained for a period of three years (phase 1 to phase 3) prior to writing trade tests. After passing their trade tests they become qualified artisans.

Phase 2: Following trade tests, Umgeni Water provides the artisans with further experiential training as Artisan Trainees for a period of two years after which they become fully employable in the labour market.

For this Corporate Plan period:

- Fifty eight (58) Apprentices and learners are appointed in Technical skills operations.
- Practical training is provided to apprentices who have qualified as Artisans.
- Nineteen (19) Umgeni Water employees are enrolled in Water and Wastewater Treatment Operation Learnership.

15.4.3 Bursary and Graduate Programme

A *create strategy* will be used to create a talent pool that would address future skills demands of the entity. This will be achieved through:

- Continuing with the current bursary programme and awarding further bursaries for skills identified, namely; civil engineering, chemical engineering, electrical engineering, mechanical engineering, and financial accounting.
- Continue to ring-fence twenty (20) positions in the structure for implementation of graduate development programmes as mechanisms for addressing the core, critical and scarce skills needed by the organisation.

15.4.4 Assisted Education Programmes

Assisted Education programmes will be improved by better alignment of the skills and competency needs of the Corporate Plan to individual's development plan, as well as, the workplace skills plan.

15.4.5 Process Controller – Blue-drop and Green-drop Certification

Umgeni Water has continued to assess the skills and competency levels of water and wastewater treatment staff against requirements of Regulation 17 of the Water Services Act for Blue Drop and Green Drop certification. The training programme to close the gap is shown in **Table 15.6**.

15.4.6 Contribution to regional skills development – municipalities

Umgeni Water has partnered with National Treasury to develop and train graduate Technicians, Technologist, Engineers and Scientists with specific emphasis on meeting the skills shortage in

the municipalities in KwaZulu-Natal. As part of this programme, a total number of thirty nine(39) engineers are enrolled in the programme. This programme will ensure that graduates will achieve professional registration with certified professional bodies.

To ensure sustainability, the internship programme will be treated as a bursary for which trainees will be contracted to work for the municipalities for a period equal to the number of years they were trained by Umgeni Water.

Table 15.5: Staff Skills Development Plan

Initiatives/Plans	Result Indicator	Baseline	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Develop technical skills for the organisation (Apprenticeship/Learn ership Programmes).	Number of apprentices/learn ers met.	50 training plans met	50 training plans met	50 training plans met	50 training plans met	50 training plans met	50 training plans met
		50 trade tests passed	Year 1 Apprenticeship	Year 2 Apprenticeship	Year 3 Apprenticeship	50 trade tests passed	Year 1 Apprenticeship
Develop technical skills for the organisation (trade tested artisan trainees).	Number of artisan trainees plans met.	Year 1 artisan trainees	Year 2 Artisan trainees	-	-	-	Year 2 Artisan trainees
Develop technical skills for the organisation (process controllers).	Number of process controllers training plans met.	79 training plans met	79 training plans met	79 training plans met	79 training plans met	79 training plans met	79 training plans met
Develop technical skills for the organisation (graduates, interns and In-Service Trainees).	Number of graduates, interns and In-Service Trainees development plans met.	65 development plans met	65 development plans met	65 development plans met	65 development plans met.	65 development plans met.	65 development plans met
Develop technical skills for the organisation (bursars).	Number of bursars' degree requirements met.	10 degree plans met	10 degree plans met	10 degree plans met	10 degree plans met	10 degree plans met	10 degree plans met
Enable training, development and assisted education as informed by Individual Development Plans.	-	40% of training budget allocated to developing core / distinctive competencies.	40% of training budget allocated to developing core / distinctive competencies.	40% of training budget allocated to developing core / distinctive competencies.	40% of training budget allocated to developing core / distinctive competencies	40% of training budget allocated to developing core / distinctive competencies	40% of training budget allocated to developing core / distinctive competencies.
Develop and train water sector professionals for municipalities. (NT – National Treasury)	Numbers of candidate engineers/ professionals developed and certification achieved.	30 developed.	30 developed.	30 developed	30 developed	30 developed	30 developed.
						30 certifications at year end	

- *Process Controllers as per Regulation 17 requirements includes: Superintendents, Senior Process Controllers, Process Controllers and Shift Attendants.*

Table 15.6: Training Plan to improve operations and process control skills for water and wastewater systems (in line with regulation 17 / Blue and Green Drop certification)

Designation	Current Class	Required Class	No. to be trained	Intervention Required		
				Short Term (0-1 year)	Medium Term (1-2 years)	Long Term (2- 5 years)
Superintendent	13 (Class V) 1 (Class VI)	13 (Class V) 1 (Class IV)	14	14-Refresher Course	14-Refresher Course	14-Refresher Course
Assistant Superintendent	1 (Class IV)	1 (Class IV)	1	1-Refresher Course	1-Refresher Course	1-Refresher Course
Process and Quality Technicians	3 (Class V)	2 (Class IV) 1 (Class III)	3	3 Refresher Course	3 Refresher Course	3 Refresher Course
Process Technician	1 (Class IV)	1 (Class IV)	1	1 – Refresher Course	1 – Refresher Course	1 – Refresher Course
Senior Operators	12 (Class V) 1 (Class IV) 1 (Class o)	13 (Class IV) 1 (Class I)	14	12 - Refresher Course 2 - Skills Program	12 - Refresher Course 2 - Skills Program	12 - Refresher Course 2 - Skills Program
Operators	18 (Class V) 16 (Class IV) 15 (Class III) 3 (Class II) 8 (Class I) 6 (Class o) 3 Not Registered	23 (Class III) 7 (Class V) 33 (Class IV) 4 (Class II) 2 (Class I)	69	43 - Refresher Course 7 - Skills Program 6 - Process Training 13 - NQF2 Water & Wastewater Learnership	43 – Refresher Course 7 - Skills Program 5 - Process Training 1 - Nat Cert: Engineering Studies (NTC3) 10 - NQF3 Water & Wastewater Learnership 3 - NQF2 Water&Wastewater Learnership	43 – Refresher Course 7 - Skills Program 3 - Process Training 10 NQF4 Water&Wastewater Learnership 3 - NQF2 Water & Wastewater Learnership 3 – N Dip Chemical Engineering
Process Controllers	4 (Class V) 2 (Class IV) 2 (Class III) 1 (Class o)	1 (Class V) 7 (Class IV) 1 (Class II)	9	6 – Refresher Course 2 - Process Training Course 1 - NQF2 Water & Wastewater Learnership	6 – Refresher Course 2 - Process Training Course 1 – NQF3 Water & Wastewater Learnership	6 - Refresher 2 - Process Training Course 1 – NQF4 Water & Wastewater Learnership
Shift Attendants	6 (Class IV) 1 (Class III) 4 (Class II) 16 (Class o)	1 (Class V) 15 (Class IV) 2 (Class II) 4 (Class I) 1 (Class o)	27	6 – Refresher Course 13 - Skills Program 1 - Process Training Course 5 - NQF2 Water&Wastewater Learnership 2 - No Training Required 1 - Grand Parenting	6 – Refresher Course 13 - Skills Program 1 - Process Training Course 5 - NQF3 Water&Wastewater Learnership 1 - No Training Required 1 - Grand Parenting	6 – Refresher Course 12 - Skills Program 1 - Process Training Course 5 - NQF4 Water&Wastewater Learnership 1 - No Training 1 - Grand Parenting
Total			138			

Table 15.7: Umgeni Water registered engineering professionals with ECSA

Type	No.	Field	No.
Candidate Engineer	15	Chemical Engineering	4
		Civil Engineering	9
		Electrical Engineering	1
		Mechanical Engineering	1
Candidate Technician	8	Chemical Engineering	1
		Civil Engineering	5
		Mechanical Engineering	2
Candidate Technologist	0	Chemical Engineering	0
		Civil Engineering	0
Professional Engineer	26	Civil Engineering	14
		Agricultural Engineering	1
		Chemical Engineering	10
		Mechanical Engineering	1
Professional Technologist	14	Chemical Engineering	6
		Civil Engineering	5
		Electrical Engineering	1
		Mechanical Engineering	2
Professional Technician	4	Civil Engineering	3
		Chemical Engineering	1

Type	No.	Field	No.
Professional Natural Scientist	1	Chemical Engineering	1
Total			68

Table 15.8: Umgeni Water (National Treasury Graduates) candidate engineers, technicians and technologists

Type / Field	No.
Civil Engineering (N. Dip)	4
Civil Engineering (B.Tech)	3
Civil Engineering (B. Sc)	3
Chemical engineering (N.Dip)	0
Chemical Engineering (B. Tech)	7
Chemical Engineering (B. Sc)	3
Electrical Engineering (N. Dip)	4
Electrical Engineering (B.Tech)	4
Electrical Engineering (B. Sc)	3
Mechanical Engineering (N.Dip)	4
Mechanical Engineering (B.Tech)	2
Mechanical Engineering (B.Sc)	2
Total	39

The information on graduates who are being trained by Umgeni Water as part of a National Treasury funded initiative have been submitted to ECSA for registration as candidate engineers, technologists and technicians in indicated fields. On completion of their training and registration with professional bodies the graduates will be deployed to municipalities as part of capacitating municipalities with skills.

15.4.7 Umgeni Water Young Professionals

The Umgeni Water Young Professionals (UWYP) initiative was launched in November 2014 and provides a platform for Umgeni Water's employees below the age of 35 to ensure that Young Professionals are competent in their core skills and are groomed to become future leaders.

The objectives of the UWYP initiative are to:

- Create enabling environment for professional growth through affiliation and registration,
- Encourage active community participation, and
- To create a solid professional and social network amongst the Young Professionals within the organisation.

15.6 HIV/AIDS, Wellness, Health and Safety

Umgeni Water continues to provide health care programmes that include environmental health, occupational health, primary health and general wellness. Occupational health remains vitally important for Umgeni Water to ensure effective water service delivery to its customers. Occupational health is a primary function of medical services delivered at all our operating sites. Qualified Occupational Health Nursing Practitioners and part-time Occupational Health Doctor provide occupational health services, including job-related medical examinations, return to work assessments, base line assessments, on-going monitoring and management of health conditions such as hearing, biological monitoring and lung function testing.

Occupational Health Risk Assessment identifies noise, dust and chemicals as principal risks factors requiring effective interventions. Active steps are being taken to prevent the occurrence of occupational diseases, particularly those resulting from exposure to principal risks. Medical Surveillance Programmes are reviewed on annual basis and continuously being monitored to ensure that employees exposed to high risk activities are not negatively affected by inherent occupational health risks. Medical Surveillance Programmes also provide an opportunity for urgent medical interventions to be taken and reverse the early detection of symptoms of occupational illness.

The organisation also offers employee assistance programme to employees who are experiencing challenges in the workplace due to personal problems which impact on their work performance. The aim of this programme is improve the well-being of employees and enhance their social, spiritual and psychological functioning. It also focuses on promoting a culture of “wellness” and identifies the prevalence of certain health risk factors in the organisation. Proactive services are rendered as short-term intervention processes aimed at assisting employees address work related stress, relationship problems, ill health disability and counselling.

Management of HIV and AIDS

For most people, HIV/AIDS is a frightening disease, but today treatment is available that allows the majority of people living with HIV to lead healthy and productive lives for many years. HIV/AIDS continues to be a major contributor to the burden of disease in South Africa. Umgeni Water has experienced the effects of the HIV/AIDS epidemic in its operations and has implemented interventions to address these challenges. Umgeni Water has also aligned its strategy with that of UNAIDS and Brothers For Life, referred to as the “Know Your Status”. UNAIDS estimates that more than 9.4 million people living with HIV still do not know their status. The AIDS response has made significant progress and today millions of people living with HIV are leading healthy and productive lives. The whole world still have miles to go, as the latest UNAIDS report shows, and one of the challenges remaining is knowledge of HIV status. HIV testing is essential for expanding treatment and achieving the 90-90-90 Targets. It also empowers people to make choices about HIV prevention, so that they can protect themselves and their loved ones.

Umgeni Water will therefore continue to partner with the contracted medical aid fund in its strategy to deliver HIV/AIDS programmes which will include:

Access to Voluntary, Counselling and Testing Programmes known as HIV Counselling and Testing, Access Anti-retroviral Treatment, enabled through the Medical Aid Fund HIV/AIDS Programme known as Aid for Aids, and Strengthening of HIV/AIDS awareness in the organisation.

Employees who are living with HIV are encouraged to register on the programme and are being monitored by Aid for Aids for treatment and other special conditions. The programme offers the following benefits to the employees:-

- Medicine to treat HIV (including drugs to prevent mother-to-child transmission and infection after HIV exposure i.e. sexual assault or needle-stick injury) at the most appropriate time
- Treatment to prevent opportunistic infections like certain serious pneumonia and TB
- Regular monitoring of disease progression and response to therapy
- Regular monitoring tests to pick up possible side-effects of treatment
- Ongoing patient support via a Nurse-Line
- Clinical guidelines and telephonic support for doctors, and
- Help in finding a registered counsellor for emotional support.

Umgeni Water’s HIV/AIDS Management Forum plays a significant role and will further be utilised to encourage employees to participate in the World AIDS day and Wellness Programme events, amongst others. Implementation of HIV/AIDS programmes and wellness programmes will be achieved through collaboration with other organisations and partnerships with Umgeni Water’s medical aid fund and associated institutions.

The current HIV prevalence levels in the general adult population is estimated at 19.8%, compared to 7.6% at Umgeni Water, as derived from the organisation’s medical aid health profileHealth and Safety Plan at Operational Sites

Umgeni water is committed to the safety of its employees, contractors, visitors as well as the health of its employees. The organisation has implemented systems to ensure that health and safety issues are dealt with and managed effectively and timeously. This is achieved through:

- Continuous risk management through participative risk reviews,
- Implementation of safety plans to ensure that existing hazards and risk are continuously monitored and managed,
- Ensuring legal appointments are in place and proper training is afforded for the appointed individuals,
- Sound health programmes to ensure employee job fitness at all times,
- There is a plan in place for a standardised comprehensive induction programme at site level to elevate risks associated with Umgeni Water operations for new and existing employees as well as contractors,
- Continuous improvement initiatives are in place to ensure that OHSAS 18001 certificate is maintained within the operations division,
- Adequately trained emergency teams available at site level to deal with operational emergencies, and
- Planned job observations that enforce compliance to the safe/ standard operating procedures.

15.7 Employee Relations

Constructive employment relations are built on a solid foundation of trust and respect between management and organised labour. The sound employment relations in an organisation is the foundation of a climate of trust, cooperation and stability within an organisation. The organisation has a responsibility to ensure harmonious and productive working environment which enables the organisation to compete effectively in its market place and contributes to a respected reputation.

Umgeni Water has always strived to create an environment in which our employees feel valued and support the organisation's values, strategies and priorities. Effective communication and employee engagement is critical for maintaining open and productive relationships between management and employees. The relationship with trade union in the organisation is managed by human resources department through open communication forums which allow for internal issues to be effectively dealt with. Trade union representatives are included in formal joint management-worker health and safety committees.

Umgeni Water employees enjoys the right to freedom of association and this is entrenched in the company's code of ethics, business principles and policies. There is one trade union formally recognised (National Education Health and Allied Workers Union) which represents fifty-five per cent (55%) of the total workforce.

Umgeni Water continued to maintain a constructive relationship with organised labour and a climate of industrial peace has generally prevailed. The relationship between the organisation and NEHAWU is subject to a collective bargaining agreement. Umgeni Water will continue to negotiate salaries and other substantive employment conditions through negotiated collective agreements at a bargaining council.

Chapter 16: Environmental Management Plan



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16.1 Approach to Environmental Management

Umgeni Water strives for sustainable growth and will ensure continued provision and extension of sustainable water services to all areas. Mindful of the high reliance on natural resources, chemical and energy supply for sustainable business function, the organisation recognises the environmental pillar as one of the priority areas. In such, the organisation is committed in the efficient use, conservation and protection of these resources while undertaking its water business.

Environmental management is implanted throughout the project life-cycle, which includes the planning, construction, operation and decommissioning phases. Environmental management within the organisation can be categorised as:

- Corporate environmental management focusing on aligning the business activities towards environmental sustainability and promoting a shift towards the state of green economy
- Operational environmental management focusing on ensuring compliance of the organisation with applicable governing environmental legislations and regulations and avoiding and or minimising environmental impacts as a result of business activities
- Integrated environmental management focusing on the identification, mitigation and implementation of environmental management plans for the minimisation of potential negative environmental impacts for new infrastructure projects.

Categories that are the main focus under corporate environmental sustainability include:

- Eco-Efficiency
- Waste Management
- Aquatic Compensation / Biodiversity Management

16.2 Eco-Efficiency and Energy Management

Projects falling under the eco-efficiency category include Energy Conservation and Demand Management, Green Buildings and Carbon Footprint.

16.2.1 Energy Conservation and Demand Management

The huge demand for water supply comes with an equally increased cost of energy especially for pumping of water in Umgeni Water's water treatment facilities. In the previous financial years, the energy costs increased significantly by 17% in (2015/2016) and 14% in (2016/2017) respectively, and some of this increase can be attributed to escalating pumping costs that were experienced during the drought. To contribute towards resource sustainability especially in the future, the Energy Conservation and Demand Management Strategy was developed. The aim of this strategy is to provide a guideline document for all future infrastructure projects to improve overall energy usage and manage facility demand.

A baseline energy assessment was conducted by the PSP to understand Umgeni Water's current energy usage on some of the sites. This was undertaken at the Midmar, Durban Heights and the Lower Thukela water works as well as the associated infrastructure such as pipelines, pump stations and reservoirs.

The way forward is to implement the recommendations of the study and also to roll the strategy out by firstly consulting with relevant key internal stakeholders and then working with a team that will ensure that the strategy is implemented. Energy usage will also need to be monitored as part of the Environmental Management Programme to ensure that the findings are built onto the strategy for future reference.

16.2.2 Green Buildings

Green building or green construction refers to a "green" structure where environmentally responsible and resource-efficient processes were used throughout a building's life-cycle. The aim is to create "green"

buildings designed to reduce the overall impact of the built environment on human health and the natural environment.

In an effort to conduct its business in a sustainable manner and safeguard natural resources, Umgeni Water initiated a green buildings project (using the Green Building Council of South Africa (GBCSA) Existing Building Performance tool as a framework). From previous studies it was determined that key focus areas must be identified going forward. Hence energy consumption was chosen as a focus area for this project.

The planned outputs of the study include the monitoring of energy consumption at the four largest energy consuming Bulk Water Treatment Works by installing online meters. The summary of the data accumulated will assist in making recommendations on how energy consumption can be optimised.

16.2.3 Carbon Footprint

The objective of the carbon footprint mapping initiative is to evaluate Umgeni Water's contribution to greenhouse gases as a result of the organisation's activities and then map the corporate carbon footprint. This study will serve as a planning tool for the Umgeni Water Environmental Sustainability Plan as it develops long-term strategies for reducing the institution's environmental impacts and will ensure the organisation is prepared for future national or regional climate change policies such as the carbon tax bill that will take effect in June 2019.

During the 2017-2018 financial year a tool was developed to gather the necessary information which is currently being analysed. Once finalised this information will assist in identifying areas of opportunity for the reduction of emissions and assist with emission offset initiatives.

16.3 Waste Management

This project is aimed at enhancing waste management at Umgeni Water by applying the waste hierarchy. The organisation is looking into two specific projects one aimed at recycling initiatives of different waste streams at operational sites and the second looking into the management and disposal of water treatment residue.

These projects will entail:

- Reclassification of the water treatment residue from Durban Heights, Wiggins and uMzinto Water Works,
- Conducting a study to assess and recommend the beneficial use of the Water Treatment Residues, and
- Rollout of the recycling initiative to the operational sites.

With the implementation of the recycling campaign, there will be a reduction of waste sent to landfill thereby aligning with the waste hierarchy and realising costs savings from waste disposal charges. Completion of the water treatment residue study will guide the organisation on economically and environmental sustainable measures of managing this type of waste.

16.4 Biodiversity Management

A biodiversity management strategy has been developed which provides a framework for assessing the biodiversity status of the operational areas to highlight areas of high conservation status and to minimise negative impacts on biodiversity from construction of new infrastructure projects. An internal project has been undertaken to assess and highlight areas of high conservation priority within the business area of operation.

Initiatives include:

- Biodiversity management implemented by Msinsi Holdings (detailed in section below),
- Biodiversity Impact Assessments as a component of EIAs for new infrastructure projects,

- Alien and aquatic vegetation control,
- Management and rescue for listed tree removals during construction of new infrastructure, and
- Bio-monitoring of river systems.

16.5 Msinsi Holdings Land and Sustainable Resource management

Msinsi Holdings SOC Ltd, a wholly-owned subsidiary of Umgeni Water is mandated to manage the land and biodiversity of the areas around the dams owned or managed by Umgeni Water in a manner that balances the divergent factors of local community development, provision of recreational facilities for the public and water resources/biodiversity protection.

These reserves are located at Spring Grove Dam, Albert Falls Dam, Nagle Dam, Inanda Dam, Hazelmere Dam, and Shongweni Dam. Detailed management plans for each of the reserves, in line with industry best practice, have been completed and form the basis for all operations in the reserves.

The resource management plans focus on:

- The management of the game and species according to the carrying capacity of each reserve,
- Local community development,
- Recreation for the public,
- Grassland management, and
- Control of pollution inside the purchase areas.

16.6 Removal of alien invasive plants, both terrestrial and aquatic. Chemicals Usage and Efficiency

Umgeni Water monitors chemical usage at all its sites. Initiatives to ensure and improve chemical usage efficiency and effectiveness include:

- Water treatment process evaluation audits, which identify areas to improve process and operational efficiency,
- Monitoring and reviewing seasonal variation of the water column/ dam levels, to optimise raw water quality.
- Participating in catchment management activities and forums, and contributing to the information base, including water quality. This helps shape and influence decisions for sustainable catchment land use activities and development, and
- Monthly chemical optimisation audits to ensure that optimal use of treatment chemicals is maintained and to facilitate a prompt response should a problem be identified through the monthly sampling.

16.7 Innovation, Research and Development

The thrust of Umgeni Water's Innovation, Research and Development Programme is to nurture and encourage research within the organisation to gain knowledge about new technology and processes that can be implemented to improve efficiencies and increase effectiveness by reducing chemical and operating costs as well as lowering energy consumption. The entity has identified focus areas and strategies for research and innovation during this five-year corporate plan period.

16.8 Operational Sites Environmental Management and Compliance

The organisation will continue with the implementation of environmental management at all operational sites and implement recommendations from the previous periods environmental audits which:

- Assess whether the site is complying with all relevant environmental legislation,
- Assess internal policy and procedural compliance,
- Assess the status of energy, waste, biodiversity and resource consumption management at the sites, and

- Recommend management measures for implementation.

16.9 Infrastructure Project Environmental Impact Assessments and Management

The organisation continues to apply Integrated Environmental Management (IEM) principles to the life cycle of its infrastructure projects, including, conducting Environmental Impact Assessments for proposed projects and developing Environmental Management Plans.

Initiatives are aligned to the entities capital infrastructure development programme.

For construction projects not triggering listed activities under the NEMA regulations, an EMP for the project is developed to identify and mitigate any environmental impacts in alignment with Umgeni Water's environmental management system.

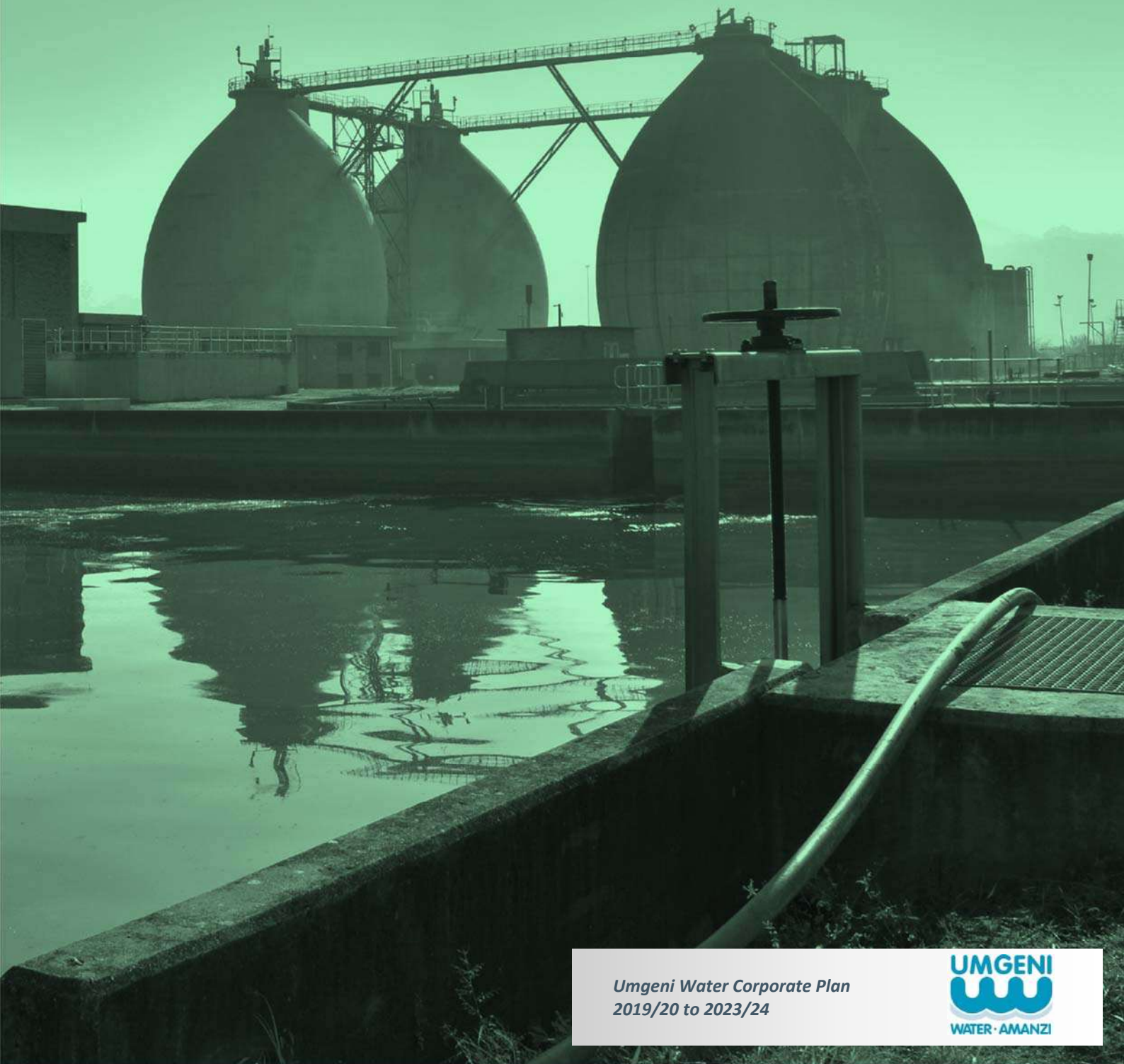
For operation sites, to date, environmental performance has been satisfactory with minor challenges in the prevention of hydrocarbon and cement spillages, waste management and management of alien plants invasion. The organisation will continue to strive for good environmental practice and management of these challenges.

Community Liaison

As part of Institutional Support for Social Development, Umgeni Water has recognised the role of communities in the planning and implementation of water and sanitation projects and has institutional support programmes which support Umgeni Water's objectives in providing sustainable water solutions to District Municipalities.

Programmes include mobilising communities for support in the implementation of Umgeni Water's pipeline projects, formalising liaison between various leadership structures including traditional and local leadership in negotiating for access to land and cooperative governance during project implementation.

Chapter 17: Catchment / Ecological Infrastructure Management



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17.1. Ecological Infrastructure Management Approach

Ecological infrastructure is the nature-based equivalent of built or hard infrastructure. It refers to ecosystems that function naturally to deliver invaluable services to us including water, soil, climate regulation and disaster risk reduction. Ecological infrastructure includes **catchments, rivers, wetlands**, inland and coastal areas, nodes and corridors of natural habitats, which together form a **network of interconnected natural structural elements in the landscape**.

South Africa faces the challenge of deteriorating ecological infrastructure due to pollution, degradation, destruction and depletion. Furthermore, South Africa is a water-stressed country. We face climate uncertainty with cycles of drought and unexpected excessive rains. Ecological infrastructure is as important for providing services that underpin socio-economic development that supplements and at times substitutes built infrastructure solutions. Well managed ecological infrastructure buffers human settlements and built infrastructure against extreme events of floods and droughts, playing a cost-effective role in disaster risk reduction.

Management and protection of ecological infrastructure assures our water resources stock and is therefore as fundamental to Umgeni Water's business as built infrastructure development. Umgeni Water has therefore, in undertaking its water business, re-ignited its commitment to the sustainable use, conservation and protection of ecological infrastructure that underpins its water resources stock.

Umgeni Water initiatives and investment in ecological infrastructure will be aligned to national government priorities and National Development Plan objectives. This will also include the key principles that guide investment in ecological infrastructure as recommended by SANBI (South African National Biodiversity Institute).

17.2. Key Initiatives

During the course of this corporate plan period, Umgeni Water will, together with its key stakeholders and partners, identify the priority initiatives that it will support and invest in, including initiatives that relate to:

- Restoring and maintaining ecological infrastructure
- Catchment management
- Water resources management
- Flood and drought risk mitigation
- Alien invasive plants eradication
- Wetland development / rehabilitation
- Msinsi Holdings: Biodiversity management and water resources management
- Science, technology and innovation: cross-cutting initiatives in relation to ecological infrastructure

Chapter 18: Research and Innovation



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18.1. Research and Innovation

Locally, nationally and globally we are increasingly faced with consequences of pollution of water resources and land areas, unsustainable levels of waste, high levels of air pollution, climate change, loss of biodiversity and more. The 4th Industrial Revolution presents opportunities to help address these water and environmental issues, amongst others, and transform how we manage our shared and finite resources. Harnessing the opportunities, whilst managing the risks could enable the creation of a sustainable future.

The 4th Industrial Revolution is characterised by technology becoming increasingly connected and a convergence of the digital, physical and biological spheres. Emerging technologies have the potential to change the face of the water and sanitation business. Over the course of this corporate plan period, Umgeni Water will collaboratively identify opportunities to research, plan and invest in these, whilst developing and implementing strategies to mitigate potential risks.

18.2. Key thematic areas

- Obtaining a complete, current and accessible picture of water supply and demand
- 21st century water infrastructure systems and management
- Providing access to and ensuring the quality of water and sanitation services
- Managing growing demand,
- Diversified sources of supply
- Ensuring water quality
- Building resilience to climate change
- Leveraging real-time water data to empower users (decision-makers, end-users, communities)
- Cybersecurity and mitigation of other technology risks (including the future of work)

Chapter 19: Water Education and Awareness



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19.1 Background

Umgeni Water continues to strive for society to be aware of societal pressure on a water scarce non-renewable resource. UW will develop and implement an integrated water education and/or awareness programme that take cognisance of the following:

- Water scarcity, climate change and environmental degradation are intertwined challenges exacerbated by anthropological activities
- Water is a scarce resource as approximately 97% of all water on earth is salt water, and of the remainder about 70% is locked in ice leaving humans with about 1% of freshwater available.
- Considerable resources are required to access, store, treat and distribute water to consumers.
- Major sources of both water and environmental pollution are humans, industry and agricultural activities.
- Although water is a public good, society needs to be aware of their contribution to the opportunity costs associated with water use

Thus Umgeni Water's integrated water and environmental education programme for the 2018'19 to 2022'2023 Corporate Plan puts a concentrated focus on influencing behavioural change by facilitating and promoting awareness; knowledge transfer and stewardship of water and environmental ecosystems. This behavioural change will be achieved by fostering and maintaining relationships by recognising the value in ensuring that Umgeni Water's stakeholders have relevant information and also actively participate in water and environmental issues. Our programme is geared to both our internal stakeholders and external stakeholders such as customers; communities; industry as well as the general public. Our commitment as an organisation is to implement appropriate strategies that are aimed at building better understanding about water and environmental issues.

The integrated water and environmental education programme employs a variety of methods where the pervasive themes that include water conservation and demand management; freshwater ecosystems; integrated catchment management as well as the entire water and sanitation value chain.

The entity's programmes target rural and urban-based schools and communities, with a wide range of learners. Water education and awareness content and themes are reviewed each year to assess suitability to address current issues facing the region.

Umgeni Water will continue to identify suitable educational materials and mechanisms to facilitate communication of key messages. Information to improve effectiveness and alignment of programmes will be gathered from the learners and stakeholder interest groups. Umgeni Water has formed several partnerships in this regard.

19.2 Water Education Classrooms

Umgeni Water has three accessible water education classroom facilities at its largest water and wastewater treatment works, namely at Durban Heights WTW, Darvill WWTW and Midmar WTW. Through this programme, learning opportunities are created for visitors to investigate the water purification process and environmental issues impacting these processes. Water classroom presentations are subsequently followed by tours of the water works where learners get to see the practicality of the treatment processes.

19.3 Schools and Community Outreach

Umgeni Water employs national and global themed or special days to boost outreach objectives. The annual cycle of themed events targeted include:

- Wetlands (February)
- National Water Week (March)
- Earth Day (April)
- International Day for Biodiversity (May)
- National Environment Week (June)
- National Harbour Week (September)

- Weed buster week (October)
- World Water Monitoring Day (October)
- National Marine week (November)

Events in rural communities and urban centres will be undertaken in collaboration with relevant authorities and stakeholders.

Plans and programmes include a combination of road shows in targeted regions, development and distribution of relevant materials, school's competitions, clean-up campaigns and assembly talks.

Umgeni Water will continue to use an approach to environmental education that uses participatory methodologies and draws on indigenous knowledge. Types of technology that will prove beneficial to providing more access to information will be explored in line with the growing trend of digital technology. Online materials and audio visual content will be reviewed, researched and developed to facilitate this.

19.4 Integrated water and environmental education plan / scorecard for 2019/2020 to 2023/2024

Programme	Goal	Objective	Details	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Water Education Classrooms	Schools and community environmental education	Encourage environmentally responsible citizens through water and environmental education programmes	90 water classroom lessons in total are planned for each year.	Deliver 90 classrooms	90 classrooms undertaken	90 classrooms undertaken	90 classrooms undertaken	90 classrooms undertaken
Schools and Community Outreach	Adopt-a-school	Encourage environmentally responsible citizens through water and environmental education programmes	For the adopted schools the School Environmental Plans will be developed and implemented. Programmes include Environmental Ambassadors programmes	20 new schools adopted and programmes implemented	Programme implemented for 20 schools adopted	Programme implemented for 20 schools adopted	20 new schools adopted and programmes	Programme implemented for 20 schools adopted in 2018
	Community Outreach		Planning and launching selected environmental themed or special days' events to boost outreach objectives. Events in rural communities and urban centres will be undertaken in collaboration with relevant authorities and stakeholders.	Environmental Education programmes implemented at 6 water service authorities	Environmental Education programmes implemented at 6 water service authorities.	Environmental Education programmes implemented at 6 water service authorities	Environmental Education programmes implemented at 6 water service authorities	Environmental Education programmes implemented at 6 water service authorities.

Chapter 20: Water Conservation and Demand Management



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20.1 Background

Umgeni Water is mindful that water demand management relieves the stress already imposed on many water resource and supply systems. Whilst not only assisting Water Services Authorities in reducing their non-revenue water, water demand management can also influence Umgeni Water's capital expenditure programme, enabling some of the augmentation projects to be deferred to later dates.

20.2 Umgeni Water Bulk System Water Loss Management

Umgeni Water experiences very low water loss from its bulk infrastructure operations (average is below 5%) and the entity is committed to reducing / maintaining its average water loss below this level through continuing to implement asset management plans and ensuring targeted investment in maintenance throughout the bulk network.

20.3 Darvill Wastewater Reuse Project

A 2 Ml/day Water Recovery Plant has been constructed at Darvill WWTW. Approximately half the water produced (1 Ml/day) is intended for process water (wash water) for the Darvill WWTW. The plant is a demonstration facility for research and educational purposes. Water recovery will be promoted as an important and safe water resource to augment existing supplies. The project plan includes installation of advanced treatment technologies and the facility will provide valuable opportunity to gain experience into the operation of a Water Recovery Plant.

A major objective of the facility is to build public confidence in direct potable reuse. The design of the plant includes a classroom, viewing window and special gantries for accessing individual treatment processes on the plant, making it suitable for school children and visitors. Stakeholders and the broader community will be invited to tour the facility and drink the water produced.

20.4 Non-Revenue Water in municipality / customer systems

Umgeni Water, in response to a mandate provided by the Minister of Water and Sanitation, have taken a decision to provide assistance to all WSA's in the Province through the Regional Office of DWS and to ensure that sustainable improvements are made in the Province, particularly in light of the impact of the previous drought.

WSA's are at various stages, regarding implementation of water conservation and demand management measures, within their respective districts. Notwithstanding the efforts to date, the estimated non-revenue water / water loss in the region remains very high (**Figure 18.1 and 18.2**).

Umgeni Water established a water demand management unit (WDM) in 2016 to provide support to water services authorities in curbing water losses in distribution networks. This unit provides measurements and analytical support with technical recommendations where necessary. Various initiatives are already afoot in water services authorities.

The role of the WDM unit is to provide technical assistance to all Water Service Authorities in the Province of KwaZulu-Natal in order for them to comply with DWS regulatory requirements of providing water balance and water savings reports to the DWA Regional and National offices. In support of this, the DWS KZN Regional Office initiated a KZN WC/WDM Forum through which all WSA's in the Province could engage, prepare and develop strategies for reporting on and quantifying the potential benefit of WC/WDM interventions on water availability.

Five potential areas of framework support were identified where Umgeni Water is currently providing assistance such as:

- Strategic – preparation/updating of WC/WDM master plans

- Tactical – provision of specialist technical assistance and engineering advice for WC/WDM or NRW reduction implementation
- Operational – implementation, operations and maintenance support
- Regulatory – provision of assistance and support for No Drop assessments, monthly reporting to DWS and training to WSA's to ensure sustainability
- Financial – not direct funding support, but assistance in preparation of business plans, funding applications, AFA's, etc.

Table 18.1: Planned Water Conservation and Demand Management initiatives for 2018/2019

Water Demand Management Initiative	Elements / Outcomes
Review and refine Water Conservation/ Water Demand Management (WC/WDM) Master Plans for 14 Water Services Authorities in KZN by June 2019	<ul style="list-style-type: none"> • Current, valid and approved WC/WDM Master Plans for 14 KZN WSAs • State of the Province Report on WC/WDM drafted (to be based on the 2017/18 information and comparing it 2016/2017) • Technical support provided to all KZN WSA's for implementation of WC/WDM projects
Develop WC/WDM funding application tool for 14 Water Services Authorities in KZN by June 2019	<ul style="list-style-type: none"> • WC/WDM funding application assessment tool developed for KZN WSAs to ensure "value for money" in implementation of new WC/WDM projects
Provide training and mentorship to KZN WSAs in Water Loss monitoring and reporting (as per IWA Standard at 95% confidence levels) by June 2019	<ul style="list-style-type: none"> • Customized WC/WDM Handbook for KZN WSA's developed • Regular water balance reports produced by WSAs (at WSA, town and water supply system level). • Improved monitoring and reporting on WC/WDM activities and quantification of water demand reduction across all KZN WSA's

20.5 The eThekweni Metropolitan Municipality Non-Revenue Water Reduction Initiative

The eThekweni Water and Sanitation Unit has embarked on a range of water demand management initiatives in the past 10 years that have yielded insignificant reduction of the Non-Revenue Water. The initiatives were technically appropriate in general terms but insufficient and/or not structured for the specific situation of the eThekweni water supply system, management approach, consumer profile and behaviour. The prioritization, timing and alignment of the interventions did not create adequate critical mass for sustainable reductions in non-revenue water.

Water Conservation and Water Demand Management Plan for eThekweni Municipality is necessary as at 30 June 2016, the eThekweni's Non Revenue Water (NRW) was recorded as 40.7. This is comprised of real water losses, commercial losses and unbilled authorized consumption. The main objective of their 2017 WATER CONSERVATION & WATER DEMAND MANAGEMENT STRATEGY & BUSINESS PLAN is to reduce NRW to <20% by 2025/26.

Figure 18.1: Status of non-revenue water (Million m³/ annum) for KZN Water Service Authorities

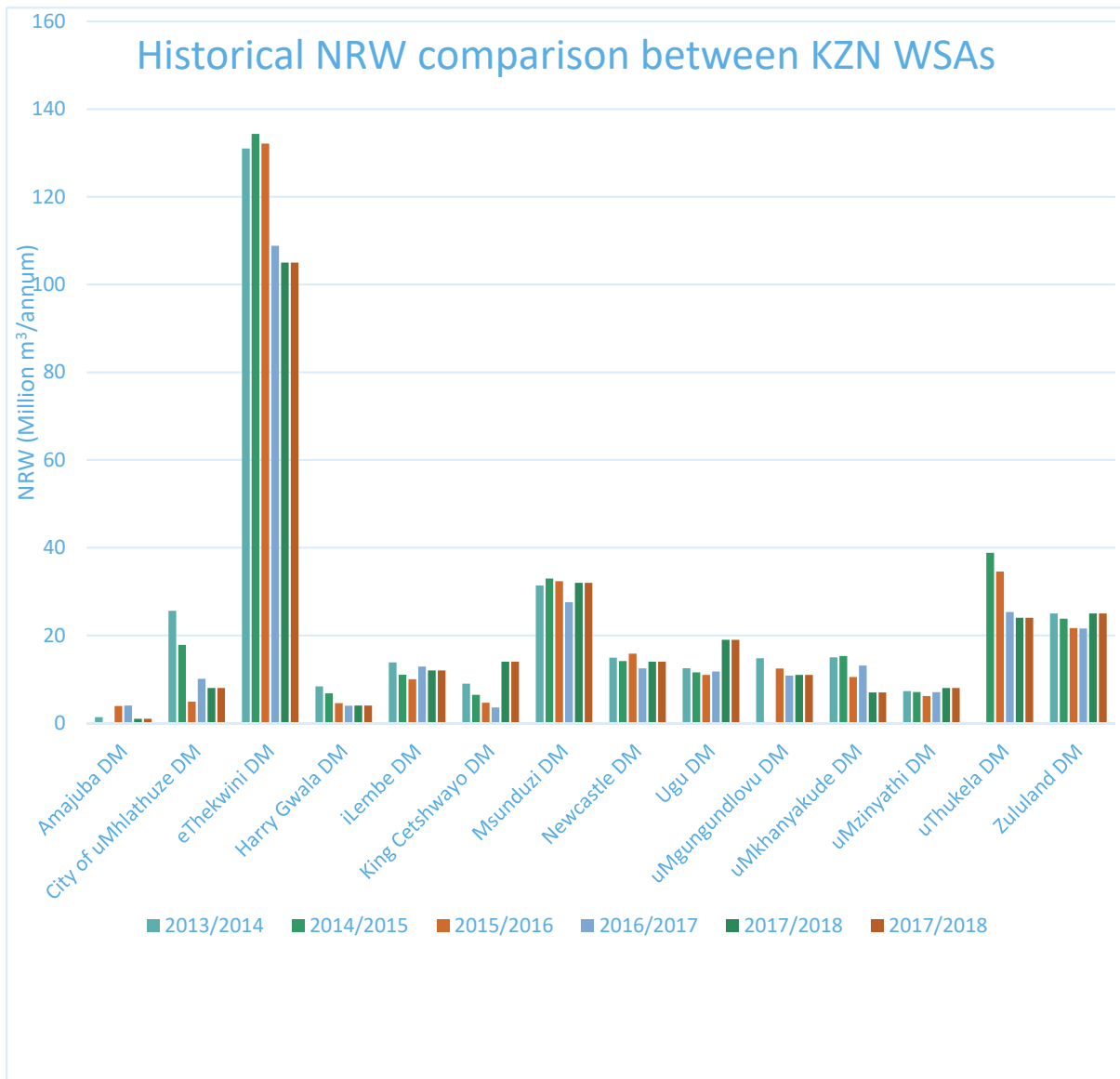
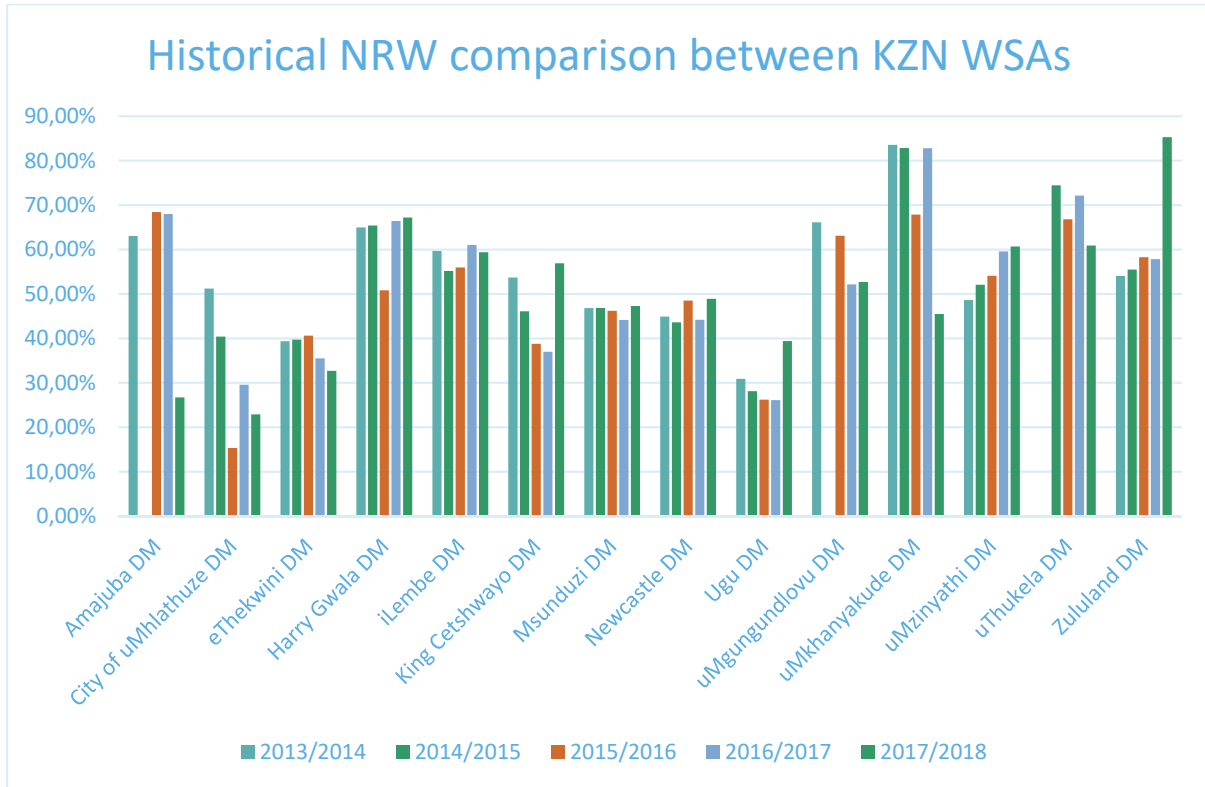


Figure 18.2: Status of non-revenue water (%) for KZN Water Service Authorities



20.6 NRW Benchmarking Partnership with SALGA

Umgeni Water has in place a Benchmarking initiative shared with all Water Boards as well as SALGA. The purpose is to share and exchange water related benchmarking information. This includes non-revenue water data and information. There is joint commitment to initiatives that focus on and reduce non-revenue water in the value chain.

20.7 Water Loss / Water Conservation Education and Awareness

Umgeni Water will continue with its education and awareness programmes, focusing on water loss and water conservation, through the environmental education unit targeting schools and communities.

Chapter 21: Financial Plan



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21.1 Introduction

The five-year financial plan (2019/20 to 2023/24) is pursuant to maintaining sustainable increases in operating cashflow and a strong financial position. With a long term credit rating of AA+ (FitchRatings) and zaAAA (S&P rating), together with a healthy cashflow generating profile, this will enable Umgeni Water to raise debt to support the capital expenditure plan over the period 2019/20 to 2023/24 and beyond. One of the key events included in the financial plan is the anticipated growth in terms of extending Umgeni Water's footprint into the existing area of operation - in the UGU DM and the Harry Gwala DM areas. Both District Municipalities are existing customers of Umgeni Water and have expressed a willingness to partnering with Umgeni Water in terms of taking over the operations of the bulk water services plants.

In terms of the projected financial performance, the net profit in 2018/19 is anticipated to be 22% lower than 2017/18 but in 2019/20 net profit is projected to increase by 25% year on year. From 2020/21 onwards net profit will increase at an average of 13% per annum. These trends are discussed in more detail in "Self-evaluation statement on financial viability".

The bulk water tariff increase for Umgeni Water is approved at 9.6%. Going forward the tariff increases required to support Umgeni Water's operations is at least CPI+4%. Refer to Financial Plan (assumptions and 5 year projected financial statements) for the financial planning assumptions underlying the financial plan 2019/20 to 2023/24. The main cost drivers (Chemicals, Depreciation; Energy; Maintenance; Payroll and Raw Water) in 2018/19 and 2019/20 is projected to be at least 70% and 74% respectively of total operating costs with the remaining costs being "other operating costs". The trend from 2020/21 onward is that the main cost drivers will form at least 72% of total operating cost based on the assumption that only price will be a factor for increase in cost. The Main cost drivers are mainly fixed in nature. Net finance costs are anticipated to be negative (net finance income) in 2018/19 through to 2021/22 although at a decreasing trend due to the utilisation of investments set aside for capital expenditure. In 2022/23, Umgeni Water will be in a net finance cost position due to the funding requirements starting from that year.

In terms of the operating cashflows, in 2018/19 and 2019/20, operating cashflows are anticipated to be R1227m and R1490m respectively and is projected to grow at an average of 16% per annum to R2712m in 2023/24. The achievement of these growth levels in operating cashflows will delay the borrowing requirement to 2022/23 hence it is vital that Umgeni Water monitor all business decisions against the impact of those decisions on operating cashflow levels and ensure that unplanned expenditure does not result in an erosion of operating cashflows. Refer to "Self-evaluation statement on financial viability" for the operating cashflow trend as well as the sensitivity analysis of possible risk scenarios on the borrowing levels of Umgeni Water (as any decrease in operating cashflow will result in an increase in debt – all things being equal) and debt covenants.

The gross borrowing levels is not anticipated to breach the borrowing limits of R2bn to R2.2bn for the period 2019/20 to 2023/24. The borrowing limits are still subject to approval by National Treasury and will be in place before the start of the 2019/20 financial year. No new borrowings are anticipated until 2021/22 when borrowings will be secured to ensure that the funding requirements starting in 2022/23 are adequately met. Refer to "Debt Management and funding Requirements" for the funding strategy to meet the short (2018/19 and 2019/20), medium (2020/21 to 2022/23) and long term funding requirements (2023/24 onward).

A major driver of the funding requirements is the capital expenditure requirements for the period 2019/20 to 2023/24. Umgeni Water has a planned total investment of R10 568m over the period 2018/19 to 2023/24. Refer to Financial Plan (Assumptions and 5 year projected financial statements) for the detailed Capital expenditure plan underlying the 2019/20 – 2023/24 Corporate Plan. Of this amount R3277m or 31% of total planned capital expenditure is allocated toward developmental projects such as the Greater Mpofana

project, the Impendle Bulk Water Supply scheme and Mhlabatshane Phase 2. There will also be continued investment in the Umshwathi and Maphumulo areas in terms of the succeeding phases to the project. The investment in Augmentation projects over the period to 2023/24 will be R 3554m or 34% of the total planned investment for the period 2018/19 to 2023/24. The main projects in the Augmentation category is the uMkhomazi Water project and the Lower Mkomazi project which total R3420m over the period 2019 to 2024. These projects are key to providing the required water assurance requirements for Umgeni Water's area of operation.

21.2 Financial planning assumptions

21.2.1 Macroeconomic Factors

Table 20.1: Macroeconomic assumptions

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
Inflation										
As measured by CPI per the BER	6.33%	5.28%	4.90%	5.10%	5.02%	5.44%	5.10%	5.10%	5.10%	5.10%
PPI										
Per the BER	7.08%	4.88%	4.90%	4.80%	5.02%	5.24%	4.90%	4.90%	4.50%	4.50%
% Adjustment		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Revised calendar average	7.08%	6.38%	6.40%	6.30%	6.52%	6.74%	6.40%	6.40%	6.00%	6.00%
Interest Rate - Borrowings										
Short-term		6.83%	6.77%	6.87%	7.12%	7.12%	7.14%	7.22%	7.34%	7.47%
Spread		1.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
All in rate		8.33%	9.27%	9.37%	9.62%	9.62%	9.64%	9.72%	9.84%	9.97%
Long-term		9.19%	8.23%	8.40%	9.15%	8.78%	8.93%	8.86%	8.85%	8.85%
Spread		2.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
All in rate		11.19%	10.73%	10.90%	11.65%	11.28%	11.43%	11.36%	11.35%	11.35%
Interest Rate - Investments	7.98%	8.112%	7.881%	7.83%	8.12%	8.12%	8.14%	8.22%	8.34%	8.47%
Weighted average cost of capital	10.53%	10.59%	10.61%	10.66%	10.64%	10.71%	10.86%	10.92%	10.99%	11.06%
Exchange rates										
R/\$	14.714	13.313	13.003	12.150	14.328	14.430	14.440	14.520	14.740	14.740
R/euro	16.282	15.041	15.415	14.820	16.603	17.316	17.620	18.000	18.280	18.280
R/pound sterling	19.998	17.152	17.583	16.098	18.806	19.192	19.060	19.490	19.900	19.900

Reference was made to the following publications in order to arrive at the macro-economic factors for 2016 to 2024:

- Bureau for Economic Research (BER) Inflation forecast - June 2017 and Jan 2018
- BER interest Forecast – June 2018
- BER Exchange Rate forecast – June 2018

*Interest rate borrowings:

- The short term (3 month) rates are based on the average of the local money market average obtained from the mid-rate between the 3 m Banker's Acceptance (BA) from forward Rate Agreement (FRA) bid, and 3m BA from FRA (offer), converted to NACM and the swap rates per Inet Bridge.
- The long term (10 year) rate was based on the forecast per the BER.

21.2.2 Staff Costs

Table 20.2: Workforce: Umgeni Water

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
Approved establishment Umgeni Water	990	1,034	1,114	1,168	1,349	1,349	1,349	1,349	1,349	1,349
Approved establishment Msinsi	116	116	117	117	117	117	117	117	117	117

Table 20.3: Staff Costs (R'000)

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
Annual Salary Increase	8.0%	9.0%	8.0%	8.0%	8.0%	6.7%	7.0%	6.6%	6.9%	6.9%
Per the Income statement:										
- Direct staff costs	183,312	205,421	220,675	261,286	261,658	335,453	358,935	382,625	409,026	437,249
- Indirect staff costs	258,531	320,766	337,128	305,686	398,724	414,600	388,145	413,763	442,312	472,832
Maintenance Payroll	90,518	99,383	107,131	120,900	184,488	177,918	190,372	202,936	216,939	231,908
Subtotal	533,613	625,569	664,934	687,872	777,894	876,123	937,452	999,324	1,068,277	1,141,988
- % Increase before recoveries	10.1	17.2	6.3	22.1	17.0	12.6	7.0	6.6	6.9	6.9
- Less WIP Recoveries	(31,054)	(28,506)	(24,953)	(19,920)	(25,509)	(26,182)	(28,015)	(29,864)	(31,925)	(34,127)
Total staff costs (inc State)	502,559	597,064	639,982	667,952	752,385	849,941	909,437	969,460	1,036,353	1,107,861
- % Increase after recoveries	8.4	18.8	7.2	23.2	17.6	13.0	7.0	6.6	6.9	6.9
- Average pay (based on complement)	509	546	609	611	604	732	783	835	892	954
- % Increase	5.4	7.2	11.7	18.3	(0.8)	21.1	7.0	6.6	6.9	6.9
Productivity - K'000 per employee	415.8	357.7	379.5	394.5	403.2	445.3	459.4	467.0	474.0	481.1

21.2.3 Operating costs assumptions

Table 20.4: Major operating costs

(i) Energy cost (R'000)

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
- Forecast Price increase	12.7%	9.4%	9.5%	7.2%	7.2%	11.4%	8.1%	5.2%	12.5%	12.5%
- Usage	20.2%	17.7%	3.9%	3.9%	7.9%	30.3%	0.5%	0.5%		
- total price and impact of new schemes	32.9%	27.1%	13.4%	7.9%	15.2%	41.7%	8.6%	5.7%	12.5%	12.5%
- Cost	205,401	233,159	264,289	314,919	304,408	431,248	468,335	495,030	556,909	626,523
<i>Direct</i>	199,086	226,894	257,361	307,248	297,079	422,373	458,697	484,843	545,448	613,629
<i>Indirect</i>	6,315	6,265	6,928	7,671	7,329	8,875	9,638	10,188	11,461	12,894
- Increase in cost (%)	17.1	13.5	13.4	11.2	15.2	41.7	8.6	5.7	12.5	12.5
- Cost per kilolitre	47.1	56.9	60.8	69.7	65.9	84.6	89.0	92.6	102.6	113.7
- Allocated to 530 O&M dams	-	-	-	-	-	-	-	-	-	-
- Increase in cost (%)										
TOTAL ENERGY COSTS	205,401	233,159	264,289	314,919	304,408	431,248	468,335	495,030	556,909	626,523

(ii) Chemical costs (R'000)

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
Forecast Price increase	10.5%	10.5%	8.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
- Usage	-4.4%	10.3%	-3.3%	30.3%	12.4%	40.8%	0.0%	0.0%	0.0%	0.0%
- Cost	51,742	62,516	65,453	108,552	80,138	120,886	132,974	146,271	160,899	176,989
Increase in cost (%)	6.1	20.8	4.7	40.3	22.4	50.8	10.0	10.0	10.0	10.0
- Cost per kilolitre	11.9	15.3	15.1	24.0	17.4	23.7	25.3	27.4	29.6	32.1

(iii) Maintenance Costs (R'000)

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
Forecast Price increase	7.3%	6.4%	6.4%	6.3%	6.5%	6.7%	6.4%	6.4%	6.0%	6.0%
Total Cost	168,825	190,043	212,694	276,774	250,674	355,631	378,392	402,609	426,765	452,371
Direct	154,765	174,586	192,480	256,469	231,306	331,208	352,405	374,959	397,456	421,304
Indirect	14,060	15,457	20,215	20,305	19,368	24,424	25,987	27,650	29,309	31,068
- Maintenance payroll	90,518	99,383	107,131	120,900	184,488	177,918	190,372	202,936	216,939	231,908
- Total excl Maint payroll	78,307	90,660	105,563	155,874	66,186	177,714	188,020	199,673	209,826	220,464
- Increase in cost	(10.2)	12.6	11.9	29.9	17.9	41.9	6.4	6.4	6.0	6.0
- (excl Maint payroll)	(27.4)	15.8	16.4	37.7	(37.3)	168.5	5.8	6.2	5.1	5.1
- % of PPE	3.3	2.9	2.9	3.6	3.1	3.7	3.5	3.2	2.9	2.7

21.2.4 Raw water costs

Table 20.5: Raw water cost assumptions (R'000)

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
Raw Water Abstraction Volumes										
Volume Mgeni System	421	384	367	371	423	434	448	455	462	469
Volume Mdloti System	11	17	18	19	20	20	20	21	21	21
Volume Lower Thukela System	2	6	3	4	9	9	9	9	10	10
Volume uThukela System				35	5	16	17	17	17	18
Volume Other	21	26	23	22	22	77	77	77	77	77
Total Abstraction Volume	454	433	411	451	479	557	572	580	587	595
Raw Water Consumption Charge per System including functional support										
Mgeni System										
Tariff existing infrastructure	33.39	38.01	41.00	46.70	42.19	44.21	48.64	53.50	58.85	64.73
Increase	13.6	13.8	7.9	13.9	2.9	4.8	10.0	10.0	10.0	10.0
Mdloti system										
Tariff existing infrastructure	117.85	129.24	137.77	158.50	154.02	165.20	181.72	199.89	219.88	241.87
Increase	12.2	9.7	6.6	15.0	11.8	7.3	10.0	10.0	10.0	10.0
Lower Thukela System										
Tariff existing infrastructure			52.53	59.82	60.17	68.10	74.92	82.41	90.65	99.71
Increase				13.9	14.5	13.2	10.0	10.0	10.0	10.0
uThukela System										
Tariff existing infrastructure				40.71	42.18	47.73	52.51	57.76	63.53	69.89
Increase						13.2	10.0	10.0	10.0	10.0
Consumption charge - New Capex										
Cost Raising Hazelmere Dam Wall (R'000)		-		2,204	2,204	2,204	2,204	2,204	2,204	2,204
Increase						(0.0)	0.0	(0.0)	0.0	(0.0)
Springrove dam	45.80	48.40	51.84	55.15	55.10	149.80	189.30	232.50		
Increase	7.5	5.7	7.1	6.4	6.3	171.9	26.4	22.8	(100.0)	-
Water Resource Management (WRM) Charge (based on registered volume)										
Tariff - existing	1.75	1.99	2.45	3.19	2.65	3.01	3.46	3.98	4.58	5.26
Increase	(30.8)	14.0	23.0	30.5	8.1	13.8	15.0	15.0	15.0	15.0
Total Raw Water Costs										
- Abstraction	156,234	170,607	184,184	229,944	216,833	238,328	270,293	302,216	337,424	376,734
- Abstraction - New Infrastructure	-	-	-	2,204	2,204	2,204	2,204	2,204	2,204	2,204
- Water Resource Mgmt charge	8,343	9,514	11,619	16,462	15,180	18,928	21,767	25,032	28,787	33,105
Total Raw Water Costs	164,578	180,122	195,803	248,611	234,218	259,460	294,264	329,453	368,416	412,044
Increase in cost	(1.6)	9.4	8.7	27.0	19.6	10.8	13.4	12.0	11.8	11.8
Effective unit cost	36.29	41.59	47.66	55.12	48.85	46.61	51.48	56.83	62.74	69.26
Increase in unit cost	5.2	14.6	14.6	15.6	2.5	(4.6)	10.5	10.4	10.4	10.4

The capital unit charge (C.U.C.) is an agency cost, rather than a direct cost of operation. As a result, both the revenue and cost associated with the C.U.C. will not be reflected in the Income Statement.

* From 2016 onward, Umgeni Water has agreed with DWS that the costs borne by Umgeni Water for the O&M of DWS owned dams will not be recovered from DWS. In turn, DWS will not charge Umgeni Water as part of its raw water charge that amount which is required to recover the O&M of DWS owned dams carried out by Umgeni Water.

21.3 Sales volumes

Table 20.6: Sales volumes projections (kl'ooo)

	ACTUAL			BUDGET	FORECAST					
	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
- Bulk Potable	435,726	409,887	434,568	451,729	461,700	509,862	526,026	534,689	542,709	550,850
- eThekweni Munic	320,151	299,045	314,523	315,580	328,461	338,020	339,931	341,629	346,754	351,955
- Siza	3,338	3,360	3,458	3,493	3,587	3,712	3,830	3,945	4,005	4,065
- uthukela DM				16,425	5,292	15,756	25,609	27,960	28,379	28,805
- other WSA's	112,236	107,483	116,587	116,231	124,360	152,373	156,655	161,154	163,571	166,025
- Increase	(2.4)	(5.9)	6.0	7.0	6.2	10.4	3.2	1.6	1.5	1.5
- Raw water	630	619	419	744	496	568	568	568	568	568
- Increase	9.8	(1.7)	(32.4)	42.7	18.4	14.6	-	-	-	-

Figure 20.1: Bulk water sales volumes (kl'm)

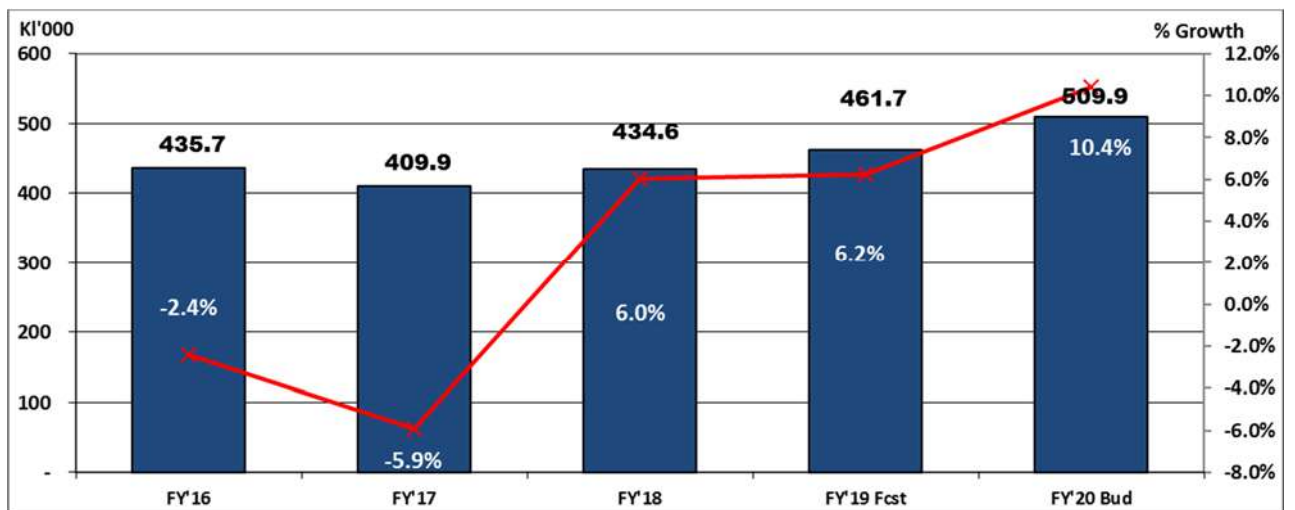


Table 20.7: Bulk water sales volume per customer

Customer	FY 2016	FY 2017	FY 2018		FY 2019				FY 2020	
	Actual	Actual	Actual		Budget		Forecast		Budget	
	Vol kl'000	Vol kl'000	Vol kl'000	Growth %	Vol kl'000	Growth %	Vol kl'000	Growth %	Vol kl'000	Growth %
eThekweni	320,151	299,045	314,523	5.2	315,580	0.3	328,461	4.4	338,020	2.9
Msunduzi	69,944	62,513	68,433	9.5	66,809	(2.4)	69,555	1.6	71,431	2.7
Mngungundlovu	19,417	18,475	18,797	1.7	19,380	3.1	20,532	9.2	21,268	3.6
Ugu	11,295	12,916	13,981	8.2	15,093	8.0	15,120	8.1	36,206	139.5
iLembe	10,790	12,716	14,182	11.5	13,939	(1.7)	17,998	26.9	17,998	-
Siza	3,338	3,360	3,458	2.9	3,493	1.0	3,587	3.7	3,712	3.5
Harry Gwala	661	743	1,066	43.4	1,009	(5.3)	1,075	0.9	5,471	408.7
Uthukela	-	-	-	-	16,425	100.0	5,292	100.0	15,756	197.7
Other - Retail	130	119	129	8.2	-	(100.0)	80	(38.1)	-	-
Total Bulk Potable	435,726	409,887	434,568	6.0	451,729	3.9	461,700	6.2	509,862	10.4
Raw Water	630	619	419	(32.4)	744	77.8	496	18.4	568	14.6
Total Bulk Water	436,355	410,506	434,987	6.0	452,473	4.0	462,196	6.3	510,430	10.4

Figure 20.2: Composition of customer base 2019

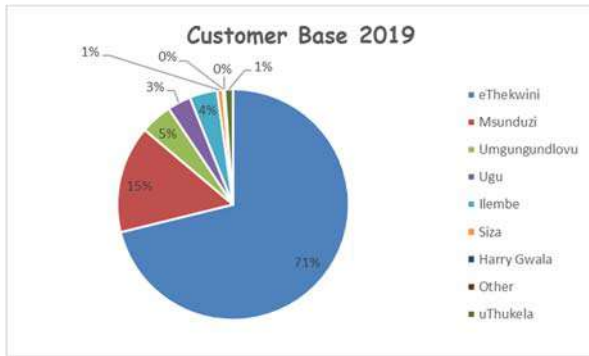
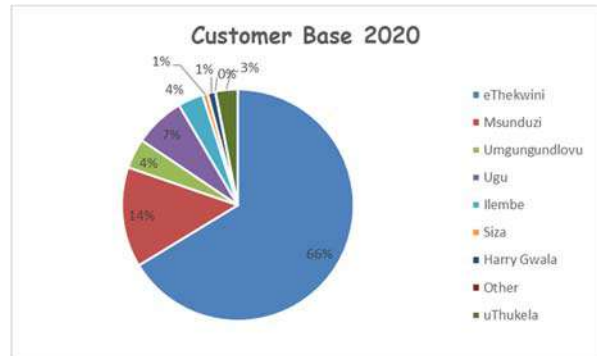


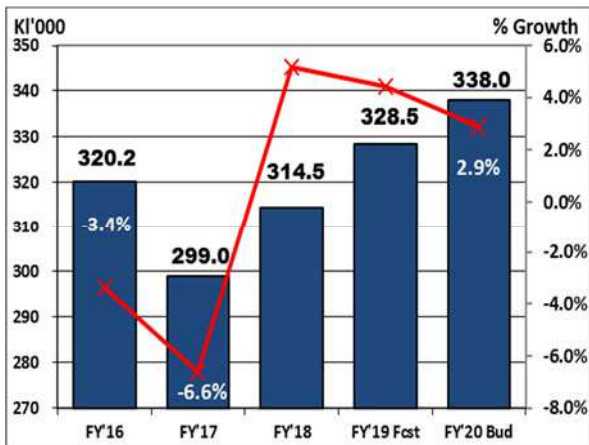
Figure 20.3: Composition of customer base 2020



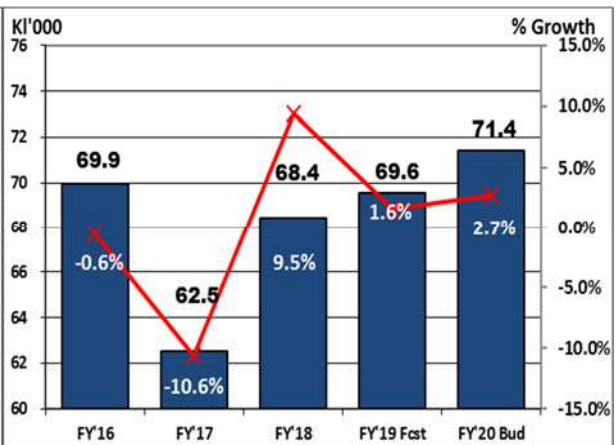
21.3.1 Volume Trends per customer

Figure 20.4 (a to g): Bulk sales per customer

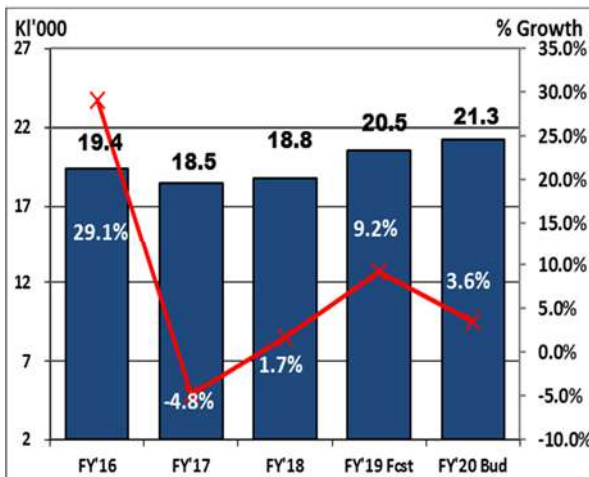
(a) Sales Volumes – eThekweni MM



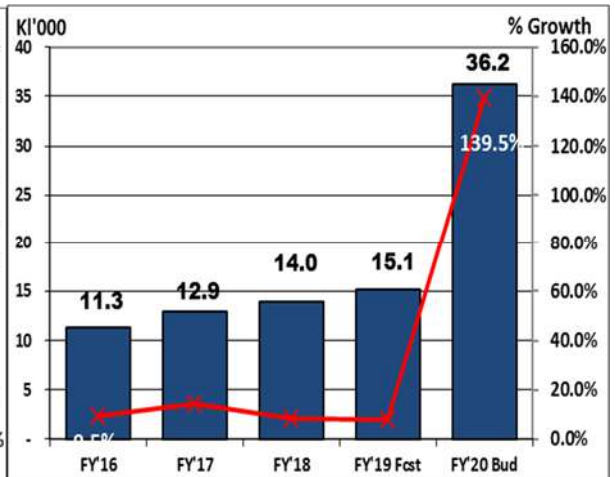
(b) Sales Volumes – Msunduzi LM



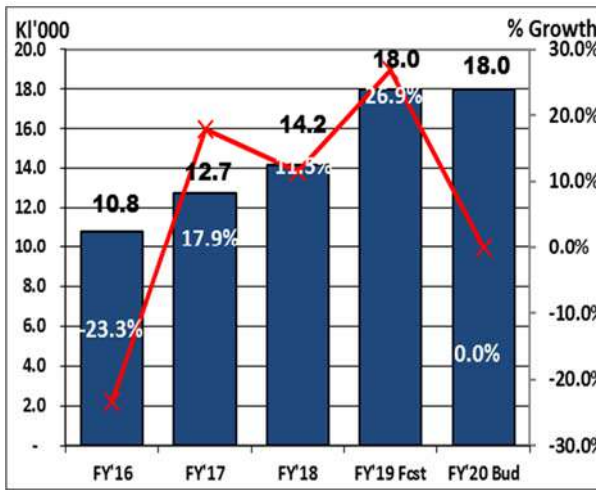
(c) Sales Volumes – UMDM



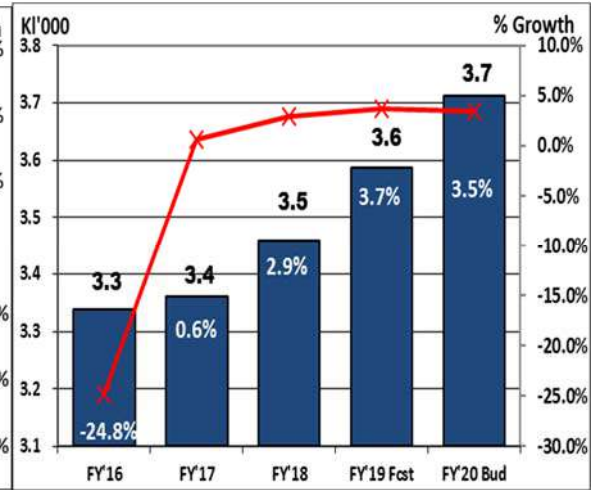
(d) Sales Volumes – UGU DM



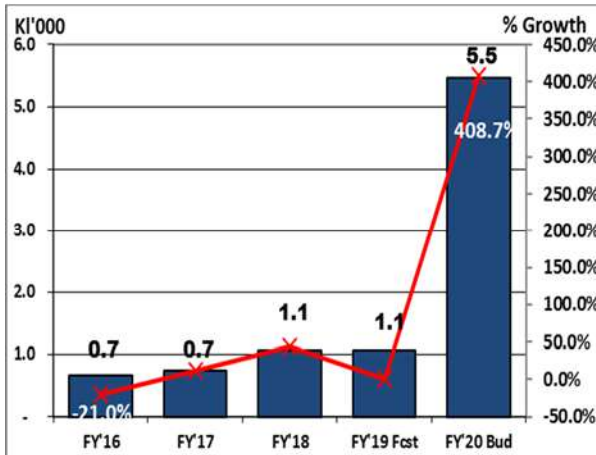
(e) Sales Volumes – iLembe DM



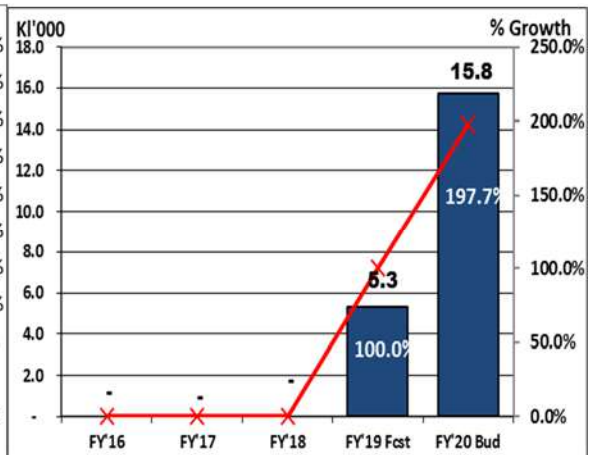
(f) Sales Volumes – Siza SembCorp Water



(g) Sales Volumes – Harry Gwala DM



(h) Sales Volumes - uThukela DM



21.4 Tariff Projections

21.4.1 Bulk water tariff 2020: Consultation process

(i) Customers

The consultation meeting with the Municipalities as customers of Umgeni Water, in compliance with S42 of the Municipal Finance Management Act was held on 12 November 2018. Representatives of SALGA and National Treasury were also present.

TCTA consulted with the stakeholders on the 2020 increase for the capital unit charge for MMTS₂ including the proposed surcharge to repay the debt associated with MMTS₂ by 2023, ten years earlier than planned to make provision for the phasing in of the Mkomazi Water Supply Project capital unit charge by 2023.

The contents of the presentation highlighted the operational risks facing Umgeni Water and the financial impact thereof. The legislative framework governing the tariff computation was highlighted and discussed with the customers and the infrastructure plan to be funded from 2019 was also presented.

The main issues raised by the customers (and responses thereto) were as follows:

Comments	UW Response
1. Ethekwini MM	
1.1. There is a serious shortage of water in the systems. The municipality is currently undergoing hydrological studies to determine the extent of shortage and the available yields	The concerns are noted. UW shares the same concerns and hence elaborated in the presentation that UW is pursuing the assurance of water supply projects with as much vigour as is possible to ensure that these projects are implemented within the required time. The delays were mainly attributable to the negotiations with Traditional Leadership as custodian of the land within which the project is based.
1.2. Lower Mkhomazi – the delay in the project is impacting the economic development of the south region and may only be commissioned by 2025 (2 years later than innitially promised)	
1.3. Concerned with the affordability of the tariff increase proposed of 9.6% vs CPI	In order to balance the delivery of services with the implementation of new infrastructure, UW requires a CPI increase plus at least 3.5% (the % above inflation) for the latter responsibility.
1.4. Cost drivers – UW have assumed the high end increases which must be shared with the customers so that the customers may comment on the practicality of these assumptions.	
1.5.1. Mkhomazi Water project – not practical to indicate commissioning by 2028 – a more realistic assumption will be commissioning by 2032 especially given that DWS and NT does not have funding.	Umgeni and DWS acknowledges that this project is behind schedule mainly due to Environmental Impact studies. However there is an appreciation of the urgency of the project to an extent that alternative design are recommended in order to avoid the "fatal flaws" from environmental perspective. It is anticipated that the EIA approval will still be obtained by June 2019 which makes it certain that construction will start as per the latest implementation plan. In terms of the commitment toward funding of the Mkomazi Water project, from the fiscus, there is an intention to fund 25% if the project as the social component of the project.
1.5.2. Will there be funding of social component currently estimated to be 25% from fiscus or will the whole investment funded through "user pay" principle?	
1.6. Clarity is sought on those that were not paying the CUC – such as iLembe and Ugu – are they now paying?	Ugu has always paid the capital unit charge. iLembe have realised the benefits of the scheme and have resolved to re-negotiate the agreement with DWS on paying in terms of a catchup plan.
1.7. Key cost drivers still is a concern. UW have only	In terms of the key cost drivers, UW uses the assumptions based

Comments	UW Response
shown the customers the upper limit increases. Customers need to look at the lowest increase without breaching the covenants.	on the BER for wages and for chemicals UW has embarked on optimisation of the dosing at most plants. However, due to the extent of pollutants in the water, dosing quantities are higher. Perhaps now that UW is taking over the Uthukela region, UW will be in a better position to influence the upstream of the systems and increase optimization at the source.
1.8. Raw water pricing strategy –can DWS reduce its cost of raw water which goes up each year by double digit increases? This would enable UW to pass on at least a 2% lower tariff increase.	Regarding the increase in the tariff and transparency, UW always shows the key components of the bulk water tariff and capex is a key factor too. Although UW has put a “peg in ground” at 9.6% a simulation will be performed to understand the impact on the tariff of delaying the implementation of projects. However, a word of caution is relayed in that a delay in projects to achieve a one year reduction in tariff will dire result in a catch up in the next year as the project price always escalate.
2. Msunduzi Municipality	
2.1. Comment for SALGA – WSA’s rely on the SALGA economic assessment on UW’s tariff increase. Therefore the Economist is to please continue with the assessment as this guides the Municipalities response to bulk water tariff increase.	SALGA is urged to provide the report before 25 December 2018 in order to allow adequate time to interact with it, and avoid the prior year where the report was late and ended up being submitted as a supplementary submission post the final submission to the Ministry of Water and Sanitation.
2.2. How much of cross subsidisation will there be for Uthukela DM?	There will be no cross subsidisation. This is the basis that the tariff was negotiated for the new areas. Hence until UW is fully operational in the area there will be no capital expenditure until operations have stabilised and there is a track record of revenue being generated in the area.
2.3. In terms of the capital unit charge for the Mkhomazi Water Project – the municipality was under the impression that it was already paying for it to UW. Therefore is the TCTA tariff that was presented not inclusive of this charge currently being levied by UW?	The UW customers are currently paying to UW the potable charge only. TCTA have presented on the raw water component separately, therefore the current contribution made is for the Potable water only for Umgeni while the Raw Water portion is as presented by TCTA.

(ii) SALGA

SALGA notes the proposed tariff increase by the water board and does not support the application on the basis of the following factors;

- An energy cost that might have to be reviewed downward.
- Chemical costs that are excessive. Though the year on year increase is 1%, this projected increase can only be condoned once off as an outlier.
- Budgeting and forecasting is excessive for administrative expenses. A point is made by the water board that the drought has had an impact on the costs of the financial years being considered, however our contention is with the composition of the costs that are excessively increasing.
- Raw water costs are in double digits before factoring in the CUC charge
- A CUC charge that does not take into consideration the guidelines as provided in the Pricing Strategy for Raw Water Use Charges i.e. user affordability and future augmentation.

(iii) National Treasury

National Treasury's comments are as follows:

- National Treasury notes that of the 5-year Capital Investment Programme of R10.9 billion, R3.3 billion (29.7%) is for Development Projects. National Treasury is mindful of the fact that the development of rural infrastructure is a key priority of government. At the same time the water board as well as the Department of Water and Sanitation (DWS) are again urged to be mindful of

the impact that these projects might have on the Water Board's long term financial sustainability and viability should support from DWS not be forthcoming in the future.

- National Treasury notes that the major cost drivers such as raw water, energy and chemicals are increasing at double digits. Going forward, the water board will have to balance the need to set a cost reflective tariff as well as ensure that the principle of end-user affordability is upheld as well as manage future cost increases.
- Lastly, National Treasury continues to support Umgeni's need to augment its raw water supply through the Mkhomazi Water project. National Treasury notes that the bulk water tariff includes an average of R0.153/kl for pre- funding of bulk potable infrastructure linked to the project. National Treasury further notes the inputs received from Umgeni Water's customers regarding funding of the Mkhomazi water project, and in particular, their concerns regarding the mix of funding for the project. These comments highlight the need for Umgeni to engage with its customers as well as with the DWS and TCTA to finalise the institutional and funding arrangements regarding the project. It is important that a clear funding model is developed for all the components of this project and that stakeholder buy-in is obtained early on.

21.4.2 Bulk water tariff 2020: approval by DWS

The proposed increase of 9.6% was tabled in Parliament and will be effected from 01 July 2019 to all customers.

21.4.3 Bulk water tariff projections

Table 20.8: Tariffs for bulk water sales

	UNIT	ACTUAL			CORPORATE PLAN	FORECAST					
		F'16	F'17	F'18		F'19	F'20	F'21	F'22	F'23	F'24
Tariff Increase (%)											
CPI		6.33%	6.43%	4.90%	5.10%	5.02%	5.44%	5.10%	5.10%	5.10%	5.10%
+ provision for internal inflation		1.48%	2.58%	10.10%	8.60%	8.68%	4.16%	3.90%	3.90%	3.90%	3.90%
Total UW Tariff Increase		7.80%	9.00%	15.00%	13.70%	13.70%	9.60%	9.00%	9.00%	9.00%	9.00%
Capital Unit charge		7.80%	6.60%	7.10%	6.40%	6.30%	171.87%	26.37%	22.82%	-100%	0.00%
Effective all in tariff increase		8.02%	10.75%	14.37%	13.19%	13.15%	21.35%	11.82%	11.52%	-12.85%	9.00%
Bulk Water Tariff											
- Bulk Tariff 1											
- Base Tariff	R.c/Kl	4.593	4.951	5.397	6.207	6.207	7.057	7.734	8.430	9.189	10.016
- Tariff Increase	R.c/Kl	0.358	0.446	0.810	0.850	0.850	0.677	0.696	0.759	0.827	0.901
- New Tariff - Umgeni Water	R.c/Kl	4.951	5.397	6.207	7.057	7.057	7.734	8.430	9.189	10.016	10.917
- % Increase - UW	%	7.8	9.0	15.0	13.7	13.7	9.6	9.0	9.0	9.0	9.0
Add Capital unit charge											
- Spring grove	R.c/Kl	0.458	0.484	0.518	0.552	0.551	1.498	1.893	2.325	-	-
- Mkomazi (Potable)	R.c/Kl		0.108	0.124	0.141	0.141	0.155	0.169	0.184	0.200	0.218
- Total Tariff	R.c/Kl	5.409	5.989	6.850	7.750	7.749	9.387	10.492	11.698	10.216	11.135
- % Increase -Total		7.8	10.7	14.4	13.1	13.1	21.1	11.8	11.5	(12.7)	9.0
- Bulk Tariff 2 - eThekweni											
- Base Tariff	R.c/Kl	4.502	4.853	5.290	6.084	6.084	6.918	7.582	8.264	9.008	9.819
- Tariff Increase	R.c/Kl	0.351	0.437	0.794	0.834	0.834	0.664	0.682	0.744	0.811	0.884
- New Tariff - Umgeni Water	R.c/Kl	4.853	5.290	6.084	6.918	6.918	7.582	8.264	9.008	9.819	10.703
- % Increase - UW	%	7.8	9.0	15.0	13.7	13.7	9.6	9.0	9.0	9.0	9.0
Add Capital unit charge											
- Spring grove	R.c/Kl	0.458	0.484	0.518	0.552	0.551	1.498	1.893	2.325	-	-
- Mkomazi (Potable)	R.c/Kl		0.106	0.122	0.138	0.138	0.152	0.165	0.180	0.196	0.214
- Total Tariff	R.c/Kl	5.311	5.880	6.724	7.608	7.607	9.232	10.322	11.513	10.015	10.917
- % Increase -Total		7.8	10.7	14.4	13.1	13.1	21.4	11.8	11.5	(13.0)	9.0
- Bulk Tariff 3 - Siza											
- Base Tariff	R.c/Kl	4.633	6.518	7.105	8.171	8.171	9.290	10.182	11.098	12.097	13.186
- Tariff Increase	R.c/Kl	1.885	0.587	1.066	1.119	1.119	0.892	0.916	0.999	1.089	1.187
- New Tariff - Umgeni Water	R.c/Kl	6.518	7.105	8.171	9.290	9.290	10.182	11.098	12.097	13.186	14.373
- % Increase - UW	%	40.7	9.0	15.0	13.7	13.7	9.6	9.0	9.0	9.0	9.0
Add Capital unit charge											
- Spring grove	R.c/Kl	0.458	0.484	0.518	0.552	0.551	1.498	1.893	2.325	-	-
- Mkomazi (Potable)	R.c/Kl		0.142	0.163	0.186	0.186	0.204	0.222	0.242	0.264	0.287
- Total Tariff	R.c/Kl	6.976	7.731	8.853	10.027	10.027	11.884	13.213	14.664	13.450	14.660
- % Increase -Total		37.9	10.8	14.5	13.3	13.3	18.5	11.2	11.0	(8.3)	9.0
WEIGHTED AVERAGE TARIFF											
Excluding the capital unit charge		4.891	5.333	6.134	6.960	6.975	7.651	8.342	9.093	9.912	10.804
- % Increase -Total		8.1	9.0	15.0	13.8	13.7	9.7	9.0	9.0	9.0	9.0
Including the Capital unit charge		5.349	5.924	6.775	7.668	7.666	9.302	10.402	11.600	10.110	11.020
- % Increase -Total		8.0	10.7	14.4	13.2	13.2	21.4	11.8	11.5	(12.8)	9.0

21.4.4 Other commercial/management fee increases

Table 20.9: Other Revenue charges

	Actual	%	Actual	%	Actual	%	Forecast	%	Budget	%
	F'16	change	F'17	change	F'18	change	F'19	change	F'20	Change
Potable Water – Other (R/kl)										
Retail	5.23	8.3%	5.701	15.7%	6.585	8.8%	7.487	13.7%	8.206	9.6%
Bulk Raw Water(R/kl)										
Piped	3.04	10%	3.329	10%	3.829	15%	4.353	14%	4.771	9.6%
Dam	0.789	10%	0.864	10%	0.994	15%	1.13	14%	1.238	9.6%
Management Fee(R'000)										
Darvill Wastewater (incl Trade & effluent charge)	76,898	20%	92035	20%	110,177	20%	131,923	20%	151,424	14,8%
Lynnfield Park W/W	1,210	7%	1391	15%	2,047	47%	1,913	-7%	2,104	10%
Howick Wastewater	17,191	29%	17622	3%	23,375	33%	23,045	-7%	24,498	6.3%
UMDM W/W	18,247		29,257	60%	30,526	4%	37,487	15%	40,281	7.5%
Ixopo Wastewater	4,130	9%	4403	7%	4,799	9%	5,322	11%	7,004	31,6%
Water Research Levy(R/kl)	0.054	7%	0.057	7%	0	7%	0.065	6%	0.070	7%

Table 20.10: Tariff Cost Components

Components	2015/2016		2016/2017		2017/2018		2018/2019 BUDGET		2018/2019		2019/2020		2020/2021		2021/2022		2022/2023		2023/2024			
	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %		
Direct Costs																						
Chemicals	0.108	7%	0.140	30%	0.137	-2%	0.222	34%	0.162	18%	0.220	36%	0.235	7%	0.254	8%	0.276	8%	0.299	8%		
Depreciation	0.290	24%	0.321	11%	0.378	18%	0.420	4%	0.438	16%	0.458	4%	0.472	3%	0.494	5%	0.516	4%	0.539	4%		
Energy	0.415	20%	0.508	22%	0.542	7%	0.617	4%	0.581	7%	0.766	32%	0.806	5%	0.838	4%	0.929	11%	1.030	11%		
Maintenance	0.314	-9%	0.379	21%	0.392	3%	0.504	22%	0.454	16%	0.603	33%	0.622	3%	0.651	5%	0.680	4%	0.710	4%		
Raw Water	0.378	1%	0.440	16%	0.481	9%	0.550	19%	0.507	5%	0.509	0%	0.559	10%	0.616	10%	0.679	10%	0.748	10%		
Staff Costs	0.365	15%	0.426	17%	0.430	1%	0.505	28%	0.481	12%	0.574	19%	0.596	4%	0.625	5%	0.658	5%	0.693	5%		
Other direct operating activities	0.094	50%	0.073	-22%	0.058	-20%	0.079	35%	0.071	22%	0.077	8%	0.079	3%	0.081	3%	0.085	5%	0.089	5%		
Total Direct Costs	1.964	10%	2.286	16%	2.419	6%	2.897	16%	2.694	11%	3.207	19%	3.369	5%	3.560	6%	3.822	7%	4.107	7%		
Indirect Costs																						
Overheads	0.485	15%	0.587	21%	0.590	0%	0.754	1%	1.153	96%	1.038	-10%	1.289	24%	1.348	5%	1.387	3%	1.448	4%		
staff costs	0.593	7%	0.783	32%	0.776	-1%	0.677	7%	0.864	11%	0.813	-6%	0.738	-9%	0.774	5%	0.815	5%	0.858	5%		
Depreciation	0.055	10%	0.081	48%	0.156	92%	0.191	3%	0.173	11%	0.194	12%	0.200	3%	0.210	5%	0.219	4%	0.229	4%		
Amortisation	0.015	-9%	0.028	83%	0.072	0%	0.126	0%	0.065	0%	0.066	0%	0.054	0%	0.034	0%	0.025	0%	-	0%		
Impairments	0.305	51%	0.102	-66%	(0.180)	-276%	0.356	-318%	0.087	-149%	0.035	0%	0.038	0%	0.158	0%	0.199	0%	0.235	0%		
Retirement benefits	0.136	8%	0.157	15%	0.147	-7%	0.229	13%	0.246	68%	0.242	-2%	0.258	7%	0.276	7%	0.297	7%	0.318	7%		
Total Indirect Costs	1.590	16%	1.738	9%	1.560	-10%	2.333	37%	2.589	66%	2.388	-8%	2.578	8%	2.800	9%	2.942	5%	3.088	5%		
Total direct & indirect cost	3.554	13%	4.024	13%	3.980	-1%	5.230	25%	5.283	33%	5.595	6%	5.947	6%	6.360	7%	6.765	6%	7.196	6%		
Finance Costs	(0.303)	1%	(0.361)	19%	(0.406)	12%	(0.192)	-26%	(0.306)	-25%	(0.275)	-10%	(0.185)	-33%	(0.052)	-72%	(0.004)	-92%	0.087	-2290%		
Cost - Bulk Water	3.251	14%	3.663	13%	3.574	-2%	5.038	28%	4.977	39%	5.320	7%	5.763	8%	6.308	9%	6.761	7%	7.283	8%		
Less: Sundry income	0.086	33%	0.063	-26%	0.020	-69%	0.011	4%	0.008	-57%	0.008	-9%	0.006	-15%	0.006	-2%	0.006	-1%	0.006	-1%		
Net Cost - Bulk Water	3.165	14%	3.600	14%	3.554	-1%	5.027	28%	4.969	40%	5.313	7%	5.756	8%	6.301	9%	6.755	7%	7.276	8%		
Contribution from Wastewater	0.072	142%	0.096	33%	0.128	33%	0.114	12%	0.116	-9%	0.069	-40%	0.114	65%	0.161	42%	0.188	17%	0.222	18%		
Contribution from Section 30 activities	0.013	-36%	0.040	193%	0.013	-67%	0.011	-19%	0.011	-13%	0.012	9%	0.002	-85%	0.002	-2%	0.002	-1%	0.002	-1%		
Total cost	3.079	13%	3.464	12%	3.413	-1%	4.902	29%	4.841	42%	5.231	8%	5.641	8%	6.138	9%	6.565	7%	7.053	7%		
Total Average UW Tariff excluding CUC	4.891	8.1%	5.333	9.0%	6.134	15.0%	6.960	13.8%	6.975	13.7%	7.651	9.7%	8.342	9.0%	9.093	9.0%	9.912	9.0%	10.804	9.0%		
Net profit Margin/(deficit)	1.812	1%	1.869	3%	2.720	46%	2.058	-11%	2.134	-22%	2.420	13%	2.702	12%	2.955	9%	3.347	13%	3.751	12%		
Projected water sales (Ml)	435.73	-2%	409.89	-6%	434.57	6%	451.73	7%	461.70	6%	509.86	10%	526.03	3%	534.69	2%	542.71	2%	550.85	1%		
Projected revenue (R m)	2405	7%	2531	5%	2901	15%	3384	20%	3458	19%	4169	21%	4677	12%	5189	11%	5734	11%	6337	11%		
Projected costs (R m)	1615	12%	1780	10%	1718	-3%	2453	34%	2471	44%	2934	19%	3255	11%	3606	11%	3915	9%	4268	9%		
Projected surplus (R m)	753	-6%	845	12%	1265	50%	931	-5%	986	-22%	1235	25%	1422	15%	1582	11%	1819	15%	2069	14%		
Reserves (R m)	5945	15%	6470	9%	8055	25%	8698	12%	9041	12%	10276	14%	11698	14%	13281	14%	15100	14%	17169	14%		
Projected surplus as a % of reserves	13%	-17%	13%	3%	16%	20%	11%	-15%	11%	-31%	12%	10%	12%	1%	12%	-2%	12%	1%	12%	0%		
Debt service cost (R m)	1	-56%	1	17%	1	1%	41	97%	20	1357%	19	-3%	17	-13%	12	-27%	12	-2%	59	388%		
Debt (Debt + Equity) ratio	0.226	30%	0.243	8%	0.154	-37%	0.137	-15%	0.132	-14%	0.112	-15%	0.088	-21%	0.069	-22%	0.080	16%	0.133	66%		
Capex (R m)	1,963	18%	1,815	-8%	988	-46%	1,650	16%	1,655	68%	1,505	-9%	2,142	42%	2,260	5%	2,444	8%	2,931	20%		

21.5 Surplus Policy

21.5.1 Introduction

The purpose of the policy is to guide the accrual and application of surpluses earned in any one year.

21.5.2 Policy

Surpluses are accrued for the following:

1. Maintain optimal capital structure
2. Repayment of debt during the current financial year.
3. Provision for repaying debt during a future year (for example, provision for a bullet payment).
4. Cash contribution toward the purchase of Plant and equipment during the current year.
5. Provision of cash contribution toward the purchase of plant and equipment during the future.
6. Refurbishment of plant and equipment during the current year.
7. Provision towards refurbishment of plant and equipment during a future year.
8. Provision for contingencies which could materialise in the form of either a reduction in revenue or increased unexpected costs or both.

21.5.3 Optimal Capital Structure

In terms of the optimal capital structure, the debt to equity ratio should not exceed 0.7 times. Thus retained surpluses contribute toward achievement of this target ratio and the optimal level of equity.

Amounts retained in excess of the optimal accumulated surplus are in terms of 1 to 8 in section 20.5.2 above.

21.6 Subsidy projections

Subsidy projections are based on the social component of developmental projects and are critical to Umgeni Water's financial viability and funding requirements. The overall Developmental Programme totals R66,41 million with a specific allocation for the period 2019-2024 of R32,77m, representing 31% of Umgeni Water's planned capital expenditure for that same period. These projects have a social component which is calculated as the amount which cannot be recovered through an affordable tariff structure. Umgeni Water's Financial Plan has allowed for the following funding split for the overall developmental programme:

- R751 million or 12% funding by Umgeni Water.
- R5 455 million or 88% funding required from DWA for the remaining social components.

The 2019 tranche was received in August 2018. Thereafter all grant funding removed from the tariff model due to the uncertainty in terms of future receipts. The tables below reflect the projected subsidy projections to co-fund the social component of the developmental projects.

Table 20.11: Optimal funding mix for rural developmental projects (R'000)

Project	Total capital cost		Targeted Funding mix			
	R'000		Grant Funding		Umgeni Water	Total
			R'000	%	R'000	R'000
PROJECT IN PROGRESS						
Greater Mpofana Regional Scheme Phases 1	757,342	441,935	58%	315,407	757,342	
Greater Mpofana Regional Scheme Phases 2	75,052	75,052	100%		75,052	
Impendle- Nzinga	292,205	292,205	100%		292,205	
Impendle- Stepmore	108,656	108,656	100%		108,656	
uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1, 2 & 3)*	115,321	64,580	56%	50,741	115,321	
uMshwathi Ph 4 - Southern Ndwedwe	677,500	379,400	56%	298,100	677,500	
uMshwathi Ph 6	151,000	84,560	56%	66,440	151,000	
Lower Thukela BWS – Phase 1*	51,033	30,109	59%	20,924	51,033	
Lower Thukela BWS - Phase 2	773,040	773,040	100%		773,040	
Maphumulo Phase 3 : 6MI WW	298,278	298,278	61%		298,278	
Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu River abstraction	570,806	570,806	100%		570,806	
Umbumbulu Pump Station	84,551	84,551	100%		84,551	
Umbumbulu PL Augmentation	903,500	903,500	100%		903,500	
Table Mountain BWSS (PL, PS and 3MI Reservoir)	152,372	152,372	100%		152,372	
Vulindlela PS and Reservoir	348,986	348,986	100%		348,986	
Wartburg to Bruyns Hill Pipeline	127,616	127,616	100%		127,616	
Mpophomeni WWW	388,777	388,777	100%		388,777	
Mpofana WWW Upgrade	330,300	330,300	100%		330,300	
Mkhambathini WWW	4,727	0	0%	100%	4,727	
Trust Feeds WWTW	103,302	0	0%	100%	103,302	
Mpophomeni Sewer Outfall	39,131	0	0%	100%	39,131	
N3 Corridor WWTW	54,452	0	0%	100%	54,452	
Cedara – Khanya Village WWTW	34,201	0	0%	100%	34,201	
TOTAL	6,441,150	5,454,723	85%	751,612	6,441,150	

Table 20.12: Grant Funding from DWS Confirmed per annum for developmental projects (R'000)

	TOTAL R'000	cumulative to 2017 R'000	2018 R'000	2019 R'000	2020 R'000	2021 R'000
Umshwathi Regional Bulk Scheme	1 020 685		124 603	307 765	588 317	
Maphumulo BWS	258 439		70 175	87 719	100 545	
Greater Mpofana Phase 1 - 3	441 935		76 101	141 727	224 107	
Lower Thukela RBWS	946 263	726 183	183 861	36 219		
TOTAL	2 667 322	726 183	454 741	573 431	912 969	

Off the amounts confirmed above, R1410m have been received so far (as at 31 March 2019).

The social value component funded by Umgeni Water will be reflected as impairments in the income statements over the next 5 years as follows:

Table 20.13: Progressive Impairment Summary (R'000)

Project	% Impairment	TOTAL	to 2018 actual	2019	2020	2021	2022	2023	2024	2025 onward
1. Greater Mpofana	9%	72,999	87,536	-36,870	13,558	8,774				
2. Impendle	2%	14,960	989	-749	651	1,008	1,457	2,306	3,693	5,605
3. Mhlabatshane Sub-Regional Scheme Ph 2	64%	680,678	3,765	3,568	3,509	10,338	82,934	105,865	125,893	344,807
TOTAL IMPAIRMENT CP 2020		768,637	92,290	-34,050	17,718	20,120	84,391	108,170	129,586	350,412

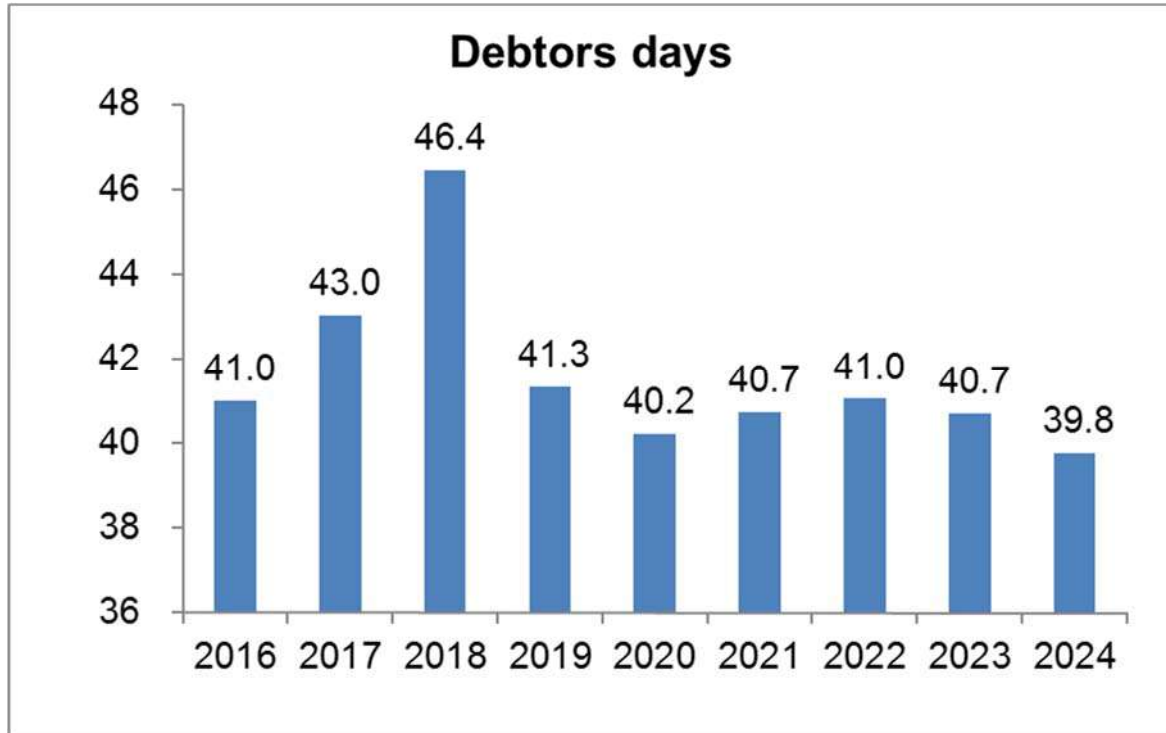
In 2019, a reversal of impairment is anticipated due to the receipt of grant funding in August 2018. Unless there is certainty in terms of the timing of/and the receipt of grant funding, the assumption of grant funding is not made until the funding is received. Therefore, in most cases when the grant funding is received there is a reversal of impairment in that year.

21.7 Challenges in collection of debtors

There have been no significant challenges in terms of collection of amounts due by debtors.

Based on the historical debtors payment cycle Umgeni Water does not expect debtors days outstanding to exceed 41 days.

Figure 20.5: Debtors days



21.8 Subsidiaries and associates

21.8.1 Msinsi Holdings (Pty) Ltd

Msinsi Holdings (Pty) Ltd is a 100% owned subsidiary of Umgeni Water, which provides land and wildlife management of the land surrounding some of Umgeni Water's major dams and treatment works. The entity is projected to break even in 2018 and 2019, with positive operating cash flows.

21.8.2 Umgeni Water Services (Pty) Ltd

Umgeni Water Services (Pty) Ltd is a 100% owned subsidiary of Umgeni Water. Its main business is holding of an investment (18.5%) in an associate, namely, Durban Water Recycling and carrying out other commercial activities. Thus the main source of income for Umgeni Water Services is the dividend distribution by the associate company Durban Water Recycling. It is envisaged that Umgeni Water Services will retain its current investment in Durban Water Recycling at R6m for the next 5 years.

21.9 Financial Statement projections

The financial statement projections of Umgeni water, its subsidiaries and the Group are presented in this section.

The deviations in growth and decline in significant line items are explained in chapter 24, Self-evaluation on financial viability of Umgeni Water.

As the capital unit charge is an agency cost, rather than a direct cost of operation, both the revenue and cost associated with the C.U.C. have not been reflected in the Income Statement.

Table 20.14: Umgeni Water Income Statement Total (R'000)

Income Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
TOTAL	Actual	Actual	Actual	Budget	Forecast					
Volume of Bulk treated water sold (in kl'000)	435,726	409,887	434,568	451,729	461,700	509,862	526,026	534,689	542,709	550,850
Revenue	2,363,290	2,496,605	2,888,951	3,378,731	3,453,334	4,164,860	4,673,787	5,185,426	5,730,959	6,333,990
Water Sales - Bulk	2,131,170	2,185,939	2,665,412	3,144,201	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
Water Sales - Raw Water	780	748	662	1,131	830	1,156	1,260	1,373	1,496	1,631
Wastewater O&M	39,437	52,673	61,586	73,797	67,767	73,887	82,753	91,856	98,286	105,166
Wastewater Management Fee	76,898	92,035	110,177	131,923	131,923	151,424	174,137	200,258	220,284	242,312
Section 30 activities	115,004	165,210	51,115	27,678	32,206	37,415	27,453	29,047	30,736	32,526
Cost of sales	1,040,845	1,178,925	1,191,532	1,457,018	1,379,979	1,797,593	1,940,138	2,082,030	2,267,062	2,470,301
Changes in water inventory	698									
Chemicals	51,742	62,516	65,453	108,552	80,138	120,886	132,974	146,271	160,899	176,989
Depreciation	129,421	133,698	166,858	201,970	204,443	245,176	260,867	277,563	294,217	311,870
Energy	199,086	226,894	257,361	307,248	297,079	422,373	458,697	484,843	545,448	613,629
Maintenance	154,765	174,586	192,480	256,469	231,306	331,208	352,405	374,959	397,456	421,304
Raw Water	164,578	180,160	209,126	248,611	234,218	259,460	294,264	329,453	368,416	412,044
Staff Costs	183,312	205,421	220,675	261,286	261,658	335,453	358,935	382,625	409,026	437,249
Section 30 activities	108,063	150,942	41,602	21,476	24,517	28,728	24,131	25,579	27,113	28,740
Other direct operating activities	49,181	44,707	37,977	51,406	46,621	54,310	57,865	60,738	64,487	68,477
Gross profit	1,322,444	1,317,680	1,697,419	1,921,713	2,073,355	2,367,267	2,733,649	3,103,396	3,463,897	3,863,689
	56%	53%	59%	57%	60%	57%	58%	60%	60%	61%
Other operating income	41,335	34,532	12,268	4,938	4,200	4,210	3,400	3,400	3,400	3,400
Administration Expenses	705,533	749,027	703,652	1,078,939	1,229,226	1,256,234	1,395,530	1,539,068	1,641,298	1,748,364
Staff Costs (excl Maintenance Payroll costs)	258,531	320,766	337,128	305,686	398,724	414,600	388,145	413,763	442,312	472,832
Energy	6,315	6,265	6,928	7,671	7,329	8,875	9,638	10,188	11,461	12,894
Depreciation	24,227	33,905	68,968	87,717	80,968	99,924	106,320	113,124	119,911	127,106
Amortization	6,730	11,558	31,170	56,916	30,015	33,691	28,407	18,347	13,667	-
Impairments	132,881	41,885	(78,033)	160,764	40,255	17,718	20,120	84,391	108,170	129,586
Maintenance	14,060	15,457	20,215	20,305	19,368	24,424	25,987	27,650	29,309	31,068
Retirement Benefits	60,119	65,600	64,902	104,899	114,851	124,605	135,692	147,781	160,966	175,347
Performance bonus										
Other operating & administrative expenses (net of recoveries)	202,668	253,591	252,374	334,981	537,715	532,397	681,222	723,824	755,500	799,532
Operating income before interest	658,247	603,185	1,006,035	847,712	848,329	1,115,243	1,341,519	1,567,728	1,826,000	2,118,725
Net interest and finance charges	(131,260)	(148,076)	(176,718)	(83,278)	(137,844)	(119,646)	(80,787)	(14,635)	6,975	49,783
Interest Paid	1,161	1,355	1,363	41,466	19,865	19,310	16,878	12,345	12,114	59,175
Interest Received	(132,421)	(149,431)	(178,081)	(124,745)	(157,710)	(138,955)	(97,665)	(26,979)	(5,139)	(9,392)
Net Profit (Loss) for the year	789,507	751,261	1,182,753	930,991	986,173	1,234,888	1,422,306	1,582,363	1,819,025	2,068,942
Other Comprehensive Income										
- Retirement Benefit adjustment (IAS 19)	(36,540)	93,472	82,070							
Other Comprehensive Income for the year	(36,540)	93,472	82,070	-	-	-	-	-	-	-
Total comprehensive income for the year	752,967	844,733	1,264,823	930,991	986,173	1,234,888	1,422,306	1,582,363	1,819,025	2,068,942

Table 20.15: Umgeni Water Income Statement: S29 Activities (R'000)

Income Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
PRIMARY (S29)	Actual	Actual	Actual	BUDGET						

Volume of treated water sold (in kl'000)	435,726	409,887	434,568	451,729	461,700	509,862	526,026	534,689	542,709	550,850
Revenue	2,248,285	2,331,395	2,837,836	3,351,053	3,421,128	4,127,445	4,646,335	5,156,379	5,700,223	6,301,463
Water Sales - Bulk	2,131,170	2,185,939	2,665,412	3,144,201	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
Water Sales - Raw Water	780	748	662	1,131	830	1,156	1,260	1,373	1,496	1,631
Wastewater Sales	39,437	52,673	61,586	73,797	67,767	73,887	82,753	91,856	98,286	105,166
Wastewater Management Fee	76,898	92,035	110,177	131,923	131,923	151,424	174,137	200,258	220,284	242,312
				40%	22%					
Cost of sales	931,803	1,025,186	1,147,875	1,434,889	1,353,950	1,767,468	1,914,531	2,054,879	2,238,276	2,439,782
Changes in water inventory	698	-	-	-	-	-	-	-	-	-
Chemicals	51,742	62,516	65,453	108,552	80,138	120,886	132,974	146,271	160,899	176,989
Depreciation	129,421	133,698	166,858	201,970	204,443	245,176	260,867	277,563	294,217	311,870
Energy	199,086	226,894	257,361	307,248	297,079	422,373	458,697	484,843	545,448	613,629
Maintenance	154,042	172,448	190,977	256,027	230,445	330,454	351,603	374,106	396,552	420,345
Raw Water	164,578	180,160	209,126	248,611	234,218	259,460	294,264	329,453	368,416	412,044
Staff Costs	183,071	204,969	220,180	261,099	261,066	334,872	358,313	381,962	408,317	436,491
Other direct operating activities	49,166	44,499	37,921	51,383	46,561	54,247	57,812	60,682	64,427	68,414
Gross margin/profit	1,316,482	1,306,209	1,689,961	1,916,164	2,067,178	2,359,977	2,731,804	3,101,500	3,461,947	3,861,682
	59%	56%	60%	57%	60%	57%	59%	60%	61%	61%
Other operating income	41,335	30,032	12,268	4,938	4,200	4,210	3,400	3,400	3,400	3,400
Administration Expenses	705,441	728,108	701,827	1,078,494	1,228,256	1,255,228	1,394,685	1,538,172	1,640,348	1,747,357
Staff Costs	258,531	320,766	337,128	305,686	398,724	414,600	388,145	413,763	442,312	472,832
Energy	6,315	6,265	6,928	7,671	7,329	8,875	9,638	10,188	11,461	12,894
Depreciation	24,227	33,905	68,968	87,717	80,968	99,924	106,320	113,124	119,911	127,106
Amortization	6,730	11,558	31,170	56,916	30,015	33,691	28,407	18,347	13,667	-
Impairments	132,881	41,885	(78,033)	160,764	40,255	17,718	20,120	84,391	108,170	129,586
Maintenance	14,060	15,457	20,215	20,305	19,368	24,424	25,987	27,650	29,309	31,068
Retirement Benefits	60,119	65,600	64,902	104,899	114,851	124,605	135,692	147,781	160,966	175,347
Performance bonus	-	-	-	-	-	-	-	-	-	-
Other operating & administrative expenses	202,576	232,672	250,549	334,536	536,746	531,390	680,376	722,928	754,551	798,525
Operating income before interest	652,376	608,133	1,000,402	842,608	843,121	1,108,959	1,340,519	1,566,728	1,825,000	2,117,725
Net interest and finance charges	(131,260)	(148,076)	(176,718)	(83,278)	(137,844)	(119,646)	(80,787)	(14,635)	6,975	49,783
Interest Paid	1,161	1,355	1,363	41,466	19,865	19,310	16,878	12,345	12,114	59,175
Interest Received	(132,421)	(149,431)	(178,081)	(124,745)	(157,710)	(138,955)	(97,665)	(26,979)	(5,139)	(9,392)
Net Profit (Loss)	783,636	756,209	1,177,120	925,886	980,966	1,228,605	1,421,306	1,581,363	1,818,025	2,067,942

Table 20.16: Umgeni Water Income statement - Bulk water segment (R'000)

Income Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
BULK WATER	Actual	Actual	Actual	BUDGET	Forecast					
Volume of treated water sold (in kl'000)	435,726	409,887	434,568	451,729	461,700	509,862	526,026	534,689	542,709	550,850
Revenue	2,131,950	2,186,687	2,666,074	3,145,333	3,221,437	3,902,134	4,389,444	4,864,265	5,381,653	5,953,985
Water Sales - Bulk	2,131,170	2,185,939	2,665,412	3,144,201	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
- Bulk water sales	2,131,170	2,185,939	2,665,412	3,144,201	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
- Capital Unit charge	-	-	-	-	-	-	-	-	-	-
Water Sales - Raw Water	780	748	662	1,131	830	1,156	1,260	1,373	1,496	1,631
Cost of sales	856,495	937,002	1,051,351	1,308,552	1,243,923	1,635,009	1,772,331	1,903,394	2,074,473	2,262,552
Changes in water inventory	698	-	-	-	-	-	-	-	-	-
Chemicals	47,024	57,294	59,585	100,353	74,588	112,338	123,572	135,929	149,522	164,474
Depreciation	126,415	131,435	164,403	189,715	202,181	233,269	248,198	264,082	279,927	296,723
Energy	180,947	208,402	235,600	278,582	268,413	390,436	424,013	448,182	504,204	567,230
Maintenance	136,771	155,257	170,330	227,589	209,761	307,625	327,314	348,262	369,157	391,307
Raw Water	164,578	180,160	209,126	248,611	234,218	259,460	294,264	329,453	368,416	412,044
- Abstraction, O&M & WRM	164,578	180,160	209,126	248,611	234,218	259,460	294,264	329,453	368,416	412,044
- Capital Unit charge	-	-	-	-	-	-	-	-	-	-
Staff Costs	159,093	174,564	187,035	228,189	222,020	292,798	313,294	333,971	357,015	381,649
Other direct operating activities	40,968	29,890	25,273	35,513	32,743	39,083	41,677	43,514	46,230	49,125
Gross margin/profit	1,275,455	1,249,684	1,614,722	1,836,781	1,977,514	2,267,125	2,617,113	2,960,871	3,307,181	3,691,433
	60%	57%	61%	58%	61%	58%	60%	61%	61%	62%
Other operating income	37,514	25,975	8,573	4,850	3,900	3,900	3,400	3,400	3,400	3,400
Administration Expenses	692,884	712,565	678,086	1,053,923	1,195,315	1,217,709	1,356,086	1,497,103	1,596,815	1,701,212
Staff Costs	258,531	320,766	337,128	305,686	398,724	414,600	388,145	413,763	442,312	472,832
Energy	6,315	6,265	6,928	7,671	7,329	8,875	9,638	10,188	11,461	12,894
Depreciation	23,846	33,246	67,838	86,453	80,008	99,122	105,466	112,216	118,949	126,086
Amortization	6,730	11,558	31,170	56,916	30,015	33,691	28,407	18,347	13,667	-
Impairments	132,881	41,885	(78,033)	160,764	40,255	17,718	20,120	84,391	108,170	129,586
Maintenance	13,773	14,906	18,644	18,740	17,853	22,756	24,212	25,762	27,308	28,946
Retirement Benefits	59,367	64,447	63,702	103,373	113,776	123,363	135,692	147,781	160,966	175,347
Performance bonus	-	-	-	-	-	-	-	-	-	-
Other operating & administrative expenses	191,439	219,492	230,708	314,320	507,355	497,583	644,405	684,654	713,981	755,521
Operating income before interest	620,085	563,094	945,210	787,709	786,099	1,053,316	1,264,426	1,467,169	1,713,766	1,993,621
Net interest and finance charges	(131,975)	(148,141)	(176,307)	(86,811)	(141,377)	(140,141)	(97,070)	(27,937)	(2,151)	47,799
Interest Paid	446	1,290	1,774	37,934	16,332	(1,185)	595	(958)	2,988	57,192
Interest Received	(132,421)	(149,431)	(178,081)	(124,745)	(157,710)	(138,955)	(97,665)	(26,979)	(5,139)	(9,392)
Net Profit (Loss)	752,060	711,236	1,121,517	874,520	927,476	1,193,457	1,361,496	1,495,106	1,715,917	1,945,821

Table 20.17: Umgeni Water Income statement Wastewater (R'000)

Income Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
WASTE WATER	Actual	Actual	Actual	BUDGET		FORECAST				
Volume of treated water sold (in kl'000)	-	-	-	-	-	-	-	-	-	-
Revenue	116,336	144,708	171,762	205,720	199,690	225,311	256,891	292,114	318,570	347,478
Wastewater O&M	39,437	52,673	61,586	73,797	67,767	73,887	82,753	91,856	98,286	105,166
Wastewater Management Fee	76,898	92,035	110,177	131,923	131,923	151,424	174,137	200,258	220,284	242,312
Cost of sales	75,309	88,183	96,524	126,337	110,027	132,459	142,199	151,486	163,803	177,229
Chemicals	4,718	5,222	5,868	8,198	5,550	8,547	9,402	10,342	11,377	12,514
Depreciation	3,005	2,263	2,455	12,255	2,262	11,907	12,669	13,480	14,289	15,147
Energy	18,139	18,493	21,761	28,667	28,667	31,937	34,684	36,661	41,244	46,399
Maintenance	17,271	17,191	20,647	28,438	20,684	22,829	24,290	25,844	27,395	29,039
Staff Costs	23,978	30,405	33,145	32,910	39,046	42,074	45,019	47,990	51,302	54,841
Other direct operating activities	8,197	14,609	12,647	15,869	13,818	15,164	16,135	17,167	18,197	19,289
Gross margin/profit	41,027	56,525	75,239	79,383	89,664	92,852	114,691	140,628	154,766	170,249
	35%	39%	44%	39%	45%	41%	45%	48%	49%	49%
Other operating income	3,822	4,057	3,695	88	300	310	-	-	-	-
Administration Expenses	12,557	15,543	23,742	24,571	32,941	37,519	38,599	41,069	43,533	46,145
Staff Costs	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-
Depreciation	381	660	1,130	1,264	960	802	853	908	962	1,020
Amortization	-	-	-	-	-	-	-	-	-	-
Impairments	-	-	-	-	-	-	-	-	-	-
Maintenance	287	551	1,570	1,565	1,515	1,668	1,774	1,888	2,001	2,121
Retirement Benefits	752	1,152	1,200	1,526	1,075	1,242	-	-	-	-
Other operating & administrative expenses	11,137	13,179	19,841	20,216	29,391	33,807	35,971	38,273	40,570	43,004
Operating income before interest	32,292	45,039	55,192	54,899	57,023	55,643	76,093	99,560	111,233	124,104
Net interest and finance charges	715	66	(411)	3,533	3,533	20,495	16,283	13,302	9,126	1,983
Interest Paid	715	66	(411)	3,533	3,533	20,495	16,283	13,302	9,126	1,983
Interest Received	-	-	-	-	-	-	-	-	-	-
Net Profit (Loss)	31,576	44,973	55,603	51,366	53,490	35,148	59,809	86,257	102,108	122,121

Table 20.18: Umgeni Water Income statement: S30 Activities (R'000)

Income Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
OTHER (S30)	Actual	Actual	Actual	BUDGET	FORECAST					
Volume of treated water sold (in kl'000)	-	-	-	-	-	-	-	-	-	-
Revenue	115,004	165,210	51,115	27,678	32,206	37,415	27,453	29,047	30,736	32,526
Other	115,004	165,210	51,115	27,678	32,206	37,415	27,453	29,047	30,736	32,526
Cost of sales	109,042	153,739	43,657	22,129	26,029	30,125	25,607	27,151	28,786	30,519
Chemicals	-	-	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-
Maintenance	723	2,138	1,503	441	861	753	802	853	904	958
Staff Costs	241	451	496	188	592	582	622	663	709	758
Projects/WIP costs	108,063	150,942	41,602	21,476	24,517	28,728	24,131	25,579	27,113	28,740
Other direct operating activities	15	208	57	24	60	63	53	56	59	63
Gross margin/profit	5,963	11,471	7,457	5,549	6,177	7,290	1,845	1,896	1,950	2,007
	5%	7%	15%	20%	19%	19%	7%	7%	6%	6%
Other operating income		4,500								
Administration Expenses	92	20,920	1,825	445	969	1,007	845	896	950	1,007
Staff Costs	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-
Depreciation	-	-	-	-	-	-	-	-	-	-
Amortization	-	-	-	-	-	-	-	-	-	-
Impairments	-	-	-	-	-	-	-	-	-	-
Maintenance	-	-	-	-	-	-	-	-	-	-
Retirement benefits	-	-	-	-	-	-	-	-	-	-
Other operating & administrative expenses	92	20,920	1,825	445	969	1,007	845	896	950	1,007
Operating income before interest	5,871	(4,949)	5,633	5,104	5,208	6,283	1,000	1,000	1,000	1,000
Net interest and finance charges	-	-	-	-	-	-	-	-	-	-
Interest Paid	-	-	-	-	-	-	-	-	-	-
Interest Received	-	-	-	-	-	-	-	-	-	-
Net Profit (Loss)	5,871	(4,949)	5,633	5,104	5,208	6,283	1,000	1,000	1,000	1,000

Table 20.19: Umgeni Water Balance sheet (R'000)

Balance Sheet (in R'000) As at June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual	BUDGET		FORECAST				
ASSETS										
Non-current assets	7,445,284	8,133,886	8,843,402	9,970,164	10,217,683	11,548,264	12,966,086	14,843,395	16,867,785	19,658,347
Property, plant and equipment	7,026,173	7,752,927	8,305,810	9,425,558	9,699,469	11,015,135	12,921,973	14,817,629	16,848,031	19,317,354
Intangible assets	95,802	132,913	121,595	126,793	94,112	60,421	32,014	13,667	-	-
Other non-current assets	6,917	4,774	-	-	-	-	-	-	-	-
Investments	295,142	230,175	403,898	406,528	412,003	460,609	-	-	7,655	328,894
Investments in subsidiaries	21,250	13,096	12,099	11,284	12,099	12,099	12,099	12,099	12,099	12,099
Assets held for sale	-	-	-	-	-	-	-	-	-	-
Current Assets	2,075,206	2,054,842	2,655,923	2,102,882	2,240,535	2,175,982	1,599,683	1,352,007	1,242,540	1,305,389
Other current assets			2,404							
Inventories	14,720	15,734	18,955	17,920	22,338	25,904	29,653	33,593	37,733	42,085
Accounts receivable	302,594	335,471	419,113	437,119	445,908	523,143	594,491	664,818	728,470	786,737
Sundry Debtors	89,788	84,986	84,986	84,986	84,986	84,986	84,986	84,986	84,986	84,986
Short-term investments	1,619,900	1,566,714	2,076,596	1,523,982	1,642,577	1,497,577	845,665	523,665	346,665	346,665
Interest Receivable	28,366	35,585	43,952	37,969	43,953	43,953	43,953	43,953	43,953	43,953
Bank balances and cash	19,838	16,352	9,918	908	773	419	935	993	733	963
Total assets	9,520,490	10,188,728	11,499,326	12,073,046	12,458,218	13,724,246	14,565,769	16,195,403	18,110,325	20,963,737
Reserves										
Accumulated reserves	5,945,439	6,790,173	8,054,997	8,698,161	9,041,170	10,276,059	11,698,364	13,280,727	15,099,752	17,168,694
Non-current liabilities	2,570,196	2,522,536	2,476,710	2,559,921	2,520,586	1,969,820	2,030,152	2,097,521	2,172,517	2,255,781
Interest bearing borrowings	1,949,712	1,870,902	1,791,890	1,762,668	1,762,668	1,133,226	1,108,388	1,083,549	1,058,710	1,033,872
Post employment medical benefit obligations	592,285	569,405	554,850	692,458	627,948	706,624	791,794	884,002	983,837	1,091,940
Long term provisions	25,046	39,120	34,102	61,684	34,102	34,102	34,102	34,102	34,102	34,102
Other non-current liabilities	3,153	43,110	95,868	43,110	95,868	95,868	95,868	95,868	95,868	95,868
Current liabilities	1,004,855	876,018	967,619	814,964	896,461	1,478,367	837,253	817,155	838,056	1,539,262
Accounts payable (including accruals)	782,006	629,277	716,269	599,277	696,616	677,337	662,337	642,337	622,337	602,337
Provisions	85,365	110,473	116,311	110,473	116,311	116,311	116,311	116,311	116,311	116,311
Current portion of interest bearing loans	78,619	78,810	79,011	29,222	29,222	629,442	24,839	24,839	65,839	787,839
Other payables/loans	58,865	57,458	56,028	75,992	54,312	55,277	33,767	33,668	33,569	32,775
Bank overdrafts										
Total reserves and liabilities	9,520,490	10,188,728	11,499,326	12,073,045	12,458,218	13,724,246	14,565,770	16,195,403	18,110,325	20,963,737

Table 20.20: Umgeni Water Statement of changes in equity (R'000)

Statement of Changes in Equity (in R'000) For the Year ended June 30,	Capital Contributions	OCI Reserve	Accumulated Profit (Loss)	Total
Balance at 30 June 2016	442,847	(104,822)	5,607,414	5,945,439
Profit for the year	-	-	751,261	751,261
Other comprehensive income	-	93,472	-	93,472
Balance at 30 June 2017	442,847	(11,350)	6,358,674	6,790,173
Profit for the year	-	-	1,182,753	1,182,753
Other comprehensive income	-	82,070	-	82,070
Balance at 30 June 2018	442,847	70,720	7,541,427	8,054,997
Profit for the year	-	-	986,173	986,173
Other comprehensive income	-	-	-	-
Balance at 30 June 2019	442,847	70,720	8,527,601	9,041,170
Profit for the year	-	-	1,234,888	1,234,888
Other comprehensive income	-	-	-	-
Balance at 30 June 2020	442,847	70,720	9,762,489	10,276,059
Profit for the year	-	-	1,422,306	1,422,306
Other comprehensive income	-	-	-	-
Balance at 30 June 2021	442,847	70,720	11,184,794	11,698,364
Profit for the year	-	-	1,582,363	1,582,363
Balance at 30 June 2022	442,847	70,720	11,698,364	13,280,727
Profit for the year	-	-	1,819,025	1,819,025
Balance at 30 June 2023	442,847	70,720	13,517,389	15,099,752
Profit for the year	-	-	2,068,942	2,068,942
Balance at 30 June 2024	442,847	70,720	15,586,331	17,168,694

Table 20.21: Umgeni Water Cashflow Statement (R'ooo)

Cash Flow Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual	BUDGET			Forecast			
OPERATING ACTIVITIES										
Operating profit before working capital changes	1,038,801	1,037,429	1,336,887	1,427,430	1,277,108	1,590,428	1,842,403	2,153,361	2,461,800	2,795,389
Changes in working capital	113,529	(219,168)	(13,282)	(74,135)	(49,831)	(100,081)	(90,097)	(94,267)	(87,792)	(82,619)
Net cash from operating activities	1,152,330	818,261	1,323,605	1,353,294	1,227,277	1,490,348	1,752,307	2,059,094	2,374,008	2,712,770
INVESTING ACTIVITIES										
Additions to property, plant and equipment	(1,963,218)	(1,118,301)	(987,808)	(1,649,808)	(1,655,320)	(1,504,698)	(2,142,239)	(2,259,633)	(2,443,673)	(2,930,668)
Additions to intangible assets	(55,647)	(45,917)	-	-	-	-	-	-	-	-
Proceeds on disposal of Property, plant & equipment	2,457	1,845	-	-	-	-	-	-	-	-
Grant Funding	280,016	371,056	454,741	573,431	114,783	-	-	-	-	-
Payments of intercompany borrowings	(11,555)	1,730	997	1,783	-	-	-	-	-	-
Net cash used in investing activities	(1,747,947)	(789,587)	(532,070)	(1,074,595)	(1,540,537)	(1,504,698)	(2,142,239)	(2,259,633)	(2,443,673)	(2,930,668)
FINANCING ACTIVITIES										
Net change in long-term borrowings	(78,434)	(78,619)	(78,810)	(79,012)	(79,012)	(29,222)	(629,442)	(24,839)	(24,839)	(24,839)
New Debt proposed	935,000	-	-	-	-	-	-	-	-	-
Net Investments - LTI & RED	(236,593)	156,296	(641,317)	(84,000)	469,000	145,000	894,876	322,000	169,551	(311,847)
Proceeds on disposal of available for sale investments	-	-	-	-	-	-	-	-	41,000	722,000
Proceeds from (repaid to) short-term borrowings	-	-	-	-	-	-	-	-	-	-
Net interest (Paid) Received	(5,981)	(109,839)	(77,839)	(115,196)	(85,873)	(101,782)	125,014	(96,565)	(116,306)	(167,187)
Interest received	132,421	149,431	178,081	124,745	157,710	138,955	97,665	26,979	5,139	9,392
Deferred interest amortized	(137,241)	(257,915)	(254,557)	(198,474)	(223,717)	(221,428)	44,227	(111,200)	(109,331)	(117,404)
Interest paid	(1,161)	(1,355)	(1,363)	(41,466)	(19,865)	(19,310)	(16,878)	(12,345)	(12,114)	(59,175)
Net Repo & Market-making	-	-	-	-	-	-	-	-	-	-
Net cash used in financing activities	613,992	(32,162)	(797,967)	(278,208)	304,116	13,996	390,448	200,596	69,406	218,128
CASH AND CASH EQUIVALENTS										
Net increase/(decrease) in cash and cash equivalents	18,374	(3,487)	(6,431)	492	(9,145)	(354)	516	58	(259)	229
At beginning of year	1,462	19,836	16,349	413	9,918	773	419	935	993	733
At end of year	19,836	16,349	9,918	904	773	419	935	993	733	963

Table 20.22: Notes to Umgeni Water Cashflow Statement (R'ooo)

NOTES TO THE CASHFLOW STATEMENT	F16 Actual	F17 Actual	F18 Actual	F19 Budget	F19	F20	F21 Forecast	F22	F23	F24
RECONCILIATION OF NET PROFIT TO CASH GENERATED FROM OPERATIONS										
Net profit	789,507	751,261	1,182,753	930,991	986,173	1,234,888	1,422,306	1,582,363	1,819,025	2,068,942
Adjust for:										
Amortisation of intangible asset	4,036	8,804	28,407	54,383	27,483	33,691	28,407	18,347	13,667	-
Amortisation of financial asset	2,694	2,754	2,763	2,533	2,533	-	-	-	-	-
Asset Impairments	132,881	57,053	(78,033)	160,764	40,255	17,718	20,120	84,391	108,170	129,586
Depreciation	161,916	173,150	242,694	295,727	285,410	345,100	367,187	390,687	414,128	438,976
Darvill liability amorisation	(3,572)	(3,572)	(3,572)							
Doubtful debts provision	3,805	37,350	13,411							
Fair value of biological assets										
Finance costs	1,161	1,355	1,363	41,466	19,865	19,310	16,878	12,345	12,114	59,175
Interest received	(132,421)	(149,431)	(178,081)	(124,745)	(157,710)	(138,955)	(97,665)	(26,979)	(5,139)	(9,392)
Investment Impairments	(915)	6,424	911							
Increase/(decrease) in Provisions and non-current liabilities	74,960	153,307	124,663	66,310	73,098	78,676	85,170	92,208	99,835	108,102
Profit (loss) on disposal of PPE	4,749	(1,026)	(392)							
Profit (loss) on disposal of non current asset held for sale										
Profit on disposal of shares										
Operating income before changes in working capital	1,038,801	1,037,429	1,336,887	1,427,430	1,277,108	1,590,428	1,842,403	2,153,361	2,461,800	2,795,389
Working capital changes:	113,529	(219,168)	(13,282)	(74,135)	(49,831)	(100,081)	(90,097)	(94,267)	(87,792)	(82,619)
(Increase)/decrease in inventories	(2,653)	(1,014)	(3,221)	(1,120)	(3,383)	(3,567)	(3,749)	(3,940)	(4,141)	(4,352)
(Increase) decrease in accounts receivable	(56,144)	(65,425)	(97,053)	(58,015)	(26,795)	(77,235)	(71,348)	(70,327)	(63,652)	(58,268)
Increase/(decrease) in accounts payable	172,326	(152,729)	86,992	(15,000)	(19,653)	(19,279)	(15,000)	(20,000)	(20,000)	(20,000)
Net Cash generated from operations	1,152,330	818,261	1,323,605	1,353,294	1,227,277	1,490,348	1,752,307	2,059,094	2,374,008	2,712,770

Table 20.23: Income Statement (Msinsi) (R'000)

MSINSI INCOME STATEMENT For the year ended June 30, TOTAL	F16	F17 Actual	F18	F19 Budget	F19	F20	F21 Forecast	F22	F23	F24
Revenue	47,161	49,915	54,952	61,014	59,438	80,239	86,850	94,182	102,329	111,399
Environmental Management Fee	33,127	37,000	40,180	42,189	42,189	54,244	56,957	59,804	62,795	65,934
Tourism & Other Revenue	14,034	12,915	14,772	18,825	17,249	25,994	29,894	34,378	39,534	45,465
Cost of sales	-	-	-	-	-	-	-	-	-	-
Gross profit	47,161	49,915	54,952	61,014	59,438	80,239	86,850	94,182	102,329	111,399
Other operating income	2,489	1,683	912	886	886	813	858	905	955	1,008
Administration Expenses	56,055	64,422	54,945	61,214	59,061	79,409	84,580	90,493	97,368	104,947
Staff Costs	31,203	33,987	34,582	42,241	39,228	48,157	52,010	56,171	60,664	65,517
Depreciation	1,979	3,417	3,713	3,500	3,500	3,850	3,250	2,950	3,135	3,175
Opex spend against equity contribution	0	6,300	0	0	0	0	0	0	0	0
Other operating & administrative expenses	22,873	20,719	16,650	15,473	16,333	27,402	29,320	31,373	33,569	36,254
Operating income before interest	-6,405	-12,824	920	686	1,264	1,643	3,128	4,594	5,916	7,460
Net interest and finance charges	777	-233	-802	-686	-686	-605	-764	-740	-651	-651
Interest Paid	897	975	1,195	936	936	955	914	840	751	751
Interest Received	1,674	742	393	250	250	350	150	100	100	100
Net Profit (Loss)	-5,628	-13,057	117	0	578	1,038	2,364	3,854	5,266	6,809

Table 20.24: Balance Sheet (Msinsi) (R'000)

Msinsi Balance Sheet (in R'000) As at June 30,	F16	F17 Actual	F18	F19 Budget	F19	F20	F21 Forecast	F22	F23	F24
ASSETS										
Non-current assets	22,159	26,216	21,817	19,924	18,462	20,795	21,324	22,007	21,588	21,105
Property, plant and equipment	17,048	21,745	18,388	15,233	15,188	17,338	17,288	17,838	17,203	16,528
Biological Assets	4,911	4,244	3,224	4,515	3,100	3,300	3,865	4,015	4,215	4,415
Intangible Assets	200	227	206	176	174	156	170	153	170	162
Current Assets	28,593	12,063	13,722	9,899	16,266	13,798	14,129	15,171	20,305	26,514
Accounts receivable	1,557	2,349	2,441	1,851	2,222	1,452	1,465	1,500	1,236	1,321
Sundry Debtors	0	0	0	0	0	0	0	0	0	0
Net Intercompany receivable	7,434	6,333	5,558	4,250	7,089	7,100	7,300	7,450	7,550	7,650
Cash and cash equivalents	19,602	3,380	5,723	3,798	6,955	5,246	5,364	6,221	11,519	17,543
Total assets	50,752	38,278	35,539	29,823	34,728	34,593	35,453	37,178	41,893	47,619
Equity	27,606	14,303	14,419	12,089	14,997	16,035	18,399	22,252	27,517	34,325
Share Capital	0	0	0	0	0	0	0	0	0	0
Equity contribution from parent	11,798	2,035	173	0	0	0	0	0	0	0
Accumulated reserves	15,807	12,268	14,246	12,089	14,997	16,035	18,399	22,252	27,516	34,325
Non-current liabilities	14,771	13,041	12,099	8,783	10,921	9,607	8,057	6,507	4,957	3,407
Interest bearing borrowings	0	0	0	0	0	0	0	0	0	0
Non-Interest bearing Loan - UW	14,771	13,041	12,099	8,783	10,921	9,607	8,057	6,507	4,957	3,407
Current liabilities	8,375	10,934	9,021	8,951	8,810	8,951	8,999	8,419	9,421	9,887
Provisions	3,414	3,255	3,889	4,031	3,950	4,031	3,979	4,050	4,191	4,236
Accounts Payable	4,961	7,679	5,133	4,920	4,860	4,920	5,020	4,369	5,230	5,651
Total reserves and liabilities	50,752	38,278	35,539	29,823	34,728	34,593	35,453	37,178	41,893	47,619

Table 20.25: Cashflow Statement (Msinsi) (R'000)

Msinsi Cash Flow Statement For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual	Budget	Forecast					
OPERATING ACTIVITIES										
Operating profit before working capital changes	-4,505	-8,653	6,067	4,046	5,120	5,511	5,999	7,611	9,034	10,643
Changes in working capital	-5,778	2,868	-1,230	-636	-1,524	900	-165	-765	1,166	281
Net cash from operating activities	-10,283	-5,784	4,836	3,410	3,596	6,411	5,834	6,847	10,199	10,924
INVESTING ACTIVITIES										
Additions to property, plant and equipment	-14,882	-8,357	-548	-2,500	-300	-6,000	-3,200	-3,500	-2,500	-2,500
Additions to intangible assets	-60	-323	-201	0	-200	-200	-200	-200	-200	-200
Acquisition of Biological Assets	-510	0	0	0	0	0	0	0	0	0
Proceeds on disposal of biological assets	598	206	0	0	0	0	0	0	0	0
Net cash used in investing activities	-14,855	-8,474	-749	-2,500	-500	-6,200	-3,400	-3,700	-2,700	-2,700
FINANCING ACTIVITIES										
Net change in long-term borrowings	14,771	-1,730	-942	-1,550	-1,177	-1,315	-1,550	-1,550	-1,550	-1,550
Interest received	1,674	742	393	250	250	350	150	100	100	100
Equity Contribution from parent	0	0	0	0	0	0	0	0	0	0
Interest paid	-897	-975	-1,195	-936	-936	-955	-914	-840	-751	-751
Net cash used in financing activities	15,548	-1,963	-1,745	-2,236	-1,863	-1,920	-2,314	-2,290	-2,201	-2,201
CASH AND CASH EQUIVALENTS										
Net increase/(decrease) in cash and cash equivalents	-9,589	-16,221	2,342	-1,326	1,233	-1,709	118	858	5,298	6,024
At beginning of year	29,190	19,602	3,380	5,123	5,723	6,955	5,246	5,364	6,221	11,519
At end of year	19,602	3,380	5,723	3,798	6,955	5,246	5,364	6,221	11,519	17,543

Table 20.26: Notes to the Cashflow Statement (Msinsi) (R'000)

NOTES TO THE CASH FLOW STATEMENT	2016	2017	2018	2019	2019	2020	2021	2022	2023	2024
RECONCILIATION OF NET PROFIT TO CASH GENERATED FROM OPERATIONS	Actual	Actual	Actual	Budget			Forecast			
Net Profit	(5,628)	(13,057)	117	-	578	1,038	2,364	3,854	5,264	6,809
Depreciation	1,979	3,417	3,713	3,500	3,500	3,850	3,250	2,950	3,135	3,175
Write off on biological Assets			87							
Write off on Moveable Assets			192							
Profit /Loss on sale of game	425	(327)								
Biological Assets - Disposal Shongweni			372							
Fair Value Adjustment	(691)	788	562	(200)	124	(200)	(565)	(150)	(200)	(200)
Amortisation	187	294	222	60	232	218	186	217	184	208
Interest received	(777)	(742)	(393)	(250)	(250)	(350)	(150)	(100)	(100)	(100)
Interest paid (net of interest capitalized)		975	1,195	936	936	955	914	840	751	751
Operating Profit before working capital changes	(4,505)	(8,653)	6,067	4,046	5,120	5,511	5,999	7,611	9,034	10,643
Working capital changes	(5,778)	2,868	(1,230)	(636)	(1,524)	900	(165)	(765)	1,166	281
Change in receivables	(1,203)	(792)	(92)	328	219	770	(13)	(35)	264	(85)
Change in accounts payable	124	2,765	(2,545)	60	(273)	60	100	(651)	861	421
Change in Long term provisions		-	-	(1,105)						
Change in Net Intercompany receivable	(6,205)	1,101	775	-	(1,531)	(11)	(200)	(150)	(100)	(100)
Movement In Social Investment	159	(47)	(1)							
Change in provisions	1,348	(158)	633	81	61	81	(52)	71	141	45
Cash Generated from operations	(10,283)	(5,784)	4,837	3,410	3,596	6,411	5,834	6,847	10,199	10,924

Table 20.27: Income Statement (Umgeni Water Services) (R'000)

Income Statement (in R'000) For the year ended June 30, Umgeni Water Services	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual	Budget	Forecast					
Revenue	-	-	-	-	-	-	-	-	-	-
Cost of sales	-	-	-	-	-	-	-	-	-	-
Gross margin/profit	-	-	-	-	-	-	-	-	-	-
Other operating income		-	-							
Administration Expenses	62	50	50	57	57	61	65	70	75	80
Share of profit from associate	4,427	4,995	5,285	-	-	-	-	-	-	-
Operating income before interest	4,365	4,945	5,235	(57)	(57)	(61)	(65)	(70)	(75)	(80)
Net interest and finance charges	232	360	273	-	-	-	-	-	-	-
Interest Paid	-	-	-	-	-	-	-	-	-	-
Interest Received	232	360	273							
Profit before tax	4,597	5,305	5,508							
Taxation	65	101	76							
Net Profit (Loss)	4,532	5,204	5,432	(57)	(57)	(61)	(65)	(70)	(75)	(80)

Table 20.28: Balance Sheet (Umgeni Water Services) (R'000)

Balance Sheet (in R'000) As at June 30,	F16	F17	F18	F19 Budget	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual		Forecast					
ASSETS										
Non-current assets	6,005	6,005	6,005	6,005	6,005	6,005	6,005	6,005	6,005	6,005
Other non-current assets	-	-	-	-	-	-	-	-	-	-
Investments in subsidiaries	6,005	6,005	6,005	6,005	6,005	6,005	6,005	6,005	6,005	6,005
Current Assets	12,039	12,645	18,021	12,645	18,021	18,021	18,021	18,021	18,021	18,021
Total assets	18,044	18,650	24,026	18,650	24,026	24,026	24,026	24,026	24,026	24,026
Reserves	17,891	18,595	19,043	18,595	19,043	19,043	19,043	19,043	19,043	19,043
Accumulated reserves and Share capital	17,891	18,595	19,043	18,595	19,043	19,043	19,043	19,043	19,043	19,043
Non-current liabilities	55	55	-	55	-	-	-	-	-	-
Other non-current liabilities	55	55	-	55	-	-	-	-	-	-
Current liabilities	98	-	4,983	-	4,983	4,983	4,983	4,983	4,983	4,983
Accounts payable (including accruals and leases)	98	-	4,983	-	4,983	4,983	4,983	4,983	4,983	4,983
Total reserves and liabilities	18,044	18,650	24,026	18,650	24,026	24,026	24,026	24,026	24,026	24,026

Table 20.29: Group Income Statement (R'000)

Group Income Statement (in R'000) For the year ended June 30,	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual	Budget group	Forecast group	group	group	group	group	group
Volume of Bulk treated water sold (in kl'000)	435,726	410,506	434,568	451,729	461,700	509,862	526,026	534,689	542,709	550,850
Revenue	2,377,323	2,509,520	2,903,723	2,999,414	3,470,583	4,190,854	4,703,681	5,219,804	5,770,493	6,379,454
Water Sales - Bulk	2,131,170	2,185,939	2,665,412	2,758,580	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
Water Sales - Raw Water	780	748	662	1,272	830	1,156	1,260	1,373	1,496	1,631
Wastewater O&M	39,437	52,673	61,586	81,477	67,767	73,887	82,753	91,856	98,286	105,166
Wastewater Management Fee	76,898	92,035	110,177	110,387	131,923	151,424	174,137	200,258	220,284	242,312
Section 30 activities	129,038	178,125	65,887	47,698	49,455	63,410	57,346	63,425	70,270	77,991
Cost of sales	1,040,845	1,178,925	1,191,532	1,325,084	1,379,979	1,797,593	1,940,138	2,082,030	2,267,062	2,470,301
Changes in water inventory	698	(823)	(438)	-	-	-	-	-	-	-
Chemicals	51,742	62,516	65,453	83,537	80,138	120,886	132,974	146,271	160,899	176,989
Depreciation	129,421	133,698	166,858	207,861	204,443	245,176	260,867	277,563	294,217	311,870
Energy	199,086	226,894	257,361	317,628	297,079	422,373	458,697	484,843	545,448	613,629
Maintenance	154,765	174,586	192,480	215,704	231,306	331,208	352,405	374,959	397,456	421,304
Raw Water	164,578	180,160	209,126	229,013	234,218	259,460	294,264	329,453	368,416	412,044
Staff Costs	183,312	150,942	220,675	211,513	261,658	335,453	358,935	382,625	409,026	437,249
Section 30 activities	108,063	205,421	41,602	20,663	24,517	28,728	24,131	25,579	27,113	28,740
Other direct operating activities	49,181	45,531	38,415	39,164	46,621	54,310	57,865	60,738	64,487	68,477
Gross profit	1,336,478	1,330,595	1,712,191	1,674,330	2,090,604	2,393,261	2,763,543	3,137,774	3,503,432	3,909,153
	56%	53%	59%	56%	60%	57%	57%	57%	57%	57%
Other operating income	36,881	32,503	13,746	8,299	5,086	5,023	4,258	4,305	4,355	4,408
Administration Expenses	728,800	770,098	719,176	949,539	1,246,154	1,281,460	1,423,219	1,569,827	1,675,946	1,787,456
Staff Costs	289,734	354,753	371,710	341,729	437,952	462,757	440,155	469,933	502,976	538,349
Energy	6,315	6,265	6,928	7,988	7,329	8,875	9,638	10,188	11,461	12,894
Depreciation	26,207	37,356	72,738	69,145	84,468	103,774	109,570	116,074	123,046	130,281
Amortization	6,730	11,856	31,392	18,334	30,015	33,691	28,407	18,347	13,667	-
Impairments	132,881	57,872	(78,033)	107,718	40,255	17,718	20,120	84,391	108,170	129,586
Maintenance	14,060	15,457	20,215	16,715	19,368	24,424	25,987	27,650	29,309	31,068
Retirement Benefits	60,119	65,600	64,902	117,674	114,851	124,605	135,692	147,781	160,966	175,347
Performance bonus	-	-	-	-	-	-	-	-	-	-
Other operating & administrative expenses	192,753	308,262	229,324	270,235	511,916	505,616	653,651	695,462	726,349	769,932
Operating income before interest	644,559	593,001	1,006,761	733,089	849,535	1,116,824	1,344,582	1,572,253	1,831,841	2,126,105
Net interest and finance charges	(132,269)	(148,202)	(176,189)	(14,031)	(137,158)	(119,041)	(80,022)	(13,895)	7,626	50,433
Interest Paid	1,185	1,399	1,718	66,264	19,865	19,310	16,878	12,345	12,114	59,175
Interest Received	(133,454)	(149,601)	(177,907)	(80,295)	(157,024)	(138,350)	(96,901)	(26,239)	(4,488)	(8,742)
Share of profit from associate	4,427	4,995	5,285	-	-	-	-	-	-	-
Profit before Taxation	781,255	746,198	1,188,235	747,120	986,694	1,235,865	1,424,604	1,586,147	1,824,215	2,075,671
Taxation	(65)	(101)	(76)	-	-	-	-	-	-	-
Net Profit (Loss)	781,190	746,097	1,188,159	747,120	986,694	1,235,865	1,424,604	1,586,147	1,824,215	2,075,671
Other Comprehensive Income	-	-	-	-	-	-	-	-	-	-
- Retirement Benefit adjustment (IAS 19)	(36,540)	93,472	82,070	-	-	-	-	-	-	-
Other Comprehensive Income for the year	-	-	-	-	-	-	-	-	-	-
Total comprehensive income for the year	744,650	839,569	1,270,229	747,120	986,694	1,235,865	1,424,604	1,586,147	1,824,215	2,075,671

Table 20.30: Group Balance Sheet (R'000)

Group Balance Sheet (in R'000) As at June 30,	F16	F17	F18	F19	F19	F'20	F'21	F'22	F'23	F'24
	Actual	Actual	Actual	Budget group	Forecast group	Forecast group	Forecast group	Forecast group	Forecast group	Forecast group
ASSETS										
Non-current assets	7,452,095	8,152,485	8,859,177	9,987,310	10,231,229	11,565,457	12,985,358	14,864,900	16,890,421	19,682,051
Property, plant and equipment	7,043,119	7,774,146	8,324,248	9,440,791	9,714,657	11,032,473	12,939,261	14,835,467	16,865,234	19,333,883
Intangible assets	96,002	133,140	121,802	126,969	94,286	60,578	32,185	13,820	170	162
Other non-current assets	11,827	9,018	3,224	4,515	3,100	3,300	3,865	4,015	4,215	4,415
Investments - Financial Instruments	295,142	230,175	403,898	406,528	412,003	460,609	-	-	7,655	328,894
Investments in subsidiaries and associates	6,005	6,005	6,005	8,506	7,183	8,497	10,047	11,597	13,147	14,697
Assets held for sale	-	-	-	-	-	-	-	-	-	-
Current Assets	2,105,648	2,070,839	2,679,861	2,125,366	2,268,353	2,201,227	1,625,412	1,378,728	1,274,479	1,343,465
Inventories	14,721	15,735	18,955	17,920	22,338	25,904	29,653	33,593	37,733	42,085
Accounts receivable	302,593	341,269	407,583	437,119	445,908	523,143	594,491	664,818	728,470	786,737
Sundry Debtors	96,183	86,618	106,683	98,587	95,474	94,610	94,973	95,108	95,029	95,143
Short-term investments	1,619,900	1,566,715	2,076,596	1,523,982	1,642,577	1,497,577	845,665	523,665	346,665	346,665
Interest Receivable	28,366	35,585	43,952	37,969	43,953	43,953	43,953	43,953	43,953	43,953
Bank balances and cash	43,885	24,917	26,092	9,790	18,103	16,040	16,676	17,590	22,629	28,881
Total assets	9,557,743	10,223,325	11,539,038	12,112,676	12,499,582	13,766,684	14,610,770	16,243,628	18,164,900	21,025,516
Reserves										
Accumulated reserves	5,983,758	6,823,327	8,088,510	8,728,845	9,075,210	10,311,136	11,735,807	13,322,023	15,146,313	17,222,063
Non-current liabilities	2,571,252	2,523,549	2,477,721	2,559,921	2,520,586	1,969,820	2,030,152	2,097,521	2,172,517	2,255,781
Interest bearing borrowings	1,950,770	1,871,914	1,792,901	1,762,668	1,762,668	1,133,226	1,108,388	1,083,549	1,058,710	1,033,872
Post retirement medical benefit obligations	592,284	569,405	554,850	692,458	627,948	706,624	791,794	884,002	983,837	1,091,940
Long term provisions		39,120	34,102	61,684	34,102	34,102	34,102	34,102	34,102	34,102
Other Non Current Liabilities	28,198	43,110	95,868	43,110	95,868	95,868	95,868	95,868	95,868	95,868
Current liabilities	1,002,733	876,448	972,806	823,910	903,785	1,485,728	844,811	824,083	846,071	1,547,671
Accounts payable (including accruals & leases)	776,470	626,453	717,568	604,192	699,990	680,666	665,916	645,215	626,161	606,511
Provisions	88,780	113,727	120,199	114,504	120,261	120,342	120,290	120,361	120,502	120,547
Current portion of interest bearing loans	78,618	78,810	79,011	29,222	29,222	629,442	24,839	24,839	65,839	787,839
Other payables/loans	58,865	57,458	56,028	75,992	54,312	55,277	33,767	33,668	33,569	32,775
Total reserves and liabilities	9,557,743	10,223,325	11,539,038	12,112,675	12,499,582	13,766,684	14,610,770	16,243,628	18,164,901	21,025,516

Table 20.31: Group Cashflow Statements (R'000)

Group Cash Flow Statement (in R'000) For the year ended June 30,	F'16	F'17	F'18	F'19	F'19	F'20	F'21	F'22	F'23	F'24
	Actual	Actual	Actual	Budget group	Forecast group	Forecast group	Forecast group	Forecast group	Forecast group	Forecast group
OPERATING ACTIVITIES										
Operating profit before working capital changes	1,029,703	1,024,081	2,820,651	1,431,419	1,282,208	1,595,878	1,848,337	2,160,902	2,470,759	2,805,952
Changes in working capital	110,906	(211,856)	(1,486,528)	(74,714)	(51,412)	(99,120)	(90,196)	(94,961)	(86,551)	(82,258)
Net cash from operating activities	1,140,609	812,225	1,334,123	1,356,705	1,230,796	1,496,758	1,758,141	2,065,941	2,384,207	2,723,694
INVESTING ACTIVITIES										
Additions to property, plant and equipment	(1,978,099)	(1,126,025)	(972,292)	(1,652,308)	(1,655,620)	(1,510,698)	(2,145,439)	(2,263,133)	(2,446,173)	(2,933,168)
Additions to intangible assets	(55,707)	(46,240)	(17,290)	-	(200)	(200)	(200)	(200)	(200)	(200)
Additions to biological assets	(510)	-	-	-	-	-	-	-	-	-
Proceeds on disposal of Property, plant & equipment	2,457	1,845	392	-	-	-	-	-	-	-
Proceeds on disposal of Biological Assets	598	206	-	-	-	-	-	-	-	-
Grant Funding	280,016	371,056	454,741	573,431	114,783	-	-	-	-	-
Increase of intercompany borrowings	-	-	-	1,783	-	-	-	-	-	-
Net cash used in investing activities	(1,751,245)	(799,158)	(534,449)	(1,077,094)	(1,541,037)	(1,510,898)	(2,145,639)	(2,263,333)	(2,446,373)	(2,933,368)
FINANCING ACTIVITIES										
Net change in long-term borrowings	858,153	(78,619)	(78,810)	(80,562)	(80,189)	(30,537)	(630,992)	(26,389)	(26,389)	(26,389)
New Debt proposed	-	-	-	-	-	-	-	-	-	-
Net Investments - LTI & RED	(236,593)	156,296	(641,317)	(84,000)	469,000	145,000	894,876	322,000	169,551	(311,847)
Proceeds on disposal of available for sale investments	-	-	-	-	-	-	-	-	41,000	722,000
Equity Contribution from parent	-	-	-	-	-	-	-	-	-	-
Net interest (Paid) received	(4,972)	(109,713)	(78,372)	(115,882)	(86,559)	(102,387)	124,250	(97,305)	(116,957)	(167,837)
Interest received	106,367	103,989	126,860	124,995	157,960	139,305	97,815	27,079	5,239	9,492
Deferred interest amortized	-	-	-	(198,474)	(223,717)	(221,428)	44,227	(111,200)	(109,331)	(117,404)
Interest paid	(111,339)	(213,702)	(205,232)	(42,403)	(20,801)	(20,265)	(17,792)	(13,185)	(12,865)	(59,925)
Net Repo & Market-making	-	-	-	-	-	-	-	-	-	-
Net cash used in financing activities	616,588	(32,036)	(798,499)	(280,444)	302,253	12,076	388,134	198,306	67,205	215,927
CASH AND CASH EQUIVALENTS										
Net increase/(decrease) in cash and cash equivalents	5,952	(18,969)	1,175	(835)	(7,989)	(2,064)	636	914	5,038	6,253
At beginning of year	37,933	43,886	24,917	10,625	26,092	18,103	16,040	16,676	17,590	22,629
At end of year	43,885	24,917	26,092	9,790	18,103	16,040	16,676	17,590	22,629	28,881

Table 20.32: Group Notes to the Cashflow Statements (R'ooo)

NOTES TO THE CASHFLOW STATEMENT RECONCILIATION OF NET PROFIT TO CASH GENERATED FROM OPERATIONS	F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
	Actual	Actual	Actual	Budget		Forecast				
NET PROFIT	781,190	746,097	1,188,159	930,933	986,732	1,235,865	1,424,604	1,586,147	1,824,214	2,075,671
Adjust for:										
Amortisation of intangible asset	4,222	9,103	28,629	54,443	27,715	33,909	28,593	18,564	13,851	208
Amortisation of financial asset	2,694	2,754	2,762	2,533	2,533	0	0	0	0	0
Asset Impairments	132,881	57,053	-77,122	160,764	40,255	17,718	20,120	84,391	108,170	129,586
Depreciation	163,997	176,601	246,464	299,227	288,910	348,950	370,437	393,637	417,263	442,151
Darville liability amortisation	-3,572			0	0	0	0	0	0	0
Doubtful debts provision	3,805	37,350	13,411							
Fair value adjustment of biological assets	-691	788	562	0	0	0	0	0	0	0
Finance costs	1,185	1,399	1,719	42,403	20,801	20,265	17,793	13,185	12,865	59,925
Interest received	-133,454	-149,601	-177,907	-124,995	-157,960	-139,305	-97,815	-27,079	-5,239	-9,492
Profit from associate	-4,427	-4,995	-5,285							
Increase/(decrease) in Provisions and non-current liabilities	76,699	153,149	125,296	66,310	73,098	78,676	85,170	92,208	99,835	108,102
Profit (loss) on disposal of PPE	4,749	-1,026	-200	0	0	0	0	0	0	0
Profit (loss) on sale of biological assets	425	-1,013		0	0	0	0	0	0	0
(Profit) loss on disposal of Non current asset held for sale				0	0	0	0	0	0	0
tax paid/income tax expense		-4	-64		101					
Other adjustment		-3,572	-3,100	2	23	-200	-565	-150	-200	-200
Operating income before changes in working capital	1,029,703	1,024,081	1,343,324	1,431,419	1,282,208	1,595,878	1,848,337	2,160,902	2,470,759	2,805,952
Working capital changes:	110,907	-211,856	-9,201	-74,714	-51,412	-99,120	-90,196	-94,961	-86,551	-82,258
(Increase)/decrease in inventories	-2,653	-1,014	-3,220	-1,120	-3,383	-3,567	-3,749	-3,940	-4,141	-4,352
(Increase) decrease in accounts receivable	-53,109	-67,804	-96,112	-58,792	-28,107	-76,476	-71,561	-70,512	-63,488	-58,453
Increase/(decrease) in accounts payable	166,669	-143,039	90,131	-14,802	-19,922	-19,077	-14,886	-20,510	-18,923	-19,454
Increase/(decrease) in intercompany loan (UWS)										
Net Cash generated from operations	1,140,610	812,225	1,334,123	1,356,705	1,230,796	1,496,758	1,758,141	2,065,941	2,384,207	2,723,694

Table 20.33: Segmental Report (R'000)

Segmental Report (in R'000) For the year ended June 30,	F17				F18				F19				F20			
	Primary		S30	Total	Primary		S30	Total	Primary		S30	Total	Primary		S30	Total
	Bulk Water	Waste Water			Bulk Water	Waste Water			Bulk Water	Waste Water			Bulk Water	Waste Water		
Volume sold	409,887			409,887	434,568			434,568	461,700			461,700	509,862			509,862
Revenue	2,186,687	144,708	178,125	2,509,520	2,666,074	171,762	65,887	2,903,723	3,221,437	199,690	49,455	3,470,583	3,902,134	225,311	63,410	4,190,854
Cost of sales	-937,002	-88,183	-	-1,178,926	-1,050,716	-96,524	-	-1,191,532	-1,243,923	-110,027	26,029	-1,379,979	-1,635,009	-132,459	30,125	-1,797,593
Changes in water inventory		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chemicals	-57,294	-5,222	0	-62,516	-59,585	-5,868	0	-65,453	-74,588	-5,550	0	-80,138	-112,338	-8,547	0	-120,886
Depreciation	-131,435	-2,263	0	-133,698	-164,403	-2,455	0	-166,858	-202,181	-2,262	0	-204,443	-233,269	-11,907	0	-245,176
Energy	-208,402	-18,493	0	-226,894	-235,600	-21,761	0	-257,361	-268,413	-28,667	0	-297,079	-390,436	-31,937	0	-422,373
Maintenance	-155,257	-17,191	-2,138	-174,586	-169,695	-20,647	-2,138	-192,480	-209,761	-20,684	-861	-231,306	-307,625	-22,829	-753	-331,208
Raw water	-180,160	0	0	-180,160	-209,126	0	0	-209,126	-234,218	0	0	-234,218	-259,460	0	0	-259,460
Section 30 activities	0	0	150,942	-150,942	0	0	41,602	-41,602	0	0	-24,517	-24,517	0	0	28,728	-28,728
Staff costs	-174,564	-30,405	-451	-205,420	-187,035	-33,145	-495	-220,675	-222,020	-39,046	-592	-261,658	-292,798	-42,074	-582	-335,453
Other direct operating expenses	-29,890	-14,609	-209	-44,708	-25,273	-12,647	-57	-37,978	-32,743	-13,818	-59	-46,621	-39,083	-15,164	-63	-54,310
Gross profit	1,249,684	56,525	24,385	1,330,594	1,615,357	75,239	21,595	1,712,191	1,977,514	89,664	23,426	2,090,604	2,267,125	92,852	33,284	2,393,261
Other income	25,975	4,057	2,471	32,503	8,573	3,695	1,478	13,746	3,900	300	886	5,086	3,900	310	813	5,023
Other operating and administration expenses	-712,565	-15,543	-41,990	-770,098	-678,086	-23,742	-17,349	-719,176	-1,195,315	-32,941	-17,898	-1,246,154	-1,217,709	-37,519	26,233	-1,281,460
Amortisation	-11,558	0	-298	-11,856	-31,170	0	-222	-31,392	-30,015	0	0	-30,015	-33,691	0	0	-33,691
Impairments and write-offs	-41,885	0	-15,987	-57,872	78,033	0	0	78,033	-40,255	0	0	-40,255	-17,718	0	0	-17,718
Depreciation	-33,246	-660	-3,450	-37,355	-67,838	-1,130	-3,770	-72,738	-80,008	-960	-3,500	-84,468	-99,122	-802	-3,850	-103,774
Other expenses	-625,876	-14,883	-22,255	-663,014	-657,110	-22,612	-13,357	-693,079	1,045,037	-31,981	14,398	-1,091,416	-1,067,178	-36,717	22,383	-1,126,277
Profit from operations	563,094	45,039	-15,134	593,000	945,845	55,192	5,724	1,006,761	786,099	57,023	6,414	849,535	1,053,316	55,643	7,865	1,116,824
Interest income	149,431	0	170	149,601	178,081	0	-174	177,907	157,710	0	-686	157,024	133,238	0	5,112	138,350
Finance costs	-1,290	-66	-44	-1,399	-1,774	411	-355	-1,718	-16,332	-3,533	0	-19,865	1,185	-20,495	0	-19,310
Share of profit from associate	0	0	4,995	4,995	0	0	5,285	5,285	0	0	0	0	0	0	0	0
Profit before tax	711,236	44,973	-10,013	746,197	1,122,152	55,603	10,480	1,188,235	927,476	53,490	5,728	986,694	1,187,740	35,148	12,977	1,235,865
Taxation			-101	-101			-76	-76				0				0
Profit for the year	711,236	44,973	-10,114	746,096	1,122,152	55,603	10,404	1,188,159	927,476	53,490	5,728	986,694	1,187,740	35,148	12,977	1,235,865
Capital expenditure	958,499	204,201	9,566	1,172,266	800,588	187,612	1,382	989,582	1,518,765	136,355	500	1,655,620	1,963,754	175,484	6,200	2,145,439
Segment assets	7,100,294	1,095,329	139,550	8,335,173	8,714,301	132,499	111,112	8,957,912	9,340,912	265,633	108,112	9,714,657	10,493,603	428,408	110,462	11,032,473
Interest in associate	0	0	6,005	6,005	0	0	6,005	6,005	0	0	7,183	7,183	0	0	8,497	8,497
Investments	1,654,032	0	142,858	1,796,890	2,336,923	0	143,571	2,480,494	2,054,580	0	0	2,054,580	1,958,185	0	0	1,958,185
Unallocated				85,255				94,627				723,162				767,529
Consolidated total assets				10,223,324				11,539,038				12,499,582				13,766,684
Segment liabilities	1,947,188	3,536	134,342	2,085,066	779,912	1,092,000	122,354	1,994,266	2,438,047	979,000	10,921	3,427,968	2,453,188	995,000	9,607	3,457,795
Unallocated				1,314,931				1,456,261				-3,597				-2,247
Consolidated total liabilities				3,399,997				3,450,527				3,424,372				3,455,548

21.10 Capital Expenditure Programme

The capital expenditure programme is integral to the execution of Umgeni Water's growth and water services delivery strategy and is thus a significant component of Umgeni Water's Business Plan. The capital infrastructure programme is based on Umgeni Water's Infrastructure Master Plan which is aligned to the KZN Bulk water supply plan. Umgeni water's Infrastructure Master Plan is updated annually and outlines the organisation's future bulk infrastructure requirements to meet the regional demands. The capital infrastructure programme is drawn from this Master Plan and structured according to the provincial and local strategic priorities.

In drafting this Infrastructure Master Plan Umgeni Water takes into consideration customer IDPs & WSDPs whilst aligning development with government's Provincial Growth and Development Strategy (PGDS). In addition, Umgeni Water meets regularly with its customers to ensure that this alignment is current.

Table 20.34: Summary of Capex Cashflow to 2024 (R'000)

CASHFLOWS UNESCALATED								
CAPEX CATEGORY	Actual F'18	Total 2019 - 2024	Forecast					
			F19	F20	F21	F22	F23	F24
	R'000	R'000	R'000	R'000	R'000	R'000	R'000	R'000
AUGMENTATION	139,588	3,554,193	76,426	124,407	420,255	563,738	803,558	1,565,810
EXPANSION	46,109	272,796	27,739	15,085	61,151	66,974	22,561	79,286
UPGRADE	292,502	2,136,110	534,151	459,419	607,605	378,902	114,080	41,953
REHABILITATION	81,877	918,502	322,479	348,150	201,473	46,400	-	-
DEVELOPMENT PROJECTS	366,558	3,276,522	456,592	407,948	517,712	730,781	855,974	307,515
IMMOVABLE	926,633	10,158,124	1,417,387	1,355,009	1,808,197	1,786,795	1,796,173	1,994,563
Business plan 2018/19		12,134,467	1,580,469	2,626,904	1,675,104	1,635,873	2,147,746	2,468,371
% Increase / (Decrease)		-16%	-10%	-48%	8%	9%	-16%	-19%
EQUIPMENT & VEHICLES	1,457	130,632	62,900	65,731	2,000	-	-	-
ICT	49,964	239,597	150,150	79,447	10,000	-	-	-
LABORATORY & PROCESS SERVICES	3,463	39,265	24,883	4,510	2,898	6,974	-	-
MOVABLE	54,884	409,494	237,933	149,688	14,898	6,974	-	-
Business plan 2018/19		102,701	69,339	9,490	4,898	6,974	2,000	10,000
% Increase / (Decrease)		299%	243%	1477%	204%	0%	-100%	-100%
TOTAL CAPITAL BUDGET	981,516	10,567,618	1,655,320	1,504,698	1,823,095	1,793,769	1,796,173	1,994,563
Business plan 2018/19		12,237,168	1,649,808	2,636,394	1,680,002	1,642,847	2,149,746	2,478,371
Increase / (Decrease)		-1,669,550	5,512	-1,131,696	143,093	150,923	-353,573	-483,808
% Increase / (Decrease)		-14%	0%	-43%	9%	9%	-16%	-20%
CASHFLOWS ESCALATED								
SUMMARY OF ESCALATED BUDGET		Total 2019 - 2024	F19	F20	F21	F22	F23	F24
IMMOVABLE BUDGET		12,522,317	1,417,387	1,355,009	2,124,732	2,250,847	2,443,673	2,930,668
MOVABLE BUDGET		413,913	237,933	149,688	17,507	8,785	-	-
TOTAL CAPITAL BUDGET		12,936,230	1,655,320	1,504,698	2,142,239	2,259,633	2,443,673	2,930,668

21.10.1. Major movements from the 2019 Corporate Plan

Table 20.35: Analysis of change in project total and 5 year cashflow investment

CAPEX CATEGORY	Project Total		Cashflows F'19 - F'24		Comparison of Project Total	Comparison of 5Yr Cashflows F'19-F'24
	Corporate Plan 2019	Corporate Plan 2020	Corporate Plan 2019	Corporate Plan 2020	CP 2019 vs CP2020 Increase / (Decrease)	CP 2019 vs CP 2020 Increase / (Decrease)
	R'000	R'000	R'000	R'000	R'000	R'000
Augmentation	10,837,677	11,897,595	6,347,949	3,554,193	1,059,919	-2,793,756
Expansion	661,868	755,195	224,257	272,796	93,327	48,539
Upgrade	3,679,819	3,460,791	1,608,962	2,136,110	-219,028	527,148
Rehabilitation	1,035,253	1,062,468	808,709	918,502	27,556	109,793
Development Projects	6,413,797	6,441,150	3,144,589	3,276,522	27,353	131,933
Equipment & Vehicles	96,792	147,632	55,889	130,632	50,839	74,743
ICT	258,658	261,340	25,500	239,597	2,682	214,097
Lab & Process Services	42,090	40,232	21,312	39,265	-1,858	17,953
	23,025,955	24,066,402	12,237,168	10,567,618	1,040,789	-1,669,550

Whilst the capex plan is pursuant to the KZN Bulk water supply plan, it is also prioritised and balanced in terms of projects that will provide the necessary return to ensure the continued financial viability. These are the investments in Augmentation, Expansion and Upgrade projects. Over the next 5 years, there will be increased focus on the following key projects:

Table 20.36: Major Projects

	Project description	Project total	F'19 to F'24	F'20 Spend	Stage of completion based on gate review
		R'000	R'000	R'000	
1	uMkhomazi Water Project	6,132,242	1,755,675	10,000	Gate 4 – Feasibility
2	Lower Mkomazi Bulk Water Scheme	4,209,698	1,664,352	60,154	Gate 5 – Design Development
3	Greater Mpofana Regional Scheme Phases 1	757,342	270,191	102,985	Gate 7 - In construction
4	uMshwathi Ph 4 - Southern Ndwedwe	677,499	520,959	20,000	Gate 6 - Design Development
5	Vulindlela PS and Reservoir	348,986	344,396	50,000	Gate 6 - Design Development
6	Mpophomeni WWW	388,777	370,220	56,410	Gate 6 - Design Development
7	Mpofana WWW Upgrade	330,300	330,187	5,930	Gate 3 - Pre-Feasibility
8	Rehabilitation of Aqueduct No 1,2,3 &4/DBN Hts/Wiggins	551,450	541,009	243,775	No Gate review performed but at Tender stage
9	Dbn Hgts old and new degroment filter Floors	220,000	220,000	0	No gate review done but only to be procured in 2021
10	Ndwedwe Pumps (Plant and outstations)	127,331	127,316	81,635	No gate review done
11	Wiggins High Lift Pump Station	113,307	112,066	58,610	Gate 5 - Design Development
12	Maphumulo Phase 3 : 6MI WW	199,713	193,446	79,884	Gate 5 – Design Development
13	Howick West Reservoir Upgrade (16MI)	108,449	102,824	45,953	Gate 6 - Design Development
14	Mobile Plant & Vehicles	75,723	75,723	47,415	No gate review
15	Software	76,991	76,991	45,158	No gate review – in terms of approved ICT strategy

Table 20.37: Major movements between project totals (2019 CP vs 2020 CP)

The following projects have led to an increase in the **project totals** since the 2019 CP:

CAPEX CATEGORY	Corporate plan 2019 vs Corporate Plan 2020 Increase / (Decrease)	New Project	Scope Changes	Revision of Estimate based on stage of Project	Cancellation
	R'000	R'000	R'000	R'000	R'000
Lower Mkomazi Bulk Water Scheme	1,315,903			1,315,903	
Lower Thukela BWS - Phase 2	488,880			488,880	
Mhlabatshane Sub-Regional Scheme Ph 2	130,908			130,908	
uMshwathi Ph 5 - Central Ndwedwe	-227,300				-227,300
Dbn Hgts old and new degroment filter	220,000	220,000			
Dbn Hts WW: Filter Upgrade	-726,478				-726,478
Hydropower unit on MMTS 2	-99,595				-99,595
Darvill WWW: Co Generation	-74,034		-74,034		
Other Projects	12,505			12,505	
TOTAL CAPEX	1,040,789	220,000	-74,034	5,948,196	-1,053,373

Table 20.38: Major movements between five year cashflows (2019 CP vs 2020 CP)

The decrease in the **5 year cashflows** since the 2019 CP is due to the following projects:

CAPEX CATEGORY	Corporate 2019 vs Corporate Plan 2020 Increase / (Decrease)	New Project	Scope Changes	Revision of Estimate based on stage of Project	Project Acceleration (Delay)	Cancellation
	R'000	R'000	R'000	R'000	R'000	R'000
uMkhomazi Water Project	-1,456,575				-1,456,575	
Lower Mkomazi Bulk Water Scheme	-1,214,654				-1,214,654	
Hydropower unit on MMTS 2	-99,595					-99,595
Impendle- Stepmore	163,114			163,114		
uMshwathi Ph 4 - Southern Ndwedwe	-149,497				-149,497	
uMshwathi Ph 6	93,000				93,000	
Lower Thukela BWS - Phase 2	320,763			320,763		
Maphumulo Phase 3 : 6MI WW	102,835				102,835	
Mhlabatshane Sub-Regional Scheme Ph 2	51,371			51,371		
Trust Feeds WWTW	56,552				56,552	
uMshwathi Ph 5 - Central Ndwedwe	-194,900					-194,900
Darvill WWW: Co Generation	-70,362			-70,362		
Dbn Hgts old and new degroment filter	220,000	220,000				
Dbn Hgts Shaft Pumps (4 New)	-85,915				-85,915	
Dbn Hgts: Pump Stations	116,536		116,536			
Dbn Hts WW: Filter Upgrade	-110,077					-110,077
Hazelmere Pumps (Capacity Upgrade)	50,100		50,100			
Nagle Dam. Upgrade Ring Main unit at Turbines	-51,000					-51,000
Ndwedwe Pumps (Plant and outstations)	93,663		93,663			
Software	68,491	68,491				
SAP Analytics Implementation	80,000	80,000				
Other	346,598	33,000	41,459	272,139		
TOTAL CAPEX	-1,669,550	401,491	301,759	737,026	-2,654,254	-455,572

21.10.2. Costing for Developmental Mandates

In response to customer water demands and the need to eliminate water service delivery backlogs, a capital expenditure programme of approximately R6.4bn has been planned for rural development. The value of Developmental projects is R3.3bn for 5 years and represents 31% of the 2019/20 to 2023/24 capex programme.

Due to their developmental nature, there is a need for government support via subsidy or grant funding to support part of the social component of these projects which cannot be recovered through the existing tariff structure. The social component carried by Umgeni Water is reflected in the statement of profit and loss as impairments. These impairments are recognized during the construction period and reflected in work in progress on a progressive basis.

Projected funding mix for rural developmental projects

The following table illustrates the required funding mix for the Rural Development (Excl. Vat and Interest).

Table 20.39: Projected Funding mix for development projects (R'000)

Project	Total capital cost		Targeted Funding mix			
	R'000		Grant Funding		Umgeni Water	Total
			R'000	%	R'000	R'000
PROJECT IN PROGRESS						
Greater Mpofana Regional Scheme Phases 1	757,342	441,935	58%	315,407	757,342	
Greater Mpofana Regional Scheme Phases 2	75,052	75,052	100%		75,052	
Impendle- Nzinga	292,205	292,205	100%		292,205	
Impendle- Stepmore	108,656	108,656	100%		108,656	
uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1,2 & 3)*	115,321	64,580	56%	50,741	115,321	
uMshwathi Ph 4 - Southern Ndwedwe	677,500	379,400	56%	298,100	677,500	
uMshwathi Ph 6	151,000	84,560	56%	66,440	151,000	
Lower Thukela BWS – Phase 1*	51,033	30,109	59%	20,924	51,033	
Lower Thukela BWS - Phase 2	773,040	773,040	100%		773,040	
Maphumulo Phase 3 : 6MI WW	298,278	298,278	61%		298,278	
Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu River abstraction	570,806	570,806	100%		570,806	
Umbumbulu Pump Station	84,551	84,551	100%		84,551	
Umbumbulu PL Augmentation	903,500	903,500	100%		903,500	
Table Mountain BWS (PL, PS and 3MI Reservoir)	152,372	152,372	100%		152,372	
Vulindlela PS and Reservoir	348,986	348,986	100%		348,986	
Wartburg to Bruyns Hill Pipeline	127,616	127,616	100%		127,616	
Mpophomeni WWW	388,777	388,777	100%		388,777	
Mpofana WWW Upgrade	330,300	330,300	100%		330,300	
Mkhambathini WWW	4,727	0	0%	100%	4,727	
Trust Feeds WWTW	103,302	0	0%	100%	103,302	
Mpophomeni Sewer Outfall	39,131	0	0%	100%	39,131	
N3 Corridor WWTW	54,452	0	0%	100%	54,452	
Cedara – Khanya Village WWTW	34,201	0	0%	100%	34,201	
TOTAL	6,441,150	5,454,723	85%	751,612	6,441,150	

Impairment of development projects – Umgeni Water's investment in the social component of developmental projects

In accordance with IAS 36, the carrying amounts of non-financial assets should be reviewed to determine whether there is any indication that the carrying value may not be recoverable and whether those assets should be impaired. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss.

The recoverable amount is the higher of the assets fair value less costs to sell and its value in use. In Terms of International Financial Reporting Standards: (IFRS) IAS 36 Impairment of Assets - An item of property, plant, or equipment shall not be carried at more than recoverable amount. Recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. The impairment reflects the social component funded by Umgeni Water

Table 20.40: Progressive Impairments (R'000)

Project	% Impairment	TOTAL	to 2018 actual	2019	2020	2021	2022	2023	2024	2025 onward
1. Greater Mpofana	9%	72,999	87,536	-36,870	13,558	8,774				
2. Impendle	2%	14,960	989	-749	651	1,008	1,457	2,306	3,693	5,605
3. Mhlabatshane Sub-Regional Scheme Ph 2	64%	680,678	3,765	3,568	3,509	10,338	82,934	105,865	125,893	344,807
TOTAL IMPAIRMENT CP 2020		768,637	92,290	-34,050	17,718	20,120	84,391	108,170	129,586	350,412

21.10.3. Summary of major capital investments 2019 to 2024

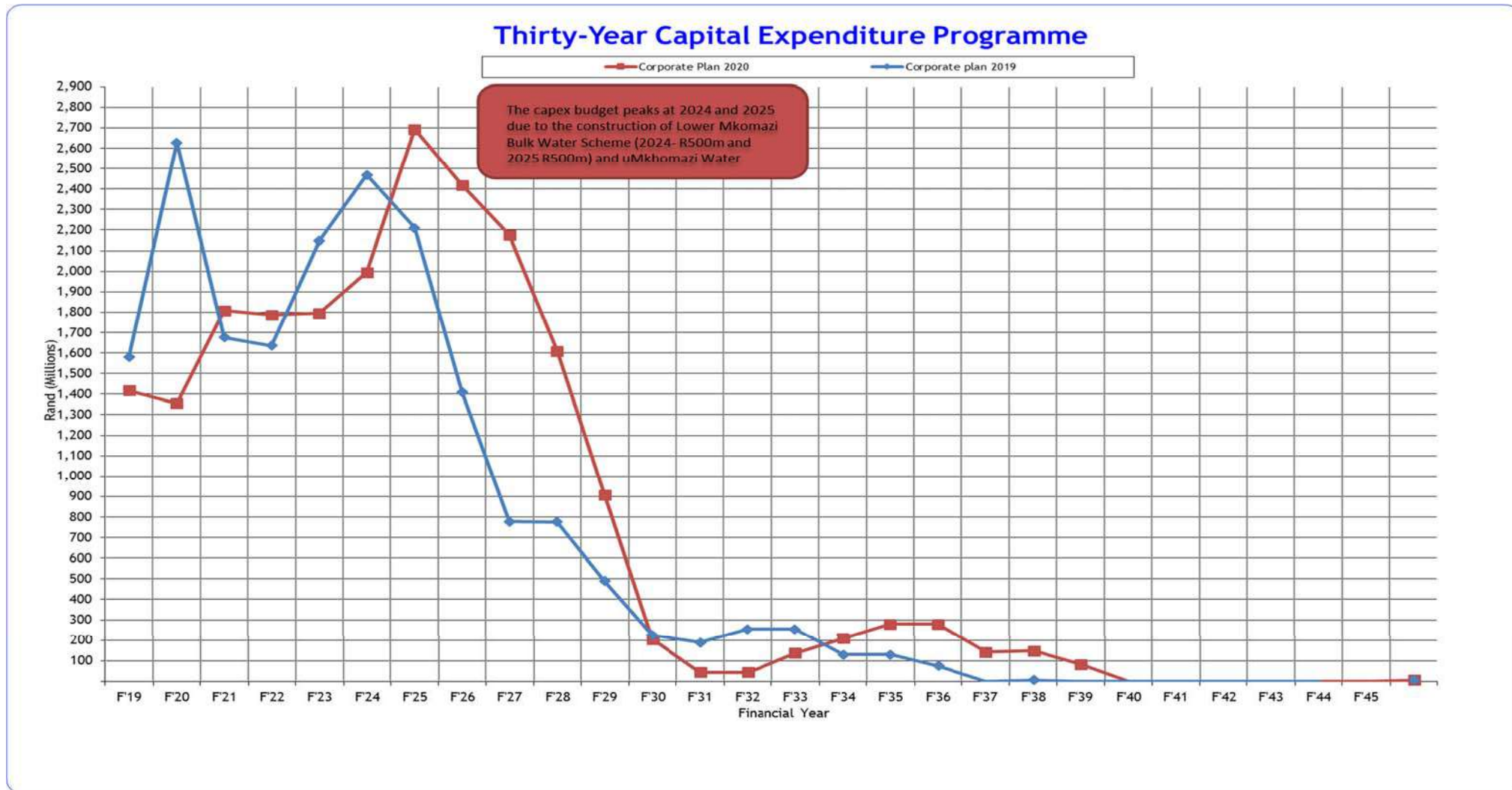
Table 20.41: Major projects

Project Description	Corporate Plan 2020	Work in progress 30 June 2018	2019-2024 Cashflows	CP 2020 Cashflows 2019 - 2024						Cashflows Beyond 5 Years F'25 - F'48
				F'19	F'20	F'21	F'22	F'23	F'24	
				R'000	R'000	R'000	R'000	R'000	R'000	
AUGMENTATION	11,897,595	70,417	3,554,193	76,426	124,407	420,255	563,738	803,558	1,565,810	8,272,985
EXPANSION	755,195	40,799	272,796	27,739	15,085	61,151	66,974	22,561	79,286	441,599
UPGRADE	3,460,791	1,154,414	2,136,110	534,151	459,419	607,605	378,902	114,080	41,953	170,267
REHABILITATION	1,062,468	143,966	918,502	322,479	348,150	201,473	46,400			
DEVELOPMENT PROJECTS	6,441,149	669,535	3,276,522	456,592	407,948	517,712	730,781	855,974	307,515	2,495,092
IMMOVABLE	23,617,198	2,079,131	10,158,124	1,417,387	1,355,009	1,808,197	1,786,795	1,796,173	1,994,563	11,379,943
EQUIPMENT & VEHICLES	147,632		130,632	62,900	65,731	2,000				17,000
INFORMATION COMMUNICATION TECHNOLOGY	261,340	21,743	239,597	150,150	79,447	10,000				
LABORATORY SERVICES	40,232	967	39,265	24,883	4,510	2,898	6,974			
MOVABLE	449,204	22,710	409,494	237,933	149,688	14,898	6,974			17,000
TOTAL CAPITAL BUDGET	24,066,402	2,101,841	10,567,618	1,655,320	1,504,698	1,823,095	1,793,769	1,796,173	1,994,563	11,396,943
AUGMENTATION PROJECTS										
Midmar WW Upgrade Ph 2 (250 to 375MI/d) & Midmar Dam RWPS	53,915	35,925	17,990	17,990						
Howick West Reservoir Upgrade (16MI)	108,449	5,625	102,824	33,944	45,953	22,927				
uMkhomazi Water Project	6,132,242	9,711	1,755,675	9,158	10,000	131,127	150,000	389,819	1,065,571	4,366,856
Elysium Desalination	3,086	2,734	352	352						
Lower Mkomazi Bulk Water Scheme	4,209,698	16,422	1,664,352	12,983	60,154	263,500	413,738	413,739	500,238	2,528,923
Fawsley Park BWS	1,377,206									1,377,206
Construction of Gauging Weirs (Imvutshane, EJ Smith, Umzinto dams)	13,000		13,000	2,000	8,300	2,700				
Sub Total – Augmentation	11,897,595	70,417	3,554,193	76,426	124,407	420,255	563,738	803,558	1,565,810	8,272,985
DEVELOPMENT										
Greater Mpofana Regional Scheme Phases 1	757,342	487,152	270,191	155,696	102,985	11,509				
Greater Mpofana Regional Scheme Phases 2	75,052		51,800		1,000	1,000		30,600	19,200	23,252
Impendle- Nzinga	292,205	3,141	160,031	638	6,098	1,935	5,281	50,811	95,268	129,034
Impendle- Stepmore	108,656	1,972	106,684	7,551	4,905	50,590	43,638			
uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1, 2 & 3)	115,321	30,636	84,685	84,685						
uMshwathi Ph 4 - Southern Ndwedwe	677,499	5,944	520,959	362	20,000	50,000	150,000	200,000	100,597	150,597
uMshwathi Ph 6	151,000		151,000		1,000	20,000	50,000	50,000	30,000	
Lower Thukela BWS - Phase 1	51,033	571	50,461	50,461						
Lower Thukela BWS - Phase 2	773,040	409	18,437	3,322	3,090	12,025				754,194
Maphumulo Phase 3 : 6MI WW	199,713	6,267	193,446	35,740	79,884	46,158	31,665			
Maphumulo Phase 4 : Weir on Hlimbitwe River	98,565	459	98,106	400	200		48,825	48,366	315	
Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu River abstraction	570,806	8,117	147,546	286	1,410	11,350	25,234	47,131	62,135	415,143
Trust Feeds WWTW	103,302	7,969	95,333	55,275	40,058					
Umbumbulu Pump Station	84,551	491	84,060	3,615	940	26,954	52,551			
Umbumbulu PL Augmentation	903,500		24,500		2,000	2,500	10,000	10,000		879,000
Table Mountain BWS (PL, PS and 3MI Reservoir)	152,372		8,500			500	5,000	3,000		143,872
Vulindlela PS and Reservoir	348,986	4,590	344,396	16,557	50,000	100,000	100,000	77,840		
Wartburg to Bruyns Hill Pipeline	127,616	90,616	37,000	32,654	4,346					

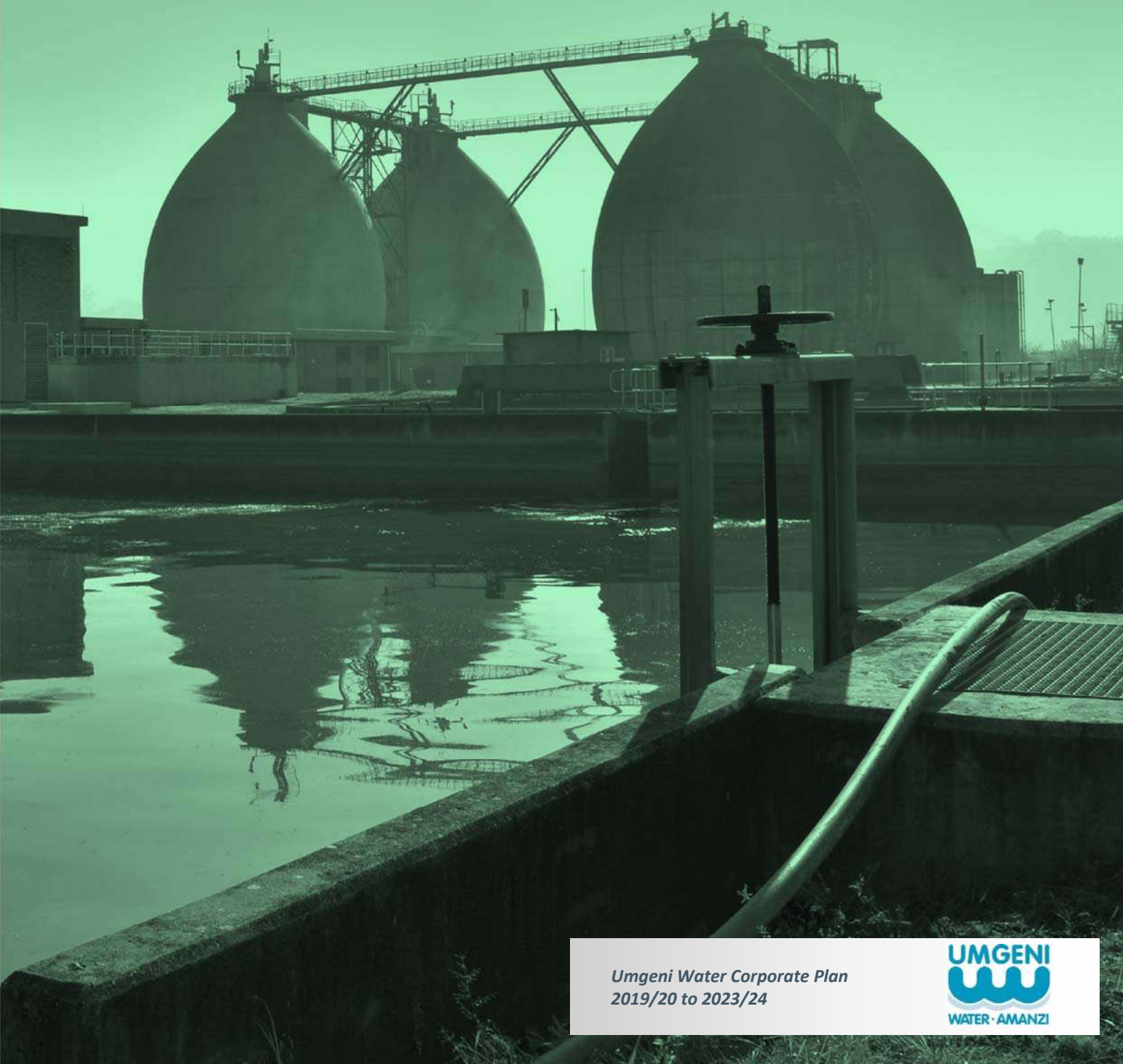
Project Description	Corporate Plan 2020	Work in progress 30 June 2018	2019-2024 Cashflows	CP 2020 Cashflows 2019 - 2024						Cashflows Beyond 5 Years F'25 - F'48
				F'19	F'20	F'21	F'22	F'23	F'24	
				R'000	R'000	R'000	R'000	R'000	R'000	
Mpophomeni WWW	388,777	18,557	370,220	3,842	56,410	92,669	102,557	114,741		
Mpofana WWW Upgrade	330,300	113	330,187	2,772	5,930	10,000	88,000	223,485		
Other developmental projects	131,511	2,532	128,979	2,734	27,692	80,523	18,030			
Sub Total - Development	6,441,149	669,535	3,276,522	456,592	407,948	517,712	730,781	855,974	307,515	2,495,092
EXPANSION										
uMzimkhulu Bulk Water Supply Scheme	7,802	4,501	3,301	3,301						
South Coast Ph. 2b (Kelso to Umdoni)	164,770	36,298	128,472	692	4,100	57,627	47,307	18,746		
South Coast Ph. 3	555,352		113,753	1,476	5,985	3,524	19,667	3,815	79,286	441,599
Other expansion projects	27,270		27,270	22,270	5,000					
Sub Total - Expansion	755,195	40,799	272,796	27,739	15,085	61,151	66,974	22,561	79,286	441,599
REHABILITATION										
Howick WWW - Major Rehab of Constrained Unit Processes	17,227	7,283	9,944	9,944						
Dbn Hgts WW - Reservoir 3 Roof Rehabilitation & Dam Safety	64,187	2,466	61,720	4,961		40,360	16,400			
Coastal Renewals	101,984	43,639	58,346	19,877	12,000	26,469				
Inland Renewals	75,688	681	75,007	39,924	35,083					
Mpofana WWW - Constrained Unit Process Upgrade	29,400	618	28,783	13,783	15,000					
Nungwane Raw Water Aqueduct (450dia x 18km)	185,041	78,758	106,283	73,991	32,292					
Rehabilitation of Aqueduct No 1,2,3 & 4	250,949		250,949	73,489	104,815	42,645	30,000			
Rehabilitation of key installations at Durban Heights WTP	178,501	10,441	168,060	79,100	88,960					
Rehabilitation of key installations at Wiggins WTP	122,000		122,000		50,000	72,000				
Other rehabilitation projects	37,490	80	37,411	7,411	10,000	20,000				
Sub Total - Rehabilitation	1,062,468	143,966	918,502	322,479	348,150	201,473	46,400			
UPGRADE										
Darvill Sludge Handling Facility incl Road	87,074	1,603	85,471	23,138	39,624	22,708				
Darvill WWW: Plant Capacity Increase (85Ml/d) (MBR - 10Ml/d in 3-5yrs)	977,316	906,158	71,158	49,250	21,908					
Dbn Hgts (Unit Process Valves)	50,000		50,000			50,000				
Dbn Hgts old and new degroment filter	220,000		220,000			110,000	110,000			
Dbn Hgts Shaft Pumps (4 New Pumps - dependant on existing pump test)	124,605	20,192	23,283	545				10,219	12,520	81,130
Dbn Hgts WW: Shaft Pump Lifts	46,802		46,802	15,561	31,241					
Dbn Hgts: Pump Stations	126,036		126,036	103,346	22,690					
Hazelmere WW - Sludge Treatment Plant Upgrade	46,194	1,120	45,074	440	7,974	32,634	4,026			
Hazelmere WW - Upgrade of Reservoir No.2	49,896	497	49,399	15,032	34,367					
Inanda Dam Pump Station (Pumps & Valves)	49,420		49,420		11,000		38,420			
Nagle Dam. Upgrade Ring Main unit at Turbines	51,000									51,000
Ndwedwe Pumps (Plant and outstations)	127,331	15	127,316	45,681	81,635					
Richmond WWW Upgrade	157,435	3,210	135,252	960	8,420	4,100	56,400	45,090	20,282	18,973
Umzinto Water Works	61,172	18,134	43,038	30,205	12,833					
Wiggins High Lift Pump Station	113,307	1,242	112,066	995	58,610	52,460				
Wiggins: HLP5 Pumps Refurbishment	30,000	22,252	7,748	7,748						
Ndwedwe Pumpstation 1 & 2	60,000	49,662	10,338	10,338						
Ilovu River Raw Water Transfer Pump Station	49,200		49,200	8,659	40,541					
Ultrafiltration Full Scale Evaluation	100,277	3,828	96,449	60	780	38,913	56,696			
Sludge Dewatering Technology Evaluation	50,861	3,103	47,758	242	852	19,949	15,945	10,770		
DBN HGT5 sludge plant upgrade	99,495	107	99,388	678	550	15,457	47,909	34,794		
Hazelmere WW: PLC Upgrade (10-yr upgrade cycle)	34,856		34,856	34,856						
Hazelmere Pumps (Capacity Upgrade)	50,100		50,100	100	10,000	20,000	20,000			
South: Scrubber at WTP	30,000		30,000		500	29,500				
North Scrubbers: maphumulo WTP and lower tukela	38,223		38,223		500	28,167	9,556			
North: Hazelmere WTP La Mercy Old PS rehabilitation	45,000		45,000		500	28,750	12,600	3,150		

Project Description	Corporate Plan 2020	Work in progress 30 June 2018	2019-2024 Cashflows	CP 2020 Cashflows 2019 - 2024						Cashflows Beyond 5 Years F'25 - F'48
				F'19	F'20	F'21	F'22	F'23	F'24	
				R'000	R'000	R'000	R'000	R'000	R'000	
Other upgrade projects	585,190	123,293	442,733	186,316	74,893	154,966	7,350	10,057	9,151	19,164
Sub Total - Upgrade	3,460,791	1,154,414	2,136,110	534,151	459,419	607,605	378,902	114,080	41,953	170,267
TOTAL IMMOVABLES	23,617,198	2,079,131	10,158,124	1,417,387	1,355,009	1,808,197	1,786,795	1,796,173	1,994,563	11,379,943
MOVABLES										
Total Equipment & Vehicles	147,632		130,632	62,900	65,731	2,000				17,000
Total ICT	261,340	21,743	239,597	150,150	79,447	10,000				
Total LAB	40,232	967	39,265	24,883	4,510	2,898	6,974			
TOTAL MOVABLES	449,204	22,710	409,494	237,933	149,688	14,898	6,974			17,000

Figure 20.6: 30 year capex programme by nature



Chapter 22: Debt Management Plan



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21.1 Long-term cashflow and outstanding debt projections

21.1.1 Introduction

Based on the debt maturity profile and cumulative debt curve, the following key issues have been identified and are taken into account in terms of creating the short, medium and long-term funding strategy:

1. Capital structure

A key principle to managing the outstanding debt is to target the optimum capital structure of 70 % fixed and 30 % floating interest rate so as to minimise volatility of both the tariff and income statement.

2. Asset/liability matching

A further key principle to managing Umgeni Water's debt is to match the maturity dates and quantum of debt outstanding in any year to the free cash generated by operations after servicing interest and operational expenditure. This is a pro-actively managed / on-going process.

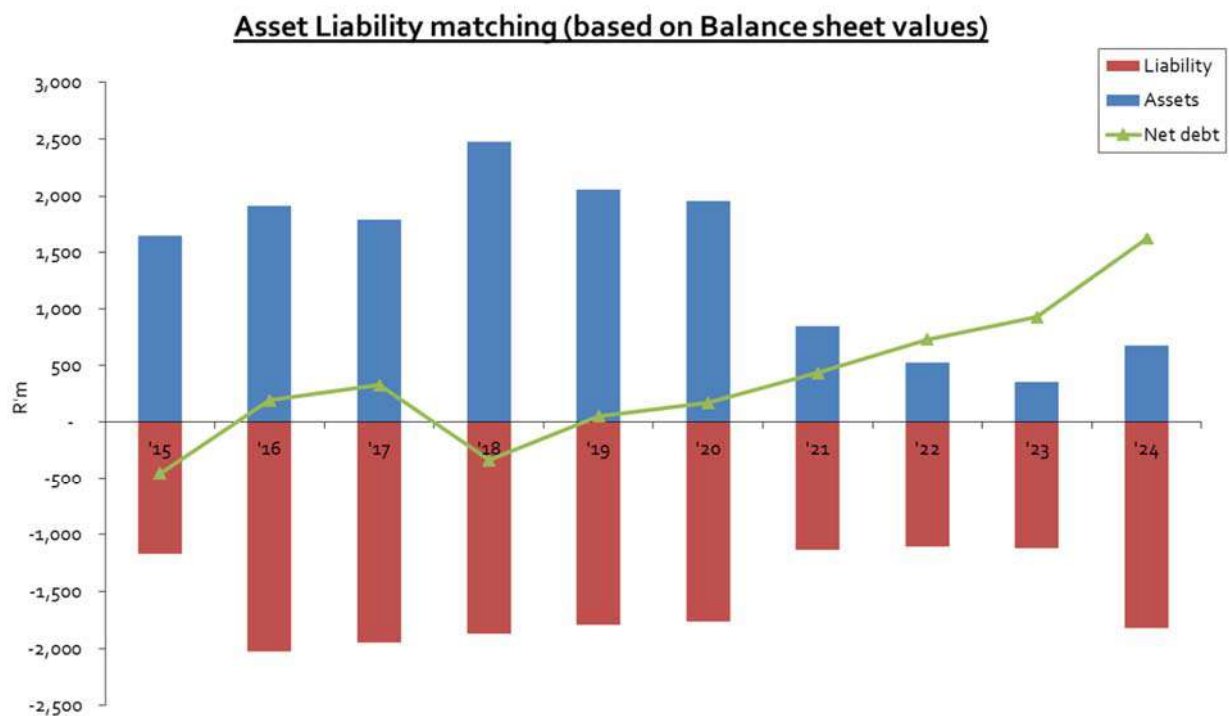
3. Optimal Debt Level

The key driver in determining the optimal level of debt for Umgeni Water is the ability to service debt given the cashflows generated after capital expenditure.

4. Redemption portfolio

Having debt with large bullet repayments, such as the UG21 and the UG26 bond, exposes Umgeni Water to forward starting interest rate and refinancing risk. These risks are eliminated through redemption portfolio management.

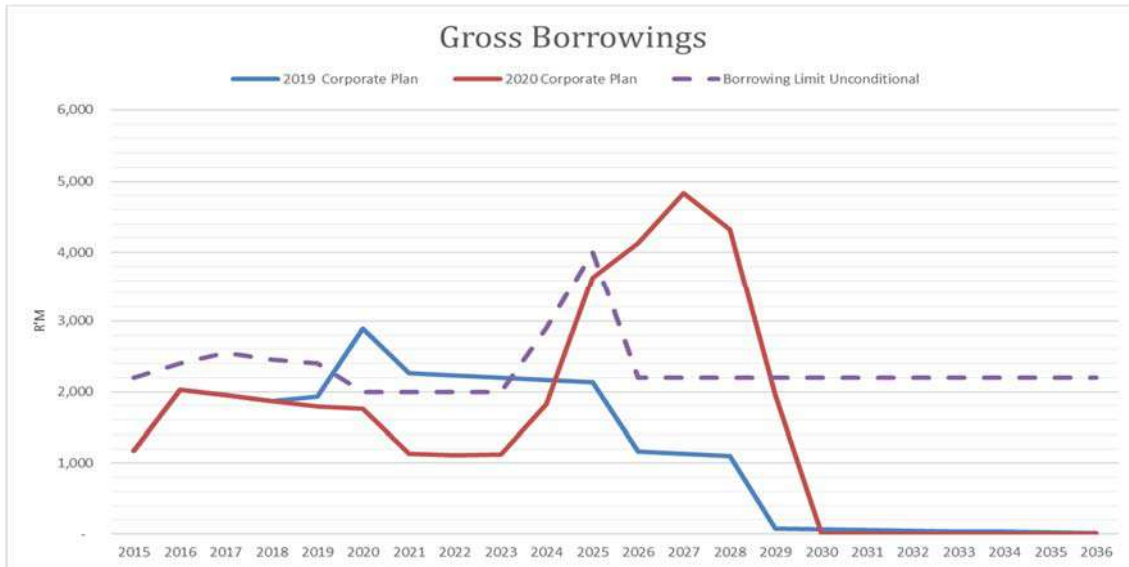
Figure 21.1: Asset liability matching (based on Balance Sheet)



21.2 Debt Curve

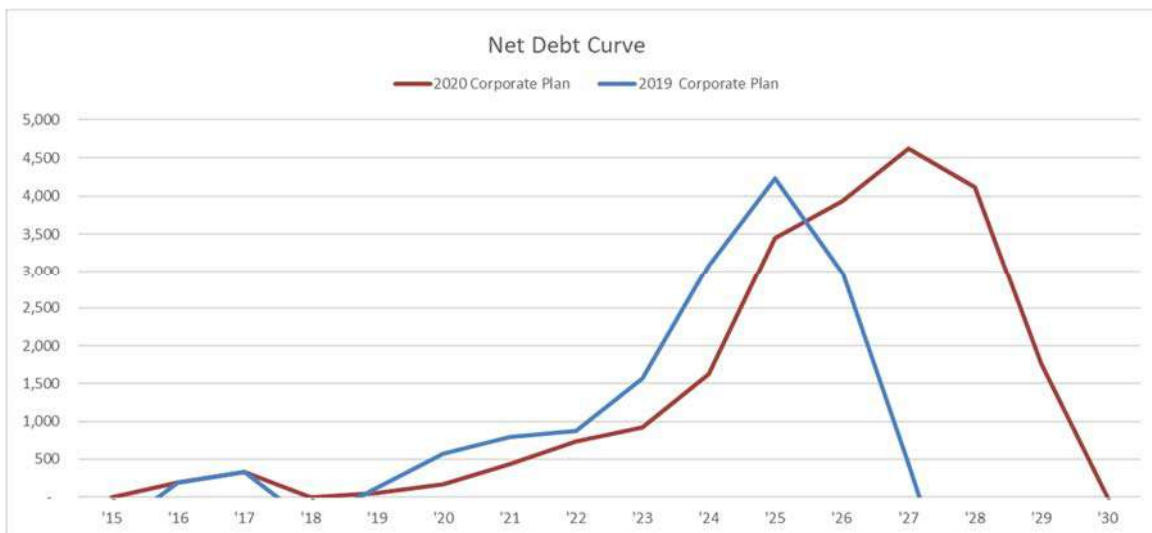
The 2019 Business Plan indicated that gross borrowings will peak at R4 440m in 2025. The gross borrowings curve has increased since then due to the rationalisation of projects to ensure continued assurance of water resources for UW’s customers. Therefore the peak in gross borrowings is expected to occur in 2027 at R4 830m.

Figure 21.2: Gross borrowings (R’m)



From 2020 onward, operating cashflows generated are not sufficient to fund both operating and capital expenditure thus the available investments will be utilised to meet funding requirements and will decrease thereby placing Umgeni Water in a net debt position.

Figure 21.3: Net debt curve (R’m)



Net debt increase anticipated in line with the increase in gross debt above. Refer to section 21.3 on the funding strategy.

21.3 Funding Strategy

21.3.1 Introduction

The funding strategy recommends a long term funding in 2023 to meet the funding requirements onward.

Table 21.1: Funding requirements 2019 to 2024 (R'm)

FUNDING REQUIREMENTS Financial Year (R'm)	Short term		Medium Term			L/Term
	F19	F20	F21	F22	F23	F24
Operational Cash flows	1,227	1,490	1,752	2,059	2,374	2,713
CapEx - Gross (Escalated)	(1,655)	(1,505)	(2,142)	(2,260)	(2,444)	(2,931)
Net Operating and CapEx cash flow	(428)	(14)	(390)	(201)	(70)	(218)
CapEx - Grants: Confirmed	115	-	-	-	-	-
Financing activities - capital						
Existing Debt	(79)	(29)	(29)	(25)	(25)	(25)
UG21 repayment	-	-	(600)	-	-	-
Financing activities - Net Finance costs						
Exisiting financial instruments	(86)	(102)	(129)	(97)	(116)	(167)
Funding Requirements	(478)	(145)	(1,148)	(322)	(211)	(410)
Redemption Portfolio			363	-	(7)	(312)
Redemption Portfolio - Interest earned			254			
Net Incremental Funding Requirement p.a.	(478)	(145)	(531)	(322)	(218)	(722)
Net (Funding) Investing requirements						
Opening Balance Available investments	1,651	1,173	1,028	496	174	(44)
Closing Balance	1,173	1,028	496	174	(44)	(766)

21.3.2 Short-term funding strategy

(a) All surplus cash is invested in financial assets in order of

- Liquidity
- Credit risk
- Yield.

21.3.3 Medium-term (F21 to F23) funding strategy

- All surplus cash is invested in short-term financial assets (3 to 6 month term deposits).
- New debt to be raised in year 2021/22 to meet funding requirements starting 2022/23.
- However, all possible funding instruments will be evaluated against the projected financial position per the 2020 CP to ensure that the most optimal funding mix is achieved.

21.3.4 Long-term funding strategy (F24 onward)

Refer to Table 21.2

- (a) In the **long term**, finance requirements will peak at R4.79m in 2027. The funding strategy will be confirmed by 2022 in terms of whether the peak funding requirement is provided for in a once off draw down (bond or loan) or if the funding requirement will be met via staggered draw downs to reduce the negative carries.
- (b) The key parameter in terms of making this funding decision will be the pricing and its impact on the tariff as well as the borrowing limits.

Table 21.2: Funding requirements 2024 to 2030 (R'm)

FUNDING REQUIREMENTS Financial Year (R'm)	L/Term F24	L/Term F25	L/Term F26	L/Term F27	L/Term F28	L/Term F29	L/Term F30
Operational Cash flows	2,713	3,064	3,448	3,815	4,215	4,652	5,130
CapEx - Gross (Escalated)	(2,931)	(4,277)	(4,162)	(4,032)	(3,221)	(1,959)	(472)
Net Operating and CapEx cash flow	(218)	(1,213)	(714)	(217)	994	2,693	4,658
CapEx - Grants: Confirmed	-	-	-	-	-	-	-
Financing activities - capital							
Existing Debt	(25)	(25)	(25)	(25)	(25)	(18)	(6)
UG21 repayment							
Financing activities - Net Finance costs							
Existing financial instruments	(167)	(307)	(479)	(482)	(488)	(326)	101
Funding Requirements	(410)	(1,546)	(2,152)	(725)	481	2,348	4,753
Redemption Portfolio	(312)	(301)	621	-	-	-	-
Redemption Portfolio - Interest earned			85				
Net Incremental Funding Requirement p.a.	(722)	(1,847)	(1,447)	(725)	481	2,348	4,753
Net (Funding) Investing requirements							
Opening Balance Available investments	(44)	(766)	(2,613)	(4,060)	(4,785)	(4,303)	(1,955)
Closing Balance	(766)	(2,613)	(4,060)	(4,785)	(4,303)	(1,955)	2,798

21.4 Sources of funding: terms and conditions on which money is borrowed

The terms and conditions on which money is borrowed differ according to loan agreements and bond issues. Bank committed facilities offered can be for a full twelve months or for a specified seasonal period. This committed facility would attract a facility fee on any unutilised balances during the agreed period only.

A summary of the various funding facilities that Umgeni Water currently has and major conditions relating to those facilities are as follows:

21.4.1 Issuance through the DMTN programme

The programme has an authorized amount of R4 billion, and is a useful funding tool in terms of the following:

- Refining the duration of the stock of debt.
- Refining the fixed to floating ratio of the debt book.
- Meeting short-term liquidity requirements.
- Filling gaps in the debt maturity profile.

Commercial paper and other short term notes can be issued through this programme.

21.4.2 Bank Funding

Umgeni Water's bank facilities are shown in Table 21.3. The banks are currently in the process of reviewing these facilities.

Table 21.3: Sources of liquidity

SOURCES OF LIQUIDITY	LIMIT	TYPE OF FACILITY	UTILISATION	AVAILABLE	COMMITTED FACILITIES	UNCOMMITTED FACILITIES
General banking facilities	R'm		R'm	R'm	R'm	R'm
FirstRand Facility	20	Working capital	0	20	20	0
Nedbank facility	50	General banking	0	50	0	50
Absa Facility	50	General banking	0	50	50	0
Investec Facility	50	General banking	0	50	0	50
			0	170	70	100

First National Bank

Instruments available under the short-term direct facility are:

- Overdraft – prime less 1% up to R10 million, thereafter prime;
- Corporate term loans – negotiable rate;
- Bankers acceptances (Acceptance credits) – negotiable rate;
- Call loans – negotiable rate.

Investec Bank

Instruments available under the general credit facility are:

- Bank call facility – negotiable rates;
- Foreign financing facility – negotiable rates; and
- Foreign exchange dealing facility – negotiable rates.

Nedbank

Instruments available under the general credit facility are:

- Overnight loans;
- Electronic banking facilities.

ABSA Bank

Instruments available under the short-term direct facility are:

- Overdraft – prime less 1.5%.

21.4.3 Annuity Loans

Terms, conditions and maturity are specific to each loan agreement. The most significant loan is the EIB loans which are annuity loans and is forecast to be at R123m (variable interest rate) and R123m (fixed interest rate) by 30 June 2019.

21.4.4 Capital Market Bonds

Domestic Medium Term Note (DMTN) Programme

The DMTN Programme was established in 2009 (updated in 2015) to fund long term capital expenditure requirements and to fund short term working capital requirements. Under this DMTN Programme, Umgeni Water may from time to time issue unsecured or secured registered notes of any kind, in an aggregate outstanding nominal amount which will not exceed R 4 billion.

- **Notes may comprise without limitation:**
Fixed rate, floating rate, mixed rate, zero coupon notes or a combination of such foregoing notes or any other type of notes determined by Umgeni Water and the relevant dealers.
- **Interest rate**
The interest rate will be determined at the time of issuance of notes and will be specified in the Applicable Pricing Supplement.
- **Maturity**
The Notes are not subject to any minimum or maximum maturity.
- **Issuance of bonds under the DMTN Programme**
The UG21 falls due on 02 March 2021 and interest payments are due on 02 March and 02 September each year. The coupon rate is 10.7%.
The UG21 was oversubscribed at the time of issuance.

The UG26 is the latest issuance under the DMTN programme. A total of R935m was issued and like its predecessor, was oversubscribed at the time of issuance. The coupon rate is 11.31%.

21.4.5 Development Funding Institutions

European Investment Bank (EIB) Loan

The European Investment Bank provided EUR 35 million (R385 million) long-term funding facility to Umgeni Water for new investment and upgrading of existing pipelines, water treatment works, pumping and service reservoirs that will contribute to improved supply of bulk potable water in the Umgeni Water operational area. The granting of the loan to Umgeni Water is the first loan to be made to a South African water board by the European Investment Bank. The loan is unsecured.

21.5 Compliance with Loan covenants

The financial covenants, per the EIB loan agreement, are:

- Consolidated EBIT to Borrowing Costs (Interest Cover) of not less than 2.5 : 1
- Consolidated Gross Borrowings to Consolidated Equity (Debt: Equity) not greater than 0.7 : 1

Table 21.4: Loan covenants

Ratio	F'16	F'17	F'18	F'19	F'20	F'21	F'22	F'23	F'24
Debt: Equity	0.341	0.287	0.232	0.198	0.172	0.097	0.083	0.074	0.106
Interest Cover	4.592	2.847	4.945	4.270	5.776	7.948	12.700	15.073	12.733

21.6 Debt guaranteed by government

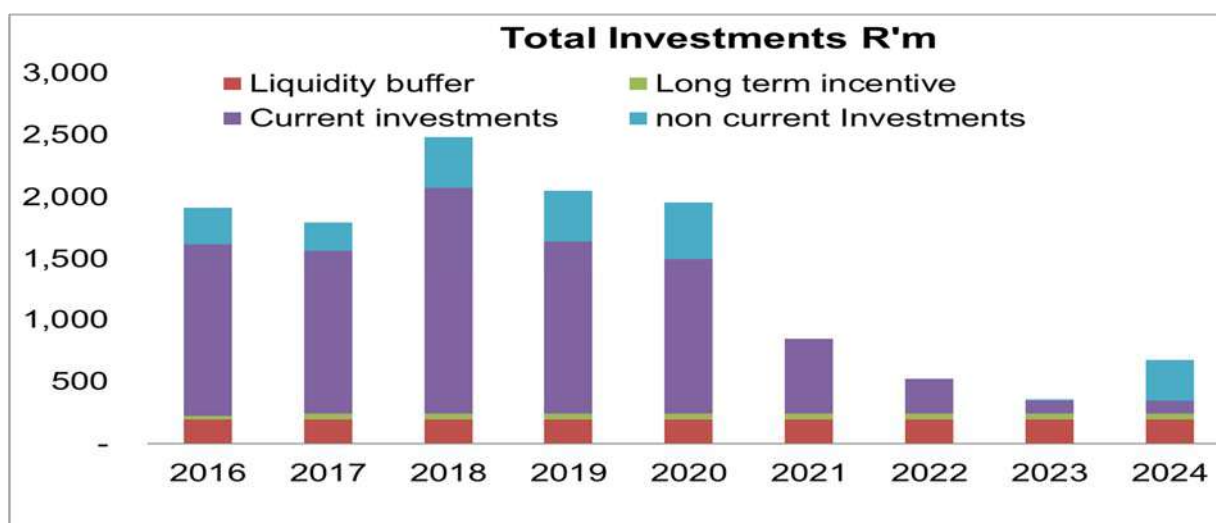
Umgeni water does not have any government guaranteed debt.

21.7 Maturity profile of debt and investments

Table 21.5: Maturity profile of investments (R'm)

Investment maturity structure (R'm)	F'16	F'17	F'18	F'19	F'20	F'21	F'22	F'23	F'24
< 1year	1,620	1,567	2,077	1,643	1,498	846	524	347	347
	85%	87%	84%	80%	76%	100%	100%	98%	51%
1-5 years	295	230	404	412	461	0	0	8	329
Total Investments	1,915	1,797	2,480	2,055	1,958	846	524	354	676

Figure 21.4: Analysis of Investments (R'm)



To ensure sufficient liquidity, Umgeni Water will maintain a liquidity buffer of R200m. Non-current investment represents the first redemption asset toward the redemption of the UG21 and UG26. Current investments are held for the funding of operating and capital expenditure requirements.

Table 21.6: Debt maturity structure (R'm)

Debt Maturity Structure (R'm)	F'18	F'19	F'20	F'21	F'22	F'23	F'24
< 1year	79	29	629	25	25	66	788
	4%	2%	36%	2%	2%	6%	43%
1-5 years	733	729	1,059	1,059	1,059	1,053	1,034
	39%	41%	60%	93%	96%	94%	57%
5-10 years	1,053	1,034	74	49	24	6	-
	56%	58%	4%	4%	2%	1%	0%
+10 Years	6	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%
Total Borrowings	1,871	1,792	1,763	1,133	1,108	1,125	1,822

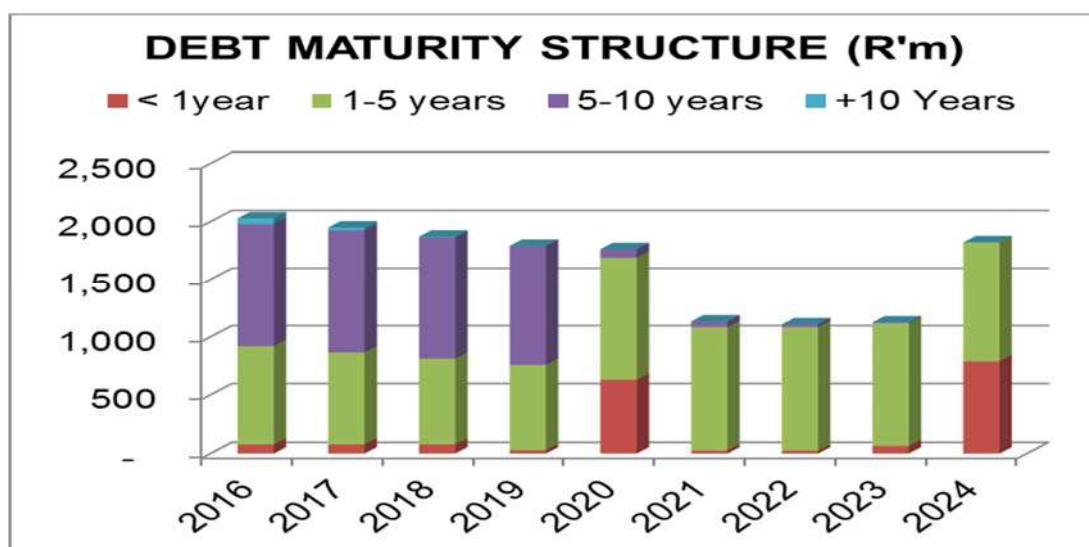
Table 21.7: Ratio of Fixed to floating rate debt

Ratio of Fixed to floating interest rate debt	F19	F20	F21	F22	F23	F24
Fixed Interest Rate Debt	93.2%	93.8%	91.5%	92.4%	93.7%	96.8%
Floating Interest Rate Debt	6.8%	6.2%	8.5%	7.6%	6.3%	3.2%

Table 21.8: Profiles of existing & proposed loans (R'000)

Capital balances	Lender	Maturity date	F16	F17	F18	F19	F20	F21	F22	F23	F24
LN71A (Floating)	DBSA	2019/03/31	150 000	100 000	50 000	0	0	0	0	0	0
LN72	DBSA	2021/03/31	20 911	17 131	13 159	8 987	4 603	0	0	0	0
UG21	Capital market		600 000	600 000	600 000	600 000	600 000	0	0	0	0
EIB1 (Floating)	EIB	2028/12/18	161 290	148 387	135 484	122 581	109 677	96 774	83 871	70 968	58 065
EIB 2	EIB	2019/03/31	161 129	149 194	137 258	125 323	113 387	101 452	89 516	77 581	65 645
UG26	Capital market	2026/06/30	935 000	935 000	935 000	935 000	935 000	935 000	935 000	935 000	935 000
Proposed funding	Bank loan/Capital market	2027/06/30								41 000	763 000
Total debt capital			2 028 330	1 949 712	1 870 901	1 791 891	1 762 667	1 133 226	1 108 387	1 124 549	1 821 710

Figure 21.5: Debt maturity structure



The increase in the amounts maturing in 5 to 10 years' time from 2016 onward is due to the UG21 which will be redeemed in 2021 and the proposed funding of R41m in 2023 and a further R722m to be obtained in 2024.

21.8 Analysis of funding against approved borrowing limits

In preparing the funding strategy, cognisance was taken of the level of gross debt against the unconditional borrowing limit set by the Department of Water and Sanitation and National Treasury which is based on:

- F19 – R2 700m (R2 400m is confirmed and R300m is conditional)
- F'20 – R2 100m (R2 100m is awaiting approval)

Figure 21.6: Debt curve against funding limits (R'm)

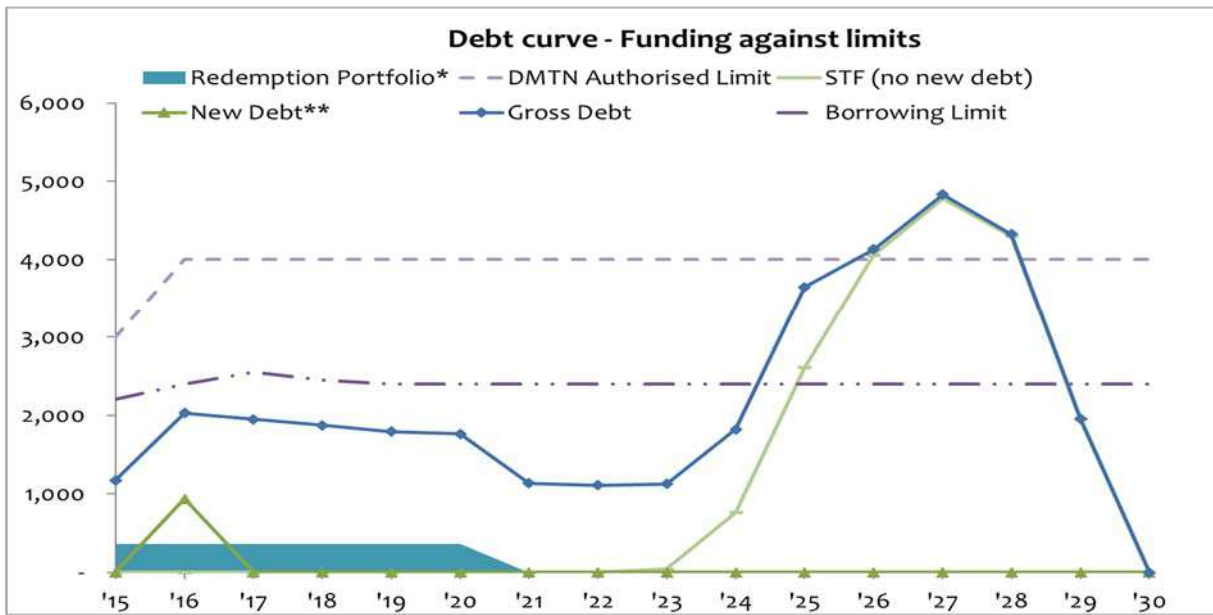


Table 21.9: Gross borrowings (R'm)

Borrowing Limit	F19	F20	F21	F22	F23	F24
Gross Borrowings	1,792	1,763	1,133	1,108	1,125	1,822
At Peak			600			
Contingencies	-	-	-	-	-	-
TOTAL GROSS BORROWINGS	1,792	1,763	1,733	1,108	1,125	1,822
Approved borrowing Limit	2,700	2,100	2,100	2,000	2,000	2,200
- Confirmed	2,400					
- Unconfirmed	300					
- Application		2,100	2,100	2,000	2,000	2,200
(Over) Under utilisation	908	337	367	892	875	378

21.9 Proposed Borrowings

Table 21.10: Total borrowings (R'000)

DATE OF BORROWING	TOTAL GROSS BORROWING	TOTAL PORTION					
		LONG TERM			SHORT TERM		
	Actual	Actual			Actual Total Short term	Short-term portion of long term debt	Short-term borrowings
2015/2016	2,028,331	1,014,712	935,000	1,949,712	78,619	78,619	0
2016/2017	1,949,712	1,870,902	0	1,870,902	78,810	78,810	0
2017/2018	1,870,901	1,791,890	0	1,791,890	79,011	79,011	0
	Projected	Projected	Proposed	Total	Projected	Projected	Projected
2018/2019	1,791,890	1,762,668	0	1,762,668	29,222	29,222	0
2019/2020	1,762,668	1,133,226	0	1,133,226	629,442	629,442	0
2020/2021	1,133,226	1,108,388	0	1,108,388	24,839	24,839	0
2021/2022	1,108,388	1,083,549	0	1,083,549	24,839	24,839	0
2022/2023	1,124,549	1,058,710	0	1,058,710	65,839	65,839	0
2023/2024	1,821,710	1,033,872	0	1,033,872	787,839	787,839	0

Table 21.11: Foreign borrowings (EIB) (R'000)

BORROWING	TOTAL GROSS BORROWING	FOREIGN PORTION					
		LONG TERM			SHORT TERM		
	Actual	Actual			Actual Total Short term	Short-term portion of long term debt	Short-term borrowings
2015/2016	322,419	297,581	0	297,581	24,839	24,839	0
2016/2017	297,581	272,742	0	272,742	24,839	24,839	0
2017/2018	272,742	247,903	0	247,903	24,839	24,839	0
	Projected	Projected	Proposed	Total	Projected	Projected	Projected
2018/2019	247,903	223,065	0	223,065	24,839	24,839	0
2019/2020	223,065	198,226	0	198,226	24,839	24,839	0
2020/2021	198,226	173,387	0	173,387	24,839	24,839	0
2021/2022	173,387	148,548	0	148,548	24,839	24,839	0
2022/2023	148,548	123,710	0	123,710	24,839	24,839	0
2023/2024	123,710	98,871	0	98,871	24,839	24,839	0

Table 21.12: Domestic borrowing programme (R'000)

DATE OF BORROWING	TOTAL GROSS BORROWING	DOMESTIC PORTION					
		LONG TERM			SHORT TERM		
	Actual	Actual			Actual Total Short term	Short-term portion of long term debt	Short-term borrowings
2015/2016	1,705,912	717,132	935,000	1,652,132	53,780	53,780	0
2016/2017	1,652,132	1,598,160	0	1,598,160	53,972	53,972	0
2017/2018	1,598,159	1,543,987	0	1,543,987	54,172	54,172	0
	Projected	Projected	Proposed	Total	Projected	Projected	Projected
2018/2019	1,543,987	1,539,604	0	1,539,604	4,383	4,383	0
2019/2020	1,539,604	935,001	0	935,001	604,603	604,603	0
2020/2021	935,001	935,001	0	935,001	0	0	0
2021/2022	935,001	935,001	0	935,001	0	0	0
2022/2023	976,001	935,001	0	935,001	41,000	41,000	0
2023/2024	1,698,001	935,001	0	935,001	763,000	763,000	0

21.10 Hedging Policies

21.10.1 Interest rate derivatives

- Purpose**
- To improve the ability to raise long term finance
 - To reduce the cost of long term finance
 - To provide instruments to assist in the management of the interest rate and liquidity risk on long term finance.
- Approved instruments**
- Table 21.13 shows the derivative instruments approved for the purpose stated.
 - The writing of options is only permitted for approved non-Umgeni Water bond issues where the issuer makes a market in the underlying issues.
 - Both options written and purchased may have a maximum expiry of 12 months from transaction date.
 - Options include caps, floor, collar, rate swaps.

Table 21.13: Approved derivative instruments

	Funding	Risk management
Written Over the counter (OTC) interest rate options on Umgeni Water bonds	X	X
Written OTC interest rate options on non-Umgeni Water bonds which are on the approved list		X
Purchased OTC interest rate options on Umgeni Water bonds	X	X
Purchased OTC interest rate options on Non-Umgeni Water bonds		X

- Delegation of Authority**
- The Board of Umgeni Water is responsible for approving the following:
- Approve instruments and combinations thereof for utilisation in funding, investment and hedging activities
 - Select instruments and techniques from the approved list
 - Appoint dealers to deal in the Options Market
 - Approve special transactions entered into with market participants
 - Determine which underlying bonds can be utilised for buying and writing options

21.10.2 Derivatives for management of foreign currency risk

- Purpose**
- To reduce the cashflow risk associated with transactions concluded in foreign currency.

- Policy**
- Umgeni Water's risk profile requires that all funding transactions be South African Rand denominated, and thus the only foreign currency transactions permitted are those required to hedge transactions arising from the operating environment.
 - Depending on the business and economic environment prevailing, minimum hedging level for foreign exchange risk should be 30% to 40% of the underlying risk.
 - Any prepayments in terms of foreign currency transactions should not exceed 30% as determined by the South African Reserve Bank.
 - There must be a bona fide business basis for all foreign exchange transactions.

- Approved instruments**
- Natural hedging
 - Forward market hedging
- Delegation of Authority**
- All forward cover transactions to be approved by the General Manager: Finance as delegated by the Board from time to time.



Chapter 23: Materiality and Significance Framework



*Umgeni Water Corporate Plan
2019/20 to 2023/24*



Contents

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23.1 Quantitative aspects: Materiality level

The framework is applied under two main categories: quantitative aspects and qualitative aspects. With respect to quantitative aspects, Umgeni Water assesses the level of a materiality as being ½ % of its gross revenue.

It is recognised that different levels of materiality can be set for different classes of transactions. Umgeni Water has, however, taken the approach of setting a more conservative materiality level that will be used for all classes of transactions.

23.2 Factors considered

- Nature of Umgeni Water's business: Revenue for Umgeni Water primarily comprises sales of water, fees for management of water and wastewater treatment works' and revenue from S30 activities.
- Statutory requirements applicable to Umgeni Water:
 - Umgeni Water is listed as a PFMA Schedule 3B public entity.
 - The Board of Umgeni Water is required to execute its mandate in terms of the PFMA.
 - Umgeni Water accordingly elects to give preference to a stricter level of materiality as the entity is closely governed by legislation and has public accountability.
- The control and inherent risks associated with Umgeni Water: In assessing the control risk, Umgeni Water concluded that the level of materiality of ½ % of gross revenue is appropriate and prudent.

This assessment is based on the fact that a sound control environment is being maintained. In this regard cognisance was given to amongst other matters:

- Proper and appropriate governance structures are established which include a Board of Directors (Accounting Authority), CE and Executive Management,
- A Risk Management Committee with specific risk management responsibilities,
- An audit committee that closely monitors the control environment of Umgeni Water,
- The function of internal audit is outsourced to professional independent internal auditors, and
- A three year Internal Audit Coverage Plan, based on annual risk assessments.

23.3 Qualitative Aspects

Materiality is not confined to the size of the entity and the elements of its financial statements.

- Umgeni Water recognises that misstatements that are large either individually or aggregate may affect a "reasonable" user's judgement. Further, misstatements may also be material on qualitative grounds. These qualitative grounds include amongst other:
 - New ventures that Umgeni Water may enter into,
 - Unusual transactions entered into that are not of a repetitive nature and are required to be disclosed purely due to the nature thereof due to knowledge thereof affecting the decision making of the user of the financial statements,
 - Transactions entered into that could result in reputational risk to Umgeni Water,
 - Any fraudulent or dishonest behaviour of an officer or staff of Umgeni Water,

- Any suspected corruption, irregularities or fraud,
- Any infringement of Umgeni Water's agreed performance levels,
- Procedures/processes required by legislation or regulation (e.g. PFMA and Treasury Regulations),
- Unauthorised, irregular or fruitless and wasteful expenditure, and
- Items of a non-financial nature, which would impact on the continued operation and deliverables of Umgeni Water.

The policy contained in this framework will be appropriately presented in the Annual Report of Umgeni Water.

Chapter 24: Financial Ratios



The financial ratios reflected in the following tables are defined wherever applicable in the footnotes that follow table 23.2w

Table 23.1: Umgeni Water financial indicators and ratios

Financial Indicators and Ratios		F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
		Actual	Actual	Actual	Budget			Forecast			
A Performance criteria/indicators											
1	Volume of water sold (kl'000)	435,726	409,887	434,568	451,729	461,700	509,862	526,026	534,689	542,709	550,850
	eThekweni Municipality(kl'000)	320,151	299,045	314,523	315,580	328,461	339,931	341,629	346,754	351,955	357,235
	Siza Water	3,338	3,360	3,458	3,493	3,587	3,830	3,945	4,005	4,065	4,126
	Other WSA's(kl'000)	112,236	107,483	116,587	132,656	129,652	166,100	180,451	183,930	186,689	189,490
2	Total gross revenue (R'000)	2,363,290	2,496,605	2,888,951	3,378,731	3,453,334	4,164,860	4,673,787	5,185,426	5,730,959	6,333,990
3	Total Bulk Revenue (R'000)	2,131,170	2,185,939	2,665,412	3,144,201	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
	eThekweni Municipality(R'000)	1,553,693	1,581,946	1,913,513	2,183,182	2,272,296	2,562,870	2,809,194	3,077,398	3,404,776	3,766,976
	Siza Water	21,759	23,870	28,257	24,868	33,324	37,798	42,502	47,727	52,804	58,421
	Other WSA's(R'000)	555,718	580,123	723,642	936,151	914,987	1,300,310	1,536,488	1,737,767	1,922,577	2,126,957
4	Total Bulk Revenue (R'000) (excl Capital Unit charge)	2,131,170	2,185,939	2,665,412	3,144,201	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
5	Bulk Revenue Growth (excl Cap Unit Charge)	-4.94%	2.57%	16.46%	17.96%	20.83%	21.13%	12.49%	10.82%	10.64%	10.64%
6	Weighted average Water tariff (R/kl) (total bulk rev/total bulk vol)	4.891	5.333	6.134	6.960	6.975	7.651	8.342	9.093	9.912	10.804
	eThekweni Municipality	4.853	5.29	6.084	6.918	6.918	7.582	8.264	9.008	9.819	10.703
	Siza Water	6.518	7.105	8.171	7.119	9.29	10.182	11.098	12.097	13.186	14.373
	Other WSA's	4.951	5.397	6.207	7.057	7.057	7.734	8.43	9.189	10.016	10.917
7	Weighted average Water tariff (R/kl) (total bulk rev/total bulk vol) incl CUC	5.349	5.924	6.775	7.668	7.666	9.302	10.402	11.600	10.110	11.020
	eThekweni Municipality	5.311	5.880	6.724	7.608	7.607	9.232	10.322	11.513	10.015	10.917
	Siza Water	6.976	7.731	8.853	10.027	10.027	11.884	13.213	14.664	13.450	14.660
	Other WSA's	5.409	5.989	6.850	7.750	7.749	9.387	10.492	11.698	10.216	11.135
8	Net profit (loss) for the year	789,507	751,261	1,182,753	930,991	986,173	1,234,888	1,422,306	1,582,363	1,819,025	2,068,942
9	Profit from Operations/Revenue	0.279	0.242	0.348	0.251	0.246	0.268	0.287	0.302	0.319	0.335
10	Total expenditure/Revenue	0.683	0.713	0.595	0.726	0.716	0.705	0.696	0.695	0.683	0.674
11	Cost of sales/Revenue	0.440	0.472	0.412	0.431	0.400	0.432	0.415	0.402	0.396	0.390
12	Total cost/volume (Rand/kl) (Bulk only)	3.253	3.663	3.574	5.038	4.977	5.320	5.763	6.308	6.761	7.283
13	Net Finance costs (Rand/kl)	(0.301)	(0.328)	(0.407)	(0.184)	(0.299)	(0.235)	(0.154)	(0.027)	0.013	0.090
14	Personnel cost ratio (Total Personnel costs/Total Costs excl finance costs)	0.253	0.273	0.294	0.224	0.253	0.246	0.224	0.220	0.218	0.216
15	Personnel cost per kilolitre (Personnel costs/Annual volume)	1.014	1.284	1.284	1.255	1.430	1.471	1.420	1.489	1.569	1.652
16	Personnel cost per kilolitre (Personnel costs/Annual volume) (Primary only)	1.013	1.283	1.282	1.255	1.429	1.470	1.419	1.488	1.567	1.651
17	Personnel cost per kilolitre (Personnel costs/Annual volume) (Bulk only)	0.958	1.208	1.206	1.182	1.344	1.387	1.333	1.398	1.473	1.551
B Operating Risks											
18	Working ratio (total expenses excluding depreciation, amortisation and finance costs divided by Total revenue)	0.671	0.700	0.564	0.648	0.664	0.642	0.629	0.619	0.607	0.597
19	Operating Ratio (Total Costs excluding depreciation & amortisation/Total Revenue)	0.616	0.641	0.502	0.623	0.624	0.614	0.612	0.617	0.609	0.605
20	Controllable working ratio (total expenses excl.raw water, deprec, amort & inter. divided by total. rev.)	0.601	0.628	0.491	0.574	0.596	0.580	0.566	0.556	0.543	0.532
21	Return on assets (income before interest & taxes divided by total	8.65%	7.19%	11.15%	8.36%	8.15%	9.48%	9.78%	10.00%	10.28%	10.44%

Financial Indicators and Ratios		F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
		Actual	Actual	Actual	Budget	Forecast					
assets excluding investments)											
22	Asset turnover (revenue divided by total assets excluding investments)	0.311	0.298	0.320	0.333	0.332	0.354	0.341	0.331	0.323	0.312
23	Gross margin %	55.96%	52.78%	58.76%	56.88%	60.04%	56.84%	58.49%	59.85%	60.44%	61.00%
24	Current asset turnover (revenue divided by current assets excl investments)	5.191	5.115	4.987	5.836	5.775	6.139	6.199	6.260	6.397	6.607
25	Fixed asset turnover (revenue divided by fixed assets)	0.336	0.322	0.348	0.358	0.356	0.378	0.362	0.350	0.340	0.328
26	Debtors collection period (debtors divided by revenue times 365) (Excl. VAT) *	40.995	43.022	46.449	41.422	41.342	40.217	40.725	41.049	40.698	39.769
27	Accounts receivable turnover (revenue divided by accounts receivable) (Excl. VAT)	7.810	7.442	6.893	7.730	7.744	7.961	7.862	7.800	7.867	8.051
* Accounts receivable is made up as follows:											
	Trade Debtors	302,594	335,471	419,113	437,119	445,908	523,143	594,491	664,818	728,470	786,737
	Provision for Doubtful debts	-	-	-	-	-	-	-	-	-	-
		<u>302,594</u>	<u>335,471</u>	<u>419,113</u>	<u>437,119</u>	<u>445,908</u>	<u>523,143</u>	<u>594,491</u>	<u>664,818</u>	<u>728,470</u>	<u>786,737</u>
C Financial Risks											
28	Current ratio (current assets divided by current liabilities)	2.065	2.346	2.745	2.580	2.499	1.472	1.911	1.655	1.483	0.848
29	Debt ratio (total debt divided by total assets)	0.213	0.191	0.163	0.148	0.144	0.128	0.078	0.068	0.062	0.087
30	Gross Debt-equity ratio (total liabilities divided by total accumulated reserves)	0.341	0.287	0.232	0.206	0.198	0.172	0.097	0.083	0.074	0.106
31	Net Debt-equity ratio (Net liabilities divided by total accumulated reserves)	0.019	0.023	(0.076)	(0.016)	(0.029)	(0.019)	0.025	0.044	0.051	0.067
32	Weighted Average Cost of Capital (WACC) (Per AFS)	10.53%	10.59%	10.61%	10.66%	10.64%	10.71%	10.86%	10.92%	10.99%	11.06%
33	Weighted Average Cost of Capital (WACC) (Finance costs/Gross borrowings)	0.06%	0.07%	0.07%	2.31%	1.11%	1.10%	1.49%	1.11%	1.08%	3.25%
34	Financial Leverage (D/(D+E)) (Net of redemption assets)	0.226	0.202	0.154	0.137	0.132	0.112	0.088	0.077	0.069	0.080
C Debt Management											
Net Debt											
	Total Borrowings (as per Balance sheet)	2,028,331	1,949,712	1,870,901	1,791,890	1,791,890	1,762,668	1,133,226	1,108,388	1,124,549	1,821,710
	Total Investment (as per Balance sheet)	1,915,042	1,796,890	2,480,494	1,930,510	2,054,580	1,958,185	845,665	523,665	354,320	675,559
	Net Borrowings (Total Borrowings - Total Investment)	<u>113,289</u>	<u>152,823</u>	<u>(609,594)</u>	<u>(138,620)</u>	<u>(262,689)</u>	<u>(195,517)</u>	<u>287,561</u>	<u>584,722</u>	<u>770,229</u>	<u>1,146,151</u>
D Business Credit Risk											
35	Interest Cover ratio (EBIT/int paid)	4.592	2.847	4.945	3.861	4.270	5.776	7.948	12.700	15.073	12.733
36	EBITDA interest coverage (EBITDA/int paid)	705.09	3.69	933.938	28.802	58.583	77.372	102.919	160.132	186.047	43.223
37	Cash from operations/average total debt	0.568	0.420	0.707	0.755	0.685	0.846	1.546	1.858	2.111	1.489
38	Return on average total capital	0.111	0.089	0.125	0.097	0.094	0.109	0.115	0.118	0.121	0.123
39	EBITDA/Sales	0.346	0.313	0.441	0.353	0.337	0.359	0.372	0.381	0.393	0.404
40	Funds flow net debt pay back (cash from op before WC adj/total int bearing debt)	0.512	0.532	0.715	0.797	0.713	0.902	1.626	1.943	2.189	1.534
E Surplus Ratios											
41	Accounting Surplus (NP)/Fixed Assets (PPE)	0.112	0.097	0.142	0.099	0.102	0.112	0.110	0.107	0.108	0.107
42	Return on turnover (NP)/Revenue (Total org)	0.334	0.301	0.409	0.276	0.286	0.297	0.304	0.305	0.317	0.327
43	Return on turnover (NP)/Revenue (S29)	0.349	0.324	0.415	0.276	0.287	0.298	0.306	0.307	0.319	0.328
44	Return on turnover (NP)/Revenue (S30)	0.051	(0.030)	0.110	0.184	0.162	0.168	0.036	0.034	0.033	0.031
45	EBITDA	818,625	782,346	1,273,032	1,194,316	1,163,754	1,494,034	1,737,113	1,976,762	2,253,795	2,557,700
46	Net Debt/EBIDAR	2.478	2.492	1.470	1.500	1.540	1.180	0.652	0.561	0.499	0.712

Table 23.2: Umgeni Water Group financial indicators and ratios

Financial Indicators and Ratios		F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
		Actual	Actual	Actual	Budget	Forecast					
A	Performance criteria/indicators										
1	Total gross revenue (R'000)	2,222,565	2,377,323	2,903,723	2,809,297	3,470,583	4,190,854	4,703,681	5,219,804	5,770,493	6,379,454
2	Bulk Water Business segment										
	2.1 Volume of water sold (kl'000)	446,548	464,490	434,568	429,209	461,700	509,862	526,026	534,689	542,709	550,850
	2.2 Total Bulk Revenue (R'000)	2,021,053	2,131,170	2,665,412	2,288,636	3,220,607	3,900,979	4,388,184	4,862,892	5,380,157	5,952,354
	2.3 Average increase in revenue	24.3%	5.4%	25.1%	6.8%	40.7%	21.1%	12.5%	10.8%	10.6%	10.6%
	2.4 Weighted average Water tariff (R/kl) (total bulk rev/total bulk vol)	4.891	5.333	6.134	6.960	6.975	7.651	8.342	9.093	9.912	10.804
	2.5 Total cost per kl sold	3.253	3.663	3.574	4.575	4.977	5.320	5.763	6.308	6.761	7.283
3	Net profit (loss) for the year	826,988	781,190	1,188,159	597,747	986,694	1,235,865	1,424,604	1,586,147	1,824,215	2,075,671
4	Profit from Operations/Revenue	0.309	0.271	0.347	0.195	0.245	0.266	0.286	0.301	0.317	0.333
5	Total expenditure/Revenue	0.645	0.689	0.597	0.790	0.717	0.706	0.698	0.697	0.685	0.675
6	Cost of sales/Revenue	0.427	0.438	0.410	0.517	0.398	0.429	0.412	0.399	0.393	0.387
7	Total cost/volume (Rand/kl) (Consolidated)	3.211	3.525	3.991	5.171	5.391	5.806	6.242	6.804	7.279	7.821
8	Net Finance costs (Rand/kl)	(0.303)	(0.285)	(0.405)	(0.113)	(0.297)	(0.233)	(0.152)	(0.026)	0.014	0.092
9	Personnel cost ratio (Total Personnel costs/Total Costs excl finance costs)	0.273	0.267	0.310	0.215	0.266	0.259	0.238	0.233	0.231	0.229
10	Personnel cost per kilolitre (Personnel costs/Annual volume)	0.958	1.018	1.363	1.138	1.515	1.566	1.519	1.594	1.680	1.771
B	Operating Risks										
11	Working ratio (total expenses excluding depreciation, amortisation and finance costs divided by Total revenue)	0.644	0.676	0.565	0.713	0.665	0.643	0.630	0.621	0.609	0.598
12	Operating Ratio (Total Costs excluding depreciation & amortisation/Total Revenue)	0.583	0.620	0.504	0.695	0.625	0.615	0.613	0.618	0.610	0.606
13	Controllable working ratio (total expenses excl. raw water, deprec, amort & inter. divided by total. rev.)	0.569	0.607	0.493	0.649	0.597	0.581	0.568	0.558	0.545	0.534
14	Return on assets (Income before interest & taxes divided by total assets excluding investments)	11.45%	8.43%	11.11%	5.91%	8.13%	9.46%	9.77%	10.00%	10.29%	10.45%
15	Asset turnover (revenue divided by total assets excluding investments)	0.370	0.311	0.321	0.302	0.332	0.355	0.342	0.332	0.324	0.313
16	Gross margin %	57.25%	56.22%	58.97%	48.33%	60.24%	57.11%	58.75%	60.11%	60.71%	61.28%
17	Current asset turnover (revenue divided by current assets excl investments)	5.183	4.894	4.813	5.872	5.546	5.956	5.501	6.105	6.219	6.400
18	Fixed asset turnover (revenue divided by fixed assets)	0.404	0.338	0.349	0.321	0.357	0.380	0.364	0.352	0.342	0.330
19	Debtors collection period (debtors divided by revenue times 365) (Excl. VAT)	36.743	40.753	44.942	36.674	41.137	39.967	40.466	40.779	40.419	39.485
20	Accounts receivable turnover (revenue divided by accounts receivable) (Excl. VAT)	8.714	7.857	7.124	8.730	7.783	8.011	7.912	7.851	7.921	8.109
	* Accounts receivable is made up as follows:										
	Trade Debtors	255,056	302,593	-	321,783	445,908	523,143	594,491	664,818	728,470	786,737
	Provision for Doubtful debts	-	-	-	-	-	-	-	-	-	-
		255,056	302,593	-	321,783	445,908	523,143	594,491	664,818	728,470	786,737
C	Financial Risks										
21	Current ratio (current assets divided by current liabilities)	2.478	2.100	2.755	1.444	2.510	1.482	1.924	1.673	1.506	0.868
22	Debt ratio (total debt divided by total assets)	0.153	0.212	0.162	0.227	0.143	0.128	0.078	0.068	0.062	0.087
23	Gross Debt-equity ratio (total liabilities divided by total accumulated reserves)	0.224	0.339	0.231	0.353	0.197	0.171	0.097	0.083	0.074	0.106
24	Net Debt-equity ratio (Net liabilities divided by total accumulated reserves)	(0.091)	0.019	(0.075)	0.224	(0.029)	(0.019)	0.025	0.044	0.051	0.067
25	Weighted Average Cost of Capital (WACC) (Per AFS)	10.53%	10.59%	10.61%	10.66%	10.64%	10.71%	10.86%	10.92%	10.99%	11.06%
26	Weighted Average Cost of Capital (WACC) (Finance costs/Gross borrowings)	0.23%	0.06%	0.09%	0.61%	1.11%	1.10%	1.49%	1.11%	1.08%	3.25%
28	Financial Leverage (D/(D+E)) (Net of redemption assets)	0.173	0.225	0.154	0.241	0.132	0.112	0.088	0.077	0.069	0.080
C	Debt Management										
	Net Debt										

Financial Indicators and Ratios		F16	F17	F18	F19	F19	F20	F21	F22	F23	F24
		Actual	Actual	Actual	Budget	Forecast					
29	Total Borrowings (as per Balance sheet)	1,171,765	2,029,388	1,871,912	2,299,712	1,791,890	1,762,668	1,133,226	1,108,388	1,124,549	1,821,710
30	Total Investment (as per Balance sheet)	1,646,680	1,915,042	2,480,494	839,002	2,054,580	1,958,185	845,665	523,665	354,320	675,559
31	Net Borrowings (Total Borrowings - Total Investment)	(474,915)	114,346	(608,582)	1,460,710	(262,689)	(195,517)	287,561	584,722	770,229	1,146,151
D Business Credit Risk											
32	Interest Cover (<i>EBIT/int paid</i>)	5.930	4.130	4.743	2.681	4.277	5.784	7.966	12.736	15.122	12.778
33	EBITDA interest coverage (EBITDA/int paid)	305.132	554.647	743.708	58.017	58.820	77.654	103.293	160.737	186.788	43.401
34	Cash from operations/average total debt	0.963	0.350	0.713	0.387	0.687	0.849	1.551	1.864	2.120	1.495
35	Return on average total capital	0.131	0.081	0.124	0.084	0.094	0.108	0.115	0.118	0.121	0.123
36	EBITDA/Sales	0.371	0.309	0.440	0.290	0.337	0.358	0.371	0.380	0.392	0.403
37	Funds flow net debt pay back (<i>cash from op before WC adj/total int bearing debt</i>)	0.865	0.441	1.507	0.419	0.716	0.905	1.631	1.950	2.197	1.540
E Surplus Ratios											
38	Accounting Surplus (NP)/Fixed Assets (PPE)	0.150	0.082	0.143	0.068	0.102	0.112	0.110	0.107	0.108	0.107
39	Return on turnover (NP)/Revenue	0.372	0.297	0.409	0.213	0.284	0.295	0.303	0.304	0.316	0.325
40	EBITDA	825,381	775,910	1,277,750	814,750	1,168,461	1,499,466	1,743,426	1,984,237	2,262,771	2,568,255
41	Net Debt/EBIDAR	(0.575)	0.147	(0.476)	1.793	(0.225)	(0.130)	0.165	0.295	0.340	0.446

Definition of ratios

- ✓ Weighted average Water tariff (R/kl): Total bulk revenue/total bulk volumes
- ✓ Personnel cost ratio: Total Personnel costs/Total Costs excluding finance costs
- ✓ Personnel cost per kilolitre: Personnel costs/Annual volume
- ✓ Working ratio: Total expenses excluding depreciation, amortisation & finance costs/ Total revenue
- ✓ Operating Ratio: Total Costs excluding depreciation & amortisation/Total Revenue
- ✓ Controllable working ratio: Total expenses excluding raw water, depreciation, amortisation/ Total revenue
- ✓ Return on assets: Income before interest & taxes/ Total assets excluding investments
- ✓ Asset turnover: Revenue / Total assets excluding investments
- ✓ Current asset turnover: Revenue/Current assets excluding investments
- ✓ Fixed asset turnover: Revenue/Fixed assets
- ✓ Trade debtors collection period: Trade Debtors/ Revenue times 365 (Excl. VAT)
- ✓ Accounts receivable turnover: Revenue/Accounts receivable (Excl. VAT)
- ✓ Current ratio: Current assets/ Current liabilities
- ✓ Debt ratio: Total debt /Total assets
- ✓ Gross Debt-equity ratio: Total borrowings/Total accumulated reserves
- ✓ Net Debt-equity ratio: Net borrowings/ Total accumulated reserves
- ✓ Weighted Average Cost of Capital (WACC): Finance costs/Gross borrowings
- ✓ Financial Leverage: Debt/(Debt+Equity) (Net of redemption assets)
- ✓ Net Borrowings: Total Borrowings - Total Investment
- ✓ Interest Cover ratio: EBIT/Interest paid
- ✓ EBITDA interest coverage: EBITDA/Interest paid
- ✓ Funds flow net debt pay back: Cash generated from operations before working capital adjustments/Total interest bearing debt
- ✓ Accounting Surplus: Net Profit/Fixed Assets (PPE)
- ✓ Return on turnover: Net Profit/Revenue



Chapter 25: Self Evaluation Statement on Financial Viability



*Umgeni Water Corporate Plan
2019/20 to 2023/24*



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25.1 Operating performance Analysis

25.1.1 Key indicators of operating performance

Umgeni Water's operating performance can be measured in terms of the key indicators: Gross Profit, Operating Profit, Net Profit, Return on Asset and Interest Cover. Each of these is illustrated and discussed below.

Figure 24.1: Gross Profit



The 2020 CP trend is Higher than the 2019 CP with the exception of 2020 and 2021. The GP in these years are lower than the 2019 CP for the same years due to main cost drivers increasing at a higher rate than the revenue generated due to take over of the new plants which are not generating revenue at optimal levels.

Figure 24.2: Operating Profit



The operating profit trend is lower than the 2019 CP trend mainly due to higher operating costs (Direct and indirect). Refer to section 24.1.2 for an analysis of the change in operating costs.

Figure 24.3: Net Profit



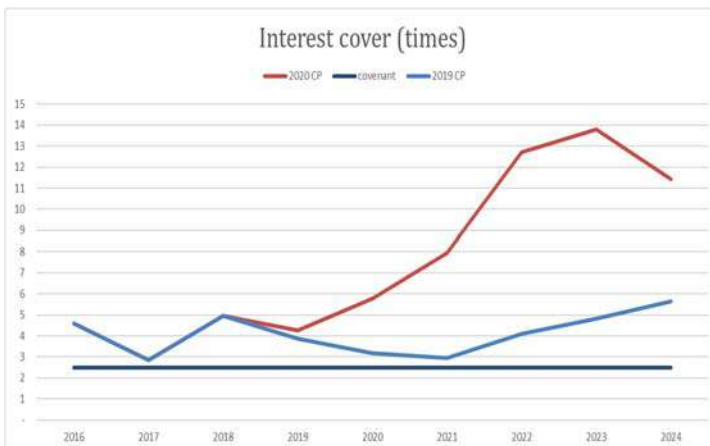
In 2019 and 2020 the NP levels will be higher than anticipated in the 2019 CP. This is due to lower net finance costs than projected in the 2019 CP. The NP trend for the years from 2021 onward is lower than the 2019 CP mainly due to higher operating costs.

Figure 24.4: Return on assets



ROA is projected to be lower than the 2019 CP due to lower operating profits in CP 2020. The return on assets has deteriorated in comparison with the previous estimates 2019 CP, by almost 25% of the estimated ROA as per the 2019 CP.

Figure 24.5: Interest cover

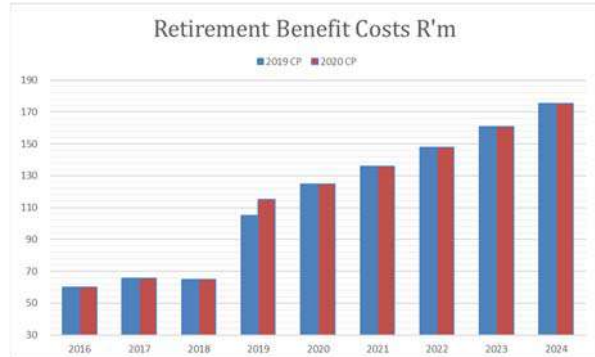
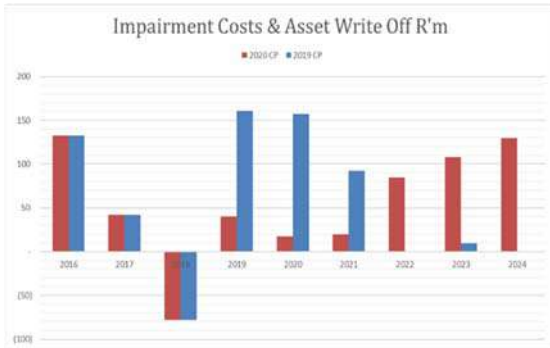


Required interest cover ratio in terms of the EIB loan covenant is greater than 2.5 times. No breach of the required ratio of greater than 2.5 times is expected over the 5-year period to 2024. The ratio is more favourable when compared with the 2019 CP.

25.1.2 Factors impacting on operating performance

The operating performance of Umgeni Water is being negatively impacted by:

1. Impairment of assets and retirement benefit costs:

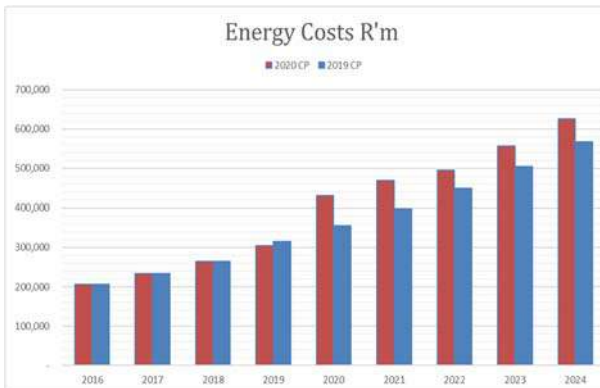
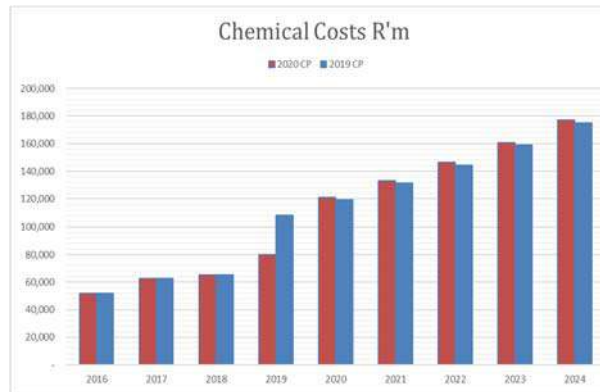
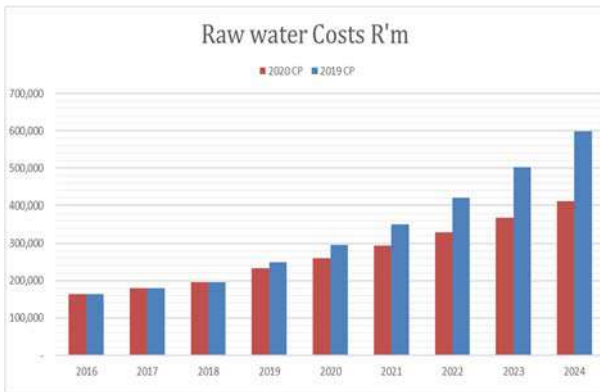


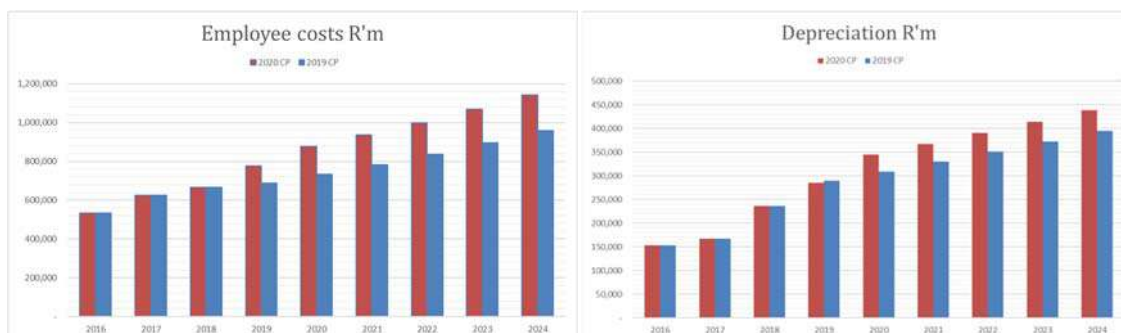
In 2019, asset write off and impairment costs will be lower than the 2019 CP due to the receipt of grant funding for the Greater Mpofana project. Due to the delay in the Impendle projects and the Mhlabatshane project, the cashflows for these projects have been reduced in 2020 and 2021 hence lower impairment costs expected in these year compared to the 2019 CP.

Retirement benefit costs are projected to be lower than the 2019 CP trend in the 2019 financial year and in line for years thereafter.

2. Higher than inflationary increases in the main operating cost drivers

The main operating cost drivers are as follows:



**Raw Water:**

1. Lower raw water cost in 2019 per the 2020 CP than projected in the 2019CP mainly due to delay in the costs coming though for the uThukela area as well as lower pricing on the Mgeni and Mdloti system received from DWS.
2. Lower raw water costs in 2020 per the 2020 CP when compared to the 2019 CP mainly due to lower pricing received from DWS than previously projected in the 2019 CP
3. The costs for the years 2021 onward have been escalated by 10% as opposed to 17% previously anticipated for these years. The revision downward to 10% was based on the trend of pricing from the prior years.

Chemicals:

1. Lower chemical cost in 2019 per the 2020 CP than projected in the 2019CP mainly due to delay in the costs coming though for the uThukela area as well as lower usage and lower chlorine pricing.
2. Higher chemical costs in 2020 per the 2020 CP when compared to the 2019 CP mainly due to
 - Higher usage due to the increase in water treatment works to be operated by UW (Ugu, HGDM & uThukela DM)
 - Price increase for 2020 estimated at 10%
3. The costs for the years 2021 onward have been escalated by the escalation factors made up of projected pricing of 10%p.a. and usage to cater for any new schemes.

Energy costs:

1. Lower energy cost in 2019 per the 2020 CP than projected in the 2019CP mainly due to delay in the costs coming though for the uThukela area.
2. Higher energy costs in 2020 per the 2020 CP when compared to the 2019 CP mainly due to
 - Higher usage due to the increase in water treatment works to be operated by UW (Ugu, HGDM & uThukela DM)
 - Price increase for 2020 estimated at 11.4% incl the Municipalities increase
3. The costs for the years 2021 onward have been escalated by the escalation factors made up of projected pricing from NERSA and usage to cater for any new schemes.

Maintenance costs:

1. Lower maintenance cost in 2019 per the 2020 CP than projected in the 2019CP mainly due to delay in the costs coming though for the uThukela area as well as lower staff and staff related costs allocated to maintenance.
2. Higher maintenance costs in 2020 per the 2020 CP when compared to the 2019 CP mainly due to higher usage due to the increase in water treatment works to be operated by UW (Ugu, HGDM & uThukela DM)
3. The costs for the years 2021 onward have been escalated by PPI using 2020 as a base for future maintenance costs.

Employee costs:

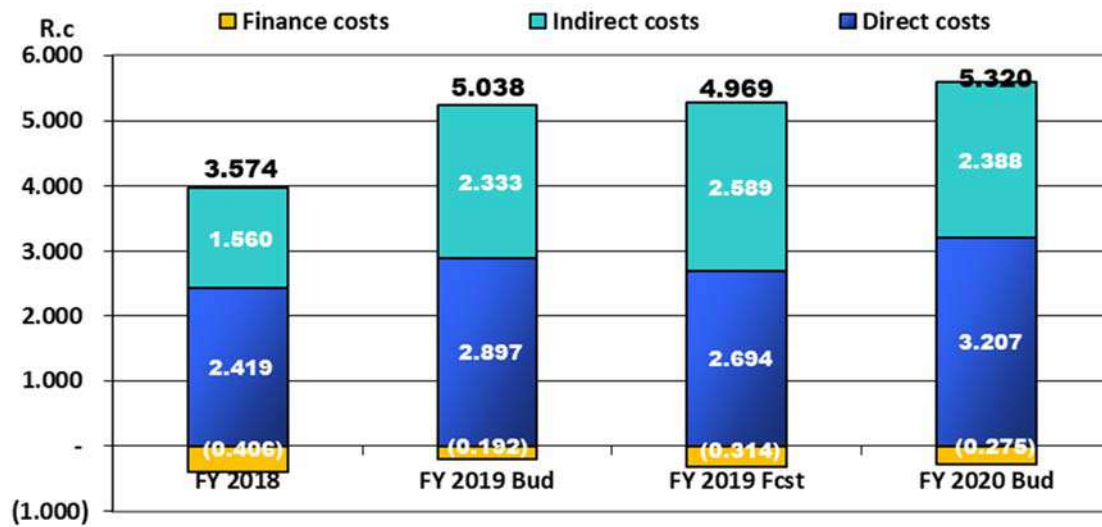
1. Higher Payroll cost in 2019 per the 2020 CP than projected in the 2019CP mainly due to the incentive bonus paid out
2. Higher payroll costs in 2020 per the 2020 CP when compared to the 2019 CP mainly due to an increase in the headcount (new areas). The wage rate increases have been kept in line with the BER rate.
3. The costs for the years 2021 onward indicate a higher trend due to the higher head count. As per 2020 the BER wage rate has been used to escalate the payroll costs.

Depreciation Costs

1. lower depreciation cost in 2019 per the 2020 CP than projected in the 2019CP mainly due to delay in the commissioning of Darvill Upgrade.
2. Higher depreciation costs in 2020 per the 2020 CP when compared to the 2019 CP mainly due to the anticipated commissioning of Darvill Upgrade and other projects in 2020.
3. The costs for the years 2021 onward indicate a higher trend due to the higher capital costs of assets due for commissioning, than anticipated in the 2019 CP.

A combined view of the impact of the main cost drivers relative to total costs is shown below.

Analysis of cost per KL



Increase in cost per kl of bulk water sold places pressure on tariffs charged per annum.

Total Bulk Water cost per kl is projected to increase in 2019 by 39% and in 2020 by 7% as follows:

Table 24.1: Cost per kl

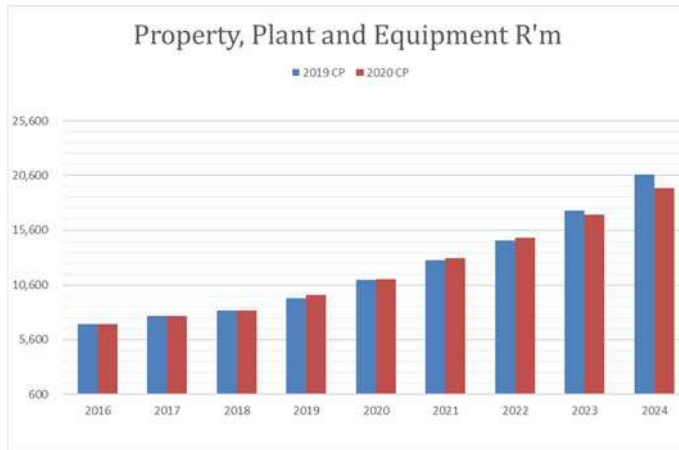
Components	2015/2016		2016/2017		2017/2018		2018/2019 BUDGET		2018/2019		2019/2020	
	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %
Direct Costs												
Chemicals	0.108	7%	0.140	30%	0.137	-2%	0.222	34%	0.162	18%	0.220	36%
Depreciation	0.290	24%	0.321	11%	0.378	18%	0.420	4%	0.438	16%	0.458	4%
Energy	0.415	20%	0.508	22%	0.542	7%	0.617	4%	0.581	7%	0.766	32%
Maintenance	0.314	-9%	0.379	21%	0.392	3%	0.504	22%	0.454	16%	0.603	33%
Raw Water	0.378	1%	0.440	16%	0.481	9%	0.550	19%	0.507	5%	0.509	0%
Staff Costs	0.365	15%	0.426	17%	0.430	1%	0.505	28%	0.481	12%	0.574	19%
Other direct operating activities	0.094	50%	0.073	-22%	0.058	-20%	0.079	35%	0.071	22%	0.077	8%
Total Direct Costs	1.964	10%	2.286	16%	2.419	6%	2.897	16%	2.694	11%	3.207	19%
Indirect Costs												
Overheads	0.485	15%	0.587	21%	0.590	0%	0.754	1%	1.153	96%	1.038	-10%
staff costs	0.593	7%	0.783	32%	0.776	-1%	0.677	7%	0.864	11%	0.813	-6%
Depreciation	0.055	10%	0.081	48%	0.156	92%	0.191	3%	0.173	11%	0.194	12%
Amortisation	0.015	-9%	0.028	83%	0.072	0%	0.126	0%	0.065	0%	0.066	0%
Impairments	0.305	51%	0.102	-66%	(0.180)	-276%	0.356	-318%	0.087	-149%	0.035	0%
Retirement benefits	0.136	8%	0.157	15%	0.147	-7%	0.229	13%	0.246	68%	0.242	-2%
Total Indirect Costs	1.590	16%	1.738	9%	1.560	-10%	2.333	37%	2.589	66%	2.388	-8%
Total direct & indirect cost	3.554	13%	4.024	13%	3.980	-1%	5.230	25%	5.283	33%	5.595	6%
Finance Costs	(0.303)	1%	(0.361)	19%	(0.406)	12%	(0.192)	-26%	(0.306)	-25%	(0.275)	-10%
Cost - Bulk Water	3.251	14%	3.663	13%	3.574	-2%	5.038	28%	4.977	39%	5.320	7%

25.2 Cashflow Analysis

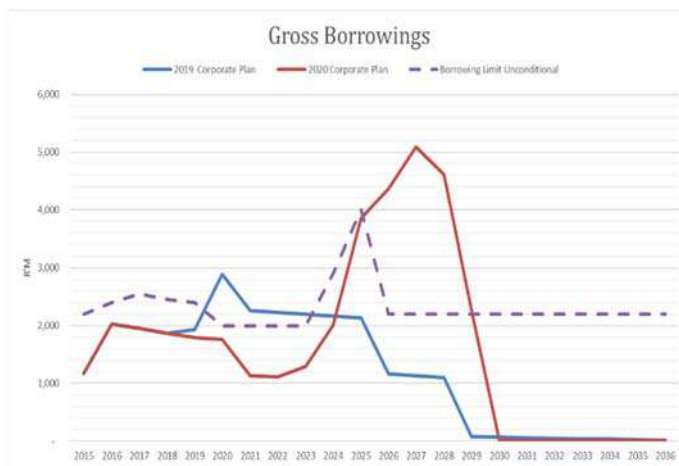


The cashflow from operations graph indicates a weakening in the cashflow profile due to higher than projected operating costs without the commensurate increase in UW's revenue. The Net profit levels for 2019 and 2020 are higher than the 2019 CP mainly due to non-cashflow items such as reversal of impairments or lower impairments than the 2019 CP which have increase the Net Profit but not had the same impact on the operating cashflow.

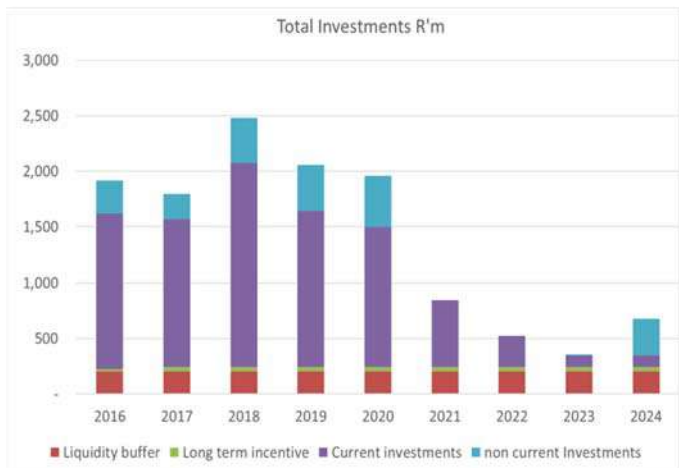
25.3 Financial Position



The level of PPE is in line with the 2019 CP. The change in PPE is based mainly on additions, depreciation and impairments.

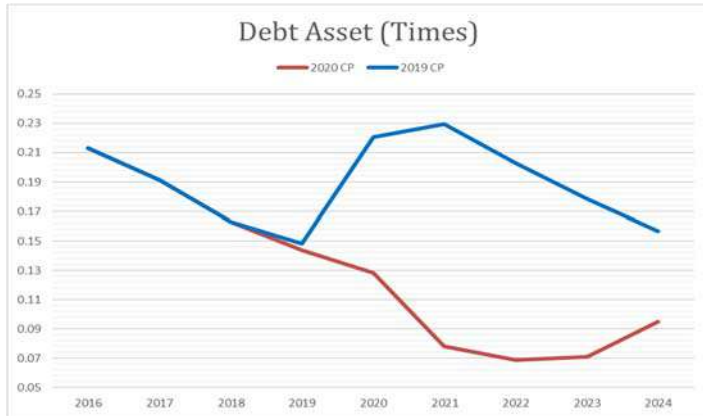


Gross borrowings are anticipated to be higher in the long term than the 2019 CP mainly due to higher capex and operating costs. In the short term, gross borrowings are anticipated to be lower than the 2019 CP mainly due to higher operating costs. The borrowings though are not expected to exceed the borrowing limits applied for the period 2019/20 to 2023/24.



To ensure sufficient liquidity, UW will maintain a liquidity buffer of R200m or more. From 2016, non - current investment represents the redemption assets set aside to fund the redemption of the UG21 in 2021. Current investments are matched to the respective working capital requirements and capital expenditure requirements.

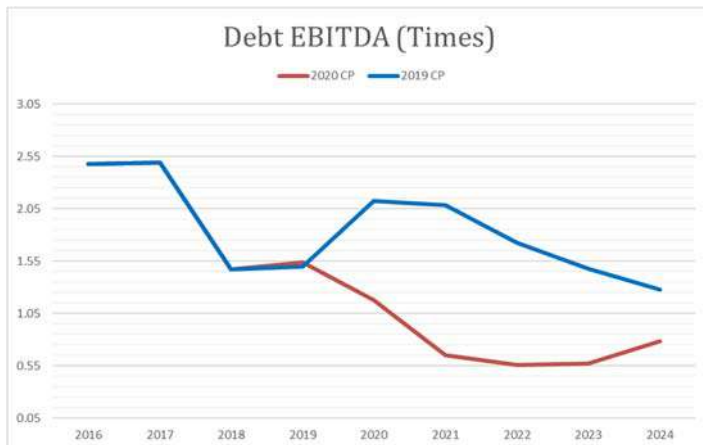
25.4 Debt Management



The ratio of debt to assets is projected to decrease to 0.14 in 2019 and a further decrease to 0.13 in 2020 however the ratio does not look to exceed the target of less the 0.4.



No breach of the required ratio of less than 0.7 times is expected over the 5-year period to 2024. Debt to equity ratio more favourable than the 2019 CP mainly due to the lower borrowing requirements for those years.



The ratio of debt to EBITDA ("Leverage ratio") will increase to 1.54 times in 2019 and decrease to 1.18 times in 2020. This is due to repayment of existing debts..

25.5 Business Segment Information

Table 24.2: Business segments: Operating Profit

	2018		2019		2020
	R'm		R'm		R'm
Bulk	945	-17%	786	34%	1053
Wastewater	55	4%	57	-2%	56
S30	6	-17%	5	20%	6
TOTAL	1,006	-16%	848	31%	1115

Bulk Segment

Operating profit margins in 2019 is projected to decrease by 17% in 2019 and increase by 34% in 2020. The operating profit margins are impacted on by the increased tariff rate which results in the increase anticipated and new operating areas.

Wastewater Segment

The bulk wastewater segment is projected to show a 4% improvement in 2019 due to the O&M of UMDM waste water schemes at cost plus 15% and the 15% increase in the Darvill management fee. In 2019 the margin decreases albeit by 2% only, mainly driven by the higher margin on the O&M of the UMDM schemes as well as the impact of the higher than inflationary increase in the operating costs at Darvill.

Section 30 Segment

Analysis of S30 segment is shown in Table 24.3.

Table 24.3: Analysis of S30 segment in terms of projects

	FY 2017		FY 2018		FY 2019				FY 2020		
	Actual	Actual	Budget	Forecast	Budget Var		Inc / (Dec) F'18	Budget	Inc / (Dec) F'19		
	R'000	R'000	R'000	R'000	R'000	%	%	R'000	R'000	%	
Revenue	165,210	51,115	27,678	32,206	4,528	16.4	(37.0)	37,415	5,209	16.2	
Laboratory Services	12,410	11,678	10,604	11,469	865	8.2	(1.8)	11,320	(149)	(1.3)	
Research	465	-	-	163	163	-	-	722	559	342.1	
Scientific & Environmental	7,262	6,129	-	-	-	-	(100.0)	-	-	-	
Engineering	12,543	2,284	-	1,126	1,126	-	(50.7)	2,700	1,574	139.8	
Water Infrastructure	116,305	16,192	-	-	-	-	(100.0)	-	-	-	
Training & Capacity Building	9,835	11,229	15,812	16,600	789	5.0	47.8	19,920	3,320	20.0	
O & M	6,391	3,603	1,262	2,847	1,585	125.5	(21.0)	2,753	(94)	(3.3)	
Cost of Sales	153,739	43,657	22,129	26,029	(3,900)	(17.6)	(40.4)	30,122	4,093	15.7	
Maintenance	2,138	1,503	441	861	(419)	(95.0)	(42.7)	753	(108)	(12.5)	
Staff costs	451	496	188	592	(404)	(215.2)	19.3	578	(14)	(2.3)	
Section 30 activities	150,942	41,602	21,476	24,517	(3,041)	(14.2)	(41.1)	28,728	4,211	17.2	
Laboratory Services	7,171	7,645	7,102	8,252	(1,150)	(16.2)	7.9	8,137	(115)	(1.4)	
Research	465	-	-	163	(163)	-	-	722	559	342.1	
Scientific & Environmental	6,649	5,667	-	-	-	-	(100.0)	-	-	-	
Engineering	11,573	1,941	-	1,010	(1,010)	-	(48.0)	1,759	749	74.1	
Water Infrastructure	116,145	16,141	-	-	-	-	(100.0)	-	-	-	
Training & Capacity Building	8,940	10,208	14,374	15,091	(717)	(5.0)	47.8	18,110	3,018	20.0	
Other direct operating expenses	208	57	24	60	(36)	(152.2)	4.9	63	3	5.4	
Gross Profit	11,471	7,457	5,549	6,177	628	11.3	(17.2)	7,294	1,117	18.1	
GP %	6.9%	14.6%	20.0%	19.2%	0.9%	-	4.6%	19.5%	0.3%	-	
Other income	4,500	-	-	-	-	-	-	-	-	-	
Administration expenses	20,920	1,825	445	969	(524)	(100.0)	(46.9)	1,006	37	3.8	
Bad Debts	19,272	739	-	-	-	-	(100.0)	-	-	-	
Other Admin	1,647	1,081	445	969	(524)	(117.9)	(10.4)	1,006	37	3.8	
Profit/(Loss) from Operations	(4,949)	5,633	5,104	5,208	103	2.0	(7.5)	6,287	1,080	20.7	
Net Finance charges	-	-	-	-	-	-	-	-	-	-	
Profit/(Loss) for the year	(4,949)	5,633	5,104	5,208	103	2.0	(7.5)	6,287	1,080	20.7	
Net Profit %	-3.0%	11.0%	18.4%	16.2%	2.3%	-	5.2%	16.8%	0.6%	-	

25.6 Sensitivity Analysis

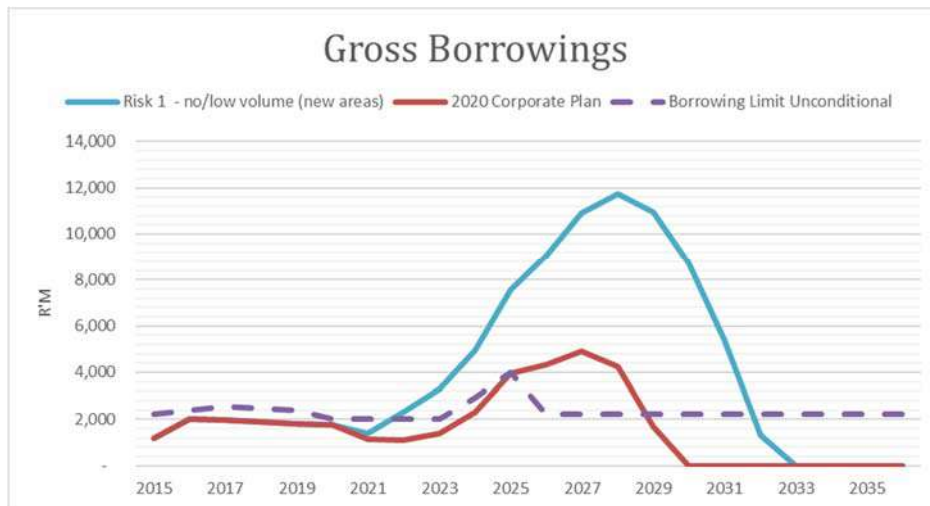
Umgeni Water's operating cashflows, borrowing levels and debt covenants are sensitive to the following operating risks which could have a financial impact on the operations of Umgeni Water:

- Risk 1 - no/low volume (new areas)
- Risk 2 - Tariff at cpi 2021-2024
- Risk 3 -10% increase in operating costs
- Risk 4 -increase in capex by 30% in 2020
- risk 5 - non-pmt by debtors - new areas

The financial impact in terms of these risks are highlighted in terms of its impact on the funding requirements, increase in debt and impact on the interest cover ratio being the most vulnerable covenant out of the 2 ratios per the EIB agreement (the other being the Debt:equity ratio). The summary of the risks is as follows:

Risk 1 – No or low volume growth

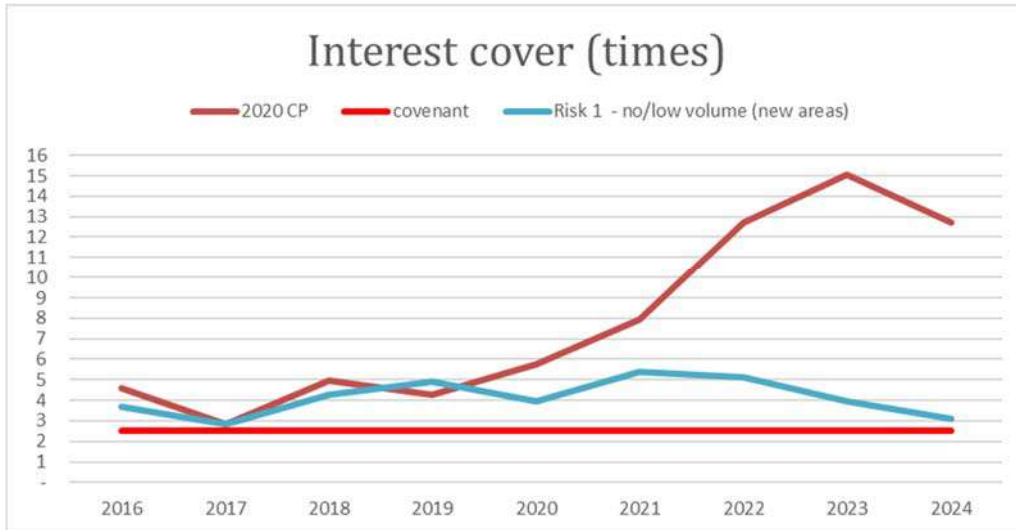
The risk that has been simulated here is that the additional sales volumes from HGDM and Ugu do not materialise in 2020 as intended. Also the sales from uThukela DM being at a lower sales volume than anticipated.



The debt curve peaks at almost R12bn in 2028 than the R5bn anticipated in the base case, in 2027.

FUNDING REQUIREMENTS Financial Year (R'm)	Short term		Medium Term			L/Term
	F19	F20	F21	F22	F23	F24
Base case funding requirements	1,173	1,028	496	174	(44)	(766)
Risk 1 - if new areas do no materialise	1,173	726	200	(432)	(1,029)	(2,204)
	-	301	296	606	985	1,438

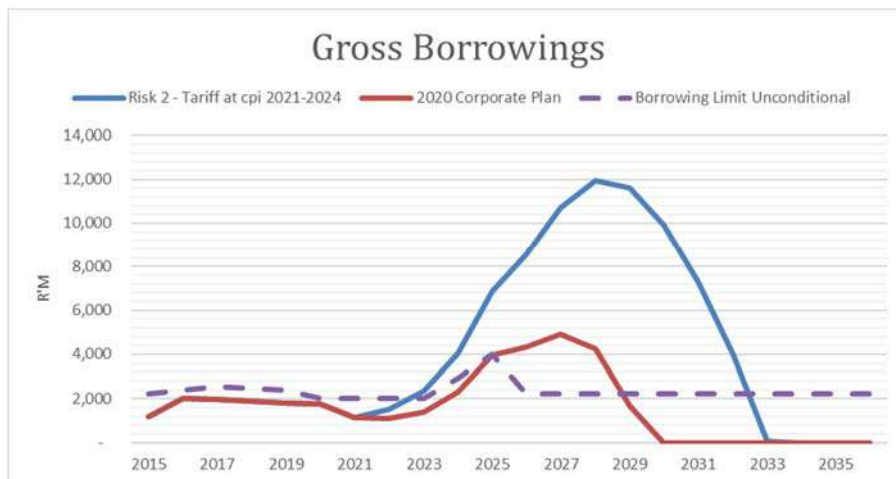
The additional funding requirement required by 2024 will be R1.4bn



The interest cover ratio is almost at the cusp of the required greater than 2.5 times by 2024 and will be breached in the years after 2024.

Risk 2 – Tariff at CPI 2021-2024

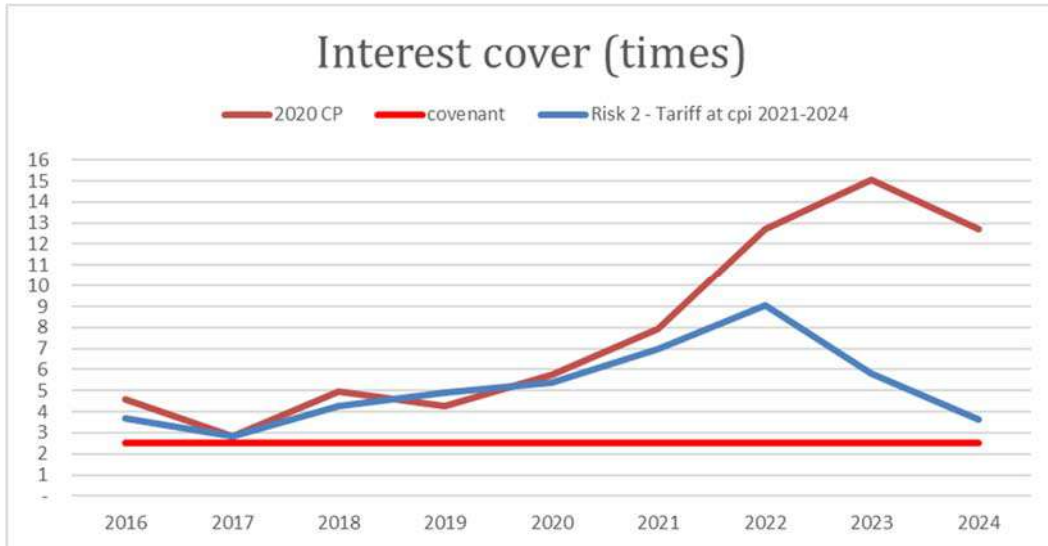
The scenario simulated is UW being under pressure to pass tariffs at CPI for the years 2021 to 2024.



The debt curve peaks at almost R12bn in 2028 than the R5bn anticipated in the base case, in 2027.

	F'19	F'20	F'21	F'22	F'23	F'24		
Base case Funding requirements (Cumulative)	1,173	1,028	496	174	(44)	(766)		
Risk 2 - Tariff at cpi 2021-2024	1,173	910	472	(221)	(1,085)	(2,790)		
	-	117	-	24	395	1,041	-	2,024

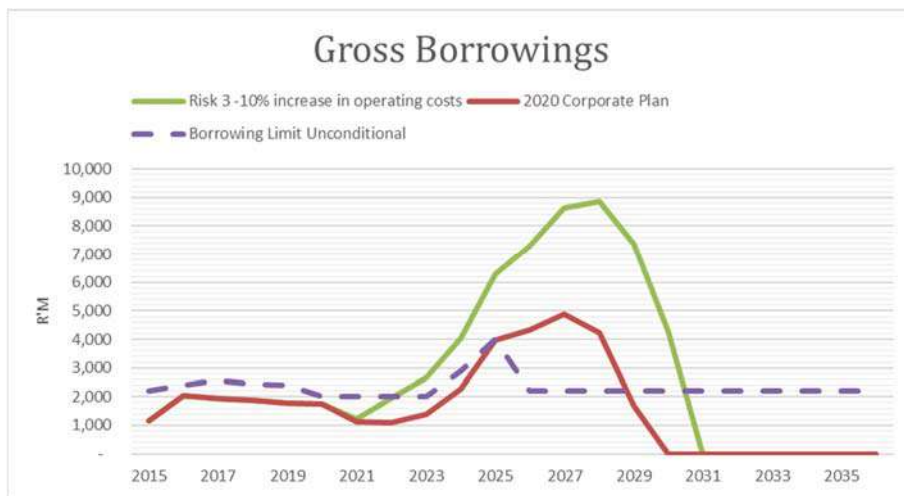
The additional funding requirement required by 2024 will be R2.obn



The interest cover ratio is almost at the cusp of the required greater than 2.5 times by 2024 and will be breach in the years after 2024.

Risk 3 -10% increase in operating costs

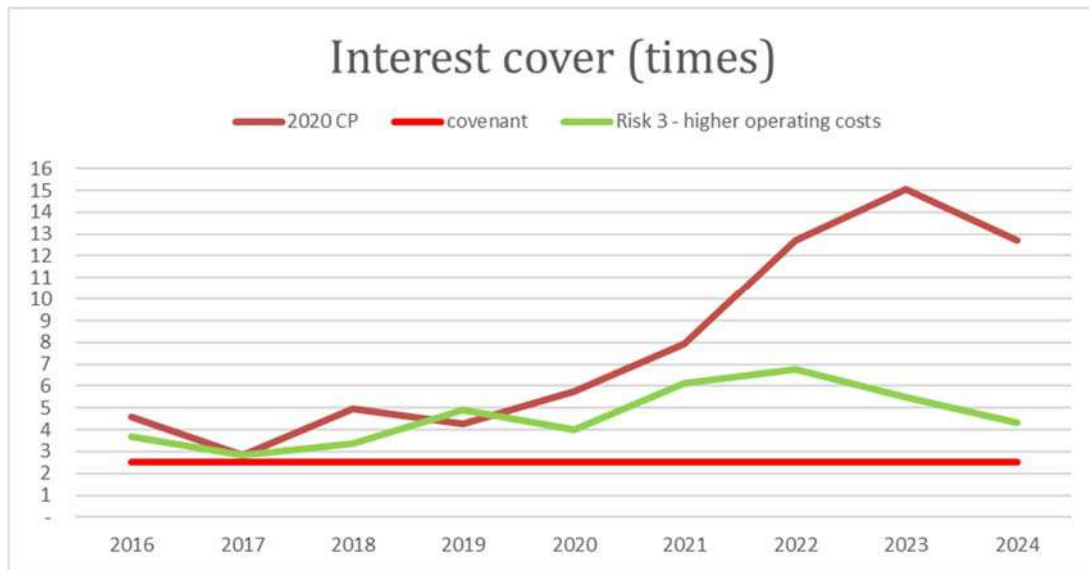
The scenario simulated here is the increase in 2019/20 of total operating costs by at least 10%.



The debt curve peaks at almost R9bn in 2028 than the R5bn anticipated in the base case, in 2027.

	F'19	F'20	F'21	F'22	F'23	F'24
Base case funding requirements	1,173	1,028	496	174	(44)	(766)
Risk 3 -10% increase in operating costs	1,173	662	168	(413)	(944)	(2,033)
	-	365	-	328	587	899
						-
						1,267

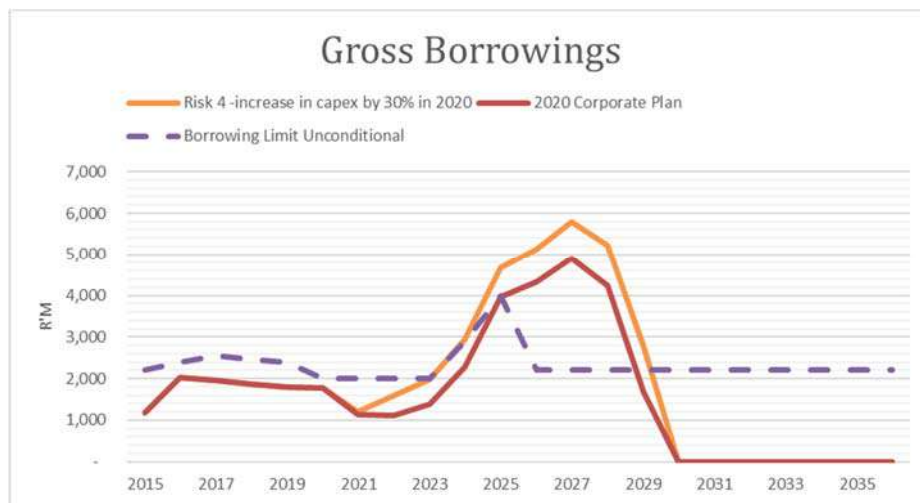
The additional funding requirement required by 2024 will be R1.3bn



The interest cover ratio will be at 4 times by 2024 compared with 11 times per the base case.

Risk 4 - increase in capex by 30% in 2020

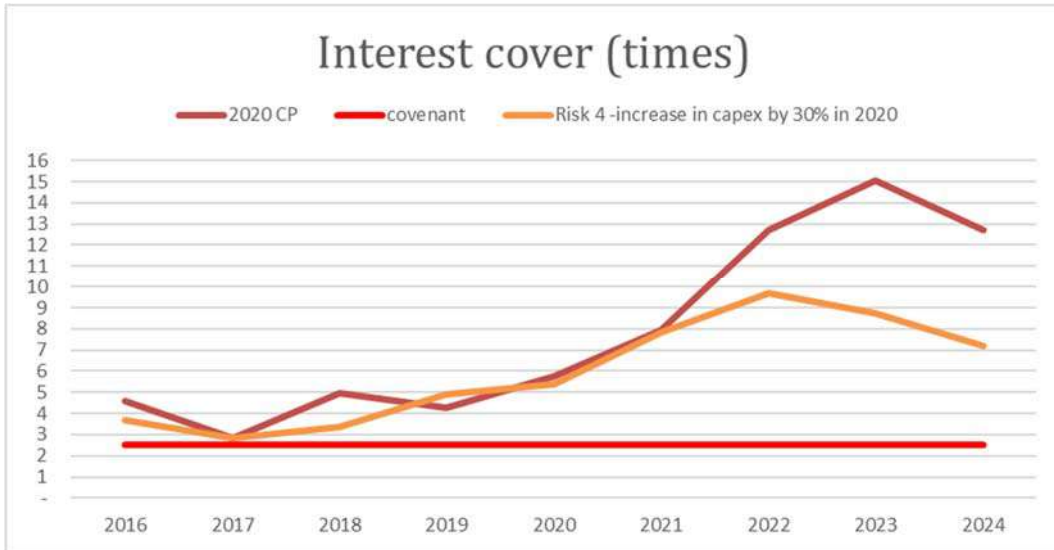
This scenario is based on a 30% increase in capex in 2019/20.



The debt curve peaks at almost R9bn in 2028 than the R5bn anticipated in the base case, in 2027.

	F'19	F'20	F'21	F'22	F'23	F'24
Base case Funding requirements (Cumulative)	1,173	1,028	496	174	(44)	(766)
Risk 4 - increase in capex by 30% in 2020	1,173	449	122	(264)	(560)	(1,369)
	-	579	-	375	438	516
						-
						603

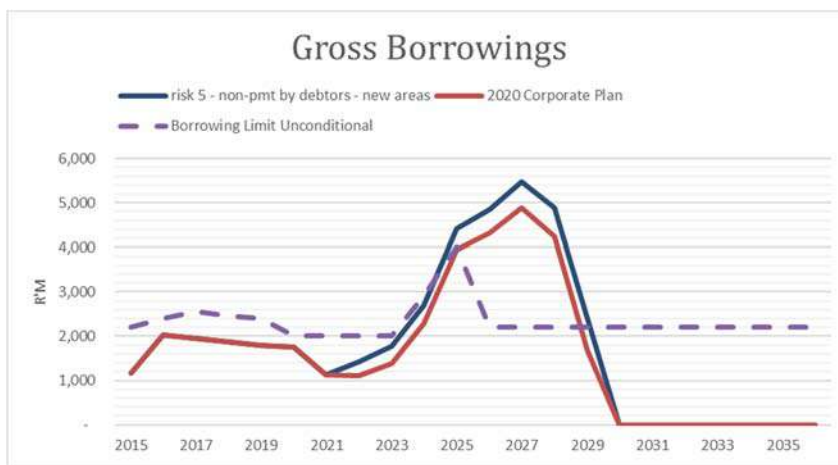
The additional funding requirement required by 2024 will be R603m.



The interest cover ratio will be at 7 times by 2024 compared with 11 times per the base case.

risk 5 - non-pmt by debtors - new areas

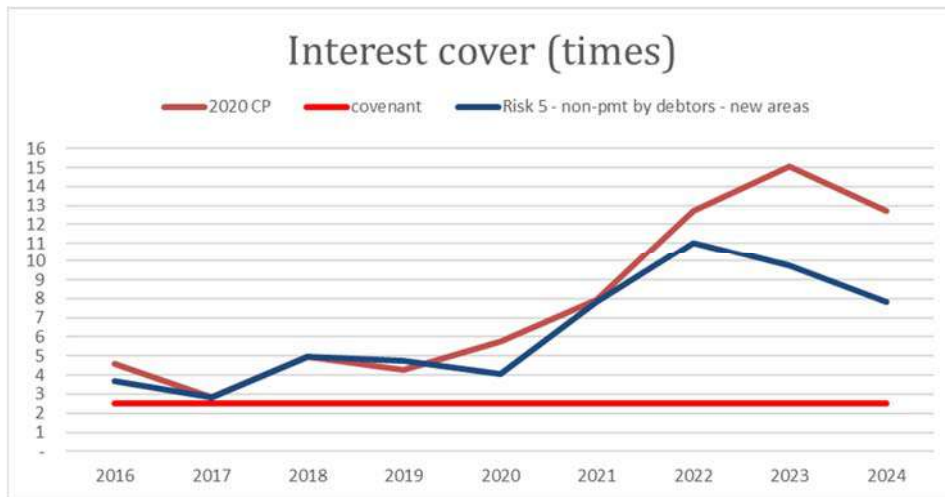
The risk being simulated in this scenario is that risk of the customers (HGDM, Ugu and uThukela DM) not being able to pay UW for the 2019/20 year.



The debt curve peaks at almost R9bn in 2028 than the R5bn anticipated in the base case, in 2027.

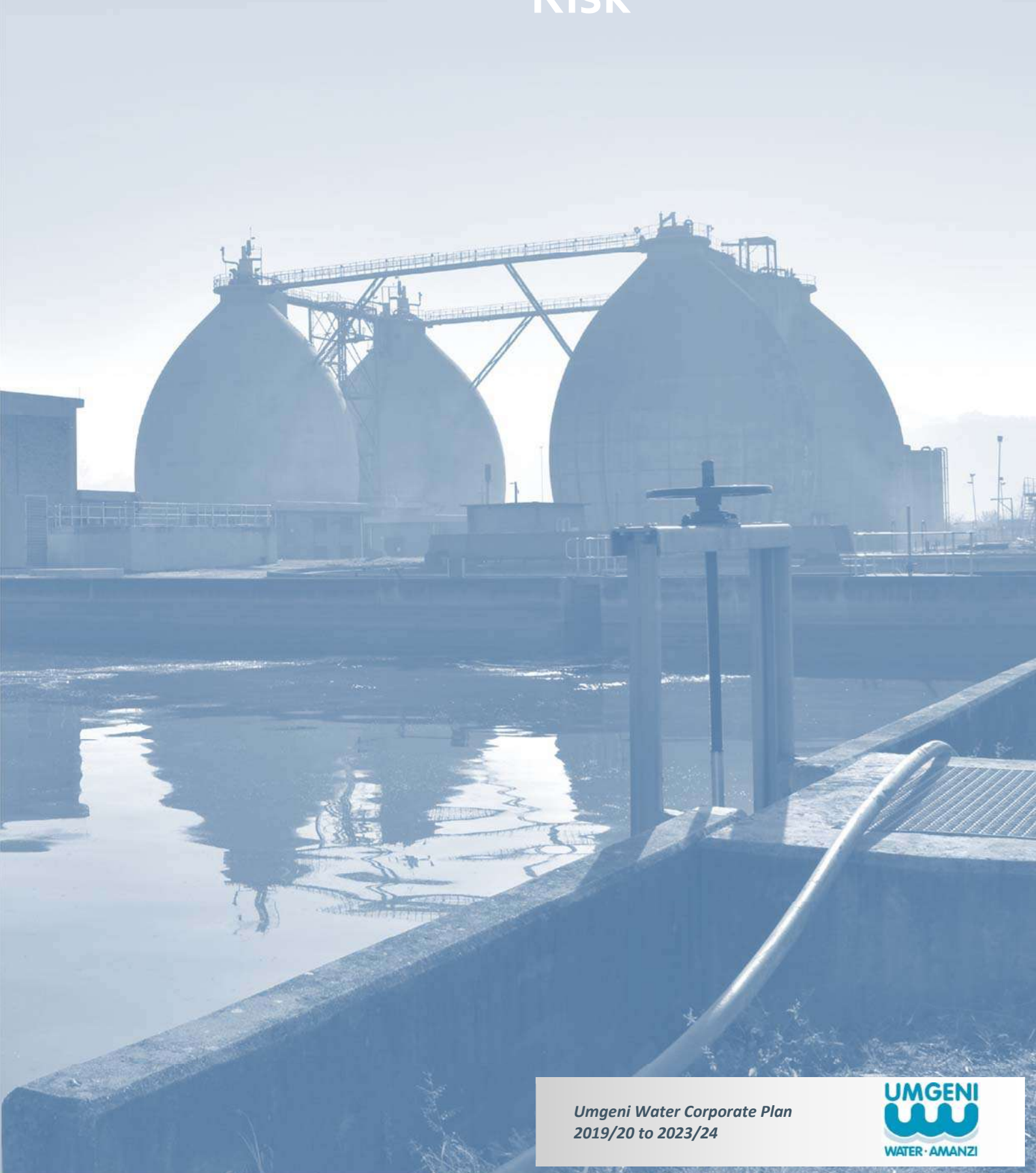
	F'19	F'20	F'21	F'22	F'23	F'24
Base case Funding requirements (Cumulative)	1,173	1,028	496	174	(44)	(766)
Risk 5 - non-pmt by debtors - new areas	1,155	705	383	27	(236)	(1,008)
	18	323	-	113	147	192
						-
						242

The additional funding requirement required by 2024 will be R242m.



The interest cover ratio will be at 8 times by 2024 compared with 11 times per the base case.

Chapter 26: Analysis of Risk



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26.1 Approach

Umgeni Water assumes a low tolerance approach to risk. The risks described in this section have been identified as either strategic financial risks and or treasury risks that are managed proactively to ensure timely mitigation.

26.2 Ability to secure funding to meet developmental goals

This risk arises from the inability to secure the required project grant funding which may delay the implementation of projects.

This risks impacts on the organisational strategy to *increase services and customers, increase customer and stakeholder value, improve and Increase infrastructure assets and increase mobilisation of funds.*

Mitigation approach

Umgeni Water manages this risk as follows:

- Business Plan for funding prepared well ahead of project implementation.
- Regular meetings with DWS on funding requirements.
- Transparent Tariff consultation process.
- Project evaluations to assess the optimal funding mix.

26.3 Sustainable Tariff

An unsustainable tariff will affect Umgeni Water's ability to fund future capital expenditure programmes and undertake operational expansion. This risk impacts on the organisation's ability to deliver on its financial strategy to remain a financially viable entity and improve on financial ratios.

Mitigation approach

- Umgeni Water monitors and reports on cash flow funding requirements and maintains optimal debt levels and has a transparent and formalised tariff policy embedded in a robust tariff model. The organisation undertakes water demand planning, liaises with stakeholders to obtain commitment to the capital expenditure programme and subsequently undertakes project evaluation to assess sustainability of the programme. The organisation pro-actively manages the impact of non-viable projects and expansion plans to ensure the relevant infrastructure funding mix is in place.

26.4 Liquidity Risk

Liquidity risk will result in Umgeni Water being unable to raise sufficient funds in the required currency and at the correct time to meet its financial obligations. This will impact on the organisation's ability to achieve its financial strategy of Financial Viability and sustainable debt.

Mitigation approach

To mitigate liquidity risk, Umgeni Water has:

- Short-term funding facilities to meet on-going cash requirements for which facility options are in place with four banks (FNB, Nedbank, ABSA, Investec).
- A Domestic Medium Note (DMTN) Programme has been established allowing for longer dated debt such as bonds to be issued with relative ease;

- Provided for a R 200 million cash buffer investment to cater for delayed payments by its customers;
- A redemption strategy framework, which provides guidelines for managing the risks associated with refinancing large debt maturities (such as the UG21 bond). The build-up in the redemption portfolio over a three-year period is: 10 % of the capital redemption value three years before maturity, 40 % two years before maturity, 75 % a year before maturity, and the balance of 25 % is funded during the year of maturity.

26.5 Credit Investment Risk

Credit investment risk will result in Umgeni Water being exposed to counter-party failure. This has the potential to impact on the organisation's ability to maintain, sustainable debt level and improve financial ratios

Mitigation approach

Umgeni Water will:

- According to its Investment Policy, mitigate credit risk by conducting transactions only with counter parties and issuers who satisfy soundly based and acceptable assessment processes, and only after formal limits have been set. In addition, same-day settlement limits will be set wherever possible and/or strict settlement procedures set and adhered to, and
- Continue monitoring of the credit quality of counterparties.

26.6 Interest rate risk

The main risk driver comes from changes in the market place, whilst a minor driver comes from changes in the capital structure from loan servicing and new loan generation. Unanticipated increases in interest costs could result in an increase in the funding requirements.

Mitigation approach

Umgeni Water will:

- Maintain a ratio of 70% fixed to 30% floating interest rate debt to manage the impact of volatility of changes in interest rates on cash flow and net profit.
- Use an interest-rate-hedging instrument for a maturity period that matches the underlying re-pricing risk, which is in line with Umgeni Water's overall interest rate risk profile.
- Depending on the business and economic environment prevailing, minimum hedging level for interest rate risk should be 30% to 40% of the underlying risk.

Chapter 27: Bank Accounts

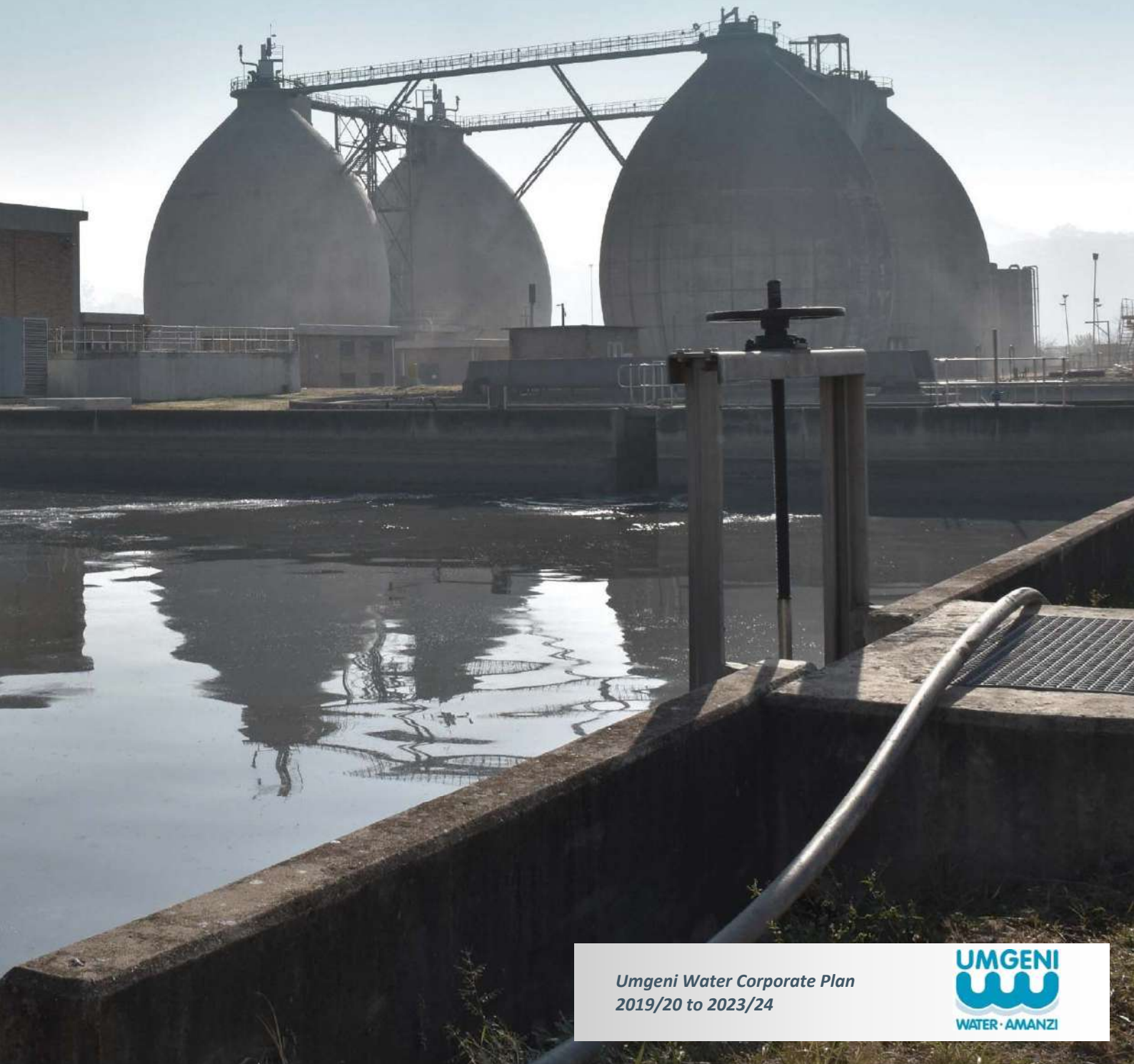


27 Bank Accounts

Umgeni Water bank accounts are presented in Table 26.1.

Table 26.1: Umgeni Water Bank Accounts

Description	Account	Branch #	Branch name	Bank
Creditors	4082271716	632005	Chatterton	Absa Bank
Payroll	4082271758	632005	Chatterton	Absa Bank
Main Bank	4082270574	632005	Chatterton	Absa Bank
Sundry One	4082270891	632005	Chatterton	Absa Bank
Treasury	4082271813	632005	Chatterton	Absa Bank
Interest Account	4082271601	632005	Chatterton	Absa Bank



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29.1 Integrated Risk Management

Umgeni Water defines risk as all sources of uncertainty that could, positively or negatively, affect the entity's ability to achieve its strategic objectives and outcomes. Risk management in the entity is guided by an Integrated Risk Management Framework (Figure 27.1). Umgeni Water's risk management process is aligned to strategy, which ensures a focused and integrated process of risk management in the entity.

Integrated Risk Management Governance structure

- The **Board** is ultimately accountable for integrated risk management and provides guidance and direction. The Board is kept informed of the status and effectiveness of the risk management system.
- The **Audit Committee** monitors the status of strategic risks, the overall effectiveness of the entity's risk management function and its implementation by management on a quarterly basis. The Committee reports the status to the Board.
- The **Corporate Risk Committee (CRC)** comprises the Chief Executive, the Executive Management and Senior Managers appointed by Executives. The CRC ensures implementation of the integrated risk management framework in compliance with all applicable legal and regulatory requirements, ensures there is management of risks at the operational levels of the entity and assists the Audit Committee in discharging its duties relating to the implementation of the integrated risk management framework. It does this by monitoring the status of strategic and operational risks and making recommendations on matters of policy and strategy based on best practise such as SANS 31000 Risk Management-Principles and guidelines and King IV to the Audit Committee for onward reporting to the Governing body.
- The **Executive and Senior Management**, supported by Divisional Risk Champions integrate risk management into their day-to day management processes by undertaking risk assessments at a departmental and divisional level to continually identify emerging risks, review, treat and monitor existing risks and report the status of the risks assigned to them.

The entity's strategic risks are shown in **Table 27.1**. Financial risks are detailed in the financial section of this Corporate Plan.

Emerging Risks

In line with the regular revision of strategy and as required by governance frameworks, the Board, assisted by its Committees, Executive and Senior Management regularly review the internal and external landscape that affect Umgeni Water's risk profile with a view to identifying and maintaining a watching brief on possible emerging risks.

Emerging risks refer to those uncertainties that have the potential to positively or negatively affect the entity in meeting its strategic objectives but for which there is insufficient information to fully understand. These risks will be monitored on an on-going basis.

The following risk has been classified as an emerging risk:

- Climate change

Table 27.1 Umgeni Water Strategic Risks December 2018

All seven (7) strategic risks are outside appetite but within tolerance.

Risk #	Risk Name, Score and Status	Cause, Context and Treatment	Main Strategic, Perspective, Strategic Objectives and Outcomes Impacted
1	<p>Long-term water resources availability</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Reasonable 55% Severity: Moderate-High: 40 Probability: 50% Fairly poor and/or could occur within 2 years Risk Owner: Executive: Infrastructure Development <p>Score 20 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Customers will not be guaranteed 99% assurance of supply in the Mgeni System and 98% assurance of supply in the South Coast System as required, due to demand being higher than the yield within the next 5 years. Delay in the implementation of the uMkhomazi Water Project to increase the yield in the Mgeni System increases the risk of non-supply and the need for restrictions.</p> <p><i>Treatment Approach: Integrated planning and implementation for medium and long-term augmentation of systems with stakeholders. Water conservation and demand management initiatives. Review of water resources mix including reuse and desalination.</i></p> <p><i>Timely completion of target water resources projects including: Mgeni system- uMkhomazi Water Project and South Coast system- Lower uMkhomazi BWSS</i></p>	<p>Organisational Efficiency and Effectiveness Perspective:</p> <p>SO1: Improve supply security and service delivery</p> <p>SO2: Increase bulk infrastructure access, customers and services</p> <p>Outcomes:</p> <p>Water Resources Adequacy Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
2	<p>Short-term Water resources availability</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Poor 40% Severity: Moderate-Low: 20 Probability: 80% Likely and/or could occur within 1 year Risk Owner: Executive: Infrastructure Development <p>Score 16 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Dam and river levels are such that there is a threat of non-supply if mitigation measures are not put in place (Restrictions, emergency schemes).</p> <p><i>Treatment Approach: On-going short-term water resources and demand management initiatives. Implementation of appropriate operating rules. Water rationing implemented as per the target percentage for applicable systems. Collaboration and partnerships to pool efforts, such as Joint Operating Committees. Implementation of the emergency scheme to transfer water from the Lovu River to the Amanzimtoti Water Works to support the supply from the Mgeni system.</i></p>	<p>Organisational Efficiency and Effectiveness Perspective:</p> <p>SO1: Improve supply security and service delivery</p> <p>SO2: Increase bulk infrastructure access, customers and services</p> <p>Outcomes:</p> <p>Water Resources Adequacy Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
3	<p>Infrastructure investment.</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Good 70% Severity: Moderate-Low: 20 Probability: 65% Even probability &/or could occur within 1- 2 years Risk Owner: Chief Financial Officer <p>Score 16 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Alignment, prioritisation and implementation of the infrastructure plan between Umgeni Water and customers. Delays in decision making relating to new infrastructure. Inadequate return on infrastructure investment due to unaffordability by rural customers. Mismatch between volume in customer's original request and actual offtake, the latter being either larger or smaller volumes.</p> <p><i>Treatment Approach: Critical supply infrastructure is annually identified, aligned, prioritised, funded and implemented as part of the entity's capital infrastructure programme linked to strategy.</i></p> <p><i>Details of major infrastructure initiatives and progress with these are outlined in the Bulk Potable Water Supply and Wastewater Treatment and Disposal Plans.</i></p>	<p>Organisational Efficiency and Effectiveness Perspective:</p> <p>SO1: Improve supply security and service delivery</p> <p>Financial Performance Perspective:</p> <p>SO5: Improve financial sustainability and enhance socio-economic development</p> <p>Outcomes:</p> <p>Infrastructure Stability Product Quality Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>

Risk #	Risk Name, Score and Status	Cause, Context and Treatment	Main Strategic, Perspective, Strategic Objectives and Outcomes Impacted
4	<p>Sustainable water and wastewater pricing</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Reasonable 60% Severity: Moderate-Low: 20 Probability: 65% Even probability &/or could occur within 1- 2 years Risk Owner: Chief Financial Officer <p>Score 13 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Constraints on ability to charge and recover a tariff that will ensure financial viability of Umgeni Water and protection of operating cash flows in view of the operating environment. Major cost drivers are fixed. Business model for wastewater is still in infancy.</p> <p><i>Treatment Approach: Strategic customer engagement on underlying assumptions for annual tariff review including the annual capital programme. Scenario planning using the tariff model to simulate scenarios (capex acceleration, increase in cost and lower sales volumes, non-receipt of grant funding as per base case assumptions) and the effect on the tariff increase, operating cashflows, optimal debt level and covenants.</i></p>	<p>Financial Performance Perspective: SO5: Improve financial sustainability and enhance socio-economic development</p> <p>Outcomes: Financial Viability Infrastructure Stability Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
5	<p>Ability to deliver projects on time and within budget.</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Reasonable 60% Severity: Moderate-Low: 20 Probability: 50% Fairly poor and/or could possibly occur within 2 years Risk Owner: Executive: Infrastructure Development <p>Score 10.0 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Actual cost and delivery time of projects may significantly differ from approved plans. The variation may lead to undesirable impacts such as reputational damage and financial costs. Delays due to appeals, re-appeals and finalisation of contracts with requisite CPG targets. Increase in the risk of social disruption.</p> <p><i>Treatment Approach: Continued effective engineering, procurement and construction management (Project Lifecycle Process) process alignment within the specified time-frames. Communities/stakeholder engagements and contractual shortcomings.</i></p>	<p>Organisational Efficiency and Effectiveness Perspective: SO2: Increase bulk infrastructure access, customers and services</p> <p>Financial Performance Perspective: SO5: Improve financial sustainability and enhance socio-economic development</p> <p>Outcomes: Product Quality Customer Satisfaction Infrastructure Stability Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
6	<p>Compliance with laws and regulations</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Good 80% Severity: Minor-Low: 5 Probability: 80% Likely &/or could occur within 1 year Risk Owner: Chief Executive Officer <p>Score 4.0 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Non-compliance to laws, regulations, policies and procedures as a result of dishonest behaviour and/or poor performance.</p> <p><i>Treatment Approach: Policies and procedures in place. Strategic oversight and assurance of compliance through on-going assessment of control effectiveness.</i></p>	<p>Financial Performance Perspective: SO4: Improve financial systems and key financial ratios.</p> <p>General Compliance (Risk, Audit and Governance) Perspective: SO6: Improve governance, risk and compliance systems</p> <p>Outcomes: Financial Viability Operational reiliency</p>
7	<p>Protection and safeguarding of assets.</p> <ul style="list-style-type: none"> Overall Response Effectiveness: Reasonable 65% Severity: Minor-Low: 5 Probability: 65 % Even probability &/or could occur within 1- 2 years Risk Owner: Executive Corporate Services <p>Score 3.0 Low</p> <p>Risk Appetite and Tolerance</p> <ul style="list-style-type: none"> Outside Appetite Within Tolerance 	<p>Cause & Context: Illegal settlements and unauthorised construction on properties and servitudes. Potential land claims on registered servitudes and new servitudes to be acquired. Umgeni Water's right of access limited. General encroachment and impact on assets. Remote locations are difficult to secure or monitor resulting in an increase in theft and vandalism with damage to third party property and injury to staff.</p> <p><i>Treatment Approach: Implementation of servitude management policy and procedure. Safety and security measures to protect staff and public. Innovative solutions implemented for reduction in theft and vandalism of infrastructure and</i></p>	<p>General Compliance (Risk, Audit and Governance) Perspective: SO6: Improve governance, risk and compliance systems</p> <p>Outcomes: Infrastructure Stability Stakeholder Understanding and Support Community and Environmental Sustainability.</p>

Risk #	Risk Name, Score and Status	Cause, Context and Treatment	Main Strategic, Perspective, Strategic Objectives and Outcomes Impacted
		<i>improvement in the internal control environment for ICT-related assets. Properties and servitudes maintained and monitored. Disposal of property no longer in use.</i>	

29.2 Key Internal Audit Issues

Control deficiencies are adequately elevated at the correct levels withing Umgeni Water in accordance with severity and Internal Audit continues to monitor the resolution of control deficiencies on an on-going basis.

Umgeni Water is projected to have below seven (7) unresolved internal audit findings by 30 June 2019 and more than 80% of Internal Audit Findings will be closed by due date at year end.

The list of unresolved findings (Table 27.2)

Table 27.2 Umgeni Water Internal Audit Findings projected to 30 June 2019

#	Description of finding
1	Long outstanding requisitions not being converted to purchase orders (repeat finding);
2	Market analysis not submitted for approval to Executive Committee
3	Bid Committee Terms of Reference not reviewed timeously.
4	Inadequate safeguarding of critical spares.
5	Performance appraisals, contracts and Individual development plans not submitted for audit
6	Lack of alarm management

29.3 Compliance Management

Umgeni Water has determined its Compliance Universe and entity-wide compliance registers have been developed. These registers continue to be consistently reviewed and used as the basis for reporting compliance in a structured manner. As at mid-term, non-compliance with legislation, namely National Water Act Regulations pertained to the following:

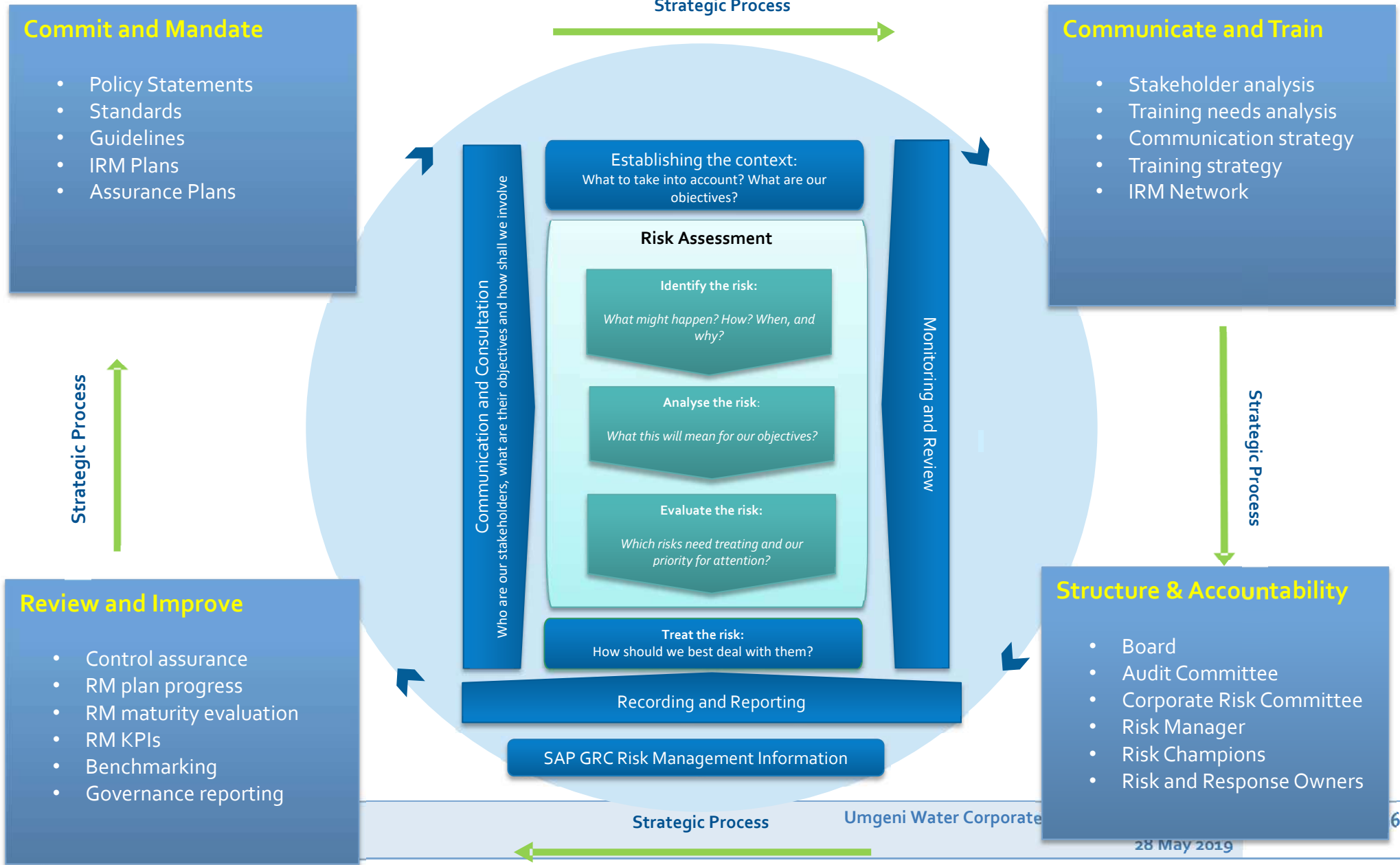
- Wastewater quality compliance (Darvill WWTW),
- Sludge/residues disposal
- Mpofana WWTW operating without a licence, and
- Abstracting without water use licences in Ixopo, EJ Smith and Mthwalume

Various interventions are in progress to address these areas of non-compliance by agreed action dates.

29.4 Contingent Liabilities

- **Collateral**
Collateral security is given to certain financial institutions in respect of mortgage loans advanced to employees under the home ownership scheme.
This amount is Rnil for 2019/2020.
- **Guarantees**
Guarantees are given by certain financial institutions in respect to payments to utility service providers.
This amount is **R7.37 million** for 2019/20.

Figure 27.1: Umgeni Water Integrated Risk Management Framework Strategic Process





Chapter 29: Fraud Prevention



*Umgeni Water Corporate Plan
2019/20 to 2023/24*



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29.1 Background

Umgeni Water has formally adopted best practice principles as contained in King IV with respect to fraud prevention planning. The change to King IV will enable, amongst other aspects: greater accountability and transparency as a broader stakeholder within society; an integrated approach to corporate governance in view of economic, social and environmental spheres; and proposed greater integration between the role and function of the Social and Ethics Committee and other Board committees.

In line with this, the Board acknowledges its responsibility to ensure that Umgeni Water is a fair, transparent and ethical entity and will continue to exercise oversight through its already fully functional Ethics Committee as prescribed in Section 29.1.1 of the Treasury Regulations in the PFMA as well as in line with the requirements of section 72 (4) of the Companies Act (Act No.71 of 2008).

Umgeni Water addresses fraud specifically through an Integrated Fraud Management Framework (IFMF) managed by five guiding principles.



This framework is a pronouncement of Umgeni Water's integrated approach to address fraud and reduce the potential risk to the entity's assets, service delivery efficiency and reputation.

29.2 Principle 1 - Fraud Governance (Also refer to Chapter 6 of this Corporate Plan)

- The Board of Umgeni Water is accountable for ethical leadership and is committed to managing fraud risk by ensuring that there are written policies and procedures in place within the entity. In this regard the Board has approved a Code of Ethics for Umgeni Water.
- The board will further ensure that its own governance practices set the tone for fraud risk management and that management implements policy and puts in place procedures that encourage ethical behaviour. The latter includes processes for employees, customers, vendors and other third parties to report incidents where standards are not met.
- The Audit Committee is mandated to achieve the highest level of financial management, accounting and reporting to the shareholder. The Audit Committee is guided by its charter, which sets out its responsibilities regarding risk management and specifically oversight of financial reporting risks and internal financial controls, as well as fraud and IT risks that are relevant to financial reporting and system controls, amongst others.
- Matters that fall within the Board and Audit Committee's competence are subjected to both Internal and External Audit as part of the entity's combined assurance framework.
- The Ethics Committee ensures the implementation of the Integrated Fraud Management Framework and accounts to the Board through the Audit Committee. The Committee provides assurance to the Board that there is effective institutional-wide prevention of fraud and corruption, that complaints are effectively managed, appropriately followed-up and efficiently investigated.

The ethics committee comprises of:

- An Independent Chairperson - who is neither a member of management nor a member of the Board, and
- Executive Management (prescribed officers),
- A Non-Executive Director – who is not involved in the day to day running of the business,
- Managers and Organised Labour.

The Ethics Committee reports to the Audit Committee on its activities. Its reports are a standing item in Audit Committee meetings. The Audit Committee takes full oversight responsibility over organisational ethics.

29.3 Principle 2 - Fraud Prevention

The Ethics Committee provides assurance to the board that there is effective institutional-wide prevention of fraud and corruption, that complaints are effectively managed, appropriately followed-up and efficiently investigated. Umgeni Water has implemented a plan to ensure mechanisms are in place, to manage its vulnerability to fraud. These mechanisms are designed to prevent, deter and detect fraud. Fraud prevention is a primary control which is intended to lower the likelihood of fraud occurring. Umgeni Water has aligned its Fraud Prevention plan with the Code of Ethics as indicated in Table 28.1.

This regulates, inter alia

- Integrity in the workplace,
- Conflicts of interest,
- Bribery and Corruption,
- Information and use of Umgeni Water property,
- Gifts and entertainment,
- Human Rights and Dignity,
- Corporate Governance,
- Suppliers and Business Partners,
- Customers and other stakeholders,
- Corporate Social Investment, and
- Integrity with regard to the environment.

Quarterly oversight by the Board on the implementation of the plan ensures ethical issues are assessed against key ethical areas in an integrated view encompassing economic, social and environmental spheres.

29.4 Principles 3 and 4: Fraud Detection and Investigation

Umgeni Water uses its external whistle-blowing hotline service managed by an external service provider as means of fraud detection and as means of encouraging an ethical culture. This 24 hour - 365 day facility provides an anonymous and confidential communication channel for all stakeholders to report suspicions of fraud or otherwise unethical conduct.

All hotline calls are investigated and appropriately followed through using a hotline protocol to ensure that all calls received are dealt with in a transparent and consistent manner. Trends and information of the hotline calls are further used to improve internal controls. Umgeni Water endeavours to create and maintain awareness of this facility and ensure that the number is adequately advertised by means of posters, intranet, staff information and induction sessions, supplier forums as well as and other means deemed effective and appropriate.

29.5 Principle 5 - Fraud Risk Assessment

The Board has developed and approved a comprehensive risk management framework that articulates the risk management mandate of the Board, its committees and management to formally conduct and review risk assessments, including any fraud risks faced by the organisation. High fraud risks are managed with appropriate mitigation to increase the control strengths. Fraud risk exposure will continue to be assessed as part of the prevention plan.

Table 28.1: Fraud prevention plan

Task	Plan 2018/19 to 2022/23	Primary Responsibility
Fraud monitoring and reporting	Quarterly assessment of Fraud Status Reports; Non-compliance to laws and policies; Misconduct involving fraud, theft, workplace violence, discrimination, harassment, misuse of computer resources, information ICT breaches; Fraud Status Reports; Disciplinary reports.	Chief Executive, Ethics Committee, Audit Committee, Board.
Fraud Control testing and reporting	Internal Audit risk assessment in accordance with annual internal audit plan.	Internal Audit, Ethics Committee, Audit Committee, Board.
Review and update of the Integrated Fraud Management Framework (IFMF) and Plans	Annual review and alignment with legislative imperatives and best practise.	Chief Executive, Executive Management, Ethics Committee, Audit Committee, Board.
Fraud Awareness Communication of Code of Ethics and Awareness of Hotline calls	General staff and line management communication at meetings and quarterly staff Information sessions.	Executive Management, All Umgeni Water Divisions, Corporate Stakeholder Management Unit.
	Communication at Supplier Briefings at least annually.	Chief Executive, Supply Chain Management.
	Internal newsletters and publications.	Corporate Stakeholder Management Unit.
	Presentation and communication at corporate Induction programmes held twice per annum.	Corporate Services, Manager CE office.
Disclosure of Interests	Individual disclosure at all Board, Committee and Executive Management meetings; Quarterly written disclosure or disclosure updates by employees.	Board, Committees, Executive Management, All employees.
Risk Workshop	Review of operating environment, legislative imperatives, and emergent risks at annual risk workshop.	Executive Management, Audit Committee, Board.
Human Capital report	Recruitment for quarter; EE Reports and targets; Training and development report; Succession, mentoring and coaching report; Health and Safety report; HIV implementation programme; Wellness report.	Chief Executive, Ethics Committee, Audit Committee, Board.
	Performance management system review.	Human Resources.
	Conducting exit interviews of terminated employees or those who have resigned to help both prevention and detection efforts.	Corporate Services, Chief Executive.
	Continuous training and induction programmes implemented.	Corporate Services, Chief Executive.
	Senior Management candidates subject to detailed National Intelligence Agency vetting process.	Corporate Services, Chief Executive.
	Staff vetting processes for all new employees.	Corporate Services, Chief Executive.
	Obtaining certified copies of qualification certificates.	Corporate Services, Chief Executive.
Disclosure of interest	Ethics / Fraud awareness a standing item on agenda of induction programmes.	Corporate Services, Chief Executive.
	Board / EXCO declaration registers. Organisational Disclosures. Declarations of Bid Committees signed at all meetings.	Chief Executive, Ethics Committee, Audit Committee Board, EXCO, all employees.
Information and use of Umgeni Water property	Gifts and donations register and declaration.	Chief Executive, Ethics Committee, Audit Committee Board, EXCO, all employees.
	Information security - Internal audit and external audit	Chief Executive, Corporate Services

Task	Plan 2018/19 to 2022/23	Primary Responsibility
	Penetration testing by external vendor to indicate loopholes in information security	
Suppliers and Business Partners	B-BBEE status report and Contractor Participation Goal (CPG) status.	Chief Executive, Finance Division-SCM.
	Tender issues, appeals, objections.	Chief Executive, Finance Division-SCM.
	All suppliers and contractors made aware of Umgeni Water's fraud policy and management thereof.	Chief Executive, Finance Division-SCM.
Financial Ethics	Finance internal controls, policies and procedures. Delegation of Authority (DOA) is updated every two years or amended as required. Irregular expenditure procedure. Wasteful and fruitless expenditure procedure.	Chief Executive, Finance.
	Materiality and Significance Framework. Duty to report corrupt transactions and actions	Chief Executive, Finance.
Corporate Social Initiatives	Implementation of project, amount of project, targeted sector, socio-economic value add, Job creation and capacity building.	Chief Executive, Engineering and Scientific Services, Water Quality and Environment
Environmental Integrity	Environmental report; Complaints; EIA reports; Water quality / public health issues.	Chief Executive, Engineering and Scientific Services.
Customer and stakeholder feedback and complaints	Customer feedback reports.	Chief Executive, Corporate Stakeholder Management.

Chapter 30: B-BBEE Plan



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31.1 Management Approach

Umgeni Water recognises the historical disparity of previously disadvantaged communities is committed to promoting B-BBEE by making procurement accessible to Black Economic Enterprises, through processes that are competitive, fair, transparent, equitable and cost effective. This will be done within the framework of the Constitution of South Africa, the Preferential Procurement Policy Framework Act and Regulations and the Broad-Based Black Economic Empowerment Act.

To ensure a focussed approach to empowerment, Umgeni Water treats economic empowerment as a business imperative aimed at the following:

- o Facilitate access to the entity's procurement activities by Suppliers who comply with B-BBEE Framework.
- o Ensure that previously disadvantaged individuals achieve full participation and involvement in businesses that support Umgeni Water in the supply of water services
- o Develop and/or establish new, sustainable business with black entrepreneurs, through the procurement process.
- o Encourage the establishment of value adding joint ventures between traditional and emerging suppliers, thus giving the latter access to technology, skills and knowledge.
- o Contribute to skills development and job creation through the employment of targeted labour.

31.2 B-BBEE Scorecard and Verification Plan

Umgeni Water recognises the historical disparity of previously disadvantaged communities and commits to promoting B-BBEE by making procurement accessible to Black Economic Enterprises. At the same time, Umgeni Water as an entity of state is also seeking to meet the requirements for B-BBEE compliance. In this independent verification was sought for the first time in 2015. The outcome of the verification, received in November 2015, was that the entity has some gaps to close before it can be rated as B-BBEE compliant.

Umgeni Water appreciates that as the Measured Entity (ME) it is responsible for conforming to the requirements for Verification, whilst the B-BBEE Verification Professional will undertake the verification and validation thereof. As a result, during this Corporate Plan period, Umgeni Water will strive to monitor and evaluate its performance against the required elements and progressively close gaps in order to achieve B-BBEE compliance at a future date.

Indicators and target plan to achieve verification is shown in **Table 31.1 (a) & (b)**. The elements of relevance to Umgeni Water as a state-owned entity are: (1) Management Control, (2) Skills Development, (3) Preferential Procurement, (4) Enterprise and Supplier Development and (5) Socio-economic Development.

Table 31.1 (a): B-BBEE Scorecard Summary per Element

B-BBEE Element:	Weight	2016 Actual Score	2020 Target Minimum	2020 Target Maximum
1. Management Control	20	14.65	Target will be set during 2019/20	
2. Skills Development	25	7.88		
3. Preferential Procurement	30	9.97		
4. Enterprise and Supplier Development	20	0.02		
5. Socio-Economic Development	5	0.43		
Overall B-BBEE Compliance	100	32.95		

Table 31.1 (b): B-BBEE Scorecard Detailed Indicators and Targets

Indicators	Weight	Target %	2016 Actual %	2016 Score	2020 Target Minimum	2020 Target Maximum
1. B-BBEE Element: Management Control	20			14.65	Target will be set during 2019/20	
o Exercisable Voting Rights of black Board members as a percentage of all board members	2	50%	91.67%	2.00		
o Exercisable Voting Rights of black female Board members as a percentage of all board members	1	25%	41.67%	1.00		
o Black Executive Directors as a percentage of all executive directors	2	50%	100.00%	2.00		
o Black Female Executive Directors as a percentage of all executive directors	1	25%	0.00%	0.00		
o Black Other Executive Management as a percentage of all executive managers	2	60%	75.00%	2.00		
o Black Female Other Executive Management as a percentage of all executive managers	1	30%	25.00%	0.83		
o Black employees in Senior Management as a percentage of all senior management	2	60%	44.97%	1.50		
o Black female employees in Senior management as a percentage of all senior management	1	30%	15.03%	0.50		
o Black employees in Middle Management as a percentage of all middle management	2	75%	61.16%	1.63		
o Black female employees in Middle Management as a percentage of all middle management	1	38%	27.41%	0.72		
o Black employees in Junior Management as a percentage of all junior management	2	88%	76.64%	1.74		
o Black female employees in Junior Management as a percentage of all junior management	1	44%	32.26%	0.73		
o Black disabled employees as a % of all such employees	2	2%	0.00%	0.00		
2. B-BBEE Element: Skills Development	25			7.88		
o Skills development spend on learning programmes as a percentage of leviabile amount.	9	7.9%	1.48%	2.21		

Indicators	Weight	Target %	2016 Actual %	2016 Score	2020 Target Minimum	2020 Target Maximum
○ Skills development spend on learning programmes for black employees with disabilities as a percentage of leviabile amount.	4	7.9%	0.00%	0.00	Target will be set during 2019/20	
○ Number of black employees participating in Learnerships, Apprenticeships and Internships as a percentage of total employees.	6	0.3%	2.36%	5.66		
○ Number of unemployed black people participating in Learnerships, Apprenticeships and Internships as a % of total employees	6	2.5%	0.00%	0.00		
○ <i>Bonus: Number of black people absorbed by the Measured Entity at the end of the Learnership Programme.</i>	5	100%	0.00%	0.00		
3. B-BBEE Element: Preferential Procurement	30			9.97		
○ B-BBEE Procurement Spend from all Empowering Suppliers as a percentage of Total Measured Procurement Spend	5	80%	80%	5.00		
○ B-BBEE Procurement Spend from all Empowering Suppliers that are QSEs, as a percentage of Total Measured Procurement Spend	4	15%	7.65%	2.04		
○ B-BBEE Procurement Spend from all EMEs as a percentage of Total Measured Procurement Spend.	5	15%	0.31%	0.10		
○ B-BBEE Procurement Spend from Empowering Suppliers that are at least 51% black owned, as a percentage of Total Measured Procurement Spend.	11	40%	5.39%	1.48		
○ B-BBEE Procurement Spend from Empowering Suppliers that are at least 30% black women owned, as a percentage of Total Measured Procurement Spend	5	12%	3.24%	1.35		
○ <i>Bonus: B-BBEE Procurement Spend from Designated Group Suppliers that are at least 51% black owned.</i>	2	2%	0.00%	0.00		

Indicators	Weight	Target %	2016 Actual %	2016 Score	2020 Target Minimum	2020 Target Maximum
4. B-BBEE Element: Enterprise and Supplier Development	20			0.02	Target will be set during 2019/20	
o Annual value of all Supplier Development Contributions made by the Measured Entity as a percentage of the target.	15	2.00% of NPAT	0.00%	0.01		
o Annual value of all Enterprise Development and Sector Specific Contributions made by the Measured Entity as a percentage of the target	5	1.00% of NPAT	0.00%	0.01		
o <i>Bonus: Graduation from Enterprise Development to Supplier Development Beneficiary</i>	1	Yes	No	0.00		
o <i>Bonus: Jobs created directly as a result of Supplier Development and Enterprise Development initiatives by the Measured Entity</i>	1	Yes	No	0.00		
5. B-BBEE Element: Socio-Economic Development	5			0.43		
o Average annual value of all Socio-economic Development Contributions made by the measured entity as a percentage of the target	5	1.00% of NPAT	0.09%	0.43		

31.3 Contract Participation Goals

In this period Umgeni Water will continue to enhance its B-BBEE initiatives through the continued implementation of Contract Participation Goals (CPGs). CPGs require tenderers to commit a certain percentage of the tender scope of work and value for which the tenderer will contract targeted enterprises through provision of meaningful economic opportunities. CPG targets set for 2018/2019 are $\geq 35\%$ for construction contracts and professional services projects. CPG targets set for B-BBEE suppliers that are women is $\geq 10\%$.

31.4 B-BBEE Spend Performance

Companies have been classified and registered on a supplier database, according to their progress in achieving B-BBEE. The spend target for 2018/2019 is $\geq 80\%$ of total discretionary spend. In addition Umgeni Water will continue to add new entrants to the database for which each year ≥ 2 of the new entrants will be awarded work.

31.5 Monitoring B-BBEE / CPG implementation at Umgeni Water

Umgeni Water has appointed two analysts, part of the functions of which is monitoring B-BBEE / CPG implementation of awarded contracts to ensure:

- o Established enterprises are in fact engaging the targeted enterprises as per contracts,
- o Targeted enterprises are in fact performing the scope as per contract,
- o Payments due to targeted enterprises are processed at the correct rates and at agreed timeframes.

31.6 Corporate Social Responsibility (CSR) Initiatives

Approach and CSR Best Practice

Umgeni Water acknowledges that Corporate Social Responsibility (CSR) is linked to a successful brand. Having a strong CSR strategy is an important part of building a well-rounded brand that increases the entity's credibility with community, customers and all stakeholders and further attracts top talent.

In addition, having strong CSR initiatives in place are important when it comes to attracting top talent, and also play a large part in engagement and retention of current employees. CSR initiatives are an important part of creating a more dynamic culture that encourages engagement and leads to long-term employee retention, whilst building the entity's credibility and acceptance with customers, community and other external stakeholders.

As CSR initiatives take root, they will have a positive impact on our current workforce and generate quality content that can be used to boost our employment brand, with the ripple effect of improving community, customer and stakeholder relationships and attracting top talent for the future.

In implementing CSR Umgeni Water will take into consideration the following simple yet effective initiatives (extracted from best companies), to demonstrate current and future employees that the entity is committed to giving back.

Implementing seniors and diversity programmes: Employee-led committees that focus on seniors, diversity and related initiatives foster engagement with employees, give employees a meaningful way to give back to society, and also create opportunities for leadership outside of their current job functions. Additionally, it's a great way for employees to contribute to something that hits close to home.

Matching donations: Encouraging employees to donate money to a good cause helps encourage engagement by fostering the mentality of what can be accomplished when everyone is working toward a common goal. However, when the leadership of an entity takes steps to "put their money where their mouth is" and do things like match employee donations, it shows employees that their employer takes CSR seriously, further increasing employee engagement.

Give employees time to volunteer: Employees are given a day off (paid time off) that they can use to volunteer at a charitable organisation of their choosing. Offering time off that can be used to do community service is a great way for an entity to show their employees they are truly committed to CSR. In addition, this also demonstrates that the entity prioritises work-life balance, which further encourages employee engagement.

Initiatives relating to these threads will be developed over time.

31.7 Corporate Social Investment (CSI) Initiatives

Umgeni Water's CSI Policy identifies five main categories of projects:

1. Education and Training
2. Job Creation
3. Public Health, Community Development and Support
4. Environmental Conservation
5. Arts, culture and sport

Elaboration of CSI project categories

<i>Education and Training</i>	<i>Job Creation</i>
<ul style="list-style-type: none"> I. Information technology skills development, II. Engineering, Mathematics and Science Skills development, III. Water services related skills development, IV. Programmes aimed at improving skills levels in communities, V. School building and equipping, and community outreach programmes 	<p>Includes:</p> <ul style="list-style-type: none"> I. Support of SMME's that do not form part of Umgeni Water's procurement processes, II. Support of new entrepreneur's development, III. Community projects that are self-help projects which are sustainable and will improve the knowledge and skills of the
<i>Public Health, Community Development and Support</i>	
<ul style="list-style-type: none"> I. Health and social welfare. Projects under this category may include medical, primary health care and welfare projects (e.g. food schemes) within communities in which Umgeni Water operates. In some projects, Umgeni Water's involvement may be non-monetary in nature, such as organisational and administrative support, time spent by staff members to help organize an event or training community members; II. Community HIV/AIDS awareness programmes aligned to government programmes, III. Support for security and public safety programmes, IV. Leadership development. 	
<i>Environmental Conservation</i>	<i>Arts, culture and sport</i>
<ul style="list-style-type: none"> I. Environmental awareness projects (e.g. cleaning of local rivers, land adjacent to servitudes and general awareness campaigns); II. Support of conservation initiatives and programmes, III. Involvement in disaster relief programmes (e.g. community assistance during floods, drought relief, etc.). 	<ul style="list-style-type: none"> I. Support of developmental programmes; II. Training of new arts and sporting talents III. Development of historically disadvantaged individuals or teams IV. Projects aimed at promoting all aspects of South African culture including performing talents in the field of art, dance and music

31 Signed Declaration

Umgeni Water hereby declares that all information is disclosed, is correctly disclosed and included in this Corporate Plan document, which includes Annexure A (Financial Statements), as required in terms of the Water Services Act (Act 108 of 1997), Public Finance Management Act (Act 1 of 1999), and associated regulations and prescribed guidelines issued by the Department of Water Affairs and National Treasury.

MR THAMI HLONGWA CA(SA)

Chief Executive

30 April 2019

MS ZIPHOZETHU MATHENJWA

Chairperson of the Board

30 April 2019