



'Improving Quality of Life and Enhancing Sustainable Economic Development'



# Umgeni Water Five-Year Business Plan

2015/16 to 2019/20

Version: 31 May 2015



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## Strategic Highlights by the Chairperson of the Board

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:

- o State of the Nation Address, State of Province Address and relevant Budget Addresses February-March 2015.
- o National Development Plan (NDP) for South Africa for 2030.
- o The Fourteen (14) Strategic Outcomes of Government and pertinent Outputs cascading to the Executive Authority.
- o Provincial Growth and Development Strategy and Plan 2030 and KwaZulu-Natal Planning Lekgotla Resolutions, notably February 2015.
- o The Department of Water and Sanitation's Strategy Plans, the National Water Resources Strategy (NWRS2) and focus areas for water boards in the Medium Term Strategic Framework (MTSF) 2014-2019.

The combined efforts of government and state-owned entities are all aimed at addressing the compounded challenge of poverty, unemployment and inequality in the country, province and operational regions, all of which are aligned to the NDP 2030 and the MTSF 2014-2019 outputs.

Umgeni Water will therefore continue in this period to align to the outcome goals and outputs of national and provincial government and the Minister and Department of Water and Sanitation, in the context of Umgeni Water's legislative mandate and ten organisational outcomes approved by the Board.

In this planning period Umgeni Water identified the following strategic priority areas that it will focus on:

**Leveraging the opportunities presented by the National Development Plan (NDP) and Regional / Integrated planning, Umgeni Water will develop regional infrastructure that will improve and increase access.**

**At the same time, the organisation will continue to ensure there is sustainable investment in refurbishment and maintenance of existing infrastructure through a focused asset management strategy.**

**Umgeni Water remains ever mindful of the issues faced by customers, particularly rural municipalities, in terms of capacity, vulnerability and challenges with serving a large indigent consumer base. As a result, the entity will develop response plans and proactively provide support to customers to improve service delivery.**

**Improving and expanding the entity's communications function has been identified as essential to improving corporate communications, marketing and branding, whilst enhancing relationships with the full range of customers and stakeholders.**

**Reconciling supply and demand and planning for long-term water resources adequacy / supply sustainability is deemed critical to avoid the woes faced by the energy sector.**

**Furthermore, establishing a water demand management business unit, with concomitant projects benefiting municipalities, will help address the high reticulation water loss / non-revenue water (NRW) that is impacting on the entire water resource value-chain sustainability.**

**The entity will continue in this period to strengthen the transformation agenda, including Broad Based Black Economic Empowerment (BBBEE), Contractor Participation Goals (CPGs) and Employment Equity (EE) by driving an agenda that supports inclusivity and reduces inequality and unemployment.**

Umgeni Water's strategy can only be achieved by ensuring effective and efficient management of the income statement, balance sheet and cash flows, all envisaged to be strengthened and significantly leveraged during this period.

Integration of business systems and responsiveness will be improved, including Engineering, Procurement, Construction Management (EPCM), Enterprise Resource Planning (ERP) and risk and governance systems. Resiliency will also be improved to respond to vandalism and theft, impacts on security of infrastructure, encroachment and other trends.

Underpinning the strategy will be leadership, management and staff competencies and capacity and skills, which will be improved and grown in this period. There will be added focus on improving operational process, mechanical and electrical engineering skills and enhancing mentoring and succession planning. Social cohesion in the organisation will be especially driven towards ensuring a non-racial, non-sexist and inclusive society.

In this period, the Umgeni Water will increase momentum towards regional preparedness, which is now anticipated to be formalised in year 2 of this five-year business plan. The Minister has consolidated twelve (12) water boards into nine (9) Regional Water Utilities (RWU) in order to address challenges of water supply in the country. This consolidation strategy has translated into proposed expansion of areas of operation of Umgeni Water, specifically:

- Expansion into the North of KwaZulu-Natal to include the uThukela, Umzinyathi and Amajuba District Municipalities and Newcastle Local Municipality.
- Expansion into the Eastern Cape Province to include the Alfred Nzo District Municipality and the Ngquza Hill Local Municipality enclave, which is in the OR Tambo District Municipality.

In this period Umgeni Water will further develop and refine the due diligence for the new areas and customers, which spans 70 701 km<sup>2</sup> with 9 million people (2.28 million households) and is a 39% increase in households from the current area of 21 155 km<sup>2</sup> with 6 million people (1.64 million households).

The area covers twelve (12) Water Service Authority (WSA) areas (6 customers in current area), which is a 100% increase in primary customers. The WSA customers will comprise: eThekweni MM, iLembe DM, Ugu DM, Harry Gwala DM, uMgungundlovu DM, Msunduzi LM, uThukela DM, Amajuba DM, Newcastle LM, Umzinyathi DM, Alfred Nzo DM and OR Tambo DM (Ngquza Hill LM).

The Board of Umgeni Water will in this period amplify its strategic guidance to the Executive Management to help realise the deliverables in support of regional growth and expansion.

Mr Andile Mahlalutye  
**Chairman of the Board**

31 May 2015



## Foreword by the Chief Executive

The board has provided strategic guidance in reviewing the business of Umgeni Water and articulated the key priorities for this period. These priorities are aligned to the outcome goals and outputs of government and specifically the Minister and Department of Water and Sanitation (DWS). In pursuing its mandate, Umgeni Water will therefore ensure its focuses its efforts in addressing poverty, unemployment and inequality in the region it serves.

This business plan responds to the organisation's strategies through targeting the resources, planned activities and outputs to progressively realise the ten (10) organisational outcomes.

Leveraging the opportunities presented by the National Development Plan (NDP) and as pronounced by the Executive Authority and Department of Water and Sanitation (DWS), Umgeni Water will develop regional infrastructure to increase access and pursue sustainable growth in each region it serves.

The total infrastructure capital investment for this business plan period is R7.8 billion, of which R3.1 billion (40%) targets rural communities. This currently excludes capital investment for the expanded area, which will be formalised in the coming period and included in the next business plan.

The infrastructure programme includes multiple developments in various phases of planning and implementation of which eight (8) developments directly target rural areas:

1. **Lower Thukela BWS Scheme Phase 1**, serving eThekweni MM and iLembe DM,
2. **uMshwathi Bulk Water Supply Scheme**, serving uMgungundlovu DM and iLembe DM,
3. **Greater Mpofana Regional Scheme Phase 1**, serving uMgungundlovu DM,
4. **Impendle Bulk Water Supply System**, serving uMgungundlovu DM,
5. **Southern Ndwedwe Bulk Water Supply Pipeline and Reservoir**, serving iLembe DM,
6. **Maphumulo WTW upgrade to 12 MI/day**, serving iLembe DM,
7. **Mhlabatshane Sub-Regional Scheme Phase 2 -Mzimkhulu River abstraction**, serving Ugu DM, and
8. **Regional Schemes Planning for Harry Gwala DM area.**

Six (6) infrastructure projects, amongst several others, are for augmentation, upgrade and rehabilitation:

1. **Lower Mkomazi Bulk Water Scheme**, serving eThekweni MM and Ugu DM,
2. **Mkhomazi Bulk Water Supply Scheme**, serving eThekweni MM, uMgungundlovu DM,
3. **Midmar WTW Upgrade (250 to 375MI/d) and Dam RWPS**, serving uMgungundlovu DM,
4. **Durban Heights WTW Filter Upgrade**, serving eThekweni MM,
5. **South Coast Phase 2b (Kelso to Umdoni)**, serving eThekweni MM and Ugu DM, and
6. **Fawsley Park-Mvoti Balancing Reservoir Pipeline (4km)**, serving iLembe DM.

Key to sustainable implementation of Umgeni Water's infrastructure programme is expansion of funding collaborations and co-funding initiatives, without which, services to the largely indigent population in municipalities that have a large rural base, will not be affordable. In this regard, certain rural schemes are partly funded through social funding and during this period additional funding will be secured for future schemes implementation.

Umgeni Water will expediently leverage the capital expansion programme to increase its contribution to Broad Based Black Economic Empowerment (BBBEE), Employment Equity (EE), job creation and community sustainability, and supported by monitoring and evaluation ensure participation is meaningful and builds real capacity.

Purifying and providing potable water to customers as well as purifying wastewater remains the uppermost priorities of Umgeni Water. Through a process of growth and consolidation the number of treatment works being managed increases each year. Currently, water is treated at fourteen (14) potable water treatment

works and four (4) major wastewater treatment works. Several works are operated above their design capacities in response to demands and this also impacts on water quality. Specific interventions to address this are in place including the previously mentioned upgrades, refurbishments and developments.

Umgeni Water continues to invest an average of 4% of the value of its Property, Plant and Equipment (PPE) and 7% of its revenue on asset maintenance, based on assessments conducted in the past year. 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. There are no assets that pose significant risk to supply and the organisation envisages no interruptions to its business arising from maintenance issues.

Umgeni Water is mindful that water demand management relieves the stress already imposed on many water resource and supply systems. On average, the water loss from bulk infrastructure operations is relatively low (below 5%) and Umgeni Water remains committed to reducing / maintaining the loss at this level through targeted investment in maintenance throughout the systems network. However, significant quantities of treated water are being lost in the reticulation system and seriously threaten the sustainability of the water value chain.

Customers are at various stages of implementing water conservation and demand management measures within municipal systems, but the threat remains significant. In this period therefore, Umgeni Water will drive water loss management as a strategic initiative and focus additional resources to reduce water loss in the value chain. This includes establishing a water conservation and demand management unit to assist municipalities and develop focused programmes to collaboratively address reticulation water losses.

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

Notwithstanding the water loss measures, integrated water resources planning will be employed to facilitate and support regional schemes sustainability. In this period, the following key water resources are needed to ensure supply sustainably for schemes:

1. **Phase 1 uMkhomazi Water Project: Smithfield Dam**, implemented by DWS and is behind Schedule,
2. **North Coast System: Raising of Hazelmere Dam**, implemented by DWS and is behind Schedule (expected by 2018),
3. **Phase 1 Lower Thukela Bulk Water Supply Scheme**, implemented by UW and is on Schedule,
4. **Phase 2 Maphumulo Bulk Water Supply Scheme, Imvutshane Dam**, implemented by UW, completed in 2015 and will impound by 2016, and
5. **Lower uMkhomazi Bulk Water Supply Scheme**, implemented by UW and is behind Schedule.
6. In addition, the future water resource mix includes alternative sources, including two strategic **seawater desalination** projects.

Strong financials underpin this business plan, the robustness of which will be strengthened and stretched during this period to deliver the organisation's goals, objectives and outputs. Whilst growth in water sales is not expected to be significant over the next year there is a slight improvement from the previous year to 2%. Revenue of R2.4 billion is targeted for the coming year, which after costs will yield a net surplus of 22%. This is to be strategically reinvested in infrastructure development, to ensure affordable future regional tariffs and to ensure a sound balance sheet to raise affordable market capital to fund infrastructure developments.

Umgeni Water will improve integration and resiliency of all its business systems to streamline and increase turnaround to deliver timely infrastructure and services. Of note, is the implementation of an Enterprise Resource Planning (ERP) system to be completed in year 2 of this business plan and which is anticipated to serve as a game changer for internal process management. An improvement in corporate culture / smarter ways of working is expected to be a healthy spinoff of this organisation-wide intervention.

Leadership, management and functional competencies will be built over this period to support the expanded functions, mandate and growth plans for a regional utility. Performance will be enhanced, capacity will be strengthened and the growth and expansion opportunity leveraged to enhance employee opportunities.

The year ahead is going to be intense with mammoth tasks that need to be accomplished. Success with the planned initiatives will however ensure Umgeni Water is well positioned to smoothly transition to a regional water utility in the coming period.

Mr Cyril Vuyani Gamede  
**Chief Executive**

31 May 2015

## 1 Introduction

### 1.1 Legislative mandate

Umgeni Water is a public entity established in 1974 to provide water services - water supply and sanitation services - to other water services institutions in its service area. The organisation 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 Chairman of the Board and the Chief Executive and its Executive Authority is the Minister of Water and Sanitation.

### 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.

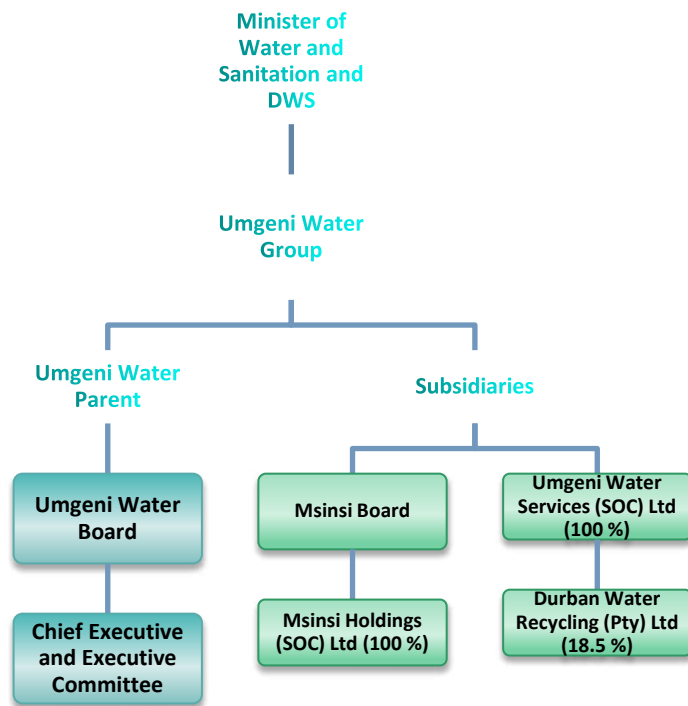
In addition, section 30 of the Water Services Act, enables Umgeni Water to undertake other activities, provided these do not impact negatively on the organisation's ability to perform its primary activity. These include:

- 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 chapter 9 Participation in Companies for further details)

### 1.3 Supply Area and Customers

Umgeni Water's current operational area is bounded by the uThukela River in the North, the Mtamvuna River in the South, the Indian Ocean in the East and Drakensberg Mountains in the West and covers a total of 21 155 square kilometres and has a population of 6 million people (1.64 million households). Umgeni Water has its head office in Pietermaritzburg and is supported by Regional Offices spanning its supply area.





The organisation derives its revenue from the sale of bulk potable water to its six customers:

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

A total of 440 million cubic metres of potable water per annum (1 205 Ml/d) are supplied to these customers.

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

- Approximately 74,6 kilometres of pipelines and sixty-six (66) kilometres of tunnels,
- Fourteen (14) impoundments, of which six (6) are managed on behalf of the Department of Water and Sanitation and two (2) on behalf of the Ugu District Municipality,
- Fourteen (14) water treatment works, of which two (2) are managed on behalf of the Ugu District Municipality, and
- An additional fourteen (14) small water treatment works and ten (10) borehole schemes which are managed on behalf of the iLembe District Municipality.

The organisation also treats bulk wastewater totalling 28 million cubic metres per annum (77 Ml/d) and in support of this operates four (4) major wastewater treatment works.

## 1.4 Expanded Supply Area and Customers

The water board consolidation strategy as an outcome of the DWS realignment project has translated into proposed expansion of areas of operation of Umgeni Water, specifically:

- Expansion into the North of KwaZulu-Natal to include the uThukela District Municipality, Umzinyathi District Municipality, Amajuba District Municipality and Newcastle Local Municipality.
- Expansion into the Eastern Cape Province to include the Alfred Nzo District Municipality and the Ngquza Hill Local Municipality enclave, which is within the OR Tambo District Municipality.

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

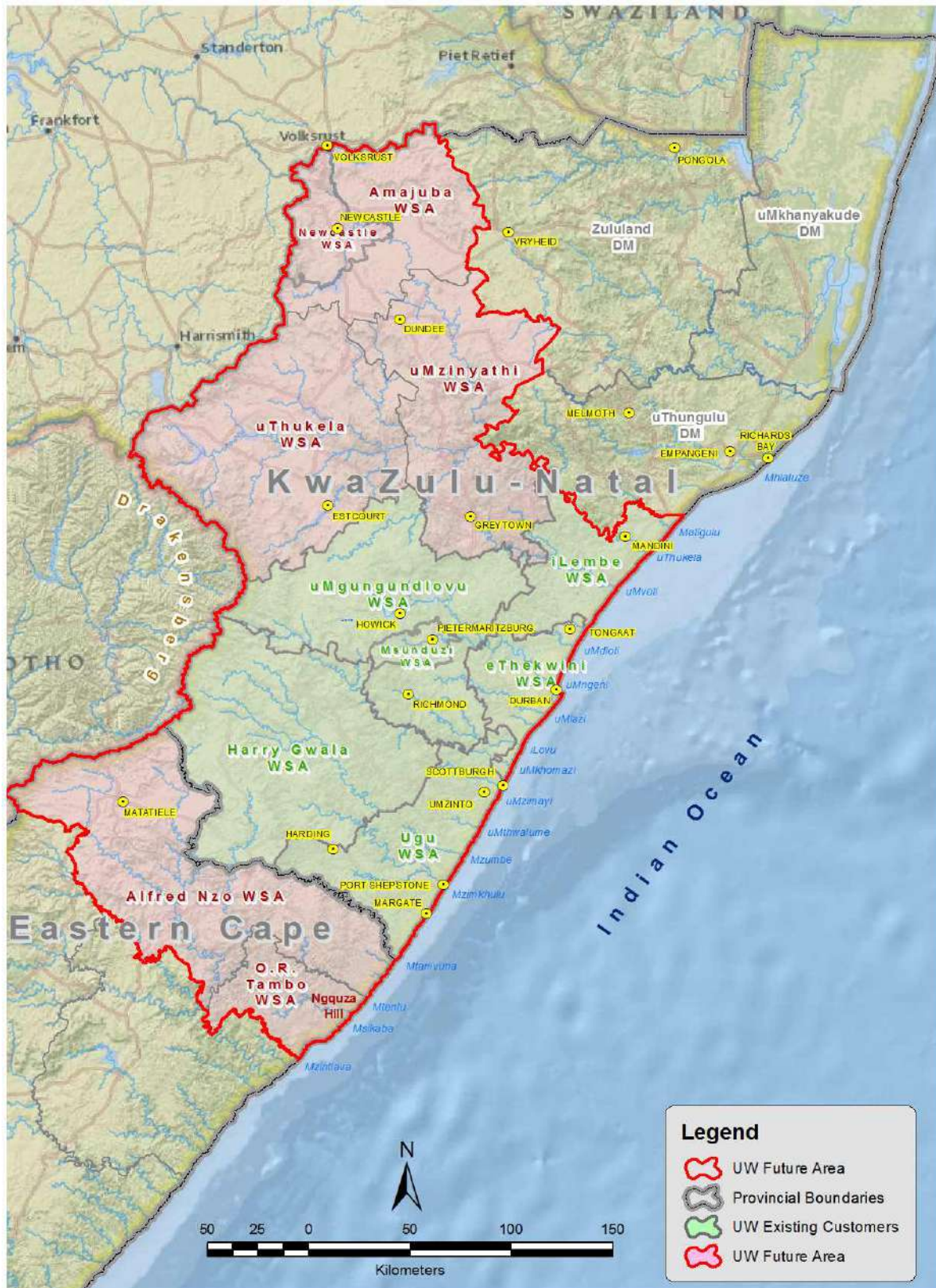
The proposed Regional Water Utility's operational area lies between the Drakensberg Mountains and Indian Ocean and is located north of the Mzintlava River in the Eastern Cape and extends as far as Majuba Pass in Northern KwaZulu-Natal (Figure 1). The area covers twelve (12) water service authority areas:

*Primary customers in the proposed RWU area:*

1. eThekweni MM
2. iLembe DM
3. Ugu DM
4. Harry Gwala DM
5. uMgungundlovu DM
6. Msunduzi LM
7. uThukela DM
8. Amajuba DM
9. Newcastle LM
10. Umzinyathi DM
11. Alfred Nzo DM
12. OR Tambo DM, Ngquza Hill LM

With the proposed change the operational area will increase to 70 701km<sup>2</sup> with a population of approximately 9 million people and households will increase from 1.64 million to 2.28 million. In respect of the expansion, Umgeni Water is updating and refining its due diligence report and will submit the revision to the minister before September 2015.

Figure 1: Proposed Regional Water Utility Area.



## 2 Strategy

### 2.1 Operating Environment and Alignment to Government Outcomes and Executive Authority Expectations

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:

- State of the Nation Address, State of Province Address and relevant Budget Addresses February-March 2015.
- National Development Plan for South Africa for 2030.
- The Fourteen Strategic Outcomes of Government and pertinent Outputs cascading to the Executive Authority.
- Provincial Growth and Development Strategy and Plan 2030 and KwaZulu-Natal Planning Lekgotla Resolutions, notably February 2015.
- The Department of Water and Sanitation's Strategy Plans, the NWRS2 and focus areas for water boards in the MTSF 2014-2019.



Umgeni Water will continue to align to the outcome goals and outputs of national and provincial government and the Minister and Department of Water and Sanitation (DWS), in the context of Umgeni Water's legislative mandate and ten organisational outcomes approved by the Board.

The combined efforts of government and state-owned entities are aimed at addressing the compounded challenge of poverty, unemployment and inequality in the country, province and operational regions, all of which are aligned to the NDP 2030 and the MTSF 2014-2019. Details of national, provincial and the Department of Water and Sanitation (DWS) priorities are summarised below.

#### 2.1.1 14 priority outcomes of government

National government targets fourteen (14) priority outcomes, of which two (2) were added in 2014. 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 The main priority outcomes that focus on water and the mandate of DWS

The strategic plan of the DWS is aligned to the 14 outcomes of the presidency in accordance with the DWS mandate and focus areas. Several of the outcomes directly expand on the country's water priorities for the MTSF period. Specifically, the following key actions are targeted by national government and DWS in the MTSF period (2014 and 2019) to achieve the 2030 goals:

#### Implement the national water-resource strategy (NWRS).

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-resource management

These could 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 the management of water services 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-resource development, bulk-water supply and wastewater management for major centres.

This programme to include the following major investment projects in proximity to Umgeni Water supply region:

- KwaZulu-Natal Midlands projects, eThekweni MM and Msunduzi LM and surrounds, which need to be completed and future major augmentations decided on.
- These augmentations could be through desalination, reuse or by building a new dam on the Mkomazi River.
- Financing for the new dam on the Mzimvubu River.
- Regional water infrastructure investments and bulk-water supply programmes.

### 2.1.3 Strategic goals and strategic objectives of the DWS

In response to these, the Department of Water and Sanitation (DWS) identifies three (3) strategic goals and ten (10) strategic objectives in its strategy plan:

#### DWS Goal 1: An efficient, effective and development oriented sector leader

- SO 1.1: Building skills pool and competencies
- SO 1.2: Effective and efficient internal control environment
- SO 1.3: Implement programmes that create job opportunities

#### DWS Goal 2: Equitable and sustainable water and sanitation services

- SO 2.1. Increased sustainability in water provision
- SO 2.2. Enhanced provision of basic sanitation
- SO 2.3. Equitable water allocation

#### DWS Goal 3: Protection of water across the value chain

- SO 3.1: Strategies for water and sanitation management
- SO 3.2: Enhanced regulatory compliance
- SO 3.3: Increased water ecosystem health
- SO 3.4: Management of water and sanitation information

### 2.1.4 The main KZN Province priority outcomes that focus on water

Strategic plans of the province are aligned to the 14 outcomes of the presidency in accordance with the provincial mandate and focus areas. The KwaZulu-Natal Provincial Growth and Development Plan includes a specific strategic objective for water, namely 'Improve water resource management and supply' and requires sufficient water available for the growth and development needs of KZN. Specifically, a balanced and sustainable supply of water in the KZN Province is to be ensured to enable access to water to all residents as well as ensure that sufficient water is available to be a catalyst for economic growth of the region.

The following key interventions are proposed to achieve the 2030 goals:

- Review and Implement the Provincial Water Strategy.
- Rationalise and extend Water Board Jurisdiction.
- Research and promote skills development for more localised water harvesting.
- Programme for building of dams.
- Programme for development of water sources (desalination, rainwater, recycling, groundwater).

- Develop a financial model for the implementation of operations and maintenance.
- Water Conservation and Demand Management Programme in all the WSAs.
- Establish policy and design standards for the provision of 75 litres of water per person per day.

Indicators and interventions identified in the PDGP include:

- Per capita water availability.
- Water service systems in balance (supply versus demand).
- Non-revenue water.
- Development/rezoning applications not approved due to bulk water and wastewater constraints.
- Percentage of KZN households with access to water to MIG standards (75 litres per person per day).
- Percentage of households with yard water connections.
- Percentage of households with access to sanitation to MIG standards.

### Key Recommendations from the February 2015 Provincial Lekgotla

- 1. Priority Municipalities: Water provision to be a priority in Ugu, uThukela, uMzinyathi, Amajuba, Harry Gwala and uMkhanyakude District Municipality.**
- 2. WC/DM: Water conservation and water demand management intensified through War on leaks Programme.**
- 3. Water Boards: Review Water Board boundaries and expedite implementation of these.**
- 4. Universal Access Plan (UAP): Validate UAP and integrate with DWS planning to facilitate a joint approach to Treasury for funding.**

## 2.2 Umgeni Water Strategic thrusts

### 2.2.1 Umgeni Water SWOT

**Table 2.1:** Summary of operating environment opportunities and constraints, together with Umgeni Water's strengths and constraints (as at May 2015)

| Opportunities / Enablers   | Strengths / Enablers  |
|--|---|
| <ol style="list-style-type: none"> <li><b>National Development Plan</b><br/><i>Reduce poverty, unemployment and inequity Improve social cohesion through water services.</i></li> <li><b>Regional Water Utility (RWU) / Expansion of Service Area</b><br/><i>Plan, construct, operate and maintain regional infrastructure, increase customer base and access. Facilitate planning and design with full water value-chain view (source-tap-source)</i></li> <li><b>Support to Municipalities</b><br/><i>Reduce non-revenue water. Projects to support asset management and maintenance</i></li> </ol>  | <ol style="list-style-type: none"> <li><b>Bulk Water and Wastewater Treatment Competencies</b><br/><i>Distinctive competencies in bulk water and wastewater treatment</i></li> <li><b>Brand Value</b><br/><i>Strong Umgeni Water brand</i></li> <li><b>Financial Strength and Integrity</b><br/><i>Strong balance-sheet, strong governance systems and risk management</i></li> <li><b>Bulk Infrastructure</b><br/><i>Well maintained bulk infrastructure, good asset management strategy and infrastructure development plans</i></li> <li><b>Resource Mobilisation</b><br/><i>Experienced and committed people</i></li> </ol> |
| Threats / Constraints  | Weaknesses / Constraints  |
| <ol style="list-style-type: none"> <li><b>Customers capacity and indigent consumer base</b><br/><i>Customer vulnerability and sustainability. Customer areas with insufficient economy of scale / densities</i></li> <li><b>Water loss / non-revenue water</b><br/><i>Significant water loss in retail systems threatening sustainability of service delivery. Poorly maintained municipal water systems.</i></li> <li><b>Climate change</b><br/><i>Droughts and floods and long-term water resources sustainability</i></li> <li><b>Water resources development</b><br/><i>DWS delay in regional water resources developments.</i></li> <li><b>Social cohesion, poverty, unemployment and inequity</b><br/><i>Vandalism and theft, security of infrastructure, encroachment, divided, racially polarised and unequal society</i></li> </ol> | <ol style="list-style-type: none"> <li><b>Communications, Marketing and Branding</b><br/><i>Insufficient capacity and capability to meet needs</i></li> <li><b>Internal Processes</b><br/><i>Integration of business systems, responsiveness to meet customer requirements, costly procurement/EPCM</i></li> <li><b>Management and staff competencies</b><br/><i>Capacity and skills to support expansion strategy, social cohesion, mentoring and succession planning</i></li> <li><b>Water resources</b><br/><i>Sustainability of water resources developments to meet demands.</i></li> </ol>                                |

### 2.2.2 Umgeni Water strategic thrusts in response to SWOT

- Leveraging the opportunities presented by the National Development Plan (NDP) and Regional / Integrated planning, Umgeni Water will develop regional infrastructure that will improve and increase access.
- At the same time, the organisation will continue to ensure there is sustainable investment in refurbishment and maintenance of existing infrastructure through a focused asset management strategy.

3. Umgeni Water remains ever mindful of the issues faced by customers, particularly rural municipalities, in terms of capacity, vulnerability and challenges with serving a large indigent consumer base. As a result, the entity will develop response plans and proactively provide support to customers to improve service delivery.
4. Improving and expanding the entity's communications function has been identified as essential to improving corporate communications, marketing and branding, whilst enhancing relationships with the full range of customers and stakeholders.
5. Reconciling supply and demand and planning for long-term water resources adequacy / supply sustainability is deemed critical to avoid the woes faced by the energy sector.
6. Furthermore, establishing a water demand management business unit, with concomitant projects benefiting municipalities, will help address the high reticulation water loss / non-revenue water (NRW) that is impacting on the entire water resource value-chain sustainability.
7. The entity will continue in this period to strengthen the transformation agenda, including Broad Based Black Economic Empowerment (BBBEE), Contractor Participation Goals (CPGs) and Employment Equity (EE) by driving an agenda that supports inclusivity and reduces inequality and unemployment.
8. Umgeni Water's strategy can only be achieved by ensuring effective and efficient management of the income statement, balance sheet and cash flows, all envisaged to be strengthened and significantly leveraged during this period.
9. Integration of business systems and responsiveness will be improved, including Engineering, Procurement, Construction Management (EPCM), Enterprise Resource Planning (ERP), risk and governance systems. Resiliency will also be improved to respond to vandalism and theft, impacts on security of infrastructure, encroachment and other trends.
10. Underpinning the strategy will be leadership, management and staff competencies, capacity and skills, which will be improved and grown in this period. There will be added focus on improving operational process, mechanical and electrical engineering skills and enhancing mentoring and succession planning. Social cohesion in the organisation will be especially driven towards ensuring a non-racial, non-sexist and inclusive society.

## 2.3 Umgeni Water Strategic Goals

**Strategic Goal 1:** 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 2:** Expand and improve funding collaborations whilst managing key cost drivers.

**Strategic Goal 3:** Remove system constraints and blockages through innovative thinking and improve efficiency of all inputs.

**Strategic Goal 4:** Strengthen and develop quality human resources, infrastructure capacity and water resources sustainability to support growth.



## 2.4 Umgeni Water Vision, Mission, Strategic and Benevolent Intents and Core Values

### Vision

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

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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***

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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***

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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.***

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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

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We will partner with municipalities and other stakeholders to provide sustainable solutions.

### Integrity

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We commit ourselves to the highest ethical conduct.

### Developmental approach

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

### People-centred

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

### Environmentally sustainable

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We are committed to protecting our diminishing natural resources.

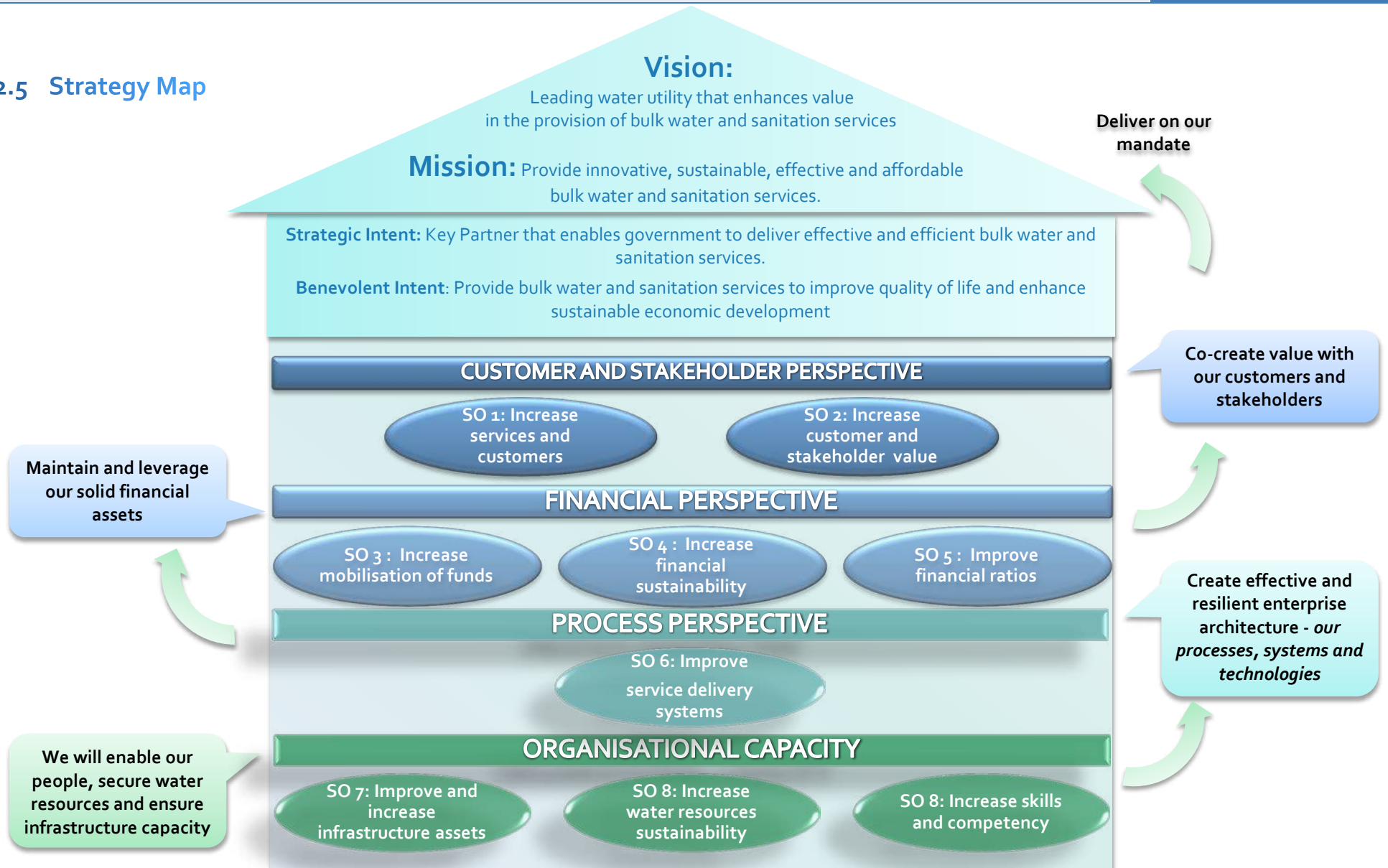
### Innovation, Knowledge Management and Excellence

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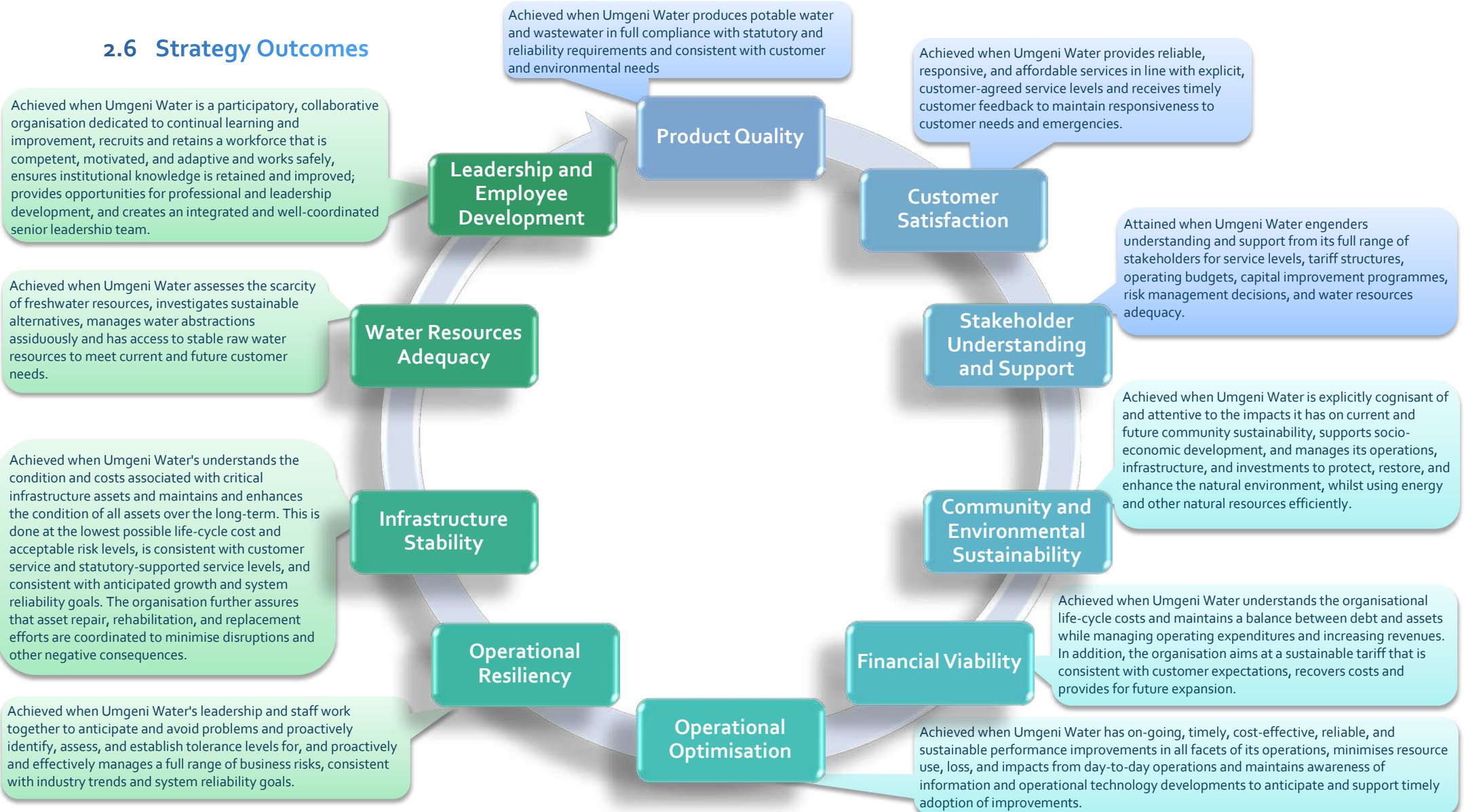
We value the use of innovation and knowledge management in order to achieve excellence.



## 2.5 Strategy Map



## 2.6 Strategy Outcomes



## 2.7 Balanced Scorecard

**Strategic Goal 1:** Develop strategic partnerships, increase support to customers, improve visibility and be a regional leader in the provision of bulk water and sanitation services.

Co-create value with our customers and stakeholders

### CUSTOMER AND STAKEHOLDER PERSPECTIVE

SO 1: Increase services and customers

SO 2: Increase customer and stakeholder value

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

| UW  | KPI  | Initiatives / Plans  | #  | Result Indicator  | Actual 2013/2014                  | Estimated 2014/2015                | Projected 2015/2016                                   | 2016/2017  | 2017/2018  | 2018/2019                                   | 2019/2020                                  | SHC Annex 1           |
|-----|--|--|--|---|-----------------------------------|------------------------------------|---|--|--|---|--|-----------------------|
| SO1 | KPI 1: The extent to which UW has grown its services and customers.      | Progressively develop regional scheme plans and grow water services. | 1.1  | Per cent regional concept plan aligned to new boundary developed.   | 3 WSA bulk water plans developed. | Regional concept plan in progress. | Detailed reconnaissance level plans 100% developed.   | Regional schemes plans per WSA 100% refined.     | 100% refined and optimised.                      | Future region concept plan 100% identified. | Future region concept plan 100% developed. | N/A                   |
|     |  |  | 1.2  | Number of new bulk contracts implemented or new customers acquired. | 1 WWTW implemented.               | 2 WWTWs implemented.               | 2 schemes implemented                                 | 2 schemes implemented. 4 new customers acquired. | 2 schemes implemented. 2 new customers acquired. | 2 schemes implemented                       | 2 schemes implemented                      | 2 schemes implemented |
| SO2 | KPI 2: The extent to which customer and stakeholder needs have been met. | Improve Corporate Communications function.                           | 2.1  | Redesigned corporate communications function.                       | -                                 | -                                  | Fully functional corporate communications.            | Refined and optimised.                           | -  | -   | -  | N/A                   |
|     |  |  | 2.2  | Targeted marketing and branding strategy and plan.                  | Annual events plan developed.     | Annual events plan developed.      | Marketing and branding strategy and plan developed.   | Refined and implemented.                         | Refined and implemented.                         | Refined and implemented.                    | Refined and implemented.                   | N/A                   |
|     |  |  | 2.3  | Structured corporate communications strategy and plan developed.    | Annual engagements scheduled      | Annual engagements scheduled.      | Corporate communications strategy and plan developed. | Refined and implemented.                         | Refined and implemented.                         | Refined and implemented.                    | Refined and implemented.                   | N/A                   |
|     |  | 2.4  | Engage statutory stakeholders                              | Minister, DWS, PC and NT engagement                                 | ≥ 4 engagements                   | ≥ 4 engagements                    | ≥ 4 engagements                                       | ≥ 4 engagements                                  | ≥ 4 engagements                                  | ≥ 4 engagements                             | ≥ 4 engagements                            | N/A                   |
|     |  | 2.5  | Per cent directives implemented in accordance with plan. ★ | NM  | NM                                | ≥ 80%                              | ≥ 80%   | ≥ 80%  | ≥ 80%  | ≥ 80%                                       | ≥ 80%                                      | SHC PO12              |

| UW  | KPI  | Initiatives / Plans  | #    | Result Indicator  | Actual 2013/2014                         | Estimated 2014/2015                    | Projected 2015/2016                                 | 2016/2017                              | 2017/2018                              | 2018/2019                              | 2019/2020                              | SHC Annex 1                            |          |
|-----|--|--|------|---|--|--|---|--|--|--|--|--|----------|
|     | <b>KPI 2, continued:</b> The extent to which customer and stakeholder needs have been met. |  | 2.6  | RWU due diligence report developed and consulted.   | Due diligence report drafted.            | 20% due diligence report refined.      | 100% due diligence report refined and communicated. | -                                      | -                                      | -                                      | -                                      | N/A                                    |          |
|     |  |  | 2.7  | Regional Steering Committee facilitates transition to RWU                                       | -  | SC stakeholders identified.            | Functional SC setup with DWS and stakeholders.      | RWU SC engagement as scheduled.        | -                                      | -                                      | -                                      | -                                      | N/A      |
|     |  | Engage customers.  | 2.8  | Customer engagement.  | ≥ 3 engagements                          | ≥ 3 engagements                        | ≥ 3 engagements                                     | ≥ 3 engagements                        | ≥ 3 engagements                        | ≥ 3 engagements                        | ≥ 3 engagements                        | ≥ 3 engagements                        | N/A      |
|     |  |  | 2.9  | Webpage water forum for RWU.  | -  | 50% developed.                         | 100% developed.                                     | Refined and optimised.                 | Refined and optimised.                 | -                                      | -                                      | -                                      | N/A      |
|     |  | Develop suppliers.   | 2.10 | Supplier and investor forums.   | ≥ 2 engagements                          | ≥ 2 engagements                        | ≥ 2 engagements                                     | ≥ 2 engagements                        | ≥ 2 engagements                        | ≥ 2 engagements                        | ≥ 2 engagements                        | ≥ 2 engagements                        | N/A      |
|     |  | Collaborate with strategic stakeholders.                   | 2.11 | KZN Province, SAAWU, SALGA, African WBs engagement  | ≥ 4 engagements                          | ≥ 4 engagements                        | ≥ 4 engagements                                     | ≥ 4 engagements                        | ≥ 4 engagements                        | ≥ 4 engagements                        | ≥ 4 engagements                        | ≥ 4 engagements                        | N/A      |
|     |  | Engage staff and union.                                    | 2.12 | Staff - union engagement  | 4 staff-union sessions                   | 3 staff-union sessions                 | ≥ 3 staff-union sessions                            | ≥ 3 staff-union sessions               | ≥ 3 staff and union sessions           | ≥ 3 staff and union sessions           | ≥ 3 staff and union sessions           | ≥ 3 staff and union sessions           | N/A      |
|     |  | Manage media and reputation.                               | 2.13 | Media engagement.   | Quarterly report.                        | Quarterly report.                      | Quarterly report.                                   | Quarterly report.                      | Quarterly report.                      | Quarterly report.                      | Quarterly report.                      | Quarterly report.                      | N/A      |
|     |  | Share service delivery plans and progress with community.  | 2.14 | Community engagement  | ≥ 1 community event                      | ≥ 1 community event                    | ≥ 1 community event.                                | ≥ 1 community event.                   | ≥ 1 community event.                   | ≥ 1 community event.                   | ≥ 1 community event.                   | ≥ 1 community event.                   | N/A      |
|     |  | Collaborate with other civil society.                      | 2.15 | Other civil society engagement, including academia, business chambers, NGOs and CBOs.           | ≥ 3 collaborations                       | ≥ 3 collaborations                     | ≥ 3 collaborations                                  | ≥ 3 collaborations                     | ≥ 3 collaborations                     | ≥ 3 collaborations                     | ≥ 3 collaborations                     | ≥ 3 collaborations                     | N/A      |
| SO2 |  | Conclude supply agreements with all customers.             | 2.16 | Total number of signed contracts (bulk supply agreements) in place as a % of total customers. ★ | 6 customers 100%                         | 6 customers 100%                       | 6 customers 100%                                    | 6 customers 100%                       | 10 customers 100%                      | 12 customers 100%                      | 12 customers 100%                      | 12 customers 100%                      | SHC PO11 |
| SO2 |  | Implement projects that support vulnerable municipalities. | 2.17 | Number of signed contracts/MOUs with rural Municipalities for provision of support. ★           | 6 projects implemented                   | 6 projects implemented                 | Support identified and agreed (MOUs).               | Support identified and agreed (MOUs)   | Support identified and agreed (MOUs)   | Support identified and agreed (MOUs)   | Support identified and agreed (MOUs)   | Support identified and agreed (MOUs)   | SHC PO13 |
| SO2 |  | Develop and submit all statutory accountability            | 2.18 | Per cent submissions in respect of quarterly reports, annual report,                            | 100% (8 of 8) developed and submitted on | 100% (8 of 8) developed and submitted. | 100% (8 of 8) developed and submitted.              | 100% (8 of 8) developed and submitted. | 100% (8 of 8) developed and submitted. | 100% (8 of 8) developed and submitted. | 100% (8 of 8) developed and submitted. | 100% (8 of 8) developed and submitted. | N/A      |

| UW  | KPI   | Initiatives / Plans  | #    | Result Indicator  | Actual<br>2013/2014                    | Estimated<br>2014/2015                                | Projected<br>2015/2016                                | 2016/2017   | 2017/2018   | 2018/2019   | 2019/2020   | SHC<br>Annex 1  |          |
|-----|---|--|------|---|--|---|---|---|---|---|---|---|----------|
|     |   | documents.   |      | tariff, business plan and SHC on time.  | time.                                  |   |   |   |   |   |   |   |          |
| SO2 | KPI 2 continued:<br>The extent to which customer and stakeholder needs have been met. | Improve water quality compliance.                            | 2.19 | WTW % compliance with SANS 241, per risk category. ★                          | 13 WTW 100% compliant                  | 14 WTW 100% compliant                                 | 14 WTW 100% compliant                                 | 14 WTW 100% compliant                                 | 14 WTW 100% compliant                                 | 14 WTW 100% compliant                                 | 14 WTW 100% compliant                                 | SHC PO1   |          |
| SO2 |   |  | 2.20 | Boreholes and small schemes % compliance with SANS 241, per risk category. ★  | iLembe schemes ≥ 85% compliant         | iLembe schemes ≥ 85% compliant                        | iLembe schemes ≥ 85% compliant                        | iLembe schemes ≥ 85% compliant                        | iLembe schemes ≥ 85% compliant                        | iLembe schemes ≥ 85% compliant                        | iLembe schemes ≥ 85% compliant                        | SHC PO1   |          |
| SO2 |   |  | 2.21 | Overall WWTW % compliance with relevant discharge licence or authorisation. ★ | 2 of 4 WTW ≥ 85% compliant             | 3 of 4 WTW ≥ 85% compliant                            | 4 of 4 WTW ≥ 85% compliant                            | 6 WTW ≥ 85% compliant                                 | 6 WTW ≥ 85% compliant                                 | 6 WTW ≥ 85% compliant                                 | 6 WTW ≥ 85% compliant                                 | SHC PO22  |          |
| SO2 |   | Plan and implement collaborative water education initiatives | 2.22 | Number of schools / community initiatives undertaken.                         | 3 implemented                          | 3 implemented   | 3 implemented   | 3 implemented   | 3 implemented   | 3 implemented   | 3 implemented   | N/A   |          |
| SO2 |   | Plan and implement CSI initiatives                           | 2.23 | Number of CSI initiatives undertaken. ★                                       | 7 implemented                          | 1 implemented<br>4 in progress                        | ≥ 4 initiatives                                       | ≥ 4 initiatives                                       | ≥ 4 initiatives                                       | ≥ 4 initiatives                                       | ≥ 4 initiatives                                       | ≥ 4 initiatives                                       | SHC PO21 |
| SO2 |   | Increase participation, BBBEE spend and new entrants.        | 2.24 | Per cent PSP and contractor order values awarded to BBBEE suppliers.          | R311m.<br>33% PSPs;<br>37% contractors | 30% PSPs;<br>35% contractors                          | ≥ 35%   | ≥ 35%   | ≥ 35%   | ≥ 35%   | ≥ 35%   | ≥ 35%   | N/A      |
| SO2 |   |  | 2.25 | Actual BBBEE spend as a % of total discretionary expenditure. ★               | 86%                                    | 91%   | 80%   | 80%   | 80%   | 80%   | 80%   | 80%   | SHC PO7  |
| SO2 |   |  | 2.26 | Number of new service providers awarded work. ★                               | 14                                     | ≥ 2 suppliers sustainably developed and work awarded. | ≥ 2 suppliers sustainably developed and work awarded. | ≥ 2 suppliers sustainably developed and work awarded. | ≥ 2 suppliers sustainably developed and work awarded. | ≥ 2 suppliers sustainably developed and work awarded. | ≥ 2 suppliers sustainably developed and work awarded. | ≥ 2 suppliers sustainably developed and work awarded. | SHC PO7  |

★ 9 SHC Indicators

**Strategic Goal 2:** Expand and improve funding collaborations whilst managing key cost drivers.

Maintain and leverage  
our solid financial  
assets

## FINANCIAL PERSPECTIVE

SO 3 : Increase  
mobilisation of funds

SO 4 : Increase  
financial  
sustainability

SO 5 : Improve  
financial ratios

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

| UW  | KPI   | Initiatives / Plans   | #   | Result Indicator  | Actual<br>2013/2014 | Estimated<br>2014/2015 | Projected<br>2015/2016 | 2016/2017   | 2017/2018   | 2018/2019   | 2019/2020   | SHC<br>Annex 1 |
|-----|---|---|-----|---|---------------------|------------------------|------------------------|-------------|-------------|-------------|-------------|----------------|
| SO3 | <b>KPI 3:</b> Increased funding collaboration and funds mobilised for sustainable growth, expansion and access.               | Identify and implement co-funding initiatives to sustain rural schemes. | 3.1 | Total funding for rural schemes received, Rm.                   | R101m RBIG          | R53m RBIG              | R282m RBIG             | R170m RBIG  | R486m RBIG  | TBC         | TBC         | N/A            |
| SO4 | <b>KPI 4:</b> The extent to which there are sustainable financial returns for each system, area, region and the organisation. | Ensure sustainable operations.  | 4.1 | Total revenue, Rm and per cent variance.                        | R2.19bn             | R2.24bn±10%            | R2.38bn±10%            | R2.63bn±10% | R2.93bn±10% | R3.23bn±10% | R3.54bn±10% | N/A            |
|     |   |   | 4.2 | Total expenditure, Rm and per cent variance. ★                  | R1.54bn, below 10%  | R1.61bn±10%            | R1.86bn±10%            | R2.08bn±10% | R2.31bn±10% | R2.47bn±10% | R2.51bn±10% | SHC PO8        |
|     |   |   | 4.3 | Total surplus (loss) Rm and per cent variance                   | R674m               | R661m±10%              | R532m±10%              | R554m±10%   | R630±10%    | R771m±10%   | R1.03bn±10% | N/A            |
|     |   | Manage debtor days.   | 4.4 | Number of debtor days. ★  | 39                  | 42                     | ≤ 42                   | ≤ 42        | ≤ 41        | ≤ 41        | ≤ 41        | SHC PO6        |
|     |   | Manage s30 revenue.   | 4.5 | Total s30 revenue, Rm and per cent of turnover. ★               | R298m, 14%          | 6%                     | ≤ 2%                   | ≤ 2%        | ≤ 2%        | ≤ 2%        | ≤ 2%        | SHC PO10       |
|     |   | Increase return on investment.  | 4.6 | Per cent return on assets. ★                                    | 13%                 | ≥11%                   | ≥ 7%                   | ≥ 7%        | ≥ 7%        | ≥ 7%        | ≥ 7%        | SHC PO6        |
|     |   | Improve controls and risk mitigation                                    | 4.7 | Number of breaches in materiality and significance framework. ★ | Nil                 | Nil                    | Nil                    | Nil         | Nil         | Nil         | Nil         | SHC PO20       |



| UW  | KPI  | Initiatives / Plans                   | #   | Result Indicator                               | Actual<br>2013/2014 | Estimated<br>2014/2015 | Projected<br>2015/2016 | 2016/2017  | 2017/2018  | 2018/2019  | 2019/2020  | SHC<br>Annex 1 |         |
|-----|--|---------------------------------------|-----|--|---------------------|------------------------|------------------------|------------|------------|------------|------------|----------------|---------|
| SO5 | KPI 5: Ratios for financial viability and sustainability met | Manage solvency                       | 5.1 | Debt to Equity ratio. ★                        | 28%                 | ≤ 25%                  | ≤ 60%                  | ≤ 60%      | ≤ 60%      | ≤ 60%      | ≤ 60%      | SHC PO6        |         |
|     |  |                                       | 5.2 | Interest cover ratio.                          | 5.1                 | 5                      | ≥ 2.5                  | ≥ 2.5      | ≥ 2.5      | ≥ 2.5      | ≥ 2.5      | ≥ 2.5          | N/A     |
|     |  | Manage liquidity                      | 5.3 | Current Ratio ★                                | 3.0                 | 2.5                    | 1.5 to 2.1             | 1.5 to 2.1 | 1.5 to 2.1 | 1.5 to 2.1 | 1.5 to 2.1 | 1.5 to 2.1     | SHC PO6 |
|     |  |                                       | 5.4 | Operating cash flows, Rm                       | R860m               | ≥ R800m                | ≥ R800m                | ≥ R900m    | ≥ R1000m   | ≥ R1200m   | ≥ R1300m   | ≥ R1300m       | N/A     |
|     |  | Manage primary business performance   | 5.5 | Gross profit margin % for primary activity ★   | 60%                 | 58%                    | ≥ 50%                  | ≥ 50%      | ≥ 50%      | ≥ 50%      | ≥ 50%      | ≥ 50%          | SHC PO6 |
|     |  |                                       | 5.6 | Net profit margin for % primary activity ★     | 34%                 | 30%                    | ≥ 20%                  | ≥ 20%      | ≥ 20%      | ≥ 20%      | ≥ 20%      | ≥ 20%          | SHC PO6 |
|     |  | Manage secondary business performance | 5.7 | Gross profit margin % for secondary activity ★ | 6%                  | 12%                    | ≥ 5%                   | ≥ 3%       | ≥ 3%       | ≥ 3%       | ≥ 3%       | ≥ 3%           | SHC PO6 |
|     |  |                                       | 5.8 | Net profit margin % for secondary activity. ★  | 12%                 | 8%                     | ≥ 1%                   | ≥ 1%       | ≥ 1%       | ≥ 1%       | ≥ 1%       | ≥ 1%           | SHC PO6 |

★ 11 SHC Indicators

**Strategic Goal 3:** Remove system constraints and blockages through innovative thinking and improve efficiency of all inputs.

Create effective and resilient enterprise architecture - our processes, systems and technologies

PROCESS PERSPECTIVE

SO 6: Improve service delivery systems

Key outcomes: Operational Resiliency, Operational Optimisation, Community and Environmental Sustainability.

| UW  | KPI  | #   | Initiatives / Plans  | Result Indicator   | Actual 2013/2014                                | Estimated 2014/2015                                   | Projected 2015/2016                                   | 2016/2017   | 2017/2018   | 2018/2019   | 2019/2020   | SHC Annex 1                                     |          |
|-----|--|-----|--|--|---|---|---|---|---|---|---|---|----------|
| SO6 | KPI 6: The extent to which business processes, policies and systems are enabling strategy implementation | 6.1 | Benchmark procurement system for engineering and construction and improve turnaround time. | Number of working days for awarding of capex programme tenders and for issuing of signed contract. | > 90 days for award.<br>≤ 7 for signed contract | > 90 days for award;<br>> 24 days for signed contract | ≤ 90 days for award;<br>≤ 24 days for signed contract | ≤ 90 days for award;<br>≤ 24 days for signed contract | ≤ 90 days for award;<br>≤ 24 days for signed contract | ≤ 90 days for award;<br>≤ 24 days for signed contract | ≤ 90 days for award;<br>≤ 24 days for signed contract | N/A   |          |
|     |  | 6.2 | Review and implement effective EPCM process.   | Project lifecycle (EPCM) incorporates structured gate review process.                              | Review 100% complete.                           | Gate review process in progress.                      | Gate review process 100% incorporated.                | Monitor and refine.                                   | -   | -   | -   | N/A   |          |
|     |  | 6.3 | Review and implement effective ERP system.   | ERP system reviewed and implemented.   | 25% reviewed.                                   | 25% implemented                                       | 75% implemented. First "Go Live" run.                 | 90% implemented "Final Go live run"                   | 100% implemented                                      | Review and optimise                                   | Review and optimise                                   | N/A   |          |
|     |  | 6.4 | Develop and implement environmental sustainability plans.                                  | ≥ 3 initiatives  | ≥ 3 initiatives                                 | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                 | N/A      |
|     |  | 6.5 | Develop and implement research and innovation plans.                                       | ≥ 3 initiatives  | ≥ 3 initiatives                                 | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                       | ≥ 3 initiatives                                 | N/A      |
|     |  | 6.6 | Monitor and review systems for performance and financial controls.                         | Unqualified report with no matters of emphasis (Clean Audit) ★                                     | Unqualified report with no matters of emphasis. | Unqualified report.                                   | Unqualified report with no matters of emphasis.       | Unqualified report with no matters of emphasis.       | Unqualified report with no matters of emphasis.       | Unqualified report with no matters of emphasis.       | Unqualified report with no matters of emphasis.       | Unqualified report with no matters of emphasis. | SHC PO5  |
|     |  | 6.7 | Monitor and review internal controls and risk system.                                      | Number of repeat and number of unresolved findings. ★  | 0 repeat; 9 unresolved.                         | 0 repeat; >4 unresolved.                              | 0 repeat; ≤ 5 unresolved.                             | 0 repeat; ≤ 5 unresolved.                             | 0 repeat; ≤ 5 unresolved.                             | 0 repeat; ≤ 5 unresolved.                             | 0 repeat; ≤ 5 unresolved.                             | 0 repeat; ≤ 5 unresolved.                       | SHC PO19 |

| UW | KPI | #    | Initiatives / Plans  | Result Indicator   | Actual<br>2013/2014                            | Estimated<br>2014/2015   | Projected<br>2015/2016                                     | 2016/2017   | 2017/2018  | 2018/2019  | 2019/2020  | SHC<br>Annex 1 |
|----|-----|------|--|--|--|--|--|---|--|--|--|----------------|
|    |     | 6.8  | Monitor and manage strategic risks.                                    | Acceptance level of risks mitigated as indicated by strategic risks outside appetite and tolerance levels. | 4 outside appetite and zero outside tolerance. | 3 outside appetite and 1 outside tolerance.                      | ≤ 5 outside appetite and zero outside tolerance.           | ≤ 5 outside appetite and zero outside tolerance.                          | ≤ 5 outside appetite and zero outside tolerance.           | ≤ 5 outside appetite and zero outside tolerance.           | ≤ 5 outside appetite and zero outside tolerance.           | N/A            |
|    |     | 6.9  | Monitor and improve fiduciary duties and governance.                   | Board / Committee meetings attended as a % of planned meetings. ★  | 82%  | 84%  | ≥ 80%.   | ≥ 80%   | ≥ 80%  | ≥ 80%  | ≥ 80%  | SHC<br>PO18    |
|    |     |      |  | Resolutions taken by the board as a % of resolutions required. ★   | -  | -  | ≥ 80%  | ≥ 80%   | ≥ 80%  | ≥ 80%  | ≥ 80%  | N/A            |
|    |     | 6.10 | Monitor and improve ethics and governance.                             | All ethical issues addressed as assessed against key ethics areas.   | Monitored and reported.                        | Ethics and Fraud Management Systems improved.                    | 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. | N/A            |
|    |     | 6.11 | Monitor and improve health and safety.                                 | DIFR   | 0.14   | 0.14   | ≤ 1  | ≤ 1   | ≤ 1  | ≤ 1  | ≤ 1  | N/A            |
|    |     | 6.12 | Develop compliance registers and monitor and improve legal compliance. | Per cent compliance against legal Compliance Register. ★   | Framework developed.                           | Registers developed.   | 100% compliance.   | 100% compliance.  | 100% compliance.   | 100% compliance.   | 100% compliance.   | SHC<br>PO14    |
|    |     | 6.13 | Undertake internal and external benchmarking.                          | Water utility benchmarking system expanded and extended.   | Framework developed.                           | 6 parameters included for 9 utilities and key customers of each. | ≥ 4 new parameters added.                                  | ≥ 4 new parameters added.<br>Inclusion of African Water utilities planned | African Water utilities included.                          | Refined and optimised.                                     | -  | N/A            |

★ 5 SHC Indicators

**Strategic Goal 4:** Strengthen and develop quality human resources, infrastructure capacity and water resources sustainability to support growth.

We will enable our people, secure water resources and ensure infrastructure capacity

**ORGANISATIONAL CAPACITY**

**SO 7: Improve and increase infrastructure assets**

**SO 8: Increase water resources sustainability**

**SO 8: Increase skills and competency**

**Key outcomes:** Infrastructure Stability, Water Resources Adequacy, Leadership and Employee Development.

| UW  | KPI  | Initiatives / Plans  | #   | Result Indicator   | Actual 2013/2014                     | Estimated 2014/2015                   | Projected 2015/2016  | 2016/2017  | 2017/2018  | 2018/2019  | 2019/2020  | SHC Annex 1 |
|-----|--|--|-----|--|--------------------------------------|---------------------------------------|--|--|--|--|--|-------------|
| SO7 | KPI 7: Infrastructure expenditure within target cash flows and completion dates. | Implement capital infrastructure to meet demands and for growth.           | 7.1 | Actual CAPEX Rm and % variance against budget. ★   | R1022m, 13% above target.            | 80% of R1840m                         | ≥ 80% of R1962m  | ≥ 80% of R1761m  | ≥ 80% of R928m   | ≥ 80% of R775m   | ≥ 80% of R571m   | SHC PO9     |
|     |  |  | 7.2 | Number of CAPEX projects within target completion dates against planned number and % variance. ★ | 19%                                  | 17%                                   | ≤ 15%  | ≤ 15%  | ≤ 15%  | ≤ 15%  | ≤ 15%  | SHC PO9     |
|     |  | Implement infrastructure to meet national objectives of increasing access. | 7.3 | Actual CAPEX spend on rural expansion related projects as % of budget. ★                         | 108%<br>R694m actual<br>R645m budget | 101%<br>R915m forecast<br>R910 budget | 100 % ±10%<br>R843m budget                                 | 100 % ±10%<br>R571m budget                                 | 100 % ±10%<br>R322m budget                                 | 100 % ±10%<br>R373m budget                                 | 100 % ±10%<br>R110m budget                                 | SHC PO4     |
|     |  |  | 7.4 | Repairs and maintenance as % of PPE. ★   | R158m<br>3.7%                        | R204m<br>≥ 3%                         | R217m<br>≥ 5% for existing assets.<br>≥ 3% for new assets. | R235m<br>≥ 5% for existing assets.<br>≥ 3% for new assets. | R254m<br>≥ 5% for existing assets.<br>≥ 3% for new assets. | R275m<br>≥ 5% for existing assets.<br>≥ 3% for new assets. | R298m<br>≥ 5% for existing assets.<br>≥ 3% for new assets. | SHC PO6     |
| SO8 | KPI 8: Sustainable water   | Develop integrated water resources   | 8.1 | Supply and demand status and projections   | Quarterly status reports and         | Quarterly status reports and          | Report of supply and demand status                         | Update and refine.   | Update and refine.   | Update and refine.   | Update and refine.   | N/A         |

| UW  | KPI  | Initiatives / Plans   | #   | Result Indicator  | Actual<br>2013/2014             | Estimated<br>2014/2015          | Projected<br>2015/2016   | 2016/2017                                      | 2017/2018                                      | 2018/2019                                      | 2019/2020                        | SHC<br>Annex 1 |
|-----|--|---|-----|---|---------------------------------|---------------------------------|--|--|--|--|----------------------------------|----------------|
|     | resource options identified for all systems.   | plans for each supply system and region for long term sustainability.                             |     | demonstrating Long-term water resources adequacy per system and region.                               | operating rules.                | operating rules.                | and projections demonstrating sustainable water resources plans for long term. |  |  |  |                                  |                |
|     |  | Improve supply reliability and asset management to eliminate unplanned supply disruptions.        | 8.2 | Per cent supply disrupted > 24 hours (over total supply days). ★                                      | 0% supply disrupted > 24 hours. | 0% supply disrupted > 24 hours. | 0% supply disrupted > 24 hours.  | 0% supply disrupted > 24 hours.                | 0% supply disrupted > 24 hours.                | 0% supply disrupted > 24 hours.                | 0% supply disrupted > 24 hours.  | SHC PO3        |
|     |  | Reduce water loss / unaccounted for water per system.   | 8.3 | Avoidable water lost as a percentage of water produced. ★   | ≤ 5%                            | ≤ 5%                            | ≤ 5%   | ≤ 5%   | ≤ 5%   | ≤ 5%   | ≤ 5%                             | SHC PO2        |
|     |  | Reduce water losses in reticulation system to support municipalities and sustain water resources. | 8.4 | Water demand business unit developed and functional.  | -                               | -                               | Fully functional and resourced.  | Implement, monitor and Optimise.               | Implement, monitor and Optimise.               | Implement, monitor and Optimise.               | Implement, monitor and Optimise. | N/A            |
|     |  |   | 8.5 | NRW analysis municipality-by-municipality.  | -                               | Annual NRW Report.              | Annual NRW Report.   | Annual NRW Report.                             | Annual NRW Report.                             | Annual NRW Report.                             | Annual NRW Report.               | N/A            |
| SO9 | KPI 9: Effectiveness and efficiency of employee training and development programmes. | Build leadership, management and functional competence for a RWU.                                 | 9.1 | Number of candidates enrolled and developed through Leadership and Management Development Programmes. | Programme developed.            | ≥ 90 management development     | ≥ 40 management development<br>≥ 35 Leadership development.                    | Review and monitor                             | Review and monitor                             | Review and monitor                             | Review and monitor               | N/A            |
|     |  | Develop technical skills through Learnerships   | 9.2 | Number of Learnerships appointed. ★   | 50                              | 49                              | 40   | 40   | 40   | 40   | 40                               | SHC PO16       |
|     |  | Implement bursary programme   | 9.3 | Number of Bursaries issued. ★   | 10                              | 13                              | 13   | 13   | 13   | 13   | 13                               | SHC PO16       |
|     |  | Develop Graduates and Interns   | 9.4 | Number of Graduates Trainees and Interns. ★   | 21                              | 28                              | 28   | 28   | 28   | 28   | 28                               | SHC PO16       |
|     |  | Develop technical skills to capacitate municipalities   | 9.5 | Numbers of candidate engineers/ professionals developed (NT)  | 44 in progress; R16m spend.     | 44 in progress; R16m spend.     | 44 developed.<br>4 certifications at year end                                  | 40 developed.<br>11 certifications at year end | 29 developed.<br>11 certifications at year end | 18 developed.<br>18 certifications at year end | -                                | N/A            |
|     |  |   | 9.6 | Implementation plan for 'War-on-Leaks' programme (NT)   | -                               | Scope finalised.                | Implementation plan developed.   | Plan implemented.                              | Plan implemented.                              | Plan implemented.                              | Plan implemented.                | N/A            |

| UW | KPI | Initiatives / Plans                         | #    | Result Indicator   | Actual<br>2013/2014        | Estimated<br>2014/2015 | Projected<br>2015/2016 | 2016/2017   | 2017/2018   | 2018/2019   | 2019/2020   | SHC<br>Annex 1 |
|----|-----|---|------|--|----------------------------|------------------------|------------------------|-------------|-------------|-------------|-------------|----------------|
|    |     | Create jobs                                 | 9.7  | Increase in number permanent employees. ★                            | 22                         | 25                     | 35                     | 21          | 2           | 0           | 0           | SHC PO17       |
|    |     |   | 9.8  | Increase in number of temporary employees. ★                         | 8                          | 1                      | 0                      | 0           | 0           | 0           | 0           | SHC PO17       |
|    |     |   | 9.9  | Number of temporary jobs created through CAPEX programme and Rm. ★   | 1073 jobs;<br>R25.7m wages | ≥ 600 jobs.            | ≥ 600 jobs.            | ≥ 600 jobs. | ≥ 600 jobs. | ≥ 600 jobs. | ≥ 600 jobs. | N/A            |
|    |     | Manage staff / skills retention.            | 9.10 | Number of staff terminations as a % of the total staff complement. ★ | ≤ 8%                       | ≤ 8%                   | ≤ 8%                   | ≤ 8%        | ≤ 8%        | ≤ 8%        | ≤ 8%        | SHC PO15       |
|    |     | Increase staff efficiency and productivity. | 9.11 | Staff remuneration % of total operating expenditure ★                | 26%                        | 28%                    | ≤ 35%                  | ≤ 35%       | ≤ 35%       | ≤ 35%       | ≤ 35%       | SHC PO6        |

★ 14 SHC Indicators

## 2.8 Summary of indicators

Umgeni Water has measurable goals, objectives, outcomes, indicators and targets: Four (4) goals and four (4) Balanced Scorecard Perspectives, nine (9) Strategic Objectives, and nine (9) Key Performance Indicators, the latter expounded through seventy-seven (77) result indicators and ten (10) outcomes indicative of sustainable water utility. Thirty-nine (39) indicators are required for the Shareholder Compact (SHC) for 2015/2016.

## 3 Marketing Plan

### 3.1 Geographical areas

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

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

### 3.2 Marketing Approach

Umgeni Water's marketing approach responds to its operating environment requirements and mandates. The overall value proposition is premised on securing mutually beneficial relationships.

The water board consolidation strategy by the Minister has translated into expansion of Umgeni Water's area of operation, namely

- Expansion into the North of KwaZulu-Natal to include the uThukela District Municipality, Umzinyathi District Municipality, Amajuba District Municipality and Newcastle Local Municipality.
- Expansion into the Eastern Cape Province to include the Alfred Nzo District Municipality and the Ngquza Hill Local Municipality enclave, which is within the OR Tambo District Municipality.

In respect of these Umgeni Water is refining its due diligence report for provision of sustainable water services to customers in the Regional Water Utility (RWU) area. This regional schemes concept will be developed further over this business plan period to include the following phased approach to water access:

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

Umgeni Water's customer engagement model entails meaningful contact at various levels for different purposes:

#### 3.2.1 Development phase

Umgeni Water will foster trust and form relationships with the RWU customers through open and honest interactions.

Over this period Umgeni Water will continue with planning and create the optimal service delivery model for the regional area. Some stakeholder testing has been undertaken through interactions during the site assessments and due diligence exercise. In the coming period, validation of the WSAs interests will continue through presentation of the service model and costs, gaining deeper understanding of the WSAs' needs, further validating the information gleaned and notably:

- i. Confirm that there is a full understanding of the WSAs' problems, passions and needs,
- ii. Confirm that the value proposition solves the WSAs' 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,
- iv. Confirm what the WSAs are willing to pay for the services, confirm how the WSAs are planning to pay for the services, solicit information/confirmation of the available funding and financing options that exist in addition to the proposed tariff and agree / develop mechanisms for sourcing these.

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

### 3.2.2 Operational phase - performance with SALGA approved Bulk Supply Agreement

Umgeni Water will copy and improve on existing successful customer relationship engagement models where experience has shown that positive outcomes arise through:

- i. Honest response and answers to questions, notably when these relate to supply interruptions and quality problems,
- ii. Solving the easy problems quickly,
- iii. Ensuring timely follow up and feedback on progress toward solutions for the harder problems,
- iv. Working together, supporting and helping the WSAs' address water crisis issues.

### 3.2.3 Planning phase – consultations relating to tariff and services and infrastructure growth.

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 WSAs preference for price stability, efficiency and security of supply.





## 4 Communication Plan

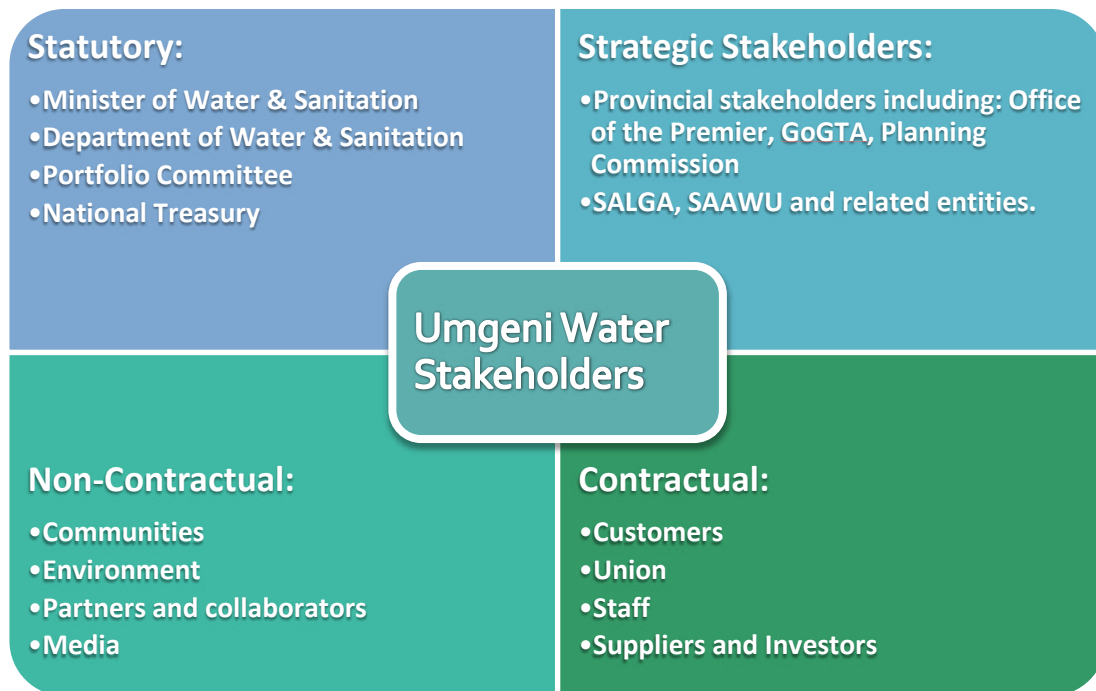
### 4.1 Corporate Communications Function and Structure

Umgeni Water will in 2015/2016 review the functions and structure of its corporate communications to address functional and capacity gaps.

A structured corporate communications strategy and plan appropriate to an entity the size of Umgeni Water, inclusive of an appropriate marketing and branding strategy and plan, will be developed for the organisation.

### 4.2 Stakeholder Engagement Plan

In the course of implementation of its primary and secondary functions, Umgeni Water interacts and engages with a wide range of stakeholders who are impacted on, are affected by or have an interest in the business activities of the organisation. These stakeholders have been categorised into four distinct groups.



**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 organisational 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, all other Water Utilities in South Africa and others.

**Contracted 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-Contracted 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 and civil society in general.

The objectives of Umgeni Water's Stakeholder Engagement Plan are to:

- Ensure that relevant and appropriate approaches are adopted for interaction with each distinct group of Stakeholders,
- Enhance internal policies, projects and services provided through Stakeholder engagement,
- Facilitate effective collaboration and knowledge sharing between Umgeni Water and its Stakeholders, and
- Ensure that the organisation is aware of Stakeholder needs and priorities through the receipt and provision of relevant information.

Umgeni Water has embarked on a growth and expansion plan which is being accompanied by increased engagements with municipalities that have been identified as potential customers. The organisation has a myriad of engagement platforms and will focus its communications to ensure the objectives of the communication are achieved. Engagement platforms comprise:

- Business cycle and calendar Stakeholder engagement events and opportunities with Statutory, Strategic, Contracted and Non-Contracted Stakeholders,
- Newsletters and communiqués,
- Internal Information displays and mailing lists,
- Intranet and internet sites,
- Various social media platforms,
- Direct engagements with the Political Leadership of Customers and Potential Customers
- Direct engagements, on a technical level, between Umgeni Water's technical staff and the technical staff of Municipal Customers
- Public forums, including events for the launch of construction and commissioning of projects,
- Media releases and advertisements, and
- Stakeholder satisfaction surveys and internal climate surveys.



### 4.3 Stakeholder Value Proposition and Engagement Plan

#### 4.3.1 Minister of Water and Sanitation, Department of Water and Sanitation, Portfolio Committee on Water and Sanitation and National Treasury

The Basis for Engagement: delivery on mandate, responsive to Water Services Act, Public Finance Management Act and other pertinent legislation and regulations, delivering strategy and plans aligned to Government outcomes and Executive Authority expectations, demonstrating adequate resource planning mobilisation, investing in infrastructure, ensuring efficient water usage and conservation and water quality management, demonstrating a well-governed and efficiently run entity, ensuring performance with financial and predetermined objectives and plans to deliver long-term sustainability.

In response, Umgeni Water has identified the value proposition statement as shown and will deliver this through the engagement plan indicated below.

#### Planned Engagements for 2015/16 to 2019/20 include:

- Regular communication with oversight departments and inputs into water sector policy and strategy at quarterly or other scheduled Ministerial and Director-General forums.
- Provision of all key reports aligned to National Government’s accountability cycle, including Annual Report during October-November, Quarterly Performance Reports, Strategy, Business Plan and Shareholder Compact in May.
- Engagement during appraisal of Business Plan, including the Strategy KPIs and signing of Shareholder Compact by the Department of Water and Sanitation scheduled between August and October.
- Relevant Portfolio Committee communication and appraisal of annual performance and tariff scheduled between February and May.
- Timely exchange in response to any other statutory / mandate issues that arise in the course of the year.

#### 4.3.2 Provincial Planning Commission, CoGTA and other Provincial Departments, SALGA and SAAWU

The Basis for Engagement: infrastructure implementation plan to enhance assurance of supply and extend water services to previously un-served communities, affordable tariff, assurance of water supply as a catalyst for economic expansion, delivery on mandate and alignment to policy and National Development Plan, partner in service delivery, accelerated service delivery and corporate governance, benchmarking and strategic information exchanges.

#### Planned Engagements for 2015/16 to 2019/20 include:

- Provision of all key inputs, presentations and reports aligned to the Provincial Government’s cycle, including inputs into the Provincial

Umgeni Water Value Proposition Statement to National Government



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

Umgeni Water Value Proposition Statement to Province



A sound partner in water services delivery, providing affordable services, contributing to regional economic growth and development, exchanging strategic information

- Lekgotla and key addresses,
- Focused Provincial communication relating to: Alignment of Strategy and Business Plan to the Provincial Growth Development Strategy and Plan; Umgeni Water's Infrastructure Master Plan and Five-Year Capital Investment Programme; Affordable and equitable distribution of water to communities and for rural development; Projects contributing to elimination of water backlogs and achievement of goals; and Impact of the bulk tariff, and Water assurance plans for the Province, plans to meet future water demands and sharing Umgeni Water's growth and expansion plans.
- Benchmarking and strategic information exchange with SALGA and SAAWU and related stakeholders.

### 4.3.3 Customers and Potential Customers

#### Customers

1. eThekweni MM
2. iLembe DM
3. Ugu DM
4. Harry Gwala DM
5. uMgungundlovu DM
6. Msunduzi LM

#### Potential Customers

7. uThukela DM
8. Amajuba DM
9. Newcastle LM
10. Umzinyathi DM
11. Alfred Nzo DM
12. OR Tambo DM, Ngquza Hill LM

The basis for engagement with customers: Service Level Agreements, assurance of supply, both quality and quantity, care and support, responsive to needs, tariff consultation, partnerships in socio-development initiatives and new products and services.

#### Planned Engagements for 2015/16 to 2019/20 include:

- 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 to restore water supply failures; Support services, including water quality and process and support for customer water programmes,
- Collaboration for water education and awareness; Collaboration and partnerships in Corporate Social Investment projects and partnerships in community-focused job-creation programmes, among them Working for Water and Adopt a River.
- Collaboration and partnerships for the launch of construction and commissioning of projects,
- Joint communications and media releases,
- Input to customer satisfaction surveys,
- Annual performance presentations during road shows, and
- Target customer engagement for joint launching of key water and related projects in the year.

Umgeni Water  
Value Proposition  
Statement to  
Customers



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

#### 4.3.4 National Education, Health and Allied Workers' Union, unionised Staff and non-unionised Staff

The Basis for Engagement: Compliance with Collective Agreement, demonstrating relevance as an organisation that adds value to the sector, regular feedback and communication regarding sector issues and organisational performance, equitable jobs, fair labour practice, good working conditions, enabling work environment and communication, fair market-related compensation and service conditions and sound performance management, recognition system and information sharing and feedback on organisation events planned and held. Umgeni Water, in turn, expects engaged employees, productivity, delivery and return on investment.

##### Planned Engagements for 2015/16 to 2019/20 include:

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

Umgeni Water  
Value  
Proposition  
Statement to  
Union and Staff

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

#### 4.3.5 Suppliers

The Basis for Engagement: Compliance with legislation for fair and equitable procurement, supplier development, transparency, business opportunities, integrity, fair treatment, fair pricing, fair payment terms, information provision on revisions to Broad-Based Black Economic Policy, partnerships in BBEE, strategy on and assistance available to co-operatives and capacity building towards more inclusive economic participation and CSI, environmental management and supplier footprint reduction – water, energy and materials.

##### Planned Engagements for 2015/16 to 2019/20 include:

- Annual engagements at Umgeni Water Supplier Forum.
- Advertising features on Umgeni Water's Five-Year Capex and implementation programme.

Umgeni Water  
Value Proposition  
Statement to  
Suppliers

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

#### 4.3.6 Community and Civil Society Institutions

The Basis for Engagement: Umgeni Water demonstrates conservation and responsible use of resources, providing a clean and safe environment, exercising responsible citizenship, demonstrating transparency in corporate governance, creating jobs, providing information and opportunities. In turn, Umgeni Water solicits a social licence to operate, recognition for creating value, respect for property and collaboration in protecting remotely situated water assets.

##### Planned Engagements for 2015/16 to 2019/20 include:

- Implementation of the organisation'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.

Umgeni Water Value Proposition Statement to Communities and Civil Society Institutions



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

#### 4.3.7 Chambers of Business and Industry

The Basis for Engagement: Umgeni Water provides assurance of supply, both quality and quantity, information on tariff, demonstrating responsible citizenship. In turn Umgeni Water solicits recognition for creating value, pollution prevention and safe-guarding of water supply resources.

##### Planned Engagements for 2015/16 to 2019/20 include:

- 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

Umgeni Water Value Proposition Statement to Business



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

#### 4.3.8 Media and general public

The Basis for Engagement: access to information, demonstrating accountability, transparency and good governance. In turn, Umgeni Water expects responsible reporting and media integrity.

##### Planned Engagements for 2015/16 to 2019/20 include:

- Using media as an opportunity to increase visibility of the organisation and as a positioning, marketing and branding platform,
- Providing information on organisational 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 Value Proposition Statement to Media and Public



A sustainable entity that adds value to society.

#### 4.3.9 Water sector, related institutions and academia in South Africa and Africa

The Basis for Engagement: exchange and expansion of water sector knowledge, benchmarking on best practices, partnerships and collaborative water and wastewater research, which in turn will enable organisational learning and growth.

##### Planned Engagements for 2015/16 to 2019/20 include:

- 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.
- 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 Value Proposition Statement to water sector, related institutions and academia



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

## 5 Policy Statement

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There have been no significant changes in Umgeni Water's policy statement from the previous year.





## 6 Corporate Governance

### 6.1 Composition and Functioning of the Board

Umgeni Water has a unitary Board comprised of twelve (12) non-executive Board members and one (1) Executive Board member, the Chief Executive. The roles of the Chairman and that of the Chief Executive are separate as recommended in the King III Report on Corporate Governance (hereinafter referred to as “King III”) to ensure the independence of the two positions and the clear definition of roles and responsibilities. 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 King III. All Board members execute their legal duties in a professional manner, with integrity and enterprise. In terms of the Water Services Act (Act 108 of 1997), Board members (save for 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 Board has established four 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 will continue to actively engage with the shareholder through various forums during the year.

A Board Charter (reviewed in 2012) 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, 2009 (King III).

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 their own remuneration. Board Members’ remuneration is fully disclosed in Umgeni Water’s Annual Report.

**Table 6.1: Current Board and Committee Memberships**

| Board Member                    | Gender | Audit | REMCO | Capex |
|---------------------------------|--------|-------|-------|-------|
| 1. Mr A Mahlalutye <sup>1</sup> | M      |       |       |       |
| 2. Prof I Vally <sup>2</sup>    | M      | ✓     |       |       |
| 3. Mr V Gounden                 | M      |       | ✓     |       |
| 4. Ms T Shezi                   | F      |       | ✓     | ✓     |
| 5. Ms N Afolayan <sup>3</sup>   | F      | ✓     |       | ✓     |
| 6. Ms Z Mathenjwa               | F      | ✓     | ✓     |       |
| 7. Dr T Dube                    | F      | ✓     |       | ✓     |
| 8. Ms N Chamane <sup>4</sup>    | F      |       | ✓     | ✓     |
| 9. Mr V Reddy                   | M      |       | ✓     | ✓     |
| 10. Mr G Atkinson               | M      |       | ✓     | ✓     |
| 11. Mr T Nkhahle                | M      | ✓     |       | ✓     |
| 12. Mr Thabani Zulu             | M      | ✓     |       | ✓     |
| 13. Mr C Gamede <sup>5</sup>    | M      |       | ✓     | ✓     |

✓ Denotes Committee Member

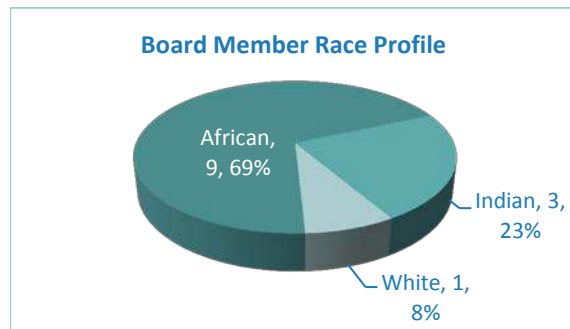
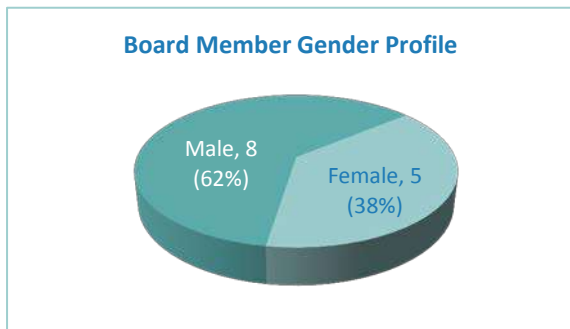
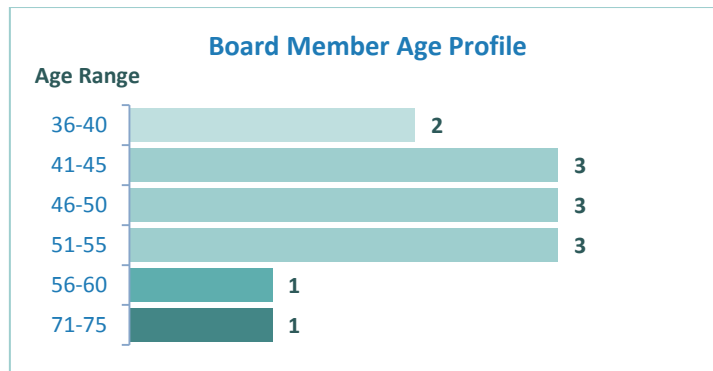
<sup>1</sup> Chairman

<sup>2</sup> Audit Committee Chairman

<sup>3</sup> Capex, Fixed Assets and Procurement Committee Chairperson

<sup>4</sup> Human Resources and Remuneration Committee Chairperson

<sup>5</sup> Chief Executive



## Meetings and Attendance

Table 6.2: Scheduled meetings of the Board and Committees 2015/2016

| Normal Board /<br>Committee Meetings | 2015                    |                         |                         |                         |                         |     | 2016                    |                         |                         |                         |                         |                         | Total |
|--------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------|
|                                      | Jul                     | Aug                     | Sep                     | Oct                     | Nov                     | Dec | Jan                     | Feb                     | Mar                     | Apr                     | May                     | Jun                     |       |
| Board Meetings                       | Wed<br>22 <sup>nd</sup> |                         | Wed<br>16 <sup>th</sup> |                         | Wed<br>25 <sup>th</sup> |     |                         |                         | Wed<br>09 <sup>th</sup> | Wed<br>27 <sup>th</sup> |                         |                         | 5     |
| Board Strategy<br>Review             |                         |                         |                         |                         |                         |     | Wed<br>29 <sup>th</sup> |                         |                         |                         |                         |                         | 1     |
| HR and<br>Remuneration               |                         | Wed<br>19 <sup>th</sup> |                         | Wed<br>11 <sup>th</sup> |                         |     |                         | Wed<br>3 <sup>rd</sup>  | Wed<br>16 <sup>th</sup> |                         |                         | Wed<br>15 <sup>th</sup> | 5     |
| Capex, Fixed Assets,<br>SCM          |                         | Wed<br>12 <sup>th</sup> |                         | Wed<br>28 <sup>rd</sup> |                         |     |                         | Wed<br>10 <sup>th</sup> | Wed<br>23 <sup>rd</sup> |                         |                         | Wed<br>22 <sup>nd</sup> | 5     |
| Audit                                |                         |                         | Wed<br>3 <sup>rd</sup>  |                         | Wed<br>4 <sup>th</sup>  |     |                         | Wed<br>17 <sup>th</sup> | Wed<br>30 <sup>th</sup> |                         | Wed<br>25 <sup>th</sup> | Wed<br>30 <sup>th</sup> | 6     |

## Summary of Meetings and Attendance

The average per cent attendance at Board and Committee meeting is 84%, comprising:

- 87.2% for Board: Three normal meetings.
- 66.7% for Audit Committee: Two normal meetings.
- 78.6% for HR and Remuneration Committee: Two normal meetings.
- 88.9% for Procurement, Fixed Assets and Capital Projects Committee: Two normal meetings.
- 100% for Governance Committee. One meeting.

Table 6.3: Board Meeting Attendance.

| Board Member                    | Gender | 2015      |           |           |           |           |
|---------------------------------|--------|-----------|-----------|-----------|-----------|-----------|
|                                 |        | 31-Jul-14 | 17-Sep-14 | 27-Nov-14 | 18-Mar-15 | 16-Apr-15 |
| 1. Mr A Mahlalutye <sup>1</sup> | M      | ✓         | ✓         | ✓         | ✓         |           |
| 2. Prof I Vally <sup>2</sup>    | M      | ✓         | ✓         | ≠         | ✓         |           |
| 3. Mr V Gounden                 | M      | ✓         | ≠         | ✓         | ✓         |           |
| 4. Ms T Shezi                   | F      | ✓         | ✓         | ✓         | ✓         |           |
| 5. Ms N Afolayan <sup>3</sup>   | F      | ≠         | ✓         | ✓         | ✓         |           |
| 6. Ms Z Mathenjwa               | F      | ✓         | ✓         | ✓         | ✓         |           |
| 7. Dr T Dube                    | F      | ✓         | ✓         | ≠         | ✓         |           |
| 8. Ms N Chamane <sup>4</sup>    | F      | ✓         | ✓         | ✓         | ✓         |           |
| 9. Mr V Reddy                   | M      | ✓         | ✓         | ✓         | ✓         |           |
| 10. Mr G Atkinson               | M      | ✓         | ✓         | ✓         | ✓         |           |
| 11. Mr T Nkhahle                | M      | ✓         | ✓         | ✓         | ✓         |           |
| 12. Mr T Zulu                   | M      | ✓         | ≠         | ✓         | ✓         |           |
| 13. Mr C Gamede <sup>5</sup>    | M      | ✓         | ✓         | ✓         | ✓         |           |

- ✓ Attendance
- Not a member
- # Absence with apology
- <sup>1</sup> Chairman
- <sup>2</sup> AUDIT Chairman
- <sup>3</sup> CAPEX Chairperson
- <sup>4</sup> REMCO Chairperson
- <sup>5</sup> Chief Executive

## 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.

### Audit Committee

The Committee consists of six (6) non-executive Board members and its chairman is Professor Imtiaz Vally.

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 III, 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.

### Ethics Committee

King III and the Companies Act No. 71 of 2008, read in conjunction with regulation 43, oblige all state-owned enterprises to establish a Social and Ethics Committee. Umgeni Water established an Ethics Committee in 2013 with a mandate to promote ethical behaviour, which includes preventing incidences of fraud, bribery and other corrupt activities and to monitor the organisation's compliance with relevant social, ethical and legal requirements and best practice codes. The establishment of the committee shows a deepened commitment by Umgeni Water as a responsible corporate citizen to all its stakeholders.

The Ethics Committee has an Independent Chairperson - who is neither a member of management nor a member of the Board. The Chairperson, Mr S Shabalala, is a qualified Chartered Accountant and has extensive public & 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 as well as social ethics.

The committee developed a code of ethics, approved by the Board in 2012, which 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 Committee's roles and responsibilities are as prescribed by the Companies Act and include monitoring the organisations activities, against legal or best practice requirements relating to:

- Social and economic development, including, EE and 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 Organization 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.
- Fraud and hotline management

Umgeni Water continues to provide an external whistle-blowing hotline service managed by an external service provider. This 24 hour- 365 days a year 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 up using a hotline protocol which ensures these 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 creates and maintains awareness of this facility and ensures that it is advertised by means deemed the most effective and appropriate.

## Corporate Risk Committee

The Corporate Risk Committee, which comprises a member of the Audit Committee, the Chief Executive, the Executive Management, the Company Secretary and the Risk Manager, assists the Audit Committee in discharging its duties relating to implementation of the integrated risk management framework.

## 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 organisation'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.

## Internal Audit

Internal Audit is an independent co-sourced 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.

## 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.

## Remuneration and Human Resources Committee

This Committee comprises of six (6) 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.

## Capital Projects, Fixed Assets and Procurement Committee

This Committee is chaired by Ms Nombuso Afolayan and comprises eight (8) non-executive Board members 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.

## Governance Committee

The Governance Committee meets on an ad-hoc basis. The Committee is chaired by Mr Andile Mahlalutye 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.

### 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.

### 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 organisation 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.

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.

### 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.



## Board Member Details

### Mr Andile Mahlalutye

*MA Financial Management (London); MBL (UNISA); Graduate Diploma in Company Direction (GIMT); BSc Quantity Surveying (UCT); Certificate in NGO Development and Management (Israel); A Project Management Professional (PMP) & Professional Quantity Surveyor (PrQS). Programme Certificate on Economic Regulation from the London School of Economics and Political Science.*

**Appointed for 1<sup>st</sup> Board term in June 2009.**

Non-Executive Chairman of Umgeni Water Board since 2009; Non-Executive Board member of the Ports Regulator of South Africa since 2012; Non-Executive Director of the Richards Bay Industrial Development Zone Company since 2012; member of the Free State Cluster Audit Committee since 2011; MD Ubudlelwane Capital Investments since 2010; Mvula Trust CEO from 2007 to 2010; Coega Development Corporation Executive from 2003 to 2007; General Manager/Project Leader with Blue IQ from 2000 to 2003; A former Non-Executive Board member of the Gauteng Gambling Board since 2011 to 2013; A former member of North West Provincial Audit Committee since 2009 to 2012.

### 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 for 1<sup>st</sup> Board term in June 2009.**

Chairperson of Insika Foundation and the Sinafuthi Group; Board Member Denel SOC (Ltd); Board Member Safran Turbomeca Africa, Board Member of Mitsui African Rail Solutions, Mpumalanga Provincial Department of Economic Development, Environment and Tourism Audit Committee Chairperson.

### Mr Teboho Nkhahle

*Registered Professional Scientist; MPhil Stellenbosch University; Environmental Auditor (IRCA).*

**Appointed for 1<sup>st</sup> Board term in June 2009.**

Owner and MD of Environmental Impact Management Services (EIMS); Non-Executive Chairman of Lesotho Highlands Development Authority (LHDA) from 2007 to 2011; Board member of US-based Global Decisions Inc. (Development of global environment, health and safety regulations and standards database) since 2008; Member of Institute of Directors-SA since 2007; Vice Chair IoD Sustainable Development Forum from 2008 to 2009; Environmental Auditor with Eskom from 1998 to 2004.

### Dr Takalani Dube

*MBChB, Medical (UKZN); Diploma in Anaesthesia (DASA); Diploma in Health Services Management (UKZN); Certificate in Business Development and Management (eThekweni Business Development); Postgraduate Diploma in HIV Management in the Workplace (Stellenbosch University).*

**Appointed for 1<sup>st</sup> Board term in June 2009.**

Director of eThekweni Community Church since 2005; Founder and President of Centre of HOPE (HIV and Community Development Organisation) since 2000; President of Women of Virtue (Women Empowerment and Investment Organisation) since 2002.

### Mr Graham Atkinson

*BSc Civil Engineering (UKZN); Post-Graduate Diploma in Town and Regional Planning (UKZN).*

**Appointed for 1<sup>st</sup> Board term in June 2009.**

Member of KZN Planning and Development Commission from 1998 to 2004; City Engineer of Pietermaritzburg from 1977 to 1986; Chief Executive of Umgeni Water from 1987 to 1994; Board Member of the Water Institute of Southern Africa (WISA) since 2002; Honorary member of the former Union of African Water Suppliers (UADE).

### Ms Nombuso Afolayan

*MBA (Finance) Luton University; Executive Leadership Development (UCT); Organisational Development Practitioner.*

**Appointed for 2<sup>nd</sup> Board term in June 2009.**

Chairperson of Umgeni Water CAPEX Committee since 2009. Founder and Executive Chairperson of FS Capital Investments; Chairperson of KwaZulu-Natal Sharks Board; Non-Executive Director at Ithala Development Finance Corporation; Executive at multinational shipping, maritime and petroleum companies in African markets.



**Ms Thokozile Shezi**

*BSc in Social Psychology/Education (USA); MSc in Measurement and Evaluation(USA); Management Development Diploma(Wits); Project Management Diploma (UP)*

**Appointed for the 2nd Board term in June 2009**

Senior Manager & Head of Secretariat; KwaZulu Natal Climate Change and Sustainable Development Council in the office of the Premier. Non-executive Director of KZN Playhouse Company.

**Ms Nompumelelo Chamane****Appointed for 1<sup>st</sup> 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 Vasu Gounden**

*MA Law (LLM) (Georgetown University); Graduate of Harvard / Wits Business School Senior Executive Programme.*

**Appointed for 3<sup>rd</sup> Board term in June 2009.**

Founder and Executive Director of the African Centre for the Constructive Resolution of Disputes (ACCORD) since 1992; Member of the Editorial Board of the Peace and Conflict Studies Journal since 1996; Elected by the World Economic Forum as a Global Leader for Tomorrow (GLT) in 2000. Board Member of the Gandhi Development Trust since 2003; Board member of Finland-based Crisis Management Initiative since 2007; Board member of the Old Mutual Science Education Foundation since 2007 (served as Chairman of the Board between 2009 – 2011); Board member of the Dutch based Inter-Church Organisation for Development Cooperation since 2009; Member of the Advisory Board of the Insight on Africa Journal since 2010.

**Company Secretary****Mr Sbusiso Madonsela**

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

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

Umgeni Water Legal Services Manager until December 2013. Prior to that he was the Competition Commission's Legal Counsel. Has extensive experience in private legal practice.

**Mr Visvin Reddy**

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

**Appointed for 1<sup>st</sup> Board term in June 2009.**

Seventeen years local government experience. Served on the Executive Committee of eThekweni Metropolitan Municipality as well as Chairman of the Infrastructure Committee. A member of various community bodies.

**Prof Imtiaz Vally**

*Master of Accountancy; Chartered Accountant (SA); Chartered Management Accountant (ACMA).*

**Appointed for 1<sup>st</sup> Board term in June 2009.**

Chairman of Umgeni Water Board Audit Committee since 2009; Professor of Management Accounting and Finance at UKZN.

**Mr Thabani Zulu**

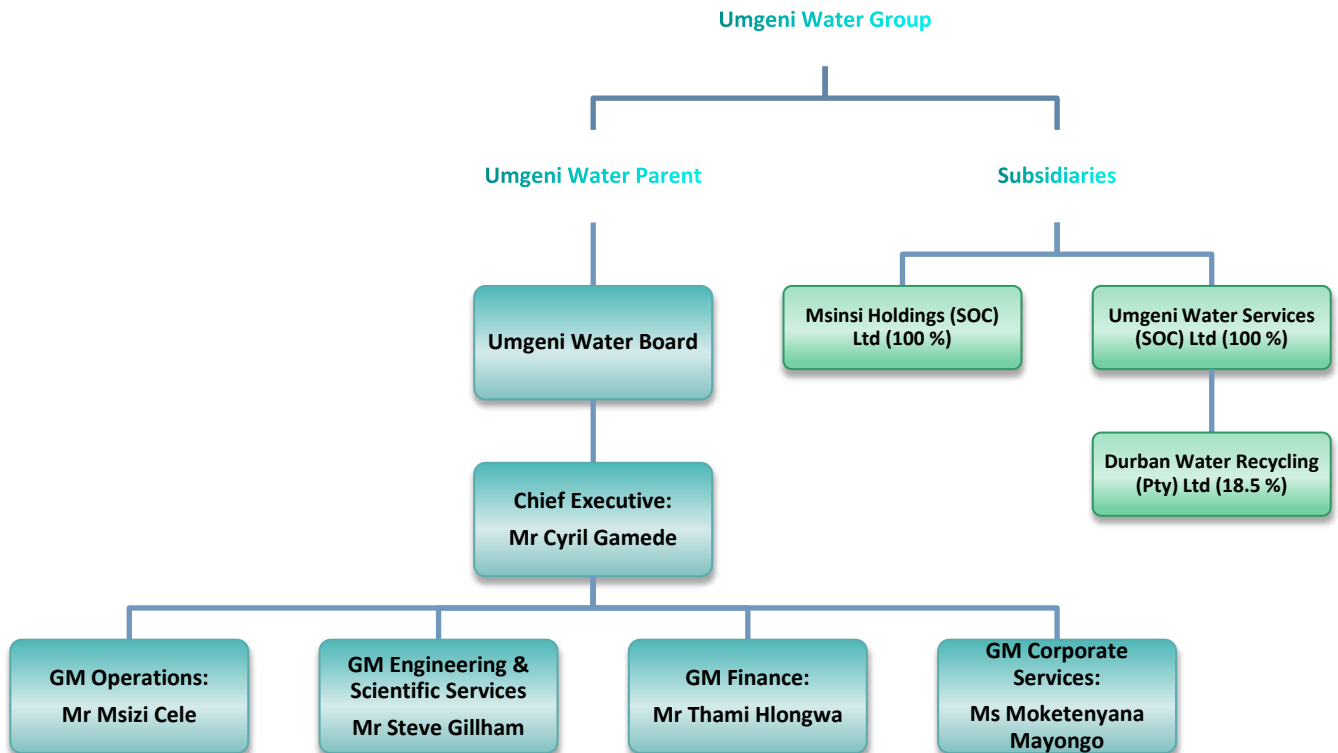
*Chartered Accountant; B.Comm degree and Post Graduate Diploma in Accounting from UKZN.*

**Appointed for 1<sup>st</sup> Board term in December 2011.**

Director of Ngubane & Company (Auditing firm); General Manager / Head of Internal Audit for Provincial Treasury; Member of SAFCOL Audit Committee; Member of UDW Audit Committee; Member of Ndwedwe Audit Committee; CEO of the KZN Gambling Board. Management Accountant of Unilever SA; Financial Accountant at Mercedes Benz of SA (now Daimler Chrysler SA).

## 6.2 Functions and Management Structure

Umgeni Water (Group) 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, authorise implementation, manage resources, manage risks and oversee implementation,  
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

*"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

*"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"*

## Engineering and Scientific Services

*"We understand water demand, resources and technology to implement infrastructure and manage water quality, optimise treatment processes and drive social and environmental initiatives to provide innovative and optimal engineering and scientific solutions, to achieve sustainability and public health, in order to meet organisational objectives"*

## Finance

*"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

*We will provide a specialised, diverse and essential enabling service through the provision of:  
holistic Human Capital management;  
property and security management;  
management of ICT systems and computing infrastructure and Legal services to enhance organisational service delivery capacity.*

## EXCO Members

### Mr Cyril Gamede

*BSc (Eng) Mechanical; MSc (Eng) Industrial; MBA; Advanced Diploma in Labour Law; Certificate in Corporate Governance. Registered Professional Engineer (ECSA).*

#### Appointed as Chief Executive Umgeni Water in August 2012.

Chairperson and Director of Msinsi Holdings SOC Ltd since 2014. President of ECSA 2012. Managing Director of K2S Consulting from 2010 to 2012 Director AEL Mining Services from 2002 to 2010. Director of Operations, Umgeni Water, from 1996 to 2002.

### Ms Moketenyana Mayongo

*BCom; Management Development Certificate; International Management and Marketing Programme Certificate*

#### Appointed as General Manager Corporate Services in January 2014.

Leadership positions held at various organisations, including the Eskom Leadership Institute, Eskom Transmission, MERSETA and South African Airways

### Mr Msizi Cele

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

#### Appointed as General Manager Operations in November 2014

Managing Director of uThukela Water since 2007. Executive Director – Engineering at uThukela Water since 2005. Member of the Institute of Municipal Engineers of South Africa. Member of the Water Institute of South Africa

### Mr Steve Gillham

*Registered Professional Engineer (ECSA); BSc Engineering (Civil); BCom*

#### Appointed as General Manager Engineering and Scientific Services in 2012.

Director of Msinsi Holdings SOC Ltd since 2014. Director of Msinsi Holdings (Pty) Ltd from 2012 to 2014. Planning Manager from 1999 to 2012. Engineer Umgeni Water from 1997 to 1999. Engineer with the Department of Water and Sanitation from 1984 to 1997.

### Mr Thamsanqa Hlongwa

*Chartered Accountant (SA); BCom Honours.*

#### Appointed as General Manager Finance in 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 sub-committees of SAICA and ABASA.

## 7 Directives by the Minister

### 7.1 New Directives (received 2015/2016)

#### 7.1.1 Drought Recovery Intervention

In October 2014, The Minister of Water and Sanitation issued a directive to Umgeni Water to provide water through supply and installation of water tanks in various municipalities in KwaZulu-Natal, for a period up to six (6) months. The Department of Water and sanitation in KwaZulu-Natal has approved a budget for procurement of water tankers and supply of water tanks.

Umgeni Water is currently supplying and installing water tanks for the following municipalities:

- iLembe District Municipality – 700 tanks
- Ugu District Municipality – 300 tanks
- uMgungundlovu District Municipality – 400 tanks

Business plans to implement emergency schemes for the following areas have been submitted:

- Greytown
- Dundee/Glencoe
- Ulundi (recycled water pipeline)
- City of Umhlathuze.

### 7.2 Previous / On-going Directives

#### 7.2.1 Due diligence report for the Regional Water Utility

Umgeni Water received a Ministerial Directive in February 2014 to prepare the due diligence report for the Regional Water Utility.

The Ministry has consolidated water boards in South Africa from twelve (12) to nine (9) regional water utilities to better address challenges of water supply in the country. The primary function of the Regional Water Utilities (RWUs) will be to plan, construct, operate and maintain Regional Bulk Infrastructure. In addition, the RWU will provide support functions to municipalities as a secondary activity.

This consolidation strategy has translated into expansion of areas of operation, which for Umgeni Water includes the following:

- Expansion into the North of KwaZulu-Natal to include the uThukela District Municipality, Amajuba District Municipality and Umzinyathi District Municipality. Umgeni Water has consolidated these district municipalities into a region referred to as the North-West Region.
- Expansion of areas of operation, which for Umgeni Water includes expansion into the Eastern Cape Province to include the Alfred Nzo District Municipality and the Ngquza Hill Local Municipality, the latter under the OR Tambo District Municipality.

The consolidation strategy has also translated into expansion of mandate for the Regional Water Utility to progressively take on more responsibility for regional water resources infrastructure to achieve greater integration with bulk systems.

Umgeni Water drafted the due diligence report which outlines how the Regional Water Utility will approach service delivery to the target municipalities in the new areas and duly submitted this to the minister by the 31 March 2014 deadline. In March 2015, DWS provided feedback requesting update to be made to the due diligence report. This is in progress and is on track to meet the DWS RWU timelines for 2015'2016.

### 7.2.2 Assistance with Eradication of Bucket System and Household Sanitation

A directive was received from the Minister in November 2013 requesting Water Boards to assist with the eradication of bucket systems and improve household sanitation.

In February 2014, Umgeni Water signed a Memorandum of Understanding and an Implementing Agency Agreement with the National Department of Human Settlements and the Provincial Department of Human Settlements to work cooperatively to address the critical water and sanitation service delivery challenges in KwaZulu-Natal and implement target projects.

An investigation by the Provincial Department of Co-operative Governance and Traditional Affairs (CoGTA) confirmed that no bucket systems exist within Umgeni Water's current area of supply. This was communicated to the National Department of Human Settlements on the 17<sup>th</sup> of June 2014.

### 7.2.3 Alfred Nzo District Municipality: Greater Mbizana Regional Bulk Water Supply Scheme

Umgeni Water is implementing the Greater Mbizana Regional Bulk Water Supply Scheme in support of rural development in the Eastern Cape area, with some components completed and others currently under construction. Project progress and planned activities for contracts that have been awarded are:

- Construction of the 40m high Ludeke Dam, on a tributary of the Mtamvuna River, which has been completed.
- The raw water pump station and the raw water rising main to the Nomlacu Water Treatment Works, which have been completed.

The Department of Water and Sanitation (DWS) has requested 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 Plant for an interim two-year period on a cost recovery basis.

Umgeni Water is awaiting feedback from DWS in order to conclude the Operation and Maintenance Agreement.

- Operational responsibility of the Nomlacu Water Treatment Plant was handed over to Alfred Nzo District Municipality in June 2013.
- Construction work on the first phase of the Bulk Treated Water Supply System, comprising 28 km of pipelines, 8 bulk storage reservoirs and a pump station is nearing completion, with a number of components having been brought into operation. The expected date of completion is June 2015.

### 7.2.4 OR Tambo District Municipality Bulk Water Supply Interventions

#### Ingquza Hill Regional Bulk Water Supply Scheme

- Proposed work is included in this business plan (chapter 14).



## 8 Self-Appraisal

### 8.1 Projected 2014/2015 Performance against Key Indicators

Umgeni Water implements its strategy through a balanced scorecard. The 2014/2015 scorecard comprised four (4) *Balanced Perspectives* and four (4) *Strategic Goals*, nine (9) *Strategic Objectives* and nine (9) *Key Performance Indicators* (KPIs).

The KPIs are further expounded through sixty-two (62) unambiguous and measurable *Result Indicators* for which responsibilities and accountabilities are agreed and *Quarterly Targets* approved for 2014/2015. (Included in the 62 *Result Indicators* are 38 indicators selected by DWS for quarterly reporting against Shareholder Compact).

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

The performance projected for 2014/2015 remains sound.

Going forward, Umgeni Water has adopted the five (5) *Balanced Scorecard Perspectives* and *Twenty-one (21) Key Performance Objectives* prescribed by DWS, which will enable future, significantly more targeted and aligned performance reporting.

#### 8.1.1 Overall Performance

**Per cent targets met: ≥ 85%**

(93.7% at the end of 2013/2014)

**Per cent targets not met: < 15%**

(6.3% at the end of 2013/2014)

The variance summary per Strategic Goal, Perspective, Objectives and Outcomes and detailed variance report follow in this chapter.

#### 8.1.2 Summary per Strategic Goal, Perspective, Objectives and Outcomes

**Strategic Goal 1: Develop strategic partnerships, increase support to customers, improve visibility and be a regional leader in the provision of bulk water and sanitation services.**

##### **Customer and Stakeholder Perspective: SO<sub>1</sub> and SO<sub>2</sub>.**

*Outcomes: Stakeholder Understanding and Support. Customer Satisfaction. Community Sustainability.*

There is slight variance with mainly three result indicators:

- Development of the Universal Access Plan is behind schedule due to resourcing issues.
- Delay in implementation of bulk services to proposed new area, awaiting DWS to appoint Umgeni Water as the new bulk provider in the area.
- Postponement of several stakeholder engagement events due to customer requests.

Action plans are in place to address delays.

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## Strategic Goal 2: Expand and improve funding collaborations whilst managing key cost drivers.

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### Financial Perspective: SO<sub>3</sub>, SO<sub>4</sub> and SO<sub>5</sub>

Outcomes: Financial Viability, Stakeholder Understanding and Support. Customer Satisfaction. Community Sustainability.

Variance with the following financial indicators:

- RBIG is slightly below budget, but expected to balance in coming year.
  - Gross profit and net profit for section 30 business below target for year, due to budgeting / rollover issue and lower margins than anticipated.
- 

## Strategic Goal 3: Remove system constraints and blockages through innovative thinking and improve efficiency of all inputs.

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### Process Perspective: SO<sub>6</sub>

Outcomes: Operational Resiliency. Operational Optimisation. Community and Environmental Sustainability.

Variance with mainly the following internal processes:

- Above target turnaround time for awarding of capex programme tenders and delays in issuing of signed contracts.
- Delay in awarding contract for EPCM project.
- ERP project implementation behind schedule.
- Higher than anticipated audit findings.
- Higher than anticipated unresolved litigation matters.
- Slight delay with two research/innovation and environmental projects

Action plans to improve these identified.

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## Strategic Goal 4: Strengthen and develop quality human resources, infrastructure capacity and water resources sustainability to support growth.

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### Organisational Capacity Perspective: SO<sub>7</sub>, SO<sub>8</sub>, and SO<sub>9</sub>

Outcomes: Infrastructure stability, Water resources adequacy and leadership and employee development.

Variance with mainly the following indicators:

- Bulk water infrastructure capex, slight under-expenditure caused by delays in procurement.
- Slight delay with the organisational-wide review of job profiles.
- Delay in implementation of Leadership Development Programme.

Action plans to address these are in place.

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### 8.1.3 Detailed Variance Report for Key Result Indicators

**KPI 1: The extent to which the entity has grown its services and customers.**

**Result Indicator 1.1** Regional Bulk Water / Universal Access developed.

| Annual Target   | Estimated Actual   | Variance   | Reason  | Action Plan   |
|---|--|--|---|---|
| Regional Bulk Water / Universal Access plan 100% developed. Baseline Universal Sanitation Plan developed. | Regional Bulk Water / Universal Access plan 50% developed. | Regional Bulk Water / Universal Access plan behind schedule. | Delay in resourcing the project to complete the work. | Resourcing hurdles have been overcome and Umgeni Water anticipated to complete most of the work by June 2016. |

**Result Indicator 1.3** Number of new business growth proposals implemented for new customers.

| Annual Target               | Actual  | Variance | Reason   | Action Plan   |
|-----------------------------|---|----------|--|---|
| 1 implemented. 1 developed. | Umgeni Water submitted a due diligence report to DWS in 2014 which included high level proposals for the new customer areas.<br><br>DWS provided feedback on 31 March 2015 requesting an updated proposal.<br><br>Work is in progress to deliver the updated proposal by August 2015. | Nil      | DWS provided feedback on 30 March 2015 requesting an updated due diligence report / updated growth proposal. | Work is in progress to deliver the updated proposal by August 2015, which will include details of asset ownership and transfers, amongst other items. |

**KPI 2: The extent to which customer and stakeholder needs have been met**

**Result Indicator 2.1** Number of Umgeni Water branded initiatives implemented: Construction projects and site branding and marketing.

| Annual Target  | Actual   | Variance   | Reason   | Action Plan   |
|--|--|--|--|---|
| Construction projects branding and marketing implemented for four (4) projects by June 2015 and Site branding at major construction project sites implemented. | Site branding implemented at construction sites of twelve (12) projects by June 2015 | Commissioning events for Mhlabatshane, Greater Eston and Richmond schemes not done by June 2015. | Commissioning events for Mhlabatshane, Greater Eston and Richmond schemes postponed at customers' request. | The customers are being engaged to source suitable dates. |

**KPI 3: Increased funding collaboration and funds mobilised for sustainable growth, expansion and access**

**Result Indicator 3.1** Total RBIG funding received, Rm.

| Annual Target | Actual  | Variance           | Reason  | Action Plan        |
|---------------|---------|--------------------|---|--------------------|
| R203m         | R170.5m | R3.5m below budget | Awaiting revised RBIG allocations for DWS's new financial year commencing 1 April 2015. | R3.5m below budget |

### KPI 5: Ratios for financial viability and sustainability met.

#### Result Indicator 5.6 Gross profit margin % for secondary activity

| Annual Target | Actual | Variance        | Reason   | Action Plan |
|---------------|--------|-----------------|--|-------------|
| ≥ 18%         | 11%    | 7% below target | Greater Mbizana project rolled over into 2014/15 along with other water infrastructure projects not budgeted for.<br><br>Lower margin in these projects than the average and higher revenue leading to dilution of GP %. | N/A         |

#### Result Indicator 5.7 Net profit margin % for secondary activity.

| Annual Target | Actual | Variance        | Reason   | Action Plan |
|---------------|--------|-----------------|--|-------------|
| ≥ 14%         | 8%     | 7% below target | Greater Mbizana project rolled over into 2014/15 along with other water infrastructure projects not budgeted for.<br><br>Lower margin in these projects than the average and higher revenue leading to dilution of NP %. | N/A         |

### KPI 6: The extent to which business processes, policies and systems are enabling strategy implementation.

#### Result Indicator 6.1 Number of working days for awarding of capex programme tenders from requisition to award.

| Annual Target     | Actual            | Variance   | Reason                             | Action Plan   |
|-------------------|-------------------|--|------------------------------------|---|
| ≤ 90 working days | > 90 working days | Longer than planned SCM turnaround time for capex programme. | Bid Committee timeframes exceeded. | Internal Bid Tracker information will continue to be used to manage bottlenecks in the processes. |

#### Result Indicator 6.3 Per cent EPCM process reviewed and aligned to capex programme.

| Annual Target  | Actual                              | Variance                                     | Reason                                | Action Plan  |
|--|-------------------------------------|--|---------------------------------------|--|
| EPCM process aligned: Project lifecycle process incorporates a formal, structured gate review process. | Delay in streamlining EPCM process. | Behind schedule with EPCM alignment project. | Delays with procurement negotiations. | Action plans in place to address delays and programme will be completed in new year. |

#### Result Indicator 6.5 Per cent ERP system reviewed and implemented.

| Annual Target                  | Actual                         | Variance            | Reason  | Action Plan   |
|--------------------------------|--------------------------------|---------------------|---|---|
| 50% of ERP System implemented. | 25% of ERP System implemented. | 25% behind schedule | The implementation methodology has changed/optimised. | Project plan has been optimised for the 18-month project to be brought back on track during 2015/16 |

**Result Indicator 6.7** Number of repeat and unresolved findings.

| Annual Target             | Actual                     | Variance                        | Reason  | Action Plan                           |
|---------------------------|----------------------------|---------------------------------|---|---------------------------------------|
| 0 repeat,<br>4 unresolved | 0 repeat<br>> 4 unresolved | More than 4 unresolved findings | Four (4) of these will be sustainably addressed in the long-term with implementation of infrastructure projects, notably the upgrade of Darvill WWTW, and the implementation of the SAP ERP ICT system to address multiple HR and Finance related issues, amongst others. | Long-term findings addressed by 2016. |

**Result Indicator 6.11** Number of significant unresolved litigation matters.

| Annual Target                      | Actual                           | Variance                                   | Reason  | Action Plan  |
|------------------------------------|----------------------------------|--|---|--|
| ≤ 3 unresolved litigation matters. | 7 unresolved litigation matters. | More than 3 unresolved litigation matters. | Litigation arising from contract management. Once incurred, lengthy processes to resolve. | Training on contract management is being improved, which will reduce contractual disputes leading to litigation. |

**KPI 7: Infrastructure expenditure within target cash flows and completion dates.****Result Indicator 7.1** Total capex implemented Rm, per cent variance.

| Annual Target | Actual   | Variance     | Reason   | Action Plan   |
|---------------|--|--------------|--|---|
| R1 365m ± 10% | Actual Capex anticipated to be below target based on mid-term performance. | Below target | Procurement and Construction Delays contributing to underspend with key construction projects. | Areas causing delays being addressed, supply chain, contractors and project managers. |

**Result Indicator 7.2** Per cent variance of capex project milestone dates.

| Annual Target  | Actual   | Variance                        | Reason  | Action Plan   |
|----------------|--|---------------------------------|---|---|
| ≤ 15% variance | > 15% variance with infrastructure project milestones. | Behind target completion dates. | Primarily procurement and contractual delays. | Areas causing delays being addressed, supply chain, contractors and project managers. |



## 9 Participation in Companies

### 9.1 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 business plan.

Umgeni Water has 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, Hazelmere 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 roles between Umgeni Water and Msinsi confirms Umgeni Water's commitment to improve the relationship, which will thus 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.

### 9.2 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 business 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.



## 10 Water Resources

### 10.1 Water Availability

Water resource systems and capacities are shown in **Table 10.1**. Umgeni Water sources water primarily from twelve (12) impoundments and one weir on three (3) major water resource systems, namely, the Mgeni System (Mooi and Mgeni rivers), the North Coast System (Mdloti River) and the South Coast System (Nungwane, Mzimayi and Mzinto rivers). Two impoundments (on the Mlazi and Msunduzi rivers) are not in use for water supply purposes.

**Table 10.1: Capacity of Water Resource Systems**

| System                                | Catchment                    | Impoundment                | Gross Capacity (million m <sup>3</sup> ) | 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 <sup>#</sup> | 3.8                                      | UW     | UW      |
|                                       | Msunduzi, Mgeni              | Henley Dam <sup>#</sup>    | 1.5                                      | UW     | UW      |
| Total for Central System              |                              |                            | 951.5                                    |        |         |
| North Coast                           | Mdloti                       | Hazelmere Dam              | 17.9                                     | DWS    | UW      |
|                                       | Imvutshane, Hlimbitwa, Mvoti | Imvutshane Dam             | 3.1                                      | UW     | UW      |
| Total for North Coast System          |                              |                            | 17.9                                     |        |         |
| South Coast                           | Nungwane, Lovu               | Nungwane Dam               | 2.2                                      | UW     | UW      |
|                                       | Mzimayi                      | E J Smith Dam              | 0.9                                      | Ugu DM | UW      |
|                                       | Mzinto                       | 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      |
| <b>Total for Umgeni Water Systems</b> |                              |                            | <b>979.1</b>                             |        |         |

<sup>#</sup> impoundments are owned and managed by Umgeni Water, but are no longer utilised for water supply purposes.

#### 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-Phase 1) which consists of the Mearns Weir on the Mooi River, the Mearns Pumping Station with a maximum transfer capacity of 3.2 cubic metres per second and a raw water transfer pipeline that discharges into the Mpofana Stream, which flows into the Lions River and then into the Mgeni River upstream of Midmar Dam.

During the MMTS-Phase 1 the yield of the Mooi/Mgeni System was 334 million cubic metres per annum (915 Ml/day). The Spring Grove Dam (MMTS-Phase 2A), which was completed in 2013, has improved the yield of the Mooi/Mgeni System to 381 million cubic metres per annum (1044 Ml/day). When the construction of MMTS-Phase 2B, which comprises a new pump station and transfer pipeline, is complete, it will further improve the Mooi/Mgeni System yield to 394 million cubic metres per annum (1080 Ml/day).

#### 10.1.2 North Coast System

The North Coast System comprises the Hazelmere Dam on the Mdloti River. This dam serves a dual-purpose 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.

Since July 2007 Umgeni Water has also been abstracting water from the Mvoti River as part of managing the Mvoti Water Treatment Works and the supply of bulk potable water to the town of KwaDukuza on behalf of the iLembe District Municipality.

The Maphumulo Bulk Water Supply System, which was commissioned in May 2013, utilises raw water from the iMvutshane River via a temporary abstraction system. This system will be replaced by the permanent abstraction that is currently part of the iMvutshane Dam project to be commissioned in April 2015. The iMvutshane Dam has a yield (at 98% level of assurance) of 2.4 million cubic metres per annum. As a result of the drought in 2014, an emergency scheme to pump water from the Hlimbitwa River to the Maphumulo Abstraction Works has been constructed. Raw water (up to 6 Ml/day) can now be pumped from the Hlimbitwa River to the Maphumulo Abstraction Works during drought periods. The Ngcebo Bulk Water System abstracts water from the uThukela River at Middledrift. The current abstraction from the uThukela River averages 1 Ml/day.

Several groundwater and surface water abstraction systems are utilised to supply raw water to Small Water Treatment and Borehole schemes currently managed by Umgeni Water on behalf of iLembe District Municipality.

### 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 EJ 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 3.3 million cubic metres per annum, E J Smith Dam and Mzinto Dam 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.

As a result of the drought in 2014, an emergency scheme was constructed to pump water from the Mpambanyoni River into the EJ Smith Dam (Mzinto System). Raw water was pumped through this scheme during December 2014 and January 2015 increasing the level of EJ Smith Dam from 40% to 70%.

The Mhlabatshane Dam on the Mhlabatshane River has a yield of 1.5 million cubic metres per annum and provides water to the Mhlabatshane Bulk Water Supply Scheme.

## 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 Hazelmere Dam on the Mdloti River is the primary source of water for this municipality. To a far lesser extent, water is also abstracted from the Mvoti and uThukela rivers, and groundwater is used extensively in the outlying rural areas. The Mvoti and uThukela rivers and seawater desalination are potential future sources of water for this municipality.

### 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 Mzimkhulu and Mtamvuna rivers, while the central area primarily receives water from the Mzinto Dam and EJ Smith Dam on the Mzinto 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 Mzimkhulu rivers and seawater desalination are potential future sources of water for this municipality. The inland area of Mzumbe and Hibiscus Coast Local Municipalities receive water from the Mhlabatshane Dam.

### 10.2.6 Harry Gwala District Municipality

Numerous small abstractions on the uMkhomazi, Mzimkhulu 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 Mzimkhulu rivers are potential future sources of water for this municipality.



### 10.3 Water Quality of Raw Water Supplies

The status of water quality per supply source is shown in **Table 10.2**. 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.
- 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.

**Table 10.2: Resource Water Quality**

| System      | Catchment              | Impoundment               | Water Quality Status and Trend |               |               |           | Description of Raw Water Quality  |
|-------------|------------------------|---------------------------|--------------------------------|---------------|---------------|-----------|---|
|             |                        |                           | Mar-2012                       | Mar-2013      | Mar-2014      | Mar-2015  |   |
| Mgeni       | Mooi, Mgeni            | Mearns Weir, Midmar Dam   | Good                           | Good          | Good          | Good      | High nutrients in the Mgeni inflow from the catchment, resulting in high algal counts in the impoundment.   |
|             | Mgeni                  | Albert Falls Dam          | Good                           | Good          | Good          | Excellent | Excellent quality in Albert Falls Dam at the site from where water is released for abstraction at the downstream Nagle Dam.   |
|             | Mgeni                  | Nagle Dam                 | Moderate                       | Moderate      | Good          | Excellent | Excellent water quality in Nagle Dam.   |
| North Coast | Mgeni                  | Inanda Dam                | Moderate                       | Moderate      | Moderate      | Moderate  | Poor quality in upper and lower reaches of the Dam due to high algal count associated with catchment related nutrient enrichment.   |
|             | Mdloti                 | Hazelmere Dam             | Moderate                       | Good          | Excellent     | Moderate  | Water quality generally good with exception of elevated turbidity and high iron and manganese concentration associated with the low dam level..   |
|             | Mvoti                  | Run-of-river abstractions |                                | Moderate      | Good          | Good      | Water quality generally good with exception of elevated turbidity associated with high intensity rainfall/storm events and erosion in the catchment.  |
|             | Thukela (Ngceboo)      | Run-of-river abstractions |                                |               | Poor          | Poor      | Unsatisfactory status due to elevated phosphates, turbidity and TOC associated with erosion due to rainfall runoff events and poor agricultural practises.  |
| South Coast | Imvutshane (Maphumulo) | Run-of-river abstractions |                                |               | Good          | Good      | Water quality generally good with exception of elevated turbidity associated with high intensity rainfall/storm events.   |
|             | Nungwane, Lovu         | Nungwane Dam              | Moderate                       | Moderate      | Moderate      | Good      | Water quality generally good with exception of elevated turbidity associated with high rainfall/storm events.   |
|             | Mzimayi                | E J Smith Dam             | Poor                           | Poor          | Poor          | Poor      | Due to drought conditions being experienced, E J Smith Dam reached dead storage capacity towards the end of 2014. The dam has since re-filled after the summer rainfall period. The raw water quality remains unsatisfactory due to the presence of elevated E.coli, TOC and nutrient input as a result of sewage contamination from the Mzinto town. |
|             | Mzinto                 | Mzinto Dam                | Poor                           | Moderate      | Moderate      | Moderate  | Indication of increasing eutrophication due to catchment related agricultural activities.   |
|             | Mtwalume               | River Abstraction         | Moderate                       | Moderate-Poor | Moderate-Poor | Good      | Water quality generally good with exception of elevated turbidity associated with high rainfall/storm events.   |
| Ixopo       | Ixopo, uMkhomazi       | Ixopo Dam                 | Poor                           | Poor          | Poor          | Poor      | Eutrophication and elevated organic carbon, algal blooms and aquatic weed problems, due to sewer problems in Ixopo Town.  |

### 10.4 Water Use Rights, Licences by Resource

Umgeni Water’s registered abstractions and licence applications are shown in **Table 10.3**. The current registered use is greater than the licenced amount for a number of water resources. In this regard, Umgeni Water has submitted licence applications to DWS, however some of these dating back as far as 2006 are still outstanding.

**Table 10.3: Registered Abstractions and Status of Licence Applications.**

| System      | Abstraction Point            | Registered Use at March 2013 (10 <sup>3</sup> m <sup>3</sup> /day) | Current Licence (10 <sup>3</sup> m <sup>3</sup> /day) and date issued | Licence Application (10 <sup>3</sup> m <sup>3</sup> /day) and date submitted to DWA |
|-------------|------------------------------|--|---|---|
| Mgeni       | Midmar Dam                   | 1,099  | 1,096<br>May 1985   | 1,287<br>November 2005<br>Resubmitted 2012<br>Resubmitted 2013                      |
|             | Nagle Dam (Albert Falls Dam) |  |   |   |
|             | Inanda Dam                   |  |   |   |
| North Coast | Hazelmere Dam                | 45   | 31<br>1985/88   | 92<br>April 2010<br>Resubmitted 2013<br>Resubmitted 2014                            |
|             | Mvoti River                  | 16   | 11  | 18<br>April 2008  |
|             | Imvutshane Dam               | N/A  | 7<br>August 2012  | -   |
|             | Lower Thukela                | N/A  | 110<br>2013   | -   |
| South Coast | Nungwane Dam                 | 26.5*  | -   | -   |
|             | E J Smith Dam                | 12*  | -   | -   |
|             | Mzinto Dam                   |  |   |   |
|             | Mtwalume River Well points   | 8.5  | 3   | 5<br>May 2006   |
|             | Mhlabatshane Dam             | N/A  | 4.1<br>June 2010  |   |
| Other       | Ixopo Dam                    | 2.3*   | -   | -   |

\*allocations to UW by DWA, new licence applications to be submitted once allocations are exceeded



## 10.5 Water Demands, Planned Developments and Shortfalls

The sales forecast for 2014/2015 and 2015/2016 are estimated to be 1 220 Ml/day and 1 255 Ml/day, respectively. This represents a 2.0% year-on-year increase in growth, which is an improvement on the previous year, and is again primarily determined by the forecast provided by eThekweni MM.

The negative growth that was experienced in 2010/11 was as a result of eThekweni Metro's Water Demand Management Initiatives. After suspension of these initiatives, demands have again increased. The five year average annual positive growth rate is 1.1%.

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 10.4** and described further in the sections that follow.

**Table 10.4:** 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 17 000 million | DWS            |
| North Coast System: Raising of Hazelmere Dam          | 2014        | Behind Schedule | R 600 million    | DWS            |
| Phase 1 Lower Thukela Bulk Water Supply Scheme        | 2016        | On Schedule     | R 1 351 million  | UW             |
| Lower uMkhomazi Bulk Water Supply Scheme              | 2019        | Behind Schedule | R 2 300 million  | UW             |
| Lower Mvoti Bulk Water Supply Scheme: Welverdiend Dam | 2030        | On Schedule     | R 4 000 million  | 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 a detailed feasibility investigation 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 business plan.

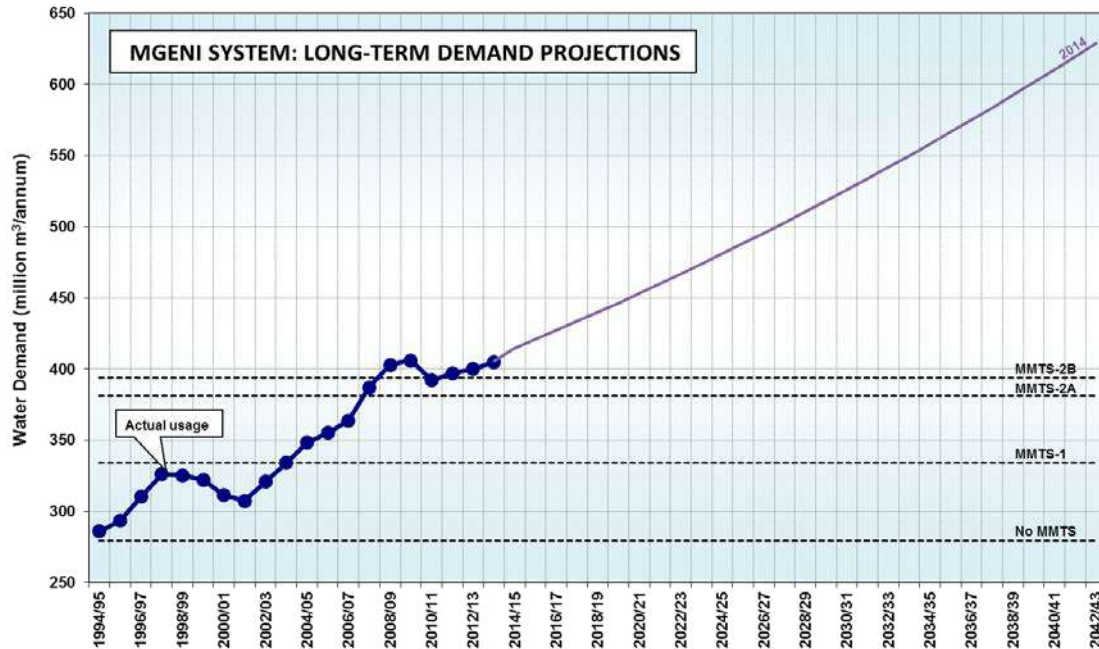
Going forward Umgeni Water, as the Regional Water Utility, will progressively take on more responsibility for regional water resources infrastructure to achieve greater integration with bulk systems. Umgeni Water will, over the next 12-month period, work closely with DWS regarding this.

### 10.5.1 Mgeni System: Planned Developments and Shortfalls

The long-term water demand projections for the Mgeni system are shown in **Figure 10.1**. Augmentation options for the Mgeni system comprise:

- Phase 2 of the Mooi-Mgeni Transfer Scheme: Spring Grove Dam.
- Phase 1 of the uMkhomazi Water Project: Smithfield Dam.

**Figure 10.1: Long-Term Water Demand Projections for the Mgeni System**



#### Phase 2 of the Mooi-Mgeni Transfer Scheme: Spring Grove Dam

Phase 2 of Mooi-Mgeni Transfer Scheme (MMTS-2) comprises the completed Spring Grove Dam (full supply capacity of 139.4 million cubic metres) on the Mooi River, a new 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 will then be increased to its ultimate rate of 4.5 cubic metres per second.

**Figure 10.1** indicates that current demands are slightly greater than the 99% assurance of supply level that will be achieved with the commissioning of the full MMTS-2, and even further augmentation of the Mgeni System is therefore needed.

The construction of the Spring Grove Dam has been completed and water was first transferred from this resource towards the end of 2014. The current transfer system relies on water to be released from Spring Grove Dam to the Mearns Weir from where it can be pumped at 3.2 cubic metres per second through the traditional transfer system. The construction of the upgraded transfer system will maximise the transfer capacity from the dam and is scheduled for completion towards the end of 2015.

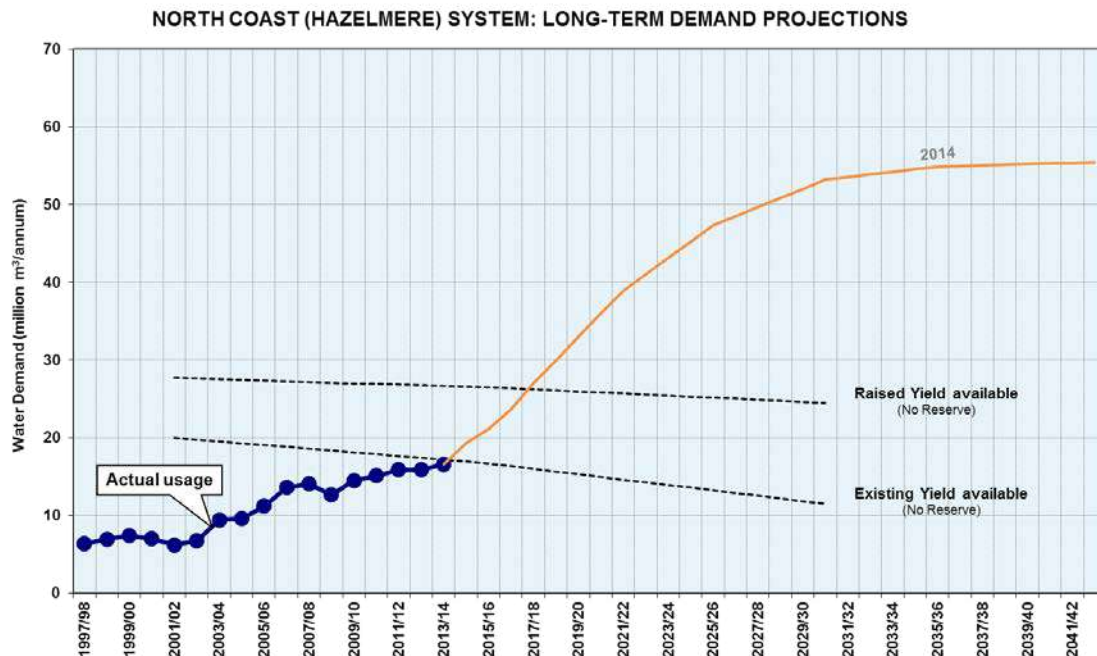
#### Phase 1 of the uMkhomazi Water Project: Smithfield Dam

It is evident from current and projected water demand trends (**Figure 10.1**), 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 now initiated a detailed feasibility level investigation into this augmentation option and Umgeni Water is simultaneously undertaking 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.

### 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 10.2).

Figure 10.2: Long-Term Water Demand Projection for the Hazelmere (Mdloti) System



DWS recently 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,
- Implementing the Lower Thukela Bulk Water Supply Scheme (BWSS), and
- Building a new dam on the Mvoti River (either the Welverdient Dam or Isithundu Dam).

#### Raising of Hazelmere Dam

Raising the full supply level of Hazelmere Dam by seven metres to increase the firm yield of the resource to approximately 27.3 million cubic metres per annum (at a 98 % level of assurance) is estimated to be the quickest option of augmenting the water supply to the North Coast region. Although preliminary designs indicated that the dam wall may not be completely stable, if raised, a solution has been designed to provide anchoring of the wall to mitigate this risk.

The construction is scheduled to commence in 2015 and will be completed in 2018. The dam currently has sufficient yield available to cater for the initial demand increases, however, once the demand increases to above 55ML/d the assurance of supply will drop below 98% unless the dam wall is raised.

#### Lower Thukela Bulk Water Supply Scheme

The Lower Thukela Bulk Water Supply Scheme is a practical solution to implement to supply additional water to the area. This scheme will be required to 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 will draw water from the uThukela River and will not require raw water storage. Construction of the scheme is currently being undertaken with completion expected towards the middle of 2016.

### Imvutshane Dam

Communities in the largely rural areas inland from the North Coast region - areas bounded by the uThukela and Mvoti rivers and extending from Greytown in the west to Maphumulo in the east - currently receive water from boreholes or small stand-alone surface water supply schemes. Many communities in this area receive a sub-RDP standard level of service.

Umgeni Water has implemented the Ngcebo Bulk Water Supply Scheme that draws water from the uThukela River to supply potable water to some of these communities. Furthermore, Umgeni Water constructed Phase 1 of the Maphumulo Bulk Water Supply Scheme (BWSS) to supply the communities of Maphumulo, Maqumbi and Ashville. This scheme currently draws water directly from the Imvutshane River, which is a tributary of the Hlimbitwa River, which in turn is a tributary of the Mvoti River. Phase 2 of this scheme which entails the construction of a dam on the Imvutshane River will be complete in April 2015 and will replace the run-of-river abstraction system. This will increase the yield from the scheme and ensure a more sustainable supply. .

### Lower Mvoti Bulk Water Supply Scheme: Welverdiend 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 Welverdiend 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 and 2014. 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 significantly increasing the risk of applying 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, driven by economic growth in the region, and it is envisaged that a major water resource development and/or inter-basin transfers will be required to provide a long-term solution to water scarcity in the area. An emergency scheme has now been 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

Umgeni Water has commissioned Phase 1 of its South Coast Pipeline that transfers potable water from the Mgeni System to the Upper and Middle South Coast areas. It is recognised that the Mgeni System has insufficient resources to support this region in the medium to long-term and that a local sustainable long-term scheme needs to be developed to replace it. The uMkhomazi River is best suited for this purpose. Umgeni Water is currently undertaking a detailed feasibility investigation of the Lower uMkhomazi Bulk Water Supply scheme, which will abstract water from the lower reaches of the uMkhomazi River for treatment and to feed into the South Coast Pipeline.

The availability of a local sustainable source will then allow the extension of this pipeline (Phase 2) further southwards to increase the area of supply and enable a linkage to other supply systems in the south. A detailed feasibility study of the Lower uMkhomazi Bulk Water Supply Scheme is currently being undertaken with completion expected towards the end of 2015.

#### Mhlabatshane Bulk Water Supply Scheme

Umgeni Water has constructed the Mhlabatshane BWSS as part of a larger regional scheme development by Ugu District Municipality and aimed at reducing water services backlogs in certain rural areas in the Mzumbe and Hibiscus Coast 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 about 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 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 component currently exists as stand-alone schemes, with the remainder still to be installed. The Mhlabatshane Dam has recently been commissioned and the dam is currently at full supply capacity.

When future water demands from this scheme exceed the firm yield of the dam, the intention is to develop the second phase of the project. Water will be abstracted directly from the Mzimkhulu River, pumped to the existing water treatment works (which will need to be upgraded) and then fed into the reticulation system via the command reservoir. A detailed feasibility of this second phase of the project is currently being undertaken with completion expected towards the end of 2015.

#### 10.5.4 Alternate Resource Options

As discussed in the previous section, 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 Phase 1 and, with the construction of the Spring Grove Dam, the Mooi-Mgeni Transfer Scheme Phase 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

Umgeni Water has investigated the option of treating domestic sewage from its Darvill Wastewater Treatment Works to potable standards. The proposal would have been to return the treated water back into the distribution system at Umlaas Road. The water could then have been used to augment the supply to the Western Aqueduct (due for completion mid 2018) which will serve the high growth areas along the western corridor of the eThekweni Metropolitan Municipality. A full feasibility study of this scheme was completed in 2014. Although the results of the feasibility study indicate that the scheme is not viable at this stage, Umgeni Water has the intention to investigate this reuse from Darvill to supply the industrial area of Msunduzi.

##### Seawater Desalination

Umgeni Water has recently completed a large-scale desalination pre-feasibility study. The objective of this study was to investigate the viability of constructing a large scale desalination plant in the eThekweni area as a possible alternative to the proposed uMkhomazi Water Project and the Lower uMkhomazi Bulk Water Supply Scheme.

A detailed feasibility study is now being undertaken by Umgeni Water using a revised approach. The detailed feasibility investigation is considering the option of a 150 Ml/d plant on both the North and South Coasts. The capacity of these plants is based on the capacity of existing and proposed bulk water supply infrastructure in these areas, which will 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 will be the beneficiaries of this project. The detailed feasibility study for this desalination project will be completed in March 2015.

Locations for the plants have now been established on both the North and South Coasts and the detailed feasibility study of each plant is underway. Components of the study include, siting of the inlet and outfall and systems to link these to the plants, water quality monitoring to inform pre-treatment techniques, potable water supply infrastructure, economic and financial analysis and institutional arrangements that would be appropriate for commissioning the project.



### 10.5-5 Research to assess the impacts of climate change on water security

Climate change risks need to be considered to make allowances in appropriate planning and design, particularly given the significant costs and long planning period required for major infrastructure investments such as dams, pipelines, structures, buildings and transport infrastructure. Umgeni Water has largely been at the forefront of the consideration of potential climate change impacts and incorporating these into operations planning. There have, however, been a number of developments since the completion of work Umgeni Water first started in 2006, which provide the basis for further investigations.

#### DWS 2013 National Climate Change Strategy

The Strategy included the modelling of the potential impacts of climate change using five regional downscaled climate models in four pilot catchments. The conclusion for the East Coast from Pongola to Mzimkulu, was that there would likely be an increase in rainfall in the eastern part of the Zone with a potential increase in yields, but that more frequent and more extreme flooding is likely to occur. There could also be increased dam and evaporation losses and consideration should be given to changing dam operating rules to address potential risks due to flooding and consequential higher sediment loads.

#### Climate Change study development, National Treasury 2013

National Treasury commissioned a study by the United National University – World Institute for Development Economics to investigate the potential economic impacts of climate change through a number of impact channels including water supply and road infrastructure. The runoff scenarios were used to look at the potential impacts on water supply in each of the 19 WMAs.

The majority of models showing an increase in runoff in the catchments along the east coast of South Africa. Some models showed very high impacts, likely to be accompanied by significant increases in the risk of flooding. There are, however, still a handful of models that show the potential for drying in these catchments. The results reflect the impacts on catchment runoff and show a general increase in the ability to supply future water demands in KwaZulu-Natal, although there is potential for a reduction in the uThukela catchment.

#### Long Term Adaptation Strategy (LTAS), DEA

This DEA flagship LTAS work is aimed at assessing the likely impacts of climate change on multiple sectors in South Africa as well as developing long term adaptation strategies. Phase 1 and 2 are complete and Phase 3 is scheduled to commence in July 2014. The objective is to focus on a few selected case studies to provide more detailed assessments of the potential impacts and adaptation options.

#### Climate Change in Water Resources Modelling, DWS 2013

The outcome of the DWS convened workshop on incorporating climate change and invasive alien plants into large scale water resources planning in South Africa was that climate change represents an added level of uncertainty in the modelling of water resources system in support of large scale planning in South Africa. Additional work and case studies are required to fully develop and operationalize the new approaches. Equally important was the consideration of how these results could best be interpreted and presented to water resource planners and decision makers.

#### Potential Future Studies on Climate Change Impacts for Umgeni Water

Given the recent developments in the modelling of potential climate change impacts on water resources systems in South Africa, and the start of Phase 3 of LTAS in 2014, Umgeni Water will actively assess the need to pursue further studies that would improve the management of water resources and adaptive capacity to manage the potential impacts of a changing climate on water and infrastructure, and has identified potential studies for consideration.

## 10.6 Management Arrangements

Umgeni Water operates the majority of the water resources infrastructure it uses 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.



## 11 Bulk Potable Water Supply Plan

### 11.1 Water Treatment Works Capacity, Condition and Water Quality Produced

Umgeni Water operates fourteen bulk water treatment works, for which the works capacities and utilisation are shown in Figures 11.1 and 11.2 respectively.

In addition the water quality produced per water treatment works is shown in Table 11.1.

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

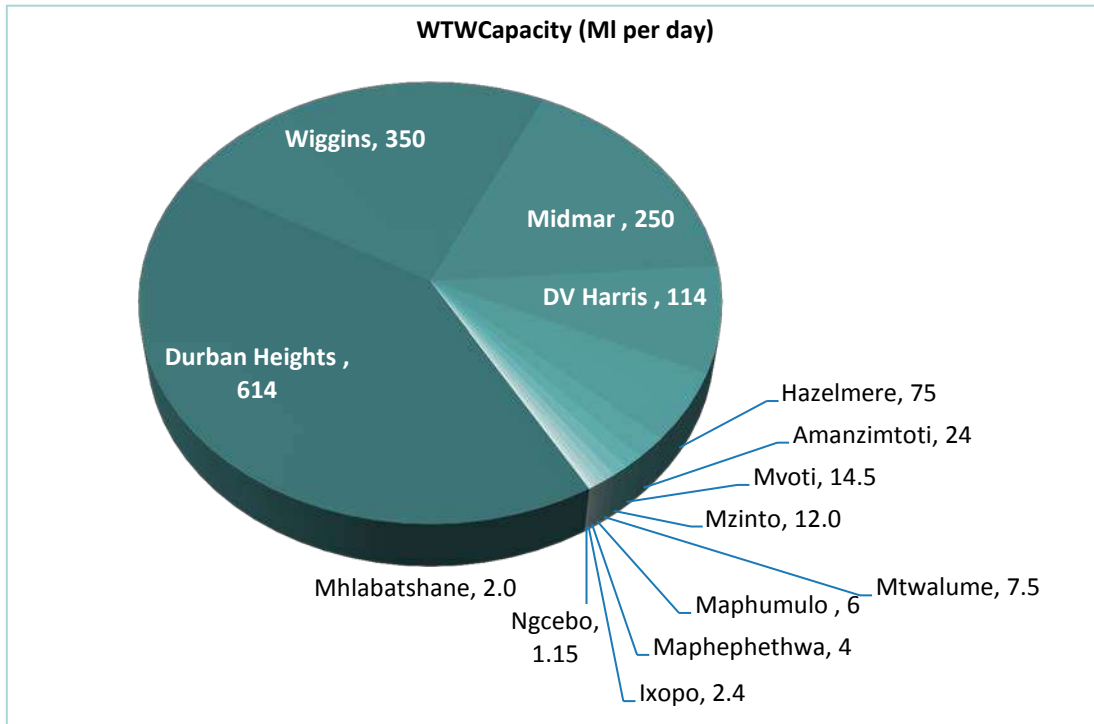
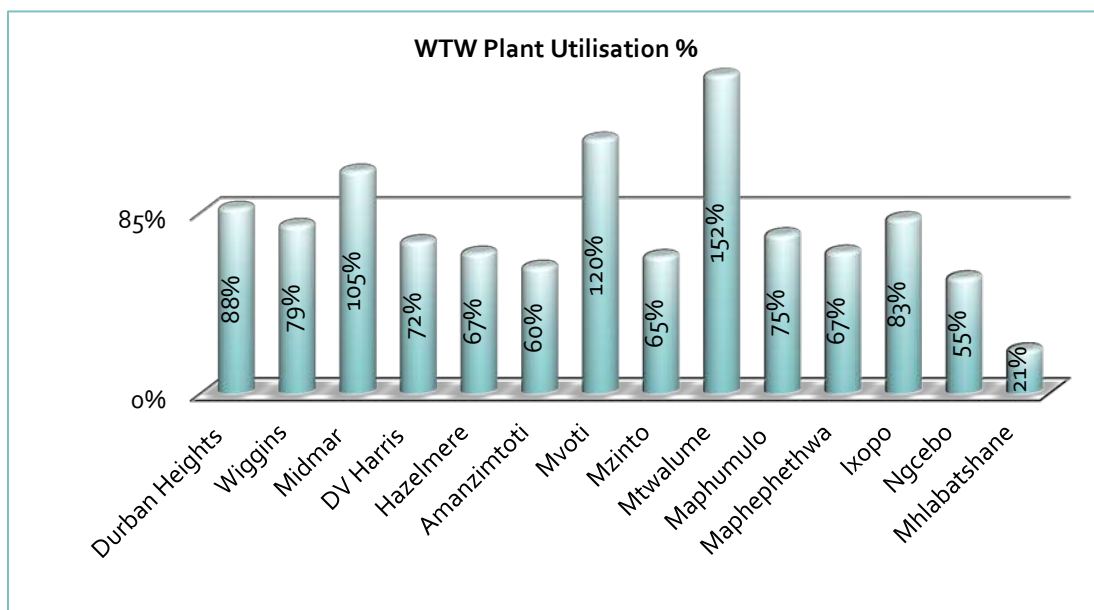


Figure 11.2: Water Treatment Works Capacity Utilisation.



An additional eighteen (18), comprising ten (10) smaller water treatment works and eight (8) borehole schemes are managed on behalf of the iLembe District Municipality

**Table 11.1:** Water quality produced per water treatment works for the period (mid-term 2014/2015)

| Water Treatment Works | Design Capacity (Ml/d) | Volume % | Per cent Compliance with SANS 241:2011 |                           |             |           |
|-----------------------|------------------------|----------|--|---------------------------|-------------|-----------|
|                       |                        |          | Acute Health 1 – Microbiological       | Acute Health 1 – Chemical | Operational | Aesthetic |
| Durban Heights        | 614                    | 39.78%   | 100                                    | 100                       | 100         | 100       |
| Wiggins               | 350                    | 20.91%   | 100                                    | 100                       | 100         | 100       |
| Midmar                | 250                    | 20.32%   | 100                                    | 100                       | 99.91       | 100       |
| DV Harris             | 110                    | 6.00%    | 100                                    | 100                       | 99.83       | 100       |
| Hazelmere             | 45                     | 4.05%    | 100                                    | 100                       | 99.9        | 100       |
| Amanzimtoti           | 24                     | 4.74%    | 100                                    | 100                       | 98.14       | 100       |
| Mvoti <sup>1</sup>    | 19.5                   | 1.14%    | 100                                    | 100                       | 98.1        | 100       |
| Mzinto                | 12                     | 0.84%    | 100                                    | 100                       | 99.4        | 100       |
| Mtwalume              | 7.5                    | 0.78%    | 100                                    | 100                       | 100         | 100       |
| Maphumulo             | 6                      | 0.47%    | 100                                    | 100                       | 100         | 99.14     |
| Maphephethwa          | 4                      | 0.18%    | 100                                    | 100                       | 100         | 100       |
| Ixopo                 | 3.2                    | 0.16%    | 100                                    | 100                       | 97.55       | 98.24     |
| Ngcebo                | 1.2                    | 0.09%    | 100                                    | 100                       | 98.36       | 100       |
| Mhlabatshane PP       | 4                      | 0.04%    | 100                                    | 100                       | 94.74       | 100       |
| iLembe Rural Schemes  | 6                      | 0.5%     | 99.24                                  | 100                       | 86.97       | 97.16     |

<sup>1</sup> Includes 5Ml/d package plant.

### Water Treatment Works Capacity and Quality Issues and Solutions.

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 Business Plan period including infrastructure plans are:

- **Midmar WTW:** A works upgrade is planned. Design complete
- **Mvoti WTW:** The Lower Thukela BWSS will replace this works by June 2016. As a short-term solution, the refurbishment of the filters was completed and a 2 Ml/d package plant installed.
- **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 upgrades.
- **iLembe Schemes:** Water quality and quantity improvements with these small schemes and boreholes will be progressively realised through short, medium and long term sustainable solutions. The Maphumulo WTW has rationalised some of the existing iLembe schemes.
- **Ixopo System:** UW provides bulk potable water to the town of Ixopo from a 2.8Ml/day Water Treatment Plant (WTP), supplemented with a 0.4Ml/day borehole. The Plant filtration has recently been upgraded to Pressure Filters. Additional source of raw water is being investigated around the area to cater for drought periods.

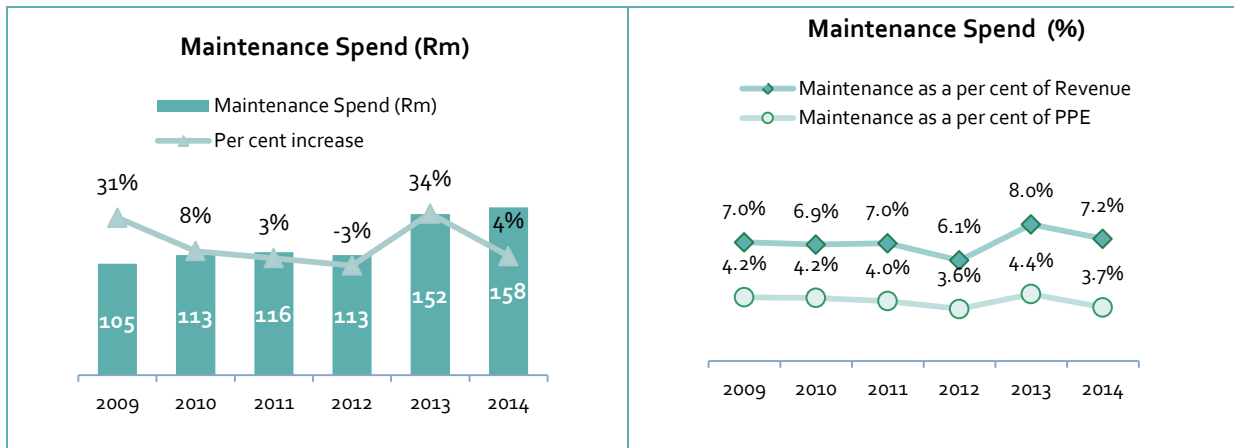
### Asset Condition, Maintenance and Management

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.

A key output of these assessments is establishment of the condition status of our 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 average 4% of its PPE and 7% of its revenue on asset maintenance, based on assessments conducted over the past year. There are no assets that pose significant risk to supply and the organisation envisages no major interruptions to its business over the next five years and beyond.

Figure 11.3: Maintenance spend history (Rm) and spend (%)



### Water Loss Management and Metering

Umgeni Water has successfully maintained non-revenue water below 5% over the years. 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.

## Water Quality Management Plan

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

In relation to this and to ensure supply sustainability, Umgeni Water will enhance its support to municipalities over this period, including through targeted programmes extending to un-served areas, to ensure municipality supply systems deliver safe water quality that will ultimately benefit all end users and vulnerable communities.

Water quality monitoring programmes for all operational sites will be reviewed during the year to improve efficiency, ensure new sites are covered and that programmes are aligned to risk based methodology that would yield reliable information for mitigation. The water quality monitoring programmes further consider customer needs and changes to these as may be required in the course of service delivery. All operational sites are equipped with a recently revised Incident Management Protocol aligned to SANS 241: Drinking Water.

Sampling and laboratory analyses continue to be undertaken in accordance with the ISO 9001 certified monitoring programme and SANAS 17025 accredited laboratory methods. Umgeni Water will ensure it maintains its certification and accreditation statuses with regards to monitoring and analysis.

The **South African National Standard (SANS) 241** for Drinking Water, as amended, is used to assess compliance against four risk categories, namely:

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

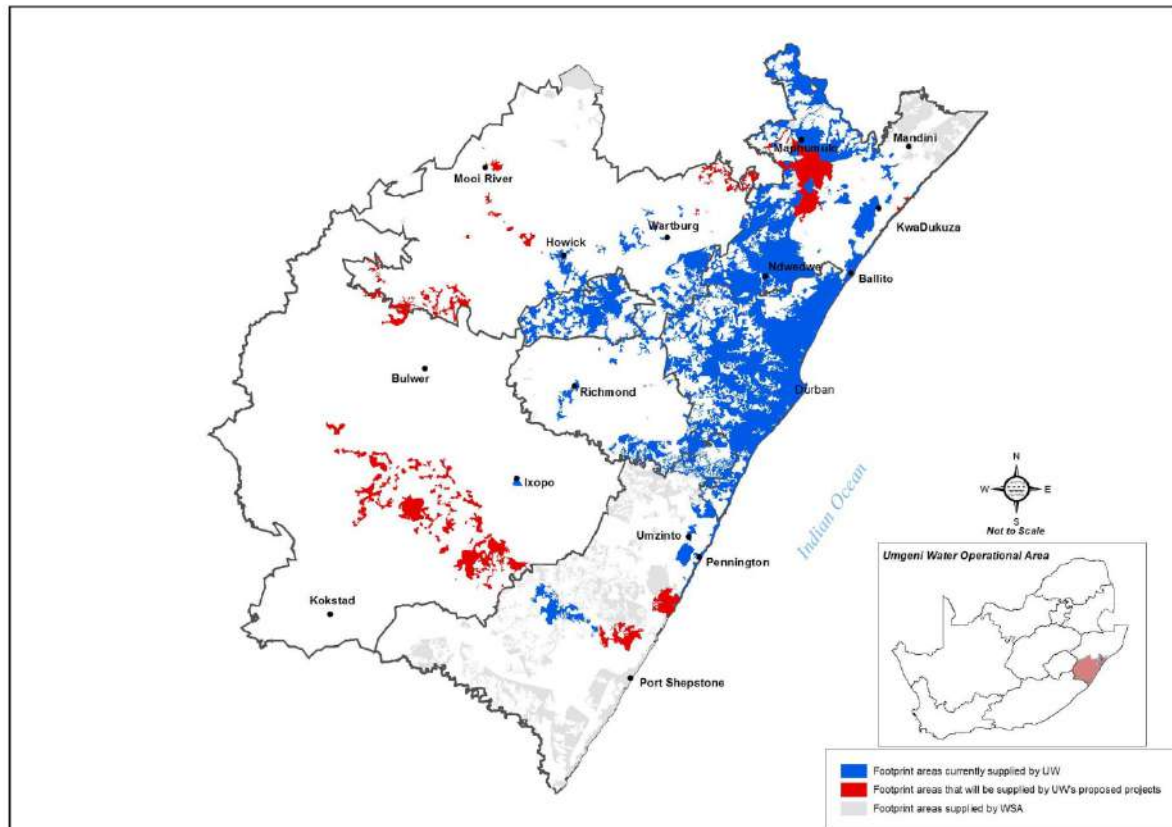
Information on water quality performance will be conveyed as per communication plan to all customers, stakeholders and legislative decision makers.

## 11.2 Demand of Major Consumers by Scheme

### 11.2.1 Potable Water Quantity Demand

Umgeni Water's current supply footprint is shown as in **Figure 11.3**. The figure also shows future supply areas discussed in Section 11.2.3.

**Figure 11.3:** 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 90% 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.



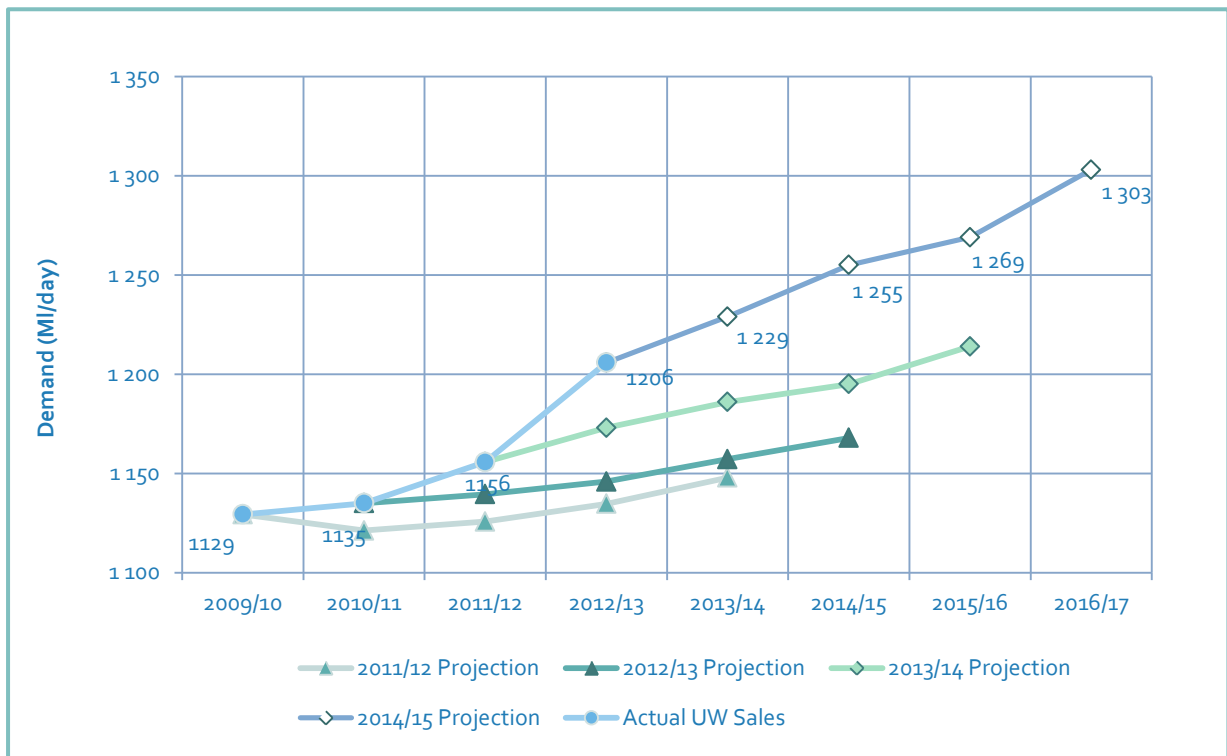
### Umgeni Water Short-Term Bulk Sales Forecast

Growth in water demands is not expected to be significant over the next few years.

Regarding customer water loss management, eThekweni Metropolitan Municipality did not achieve the same level of success with its initiatives in the past year compared to the prior year, whilst initiatives by the Msunduzi Local Municipality are expected to show benefits in the coming year.

The Umgeni Water short-term bulk water sales forecast for 2014/2015 and 2015/2016 are estimated to be 1 229 MI/day and 1 255 MI/day, respectively. This represents a 2% year-on-year increase in growth, which is an improvement on the previous year, and is again primarily determined by the forecast provided by eThekweni MM.

Figure 11.4: Umgeni Water’s Historic and Projected Total Sales Volumes



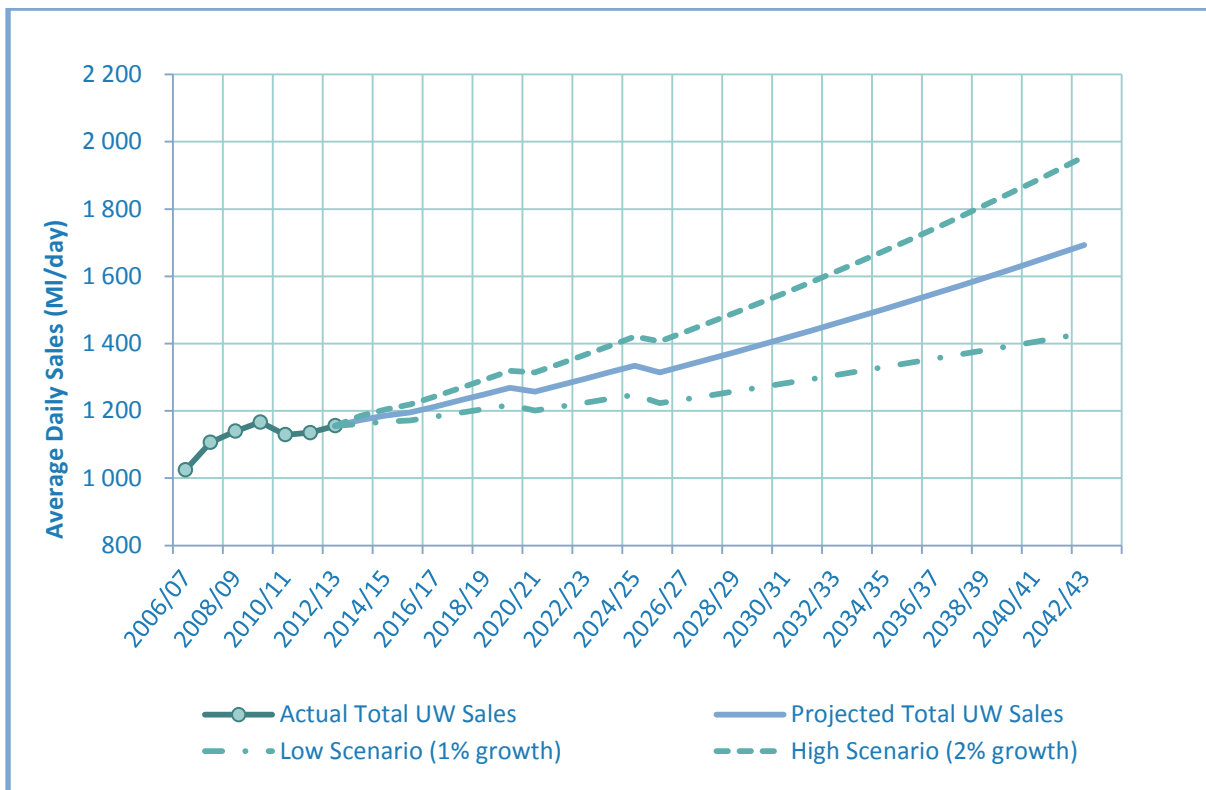
### Umgeni Water Long-Term Bulk Sales Forecast

The 30-year long-term sales forecast for Umgeni Water’s supply area, **Figure 11.5**, 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 2044/2045. 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 DWS, which used a population projection technique to estimate demand forecasts.

The drop in sales in the 2021/2022 and 2025/2026 financial years, as shown **Figure 11.5** is as a result of the anticipated commissioning by eThekweni Municipality of the Northern and KwaMashu wastewater reuse plants which are anticipated to produce 50 MI/d and 60 MI/d respectively. These plants intend to feed potable water directly into their bulk supply network, thereby reducing the requirement from Umgeni Water.

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

**Figure 11.5:** Long-Term Water Sales Projections, 2043/2044



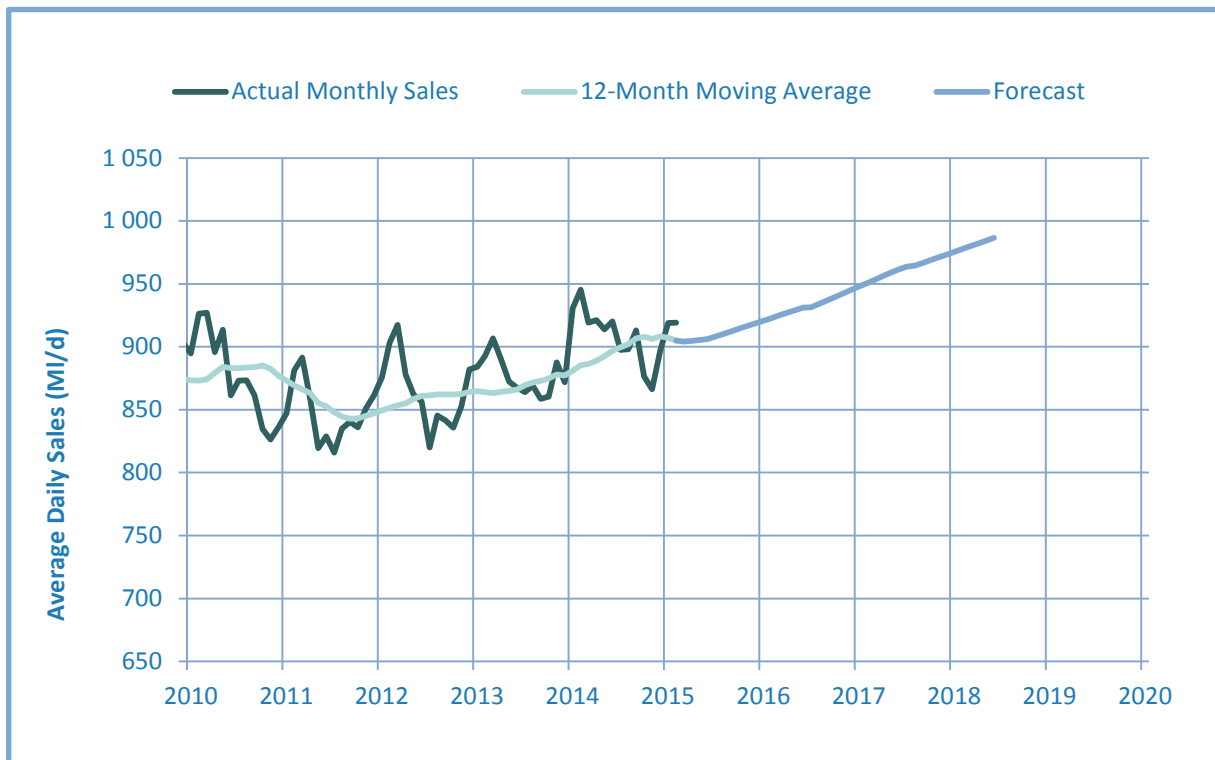
### eThekweni Metropolitan Municipality: Short-Term Bulk Sales Forecast

In the 2013/2014 financial year, the year-on-year growth in sales to eThekweni Municipality increased by 3.1%. The growth comprised 1.7% in new developments and 2.0% increase in Non-Revenue Water from 37.3% to 39.3%. In 2014, it was predicted that growth would still occur in the eThekweni area with the proposed development of formal housing projects and the Tongaat Hulett Group developments.

However, eThekweni Municipality anticipated reducing the Non-Revenue Water by 2.0% back to the 37.3% experienced in 2013. As a result a net growth in demand of only 0.5% was predicted in demand from 896 Ml/day to 901 Ml/d over the 2014/2015. This is shown in **Figure 11.6**, where the twelve-month moving average of sales has remained constant over the last 6 months.

eThekweni Municipality does not believe that their water demand management initiatives will further reduce these sales and have predicted an increase in demand from 901 Ml/day over the 2014/2015 financial year and to 931 Ml/day in 2015/2016. The historical sales and future demand projection for eThekweni Municipality are presented **Figure 11.6**.

**Figure 11.6: Total Daily Sales to eThekweni Metropolitan Municipality**



### Msunduzi Local Municipality: Short-Term Bulk Sales Forecast

The water sales to Msunduzi Local Municipality increased by 2.7% from 177 Mℓ/day in the 2012/2013 financial year to 182 Mℓ/day in 2014/2015.

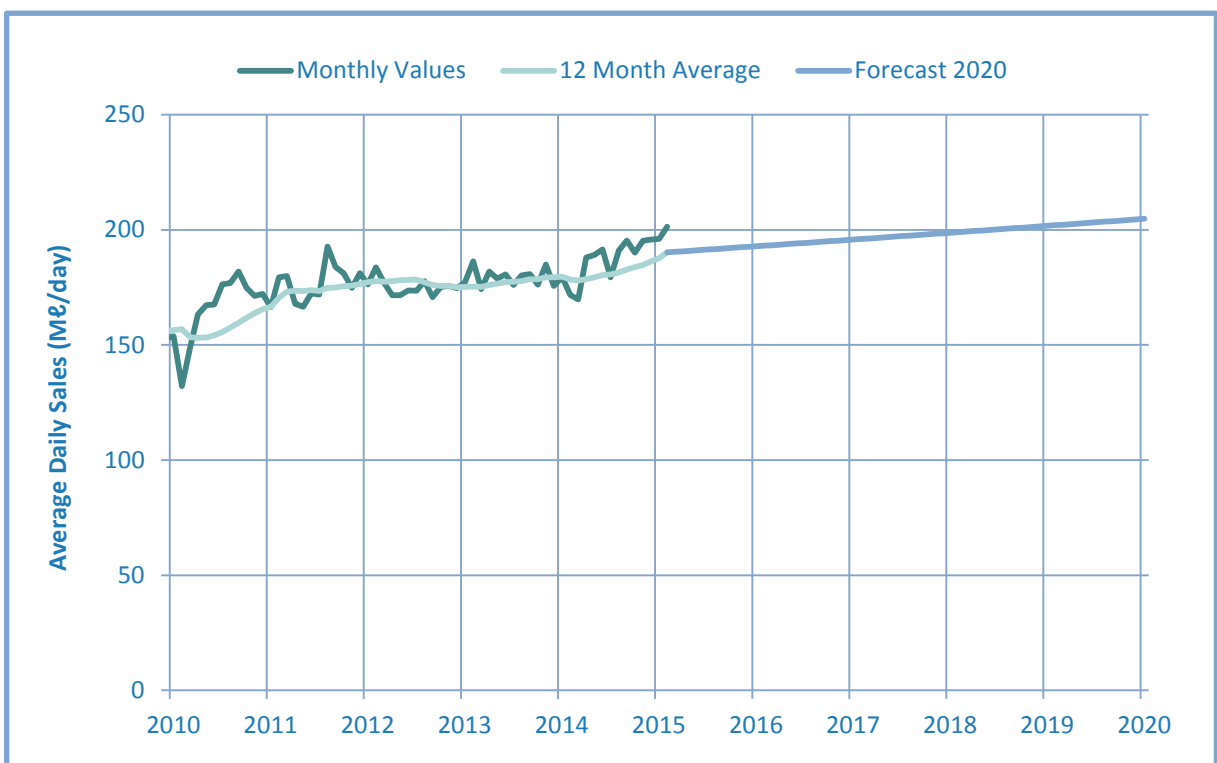
The projected demands for 2014/2015 were determined in consultation with the municipality and it was agreed that the demand will increase at a rate of 1.5% for the short term forecast.

The following significant factor influenced this short term forecast:

- There are significant developments for medium to low cost housing that will result in an increase in demand.

The projection for Msunduzi Local Municipality is reflected in Figure 11.7.

Figure 11.7: Total Daily Sales to Msunduzi Local Municipality



### uMgungundlovu District Municipality: Short-Term Bulk Sales Forecast

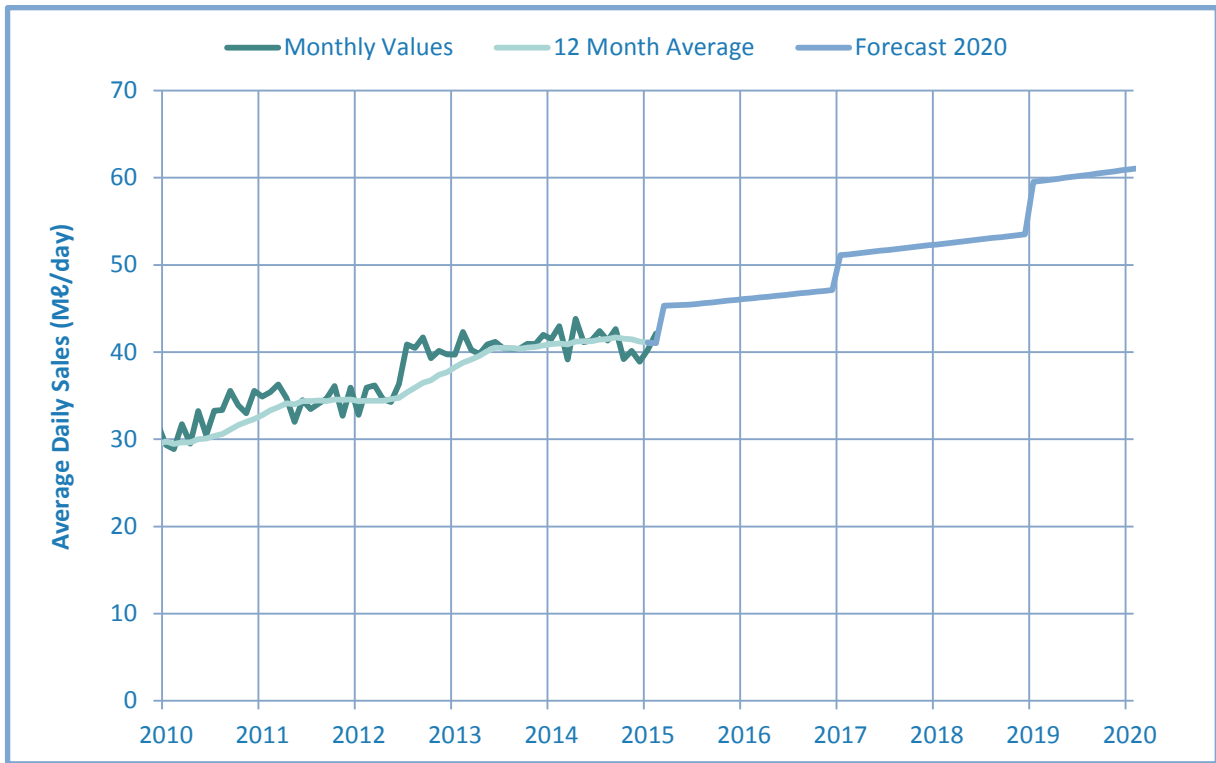
The projected demands for 2014/2015 were determined in consultation with the municipality and it was agreed that the demand would increase at a rate of 2% for the short term forecast.

The following significant factors influenced this short term forecast:

- Gradual implementation of the Greater Eston/Richmond Bulk Water Supply Schemes
- Khayelisha housing development.
- Expected commercial and industrial growth in Camperdown.

The projection for uMgungundlovu District Municipality is reflected in **Figure 11.8**

Figure 11.8: Total Daily Sales to uMgungundlovu District Municipality



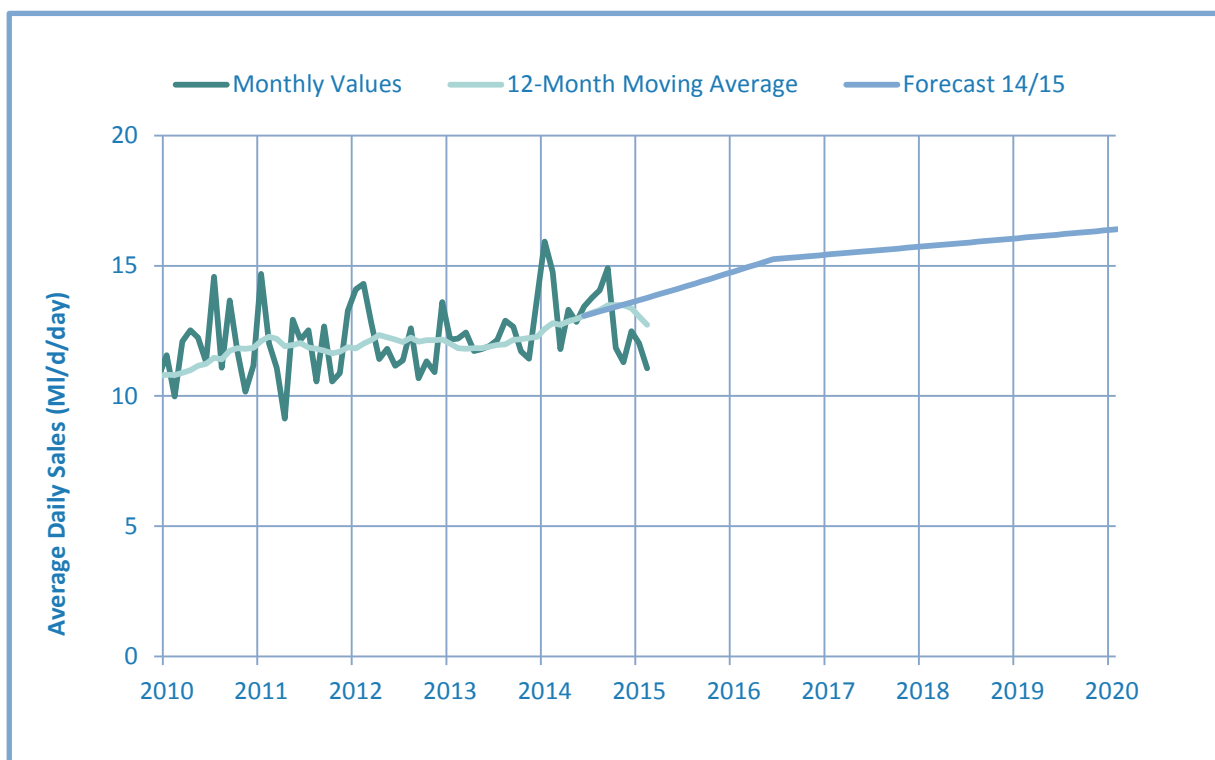
### iLembe District Municipality: Short-Term Bulk Sales Forecast

Sales to iLembe District Municipality can be described as follows:

- Sales to the Coastal Area of iLembe through Sembcorp Siza Water.
- Sales to the Coastal Area of iLembe through iLembe District Municipality.
- Sales to iLembe District Municipality through schemes owned by the municipality and managed by Umgeni Water.

Sembcorp Siza Water expects that developments in this area will increase the demand from 13.1 MI/day in 2013/2014 to 14.1 MI/day in 2014/2015 and 15.2 MI/day in 2015/2016. The historical and future predicted increase in demand for Sembcorp Siza Water is presented in **Figure 11.9**.

**Figure 11.9:** Total Daily Sales to Sembcorp Siza Water

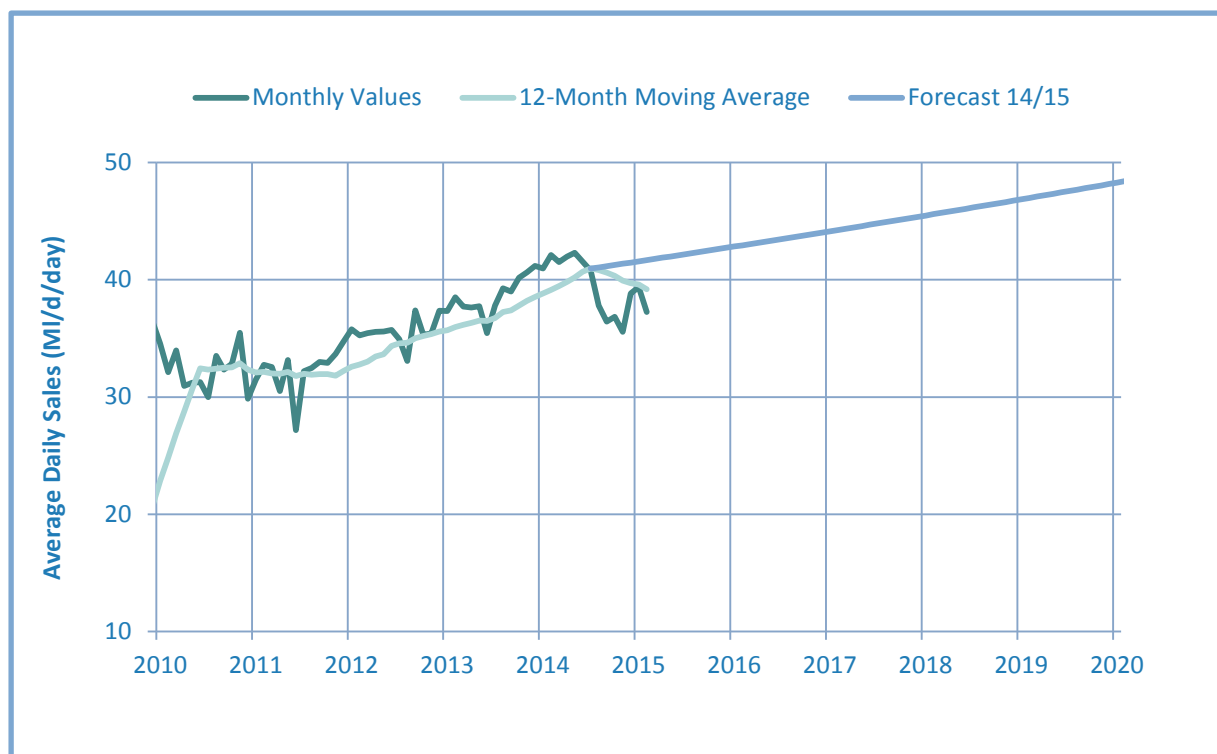


The remaining water sales to iLembe District Municipality for 2014/2015 include:

- Approximately 13.9 MI/day sales to the coastal areas from Umgeni Water's Hazelmere WTP;
- 17.3 MI/day sales to KwaDukuza (Stanger).
- 5.8 MI/day sales to 27 inland rural schemes owned by Ilembe District Municipality and operated by Umgeni Water.
- 4.9 MI/day sales to the Greater Maphumulo area from Umgeni Water's Maphumulo WTP

iLembe District Municipality is implementing a number of water demand management (WDM) initiatives within the town of KwaDukuza (Stanger) as well as the Ndwedwe area. It is estimated that savings from these initiatives will offset the growth in sales for the area. However, at the request of iLembe DM, the KwaShangase and KwaChilli areas will be linked to the Ndwedwe Reservoir Supply System off Reservoir 5. This is an interim supply option pending the findings of the Detailed Feasibility Study for a Bulk Water Supply Scheme (BWSS) for the Southern Ndwedwe area. It is predicted that a 3 percent growth rate in the 2014/2015 (42 MI/day) and 2015/2016 (43.4 MI/day) will occur. This restricted growth is due to the limited resource of the Mvoti WTP and an increase in demand will only be experienced when the Lower uThukela BWSS is commissioned during 2016. Historical and predicted future sales to iLembe District Municipality are presented in **Figure 11.10**.

**Figure 11.10:** Total Daily Sales to iLembe District Municipality



### Ugu District Municipality: Short-Term Bulk Sales Forecast

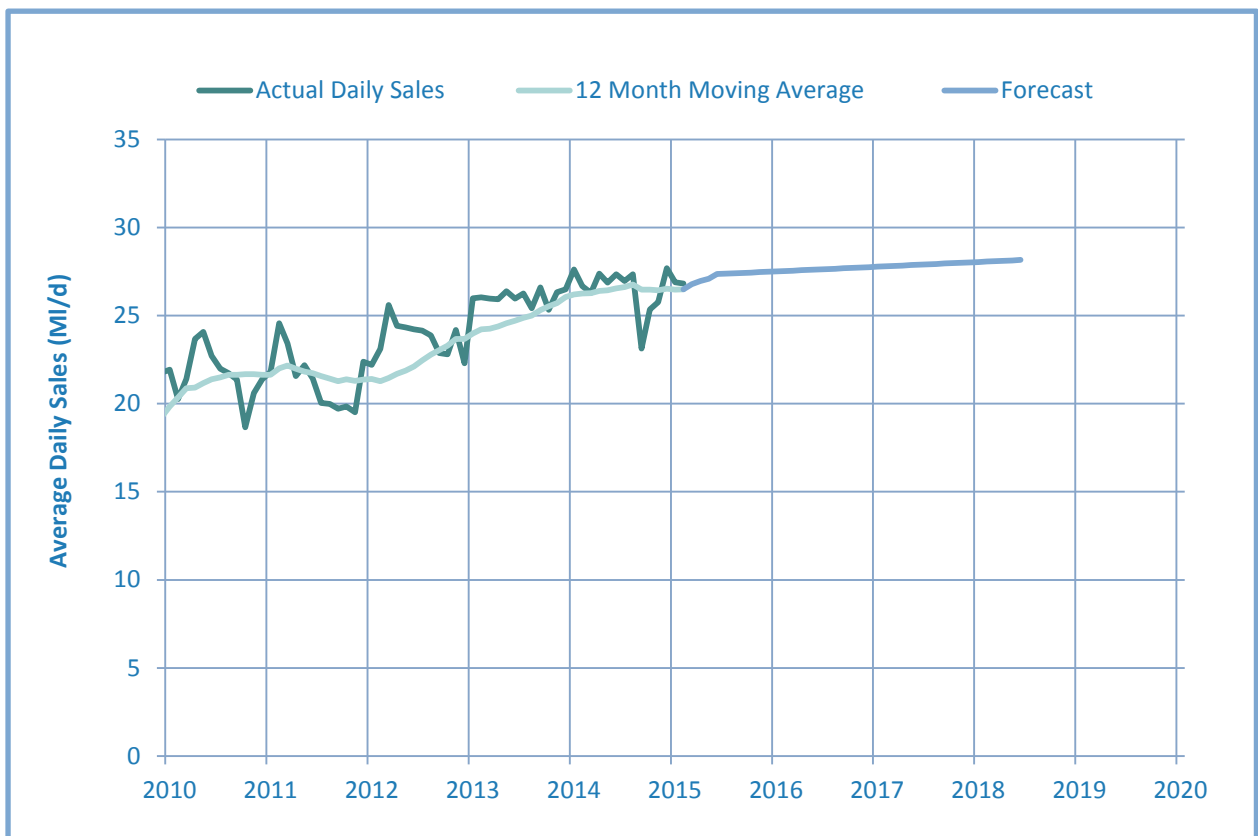
Growth in total sales to the Ugu District Municipality has slowed significantly since the last financial year. This is due to the drought experienced over the past ten months.

A 2.1% increase (26.8 MI/d to 27.4 MI/d) is likely for 2014/15, compared with a 6.7% growth for 2013/14. The recently commissioned South Coast Pipeline (SCP-2a) and Mpambanyoni River Emergency Scheme assisted in ensuring continued supply to the Middle South Coast Region, despite the fact that the main storage dam, EJ Smith, reached dead storage level in September 2014. The expected growth in sales to the Ugu District Municipality, as confirmed by the DM, is estimated to be 1.0% in 2015/2016 (**Figure 11.11**).

Growth is constrained by the available supply in the short term and sales growth will be realised once the South Coast Pipeline (SCP) Phase 2b is commissioned.

Ugu District Municipality has embarked on a number of water demand management initiatives, but these have had limited success. These initiatives are therefore not expected to have a major impact on projected water demand growth rates.

**Figure 11.11:** Total Daily Sales to Ugu District Municipality

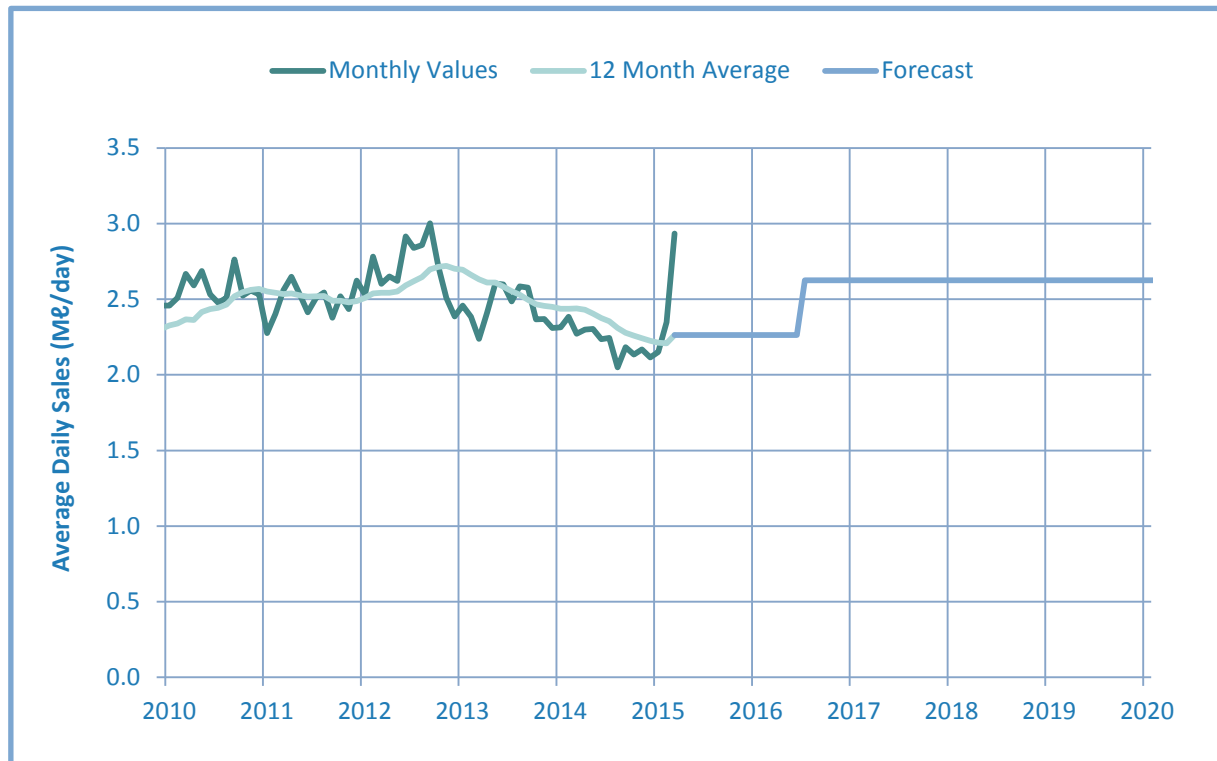




### Harry Gwala District Municipality: Short-Term Bulk Sales Forecast

The Ixopo WTP supplies the Greater Ixopo area. Average daily sales from the WTP currently amount to approximately 2.4 Ml/day. There has been a decrease in the monthly sales from September 2012 to June 2014. This is attributed to WDM efforts by the municipality to eradicate water leakage. The average sales increased after commissioning and below the previously projected values. Following discussions with the municipality, the projection for Harry Gwala District Municipality, has been set at a 0% growth. An increase to 2.625 Ml/day is projected for June 2016 due to a new development.

Figure 11.12: Total Daily Sales to Harry Gwala District Municipality



## Bulk Water Supply Infrastructure Constraints and Requirements

This section describes the more significant constraints within Umgeni Water's existing bulk supply infrastructure and the proposed infrastructure development plans to overcome these constraints and provide the additional capacity required for further expansion of the existing supply 'footprint' area. The proposed water supply infrastructure links directly to the proposed water resource infrastructure discussed in Chapter 10.

### Mgeni System

In recent 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. Amongst other things, this has led to the municipality implementing new infrastructure in order to undertake a significant load shifting exercise. The municipality's western aqueduct development, which is expected to be fully commissioned in mid-2018, will represent the most significant of these load-shifting operations. The intention is for those areas currently being served under pumping from the Lower Mgeni System (namely, from Durban Heights Water Treatment Works) to be transferred to the Upper Mgeni System, to be served under gravity from Midmar Water Treatment Works via the western aqueduct.

Further to this, eThekweni Metropolitan Municipality 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 Trade Port development zone. Whilst this measure will free up additional capacity within the Lower Mgeni System that can be redirected elsewhere within the Municipality, it places considerable additional load on much of Umgeni Water's infrastructure in 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. The recent augmentation of the '57 Pipeline by Umgeni Water was undertaken in order to provide sufficient capacity in this portion of the supply network to meet the required demands of the western aqueduct.

Phase 2 of the Mooi-Mgeni Transfer Scheme (MMTS-2) is due to be fully commissioned towards the end of this year, and the 99% assured yield of the Mgeni System at Midmar Dam will increase from 322.5MI/d to 476.2MI/d. However, even an increased yield at Midmar Dam 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.

One water resource option that is being investigated by DWA and UW is the uMkhomazi Water Project which would transfer raw water from the uMkhomazi River to a Water Treatment Works in the adjacent catchment, with potable water then being supplied to the Umlaas Road area to feed into the '57 Pipeline and subsequently into the western aqueduct. The uMkhomazi Water Project is currently in the detailed feasibility investigation stage and therefore the very earliest that it is envisaged that the scheme could be completed and operational is 2023. Refer to discussion in Chapter 10 of this Business Plan.

With Midmar Dam's yield then being fixed after MMTS-2, it is deemed prudent that all future bulk distribution infrastructure upgrades within the Upper Mgeni System (Midmar Water Treatment Works - Umlaas Road) be limited to the water resources capacity that Midmar Dam can support (bearing in mind that Midmar Dam must also contribute to the water resource requirements downstream of it). Hence, the water available to meet demands downstream of Umlaas Road Reservoir is limited until such time as the uMkhomazi Water Project is commissioned. Further to this, the available water will decrease over time as the demands upstream of the Umlaas Road Reservoir increase.

In order to meet the anticipated load shift in demand by eThekweni Metropolitan Municipality from the Lower Mgeni System to the Upper Mgeni System, the following Umgeni Water infrastructure projects will be required:

- Upgrade of Midmar Water Treatment Works;
- Augmentation of the '61 Pipeline from Richmond offtake to Umlaas Road.

Another major infrastructure project that will be required over the next 30 years in the inland area to cover capacity constraints includes the implementation of the uMshwathi Bulk Water Supply Scheme. This scheme

will include the augmentation of the existing '6g Pipeline (Claridge to Wartburg) and an increase of the capacity of Wartburg Reservoir. The Wartburg Pump Station will also need to be upgraded. In addition, an upgrade of the Bruyns Hill Pump Station, pipeline and Reservoir will be implemented. 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.

### South Coast System

Due to a water resource constraint at Nungwane Dam and the limited capacity of Amanzimtoti Water Treatment Works, it is necessary to augment supply to areas downstream of Amanzimtoti. This supply comes from the Wiggins Water Treatment Works via the South Coast Augmentation Pipeline, until such time as a new regional bulk water supply system is developed on the lower reaches of the uMkhomazi River or through the implementation of a large scale desalination plant (refer to Chapter 10). In the interim, the Wiggins Water Treatment Works sub-system should have sufficient treatment and distribution capacity to meet the medium-term demands of Amanzimtoti and the South Coast Pipeline.

Hydraulic analysis confirmed that the existing South Coast Augmentation Pipeline would have adequate capacity to meet current and projected demands up to the year 2020, provided that a new in-line booster pump station is installed along the South Coast Augmentation Pipeline to replace the existing Umlazi Pump Station. Umgeni Water has now constructed the new South Coast Augmentation Booster Pump Station to address this constraint. This will serve as a medium-term infrastructure development strategy to meet current and projected demands off the South Coast Augmentation Pipeline up to the year 2021.

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 a long-term solution is in place.

Umgeni Water has also recently implemented Phase 2a of the South Coast Pipeline (SCP-2a), which will partially relieve the demand of the Umzinto Water Treatment Works. This will allow relieved capacity to be utilised for growth further inland. In addition, Umgeni Water has also implemented a new 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 4.5ML/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 plan 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.
- Rehabilitation and/or replacement of the pipeline from Nungwane Dam to the Amanzimtoti Water Treatment Works will need to be undertaken.
- The long-term strategy is to develop a regional bulk water supply scheme that will receive raw water from either the lower uMkhomazi River or from a large scale desalination plant 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. The South Coast 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 either the regional BWS on the lower uMkhomazi River or the implementation of a large scale desalination plant.
- 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 as experienced during the period from March 2010 to October 2010, the supply to Umzinto Water Treatment Works must be supplemented from the South Coast pipeline via Scottburgh South and Ellingham reservoirs.

## North Coast System

The primary source of potable water supplied to the North Coast Supply System (NCSS) is from the recently upgraded Hazelmere Water Treatment Works. This treatment plant can now supply up to 75ML/d of potable water to the NCSS. To make full use of this capacity, however, the Department of Water and Sanitation will have to raise the Hazelmere Dam thereby increasing the yield from 55ML/d to 75ML/d at a 98% assurance of supply.

The town of KwaDukuza is supplied from the Mvoti Water Treatment Works via the Mvoti Balancing Reservoirs. The average demand placed on the Water Treatment Works over the past year was 17.5ML/d. The capacity of the Water Treatment Works, including a recently constructed 2ML/d package plant) is now 14.5ML/d.

The strategic development 30-year plan for the region, that would utilise the available resources from the Hazelmere, Lower Thukela and Mvoti systems (as discussed in Chapter 10) in the most sustainable and cost effective manner, is presented below.

- DWA to raise the full supply level of Hazelmere Dam to increase its firm yield to 75ML/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 in the future water can be brought south from a Water Treatment Works situated at the uThukela River or the Mvoti River.
- Construct an abstraction works on the uThukela River with a regional Water Treatment Works and associated infrastructure to supply water south to KwaDukuza Local Municipality and north to Mandini Local Municipality. This system would link into the NCSS. The Water Treatment Works would be constructed to initially serve 55ML/d and when demands dictate it would be upgraded to 110 ML/d.
- Develop water resource infrastructure on the Mvoti River, either at Welverdiend or Isithundu 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 (or majority of) allocation from the Lower Thukela Water Treatment Works. In this scenario potable water may need to be supplied northwards from the NCSS (i.e. towards the Lower Thukela Water Treatment Works) to meet the demands on the southern side of the uThukela River.
- The Phase 1 of the Maphumulo WTW was commissioned in May 2013 and is 100% operational. Phase 2, including the recently constructed Imvutshane Dam has also recently been completed with the first impoundment of the dam scheduled for April 2015. An upgrade of the Maphumulo WTW to 12 ML/day, will be complete by 2018.

11.2.2 New areas to be supplied

Umgeni Water 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 11.10** highlights the high and low density areas within the WSAs currently supplied by Umgeni Water. By overlaying Umgeni Water's existing supply 'footprint' onto this map it is possible to identify areas of possible future expansion (areas of high population density outside of the 'footprint' area). **Figures 11.11-11.15** show that there are many areas outside of Umgeni Water's current supply 'footprint' area that contain notable populations.

The following sections highlight some of the future expansion projects which Umgeni Water is undertaking in each of the WSAs.

Figure 11.10: Water Access Status (after Census 2011 and EKZNW 2011)

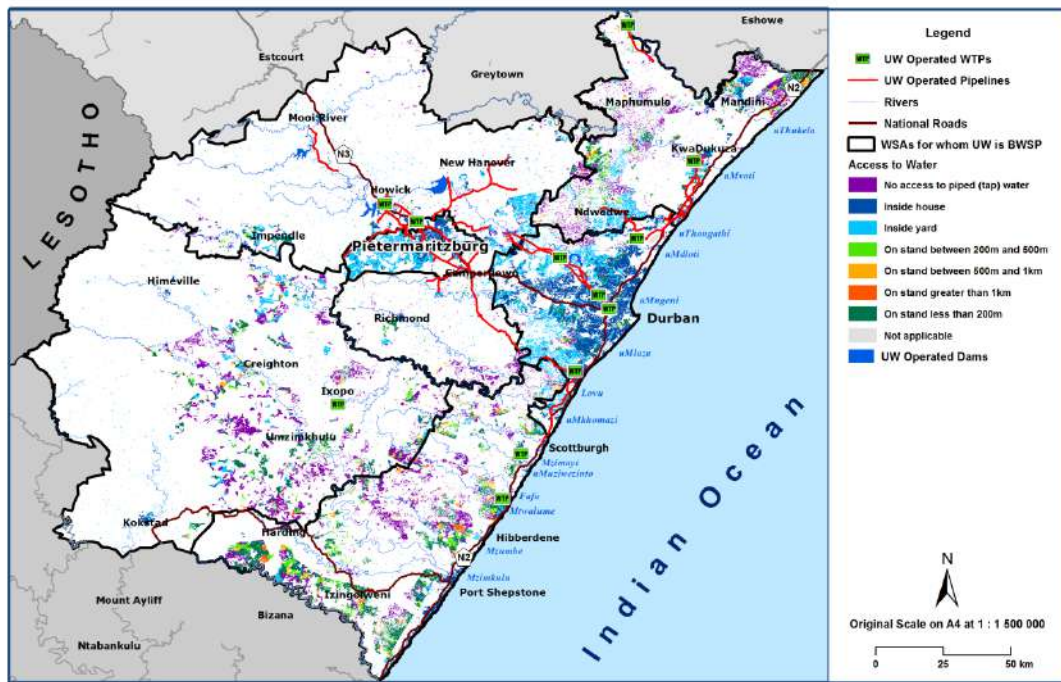


Table 11.3: Water Access Status (Source: Census 2011 (Statistics SA 2013))

| WSA              | Population       | Total Number of Households | Piped (tap) water inside dwelling/institution | Piped (tap) water inside yard | Piped (tap) water on community stand: distance less than 200m from dwelling/institution | Piped water below RDP level | %          |
|------------------|------------------|----------------------------|---|-------------------------------|---|-----------------------------|------------|
| Ugu DM           | 722 484          | 179 444                    | 44 215  | 17 477                        | 56 539  | 61 213                      | 34%        |
| uMgungundlovu DM | 399 227          | 108 674                    | 37 870  | 33 680                        | 13 230  | 23 894                      | 22%        |
| Msunduzi LM      | 618 536          | 163 993                    | 78 626  | 63 323                        | 9 335   | 12 709                      | 8%         |
| Harry Gwala DM   | 461 420          | 112 281                    | 16 515  | 20 213                        | 23 656  | 51 897                      | 46%        |
| iLembe DM        | 606 809          | 157 692                    | 37 418  | 32 212                        | 39 529  | 48 533                      | 31%        |
| eThekweni MM     | 3 442 360        | 956 712                    | 575 760                                       | 196 265                       | 113 910   | 70 777                      | 7%         |
| <b>Total</b>     | <b>6 250 836</b> | <b>1 678 796</b>           | <b>790 404</b>                                | <b>363 170</b>                | <b>256 199</b>  | <b>269 023</b>              | <b>16%</b> |

eThekwini Metropolitan Municipality

The following strategic projects (Table 11.4) will be undertaken within eThekwini Metropolitan Municipality to either consolidate existing supplies or to expand into new areas. Potential expansion areas are shown in Figure 11.11.

Figure 11.11: Proposed extensions to Umgeni Water’s Supply ‘Footprint’ in eThekwini District Municipality

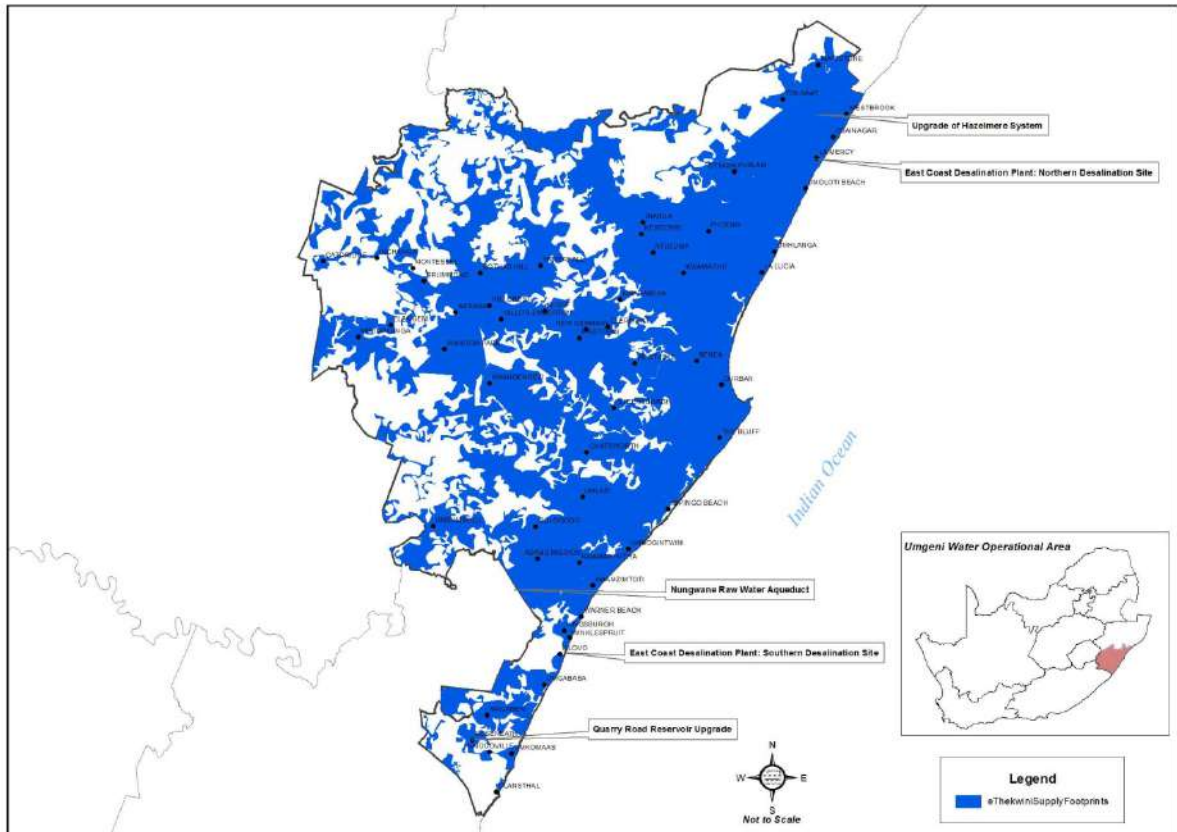


Table 11.4: Projects to be implemented in eThekwini Metro within the next five years

| Objective    | Major Project                                  | Project Total (R'm) | 2016 | 2017 | 2018 | 2019 | 2020 |
|--------------|--|---------------------|------|------|------|------|------|
|              |  |                     | R'm  | R'm  | R'm  | R'm  | R'm  |
| Augmentation | Mkhomazi Bulk Water Supply Scheme <sup>1</sup> | 3,671               | 1    |      | 10   | 60   | 70   |
| Augmentation | Lower Mkomazi Bulk Water Scheme <sup>2</sup>   | 1,143               | 3    | 6    | 60   | 128  | 215  |
| Upgrade      | Durban Heights WTW – Filter Upgrade            | 521                 | 11   | 71   | 138  | 126  | 139  |
| Upgrade      | Nagle Aqueduct- Refurbishment                  | 90                  | 10   | 80   |      |      |      |
| Augmentation | Maphethwa WW: Upgrade Plant (5.0 MI/d)         | 61                  | 5    | 6    |      |      |      |
| Augmentation | East Coast Desalination Plants                 | 27                  | 7    |      |      |      |      |

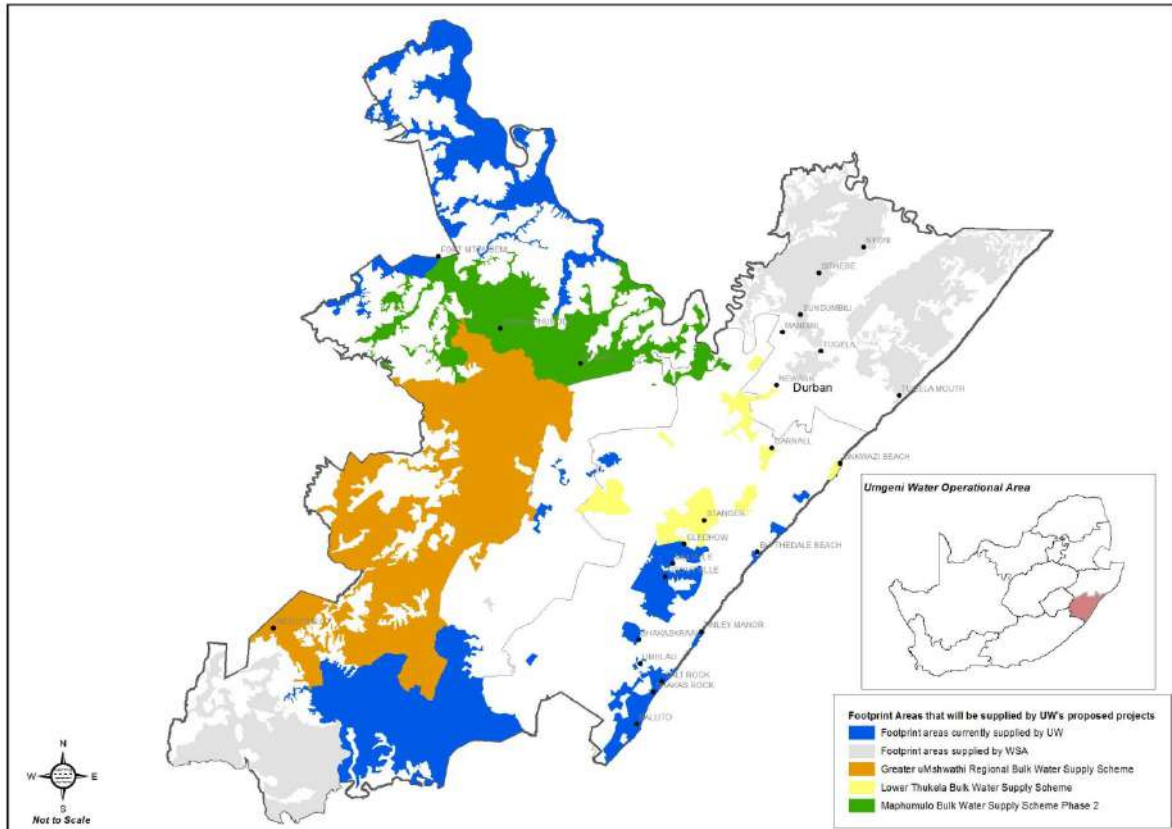
<sup>1</sup> project will also serve UMDM

<sup>2</sup> project will also serve Ugu DM

**iLembe District Municipality**

The following strategic projects (Table 11.5) will be undertaken within iLembe District Municipality to either consolidate existing supplies or to expand into new areas. Potential expansion areas are shown in Figure 11.12.

**Figure 11.12: Proposed extensions to Umgeni Water’s Supply ‘Footprint’ in 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) | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------|--|---------------------|------|------|------|------|------|
|                 |  |                     | R'm  | R'm  | R'm  | R'm  | R'm  |
| Rural Expansion | Lower Thukela BWS Scheme Phase <sup>1</sup>                            | 1,392               | 421  | 68   |      |      |      |
| Rural Expansion | uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3) <sup>2</sup> | 1,129               | 285  | 347  | 128  | 124  |      |
| Rural Expansion | Southern Ndwedwe BWS Pipeline and Reservoir)                           | 342                 | 1    | 6    | 4    | 30   | 60   |
| Augmentation    | Fawsley Park-Mvoti Balancing Res Pipeline (4km)                        | 204                 | 1    | 1    | 8    | 46   | 56   |
| Augmentation    | Hazelmere WTW: Upgrade (45Ml/d to 75Ml/d)                              | 146                 | 23   |      |      |      |      |
| Rural Expansion | Maphumulo BWSS Phase 4 : Weir on Hlimbithwa River                      | 94                  |      | 0.2  | 0.3  | 0.3  | 47   |
| Rural Expansion | Maphumulo BWSS Phase 3: WTW Upgrade (6Ml/d to 12Ml/d)                  | 37                  | 2    |      |      | 4    | 21   |
| Rural Expansion | North Coast Emergency Pipeline   | 32                  | 11   |      |      |      |      |

<sup>1</sup>project will also serve eThekweni MM

<sup>2</sup>Also see UMDM projects



uMgungundlovu District Municipality

The following strategic projects (Table 11.6) will be undertaken within uMgungundlovu District Municipality to either consolidate existing supplies or to expand into new areas. Potential expansion areas are shown in Figure 11.13.

Figure 11.13: Proposed extensions to Umgeni Water’s Supply ‘Footprint’ in uMgungundlovu District Municipality

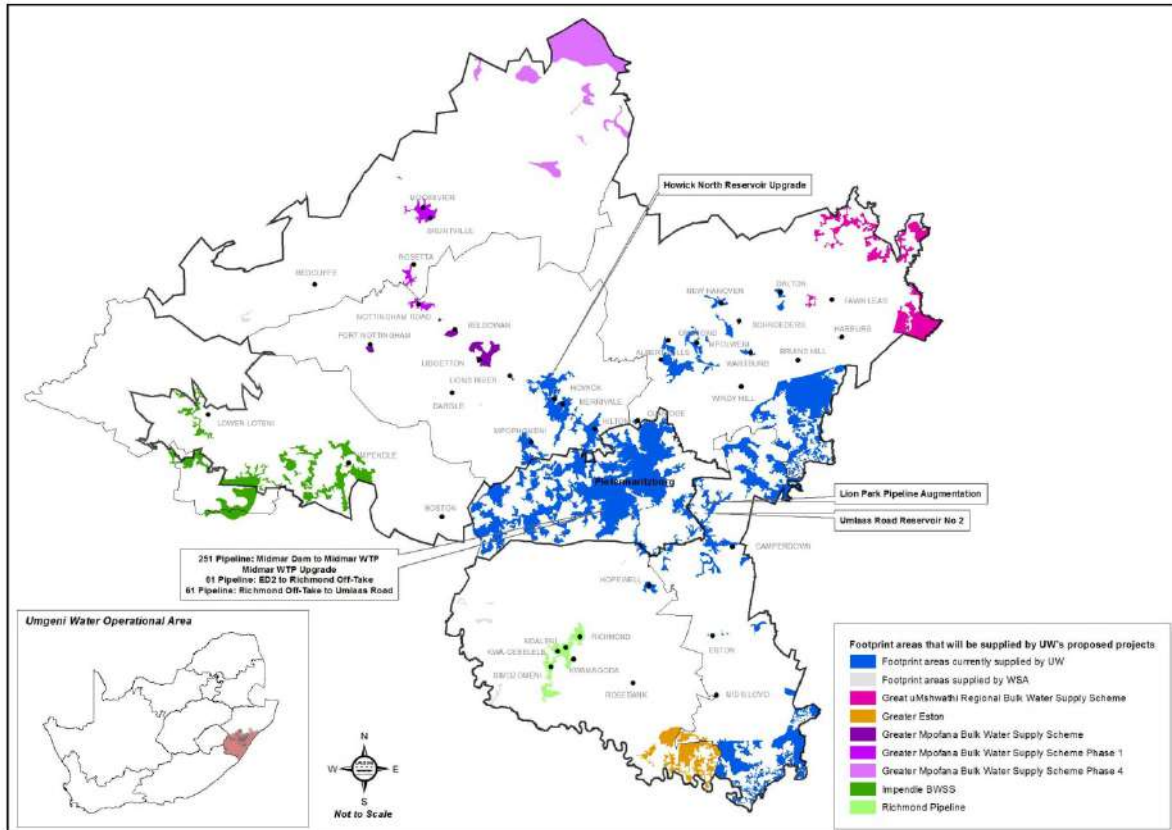


Table 11.6: Projects to be implemented in uMgungundlovu District Municipality in the next five years

| Objective       | Major Project  | Project Total (R'm) | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------|--|---------------------|------|------|------|------|------|
|                 |  |                     | R'm  | R'm  | R'm  | R'm  | R'm  |
| Rural Expansion | uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3) <sup>1</sup> | 1,129               | 285  | 347  | 128  | 124  |      |
| Rural Expansion | Greater Mpofana Regional Scheme Phase 1                                | 596                 | 108  | 124  | 145  | 139  |      |
| Augmentation    | Midmar WTW Upgrade (250 to 375Ml/d) and Dam RWPS <sup>2</sup>          | 215                 | 61   | 72   | 70   |      |      |
| Rural Expansion | Impendle BWSS  | 200                 | 4    | 20   | 40   | 75   | 50   |
| Augmentation    | 61 p/l: extension (Richmond Offtake to Umlaas Road) <sup>2</sup>       | 171                 | 6    | 2.6  | 5    |      |      |
| Augmentation    | 251/51 New RW p/l (Dam to Raw Water P/S) <sup>2</sup>                  | 131                 | 40   | 59   | 7    |      |      |
| Augmentation    | Umbumbulu Pump Station   | 125                 | 3    | 5    | 25   | 40   | 40   |
| Augmentation    | Wartburg to Bruyns Hill Pipeline                                       | 78                  | 28   | 48   |      |      |      |
| Augmentation    | Howick West Reservoir Upgrade (16Ml)                                   | 55                  | 1    | 53   |      |      |      |
| Augmentation    | Lion Park Pipeline   | 48                  | 25   | 16   |      |      |      |

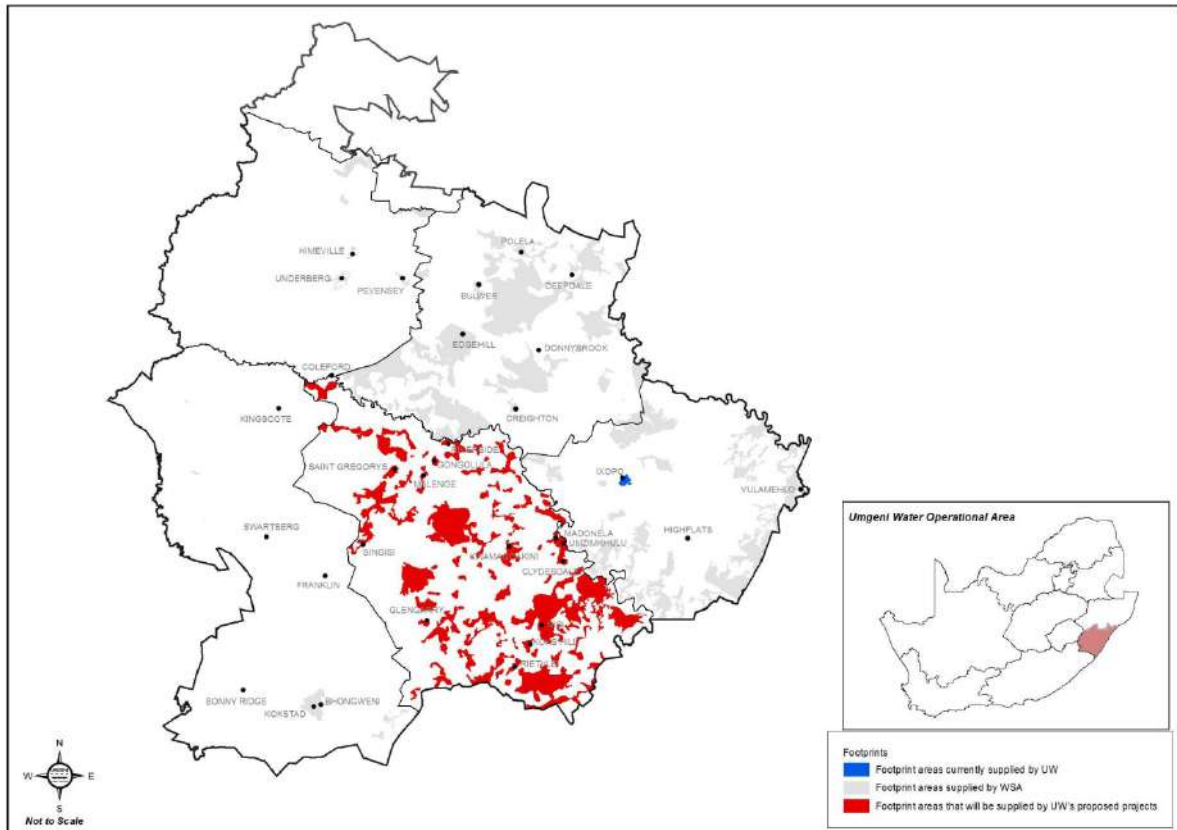
<sup>1</sup>Also see iLembe DM projects

<sup>2</sup> projects will also serve eThekweni MM

### Harry Gwala District Municipality

The Umzimkhulu Bulk Water Supply Schemes would supply water from various sources to areas throughout the Umzimkhulu local municipality. Umgeni Water has set aside R20 million CAPEX with the intention of ultimately constructing these schemes as a partnership with the Harry Gwala District Municipality. Umgeni Water is currently implementing the feasibility studies in an initiative to identify the best possible regional bulk water solutions to supply Umzimkhulu local municipality. The potential expansion area of the scheme is shown in **Figure 11.14**.

**Figure 11.14:** Proposed extensions to Umgeni Water’s Supply ‘Footprint’ in Harry Gwala District Municipality



**Table 11.7:** Projects to be implemented in Harry Gwala District Municipality in the next five years

| Objective       | Major Project                | Project Total (R'm) | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------|------------------------------|---------------------|------|------|------|------|------|
|                 |                              |                     | R'm  | R'm  | R'm  | R'm  | R'm  |
| Rural Expansion | Harry Gwala Regional Schemes | 20                  | 2    | 9    | 9    |      |      |

### Ugu District Municipality

The following strategic projects (Table 11.8) will be undertaken within Ugu District Municipality to either consolidate existing supplies or to expand into new areas. Potential expansion areas are shown in Figure 11.15.

Figure 11.15: Proposed extensions to Umgeni Water’s Supply ‘Footprint’ in Ugu District Municipality

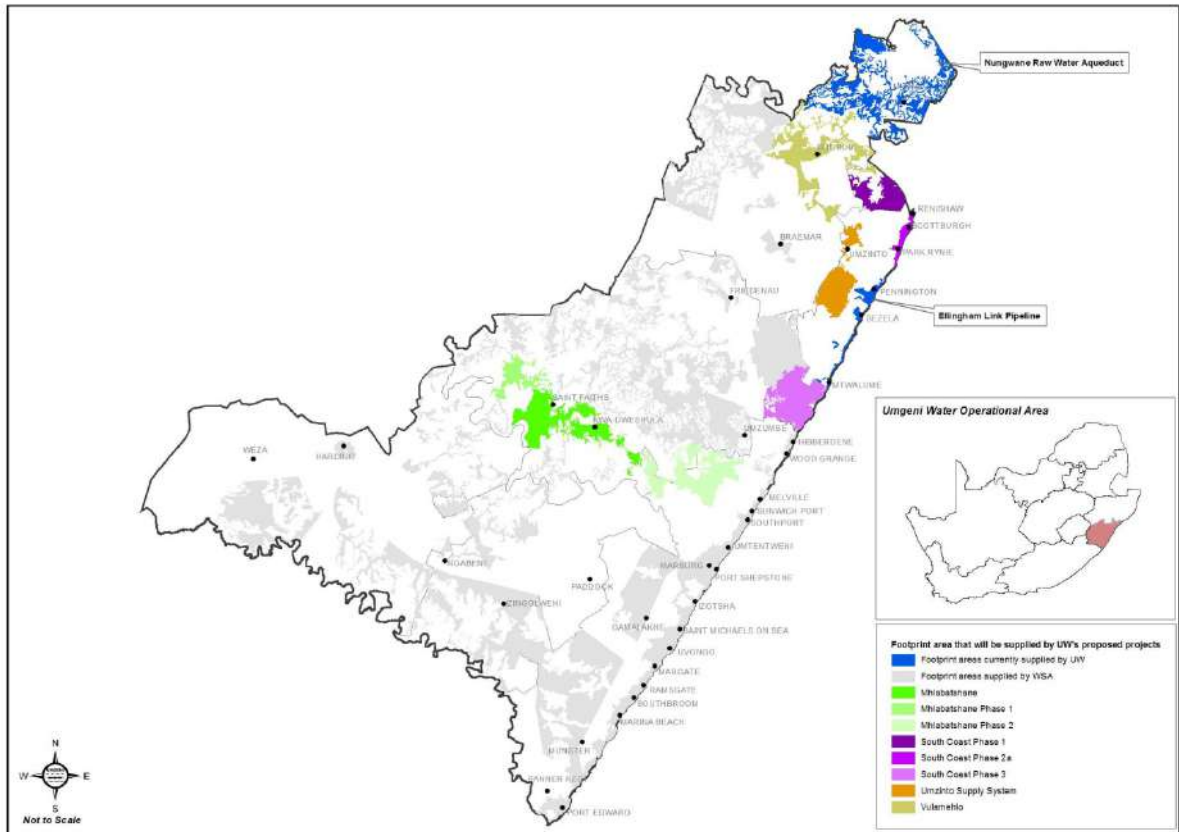


Table 11.8: Projects to be implemented in Ugu District Municipality within the next five years

| Objective       | Major Project  | Project Total (R'm) | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------|--|---------------------|------|------|------|------|------|
|                 |  |                     | R'm  | R'm  | R'm  | R'm  | R'm  |
| Rural Expansion | Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu R. abstraction | 292                 | 4    |      |      |      |      |
| Expansion       | South Coast Ph 2b (Kelso to Umdoni)                              | 181                 | 8    | 69   | 70   | 33   |      |
| Rehabilitation  | Nungwane Raw Water Aqueduct                                      | 81                  | 29   | 40   |      |      |      |
| Upgrade         | Umzinto WTW  | 16                  | 11   | 5    |      |      |      |

## Summary of Major Bulk Water Supply Infrastructure Projects

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

| Major Project   | Objective       | Key Municipality Beneficiary    | Project Total R'm | Five-Year R'm |
|---|-----------------|---------------------------------|-------------------|---------------|
| Mkhomazi Bulk Water Supply Scheme                               | Augmentation    | eThekweni MM, uMgungundlovu DM  | 3,671             | 141           |
| Lower Thukela BWS Scheme Phase 1                                | Rural Expansion | eThekweni MM, iLembe DM         | 1,392             | 489           |
| uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3)       | Rural Expansion | uMgungundlovu DM iLembe DM      | 1,129             | 884           |
| Lower Mkomazi Bulk Water Scheme                                 | Augmentation    | eThekweni MM, Ugu DM            | 1,143             | 411           |
| Greater Mpofana Regional Scheme Phase 1                         | Rural Expansion | uMgungundlovu DM                | 596               | 516           |
| Durban Heights WTW – Filter Upgrade                             | Upgrade         | eThekweni MM                    | 521               | 485           |
| Southern Ndwedwe BWS Pipeline and Res)                          | Rural Expansion | iLembe DM                       | 342               | 101           |
| Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu R abstraction | Rural Expansion | Ugu DM                          | 292               | 4             |
| Midmar WTW Upgrade (250 to 375Ml/d) and Dam RWPS                | Augmentation    | uMgungundlovu DM                | 215               | 203           |
| Fawsley Park-Mvoti Balancing Res Pipeline (4km)                 | Augmentation    | iLembe DM                       | 204               | 113           |
| Impendle BWSS   | Rural Expansion | uMgungundlovu DM                | 200               | 189           |
| South Coast Ph 2b (Kelso to Umdoni)                             | Expansion       | eThekweni MM, Ugu DM            | 181               | 181           |
| 61 p/l: extension (Richmond to UmRd)                            | Augmentation    | uMgungundlovu DM                | 171               | 14            |
| Hazelmere WTW: Upgrade (45-75Ml/d)                              | Augmentation    | eThekweni MM, iLembe DM         | 146               | 23            |
| 251/51 New RW p/l (Dam to Raw Water P/S)                        | Augmentation    | uMgungundlovu DM, eThekweni MM  | 131               | 106           |
| Umbumbulu Pump Station  | Augmentation    | uMgungundlovu DM                | 125               | 113           |
| Maphumulo BWSS Phase 4 : Weir on Hlimbithwa River               | Rural Expansion | iLembe DM                       | 94                | 48            |
| Nagle Aqueduct - Refurbishment                                  | Upgrade         | eThekweni MM                    | 90                | 90            |
| Nungwane Raw Water Aqueduct                                     | Rehabilitation  | Ugu DM                          | 81                | 70            |
| Wartburg to Bruyns Hill Pipeline                                | Augmentation    | uMgungundlovu DM                | 78                | 76            |
| Maphephethwa WW: Upgrade Plant (5.0 Ml/d)                       | Augmentation    | eThekweni MM                    | 61                | 11            |
| Howick West Reservoir Upgrade                                   | Augmentation    | uMgungundlovu DM                | 55                | 55            |
| Lion Park Pipeline  | Augmentation    | uMgungundlovu DM                | 47                | 41            |
| Maphumulo BWSS Phase 3: WTW Upgrade (6Ml/d to 12Ml/d)           | Rural Expansion | iLembe DM                       | 37                | 27            |
| <b>North Coast Emergency Pipeline</b>                           | Rural Expansion | iLembe DM                       | 32                | 32            |
| Harry Gwala Planning Regional Schemes                           | Rural Expansion | Harry Gwala DM                  | 20                | 20            |
| East Coast Desalination Plants                                  | Augmentation    | eThekweni MM, iLembe DM, Ugu DM | 27                | 7             |
| Umzinto WTW   | Upgrade         | Ugu DM                          | 16                | 16            |

### 11.3 Status of Bulk Supply Agreements with Major Customers

Umgeni Water has signed Bulk Supply Agreements with all of the six Water Service Authorities it supplies, notably 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 water in respect of planning and implementation of the quality and quantity of treated water, asset management and metering. Umgeni Water's levels of service will continue to be regulated and monitored at a micro level at the water 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.

Quarterly operational liaison meetings with the municipalities will continue to ensure that customer requirements are continuously met and responses to new requirements are provided.

Umgeni Water will continue to operate and maintain the thirty-seven water schemes within the iLembe District Municipality as an interim annexure agreement to the existing Bulk Water Supply Agreement. The objective is to operate these small stand-alone local water schemes, whilst the regional schemes are being developed and phased in. In the interim, the small schemes are subject to the same water quality and quantity standards and this requires on-going rehabilitation of the existing infrastructure.



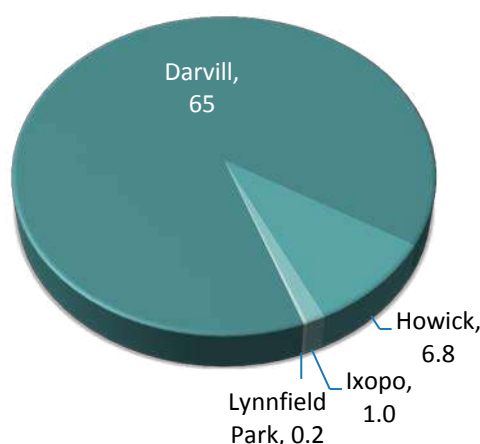
## 12 Bulk Wastewater Treatment and Disposal Plan

Umgeni Water owns and operates the Darvill Wastewater Treatment Works and Ixopo Wastewater Treatment Works, and operates and maintains the Howick Wastewater Treatment Works for the uMgungundlovu District Municipality. At the beginning of April 2014, Umgeni Water also commenced operation of the small Lynnfield Park Wastewater Treatment Works (WWTW) on behalf of the Msunduzi Local Municipality. Two small “package” plants are also operated at Albert Falls Dam.

Umgeni Water is increasing its bulk wastewater business and is currently planning construction of two new works, namely, Mpophomeni WWTW (6MI/d) and Mkhambathini WWTW (2MI/d) which should become operational in 2017.

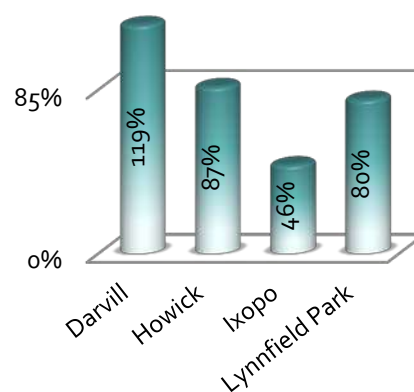
**Figure 12.1:** Wastewater Treatment Works Design Capacity (MI/d).

**WWTW Design Capacity**



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

**WWTW MI/d**



**Table 12.1:** Compliance projected to June 2015.

| Wastewater Treatment Works | Design Capacity MI/d | UW Effluent Compliance |        |       | DWA Green Drop Ratings   |                  |
|----------------------------|----------------------|------------------------|--------|-------|--------------------------|------------------|
|                            |                      | 2013                   | 2014   | 2015  | 2013 Effluent Compliance | 2013 Risk Rating |
| Darvill                    | 65                   | 87.0%                  | 81.4%  | 83.6% | 83.8%                    | 68.5% (↑)        |
| Howick                     | 6.8                  | 82.7%                  | 87.0%  | 87.5% | 83.1%                    | 50.0% (→)        |
| Ixopo                      | 1                    | 88.1%                  | 97.1%  | 97.5% | 92.0%                    | 29.4 % (↑)       |
| Lynnfield Park             | 0.2                  | -                      | 88.5%* | 89.2% | 94.3%                    | 41.1% (↑)        |

\* Compliance calculated for the period April-June 2014

**Table 12.2:** Summary of Wastewater Capex projects to be implemented during 2015/16 to 2019/20

| Objective | Major Project   | Project Total (R'm) | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------|---|---------------------|------|------|------|------|------|
|           |   |                     | R'm  | R'm  | R'm  | R'm  | R'm  |
| Upgrade   | Darvill WWTW: Plant Capacity Increase (85MI/d) (MBR - 10MI/d in 3-5yrs) | 719                 | 251  | 178  |      |      |      |
| Expansion | Mpophomeni WWTW   | 142                 | 12   | 85   | 43   |      |      |
| Expansion | Mkhambathini WWTW   | 85                  | 13   | 42   | 29   |      |      |
| Upgrade   | Darvill WWTW: Co Generation   | 59                  | 16   | 42   |      |      |      |
| Upgrade   | Darvill Sludge Handling Facility  | 48                  | 8    | 26   | 5    | 7    |      |
| Upgrade   | Howick WWTW - Major Rehab of Constrained Unit Processes                 | 17                  | 3    | 5    | 9    |      |      |

## 12.1 Darvill Wastewater Treatment Works

The average daily flow of the Darvill Wastewater Treatment Works in 2014 was 77.3 Ml/d, with peaks estimated to exceed 300 Ml/d during heavy rainfall events as a result of storm ingress. Even under optimal conditions, flows over 110 Ml/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. In addition to the increase in the hydraulic load with development in Pietermaritzburg, a 33% increase in the organic load has been observed since 2008.

The increase in the organic load has put a strain on the capacity of the plant 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. An interim upgrade of the works aeration capacity was implemented in October 2013 to minimise the impact of the increase in the organic load. While this helped significantly in 2014, a larger upgrade was recognised to be necessary.

A recent planning investigation examined several growth scenarios in the Msunduzi Local Municipality and recommends an immediate capacity upgrade of 35Ml/d, which will be adequate until 2023, and a further capacity upgrade of 20 Ml/d, the timing for which will be determined by the demand growth patterns. A capital project to undertake this work is currently well under way and commissioning is expected in mid-2016.

Umgeni Water has been issued with a 20 year licence (No. 21065561) from 24 June 2010, renewable every five years. The permitted discharge is 75Ml/d however; this is being reviewed as part of the licensing process for the upgraded site.

### Summary of plans to achieve Green Drop Certification for Darvill WWTW over business plan Period

- Complete the 35Ml/d upgrade. 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.
- 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 during the risk assessment review.
- Refurbishment of digester 5 was completed, but to avoid further process problems, the work on digester 6 is on hold until after construction and start-up of the 2 new digesters.
- Development an artificial wetland system is under investigation as a possibility for improvement of untreated spillages out of the storm dam at times of high inflow. Pre-feasibility work was undertaken and the project is in the planning phase, with the requirements for an EIA being followed up.
- Interim projects have been unable to meet the current load demands therefore; Green Drop Certification for the Darvill WWTW can only be expected after completion of the major plant upgrade work.

## 12.2 Ixopo Wastewater Treatment Works

The current capacity of the Ixopo WWTW is 1 Ml/d. The average daily inflow to the Ixopo WWTW in 2013/14 was 0.35 Ml/day, due to multiple problems experienced in the municipal sewer collector systems. The estimated normal inflow will exceed the works capacity if the District Municipality were to routinely deliver all the sewage generated in the town to the wastewater treatment works. The lower than expected inflows and early upgrading of the works capacity through the installation of a third aerator has provided sufficient capacity for the interim and therefore the construction of an additional clarifier was initially postponed.

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

### Summary of plans to achieve Green Drop Certification for Ixopo WWTW over business plan Period

- The plant treatment capacity has been upgraded through the installation of a third aerator.
- The construction of the second clarifier is in Umgeni Water current Capex programme.
- An automated screen has been installed to mitigate spillages at the plant during the night when the plant is unmanned.
- The annual risk assessment review of the entire wastewater collection and treatment system was undertaken in conjunction with Harry Gwala District Municipality. 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 was highlighted as a high risk during the risk assessment review.
- Umgeni Water has been assisting the Municipality with sewer network problem interventions and has funded the replacement of sewer pipelines in the Fairview Area.
- Green Drop Certification for the Ixopo WWTW was achieved in the 2012/2013 period of assessment and the effluent quality requirements are projected to be achieved in 2014/2015.

## 12.3 Howick Wastewater Treatment Works

Umgeni Water has an Operations and Maintenance Contract with the uMgungundlovu District Municipality for the Howick WWTW, this has been extended to 20 Years. Effluent quality non-compliance is primarily due to the lack of adequate sludge dewatering as numerous operational constraints have been encountered despite the installation of 2 dewatering units. Process and asset management improvements are also required to improve the wastewater quality compliance. Upgrading of the solids removal process is currently in progress.

### Summary of plans to achieve Green Drop Certification for Howick WWTW over business plan Period

- Multiple process optimisation interventions continue to be undertaken.
- Pumpstation issues are being addressed in the short term, whilst a longer-term project to upgrade these is in progress with uMgungundlovu District Municipality.
- Telemetry has been implemented to allow rapid response to pumpstation problems however; this will be further improved and extended to include 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 (WRAP) that was previously developed for this system.
- The construction of the new 6 Ml/d Mpophomeni WWTW will begin in 2015 and is expected to reduce loads to Howick WWTW.
- Green Drop Certification for the Howick WWTW is expected to be achieved in 2015.



## 12.4 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. Some involvement and compliance monitoring (including assessment of the adjacent stream) began in 2014, and quite extensive refurbishment work has been undertaken since including;

- Installation of a chlorine dosing system,
- Replacement of the electrical power panel,
- Implementation of a portable Waste Activated Sludge pump,
- Emptying, cleaning and re-starting both the reactor units,
- Major revision to both the clarifier units, including RAS pumps replacements, and
- Employment of a process controller during the day, 6 days a week.

Further work on improving the compliance including process optimisation at the site is ongoing,

## 12.5 Albert Falls Wastewater Package Plants

Umgeni Water operates two small package plants – 0.01 Ml/d at Albert Falls Dam. Compliance is expected to improve upon completion of the refurbishment process at the Albert Falls South works during this business plan period.

## 12.6 Other initiatives

Achievement of Green Drop status is dependent on the municipalities' ability to fulfill and provide proof of compliance against the Green Drop requirements for sewer reticulation. In this regard Umgeni Water will increase its support to municipalities over this business plan period. These include:

- Assistance at Ixopo with improving the collector sewer network and repairing or replacing pipework in key areas,
- Further developing relationships with uMgungundlovu District Municipality towards Umgeni Water taking on operation and maintenance of several other existing sewage works (including at Mooi River, Camperdown, Cool Air, Richmond and Appelsbosch),
- Assisting with the design and construction of new WWTW together with the WSA (Mkhambathini and Mpophomeni are currently in progress),
- Designing wastewater monitoring programmes for the WSA,
- Increasing awareness through presentations and communications to improve understanding of requirements to achieve Green Drop certifications, and
- Publication of effluent quality information in a format that is accessible to consumers.



## 13 Retail Supply

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Umgeni Water does not provide any retail water supplies.



## 14 Other Activities (Section 30)

### 14.1. Implementing Agent for DWS and Alfred Nzo and OR Tambo Water Services Authorities for Bulk Water Supply Infrastructure Development.

Umgeni Water will continue to provide implementing agency services to the Department of Water and Sanitation, Alfred Nzo District Municipality and OR Tambo District Municipality for bulk water services. Work is being undertaken in terms of the infrastructure funding agreement that was signed by the former Department of Water Affairs & Forestry (Eastern Cape Region), the OR Tambo District Municipality and Umgeni Water in February 2008, and a tripartite funding and implementation agreement currently being concluded between the Department of Water and Sanitation, the Alfred Nzo District Municipality and Umgeni Water.

#### 14.1.1 Greater Mbizana Regional Bulk Water Supply Scheme

The Greater Mbizana Regional Bulk Water Supply Scheme is currently being implemented, with some components completed and others under construction. As a result of changes that took place as part of the municipal demarcation process in 2011, the project is now under the jurisdiction of the Alfred Nzo District Municipality. Project progress and planned activities for contracts that have been awarded are:

##### Construction of the Ludeke Dam

- Construction work on the Ludeke Dam was completed in April 2014.
- The Ludeke Dam is a 40 m high, Category 3, clay-core rockfill embankment dam on the Ludeke River, a tributary of the Mtamvuna River.

##### Construction of the raw water pump station and rising main to the Nomlacu Water Treatment Plant

- The contract for the raw water pump station and 13.2 km long, 500 mm diameter rising main to the Nomlacu Water Treatment Plant was completed in December 2011.

##### Construction of the first phase of the Nomlacu Water Treatment Plant

- The civil and mechanical and electrical works required for Phase 1 of the upgrading and extension of the Nomlacu Water Treatment Plant have been designed to provide up to 10 000 cubic metres per day.
- Construction work of the first phase of the Nomlacu Water Treatment Plant is complete.

##### Construction work on the first phase of the Bulk Treated Water Supply System

- Phase 1 of the bulk treated water supply system comprises 28 km of pipelines, 8 bulk storage reservoirs, and a pump station.
- Construction work on the first phase of the bulk treated water supply system is nearing completion, with a number of components having been brought into operation.
- The expected date of completion is June 2015.

The target date for completion of Phase 1 of the Scheme is June 2015 at a total capital cost of approximately R664 million (including VAT).

The Department of Water and Sanitation has requested 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 Plant) for an interim two-year period on a cost recovery basis. An Operation and Maintenance Agreement is still to be signed.

Operational responsibility of the Nomlacu Water Treatment Plant was handed over to Alfred Nzo District Municipality in June 2013.

The implementation of further phases of the bulk water supply will depend on priorities within the area and the availability of funding.

The purpose of the project is to ultimately supply 20 MI/d of potable water to a population of 266 000 people (approximately 44 500 households), allowing for an increase in the average consumption per capita from 25 litres per person per day to 75 litres per person per day over a 30-year time horizon. The targeted categories of consumers to be supplied with potable water are domestic water users throughout the region, and commercial and light industrial users and institutional users mainly within the town of Bizana. The estimated total capital cost of the entire bulk water supply scheme, including all phases, is in excess of R1.1 billion over a multi-year development period.

#### 14.1.2 Ingquza Hill Regional Bulk Water Supply Scheme

Umgeni Water has been appointed as the Implementing Agent for the Study Phase of the Ingquza Hill Regional Bulk Water Supply Scheme, using the DWS RBIG "Framework for Implementation" as a guide in the implementation of this project. OR Tambo District Municipality is the Water Services Authority.

Work has not yet started on this project, as the RBIG Study Phase Agreement between the Department of Water and Sanitation and Umgeni Water has not yet been concluded. Once started, it is anticipated that this study will take about thirty three months to complete.

### 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 DEA: Working-for-Water

Umgeni Water has been an Implementing Agent for DEA for the control of terrestrial in selected catchments in the Mvoti to Mzimkhulu Water Management Area since 2003. Umgeni Water has been awarded a new contract until 31 March 2017. The agreement is being finalised (currently with DEA). The terrestrial weed programme (contract value R 12 million for 2 years) will hire and train people from within the community as contractors or employed as part of the contractor's team.

The teams use approved working for water clearing methods and apply herbicide as per the working for water herbicide policy. The contractors employed by the programme are provided with functional and developmental training to ensure that they can either become contractors on exit from the programme or join the formal job market in other capacities. This will contribute to the social economy by creating jobs through clearing of alien vegetation in raw water supply catchments.

**Table 14.1:** Working-for-Water Programme

| Project Name     | Total Hectares | Total Person Days | Max People Employed per project |
|------------------|----------------|-------------------|---------------------------------|
| KZN Nagle        | 387            | 2678              | 88                              |
| KZN Mgeni Valley | 3600           | 3151              | 66                              |
| KZN Upper Mvoti  | 378            | 2039              | 55                              |
| <b>Total</b>     | <b>1365</b>    | <b>7869</b>       | <b>209</b>                      |

## 14.4. Implementing Agent for DWA: KZN River Health (RHP) and Adopt a River Programme (AaRP)

Umgeni Water has been appointed by DWA as the Implementing Agent River Health Programme and Adopt a River Programme for 2012-2015.

The focus of the RHP for 2012-2015 is establishment of monitoring sites for the programme. These will include 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.

The AaRP will focus on clearing activities for 2012-2015 on the Mgeni and Upper Mvoti Catchment Area and monitoring and maintaining cleared areas

This contract will expire on 31 March 2015. DWS has indicated its intention to extend the contract and written communication or agreement regarding this is awaited. The scope of work is expected to remain the same.

## 14.5. Laboratory Services

Umgeni Water provides an extensive array of ISO/IEC 17025 accredited laboratory testing services to various municipalities in KZN and the Eastern Cape. The primary objective of the partnership with the WSAs is to improve the level of compliance in terms of the Blue Drop and Green Drop Systems.

Currently, fixed term contracts are in place for water and wastewater quality monitoring with the eThekweni MM, Harry Gwala DM, Ugu DM, uMgungundlovu DM, Msunduzi LM, and Alfred Nzo DM.

Laboratory services are also provided to various other water sector entities including Mhlathuze Water, Amatola Water and uThukela Water, as well as to over 2500 other clients (industries, academic institutions, commercial labs, farmers, private individuals).

## 14.6. 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.

### 14.6.1 Support to Ugu District Municipality

In 2014/2015, six projects were implemented on behalf of Ugu DM and R13.6m was spent, comprising:

- Marburg KFC Pipe replacement (R0.71m)
- Ramsgate/Southbroom pipe replacement (R0.12m)
- Valley Road Pipe Replacement (R3.6m)
- Crescent Street Pipe Replacement (R2.96m)
- Ramsgate Pipe replacement (R5.2m)
- Merlwood Road Crossing Pipeline (R1.06m)

### 14.6.2 Support to uMgungundlovu District Municipality

Four projects targeting asset refurbishment are being implemented on behalf of UMDM and R1.3m was spent in 2014/2015, comprising:

- Mpophomeni WWTW – Makopane Pump Station Automated Screens (R84 000)
- Mpophomeni WWTW – kwaMevane Pump Station Automated Screens (R0.6m)
- Bridge Pump Station Rehabilitation (R0.6m)
- Howick – Shiyabazali Discharge Channel (R10 000)

Other vulnerable municipalities (Amajuba DM and Umzinyathi DM) were assisted with possible solutions which require capital investment. Business plans were developed to assist with funding applications.

Projects specifically targeting the reduction of Non-Revenue Water in municipal reticulation networks will be being identified for implementation in 2015/2016.

### 14.7. A concept plan to extend water services throughout KwaZulu-Natal Collaboration between Umgeni Water, CoGTA and DWS

In November 2013, Umgeni Water assumed the role of programme management for the development of the conceptual water services plan for KwaZulu-Natal following a request from the Department of Co-operative Governance and Traditional Affairs (CoGTA). The work is primarily being done by consultants previously appointed by CoGTA and has a budget of R9m.

The first phase of the project was a consolidation of concurrent projects at CoGTA, the Department of Water and Sanitation (DWS) and at Umgeni Water and included identification of water service delivery gaps and the provision of conceptual plans focussing on regional schemes. Local schemes were identified as options in areas where regional schemes were not viable or where an interim water supply was needed.

The main immediate deliverable of this phase was the development of Conceptual Universal Water Access Plans for each District Municipality in KwaZulu-Natal by the end of May 2014. This was completed in September 2014, due to minor delays encountered.

The second phase of the project is being funded and implemented by Umgeni Water. The immediate deliverable of this stage is a conceptual report on how water service delivery gaps in KwaZulu-Natal will be addressed through regional schemes as well as local schemes, where necessary. This is envisaged to be completed by June 2015.

The detailed / reconnaissance level Universal Access Plan for KZN is envisaged to be completed by December 2015.



## 15 Human Resources Plan

### 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 ten 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.*

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

### 15.2 Workforce Profile

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

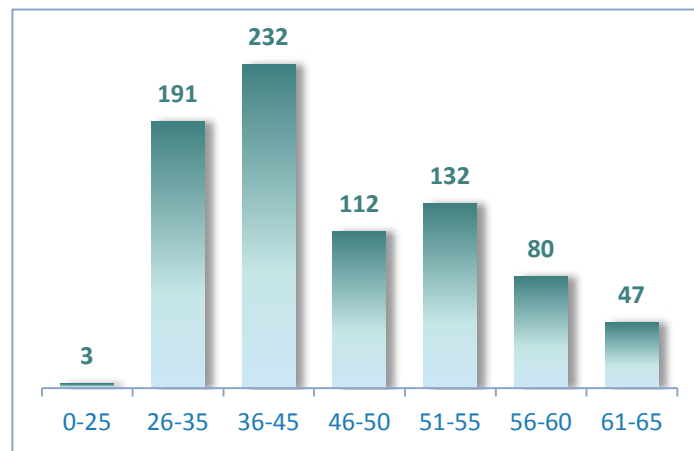
The workforce plan has been used as the basis to develop the Human Resources Plan which includes projected human resource requirements shown in **Table 15.1**. The employee age profile is shown in **Figure 15.1**. Umgeni Water's plan comprises using training programme interventions as well as succession

planning to ensure that Umgeni Water addresses skills shortages, including those being lost through ageing workforce, whilst also addressing Employment Equity needs.

**Table 15.1:** Projected Workforce Profile for 2015/2016 to 2018/2020 (includes contract employees)

| Occupational Levels  | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 |
|--|---------|---------|---------|---------|---------|---------|---------|
| Top management   | 5       | 5       | 5       | 5       | 5       | 5       | 5       |
| Senior management  | 30      | 30      | 30      | 30      | 30      | 30      | 30      |
| Professionally qualified and experienced specialists and mid-management  | 210     | 214     | 221     | 225     | 228     | 228     | 228     |
| Skilled technical and academically qualified workers, junior management, supervisors, foremen, and superintendents | 407     | 415     | 433     | 440     | 439     | 439     | 439     |
| Semi-skilled and discretionary decision making   | 199     | 206     | 214     | 222     | 220     | 220     | 220     |
| Unskilled and defined decision making  | 137     | 143     | 147     | 147     | 149     | 149     | 149     |
| Total (excluding Board members)  | 988     | 1013    | 1050    | 1069    | 1071    | 1071    | 1071    |

**Figure 15.1:** Current Workforce Age Profile



During the business plan period 2015/2016 to 2018/2020, forty seven (47) employees of the total workforce are anticipated to retire normally from the organisation in five (5) years' time (**Figure 15.1**). The organisation currently has plans in place, including succession planning, skills development interventions and leadership / employee development programmes that will mitigate the loss of skills and institutional memory due to normal retirement. The skills development interventions aim to introduce more young employees into the organisation

### 15.3 Employment Equity

Umgeni Water will continue to diversify its workforce over the five-year period through opportunities presented by recruitment, retention, staff development, turnover and succession planning. Race and gender profiles are depicted in **Figure 15.2** and **Figure 15.3**, respectively.



Figure 15.2: Race Profile

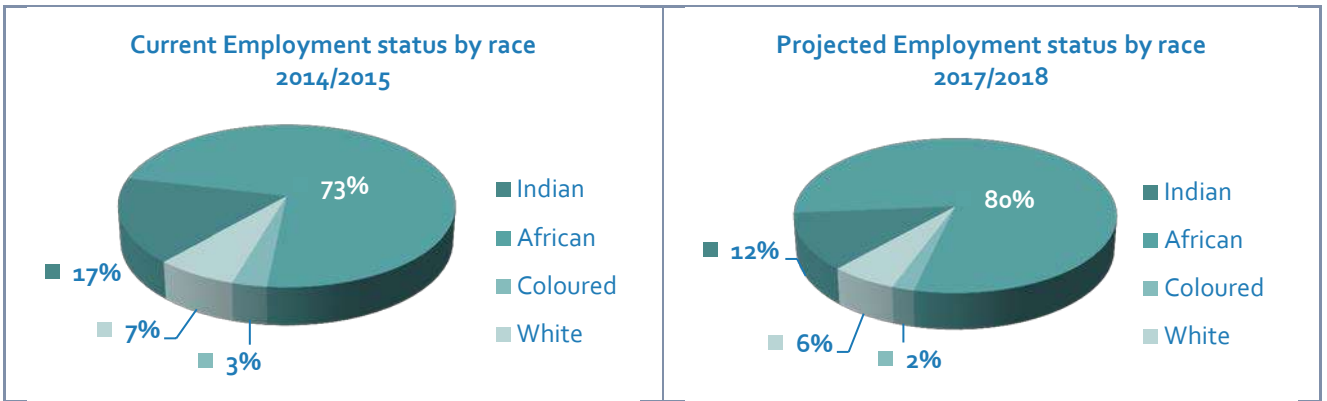


Figure 15.3: Gender Profile

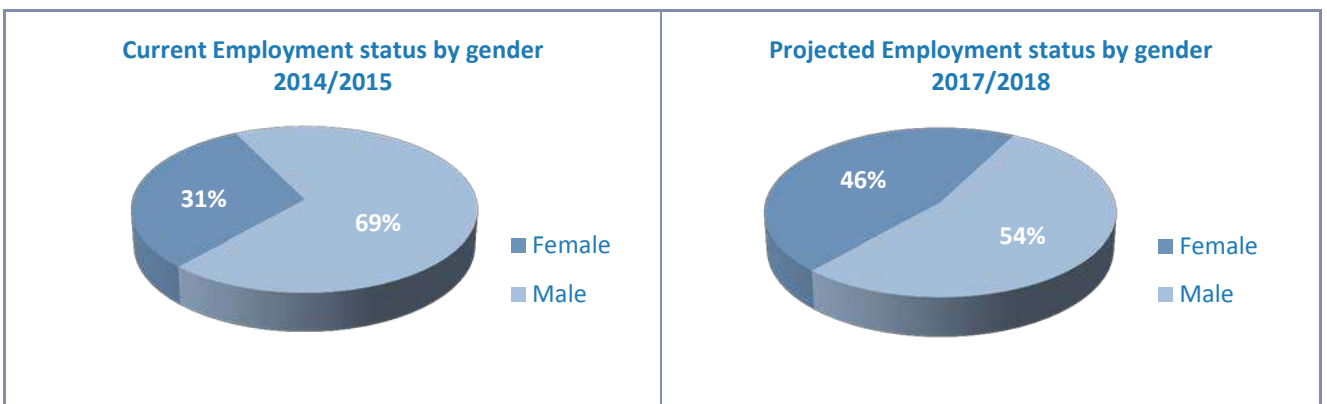
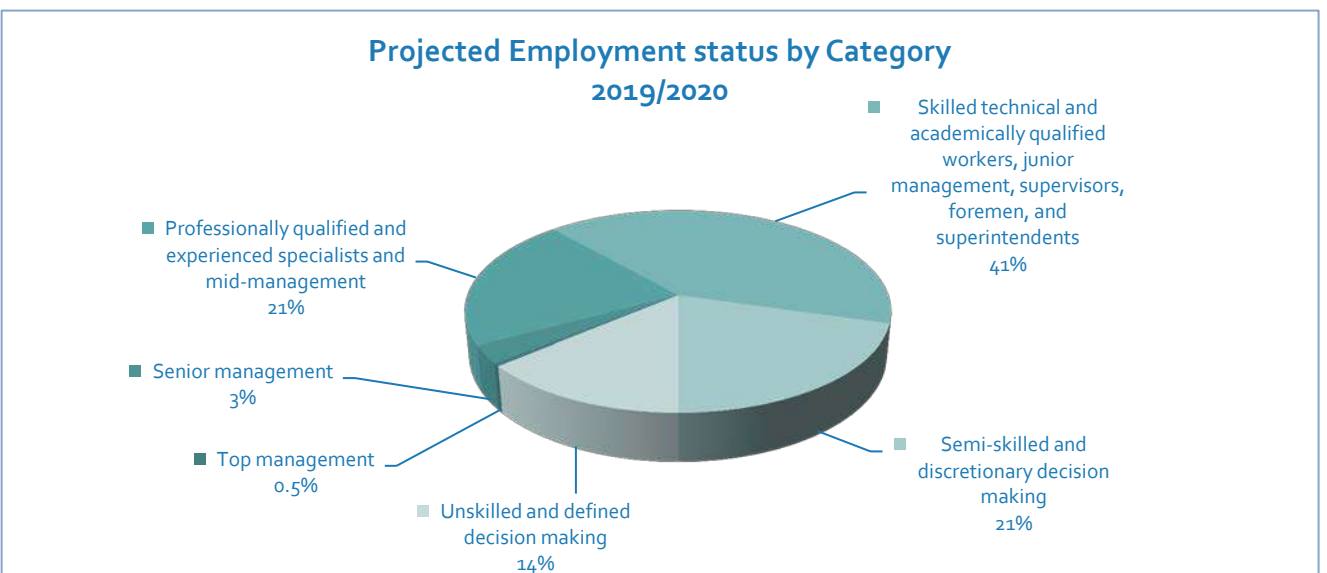


Figure 15.4: Occupational Categories



## 15.4 Training programmes

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

The approach will include options for buying, making, converting and creating skills, whilst continuing to ensure diversity is increased in under-represented areas. The convert strategy will focus on core, scarce and critical skills through retraining. This will be achieved through Learnerships, Training Interventions and Recognition of Prior Learning.

Umgeni Water will develop strong partnerships with Universities, University of Technologies, FET colleges and SETAs in support of its skills development initiatives. The organisation will also continue to maintain a strong partnership with National Treasury to assist in training 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 regional water utility.

- The Leadership Management Programme comprises of Management Development Programme (MDP), Emerging Development Programme (EMP) and Senior Management Development Programme (SMDP).
- This programme is structured into three phases:
  - Phase one and Phase two comprise MDP and EMP programmes: implemented in 2015
  - Phase three comprises the SMDP programme: implemented in 2015/2016.

**Table 15.2:** Leadership Management Development Programme Plan for 2015/2016 to 2018/2020

| Initiatives/ plans   | Estimated<br>2014-2015 | Planned<br>2015-2016  | Planned<br>2017-2020 |
|--|------------------------|-----------------------|----------------------|
| Identify Senior Management Development Programme                             | 35 training plans met  | 35 training plans met | Review and Monitor   |
| Identify Management Development Programme and Emerging Development Programme | 95 training plans met  | Review and Monitor    | Review and Monitor   |

The staff skills development plan for the Five-Year Period is summarised in **Table 15.3**.

### 15.4.2 Artisan Learnership Programme

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.

During this business plan period Umgeni Water will:

- Recruit forty (40) new external apprentices in Technical skills of operations. Fifteen (15) internal staff will proceed to level 2 of Learnerships, in Water and Wastewater treatment, and
- Provide practical training for two (2) years to eighteen (18) external apprentices once they have acquired their trade tests in Mechanical Engineering, Electrical engineering and Instruments.

### 15.4.3 Bursary and Graduate Programme

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

- Continuing with the current bursary programme and awarding further bursaries for skills identified, namely, civil engineering, mechanical engineering, mechanical engineering, chemical engineering and financial accounting.
- Continue to ring-fence twenty-eight (28) 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 Training and Development and Assisted Education Programmes

Training and development and assisted education programmes will be improved by better alignment of the skills and competency needs of the business 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 competencies 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 15.4.

### 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 Scientist with specific emphasis on meeting the skills shortage in the municipalities in KwaZulu-Natal. As part of this programme, a total of forty-four (44) engineers are enrolled in the programme. Each year a target number 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 15.3: Staff Skills Development Plan for 2015/2019 to 2019/2020**

| Initiatives/Plans   | Result Indicator                                  | Estimated (2014/2015)  | Year 1 (2015/2016)  | Year 2 (2016/2017)                                   | Year 3 (2017/2018)                               | Year 4 (2018/2019)  | Year 5 (2019/2020)   |
|---|---|--|---|--|--|---|--|
| Develop technical skills for the organisation (artisans).   | Number of artisans training plans met.            | 37 training plans met<br>(year 2 artisan)<br><br>20% of new artisans absorbed. | 40 training plans met<br>(year 1 apprenticeship)  | 40 training plans met<br>(year 2 apprenticeship)     | 40 training plans met<br>(year 3 apprenticeship) | 40 training plans met<br><br>40 trade tests passed<br><br>Year 1 artisan trainees | 40 training plans met<br><br><br><br><br>Year 2 Artisan trainees |
| Develop technical skills for the organisation (process controllers).                                | Number of process controllers training plans met. | 56 training plans met  | 72 training plans met   | 72 training plans met                                | 72 training plans met                            | 72 training plans met   | 72 training plans met  |
| Develop technical skills for the organisation (apprentices electrical, mechanical and instruments). | Number of apprentices training plans met.         | 12 training plans met  | 12 training plans met<br><br>12 apprentices trade tested<br><br>Year 1 Artisan trainees | 12 training plans met<br><br>Year 2 Artisan trainees | -  | -   | -  |
| Develop technical skills for the  | Number of graduates /                             | 37 development   | 28 development  | 28 development                                       | 28 development                                   | 28 development plans met  | 28 development plans met.  |

| Initiatives/Plans  | Result Indicator  | Estimated (2014/2015)   | Year 1 (2015/2016)  | Year 2 (2016/2017)  | Year 3 (2017/2018)  | Year 4 (2018/2019)  | Year 5 (2019/2020)  |
|--|---|---|---|---|---|---|---|
| organisation (graduates / interns).  | interns development plans met and professional registrations obtained.              | plans met<br>1 professional registration.   | plans met   | plans met   | plans met   | .   |   |
| Develop technical skills for the organisation (bursars).   | Number of bursars' degree requirements met.   | 13 degree plans on track  | 13 degree plans met   | 13 degree plans met   | 13 degree plans met   | 13 degree plans met   | 13 degree plans met   |
| Develop and train water sector professionals for municipalities.                                 | Numbers of candidate engineers/ professionals developed and certification achieved. | 44 in training.   | 44 developed.<br>4 certifications at year end.  | 40 developed.<br>11 certifications at year end.   | 29 developed.<br>11 certifications at year end.   | 18 developed.<br>18 certifications at year end.   | -   |
| Enable training, development and assisted education as informed by Individual Development Plans. |   | 60% of training budget spent on increasing capacity of core and distinctive competencies. | 60% of training budget spent on increasing capacity of core and distinctive competencies. | 60% of training budget spent on increasing capacity of core and distinctive competencies. | 60% of training budget spent on increasing capacity of core and distinctive competencies. | 60% of training budget spent on increasing capacity of core and distinctive competencies. | 60% of training budget spent on increasing capacity of core and distinctive competencies. |

**Table 15.4:** 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           | 5 (Class V)   | 5 (Class V)   | 5                 | 4-Refresher Course<br>1-Advanced Water Operation Course                           | 1-Advanced Operation Course<br>5-Refresher Course   | 1-Refresher Course  |
| Process and Quality Tech | 3 (Class V)<br>1 (Class III)  | 4 (Class V)   | 4                 | 2 Advanced Water Operation  | Process and Quality Tech<br>Legal compliance courses  | National Diploma Water Care   |
| Senior Operator          | 2 (Class IV)<br>3 (Class V)   | 5 (Class V)   | 5                 | Refresher course<br>N3 Water and Waste Water                                      | Refresher course  | Refresher course  |
| Operator                 | 12 (Class o)<br>2 (Class I)<br>2 (Class III)<br>9 (Class IV)<br>13 (Class V)  | 2 (Class II)<br>1 (Class III)<br>20 (Class IV)<br>6 (Class V)     | 38                | 22-Refresher course<br>2-Enrolment in Learnership programme<br>1-Grandparenting   | 1 – Completing NTC III<br>1- Matriculation<br>18 - Require refresher training<br>1 – Enrol into WWW Learnership programme | 2 – Currently completing B Tech<br>1 – Currently completing ND: Chemical Engineering<br>– Require grand-parenting<br>4– Process environment experience<br>1 – to complete N3<br>1 – NTC III required<br>1 – Process training required<br>8–Refresher Course<br>3– Skills programme<br>2 – Water Purification Course |
| Process Controllers      | 8 (Class o)<br>1(Class II)<br>1 (Class V)<br>1 (Class V)<br>9(not registered) | 9(Class III)<br>2 (Class IV)<br>3 (Class IV)<br>6(Not registered) | 20                | 15-Refresher course<br>5-Enrolment in Learnership programme<br>4-Skills programme | 4 - Require refresher training<br>Grand-parenting required- 2<br>10– Skills programme                                     | 2 – Enrol into WWW Learnership programme<br>4-Grandparenting required<br>8– Skills programme  |
| <b>Total</b>             |   |   | <b>72</b>         |   |   |   |

**Table 15.5:** Umgeni Water registered engineering professionals with ECSA

| Type                                | No. | Field                            | No.       |
|-------------------------------------|-----|----------------------------------|-----------|
| Candidate Engineer                  | 9   | Chemical Engineering             | 4         |
|                                     |     | Civil Engineering                | 4         |
|                                     |     | Electrical Engineering           | 1         |
| Candidate Technician                | 3   | Chemical Engineering             | 2         |
|                                     |     | Civil Engineering                | 1         |
| Candidate Technologist              | 7   | Chemical Engineering             | 2         |
|                                     |     | Civil Engineering                | 5         |
| Professional Engineer               | 15  | Civil Engineering                | 8         |
|                                     |     | Agriculture                      | 1         |
|                                     |     | Chemical Engineering             | 2         |
|                                     |     | Mechanical Engineering           | 3         |
|                                     |     | Electrical Engineering           | 1         |
| Professional Certificated Engineer  | 1   | Certified Electrical Engineering | 1         |
| Professional Engineering Technician | 1   | Electrical Engineering           | 1         |
| Professional Technician             | 1   | Civil Engineering                | 1         |
| Professional Technologist           | 8   | Chemical Engineering             | 1         |
|                                     |     | Civil Engineering                | 7         |
| <b>Total</b>                        |     |                                  | <b>45</b> |

**Table 15.6:** Umgeni Water (National Treasury Graduates) candidate engineers and scientists

| Type / Field                          | No.       |
|---------------------------------------|-----------|
| Chemical Engineering (B.Sc)           | 3         |
| Chemical Engineering (N. Dip)         | 6         |
| Chemical Engineering (B. Tech)        | 11        |
| Chemical Engineering (M Tech)         | 1         |
| Civil Engineering (N. Dip)            | 7         |
| Civil Engineering (B.Sc)              | 4         |
| Mechanical Engineering (N. Dip)       | 4         |
| Electrical Engineering (N. Dip)       | 4         |
| Water Quality and Laboratory Services | 4         |
| <b>Total</b>                          | <b>44</b> |

The information on graduates who are being trained by Umgeni Water as part of a National Treasury funded initiative have been submitted to ECSA, SAICE and SACNASP for registration as candidate engineers, scientists, 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.

## 15.5 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, 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.

## 15.6 Management of HIV and AIDS

HIV and AIDS still remains the single biggest health challenge in the country. 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 "I can't change my HIV status but you can change your attitude" strategy of zero stigma; zero discrimination; and zero AIDS related deaths.

Furthermore, Umgeni Water supports the government campaign of "get wise, get tested and get circumcised". 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 and other opportunistic infections;
- Regular monitoring of disease progression and response to therapy
- Regular monitoring tests to pick up possible side-effects of treatment and
- On-going patient support via a Nurse-Line.

Male Medical Circumcision (MMC) in combination with other HIV preventative measures, have been shown to reduce the transmission of HIV in men by sixty per cent (60%) and in light of this, the organisation is encouraging MMC to its employees.

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% at Umgeni Water, as derived from the organisation's medical aid health profile.

## 15.7 Health 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.

## 15.8 Employee Relations

Sound labour relations are the foundation of the business. 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 have 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-eight per cent (58%) 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.



## 16 Environmental Management Programmes and Plans

Umgeni Water strives to conduct its business in a sustainable manner and will ensure the organisation continues to provide and extend sustainable water services to all areas. Mindful of its high reliance on adequate supplies of raw water resources, energy, chemicals and other natural resources to undertake its core business services, Umgeni Water is committed to protecting, conserving, efficiently using and sustaining these resources.

Environmental management programmes and plans are implemented throughout the life-cycle of projects, which is during planning, construction, operation and decommissioning. The different environmental management programmes and plans are categorised into:

- 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 management plans for potential environmental impacts as a result of implementation of infrastructure projects.

### 16.1 Corporate Environmental Management

Umgeni Water has been embarking on green initiatives in terms of implementing corporate environmental sustainability initiatives aligned to global and national sustainability initiatives. Performance of the organisation in this venture is monitored through compliance with the environmental sustainability plan targets as stipulated in the business scorecard. Areas of focus have been shifted to align to:

- Biodiversity Management
- Waste Management
- Green Buildings

Implementation of these three focus areas will continue in 2015/2016 in order to achieve a state of green economy.

#### 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 of new infrastructure projects on biodiversity. Current measures being implemented include:

- Biodiversity management implemented by Msinsi Holdings,
- 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.

During this business plan cycle Umgeni Water will continue to ensure that Biodiversity Impact Assessments are being carried out for all listed activities identified in the CAPEX programme. Where rare species are identified further specialist studies are commissioned and trees of importance are avoided or a search and rescue plan is implemented if proposed construction site cannot be deviated from.

#### Waste Management

The alignment of the entities waste management strategy with the national strategy has been completed and will better assist operational sites with application of the waste management hierarchy, identification,



categorisation and classification of waste, management of waste with respect to the storage, labelling, transport and other aspects, and waste disposal.

Progress and future plans include:

- Implementation and monitoring of recommendations from the water treatment residue study.
- Investigation into the use of Co-ops to undertake waste recycling for various Umgeni Water sites.

### Green Buildings

A new project aimed at promoting sustainable development has been embarked upon. The project will utilise the services of a specialist to assess and recommend Green Building initiatives/opportunities for implementation with the view of transforming the organisation’s infrastructure/business activities and achieve environmental sustainability. The project is still at the initiation stages and progressing according to plan.

Environmental initiatives planned for implementation in this business plan period are shown in **Table 16.1** below.

**Table 16.1: Environmental initiatives planned for implementation in this business plan period:**

| Project                           | Objectives and Outcomes   | 2015/2016 Milestones   |
|-----------------------------------|---|--|
| 1. <b>Biodiversity Management</b> | Assessment of biodiversity status within Umgeni Water operational areas to highlight areas of high conservation status and to minimise negative impacts of new infrastructure projects on biodiversity. | Preliminary investigation on-going biodiversity management in water resources and construction projects completed. |
| 2. <b>Waste Management</b>        | Implementation of the waste management strategy across the organisation.  | Recycling bins rolled out for Head Office. Staff waste recycling awareness campaign implemented.                   |
| 3. <b>Green Buildings</b>         | Reduce the organisation’s carbon footprint through implementation of Green Building initiatives.  | Green Star ratings assessment for all Umgeni Water operational sites complete.                                     |

### Wastewater Reuse

The option of treating domestic sewage from the Darvill Wastewater Treatment Works to potable standards is being investigated. The proposal is to return the treated water back into the distribution system at Umlaas Road. The water could be used to augment the supply to the Western Aqueduct which will serve the high growth areas along the western corridor of the eThekweni Metropolitan Municipality. The advantage of this is that water is made available higher up in the system. A full feasibility study of this scheme is being undertaken. The initiative has however been put on hold due to a rationalisation of the CAPEX programme over the next five-year period.

### Research and Innovation

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.

Priorities that are driven by Umgeni Water’s Organisational Strategies include the following:

- Evaluation and implementation of new technologies and processes to address technical and non-technical challenges of a medium to long term nature in Umgeni Water,
- Implementation of an Innovation scheme in Umgeni Water,
- Greater collaboration with tertiary institutions to encourage more fundamental research in water and wastewater treatment and water resource management,
- Increased number of research proposals for WRC funded research. The target is one successful research project per year for the next 5 years.

Internal projects that are planned for implementation in this business plan period are shown in Table 16.2.

**Table 16.2:** Internal research projects planned for implementation in the business plan period:

| Research Project  | Objectives   | Status and Planned Work  | Milestones<br>2015/2016  | Estimated Investment |
|---|--|--|--|----------------------|
| 1. Evaluation of Alternative Technologies for Treatment of Sludge from Potable Water Works. | To identify and investigate alternative lower cost technologies and methods for treatment and disposal of sludge from potable water works at Umgeni Water.                           | Literature review identifying most viable technologies is complete. It is planned to purchase and evaluate top two technologies. | Identification of viable technologies. Purchase and evaluation of technologies | R 20 000 000         |
| 2. Ultrafiltration Full Scale Evaluation  | To investigate Ultrafiltration technology for low turbidity waters on full scale.  | Preliminary design has been completed. It is planned to commence with detailed design.   | Detailed Design. Construction and evaluation.                                  | R 30 000 000         |
| 3. HYBACS Full Scale Evaluation   | To investigate the benefits of HYBACS technology in terms of energy efficiency and improved process performance compared to conventional activated sludge for waste water treatment. | Conceptual design and technical specification is complete. Detailed design is to be finalised.                                   | Purchase and evaluation of technology.   | R 5 000 000          |

## 16.2 Operational Environmental Management

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.

An environmental legal compliance law expert has been contracted to update the organisation's environmental legislation register. As part of this, education and environmental management awareness will be increased at all levels. In addition, the status of compliance with applicable environmental legislations and regulations will be reviewed. A workshop with all applicable stakeholders has been planned to occur before the end of the financial year.

## 16.3 Integrated Environmental 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.

Currently there are eleven projects in the business plan cycle that require a basic assessment or a Scoping and full environmental impact assessment study to be conducted. Table 16.3 shows key projects requiring environmental authorisations.

**Table 16.3:** Bulk Infrastructure Projects that require environmental authorisations in the business plan period:

| Project name                        | Requirements      |
|-------------------------------------|-------------------|
| East Coast Desalination             | Obtain EA         |
| Greater Mpofana Regional Scheme     | Amend existing EA |
| Nungwane Raw Water Aqueducts        | Obtain EA         |
| uMkhomazi Water Project             | Obtain EA         |
| uMshwathi BWSS                      | Amend existing EA |
| Southern Ndwedwe BWSS               | Obtain EA         |
| Hazelmere Sludge Plant              | Obtain EA         |
| Lower Umkhomazi BWSS                | Obtain EA         |
| Wartburg to Bruyns Hill Pipeline    | Obtain EA         |
| South Coast Pipeline Phase 2B       | Obtain EA         |
| Fawsley Park Reservoir and Pipeline | Obtain EA         |

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.

Twenty projects in construction phase are currently monitored for compliance against the Environmental Management Plans. Non-conformances and mitigation measures are reported on a monthly basis.

For operation sites, to date, environmental performance has been satisfactory with minor challenges in implementation of rehabilitation, 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.

#### Management of remote sites – including decommissioned sites and servitudes

A focus area for this period is development of environmental management strategies and plans, which by nature include safety measures, for remote and / or decommissioned sites to ensure assets, community and public are adequately protected.

These include particular dam sites, including the decommissioned Henley Dam and various pipeline and other servitudes, which may be threatened by encroachment, illegal settlements and construction of unauthorised services. For decommissioned sites, plans to legally dispose of the asset and/or mitigate risks will be developed and implemented.

#### 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.

## 17 Integrated Water Education and Awareness Programme

Umgeni Water will continue with and enhance its water, environment, health education and awareness programmes during this period.

The objectives of the programme are achieved through the following three avenues:

- On site water classrooms programme
- Adopt-A-School Programme
- Schools and Community Outreach Programmes

Water education and awareness content and themes is reviewed each year to assess suitability to address current issues facing the region. Thrusts for this five year business plan will include the water cycle, water treatment, water use, the finiteness of freshwater resources, water re-use, WC/DM, integrated catchment management or a source-tap-source view of the water value chain, water quality and land-use management, sanitation, pollution prevention and the water, health and environment nexus.

The organisation's programmes target rural and urban-based schools and communities, with a wide range of learners and 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 partnerships with the Department of Education and will distribute materials aligned with school curricula targeting learners and educators from Grade R to Grade 9.

### On site water classrooms Programme

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.

90 water classroom lessons in total are planned for each year for these sites.

### Adopt-A-School Programme

Umgeni Water's adopt-a-school programme will focus on vulnerable schools that do not have proper access to water, sanitation and environmental education resources. Initiatives at the target schools comprise facilitating the development of school environmental management plans, creating linkages with relevant departments to facilitate development of library resource centres, creating food gardens and providing access to mainstream environmental programmes and competitions. These schools are empowered to serve as sites for bringing together social and ecological learning across diverse communities.

20 schools are targeted for adoption over the five-year business plan period.

### Schools and Community Outreach Programmes

Educator workshops will be introduced and environmental groups formed, the latter trained to fast track environmental programmes including adopt-a-spot and other greening initiatives.

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.



## 18 Water Conservation and Demand Management Plan

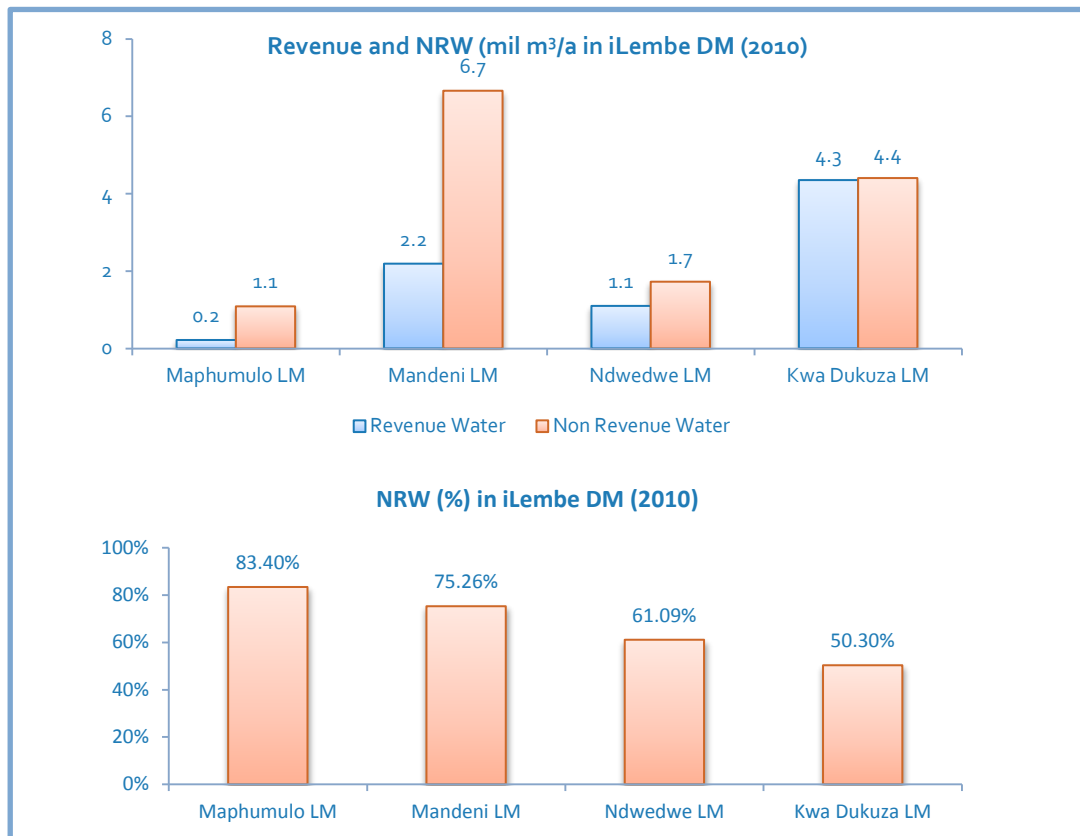
Umgeni Water is mindful that water demand management relieves the stress already imposed on many water resource and supply systems. This further influences Umgeni Water’s capital expenditure programme, enabling some of the augmentation projects to be deferred to later dates.

Umgeni Water experiences very low water loss from its bulk infrastructure operations (average is below 5%) and the organisation 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.

However, the organisation recognises that the significant water loss being experienced in the reticulation system results in substantial losses and seriously threatens the sustainability of the water value chain. Customers are at various stages regarding implementation of water conservation and demand management measures within their respective districts. The eThekweni Metropolitan Municipality in particular has over the past several years been implementing a significant Water Demand Management Programme to reduce its unaccounted-for-water. The benefits from this programme were realised in 2011 with a sustained reduction in water purchases from Umgeni Water. The interventions that had the most marked impact included pressure management, active leakage control, and the implementation of a sewer tariff which was linked to water consumption.

Umgeni Water, in collaboration with the iLembe district municipality and Sembcorp Siza Water, has piloted the continuous trending of water demand at all sales meters to identify instantaneous anomalies at the meter points. This initiative has led to the immediate identification of possible leaks and valve problems and the dispatching of maintenance teams to attend to the leaks. This has resulted in the optimisation of the North Coast System. This initiative prompted the implementation of a pilot project in the use of Automatic Meter Reading for billing and monitoring purposes.

**Figure 18.1: Status of non-revenue water for iLembe DM Local Municipalities**



Notwithstanding the efforts to date, the estimated non-revenue water / water loss in the region remains very high. Status for iLembe DM municipalities is shown in Figure 18.1 and KZN municipalities in Figure 18.2.

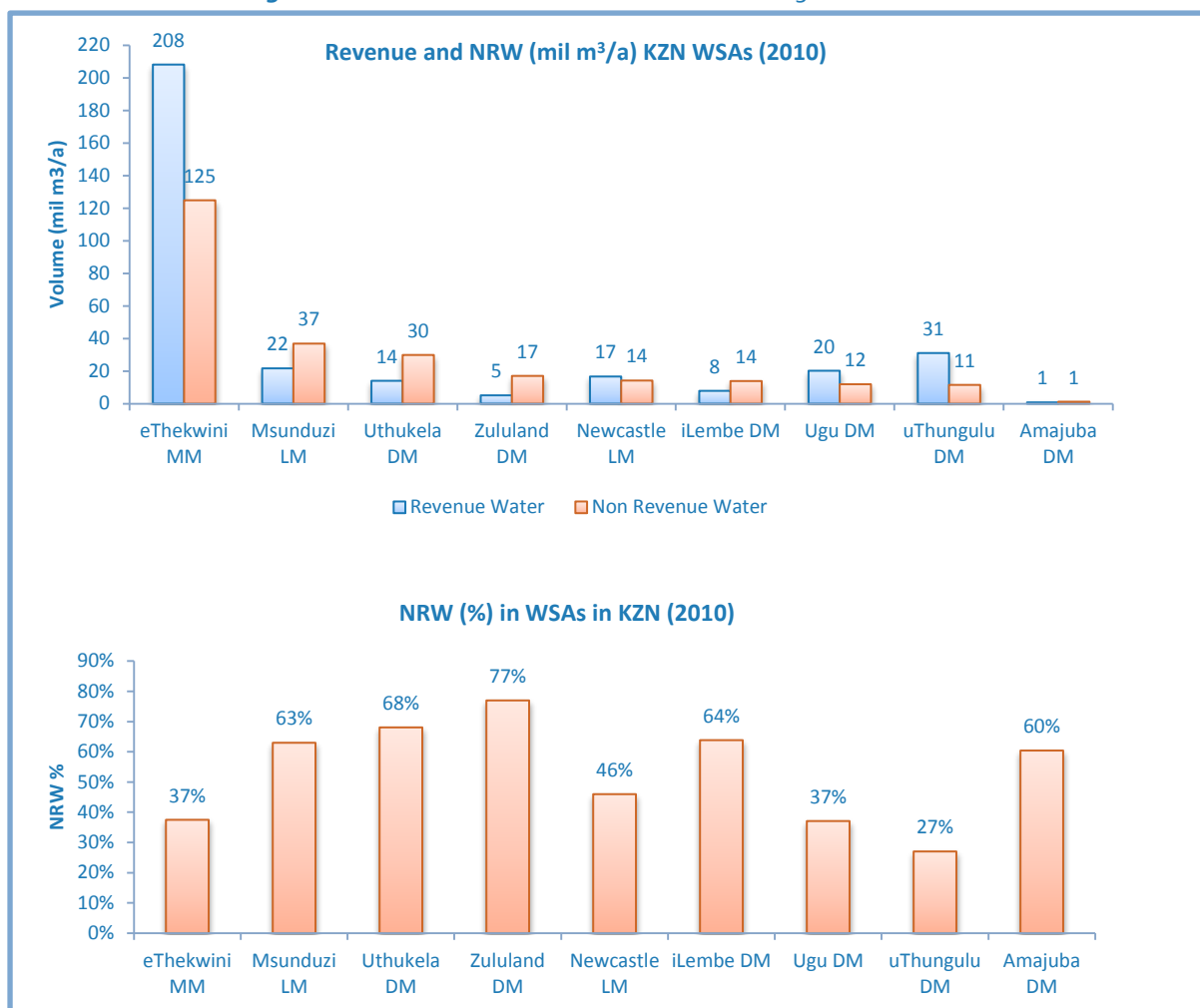
In this period therefore, Umgeni Water will make a more concerted effort through focusing additional resources to collaboratively reduce water loss in the value chain. This includes establishing a water conservation / demand management unit to assist municipalities / develop focused programmes to address reticulation water losses.

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

In conjunction with the Department of Water and Sanitation, Umgeni Water will provide technical, scientific and process support to Water Services Authorities, extending the Blue/Green Drop Programmes to the DWS branded 'No Drop' Programmes targeting water loss management initiatives in the water supply and distribution systems.

Furthermore, Umgeni Water, under the banner of SAAWU has commenced collaboration with SALGA to share and exchange water related benchmarking information, which includes non-revenue water data and information as one of the key parameter to focus on in 2015/2016.

Figure 18.2: Status of non-revenue water for a range of KZN WSAs



## 19 Corporate Social Investment (CSI) Plan

Umgeni Water is committed to supporting the alleviation of poverty, underdevelopment and inequality. In support of this the organisation has in place an approved Corporate Social Investment Policy which ensures a co-ordinated approach in the implementation of CSI initiatives. In terms of its policy Umgeni Water CSI projects are clustered and prioritised around the following categories:

- Education and Training,
- Job Creation,
- Public Health, Community Development and Support,
- Environmental Conservation, and
- Arts, culture and sport.

A CSI Committee was established to facilitate implementation of the policy. CSI projects are funded by a budget that is approved annually by the Executive Committee of Umgeni Water. In addition, CSI projects are also linked to the organisation's Capex Programme. Table 19.1 shows the CSI plan for 2016/2017 and Table 19.2 shows the CSI projects specifically linked to the CAPEX programme.

**Table 19.1:** Projects to be implemented in 2015/2016

| Project   | Beneficiaries and Outcomes  | Estimated Investment | Status and planned work.  | Milestones   |
|---|---|----------------------|---|--|
| Mandela Day Events  | 2 projects earmarked for UGU and Harry Gwala DMs.<br><br>The projects outcomes are Poverty Alleviation, Job Creation and Women Empowerment.                         | R400 000             | 2015/2016:<br>2 Cooperatives formed.<br>Training and support provided to establish the cooperatives as functional business entities.<br>Marketing plan developed.<br><br>2016/2017 : implementation of marketing plan   | 2 cooperatives formed by December 2015 and 2 marketing plans developed by June 2016.   |
| School Multi resource centre  | Development of a Multi Resource Centre at KwaHaza Primary School.   | R700 000             | 2015/2016:<br>Multi Resource centre designed and established. Centre will incorporate: <ul style="list-style-type: none"> <li>○ Upgrading of an existing classroom into a multi-purpose centre that will be utilised as a library, computer room and a hall.</li> <li>○ Installation of a water classroom model depicting the various aspects of water conservation.</li> </ul> | Multi-resource centre to be completed by June 2016.  |
| Youth Empowerment and Job Creation Projects                             | 2 Projects earmarked for uMngeni and Greater Mpofana Municipalities.<br><br>The projects outcomes include: Poverty Alleviation, Job Creation and Youth Empowerment. | R1 Million           | Training of unemployed youth with post matric in plumbing, welding and water treatment to enter formal markets or start their own enterprises.<br><br>Skills development and transfer: Training of technikon and university students during the construction phase of the project.  | Selection of post-matric unemployed youth by December 2015<br><br>2 cooperatives formed by June 2016   |
| <b>Sports and Culture Projects:</b> Water Safety Education and Swimming | Earmarked for communities in the vicinity of Mhlabatshane and Mvutshane Dams  | R1 Million           | 2015/2016 plan<br>Dam Safety Education programme implemented for schools in the target areas<br>Swimming Club: Establishment of swimming club with the objective of teaching the local communities how to swim.<br>Annual Water Sport Events Launch   | Dam Safety Education programme implemented by December 2015.<br><br>2 swimming clubs established by June 2016.<br><br>1 Water Sport Event launch by June 2016. |



**Table 19.2:** CSI Projects specifically linked to Capex Programme

| Capex Programme Project   | CSI Project   | Estimated Investment | Status and planned work.                    |
|---|---|----------------------|---|
| <b>Sports and Culture Projects:</b> Water Safety Education and Swimming | Earmarked for communities in the vicinity of Mhlabatshana and Mvutshane Dams  | R1 Million           | Planning phase                              |
| Howick West Reservoir Upgrade   | School Multi resource centre: Development of a Multi Resource Centre at KwaHaza Primary School.   | R700,000             | In progress                                 |
| Midmar WTW Upgrade  | Poverty Alleviation Project: Training of unemployed youth post matric in plumbing, welding and water treatment to enter formal markets or start their own enterprises.<br>Skills development and transfer: Training of technician and university students during the construction phase of the project. | R1 Million           | In progress                                 |
| Greater Mpofana Regional Scheme   |   |                      |   |
| Pipeline 61 to Richmond   | Early Childhood Development Facility rehabilitation: Facility rehabilitation and identification of equipment needs.   | R300,000             | Not started, project commencement 2016/2017 |
| Greater Eston   | Farm together Cooperative: Establishment of a cooperative for selling agricultural products.  | R700,000             | Not started                                 |
| Lion Park Pipeline  | Mgeni Catchment Management Project: Wetlands rehabilitation with the Mgeni Catchment targeting Mpophomeni and Howick Wetlands   | R1 Million           | Not started                                 |



## 20 Financial Plan

### 20.1 Introduction

Since the previous (2015) Business plan, analyses of the financial performance and position of Umgeni Water have indicated the following key trends:

- Increased awareness and understanding of operating costs as key cost drivers are therefore ensuring plans can be put in place to reduce / control expenditure. To date, the assumptions in terms of the main cost driver assumptions are in line with the 2015 BP projections thus lending credibility to the understanding of the key cost drivers.
- Rising Capital expenditures to cater for the demands arising from Local Government, the focus on water demand management, water resources adequacy and replacement of aging infrastructure.
- Sales volume growth over the next 5 years may be impacted by water conservation and water demand management intensified through the War on leaks Programme.
- Limited grant funding for developmental projects yet increasing need to implement developmental projects.

Proactive measures to ensure that UW's financial position is not impaired or stagnated may include real tariff increases of 3% as well as higher gearing levels to deliver on capex programme. The financial business plan has built these key assumptions as part of its projected financial position for the next 5 years.

The financial performance over the planning period indicates that the net profit margins will be positive and not more than 30% over the planning period. Umgeni Water is projected to achieve a net profit of R661m in 2015 and R529m in 2016. These profit levels are lower than the net profit achieved in 2014 mainly due to higher operating costs and higher net finance costs. In terms of total costs including net finance costs, the main cost drivers (chemicals, raw water, energy, maintenance and payroll cost) is projected to be 67% of total costs, as defined, in 2015 and 65% in 2016. The decrease in the ratio in 2016 is due to the higher finance costs anticipated.

From a capital expenditure perspective, the entity is gearing for an investment of R7.8bn to occur from 2015 to 2020, of which 40% is aimed at rural development ("developmental projects"). The entity has also increased its allocation of financial resources towards upgrade projects for existing assets nearing its useful life. Umgeni Water's drive toward implementing its developmental projects will require a total grant from the Executive Authority of R3.9bn.

To further complement the funding for capex implementation, the cashflow from operations (CFFO) will continue to be positive at levels greater than R600m. Maintaining the CFFO at these levels and greater than R600m is paramount to the entity being able to raise funding and service the resultant debt. Therefore the protection of the operating cashflows will involve stringent costing analyses, pricing for water services taking into account the impact of operating risks to the CFFO and a proactive approach toward financial modelling of customers' planned Water demand initiatives.

The borrowing levels are set to increase to R2.6bn by 2020. The funding requirements for the organisation indicate a funding need of approximately R1.6bn by 2017. Issuing debt up to this quantum will require NT and DWS to increase the current approved borrowing limits. UW will be engaging with NT and DWS over the next 6 to 12 months to secure the required borrowing limits.

The financial plan in support of the organisational strategy reflects an efficient allocation of resources required to implement the corporate strategy, a plan geared to derive operational efficiencies through continuous improvement of resources and systems and the financial sustainability of the organisation to partner with its Executive Authority and other key stakeholders to continue on the journey from water for a few to water for all.

## 20.2 Financial planning assumptions

### 20.2.1 Macroeconomic Factors

**Table 20.1:** Macroeconomic assumptions

|   | ACTUAL |        |              | BUDGET        | FORECAST     |              |               |               |               |               |
|---|--------|--------|--------------|---------------|--------------|--------------|---------------|---------------|---------------|---------------|
|   | F'12   | F'13   | F'14         | F'15          | F'15         | F'16         | F'17          | F'18          | F'19          | F'20          |
| <b>1. MACRO-ECONOMIC FACTORS</b>                                |        |        |              |               |              |              |               |               |               |               |
| <b>Inflation</b>  |        |        |              |               |              |              |               |               |               |               |
| As measured by CPI per the BER                                  | 5.60%  | 5.70%  | 6.10%        | 5.70%         | 4.20%        | 6.00%        | 5.60%         | 5.70%         | 5.80%         | 5.80%         |
| <b>PPI</b>  |        |        |              |               |              |              |               |               |               |               |
| Per the BER   | 6.90%  | 6.00%  | 8.10%        | 5.90%         | 4.00%        | 6.10%        | 5.80%         | 5.70%         | 5.50%         | 5.50%         |
| % Adjustment  |        |        |              | 1.00%         |              | 1.00%        | 1.00%         | 1.00%         | 1.00%         | 1.00%         |
| Revised calendar average  | 6.90%  | 6.00%  | 8.10%        | 6.90%         | 4.00%        | 7.10%        | 6.80%         | 6.70%         | 6.50%         | 6.50%         |
| <b>Interest Rate - Borrowings</b>                               |        |        |              |               |              |              |               |               |               |               |
| <b>Short-term</b>   |        |        |              |               |              |              |               |               |               |               |
| Spread  |        |        |              | 7.21%         | 6.22%        | 6.21%        | 6.47%         | 6.72%         | 6.88%         | 7.03%         |
|   |        |        |              | 0.60%         | 0.60%        | 0.60%        | 0.60%         | 0.60%         | 0.60%         | 0.60%         |
|   |        |        |              | <b>7.81%</b>  | <b>6.82%</b> | <b>6.81%</b> | <b>7.07%</b>  | <b>7.32%</b>  | <b>7.48%</b>  | <b>7.63%</b>  |
| <b>Long-term</b>  |        |        |              |               |              |              |               |               |               |               |
| Spread  |        |        |              | 9.11%         | 7.86%        | 8.17%        | 9.03%         | 9.25%         | 9.14%         | 9.14%         |
|   |        |        |              | 1.60%         | 1.40%        | 1.40%        | 1.40%         | 1.40%         | 1.40%         | 1.40%         |
|   |        |        |              | <b>10.71%</b> | <b>9.26%</b> | <b>9.57%</b> | <b>10.43%</b> | <b>10.65%</b> | <b>10.54%</b> | <b>10.54%</b> |
| <b>European Investment Bank = Variable rate (Repmt in 2028)</b> |        |        |              |               |              |              |               |               |               |               |
| 6 month jibar   |        |        | 6.35%        | 7.88%         | 6.70%        | 6.88%        | 7.48%         | 8.57%         | 8.63%         | 8.63%         |
| Add: 58.6bps (floating rate)                                    |        |        | 0.59%        | 0.59%         | 0.59%        | 0.59%        | 0.59%         | 0.59%         | 0.59%         | 0.59%         |
| All in rate   |        |        | <b>6.93%</b> | <b>8.47%</b>  | <b>7.29%</b> | <b>7.47%</b> | <b>8.07%</b>  | <b>9.16%</b>  | <b>9.22%</b>  | <b>9.22%</b>  |
| <b>European Investment Bank = Fixed rate (repmt in 2029)</b>    |        |        |              |               |              |              |               |               |               |               |
|   |        |        | 9.08%        | 8.44%         | 9.08%        | 9.08%        | 9.08%         | 9.08%         | 9.08%         | 9.08%         |
| Interest Rate - Investments                                     | 5.88%  | 5.39%  | 6.15%        | 6.31%         | 6.32%        | 6.31%        | 6.57%         | 6.82%         | 6.98%         | 6.98%         |
| Weighted average cost of capital                                | 9.34%  | 9.20%  | 9.28%        | 9.54%         | 9.35%        | 9.52%        | 9.90%         | 10.03%        | 10.04%        | 10.06%        |
| <b>Exchange rates</b>   |        |        |              |               |              |              |               |               |               |               |
| R/\$  | 8.210  | 9.625  | 10.677       | 10.300        | 11.720       | 11.880       | 12.450        | 13.010        | 13.600        | 13.600        |
| R/euro  | 10.550 | 12.528 | 14.450       | 13.081        | 13.590       | 13.130       | 13.690        | 14.230        | 14.940        | 14.940        |
| R/pound sterling  | 13.000 | 14.754 | 17.795       | 16.171        | 17.730       | 17.700       | 18.550        | 19.380        | 20.250        | 20.250        |

Reference was made to the following publications in order to arrive at the macro-economic factors for 2014 to 2015:

- Bureau for Economic Research (BER) Inflation forecast - January 2015
- BER interest Forecast – January 2015
- BER Exchange Rate forecast – January 2015

\*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.

## 20.2.2 Staff Costs

Table 20.2: Workforce: Umgeni Water Group

|  | F'12         | F'13         | Actual<br>F'14 | Budget<br>F'15 | F'15         | F'16         | F'17         | F'18         | F'19         | Forecast<br>F'20 |
|--|--------------|--------------|----------------|----------------|--------------|--------------|--------------|--------------|--------------|------------------|
| <b>Approved establishment Umgeni Water</b> | <b>847</b>   | <b>907</b>   | <b>929</b>     | <b>954</b>     | <b>954</b>   | <b>989</b>   | <b>1 010</b> | <b>1 012</b> | <b>1 012</b> | <b>1 012</b>     |
| <b>Staff Complement Umgeni Water</b>       |              |              |                |                |              |              |              |              |              |                  |
| Filled - Permanent                         | 787          | 832          | 835            | 954            | 954          | 989          | 1 010        | 1 012        | 1 012        | 1 012            |
| Filled - Contract                          | 18           | 21           | 21             |                |              |              |              |              |              |                  |
| Vacant                                     | 42           | 54           | 71             |                |              |              |              |              |              |                  |
| <b>SUB-TOTAL: Permanent establishment</b>  | <b>847</b>   | <b>907</b>   | <b>927</b>     | <b>954</b>     | <b>954</b>   | <b>989</b>   | <b>1 010</b> | <b>1 012</b> | <b>1 012</b> | <b>1 012</b>     |
| Contract staff - recoverable               | 37           | 50           | 58             | 59             | 59           | 59           | 59           | 59           | 59           | 59               |
| <b>Total complement Umgeni Water</b>       | <b>884</b>   | <b>957</b>   | <b>985</b>     | <b>1 013</b>   | <b>1 013</b> | <b>1 048</b> | <b>1 069</b> | <b>1 071</b> | <b>1 071</b> | <b>1 071</b>     |
| <b>Approved establishment Msinsi</b>       | <b>141</b>   | <b>141</b>   | <b>141</b>     | <b>144</b>     | <b>144</b>   | <b>144</b>   | <b>144</b>   | <b>144</b>   | <b>144</b>   | <b>144</b>       |
| <b>Staff Complement Msinsi</b>             |              |              |                |                |              |              |              |              |              |                  |
| Filled                                     | 77           | 73           | 106            | 144            | 144          | 144          | 144          | 144          | 144          | 144              |
| Vacant                                     | 64           | 68           | 35             | -              | -            | -            | -            | -            | -            | -                |
| <b>Total complement Msinsi</b>             | <b>141</b>   | <b>141</b>   | <b>141</b>     | <b>144</b>     | <b>144</b>   | <b>144</b>   | <b>144</b>   | <b>144</b>   | <b>144</b>   | <b>144</b>       |
| <b>TOTAL GROUP COMPLEMENT</b>              | <b>1 025</b> | <b>1 098</b> | <b>1 126</b>   | <b>1 157</b>   | <b>1 157</b> | <b>1 192</b> | <b>1 213</b> | <b>1 215</b> | <b>1 215</b> | <b>1 215</b>     |

In 2015/16, the group has an approved and funded establishment of 1 192, of which the Umgeni Water parent establishment is 1 048 and subsidiary, Msinsi Holdings, establishment is 144.

The staff establishment increased in the previous period from 2013/14 (1126) to 2014/15 (1157) due to additional operational and support staff required to operate new schemes.

The staff increase from 2014/15 to 2017/18 is mainly due to additional staff required to operate new schemes (Lower Thukela, Greater Mpofana), additional maintenance staff required to meet the operational requirements for maintenance of bulk water infrastructure for new schemes and additional Process services and laboratory staff to meet the water quality standards requirements

Support staff form 41% of the establishment in 2015 and 2016.

Table 20.3: Staff Costs (R'000)

|   | Actual         |                |                 |                | Budget         |                | Forecast       |                |                |                |
|---|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|   | F'12           | F'13           | F'14            | F'15           | F'15           | F'16           | F'17           | F'18           | F'19           | F'20           |
| <b>Staff Costs : Umgeni Water</b>   |                |                |                 |                |                |                |                |                |                |                |
| Annual Salary Increase<br>[Forecast based on nominal wage rate forecast by BER] | 8.3%           | 7.9%           | 8.0%            | 9.0%           | 8.0%           | 8.0%           | 7.8%           | 7.8%           | 7.9%           | 7.9%           |
| <b>Per the Income statement [A]:</b>  | <b>258 270</b> | <b>291 315</b> | <b>331 609</b>  | <b>402 779</b> | <b>381 180</b> | <b>437 726</b> | <b>483 241</b> | <b>522 100</b> | <b>563 347</b> | <b>607 850</b> |
| - Direct staff costs  | 105 291        | 117 203        | 130 305         | 164 352        | 156 450        | 185 106        | 210 916        | 228 534        | 246 589        | 266 069        |
| - Indirect staff costs  | 152 979        | 174 112        | 201 304         | 238 427        | 224 730        | 252 620        | 272 325        | 293 566        | 316 758        | 341 781        |
| Maintenance Payroll (incl in maint cost)  | 57 165         | 62 504         | 70 516          | 78 538         | 78 982         | 87 426         | 94 245         | 101 597        | 109 623        | 118 283        |
| CPG Monitoring & Compliance   |                |                | 781             | 1 418          | 1 108          | 1 250          | 1 347          | 1 452          | 1 567          | 1 691          |
| O&M Dams Payroll*   | 6 490          | 6 617          | 7 085           | -              | -              | -              | -              | -              | -              | -              |
| <b>Subtotal</b>   | <b>321 924</b> | <b>360 436</b> | <b>409 990</b>  | <b>481 317</b> | <b>461 270</b> | <b>526 403</b> | <b>578 833</b> | <b>625 149</b> | <b>674 536</b> | <b>727 824</b> |
| - % Increase before recoveries  | 9.6            | 12.0           | 14.0            | -              | 12.5           | 14.1           | 10.0           | 8.0            | 7.9            | 7.9            |
| - Less WIP Recoveries   | (8 120)        | (17 505)       | (18 370)        | (21 720)       | (20 840)       | (23 030)       | (24 826)       | (26 762)       | (28 877)       | (31 158)       |
| <b>Total staff costs</b>  | <b>313 804</b> | <b>342 931</b> | <b>391 620</b>  | <b>458 179</b> | <b>440 430</b> | <b>503 373</b> | <b>554 007</b> | <b>598 387</b> | <b>645 659</b> | <b>696 667</b> |
| - % Increase after recoveries   | 9.7            | 9.3            | 14.2            | -              | 12.5           | 14.3           | 10.1           | 8.0            | 7.9            | 7.9            |
| - Average pay (based on complement)   | 357            | 369            | 407             | 475            | 455            | 502            | 541            | 584            | 630            | 680            |
| - % Increase  | 8.4            | 3.3            | 10.4            | -              | 12.0           | 10.3           | 7.8            | 7.8            | 7.9            | 7.9            |
| Productivity - Kl'000 per employee  | 462.3          | 432.3          | 436.1           | 435.7          | 443.2          | 437.0          | 438.5          | 449.4          | 456.1          | 459.6          |
| <b>Staff costs: Msinsi [B]</b>  | <b>18 190</b>  | <b>18 510</b>  | <b>22 311</b>   | <b>24 119</b>  | <b>22 615</b>  | <b>25 218</b>  | <b>27 235</b>  | <b>29 142</b>  | <b>31 473</b>  | <b>33 991</b>  |
| <b>TOTAL GROUP STAFF COSTS [A+B]</b>  | <b>276 460</b> | <b>309 825</b> | <b>353 920</b>  | <b>426 899</b> | <b>403 795</b> | <b>462 945</b> | <b>510 476</b> | <b>551 242</b> | <b>594 819</b> | <b>641 842</b> |
| <b>Payroll related costs included in operating costs</b>                        |                |                |                 |                |                |                |                |                |                |                |
| <b>Retirement benefit costs</b>   |                |                |                 |                |                |                |                |                |                |                |
| - Post employment medical aid   | 48 997         | 29 026         | 38 444          | 38 725         | 39 875         | 47 779         | 50 502         | 53 381         | 56 424         | 59 640         |
| Current service cost  | 7 096          | 7 944          | 8 750           | 9 636          | 8 941          | 9 136          | 9 657          | 10 207         | 10 789         | 11 404         |
| Interest cost   | 18 520         | 21 082         | 24 763          | 29 089         | 30 934         | 38 643         | 40 845         | 43 174         | 45 635         | 48 236         |
| Past service cost   |                |                | 4 931           |                |                |                |                |                |                |                |
| Actuarial (gain)/loss   | 23 381         | -              | -               | -              | -              | -              | -              | -              | -              | -              |
| - Pension   | 83 588         | 47 031         | 55 275          | 61 153         | 49 615         | 55 704         | 61 274         | 67 402         | 74 142         | 81 556         |
| Current service cost  | 26 002         | 29 599         | 36 071          | 38 957         | 34 752         | 38 018         | 41 820         | 46 002         | 50 602         | 55 662         |
| Interest cost   | 47 656         | 50 140         | 65 603          | 74 487         | 77 537         | 87 712         | 96 483         | 106 132        | 116 745        | 128 419        |
| Expected return on assets   | (44 072)       | (36 093)       | (46 399)        | (52 291)       | (62 674)       | (70 026)       | (77 029)       | (84 731)       | (93 205)       | (102 525)      |
| Past service cost   |                | 3 385          |                 |                |                |                |                |                |                |                |
| <b>Total</b>  | <b>132 585</b> | <b>76 057</b>  | <b>93 719</b>   | <b>99 878</b>  | <b>89 490</b>  | <b>103 483</b> | <b>111 777</b> | <b>120 783</b> | <b>130 566</b> | <b>141 196</b> |
| - % Increase  | 123.9          | (42.6)         | 23.2            | -              | (4.4)          | 14.6           | 8.0            | 8.1            | 8.1            | 8.1            |
| <b>Incl in Other Comprehensive Income</b>                                       |                |                |                 |                |                |                |                |                |                |                |
| Other comprehensive income (IAS 19 - Actuarial Gain/loss)                       |                | 159 906        | (119 883)       | 47 226         |                |                |                |                |                |                |
| <b>Total Retirement Benefit Cost</b>  | <b>132 585</b> | <b>235 963</b> | <b>(26 164)</b> | <b>147 104</b> | <b>89 490</b>  | <b>103 483</b> | <b>111 777</b> | <b>120 783</b> | <b>130 566</b> | <b>141 196</b> |
| <b>Trainees</b>   |                |                |                 |                |                |                |                |                |                |                |
| establishment cost  | 17             | 20             | 22              | 25             | 35             | 56             | 53             | 53             | 53             | 43             |
| cost  | 1 544          | 1 719          | 1 976           | 3 671          | 3 714          | 6 334          | 5 721          | 5 721          | 5 721          | 5 181          |
| <b>National Treasury trainees</b>   |                |                |                 |                |                |                |                |                |                |                |
| establishment cost  |                | 52             | 52              | 52             | 52             | 52             | 52             | -              | -              | -              |
| cost  |                | 11 510         | 13 613          | 15 285         | 14 386         | 15 605         | 16 822         | -              | -              | -              |
| <b>Learners</b>   |                |                |                 |                |                |                |                |                |                |                |
| establishment cost  | 37             | 47             | 45              | 50             | 50             | 64             | 64             | 52             | 52             | 52             |
| cost  | 745            | 574            | 2 497           | 3 817          | 3 968          | 2 558          | 2 558          | 1 435          | 5 054          | 5 054          |

\* The payroll costs incurred by the O&M of DWS owned dams will remain an operating cost to Umgeni Water and from 2015 onward will not be billed back to DWS in terms of raw water cost. The contra impact will be a reduction in the raw water cost.

## 20.2.3 Operating costs

Table 20.4: Major operating costs

|   | Actual         |                |                | Budget         | Forecast       |                |                |                |                |                |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|   | F'12           | F'13           | F'14           | F'15           | F'15           | F'16           | F'17           | F'18           | F'19           | F'20           |
| <b>Energy</b>                           |                |                |                |                |                |                |                |                |                |                |
| - Forecast Price increase               |                | 16.0%          | 8.0%           | 8.0%           | 11.2%          | 12.7%          | 12.7%          | 12.7%          | 12.7%          | 12.7%          |
| - Usage                                 |                |                | 1.0%           |                | 12.3%          | 7.6%           | 1.0%           | 1.0%           | 1.0%           | 1.0%           |
| - total price & impact of new schemes   |                | 16.0%          | 9.0%           | 8.0%           | 23.5%          | 20.3%          | 13.7%          | 13.7%          | 13.7%          | 13.7%          |
| - Cost (R'ooo)                          | 107 013        | 111 898        | 140 919        | 175 452        | 196 709        | 236 659        | 269 057        | 305 891        | 347 768        | 395 377        |
| <i>Direct</i>                           | 103 391        | 107 884        | 136 074        | 170 752        | 190 758        | 229 879        | 261 349        | 297 128        | 337 805        | 384 050        |
| <i>Indirect</i>                         | 3 622          | 4 014          | 4 845          | 4 700          | 5 951          | 6 780          | 7 708          | 8 764          | 9 963          | 11 327         |
| - Increase in cost (%)                  | 17.8           | 4.6            | 25.9           | 23.2           | 35.5           | 20.3           | 13.7           | 13.7           | 13.7           | 13.7           |
| - Cost per kilolitre                    | 25.7           | 26.5           | 32.1           | 39.8           | 43.8           | 51.7           | 57.4           | 63.6           | 71.2           | 80.3           |
| - Allocated to S30 O&M dams             | 13 581         | 5 009          | 4 299          | -              | -              | -              | -              | -              | -              | -              |
| - Increase in cost (%)                  | 100.0          | (63.1)         | (14.2)         | (100.0)        | (100.0)        | -              | -              | -              | -              | -              |
| <b>TOTAL ENERGY COSTS</b>               | <b>120 594</b> | <b>116 907</b> | <b>145 218</b> | <b>175 452</b> | <b>196 709</b> | <b>236 659</b> | <b>269 057</b> | <b>305 891</b> | <b>347 768</b> | <b>395 377</b> |
| <b>Chemicals</b>                        |                |                |                |                |                |                |                |                |                |                |
| - Forecast Price increase               |                | 11.4%          | 13.0%          | 9.5%           | 9.5%           | 9.2%           | 10.5%          | 10.5%          | 10.5%          | 10.5%          |
| - Usage                                 |                | 9.4%           | -19.5%         | 1.7%           | -3.2%          | 8.4%           | 0.0%           | 0.0%           | 0.0%           | 0.0%           |
| - Cost (R'ooo)                          | 41 786         | 50 452         | 47 181         | 53 223         | 50 172         | 59 017         | 65 214         | 72 061         | 79 628         | 87 989         |
| - Increase in cost                      | 13.8           | 20.7           | (6.5)          | 11.2           | 6.3            | 17.6           | 10.5           | 10.5           | 10.5           | 10.5           |
| - Cost per kilolitre                    | 10.0           | 11.9           | 10.7           | 12.1           | 11.2           | 12.9           | 13.9           | 15.0           | 16.3           | 17.9           |
| <b>Maintenance</b>                      |                |                |                |                |                |                |                |                |                |                |
| - Total Cost (R'ooo)                    | 145 287        | 152 335        | 158 405        | 189 567        | 204 106        | 217 327        | 235 176        | 254 477        | 275 328        | 297 893        |
| <i>Direct</i>                           | 130 804        | 137 456        | 143 313        | 171 811        | 189 189        | 200 525        | 217 232        | 235 331        | 254 937        | 276 177        |
| <i>Indirect</i>                         | 14 483         | 14 879         | 15 092         | 17 756         | 14 917         | 16 801         | 17 944         | 19 146         | 20 391         | 21 716         |
| - payroll included in maintenance costs | 57 165         | 62 504         | 70 516         | 78 538         | 78 982         | 87 426         | 94 245         | 101 597        | 109 623        | 118 283        |
| - Total excl Maint payroll              | 88 122         | 89 831         | 87 889         | 111 030        | 125 124        | 129 901        | 140 931        | 152 880        | 165 705        | 179 610        |
| - Increase in cost                      | 9.0            | 4.9            | 4.0            | 17.5           | 28.9           | 6.5            | 8.2            | 8.2            | 8.2            | 8.2            |
| - Increase in cost (excl Maint payroll) |                | 1.9            | (2.2)          | 34.1           | 42.4           | 3.8            | 8.5            | 8.5            | 8.4            | 8.4            |

\* The energy costs incurred by the O&M of DWS owned dams will remain an operating cost to Umgeni Water and from 2015 onward will not be billed back to DWS. The contra impact will be a reduction in the raw water cost.

## 20.2.4 Raw water costs

Table 20.5: Raw water cost assumptions (R'ooo)

|  | Actual         |                |                | Budget         | Forecast       |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|  | F'12           | F'13           | F'14           |                | F'15           | F'16           | F'17           | F'18           | F'19           | F'20           |
| <b>RAW WATER ABSTRACTION VOLUMES (Kl'm)</b>        |                |                |                |                |                |                |                |                |                |                |
| Volume Mgeni System                                | 396            | 406            | 418            | 408            | 419            | 428            | 435            | 448            | 455            | 444            |
| Volume Mdloti System                               | 17             | 17             | 19             | 18             | 17             | 18             | 18             | 18             | 19             | 18             |
| Volume Other                                       | 21             | 21             | 26             | 29             | 26             | 26             | 26             | 26             | 26             | 26             |
| <b>Total Abstraction Volume</b>                    | <b>434</b>     | <b>443</b>     | <b>463</b>     | <b>455</b>     | <b>462</b>     | <b>472</b>     | <b>480</b>     | <b>492</b>     | <b>500</b>     | <b>489</b>     |
| <b>Raw Water Consumption Charge per System</b>     |                |                |                |                |                |                |                |                |                |                |
| Mgeni System                                       |                |                |                |                |                |                |                |                |                |                |
| Tariff existing infrastructure (c/kl)              | 20.86          | 23.11          | 26.09          | 29.89          | 29.39          | 31.12          | 34.54          | 38.34          | 42.56          | 47.24          |
| Increase (%)                                       | 13.8           | 43.4           | 42.4           | -              | 12.6           | 5.9            | 11.0           | 11.0           | 11.0           | 11.0           |
| Mdloti system                                      |                |                |                |                |                |                |                |                |                |                |
| Tariff existing infrastructure (c/kl)              | 78.54          | 91.96          | 102.13         | 107.58         | 105.04         | 108.45         | 118.21         | 128.85         | 140.45         | 153.09         |
| Increase (%)                                       | (15.5)         | 9.6            | 9.9            | -              | 2.9            | 3.2            | 9.0            | 9.0            | 9.0            | 9.0            |
| <b>Consumption charge - New Capex</b>              |                |                |                |                |                |                |                |                |                |                |
| Cost Raising Hazelmere Dam Wall (R'ooo)            |                |                |                |                |                |                | 19 000         | 19 000         | 19 000         | 19 000         |
| Increase (%)                                       |                |                |                |                |                |                | -              | -              | (0.0)          | -              |
| Springrove dam# (c/kl)                             |                | 40.80          | 40.80          | 42.60          | 42.60          | 45.80          | 48.40          | 48.70          | 48.90          | 49.00          |
| Increase (%)                                       |                |                |                |                | 4.4            | 7.5            | 5.7            | 0.6            | 0.4            | 0.2            |
| <b>Operation and maintenance Charge per System</b> |                |                |                |                |                |                |                |                |                |                |
| Mgeni System                                       |                |                |                |                |                |                |                |                |                |                |
| Cost (c/kl)  | 9.86           | 8.99           | 10.45          | 1.30           | 1.48           | 2.11           | 2.23           | 2.36           | 2.49           | 2.63           |
| Increase (%)                                       |                |                | 16.3           | -              | (85.8)         | 42.5           | 5.7            | 5.7            | 5.7            | 5.7            |
| Mdloti system                                      |                |                |                |                |                |                |                |                |                |                |
| Cost (c/kl)  | 37.78          | 36.42          | 39.62          | 7.10           | 7.82           | 7.86           | 8.16           | 8.38           | 8.72           | 9.42           |
| Increase (%)                                       |                |                | 8.8            | -              | (80.3)         | 0.4            | 3.8            | 2.8            | 4.0            | 8.0            |
| <b>Water Resource Management (WRM) Charge</b>      |                |                |                |                |                |                |                |                |                |                |
| Tariff – existing (c/kl)                           | 2.18           | 2.30           | 2.43           | 2.84           | 2.52           | 1.71           | 1.81           | 1.92           | 2.02           | 2.14           |
| Increase (%)                                       | 9.7            | 43.4           | 5.9            | -              | 3.6            | (32.0)         | 5.7            | 5.7            | 5.7            | 5.7            |
| <b>Total Raw Water Costs (R'ooo)</b>               |                |                |                |                |                |                |                |                |                |                |
| - Abstraction                                      | 95 777         | 109 102        | 128 203        | 141 565        | 140 745        | 152 110        | 171 478        | 195 292        | 219 719        | 237 596        |
| - Abstraction - New Infrastructure                 | -              | -              | -              | -              | -              | -              | 19 000         | 19 000         | 19 000         | 19 000         |
| - O & M Dams*                                      | 45 388         | 42 120         | 51 101         | 6 592          | 7 511          | 10 400         | 11 163         | 12 089         | 12 954         | 13 404         |
| - Water Resource Mgmt charge                       | 9 433          | 10 168         | 11 235         | 12 928         | 11 661         | 8 082          | 9 011          | 9 781          | 10 494         | 10 842         |
| <b>Total Raw Water Costs</b>                       | <b>150 598</b> | <b>161 390</b> | <b>190 540</b> | <b>161 085</b> | <b>159 916</b> | <b>170 592</b> | <b>210 652</b> | <b>236 162</b> | <b>262 167</b> | <b>280 842</b> |
| Increase in cost (%)                               | 57.0           | 7.2            | 18.1           | (22.5)         | (16.1)         | 6.7            | 23.5           | 12.1           | 11.0           | 7.1            |
| Effective unit cost                                | 34.71          | 36.43          | 41.17          | 35.39          | 34.59          | 36.18          | 43.93          | 47.96          | 52.45          | 57.49          |
| Increase in unit cost (%)                          | 56.2           | 5.0            | 13.0           | (22.5)         | (16.0)         | 4.6            | 21.4           | 9.2            | 9.4            | 9.6            |

# 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.

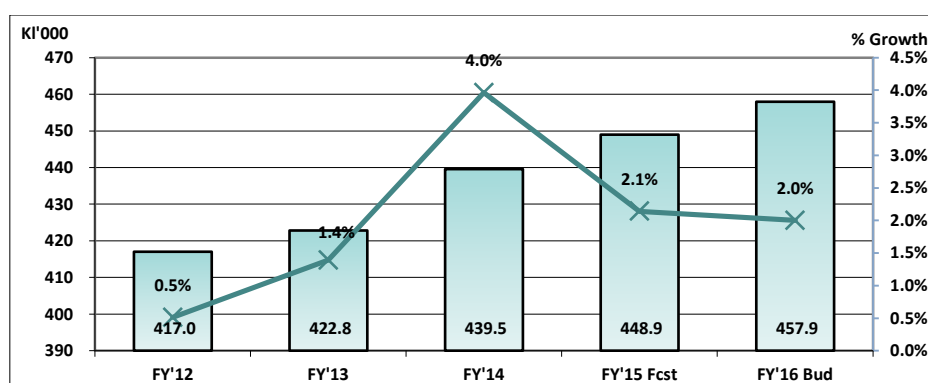
\* From 2015 onward, UW has agreed with DWS that the costs borne by UW for the O&M of DWS owned dams will not be recovered from DWS. In turn, DWS will not charge UW as part of its raw water charge that amount which is required to recover the O&M of DWS owned dams carried out by UW.

## 20.3 Sales volumes

**Table 20.6:** Sales volumes projections (kl'ooo)

|                       | Actual  |         |         | Budget  | Forecast |         |         |         |         |         |
|-----------------------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
|                       | F'12    | F'13    | F'14    | F'15    | F'15     | F'16    | F'17    | F'18    | F'19    | F'20    |
| - Bulk                | 416 995 | 422 791 | 439 542 | 441 320 | 448 948  | 457 928 | 468 740 | 481 313 | 488 533 | 492 246 |
| - eThekweni MM        | 311 434 | 315 669 | 327 011 | 328 292 | 333 168  | 338 832 | 346 832 | 356 135 | 361 477 | 363 284 |
| - Sembcorp Siza Water | 4 488   | 4 352   | 4 767   | 4 841   | 4 827    | 4 998   | 5 116   | 5 253   | 5 332   | 5 412   |
| - other WSAs          | 101 073 | 102 769 | 107 765 | 108 187 | 110 954  | 114 099 | 116 793 | 119 925 | 121 724 | 123 550 |
| - % Increase          | 0.51    | 1.4     | 4.0     | 1.5     | 2.1      | 2.0     | 2.4     | 2.7     | 1.5     | 0.8     |
| - Raw water           | 787     | 595     | 574     | 641     | 615      | 615     | 609     | 609     | 609     | 609     |
| - % Increase          | 42.98   | (24.4)  | (3.6)   | -       | 7.1      | -       | (0.9)   | -       | -       | -       |
| - Wastewater          | 300     | 287     | 178     | 205     | 203      | 217     | 220     | 222     | 225     | 227     |
| - % Increase          | (16.19) | (0.0)   | (38.0)  | -       | 14.0     | 7.2     | 1.0     | 1.0     | 1.5     | 0.8     |

**Figure 20.1:** Bulk water sales volumes (kl'm)



**Table 20.7:** Bulk water sales volume per customer

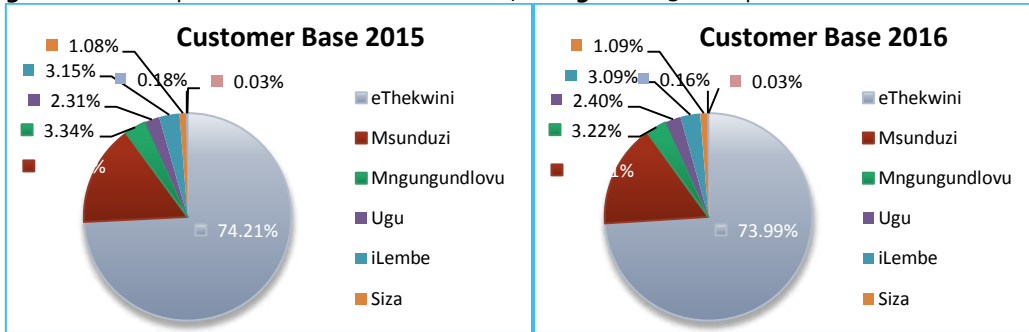
| Customer                  | FY 2012              | FY 2013              | FY 2014              |            | FY 2015              |                 | FY 2016                |                   |
|---------------------------|----------------------|----------------------|----------------------|------------|----------------------|-----------------|------------------------|-------------------|
|                           | Actual Vol<br>Kl'ooo | Actual Vol<br>Kl'ooo | Actual Vol<br>Kl'ooo | Growth %   | Budget Vol<br>Kl'ooo | Budget Growth % | Forecast Vol<br>Kl'ooo | Forecast Growth % |
| eThekweni                 | 311 434              | 315 669              | 327 011              | 3.6        | 328 292              | 0.4             | 333 168                | 1.9               |
| Mbunduzi                  | 64 909               | 64 668               | 66 991               | 3.6        | 66 685               | 0.0             | 70 513                 | 5.3               |
| uMgungundlovu             | 11 195               | 14 772               | 15 052               | 1.9        | 15 163               | 0.7             | 14 975                 | (0.5)             |
| Ugu                       | 8 203                | 9 012                | 9 890                | 9.7        | 10 955               | 10.8            | 10 392                 | 5.1               |
| iLembe                    | 12 514               | 13 244               | 14 810               | 11.8       | 14 381               | (2.9)           | 14 141                 | (4.5)             |
| Siza <sup>1</sup>         | 4 488                | 4 352                | 4 767                | 9.5        | 4 841                | (0.3)           | 4 827                  | 1.3               |
| Harry Gwala               | 587                  | 936                  | 862                  | (7.9)      | 859                  | 0.4             | 792                    | (8.2)             |
| Sappi                     | 929                  | 39                   | -                    | (100)      | -                    | 0.0             | -                      | 0.0               |
| Other - Retail            | 2 736                | 97                   | 161                  | 18.4       | 143                  | (11.2)          | 140                    | (8.5)             |
| <b>Total Bulk Potable</b> | <b>416 995</b>       | <b>422 791</b>       | <b>439 544</b>       | <b>4.0</b> | <b>441 320</b>       | <b>0.4</b>      | <b>448 949</b>         | <b>2.1</b>        |
| Raw Water                 | 787                  | 595                  | 574                  | (3.5)      | 641                  | 11.7            | 615                    | 7.2               |
| <b>Total Bulk Water</b>   | <b>417 782</b>       | <b>423 386</b>       | <b>440 118</b>       | <b>4.0</b> | <b>441 961</b>       | <b>0.4</b>      | <b>449 564</b>         | <b>2.1</b>        |

<sup>1</sup> Siza = Sembcorp Siza Water



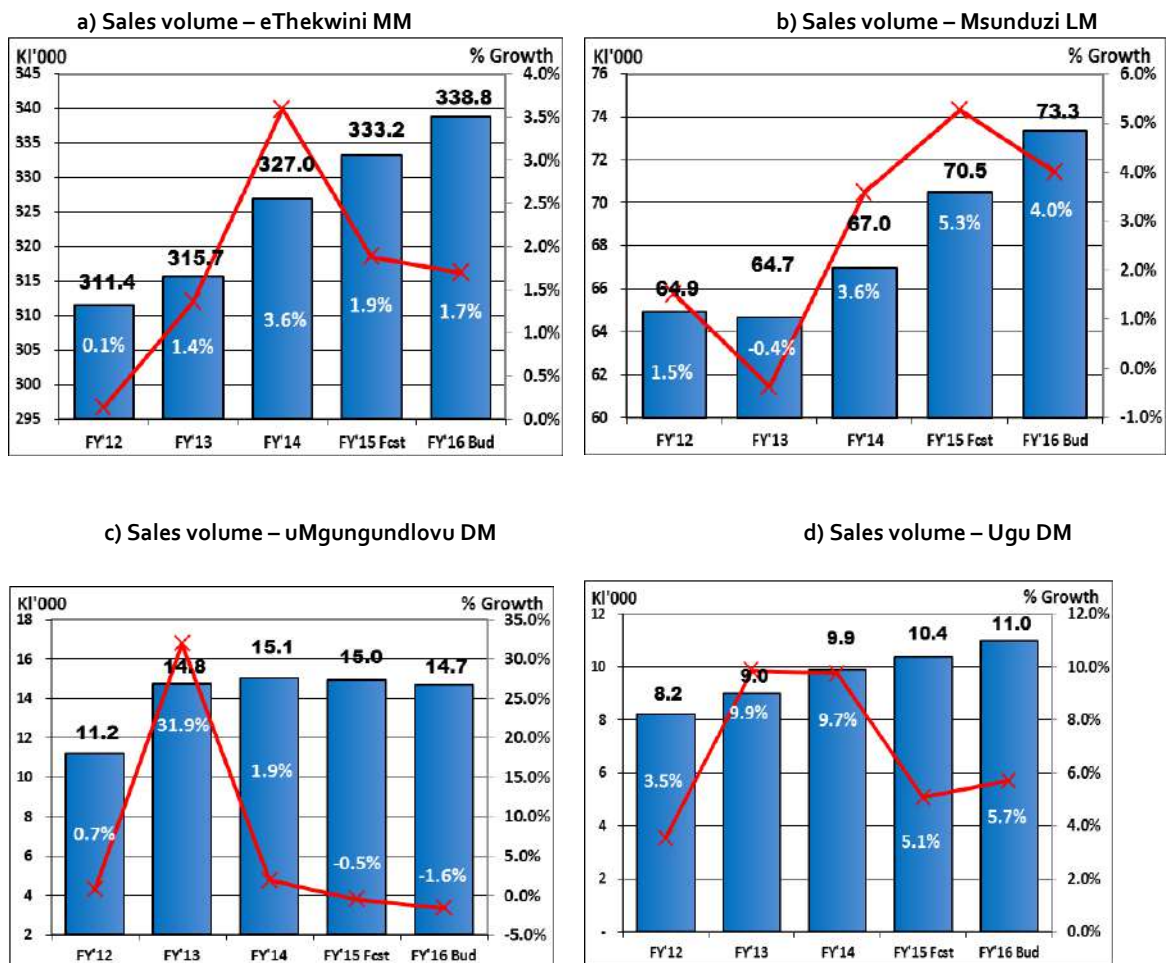
Figure 20.2: Composition of customer base 2014

Figure 20.3: Composition of customer base 2015

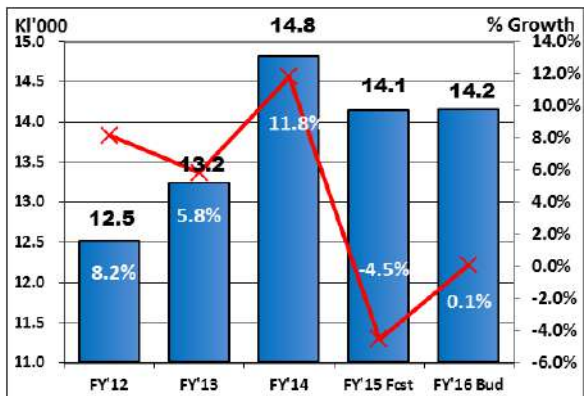


20.3.1 Volume Trends per customer

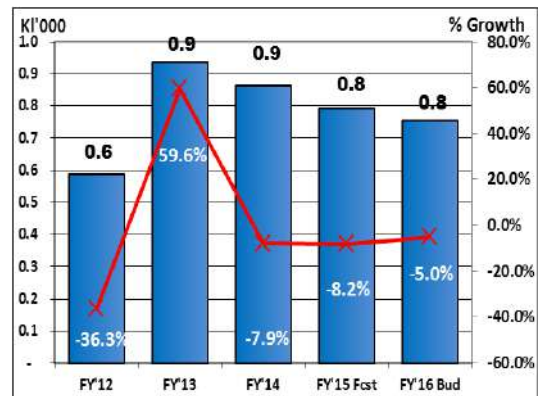
Figure 20.4 (a to g): Bulk sales per customer



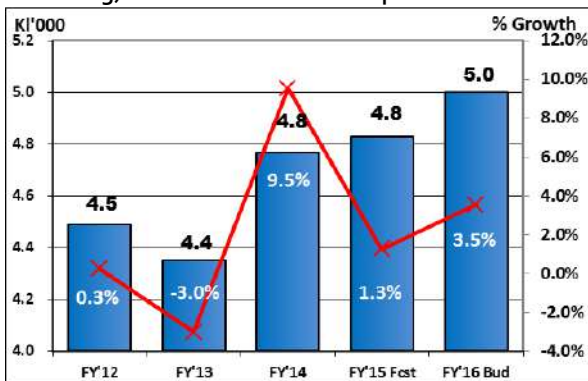
e) Sales volume – iLembe



f) Sales volume – Harry Gwala DM



g) Sales volume – Sembcorp Siza Water



## 20.4 Tariff Projections

### 20.4.1 Bulk water tariff 2015: Consultation process

#### 1. Customers

The consultation meeting with the Municipalities as customers of Umgeni, in compliance with S42 of the Municipal Finance Management Act was held on 07 November 2014. Representatives of Department of Water and Sanitation (DWS), SALGA and National Treasury were also present. TCTA consulted with the stakeholders on the 2016 increase for the capital unit charge for MMTS-2. A further meeting was held with Msunduzi Municipality on 10 November 2014 (regarding the pricing of the wastewater services to the municipality). On 12 November 2014, a separate meeting with Sembcorp Siza Water was held on the bulk water tariff increase applicable to the private sector entity.

The contents of the consultation 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 2016 was also presented. The presentation also highlighted the future prospect of an increased area of supply into the North West region and the Eastern Cape region, however it was emphasized that the prospects of an increased area of supply have not been factored in during the calculation of the proposed increase.

There was good interaction between the customers and Umgeni Water with Msunduzi leading the discussion on the need to start building up a fund for the development of the Mkhomazi Bulk Water Scheme as early as possible in order to cushion against high CUC charges on the scheme.

The main issues raised by the customers were as follows:

| Issue  | Response  |
|--|---|
| <p>1. <b>What is the progress on the new areas to be included in UW's area of supply? SALGA expressed a concern that the tariffs including the new areas will be very expensive to the municipal customers. Can UW provide further information regarding these statements?</b></p> | <p>UW has prepared and submitted to the Department of Water and Sanitation a high level plan of incorporating the new areas into the UW supply area. The plan has been presented to provincial cabinet, SALGA, CoGTA and the provincial planning commission. Ultimately, the new areas will be charged a sustainable tariff that covers its operation and maintenance costs as well as required infrastructure costs. That sustainable tariff will be determined on a scheme by scheme basis and will be ring fenced so as not to impact negatively on the current customers' tariff.</p> |
| <p>2. <b>What is the projected surplus for 2016? There was a dispute lodged regarding the 2015 tariff, has this been resolved?</b></p>   | <p>In terms of the financial viability models, UW must make a surplus and not breach covenants. Therefore, Net profit for 2016 will be approximately R600m, which is in line with a rule of thumb of profits equal to a third of long term borrowings. Any dispute lodged with the Minister will be carefully evaluated against the relevant business plan submitted to the Minister, which includes the projects that need to be implemented by UW. If the Tariff increase seems unreasonable then Minister will inform the Water Board accordingly.</p>                                 |
| <p>3. <b>At the behest of Government, UW has undertaken some projects which have an unfunded mandate. Are these key projects for UW?</b></p>   | <p>UW does not undertake the project with no commercial returns unless the Department of Water &amp; Sanitation has indicated that there will be some grant funding for the social part of the project. In exceptional circumstances, UW will invest beforehand if DWS has confirmed the grant funding with the understanding that eventually the grant is forthcoming. The Board of UW is very clear on its stance regarding investment in projects with no commercial returns.</p>  |

| Issue   | Response   |
|---|--|
| <p>4. Will savings in consumption result in higher tariffs to the customer as sales volume is a significant input to the tariff calculation? Also, there needs to be a model for repayment of the Mkhomazi BWS in place from now to enable smoother tariff increases going forward.</p> | <p>Any loss in revenue will be factored into the tariff in the next year. However consumers should be educated to conserve water, as in the long term the saving water will lead to a more sustainable water resources and longer asset lifespan.</p> <p>UW is currently engaging with the Executive Authority regarding the building of the Mkhomazi BWS and the need to start phasing in the cost to the consumer to avoid the shock of paying exorbitant charges when the scheme does come on line.</p> |

## 2. SALGA

SALGA provided an in-depth review on the 2016 bulk water tariff proposed by Umgeni Water. Besides the specific recommendations raised, SALGA's general concerns remain the allocative efficiency, operational efficiency and the financial sustainability of Umgeni Water.

In summary, Umgeni Water responded to the specific SALGA recommendations as follows:

| RECOMMENDATION  | RESPONSE BY UMGENI WATER  |
|---|---|
| <p>1. Consider the potential to reduce the proposed bulk water tariff from 2015/16 financial year by reducing its interest coverage and increasing its financial leverage by taking on more debt as discussed in the section 6.1 and 6.2 of the ratio analysis. In addition consider recovering the full revenue requirements from the capital expansion programme over a longer period in way that reflects the distribution of the benefits of the plant capacity increases to Umgeni Water's current and future customers.</p> | <p>1. The potential to reduce the tariff increase by reducing the interest coverage ratio and increase the financial leverage by taking on more debt is thwarted by the premise that strong operating cashflows generated is required to service the higher funding levels. This may only be achieved through the tariff increase. Therefore, to simply delay the required tariff increase means a double digit increase in the ensuing years to service the inflated debt levels.</p>  |
| <p>2. Review the tariff increase if a much larger portion of the social development costs which is reflected in the impairment costs is funded from the National Revenue Fund as this provides a more equitable use of the taxes rather than burden the few customers in the UW supply area. Otherwise municipalities are funding the social development costs when there is insufficient government funding and very little return on assets.</p>  | <p>2. The impairment cost in 2016 represents <b>31.1 cents</b> of the total cost per kl. Therefore, full funding of this impairment by grant funding will reduce the bulk water tariff to UW's customers. In this regards, UW is in constant communication with Department of Water and Sanitation to obtain an increase in grant funding allocations toward the social development projects. It must also be said that obtaining grant funding is in the best interest of UW considering that even the borrowing limit set by National Treasury for the entity is at a sliding scale, hence reduction of initial capital outlay to be invested by UW will be highly commendable.</p> |
| <p>3. Consider deferred maintenance by smoothing the maintenance costs over a 5 year period until 2020. This will reduce the proposed but increase slightly the future tariff increases.</p>  | <p>3. The maintenance of assets is in terms of an approved asset maintenance plan and after careful consideration of the impact of maintaining the assets. Deferring maintenance could have far worse financial impacts if the asset breaks down earlier than anticipated due to the "sweating" of the assets. This could in turn result in double digit increases going forward and supply interruptions with an even more detrimental reduction in water supply assurance in the future.</p>  |
| <p>4. The direct and indirect staff costs included in the tariff cost components appears to indicate that municipalities are paying for lower productivity in the tariff increases.</p>   | <p>4. The increase in the staff costs is in terms of the basic wage rate increase (as indicated by the BER) and the increase in staff establishment in terms of the actual head count. The increase in the staff establishment is required to implement UW's service delivery strategy and to operate and maintain the new infrastructure. Furthermore, the increase in direct staff costs is attributable to the compliance requirements of SANS241 in terms of operations of plants.</p>  |

| RECOMMENDATION   | RESPONSE BY UMGENI WATER  |
|--|---|
| 5. The issue of the extent to which the leveraging (or gearing) can be done should be included in the financial model to determine the impact on the proposed bulk water tariff increase | 5. The extent to which UW can reliably raise additional funding is per the approved funding strategy, of <b>R1.4bn</b> by 2017. |

### 3. National Treasury

National Treasury was complimentary in recognising Umgeni Water's efforts to implement the developmental projects on a sustainable basis. Furthermore, National Treasury supported Umgeni on the Hydropower project and on planned maintenance expenditure being in line with industry norms in order to ensure that assets continue to provide the desired level of service. Concerns raised by National Treasury include the level of assurance of raw water supply and the delay in receipt and non-receipt of required RBIG from DWS to support the funding requirements in the next 5 years.

#### 20.4.2 Bulk water tariff 2016: approval by DWS

DWS has tabled Umgeni Water's proposed tariff increase of 7.8% on average, at parliament.

#### 20.4.3 Bulk water tariff projections

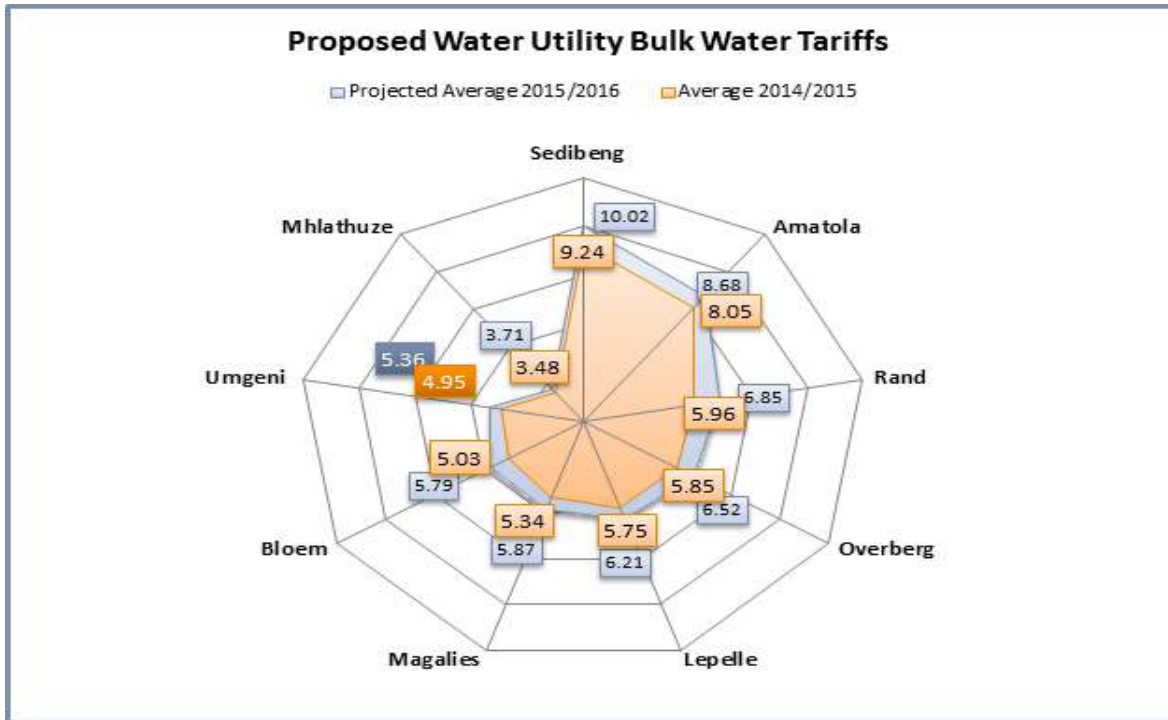
Table 20.8: Tariffs for bulk water sales

| Tariff Increase (%)                              | Actual       |              |              | Budget       | Forecast     |              |              |              |              |              | Beyond       |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  | F'12         | F'13         | F'14         |              | F'15         | F'16         | F'17         | F'18         | F'19         | F'20         |              |
| CPI  | 5.60%        | 5.70%        | 6.10%        | 5.70%        | 4.20%        | 6.00%        | 5.60%        | 5.70%        | 5.80%        | 5.80%        | 5.80%        |
| + provision for internal inflation               | 0.60%        | -0.10%       | 2.20%        | 3.00%        | 4.50%        | 1.8%         | 2.70%        | 3.00%        | 3.00%        | 3.00%        | 3.00%        |
| <b>Total Umgeni Water Tariff Increase</b>        | <b>6.20%</b> | <b>5.60%</b> | <b>8.30%</b> | <b>8.70%</b> | <b>8.70%</b> | <b>7.80%</b> | <b>8.30%</b> | <b>8.70%</b> | <b>8.80%</b> | <b>8.80%</b> | <b>8.80%</b> |
| Capital Unit charge                              |              | 100.00%      | 0.00%        | 4.41%        | 4.41%        | 7.50%        | 5.60%        | 5.70%        | 5.80%        | 5.80%        |              |
| Effective all in tariff increase                 | 6.20%        | 16.81%       | 7.52%        | 7.97%        | 8.32%        | 8.11%        | 8.08%        | 8.02%        | 8.15%        | 8.18%        |              |
| <b>- Bulk Tariff 1 (R/kl)</b>                    |              |              |              |              |              |              |              |              |              |              |              |
| - Base Tariff                                    | 3.482        | 3.694        | 3.901        | 4.225        | 4.225        | 4.593        | 4.951        | 5.362        | 5.828        | 6.341        |              |
| - Tariff Increase                                | 0.212        | 0.207        | 0.324        | 0.368        | 0.368        | 0.358        | 0.411        | 0.466        | 0.513        | 0.558        |              |
| - New Tariff - Umgeni Water                      | <b>3.694</b> | <b>3.901</b> | <b>4.225</b> | <b>4.593</b> | <b>4.593</b> | <b>4.951</b> | <b>5.362</b> | <b>5.828</b> | <b>6.341</b> | <b>6.899</b> |              |
| - % Increase - Umgeni Water                      | <b>6.2</b>   | <b>5.6</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.7</b>   | <b>7.8</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.8</b>   | <b>8.8</b>   |              |
| Add Capital unit charge                          |              |              |              |              |              |              |              |              |              |              |              |
| - Spring Grove                                   |              | 0.408        | 0.408        | 0.426        | 0.426        | 0.458        | 0.484        | 0.487        | 0.489        | 0.490        |              |
| - Total Tariff                                   | <b>3.694</b> | <b>4.309</b> | <b>4.633</b> | <b>5.019</b> | <b>5.019</b> | <b>5.409</b> | <b>5.846</b> | <b>6.315</b> | <b>6.830</b> | <b>7.389</b> |              |
| - % Increase -Total                              | <b>6.1</b>   | <b>16.6</b>  | <b>7.5</b>   | <b>8.3</b>   | <b>8.3</b>   | <b>7.8</b>   | <b>8.1</b>   | <b>8.0</b>   | <b>8.2</b>   | <b>8.2</b>   |              |
| <b>- Bulk Tariff 2 - eThekweni (R/kl)</b>        |              |              |              |              |              |              |              |              |              |              |              |
| - Base Tariff                                    | 3.414        | 3.622        | 3.825        | 4.142        | 4.142        | 4.502        | 4.853        | 5.256        | 5.713        | 6.216        |              |
| - Tariff Increase                                | 0.208        | 0.203        | 0.317        | 0.360        | 0.360        | 0.351        | 0.403        | 0.457        | 0.503        | 0.547        |              |
| - New Tariff - Umgeni Water                      | <b>3.622</b> | <b>3.825</b> | <b>4.142</b> | <b>4.502</b> | <b>4.502</b> | <b>4.853</b> | <b>5.256</b> | <b>5.713</b> | <b>6.216</b> | <b>6.763</b> |              |
| - % Increase - Umgeni Water                      | <b>6.1</b>   | <b>5.6</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.7</b>   | <b>7.8</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.8</b>   | <b>8.8</b>   |              |
| Add Capital unit charge                          |              |              |              |              |              |              |              |              |              |              |              |
| - Spring Grove                                   |              | 0.408        | 0.408        | 0.426        | 0.426        | 0.458        | 0.484        | 0.487        | 0.489        | 0.490        |              |
| - Total Tariff                                   | <b>3.622</b> | <b>4.233</b> | <b>4.550</b> | <b>4.928</b> | <b>4.928</b> | <b>5.311</b> | <b>5.740</b> | <b>6.200</b> | <b>6.705</b> | <b>7.253</b> |              |
| - % Increase -Total                              | <b>6.1</b>   | <b>16.9</b>  | <b>7.5</b>   | <b>8.3</b>   | <b>8.3</b>   | <b>7.8</b>   | <b>8.1</b>   | <b>8.0</b>   | <b>8.1</b>   | <b>8.2</b>   |              |
| <b>- Bulk Tariff 3 - Siza<sup>2</sup> (R/kl)</b> |              |              |              |              |              |              |              |              |              |              |              |
| - Base Tariff                                    | 3.482        | 3.726        | 3.935        | 4.262        | 4.262        | 4.633        | 5.059        | 5.518        | 6.014        | 6.548        |              |
| - Tariff Increase                                | 0.244        | 0.209        | 0.327        | 0.371        | 0.371        | 1.885        | 0.541        | 0.614        | 0.675        | 0.735        |              |
| - New Tariff - Umgeni Water                      | <b>3.726</b> | <b>3.935</b> | <b>4.262</b> | <b>4.633</b> | <b>4.633</b> | <b>6.518</b> | <b>7.059</b> | <b>7.673</b> | <b>8.348</b> | <b>9.083</b> |              |
| - % Increase - Umgeni Water                      | <b>7.0</b>   | <b>5.6</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.7</b>   | <b>40.7</b>  | <b>8.3</b>   | <b>8.7</b>   | <b>8.8</b>   | <b>8.8</b>   |              |
| Add Capital unit charge                          |              |              |              |              |              |              |              |              |              |              |              |
| - Spring Grove                                   |              | 0.408        | 0.408        | 0.426        | 0.426        | 0.458        | 0.484        | 0.487        | 0.489        | 0.490        |              |
| - Total Tariff                                   | <b>3.726</b> | <b>4.343</b> | <b>4.670</b> | <b>5.059</b> | <b>5.059</b> | <b>6.976</b> | <b>7.543</b> | <b>8.160</b> | <b>8.837</b> | <b>9.573</b> |              |
| - % Increase -Total                              | <b>7.0</b>   | <b>16.6</b>  | <b>7.5</b>   | <b>8.3</b>   | <b>8.3</b>   | <b>37.9</b>  | <b>8.1</b>   | <b>8.2</b>   | <b>8.3</b>   | <b>8.3</b>   |              |
| <b>WEIGHTED AVERAGE TARIFF</b>                   |              |              |              |              |              |              |              |              |              |              |              |
| Excluding the capital unit charge                | 3.641        | 3.845        | 4.163        | 4.526        | 4.526        | 4.896        | 5.302        | 5.763        | 6.270        | 6.822        |              |
| - % Increase -Total                              | <b>6.1</b>   | <b>5.6</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.7</b>   | <b>8.2</b>   | <b>8.3</b>   | <b>8.7</b>   | <b>8.8</b>   | <b>8.8</b>   |              |
| Including the Capital unit charge                | 3.640        | 4.253        | 4.571        | 4.952        | 4.952        | 5.354        | 5.786        | 6.250        | 6.759        | 7.312        |              |
| - % Increase -Total                              | <b>6.1</b>   | <b>16.8</b>  | <b>7.5</b>   | <b>8.3</b>   | <b>8.3</b>   | <b>8.1</b>   | <b>8.1</b>   | <b>8.0</b>   | <b>8.1</b>   | <b>8.2</b>   |              |

### 20.4.4 Comparison of Water Utility Bulk Water Tariffs

A comparison of Umgeni Water and other bulk water utility tariffs is shown in **Figure 20.5**. (Data source: SALGA). Tariff data has been averaged (most water utilities have multiple tariffs) and the plot is shown for relative comparison purposes.

**Figure 20.5:** Comparison of Umgeni Water and other Water Utility Bulk Water Tariffs.



## 20.4.5 Other commercial/management fee increases

Table 20.9: Other Revenue charges

|   | Actual<br>F'12 | %<br>change | Actual<br>F'13 | %<br>change | Actual<br>F'14 | %<br>change | Forecast<br>F'15 | %<br>change | Budget<br>F'16 | %<br>change |
|---|----------------|-------------|----------------|-------------|----------------|-------------|------------------|-------------|----------------|-------------|
| <b>Potable Water – Other<br/>(R/kl)</b> |                |             |                |             |                |             |                  |             |                |             |
| Sappi*                                  | 3.782          | 6.5%        | 4.028          | 6.5%        | 4.386          | 8.9%        |                  |             |                |             |
| Retail                                  | 3.830          | 10.0%       | 4.079          | 7.4%        | 4.442          | 8.9%        | 4.828            | 8.3%        | 5.229          | 8.3%        |
| Reticulation                            | 9.945          | 7.4%        | N/A            |             | N/A            |             | N/A              |             | N/A            |             |
| <b>Bulk Raw Water(R/kl)</b>             |                |             |                |             |                |             |                  |             |                |             |
| Piped                                   | 2.20           | 7.0%        | 2.359          | 7.2%        | 2.550          | 8.1%        | 2.754            | 8.0%        | 3.040          | 10.4%       |
| Dam                                     | 0.44           | 37.8%       | 0.611          | 38.9%       | 0.662          | 8.3%        | 0.715            | 8.0%        | 0.789          | 10.4%       |
| <b>Wastewater(R/kl)</b>                 |                |             |                |             |                |             |                  |             |                |             |
| Ixopo**                                 | 8.125          | 7.5%        | 8.734          | 7.5%        | 9.459          | 8.3%        | N/A              |             | N/A            |             |
| <b>Management Fee( R'ooo)</b>           |                |             |                |             |                |             |                  |             |                |             |
| Darvill Wastewater                      | 48 594         | 8.0%        | 52 481         | 8.0%        | 57 152         | 8.9%        | 64 268           | 12.5%       | 76 899         | 19.7%       |
| Howick Wastewater                       | 6 657          | 5.5%        | 7 024          | 5.5%        | 8 318          | 18.4%       | 14 726           | 16.2%       | 16 798         | 14.1%       |
| Ixopo Wastewater**                      | N/A            |             | N/A            |             | N/A            |             | 3 789            |             | 4 130          | 9.0%        |
| Lynnfield Park WWW                      | N/A            |             | N/A            |             | 378            |             | 1 133            |             | 1 942          | 71.4%       |
| Reticulation - Msunduzi                 | 7 387          | 10.7%       | 7 419          | 0.4%        | 455            | -93.9%      | N/A              |             | N/A            |             |
| <b>Water Research Levy(R/kl)</b>        |                |             |                |             |                |             |                  |             |                |             |
| Levy                                    | 0.043          | 7.0%        | 0.046          | 7%          | 0.049          | 5.7%        | 0.051            | 5.6%        | 0.054          | 5.7%        |

\*Sappi Saiccor is now a direct customer of the eThekweni MM.

\*\*In terms of the new agreement signed with Harry Gwala DM in 2015, the basis for recovery of costs associated with managing the Ixopo Wastewater Treatment Works changed in 2014 from a charge per kl to a fixed fee per annum.





## 20.5 Surplus Policy

### 20.5.1 Introduction

The purpose of the policy is to guide the accrual and application of surpluses earned in any one year.

### 20.5.2 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.

### 20.5.3 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.

## 20.6 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 R6463million with a specific allocation for the period 2015-2020 of R3 219million, representing 40% 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:

- R2 590million or 40% funding by Umgeni Water.
- R3 866million or 60% funding by DWS for the remaining social components.

To date DWS has confirmed R1 545million RBIG whilst R2 321million funding is unconfirmed and still at risk. 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  | Project Cost Estimate R x 1000(*) |                                |                                | Project Funding R x 1000(*)     |                                |                                | Analysis of RBIG Funding        |                              |                                |                                |
|--|-----------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------------|------------------------------|--------------------------------|--------------------------------|
|  | Total Cost                        | Component Split                |                                | Total                           | Source                         |                                | Total RBIG (DWS)                | Invoiced to date Dec'13      | Confirmed but not yet Invoiced | Not confirmed                  |
|  |                                   | Economic                       | Social                         |                                 | DWA                            | UW                             |                                 |                              |                                |                                |
| <b>Total</b>   | <b>6 463 241</b><br><i>100%</i>   | <b>1 457 862</b><br><i>23%</i> | <b>5 005 378</b><br><i>77%</i> | <b>6 463 241</b><br><i>100%</i> | <b>3 866 004</b><br><i>60%</i> | <b>2 597 237</b><br><i>40%</i> | <b>3 866 004</b><br><i>100%</i> | <b>579 975</b><br><i>15%</i> | <b>965 395</b><br><i>25%</i>   | <b>2 320 634</b><br><i>60%</i> |
| Projects started with confirmed Grant Funding          | 3 164 264                         | 1 014 655                      | 2 149 608                      | 3 164 264                       | 1 766 942                      | 1 397 321                      | 1 766 942                       | 579 975                      | 965 395                        | 221 572                        |
| Projects Started with no confirmation of grant funding | 997 387                           | 394 086                        | 603 300                        | 997 387                         | 161 324                        | 836 063                        | 161 324                         |                              |                                | 161 324                        |
| New capex projects with no confirmed grant funding     | 363 853                           | 49 121                         | 314 732                        | 363 853                         |                                | 363 853                        |                                 |                              |                                |                                |
| Projects to start on Confirmation of RBIG              | 1 937 738                         |                                | 1 937 738                      | 1 937 738                       | 1 937 738                      |                                | 1 937 738                       |                              |                                | 1 937 738                      |

**Table 20.12:** Grant Funding per annum for developmental projects (R'000)

| Project  | Status of Grant | Total RBIG Funding | Cumulative to F'14 | F'15           | F'16           | F'17           | F'18           | F'19          | F'20          | F'15-F'20        | Beyond F'20      |
|--|-----------------|--------------------|--------------------|----------------|----------------|----------------|----------------|---------------|---------------|------------------|------------------|
| Greater Eston  | Confirmed (*)   | 171 488            | 129 773            | 22 402         | 19 313         |                |                |               |               | 41 715           |                  |
| Richmond P/L-30kms   | Confirmed (*)   | 38 194             | 38 194             |                |                |                |                |               |               |                  |                  |
| Greater Mpofana Regional Scheme Phases 1                         | Not Confirmed   | 62 324             |                    | 48 646         | 9 119          | 4 559          |                |               |               | 62 324           |                  |
| Greater Mpofana Regional Scheme Phases 2                         | Not Confirmed   | 119 000            |                    |                |                |                |                |               |               |                  | 119 000          |
| Lower Thukela BWS - Phase 1                                      | Confirmed (*)   | 570 734            | 276 536            | 31 040         | 263 158        |                |                |               |               | 294 198          |                  |
| Lower Thukela BWS - Phase 1                                      | Not Confirmed   | 221 572            |                    |                |                | 221 572        |                |               |               | 221 572          |                  |
| Lower Thukela BWS - Phase 2                                      | Not Confirmed   | 223 777            |                    |                |                |                |                |               |               |                  | 223 777          |
| Maphumulo BWS Scheme Phase 1 & 2                                 | Not Confirmed   | 99 000             |                    | 99 000         |                |                |                |               |               | 99 000           |                  |
| Mhlabatshane BWS Scheme Phase 1                                  | Confirmed (*)   | 108 955            | 108 955            |                |                |                |                |               |               |                  |                  |
| Mhlabatshane Sub-Regional Scheme Phase 2                         | Not Confirmed   | 291 662            |                    |                |                |                |                |               |               |                  | 291 662          |
| uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3)        | Confirmed (*)   | 656 000            |                    |                |                | 170 175        | 485 825        |               |               | 656 000          |                  |
| Southern Ndwedwe BWS   | Not Confirmed   | 341 984            |                    |                |                |                | 10 000         | 30 000        | 60 000        | 100 000          | 241 984          |
| Central Ndwedwe BWS Ph1: (Ozwathini ext 31km p/l & 3 reservoirs) | Not Confirmed   | 300 000            |                    |                |                |                |                |               |               |                  | 300 000          |
| Central Ndwedwe BWS Ph2: (Ozwathini ext 19km p/l & 2 reservoirs) | Not Confirmed   | 161 315            |                    |                |                |                |                |               |               |                  | 161 315          |
| Upper-Mvoti Regional Water Scheme                                | Not Confirmed   | 500 000            |                    |                |                |                |                |               |               |                  | 500 000          |
| <b>TOTAL</b>   |                 | <b>3 866 004</b>   | <b>553 457</b>     | <b>201 088</b> | <b>291 590</b> | <b>396 307</b> | <b>495 825</b> | <b>30 000</b> | <b>60 000</b> | <b>1 474 809</b> | <b>1 837 738</b> |
| Confirmed  | <b>40%</b>      | <b>1 545 370</b>   | <b>553 457</b>     | <b>53 442</b>  | <b>282 471</b> | <b>170 175</b> | <b>485 825</b> |               |               | <b>991 913</b>   |                  |
| Not Confirmed  | <b>60%</b>      | <b>2 320 634</b>   |                    | <b>147 646</b> | <b>9 119</b>   | <b>226 131</b> | <b>10 000</b>  | <b>30 000</b> | <b>60 000</b> | <b>482 896</b>   | <b>1 837 738</b> |
| <b>TOTAL</b>   | <b>100%</b>     | <b>3 866 004</b>   | <b>553 457</b>     | <b>201 088</b> | <b>291 590</b> | <b>396 307</b> | <b>495 825</b> | <b>30 000</b> | <b>60 000</b> | <b>1 474 809</b> | <b>1 837 738</b> |

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: Impairment Summary (R'000)**

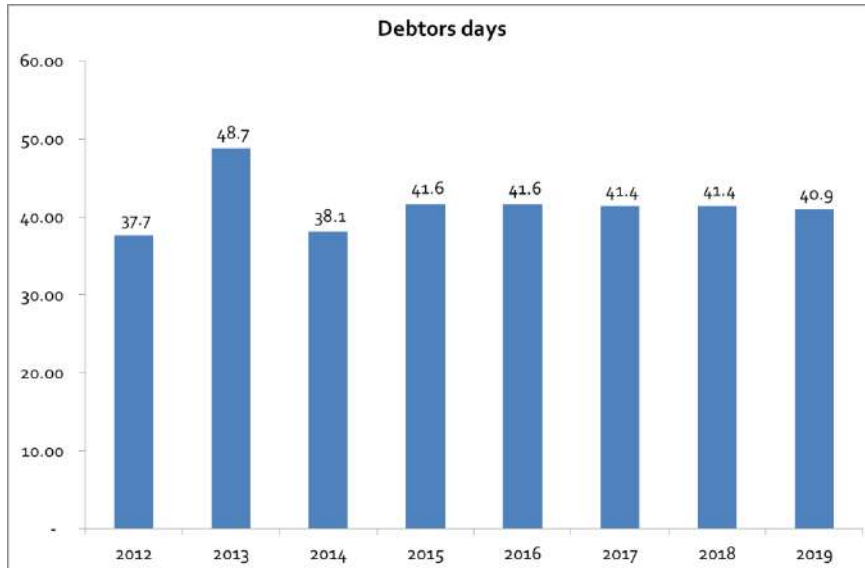
| Project   | Business Plan 2016 Impairment % | Total Impairment | Cumulative to F'14 R'000 | F'15 R'000     | F'16 R'000    | F'17 R'000     | F'18 R'000     | F'19 R'000     | F'20 R'000 |
|---|---------------------------------|------------------|--------------------------|----------------|---------------|----------------|----------------|----------------|------------|
| Greater Eston                                   | 15%                             | 31 310           | 31 775                   | -1 916         | 1 451         |                |                |                |            |
| Richmond  | 11%                             | 26 240           | 32 769                   | -6 967         | 438           |                |                |                |            |
| Greater Mpofana Regional Scheme Phases 1        | 66%                             | 472 164          | 5 814                    | 57 514         | 85 722        | 98 224         | 114 963        | 109 928        |            |
| Maphumulo BWS Scheme Phase 1 -3                 | 65%                             | 313 348          | 232 913                  | 50 027         | 8 478         | 21 931         |                |                |            |
| Mhlabatshane BWS Scheme Phase 1                 | 47%                             | 110 927          | 108 974                  | 1 953          |               |                |                |                |            |
| Lower Thukela Phase 1                           | 0%                              |                  |                          |                |               |                |                |                |            |
| uMshwathi Bulk Water Supply Scheme Phase 1 - 3) | 1%                              | 13 549           |                          | 2 942          | 3 537         | 4 284          | 1 534          | 1 251          |            |
| Impendle BWSS                                   | 86%                             | 201 178          |                          |                |               | 55 324         | 70 412         | 75 442         |            |
| Ngcebo BWS                                      |                                 | 39 036           | 39 036                   |                |               |                |                |                |            |
| <b>TOTAL</b>                                    |                                 | <b>1 207 753</b> | <b>451 281</b>           | <b>103 552</b> | <b>99 626</b> | <b>179 763</b> | <b>186 910</b> | <b>186 621</b> |            |

## 20.7 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 42 days.

Figure 20.5: Debtors days



## 20.8 Subsidiaries and associates

### 20.8.1 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 make a loss in 2015 and 2016 due to the renewals (maintenance) expenditure. From 2017 onward the entity is projected to be profitable with positive operating cash flows. Going forward, the entity will be investing in capex to upgrade the tourism facilities and Umgeni Water will be increasing its management fee for the management of the dams.

Refer to **section 20.9 Financial Statement Projections** for the financial statement projections of Msinsi Holdings (Pty) Ltd.

### 20.8.2 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.

Refer to **section 20.9 Financial Statement Projections** for the financial statement projections of Umgeni Water Services (Pty) Ltd.

## 20.9 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'ooo)

| For the year ended June 30,<br>TOTAL                          | F12              | F13              | F14              | F15              | F15              | F16              | F17              | F18              | F19              | F20              |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   | Actual           | Restated         | Actual           | Budget           | Forecast         |                  |                  |                  |                  |                  |
| Volume of Bulk treated water sold (in kl'ooo)                 | 416 995          | 422 791          | 439 542          | 441 320          | 448 948          | 457 928          | 468 740          | 481 313          | 488 533          | 492 246          |
| <b>Revenue</b>  | <b>1 835 075</b> | <b>1 895 886</b> | <b>2 187 886</b> | <b>2 111 342</b> | <b>2 237 085</b> | <b>2 376 273</b> | <b>2 625 805</b> | <b>2 926 002</b> | <b>3 228 324</b> | <b>3 537 167</b> |
| Water Sales - Bulk  | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| - Bulk water sales  | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| - Capital Unit charge   | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Water Sales - Reticulation                                    | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Water Sales - Raw Water                                       | 429              | 428              | 415              | 625              | 615              | 679              | 729              | 792              | 862              | 938              |
| Wastewater Sales  | 2 438            | 2 504            | 1 682            | 2 107            | 19 648           | 22 869           | 25 014           | 27 463           | 30 327           | 33 247           |
| Wastewater Management Fee                                     | 48 594           | 52 481           | 58 084           | 62 239           | 64 268           | 76 899           | 83 282           | 90 610           | 98 584           | 107 260          |
| Section 30 activities   | 264 318          | 214 993          | 297 567          | 49 037           | 120 626          | 33 959           | 31 444           | 33 270           | 35 207           | 37 259           |
| <b>Cost of sales</b>  | <b>856 808</b>   | <b>869 910</b>   | <b>1 034 890</b> | <b>854 812</b>   | <b>987 310</b>   | <b>1 038 177</b> | <b>1 171 457</b> | <b>1 288 767</b> | <b>1 414 948</b> | <b>1 544 168</b> |
| Changes in water inventory                                    | (211)            | (616)            | 246              | -                | -                | -                | -                | -                | -                | -                |
| Chemicals   | 41 786           | 50 452           | 47 181           | 53 223           | 50 172           | 59 017           | 65 214           | 72 061           | 79 628           | 87 989           |
| Depreciation  | 73 925           | 76 653           | 92 897           | 73 923           | 104 717          | 131 637          | 140 589          | 150 008          | 159 759          | 170 143          |
| Energy  | 103 391          | 107 884          | 136 074          | 170 752          | 190 758          | 229 879          | 261 349          | 297 128          | 337 805          | 384 050          |
| Maintenance   | 130 804          | 137 456          | 143 313          | 171 811          | 189 189          | 200 525          | 217 232          | 235 331          | 254 937          | 276 177          |
| Raw Water   | 150 598          | 161 390          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| - Abstraction, O&M & WRM                                      | 150 598          | 161 390          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| - Capital Unit charge   | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Staff Costs   | 105 291          | 117 203          | 130 305          | 164 352          | 156 450          | 185 106          | 210 916          | 228 534          | 246 589          | 266 069          |
| Section 30 activities   | 235 157          | 184 123          | 271 560          | 28 767           | 106 212          | 28 612           | 30 444           | 32 270           | 34 207           | 36 259           |
| Other direct operating activities                             | 16 067           | 35 365           | 22 775           | 30 897           | 29 895           | 32 807           | 35 062           | 37 272           | 39 859           | 42 640           |
| <b>Gross profit</b>   | <b>978 267</b>   | <b>1 025 977</b> | <b>1 152 996</b> | <b>1 256 530</b> | <b>1 249 776</b> | <b>1 338 096</b> | <b>1 454 348</b> | <b>1 637 235</b> | <b>1 813 376</b> | <b>1 992 999</b> |
|   | 53%              | 54%              | 53%              | 60%              | 56%              | 56%              | 55%              | 56%              | 56%              | 56%              |
| <b>Other operating income</b>                                 | <b>51 960</b>    | <b>18 665</b>    | <b>28 486</b>    | <b>5 753</b>     | <b>29 934</b>    | <b>8 106</b>     | <b>8 483</b>     | <b>8 890</b>     | <b>5 760</b>     | <b>6 238</b>     |
| <b>Administration Expenses</b>                                | <b>454 925</b>   | <b>447 726</b>   | <b>584 561</b>   | <b>638 380</b>   | <b>641 390</b>   | <b>747 477</b>   | <b>798 298</b>   | <b>835 741</b>   | <b>877 982</b>   | <b>816 920</b>   |
| Staff Costs (excl Maintenance Payroll costs)                  | 152 979          | 174 112          | 201 304          | 238 427          | 224 730          | 252 620          | 272 325          | 293 566          | 316 758          | 341 781          |
| Energy  | 3 622            | 4 014            | 4 845            | 4 700            | 5 951            | 6 780            | 7 708            | 8 764            | 9 963            | 11 327           |
| Depreciation  | 14 787           | 15 481           | 15 294           | 21 806           | 42 492           | 44 710           | 47 750           | 50 950           | 54 261           | 57 788           |
| Amortization  | 5 581            | 6 175            | 5 239            | 4 524            | 6 382            | 5 875            | 6 364            | 6 402            | 6 225            | -                |
| Impairments   | 72 013           | 76 034           | 183 976          | 93 277           | 103 552          | 99 626           | 124 439          | 116 497          | 111 179          | -                |
| Maintenance   | 14 483           | 14 879           | 15 092           | 17 756           | 14 917           | 16 801           | 17 944           | 19 146           | 20 391           | 21 716           |
| Retirement Benefits   | 102 092          | 75 244           | 93 719           | 84 427           | 75 956           | 88 201           | 111 777          | 120 783          | 130 566          | 141 196          |
| Other operating & administrative expenses (net of recoveries) | 89 368           | 81 787           | 65 091           | 173 464          | 167 409          | 232 863          | 209 990          | 219 634          | 228 639          | 243 111          |
| <b>Operating income before interest</b>                       | <b>575 301</b>   | <b>596 917</b>   | <b>596 921</b>   | <b>623 903</b>   | <b>638 320</b>   | <b>598 725</b>   | <b>664 533</b>   | <b>810 384</b>   | <b>941 153</b>   | <b>1 182 316</b> |
| <b>Net interest and finance charges</b>                       | <b>(15 512)</b>  | <b>(67 552)</b>  | <b>(77 048)</b>  | <b>(6 658)</b>   | <b>(22 850)</b>  | <b>69 679</b>    | <b>114 028</b>   | <b>184 891</b>   | <b>174 721</b>   | <b>153 875</b>   |
| Interest Paid   | 84 567           | 66 478           | 45 510           | 67 902           | 66 148           | 129 605          | 158 760          | 229 614          | 222 854          | 219 431          |
| Interest Received   | (100 079)        | (134 029)        | (122 558)        | (74 560)         | (88 998)         | (59 926)         | (44 732)         | (44 723)         | (48 134)         | (65 556)         |
| <b>Net Profit (Loss) for the year</b>                         | <b>590 813</b>   | <b>664 468</b>   | <b>673 969</b>   | <b>630 560</b>   | <b>661 170</b>   | <b>529 046</b>   | <b>550 505</b>   | <b>625 493</b>   | <b>766 433</b>   | <b>1 028 442</b> |

Table 20.15: Umgeni Water Income Statement: S29 Activities (R'000)

| For the year ended June 30,<br>PRIMARY (S29) | F12              | F13              | F14              | F15              | F15              | F16              | F17              | F18              | F19              | F20              |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|  | Actual           | Restated         | Actual           | Budget           | Forecast         |                  |                  |                  |                  |                  |
| Volume of treated water sold (in kl'000)     | 416 995          | 422 791          | 439 542          | 441 320          | 448 948          | 457 928          | 468 740          | 481 313          | 488 533          | 492 246          |
| <b>Revenue</b>                               | <b>1 570 756</b> | <b>1 680 894</b> | <b>1 890 318</b> | <b>2 062 306</b> | <b>2 116 459</b> | <b>2 342 314</b> | <b>2 594 361</b> | <b>2 892 732</b> | <b>3 193 118</b> | <b>3 499 908</b> |
| Water Sales - Bulk                           | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| - Bulk water sales                           | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| - Capital Unit charge                        | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Water Sales - Reticulation                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Water Sales - Raw Water                      | 429              | 428              | 415              | 625              | 615              | 679              | 729              | 792              | 862              | 938              |
| Wastewater Sales                             | 2 438            | 2 504            | 1 682            | 2 107            | 19 648           | 22 869           | 25 014           | 27 463           | 30 327           | 33 247           |
| Wastewater Management Fee                    | 48 594           | 52 481           | 58 084           | 62 239           | 64 268           | 76 899           | 83 282           | 90 610           | 98 584           | 107 260          |
| <b>Cost of sales</b>                         | <b>612 170</b>   | <b>673 557</b>   | <b>753 793</b>   | <b>814 691</b>   | <b>881 097</b>   | <b>1 009 565</b> | <b>1 141 013</b> | <b>1 256 496</b> | <b>1 380 742</b> | <b>1 507 909</b> |
| Changes in water inventory                   | (211)            | (616)            | 246              | -                | -                | -                | -                | -                | -                | -                |
| Chemicals                                    | 41 653           | 50 271           | 46 784           | 52 718           | 50 172           | 59 017           | 65 214           | 72 061           | 79 628           | 87 989           |
| Depreciation                                 | 73 925           | 76 653           | 92 897           | 73 923           | 104 717          | 131 637          | 140 589          | 150 008          | 159 759          | 170 143          |
| Energy                                       | 102 091          | 105 452          | 133 381          | 167 962          | 190 758          | 229 879          | 261 349          | 297 128          | 337 805          | 384 050          |
| Maintenance                                  | 128 801          | 134 299          | 140 348          | 167 975          | 189 189          | 200 525          | 217 232          | 235 331          | 254 937          | 276 177          |
| Raw Water                                    | 150 598          | 161 390          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| - Abstraction, O&M & WRM                     | 150 598          | 161 390          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| - Capital Unit charge                        | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Staff Costs                                  | 100 269          | 111 789          | 127 110          | 160 774          | 156 450          | 185 106          | 210 916          | 228 534          | 246 589          | 266 069          |
| Other direct operating activities            | 15 044           | 34 319           | 22 487           | 30 253           | 29 895           | 32 807           | 35 062           | 37 272           | 39 859           | 42 640           |
| <b>Gross margin/profit</b>                   | <b>958 586</b>   | <b>1 007 337</b> | <b>1 136 526</b> | <b>1 247 614</b> | <b>1 235 362</b> | <b>1 332 749</b> | <b>1 453 348</b> | <b>1 636 235</b> | <b>1 812 376</b> | <b>1 991 999</b> |
|  | <b>61%</b>       | <b>60%</b>       | <b>60%</b>       | <b>60%</b>       | <b>58%</b>       | <b>57%</b>       | <b>56%</b>       | <b>57%</b>       | <b>57%</b>       | <b>57%</b>       |
| <b>Other operating income</b>                | <b>51 429</b>    | <b>18 665</b>    | <b>20 759</b>    | <b>5 753</b>     | <b>29 934</b>    | <b>8 106</b>     | <b>8 483</b>     | <b>8 890</b>     | <b>5 760</b>     | <b>6 238</b>     |
| <b>Administration Expenses</b>               | <b>429 697</b>   | <b>443 225</b>   | <b>595 354</b>   | <b>636 757</b>   | <b>641 390</b>   | <b>747 477</b>   | <b>798 298</b>   | <b>835 741</b>   | <b>877 982</b>   | <b>816 920</b>   |
| Staff Costs                                  | 149 380          | 172 859          | 199 908          | 236 936          | 224 730          | 252 620          | 272 325          | 293 566          | 316 758          | 341 781          |
| Energy                                       | 3 622            | 4 014            | 4 845            | 4 700            | 5 951            | 6 780            | 7 708            | 8 764            | 9 963            | 11 327           |
| Depreciation                                 | 14 570           | 15 470           | 15 273           | 21 806           | 42 492           | 44 710           | 47 750           | 50 950           | 54 261           | 57 788           |
| Amortization                                 | 5 581            | 6 175            | 5 239            | 4 524            | 6 382            | 5 875            | 6 364            | 6 402            | 6 225            | -                |
| Impairments                                  | 72 013           | 76 034           | 183 976          | 93 277           | 103 552          | 99 626           | 124 439          | 116 497          | 111 179          | -                |
| Maintenance                                  | 13 275           | 13 735           | 14 948           | 17 691           | 14 917           | 16 801           | 17 944           | 19 146           | 20 391           | 21 716           |
| Retirement Benefits                          | 101 149          | 75 244           | 93 719           | 84 427           | 75 956           | 88 201           | 111 777          | 120 783          | 130 566          | 141 196          |
| Other operating & administrative expenses    | 70 107           | 79 694           | 77 445           | 173 396          | 167 409          | 232 863          | 209 990          | 219 634          | 228 639          | 243 111          |
| <b>Operating income before interest</b>      | <b>580 318</b>   | <b>582 777</b>   | <b>561 931</b>   | <b>616 610</b>   | <b>623 907</b>   | <b>593 378</b>   | <b>663 533</b>   | <b>809 384</b>   | <b>940 153</b>   | <b>1 181 316</b> |
| <b>Net interest and finance charges</b>      | <b>(15 518)</b>  | <b>(67 553)</b>  | <b>(77 048)</b>  | <b>(6 658)</b>   | <b>(22 850)</b>  | <b>69 679</b>    | <b>114 028</b>   | <b>184 891</b>   | <b>174 721</b>   | <b>153 875</b>   |
| Interest Paid                                | 84 561           | 66 476           | 45 510           | 67 902           | 66 148           | 129 605          | 158 760          | 229 614          | 222 854          | 219 431          |
| Interest Received                            | (100 079)        | (134 029)        | (122 558)        | (74 560)         | (88 998)         | (59 926)         | (44 732)         | (44 723)         | (48 134)         | (65 556)         |
| <b>Net Profit (Loss)</b>                     | <b>595 836</b>   | <b>650 330</b>   | <b>638 979</b>   | <b>623 268</b>   | <b>646 757</b>   | <b>523 700</b>   | <b>549 505</b>   | <b>624 493</b>   | <b>765 433</b>   | <b>1 027 442</b> |



Table 20.16: Umgeni Water Income statement - Bulk water segment (R'ooo)

| For the year ended June 30,               | F12              | F13              | F14              | F15              | F15              | F16              | F17              | F18              | F19              | F20              |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>BULK WATER</b>                         | Actual           | Restated         | Actual           | Budget           | Forecast         |                  |                  |                  |                  |                  |
| Volume of treated water sold (in kl'ooo)  | 416 995          | 422 791          | 439 542          | 441 320          | 448 948          | 457 928          | 468 740          | 481 313          | 488 533          | 492 246          |
| <b>Revenue</b>                            | <b>1 519 724</b> | <b>1 625 909</b> | <b>1 830 552</b> | <b>1 997 960</b> | <b>2 032 543</b> | <b>2 242 546</b> | <b>2 486 065</b> | <b>2 774 659</b> | <b>3 064 206</b> | <b>3 359 401</b> |
| Water Sales - Bulk                        | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| - Bulk water sales                        | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| - Capital Unit charge                     | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Water Sales - Reticulation                | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Water Sales - Raw Water                   | 429              | 428              | 415              | 625              | 615              | 679              | 729              | 792              | 862              | 938              |
| <b>Cost of sales</b>                      | <b>576 707</b>   | <b>633 502</b>   | <b>707 827</b>   | <b>768 202</b>   | <b>815 020</b>   | <b>941 434</b>   | <b>1 066 583</b> | <b>1 175 156</b> | <b>1 291 830</b> | <b>1 410 642</b> |
| Changes in water inventory                | (211)            | (616)            | 246              | -                | -                | -                | -                | -                | -                | -                |
| Chemicals                                 | 37 186           | 44 142           | 41 393           | 47 161           | 46 070           | 54 531           | 60 257           | 66 584           | 73 575           | 81 301           |
| Depreciation                              | 71 594           | 74 265           | 90 576           | 73 382           | 101 882          | 127 350          | 136 010          | 145 123          | 154 556          | 164 602          |
| Energy                                    | 93 359           | 95 397           | 121 871          | 155 860          | 174 038          | 210 305          | 239 096          | 271 828          | 309 041          | 351 349          |
| Maintenance                               | 120 100          | 126 223          | 127 500          | 158 058          | 167 492          | 183 337          | 198 875          | 215 743          | 234 076          | 253 960          |
| Raw Water                                 | 150 598          | 161 390          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| - Abstraction, O&M & WRM                  | 150 598          | 161 390          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| - Capital Unit charge                     | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Staff Costs                               | 92 167           | 103 372          | 117 533          | 150 086          | 142 698          | 169 955          | 194 583          | 210 928          | 227 591          | 245 571          |
| Other direct operating activities         | 11 914           | 29 329           | 18 168           | 22 570           | 22 924           | 25 363           | 27 111           | 28 789           | 30 824           | 33 018           |
| <b>Gross margin/profit</b>                | <b>943 018</b>   | <b>992 407</b>   | <b>1 122 725</b> | <b>1 229 758</b> | <b>1 217 523</b> | <b>1 301 112</b> | <b>1 419 482</b> | <b>1 599 502</b> | <b>1 772 376</b> | <b>1 948 759</b> |
|   | <b>62%</b>       | <b>61%</b>       | <b>61%</b>       | <b>62%</b>       | <b>60%</b>       | <b>58%</b>       | <b>57%</b>       | <b>58%</b>       | <b>58%</b>       | <b>58%</b>       |
| <b>Other operating income</b>             | <b>47 819</b>    | <b>15 053</b>    | <b>16 888</b>    | <b>2 135</b>     | <b>26 317</b>    | <b>4 486</b>     | <b>4 911</b>     | <b>5 318</b>     | <b>5 760</b>     | <b>6 238</b>     |
| <b>Administration Expenses</b>            | <b>421 042</b>   | <b>434 005</b>   | <b>587 259</b>   | <b>628 183</b>   | <b>631 598</b>   | <b>736 342</b>   | <b>786 405</b>   | <b>823 052</b>   | <b>864 468</b>   | <b>802 528</b>   |
| Staff Costs                               | 149 380          | 172 859          | 199 908          | 236 936          | 224 730          | 252 620          | 272 325          | 293 566          | 316 758          | 341 781          |
| Energy                                    | 3 622            | 4 014            | 4 928            | 4 700            | 5 951            | 6 780            | 7 708            | 8 764            | 9 963            | 11 327           |
| Depreciation                              | 14 104           | 15 145           | 15 370           | 21 715           | 42 089           | 44 344           | 47 360           | 50 533           | 53 817           | 57 315           |
| Amortization                              | 5 581            | 6 175            | 5 239            | 4 524            | 6 382            | 5 875            | 6 364            | 6 402            | 6 225            | -                |
| Impairments                               | 72 013           | 75 978           | 183 976          | 93 277           | 103 552          | 99 626           | 124 439          | 116 497          | 111 179          | -                |
| Maintenance                               | 12 456           | 13 356           | 15 092           | 17 301           | 14 722           | 16 613           | 17 743           | 18 932           | 20 162           | 21 473           |
| Retirement Benefits                       | 99 835           | 74 283           | 93 719           | 82 447           | 75 956           | 88 201           | 111 777          | 120 783          | 130 566          | 141 196          |
| Other operating & administrative expenses | 64 050           | 72 195           | 69 027           | 167 282          | 158 216          | 222 282          | 198 689          | 207 576          | 215 797          | 229 434          |
| <b>Operating income before interest</b>   | <b>569 794</b>   | <b>573 455</b>   | <b>552 354</b>   | <b>603 709</b>   | <b>612 243</b>   | <b>569 257</b>   | <b>637 988</b>   | <b>781 769</b>   | <b>913 668</b>   | <b>1 152 470</b> |
| <b>Net interest and finance charges</b>   | <b>(21 377)</b>  | <b>(73 361)</b>  | <b>(81 549)</b>  | <b>(11 006)</b>  | <b>(32 305)</b>  | <b>49 120</b>    | <b>93 470</b>    | <b>164 332</b>   | <b>154 162</b>   | <b>133 316</b>   |
| Interest Paid                             | 78 702           | 60 665           | 41 009           | 63 554           | 56 693           | 109 046          | 138 202          | 209 056          | 202 296          | 198 872          |
| Interest Received                         | (100 079)        | (134 026)        | (122 558)        | (74 560)         | (88 998)         | (59 926)         | (44 732)         | (44 723)         | (48 134)         | (65 556)         |
| <b>Net Profit (Loss)</b>                  | <b>591 172</b>   | <b>646 816</b>   | <b>633 903</b>   | <b>614 715</b>   | <b>644 548</b>   | <b>520 137</b>   | <b>544 518</b>   | <b>617 437</b>   | <b>759 506</b>   | <b>1 019 153</b> |

Table 20.17: Umgeni Water Income statement Wastewater (R'ooo)

| For the year ended June 30,<br>WASTE WATER | F12<br>Actual | F13<br>Restated | F14<br>Actual | F15<br>Budget | F15           | F16           | F17<br>Forecast | F18            | F19            | F20            |
|--|---------------|-----------------|---------------|---------------|---------------|---------------|-----------------|----------------|----------------|----------------|
| Volume of treated water sold (in kl'ooo)   | -             | -               | -             | -             | -             | -             | -               | -              | -              | -              |
| <b>Revenue</b>                             | <b>51 032</b> | <b>54 985</b>   | <b>59 766</b> | <b>64 346</b> | <b>83 916</b> | <b>99 768</b> | <b>108 296</b>  | <b>118 073</b> | <b>128 912</b> | <b>140 507</b> |
| Wastewater Sales                           | 2 438         | 2 504           | 1 682         | 2 107         | 19 648        | 22 869        | 25 014          | 27 463         | 30 327         | 33 247         |
| Wastewater Management Fee                  | 48 594        | 52 481          | 58 084        | 62 239        | 64 268        | 76 899        | 83 282          | 90 610         | 98 584         | 107 260        |
| <b>Cost of sales</b>                       | <b>35 464</b> | <b>40 055</b>   | <b>45 967</b> | <b>46 489</b> | <b>66 077</b> | <b>68 131</b> | <b>74 430</b>   | <b>81 340</b>  | <b>88 912</b>  | <b>97 267</b>  |
| Chemicals                                  | 4 468         | 6 129           | 5 391         | 5 558         | 4 102         | 4 486         | 4 957           | 5 477          | 6 052          | 6 688          |
| Depreciation                               | 2 330         | 2 388           | 2 321         | 541           | 2 836         | 4 287         | 4 579           | 4 886          | 5 203          | 5 541          |
| Energy                                     | 8 732         | 10 055          | 11 510        | 12 102        | 16 720        | 19 574        | 22 253          | 25 300         | 28 763         | 32 701         |
| Maintenance                                | 8 701         | 8 076           | 12 848        | 9 917         | 21 697        | 17 189        | 18 358          | 19 588         | 20 861         | 22 217         |
| Staff Costs                                | 8 101         | 8 417           | 9 577         | 10 688        | 13 752        | 15 151        | 16 333          | 17 607         | 18 998         | 20 498         |
| Other direct operating activities          | 3 131         | 4 990           | 4 319         | 7 683         | 6 971         | 7 444         | 7 951           | 8 483          | 9 035          | 9 622          |
| <b>Gross margin/profit</b>                 | <b>15 569</b> | <b>14 930</b>   | <b>13 800</b> | <b>17 857</b> | <b>17 839</b> | <b>31 637</b> | <b>33 866</b>   | <b>36 733</b>  | <b>40 000</b>  | <b>43 240</b>  |
|  | <b>31%</b>    | <b>27%</b>      | <b>23%</b>    | <b>28%</b>    | <b>21%</b>    | <b>32%</b>    | <b>31%</b>      | <b>31%</b>     | <b>31%</b>     | <b>31%</b>     |
| <b>Other operating income</b>              | <b>3 610</b>  | <b>3 612</b>    | <b>3 871</b>  | <b>3 618</b>  | <b>3 617</b>  | <b>3 620</b>  | <b>3 572</b>    | <b>3 572</b>   | <b>-</b>       | <b>-</b>       |
| <b>Administration Expenses</b>             | <b>8 655</b>  | <b>9 221</b>    | <b>8 095</b>  | <b>8 574</b>  | <b>9 792</b>  | <b>11 136</b> | <b>11 893</b>   | <b>12 690</b>  | <b>13 514</b>  | <b>14 393</b>  |
| Staff Costs                                | -             | -               | -             | -             | -             | -             | -               | -              | -              | -              |
| Energy                                     | -             | -               | -             | -             | -             | -             | -               | -              | -              | -              |
| Depreciation                               | 466           | 325             | 218           | 91            | 403           | 366           | 391             | 417            | 444            | 473            |
| Amortization                               | -             | -               | -             | -             | -             | -             | -               | -              | -              | -              |
| Impairments                                | -             | 56              | -             | -             | -             | -             | -               | -              | -              | -              |
| Maintenance                                | 819           | 379             | 367           | 390           | 195           | 188           | 201             | 214            | 228            | 243            |
| Retirement Benefits                        | 1 313         | 961             | 1 661         | 1 979         | -             | -             | -               | -              | -              | -              |
| Other operating & administrative expenses  | 6 057         | 7 501           | 5 849         | 6 114         | 9 194         | 10 582        | 11 301          | 12 058         | 12 842         | 13 677         |
| <b>Operating income before interest</b>    | <b>10 523</b> | <b>9 321</b>    | <b>9 576</b>  | <b>12 901</b> | <b>11 664</b> | <b>24 121</b> | <b>25 546</b>   | <b>27 615</b>  | <b>26 486</b>  | <b>28 847</b>  |
| <b>Net interest and finance charges</b>    | <b>5 859</b>  | <b>5 811</b>    | <b>4 501</b>  | <b>4 348</b>  | <b>9 455</b>  | <b>20 559</b> | <b>20 559</b>   | <b>20 559</b>  | <b>20 559</b>  | <b>20 559</b>  |
| Interest Paid                              | 5 859         | 5 811           | 4 501         | 4 348         | 9 455         | 20 559        | 20 559          | 20 559         | 20 559         | 20 559         |
| Interest Received                          | -             | -               | -             | -             | -             | -             | -               | -              | -              | -              |
| <b>Net Profit (Loss)</b>                   | <b>4 665</b>  | <b>3 510</b>    | <b>5 075</b>  | <b>8 553</b>  | <b>2 209</b>  | <b>3 563</b>  | <b>4 987</b>    | <b>7 057</b>   | <b>5 927</b>   | <b>8 288</b>   |

Table 20.18: Umgeni Water Income statement: S30 Activities (R'000)

| For the year ended June 30,               | F12<br>Actual  | F13<br>Restated | F14<br>Actual   | F15<br>Budget | F15            | F16           | F17           | F18           | F19           | F20           |
|---|----------------|-----------------|-----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|
|   |                |                 |                 |               | Forecast       |               |               |               |               |               |
| Volume of treated water sold (in kl'000)  | -              | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| <b>Revenue</b>                            | <b>264 318</b> | <b>214 993</b>  | <b>297 567</b>  | <b>49 037</b> | <b>120 626</b> | <b>33 959</b> | <b>31 444</b> | <b>33 270</b> | <b>35 207</b> | <b>37 259</b> |
| Other                                     | 264 318        | 214 993         | 297 567         | 49 037        | 120 626        | 33 959        | 31 444        | 33 270        | 35 207        | 37 259        |
| <b>Cost of sales</b>                      | <b>244 638</b> | <b>196 353</b>  | <b>281 097</b>  | <b>40 121</b> | <b>106 212</b> | <b>28 612</b> | <b>30 444</b> | <b>32 270</b> | <b>34 207</b> | <b>36 259</b> |
| Chemicals                                 | 133            | 181             | 396             | 505           | -              | -             | -             | -             | -             | -             |
| Depreciation                              | -              | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| Energy                                    | 1 300          | 2 432           | 2 692           | 2 790         | -              | -             | -             | -             | -             | -             |
| Maintenance                               | 2 003          | 3 157           | 2 964           | 3 837         | -              | -             | -             | -             | -             | -             |
| Staff Costs                               | 5 022          | 5 414           | 3 195           | 3 578         | -              | -             | -             | -             | -             | -             |
| Projects/WIP costs                        | 235 157        | 184 123         | 271 560         | 28 767        | 106 212        | 28 612        | 30 444        | 32 270        | 34 207        | 36 259        |
| Other direct operating activities         | 1 023          | 1 046           | 289             | 644           | -              | -             | -             | -             | -             | -             |
| <b>Gross margin/profit</b>                | <b>19 681</b>  | <b>18 640</b>   | <b>16 470</b>   | <b>8 916</b>  | <b>14 413</b>  | <b>5 347</b>  | <b>1 000</b>  | <b>1 000</b>  | <b>1 000</b>  | <b>1 000</b>  |
|   | 7%             | 9%              | 6%              | 18%           | 12%            | 16%           | 3%            | 3%            | 3%            | 3%            |
| <b>Other operating income</b>             | <b>531</b>     | <b>-</b>        | <b>7 726</b>    |               |                |               |               |               |               |               |
| <b>Administration Expenses</b>            | <b>25 228</b>  | <b>4 501</b>    | <b>(10 793)</b> | <b>1 623</b>  | <b>-</b>       | <b>-</b>      | <b>-</b>      | <b>-</b>      | <b>-</b>      | <b>-</b>      |
| Staff Costs                               | 3 599          | 1 252           | 1 396           | 1 491         | -              | -             | -             | -             | -             | -             |
| Energy                                    | -              | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| Depreciation                              | 217            | 11              | 21              | -             | -              | -             | -             | -             | -             | -             |
| Amortization                              | -              | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| Impairments                               | -              | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| Maintenance                               | 1 208          | 1 145           | 144             | 65            | -              | -             | -             | -             | -             | -             |
| Retirement benefits                       | 944            | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| Other operating & administrative expenses | 19 261         | 2 092           | (12 354)        | 68            | -              | -             | -             | -             | -             | -             |
| <b>Operating income before interest</b>   | <b>(5 016)</b> | <b>14 139</b>   | <b>34 990</b>   | <b>7 292</b>  | <b>14 413</b>  | <b>5 347</b>  | <b>1 000</b>  | <b>1 000</b>  | <b>1 000</b>  | <b>1 000</b>  |
| <b>Net interest and finance charges</b>   | <b>6</b>       | <b>2</b>        | <b>-</b>        | <b>-</b>      | <b>-</b>       | <b>-</b>      | <b>-</b>      | <b>-</b>      | <b>-</b>      | <b>-</b>      |
| Interest Paid                             | 6              | 2               | -               | -             | -              | -             | -             | -             | -             | -             |
| Interest Received                         | -              | -               | -               | -             | -              | -             | -             | -             | -             | -             |
| <b>Net Profit (Loss)</b>                  | <b>(5 023)</b> | <b>14 137</b>   | <b>34 990</b>   | <b>7 292</b>  | <b>14 413</b>  | <b>5 347</b>  | <b>1 000</b>  | <b>1 000</b>  | <b>1 000</b>  | <b>1 000</b>  |

Table 20.19: Umgeni Water Balance sheet (R'000)

| As at June 30,                                 | F11              | F12              | F13              | F14              | F15              | F15              | F16              | F17              | F18               | F19               | F20               |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|
|  | Actual           | Actual           | Restated         | Actual           | Budget           | Forecast         |                  |                  |                   |                   |                   |
| <b>ASSETS</b>                                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| <b>Non-current assets</b>                      | <b>2 912 924</b> | <b>3 133 371</b> | <b>3 474 480</b> | <b>4 131 362</b> | <b>6 125 828</b> | <b>5 704 648</b> | <b>7 397 482</b> | <b>9 122 442</b> | <b>9 586 656</b>  | <b>10 417 296</b> | <b>10 618 475</b> |
| Property, plant and equipment                  | 2 866 994        | 3 095 504        | 3 441 872        | 3 984 471        | 5 763 505        | 5 569 126        | 7 193 449        | 8 840 062        | 9 218 343         | 9 954 500         | 10 572 837        |
| Intangible assets                              | 8 542            | 9 753            | 9 374            | 18 104           | -                | 13 929           | 10 367           | 6 805            | 3 243             | -                 | -                 |
| Other non-current assets                       | 18 068           | 24 678           | 13 140           | 11 259           | 15 463           | 9 958            | 8 437            | 9 713            | 10 823            | 11 670            | 11 670            |
| Investments                                    | 14 468           | 9 995            | 5 179            | 83 561           | 344 306          | 77 669           | 151 262          | 231 896          | 320 280           | 417 159           | -                 |
| Investments in subsidiaries                    | 4 853            | 3 195            | 4 915            | 33 967           | 2 555            | 33 967           | 33 967           | 33 967           | 33 967            | 33 967            | 33 967            |
| <b>Assets held for sale</b>                    | <b>14 481</b>    | <b>13 500</b>    | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>          | <b>-</b>          | <b>-</b>          |
| <b>Current Assets</b>                          | <b>1 842 931</b> | <b>2 026 907</b> | <b>2 418 927</b> | <b>2 658 956</b> | <b>944 201</b>   | <b>1 546 991</b> | <b>1 169 797</b> | <b>854 413</b>   | <b>925 378</b>    | <b>808 417</b>    | <b>1 612 943</b>  |
| Inventories                                    | 8 783            | 8 965            | 11 029           | 11 455           | 15 530           | 11 900           | 12 371           | 12 869           | 13 395            | 13 952            | 14 541            |
| Accounts receivable                            | 196 143          | 192 157          | 289 174          | 422 670          | 263 145          | 291 000          | 308 769          | 339 241          | 378 494           | 412 862           | 457 705           |
| Sundry Debtors                                 | 14 720           | 10 271           | 10 271           | 25 376           | 10 271           | 25 376           | 25 376           | 25 376           | 25 376            | 25 376            | 25 376            |
| Short-term investments                         | 1 509 594        | 1 780 335        | 2 075 826        | 2 156 795        | 655 000          | 1 218 249        | 822 900          | 476 742          | 507 653           | 355 459           | 1 114 461         |
| Interest Receivable                            | 13 866           | 25 205           | 27 610           | 40 720           | 16               | -                | -                | -                | -                 | -                 | -                 |
| Bank balances and cash                         | 99 826           | 9 974            | 5 017            | 1 940            | 238              | 465              | 381              | 185              | 459               | 768               | 860               |
| <b>Total assets</b>                            | <b>4 770 336</b> | <b>5 173 778</b> | <b>5 893 407</b> | <b>6 790 318</b> | <b>7 070 029</b> | <b>7 251 639</b> | <b>8 567 279</b> | <b>9 976 855</b> | <b>10 512 034</b> | <b>11 225 714</b> | <b>12 231 418</b> |
| <b>Reserves</b>                                |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| Accumulated reserves                           | 2 507 194        | 2 989 791        | 3 601 757        | 4 395 609        | 4 666 444        | 5 056 779        | 5 585 825        | 6 136 330        | 6 761 824         | 7 528 256         | 8 556 698         |
| <b>Non-current liabilities</b>                 | <b>1 487 535</b> | <b>1 569 290</b> | <b>1 539 149</b> | <b>1 630 539</b> | <b>1 831 049</b> | <b>1 587 858</b> | <b>2 404 770</b> | <b>3 235 115</b> | <b>3 209 213</b>  | <b>3 240 721</b>  | <b>2 679 032</b>  |
| Interest bearing borrowings                    | 1 257 788        | 1 136 306        | 1 025 930        | 1 171 765        | 1 092 526        | 1 093 331        | 1 864 712        | 2 645 902        | 2 566 892         | 2 537 671         | 1 908 226         |
| Post employment medical benefit obligations    | 214 098          | 420 513          | 502 661          | 450 383          | 732 588          | 488 592          | 536 906          | 589 213          | 642 320           | 703 050           | 770 806           |
| Other non-current liabilities                  | 15 649           | 12 471           | 10 558           | 8 390            | 5 935            | 5 935            | 3 152            | ( )              | ( )               | ( )               | ( )               |
| <b>Current liabilities</b>                     | <b>775 607</b>   | <b>614 697</b>   | <b>752 501</b>   | <b>764 170</b>   | <b>572 537</b>   | <b>607 002</b>   | <b>576 683</b>   | <b>605 410</b>   | <b>540 998</b>    | <b>456 736</b>    | <b>995 687</b>    |
| Accounts payable (including accruals & leases) | 554 915          | 395 875          | 567 391          | 609 448          | 421 646          | 449 448          | 389 448          | 394 448          | 329 060           | 293 942           | 230 884           |
| Provisions                                     | 69 124           | 63 331           | 44 263           | 49 053           | 44 263           | 49 053           | 49 053           | 49 053           | 49 053            | 49 053            | 49 053            |
| Current portion of interest bearing loans      | 115 006          | 120 831          | 109 451          | 78 264           | 78 832           | 78 434           | 78 619           | 78 810           | 79 010            | 29 221            | 629 445           |
| Other payables/loans                           | 36 562           | 34 660           | 31 396           | 27 406           | 27 796           | 30 068           | 59 563           | 83 099           | 83 874            | 84 520            | 86 306            |
| Bank overdrafts                                |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| <b>Total reserves and liabilities</b>          | <b>4 770 336</b> | <b>5 173 778</b> | <b>5 893 407</b> | <b>6 790 318</b> | <b>7 070 029</b> | <b>7 251 639</b> | <b>8 567 279</b> | <b>9 976 855</b> | <b>10 512 034</b> | <b>11 225 714</b> | <b>12 231 418</b> |

Table 20.20: Umgeni Water Statement of changes in equity (R'000)

| For the Year ended June 30,    | Capital Contributions | OCI Reserve      | Accumulated Profit (Loss) | Total            |
|--------------------------------|-----------------------|------------------|---------------------------|------------------|
| <b>Balance at 30 June 2012</b> | <b>442 847</b>        | <b>(131 598)</b> | <b>2 678 542</b>          | <b>2 989 791</b> |
| Profit for the year            | -                     | -                | 664 468                   | 664 468          |
| Other comprehensive income     | -                     | (52 502)         | -                         | (52 502)         |
| <b>Balance at 30 June 2013</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>3 343 011</b>          | <b>3 601 757</b> |
| Profit for the year            | -                     | -                | 673 969                   | 673 969          |
| Other comprehensive income     | -                     | 119 883          | -                         | 119 883          |
| <b>Balance at 30 June 2014</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>4 016 980</b>          | <b>4 395 609</b> |
| Profit for the year            | -                     | -                | 661 170                   | 661 170          |
| Other comprehensive income     | -                     | -                | -                         | -                |
| <b>Balance at 30 June 2015</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>4 678 150</b>          | <b>5 056 779</b> |
| Profit for the year            | -                     | -                | 529 046                   | 529 046          |
| Other comprehensive income     | -                     | -                | -                         | -                |
| <b>Balance at 30 June 2016</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>5 207 196</b>          | <b>5 585 825</b> |
| Profit for the year            | -                     | -                | 550 505                   | 550 505          |
| Other comprehensive income     | -                     | -                | -                         | -                |
| <b>Balance at 30 June 2017</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>5 757 701</b>          | <b>6 136 330</b> |
| Profit for the year            | -                     | -                | 625 493                   | 625 493          |
| Other comprehensive income     | -                     | -                | -                         | -                |
| <b>Balance at 30 June 2018</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>6 383 195</b>          | <b>6 761 824</b> |
| Profit for the year            | -                     | -                | 766 433                   | 766 433          |
| Other comprehensive income     | -                     | -                | -                         | -                |
| <b>Balance at 30 June 2019</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>7 149 627</b>          | <b>7 528 256</b> |
| Profit for the year            | -                     | -                | 1 028 442                 | 1 028 442        |
| Other comprehensive income     | -                     | -                | -                         | -                |
| <b>Balance at 30 June 2020</b> | <b>442 847</b>        | <b>(184 100)</b> | <b>8 178 069</b>          | <b>8 556 698</b> |

Table 20.21: Umgeni Water Cashflow Statement (R'000)

| For the year ended June 30,                            | F12              | F13              | F14              | F15                | F15                | F16                | F17                | F18              | F19                | F20              |
|--|------------------|------------------|------------------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|------------------|
|  | Actual           | Actual           | Actual           | Budget             | Forecast           |                    |                    |                  |                    |                  |
| <b>OPERATING ACTIVITIES</b>                            |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Operating profit before working capital changes        | 982 702          | 794 869          | 950 168          | 869 948            | 929 812            | 924 789            | 1 028 279          | 1 183 131        | 1 329 652          | 1 478 004        |
| Changes in working capital                             | (166 736)        | 60 061           | (90 151)         | (67 912)           | (28 775)           | (78 240)           | (25 970)           | (105 167)        | (70 042)           | (108 490)        |
| <b>Net cash from operating activities</b>              | <b>815 966</b>   | <b>854 930</b>   | <b>860 017</b>   | <b>802 036</b>     | <b>901 038</b>     | <b>846 549</b>     | <b>1 002 309</b>   | <b>1 077 963</b> | <b>1 259 609</b>   | <b>1 369 513</b> |
| <b>INVESTING ACTIVITIES</b>                            |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Additions to property, plant and equipment             | (481 208)        | (639 465)        | (1 010 619)      | (1 884 932)        | (1 840 352)        | (2 134 260)        | (2 081 059)        | (1 143 054)      | (1 022 849)        | (807 762)        |
| Additions to intangible assets                         | (3 947)          | (2 990)          | (11 150)         | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Proceeds on disposal of Property, plant & equipment    | 1 112            | 15 636           | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Grant Funding  | 131 056          | 167 080          | 245 343          | 203 333            | 53 442             | 282 471            | 170 175            | 485 825          | -                  | -                |
| Payments of intercompany borrowings                    | 1 302            | (1 720)          | (29 052)         | -                  | -                  | -                  | -                  | -                | -                  | -                |
| <b>Net cash used in investing activities</b>           | <b>(351 685)</b> | <b>(461 459)</b> | <b>(805 478)</b> | <b>(1 681 599)</b> | <b>(1 786 910)</b> | <b>(1 851 789)</b> | <b>(1 910 884)</b> | <b>(657 229)</b> | <b>(1 022 849)</b> | <b>(807 762)</b> |
| <b>FINANCING ACTIVITIES</b>                            |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Net change in long-term borrowings                     | (115 656)        | (121 756)        | 114 657          | (78 662)           | (78 264)           | (78 434)           | (78 619)           | (78 810)         | (79 010)           | (29 221)         |
| New Debt proposed                                      | -                | -                | -                | -                  | -                  | 850 000            | 860 000            | -                | -                  | -                |
| Capital contributions                                  | -                | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Net Investments - LTI & RED                            | (286 085)        | (290 675)        | (159 349)        | 1 021 000          | 967 720            | 349 000            | 297 000            | (83 000)         | 97 000             | (294 000)        |
| Proceeds on disposal of available for sale investments | 421              | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Proceeds from (repaid to) short-term borrowings        | -                | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Net interest (Paid) Received                           | (21 568)         | 14 003           | (12 924)         | (63 315)           | (5 058)            | (115 410)          | (170 003)          | (258 650)        | (254 441)          | (238 439)        |
| Interest received                                      | 100 079          | 134 029          | 122 558          | 74 560             | 88 998             | 59 926             | 44 732             | 44 723           | 48 134             | 65 556           |
| Deferred interest amortized                            | (37 080)         | (53 548)         | (89 972)         | (69 973)           | (27 908)           | (45 731)           | (55 975)           | (73 760)         | (79 721)           | (84 564)         |
| Interest paid  | (84 567)         | (66 478)         | (45 510)         | (67 902)           | (66 148)           | (129 605)          | (158 760)          | (229 614)        | (222 854)          | (219 431)        |
| Net Repo & Market-making                               | -                | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| <b>Net cash used in financing activities</b>           | <b>(422 888)</b> | <b>(398 428)</b> | <b>(57 616)</b>  | <b>879 023</b>     | <b>884 398</b>     | <b>1 005 156</b>   | <b>908 378</b>     | <b>(420 460)</b> | <b>(236 451)</b>   | <b>(561 660)</b> |
| <b>CASH AND CASH EQUIVALENTS</b>                       |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Net increase/(decrease) in cash and cash equivalents   | 41 393           | (4 957)          | (3 077)          | (540)              | (1 474)            | (85)               | (196)              | 274              | 309                | 92               |
| At beginning of year                                   | 99 826           | 9 974            | 5 017            | 777                | 1 939              | 466                | 381                | 185              | 459                | 768              |
| <b>At end of year</b>                                  | <b>141 219</b>   | <b>5 017</b>     | <b>1 939</b>     | <b>238</b>         | <b>466</b>         | <b>381</b>         | <b>185</b>         | <b>459</b>       | <b>768</b>         | <b>860</b>       |

Table 20.22: Notes to Umgeni Water Cashflow Statement (R'ooo)

| NOTES TO THE CASHFLOW STATEMENT                                       | F12<br>Actual  | F13<br>Actual  | F14<br>Actual  | F15<br>Budget    | F15            | F16            | F17<br>Forecast  | F18              | F19              | F20              |
|---|----------------|----------------|----------------|------------------|----------------|----------------|------------------|------------------|------------------|------------------|
| <b>RECONCILIATION OF NET PROFIT TO CASH GENERATED FROM OPERATIONS</b> |                |                |                |                  |                |                |                  |                  |                  |                  |
| Total comprehensive income  | 614 197        | 664 468        | 673 969        | 583 334          | 661 170        | 529 046        | 550 505          | 625 493          | 766 433          | 1 028 442        |
| Adjust for:   |                |                |                |                  |                |                |                  |                  |                  |                  |
| Amortisation of intangible asset                                      | 2 736          | 3 369          | 2 420          |                  |                |                |                  |                  |                  |                  |
| Amortisation of financial asset                                       | 2 846          | 2 806          | 2 819          | 4 524            | 6 094          | 5 349          | 2 232            | 5 756            | 2 569            | -                |
| Asset Impairments   | 72 013         | 76 025         | 183 976        | 93 277           | 103 552        | 99 626         | 124 439          | 116 497          | 111 179          | -                |
| Depreciation  | 92 621         | 95 179         | 108 191        | 147 210          | 147 210        | 176 348        | 188 339          | 200 958          | 214 020          | 227 931          |
| Darvill liability amortisation  | (3 572)        | (3 572)        | (3 572)        | (3 572)          | (3 572)        | (3 572)        | (3 572)          | (3 572)          |                  |                  |
| Doubtful debts provision  | 15 952         | 12 376         | (16 818)       |                  |                |                |                  |                  |                  |                  |
| Fair value of biological assets                                       | 1 492          |                |                |                  |                |                |                  |                  |                  |                  |
| Finance costs   | 84 567         | 66 477         | 45 510         | 67 902           | 66 148         | 129 605        | 158 760          | 229 614          | 222 854          | 219 431          |
| Interest received   | (100 079)      | (134 029)      | (122 558)      | (74 560)         | (88 998)       | (59 926)       | (44 732)         | (44 723)         | (48 134)         | (65 556)         |
| Investment Impairments  |                |                |                |                  |                |                |                  |                  |                  |                  |
| Increase/(decrease) in Provisions and non-current liabilities         | 201 017        | 12 235         | 73 802         | 277 414          | 38 208         | 48 314         | 52 307           | 53 108           | 60 730           | 67 756           |
| Profit (loss) on disposal of PPE                                      | (1 076)        | 392            | 2 430          |                  |                |                |                  |                  |                  |                  |
| Profit (loss) on disposal of non current asset held for sale          |                | (858)          |                |                  |                |                |                  |                  |                  |                  |
| Profit on disposal of shares  | (12)           |                |                |                  |                |                |                  |                  |                  |                  |
| Operating income before changes in working capital                    | 982 702        | 794 869        | 950 168        | 1 095 529        | 929 812        | 924 789        | 1 028 279        | 1 183 131        | 1 329 652        | 1 478 004        |
| Working capital changes:  | (166 736)      | 60 061         | (90 151)       | (69 674)         | (28 775)       | (78 240)       | (25 970)         | (105 167)        | (70 042)         | (108 490)        |
| (Increase)/decrease in inventories                                    | (182)          | (2 063)        | (426)          | (4 076)          | (445)          | (471)          | (498)            | (526)            | (557)            | (589)            |
| (Increase) decrease in accounts receivable                            | (7 205)        | (109 393)      | (131 782)      | 14 401           | 131 670        | (17 769)       | (30 472)         | (39 253)         | (34 368)         | (44 843)         |
| Increase/(decrease) in accounts payable                               | (159 348)      | 171 517        | 42 057         | (80 000)         | (160 000)      | (60 000)       | 5 000            | (65 388)         | (35 118)         | (63 058)         |
| <b>Net Cash generated from operations</b>                             | <b>815 966</b> | <b>854 930</b> | <b>860 017</b> | <b>1 025 855</b> | <b>901 038</b> | <b>846 549</b> | <b>1 002 309</b> | <b>1 077 963</b> | <b>1 259 609</b> | <b>1 369 513</b> |

Table 20.23: Msinsi Income Statement (R'ooo)

| For the year ended June 30,<br>TOTAL    | F12           | F13           | F14           | F15           | F15            | F16           | F17           | F18           | F19           | F20           |
|---|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|
|   | Actual        | Actual        | Actual        | Budget        | Forecast       |               |               |               |               |               |
| <b>Revenue</b>                          | <b>26 284</b> | <b>27 904</b> | <b>41 668</b> | <b>38 675</b> | <b>37 845</b>  | <b>43 115</b> | <b>47 217</b> | <b>50 774</b> | <b>55 363</b> | <b>61 669</b> |
| Environmental Management                | 13 160        | 14 740        | 23 804        | 26 404        | 26 404         | 28 256        | 29 386        | 30 268        | 31 781        | 33 370        |
| Eco-Tourism & Other Revenue             | 13 124        | 13 164        | 17 864        | 12 271        | 11 440         | 14 860        | 17 831        | 20 506        | 23 582        | 28 299        |
| <b>Cost of sales</b>                    | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>       | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      |
| <b>Gross profit</b>                     | <b>26 284</b> | <b>27 904</b> | <b>41 668</b> | <b>38 675</b> | <b>37 845</b>  | <b>43 115</b> | <b>47 217</b> | <b>50 774</b> | <b>55 363</b> | <b>61 669</b> |
|   | <b>100%</b>   | <b>100%</b>   |               | 100%          |                |               |               |               |               |               |
| <b>Other operating income</b>           | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>       | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      |
| <b>Administration Expenses</b>          | <b>28 308</b> | <b>28 977</b> | <b>36 753</b> | <b>37 555</b> | <b>54 622</b>  | <b>49 815</b> | <b>44 617</b> | <b>47 373</b> | <b>50 891</b> | <b>54 890</b> |
| Staff Costs                             | 18 190        | 18 510        | 22 311        | 24 119        | 22 615         | 25 218        | 27 235        | 29 142        | 31 473        | 33 991        |
| Energy                                  |               |               | 0             |               | 0              |               |               |               |               |               |
| Depreciation                            | 860           | 742           | 831           | 936           | 874            | 900           | 900           | 925           | 900           | 900           |
| Amortization                            |               |               | 0             |               | 0              |               |               |               |               |               |
| Maintenance                             |               |               | 0             |               | 18 000         | 8 000         |               |               |               |               |
| Other operating &                       | 9 258         | 9 725         | 13 610        | 12 500        | 13 132         | 15 697        | 16 482        | 17 306        | 18 517        | 19 999        |
| <b>Operating income before interest</b> | <b>-2 025</b> | <b>-1 074</b> | <b>4 915</b>  | <b>1 120</b>  | <b>-16 777</b> | <b>-6 700</b> | <b>2 600</b>  | <b>3 401</b>  | <b>4 472</b>  | <b>6 779</b>  |
| <b>Net interest and finance charges</b> | <b>12</b>     | <b>-87</b>    | <b>-99</b>    | <b>-30</b>    | <b>981</b>     | <b>175</b>    | <b>30</b>     | <b>25</b>     | <b>35</b>     | <b>50</b>     |
| Interest Paid                           | 35            | 107           | 161           | 75            | 139            | 75            | 45            | 40            | 35            | 30            |
| Interest Received                       | 47            | 20            | 62            | 45            | 1 121          | 250           | 75            | 65            | 70            | 80            |
| <b>Net Profit (Loss)</b>                | <b>-2 013</b> | <b>-1 161</b> | <b>4 816</b>  | <b>1 090</b>  | <b>-15 796</b> | <b>-6 525</b> | <b>2 630</b>  | <b>3 426</b>  | <b>4 507</b>  | <b>6 829</b>  |



Table 20.24: Msinsi Balance Sheet (R'ooo)

| Msinsi Balance Sheet (in R'ooo)<br>As at June 30, | F12          | F13          | F14           | F15          | F15           | F16           | F17           | F18           | F19           | F20           |
|---|--------------|--------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|   | Actual       | Actual       | Actual        | Budget       | Forecast      |               |               |               |               |               |
| <b>ASSETS</b>                                     |              |              |               |              |               |               |               |               |               |               |
| <b>Non-current assets</b>                         | <b>7 112</b> | <b>6 153</b> | <b>8 053</b>  | <b>7 783</b> | <b>10 086</b> | <b>11 686</b> | <b>11 687</b> | <b>11 727</b> | <b>11 862</b> | <b>12 292</b> |
| Property, plant and equipment                     | 2 109        | 2 063        | 3 811         | 3 925        | 5 937         | 7 537         | 7 637         | 7 512         | 7 612         | 8 212         |
| Other non-current assets                          | 4 898        | 4 089        | 4 241         | 3 858        | 4 149         | 4 149         | 4 050         | 4 215         | 4 250         | 4 080         |
| Investments                                       | 105          | 0            |               |              |               |               |               |               |               |               |
| Employee loans                                    |              |              |               |              |               |               |               |               |               |               |
| <b>Current Assets</b>                             | <b>1 905</b> | <b>3 390</b> | <b>42 991</b> | <b>598</b>   | <b>18 879</b> | <b>9 965</b>  | <b>12 544</b> | <b>15 509</b> | <b>19 446</b> | <b>26 072</b> |
| Inventories                                       | 37           | 0            |               |              |               |               |               |               |               |               |
| Accounts receivable                               | 265          | 796          | 522           | 120          | 263           | 120           | 217           | 246           | 286           | 236           |
| Sundry Debtors                                    | 0            | 0            |               | 0            | 0             | 0             | 0             | 0             | 0             | 0             |
| Current portion of employee loans                 | 0            | 0            |               | 0            | 0             | 0             | 0             | 0             | 0             | 0             |
| Inter - Company Loan                              | 0            | 0            | 15 199        | 0            | 0             | 0             | 0             | 0             | 0             | 0             |
| Interest Receivable                               |              |              |               |              |               |               |               |               |               |               |
| Assets held for sale                              |              |              |               |              |               |               |               |               |               |               |
| Bank balances and cash                            | 1 604        | 2 594        | 27 269        | 478          | 18 616        | 9 845         | 12 327        | 15 263        | 19 160        | 25 836        |
| <b>Total assets</b>                               | <b>9 017</b> | <b>9 543</b> | <b>51 043</b> | <b>8 381</b> | <b>28 965</b> | <b>21 651</b> | <b>24 231</b> | <b>27 236</b> | <b>31 308</b> | <b>38 364</b> |
| <b>Equity</b>                                     | <b>2 768</b> | <b>1 607</b> | <b>36 423</b> | <b>960</b>   | <b>20 627</b> | <b>14 103</b> | <b>16 733</b> | <b>20 159</b> | <b>24 666</b> | <b>31 495</b> |
| Contribution by Parent                            |              |              | 30 000        |              | 30 000        | 30 000        | 30 000        | 30 000        | 30 000        | 30 000        |
| Accumulated reserves                              | 2 768        | 1 607        | 6 423         | 960          | -9 373        | -15 897       | -13 267       | -9 841        | -5 334        | 1 495         |
| <b>Non-current liabilities</b>                    | <b>1 512</b> | <b>3 232</b> | <b>2 284</b>  | <b>1 468</b> | <b>1 587</b>  | <b>853</b>    | <b>878</b>    | <b>0</b>      | <b>0</b>      | <b>0</b>      |
| Interest bearing borrowings                       | 1 512        | 3 232        | 2 284         | 1 468        | 1 587         | 853           | 878           | 0             | 0             | 0             |
| Post-retirement medical benefit obligations       |              |              |               |              |               |               |               |               |               |               |
| Provisions  |              |              |               |              |               |               |               |               |               |               |
| <b>Current liabilities</b>                        | <b>4 737</b> | <b>4 704</b> | <b>12 336</b> | <b>5 953</b> | <b>6 751</b>  | <b>6 695</b>  | <b>6 620</b>  | <b>7 077</b>  | <b>6 642</b>  | <b>6 869</b>  |
| Accounts payable (including accruals & leases)    | 2 086        | 2 004        | 2 454         | 2 869        | 2 380         | 2 560         | 2 635         | 2 827         | 2 541         | 2 884         |
| Provisions  |              |              |               |              |               |               |               |               |               |               |
| Inter - Company Loan Account                      |              |              |               |              |               |               |               |               |               |               |
| Other payables/loans                              | 2 650        | 2 699        | 9 882         | 3 084        | 4 371         | 4 135         | 3 985         | 4 250         | 4 101         | 3 985         |
| Bank overdrafts                                   |              |              |               |              |               |               |               |               |               |               |
| <b>Total reserves and liabilities</b>             | <b>9 017</b> | <b>9 543</b> | <b>51 043</b> | <b>8 381</b> | <b>28 965</b> | <b>21 651</b> | <b>24 231</b> | <b>27 236</b> | <b>31 308</b> | <b>38 364</b> |

Table 20.25: Msinsi Cashflow Statement (R'000)

| Msinsi Cash Flow Statement<br>For the year ended June 30,          | F12          | F13          | F14           | F15           | F15           | F16           | F17           | F18           | F19           | F20           |
|--|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  | Actual       | Actual       | Actual        | Budget        | Forecast      |               |               |               |               |               |
| <b>OPERATING ACTIVITIES</b>  |              |              |               |               |               |               |               |               |               |               |
| Operating profit before working                                    | -1 528       | -464         | 4 624         | 3 332         | -15 811       | -5 800        | 3 600         | 4 161         | 5 337         | 7 849         |
| Changes in working capital   | 1 288        | 1 274        | -8 691        | -460          | 9 873         | 88            | -172          | 428           | -475          | 277           |
| <b>Net cash from operating activities</b>                          | <b>-240</b>  | <b>809</b>   | <b>-4 067</b> | <b>2 872</b>  | <b>-5 938</b> | <b>-5 712</b> | <b>3 428</b>  | <b>4 589</b>  | <b>4 862</b>  | <b>8 126</b>  |
| <b>INVESTING ACTIVITIES</b>  |              |              |               |               |               |               |               |               |               |               |
| Additions to property, plant and<br>Additions to intangible assets | -460         | -743         | -1 277<br>0   | -2 000        | -3 000        | -2 500        | -1 000        | -800          | -1 000        | -1 500        |
| Proceeds on disposal of Property,<br>Biological Assets             | 0<br>27      | 462<br>550   | 0<br>118      | 0<br>0        | 0             | 0             | 0             |               |               |               |
| <b>Net cash used in investing</b>                                  | <b>-433</b>  | <b>268</b>   | <b>-1 158</b> | <b>-2 000</b> | <b>-3 000</b> | <b>-2 500</b> | <b>-1 000</b> | <b>-800</b>   | <b>-1 000</b> | <b>-1 500</b> |
| <b>FINANCING ACTIVITIES</b>  |              |              |               |               |               |               |               |               |               |               |
| Equity contribution by the parent                                  |              |              | 30 000        |               |               |               |               |               |               |               |
| Net change in long-term  | 0            | 0            |               | -700          | -697          | -734          | 25            | -878          | 0             | 0             |
| Interest received  | 47           | 20           | 62            | 45            | 1 121         | 250           | 75            | 65            | 70            | 80            |
| Interest paid  | -36          | -107         | -161          | -75           | -139          | -75           | -45           | -40           | -35           | -30           |
| <b>Net cash used in financing</b>                                  | <b>12</b>    | <b>-87</b>   | <b>29 901</b> | <b>-730</b>   | <b>284</b>    | <b>-559</b>   | <b>55</b>     | <b>-853</b>   | <b>35</b>     | <b>50</b>     |
| <b>CASH AND CASH EQUIVALENTS</b>                                   |              |              |               |               |               |               |               |               |               |               |
| Net increase/(decrease) in cash and                                | -661         | 990          | 24 675        | 142           | -8 654        | -8 771        | 2 483         | 2 936         | 3 897         | 6 676         |
| At beginning of year   | 2 266        | 1 604        | 2 594         | 336           | 27 269        | 18 616        | 9 845         | 12 327        | 15 263        | 19 160        |
| <b>At end of year</b>  | <b>1 604</b> | <b>2 594</b> | <b>27 269</b> | <b>478</b>    | <b>18 615</b> | <b>9 845</b>  | <b>12 327</b> | <b>15 263</b> | <b>19 160</b> | <b>25 836</b> |

Table 20.26: Umgeni Water Services Income Statement (R'000)

| For the year ended June 30,<br>TOTAL | F12    | F13    | F14    | F15    | F15      | F16 | F17 | F18 | F19 | F20 |
|--------------------------------------|--------|--------|--------|--------|----------|-----|-----|-----|-----|-----|
|                                      | Actual | Actual | Actual | Budget | Forecast |     |     |     |     |     |
| Revenue                              | 0      | 0      | 0      |        |          |     |     |     |     |     |
| Cost of sales                        | 0      | 0      | 0      | 0      | 0        | 0   | 0   | 0   | 0   | 0   |
| Gross profit                         | 0      | 0      | 0      | 0      | 0        | 0   | 0   | 0   | 0   | 0   |
| Other operating income               | 0      | 0      | 0      | 0      | 0        | 0   | 0   | 0   | 0   | 0   |
| Administration Expenses              | 24     | 27     | 26     | 29     | 28       | 30  | 32  | 34  | 36  | 38  |
| Share of profit from associate       | 2 531  | 3 482  | 3 627  |        |          |     |     |     |     |     |
| Operating income before interest     | 2 507  | 3 455  | 3 601  | -29    | -28      | -30 | -32 | -34 | -36 | -38 |
| Net interest and finance charges     | 23     | 54     | 43     | 0      | 0        | 0   | 0   | 0   | 0   | 0   |
| Interest Paid                        |        |        |        |        |          |     |     |     |     |     |
| Interest Received                    | 23     | 54     | 43     |        |          |     |     |     |     |     |
| Net Profit (Loss)                    | 2 530  | 3 509  | 3 644  | -29    | -28      | -30 | -32 | -34 | -36 | -38 |

Table 20.27: Umgeni Water Services Balance Sheet (R'000)

| As at June 30,                                 | F12          | F13           | F14           | F15           | F15           | F16           | F17           | F18           | F19           | F20           |
|--|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|  | Actual       | Actual        | Actual        | Budget        | Forecast      |               |               |               |               |               |
| <b>ASSETS</b>                                  |              |               |               |               |               |               |               |               |               |               |
| <b>Non-current assets</b>                      | <b>6 366</b> | <b>6 255</b>  | <b>6 037</b>  | <b>6 255</b>  | <b>6 037</b>  | <b>6 037</b>  | <b>6 037</b>  | <b>6 037</b>  | <b>6 037</b>  | <b>6 037</b>  |
| Other non-current assets                       | 360          | 250           | 32            | 250           | 32            | 32            | 32            | 32            | 32            | 32            |
| Investments in subsidiaries and associates     | 6 005        | 6 005         | 6 005         | 6 005         | 6 005         | 6 005         | 6 005         | 6 005         | 6 005         | 6 005         |
| <b>Current Assets</b>                          | <b>2 699</b> | <b>4 484</b>  | <b>8 146</b>  | <b>4 223</b>  | <b>8 118</b>  | <b>8 088</b>  | <b>8 056</b>  | <b>8 022</b>  | <b>7 986</b>  | <b>7 948</b>  |
| <b>Total assets</b>                            | <b>9 065</b> | <b>10 539</b> | <b>14 183</b> | <b>10 478</b> | <b>14 155</b> | <b>14 125</b> | <b>14 093</b> | <b>14 059</b> | <b>14 023</b> | <b>13 985</b> |
| <b>Reserves</b>                                | <b>7 005</b> | <b>10 513</b> | <b>14 157</b> | <b>10 452</b> | <b>14 129</b> | <b>14 099</b> | <b>14 067</b> | <b>14 033</b> | <b>13 997</b> | <b>13 959</b> |
| Accumulated reserves & Share Capital           | 7 005        | 10 513        | 14 157        | 10 452        | 14 129        | 14 099        | 14 067        | 14 033        | 13 997        | 13 959        |
| <b>Non-current liabilities</b>                 | <b>2 036</b> | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>0</b>      |
| other non current liabilities                  | 2 036        | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| <b>Current liabilities</b>                     | <b>24</b>    | <b>26</b>     | <b>26</b>     | <b>26</b>     | <b>26</b>     | <b>26</b>     | <b>26</b>     | <b>26</b>     | <b>26</b>     | <b>26</b>     |
| Accounts payable (including accruals & leases) | 24           | 26            | 26            | 26            | 26            | 26            | 26            | 26            | 26            | 26            |
| <b>Total reserves and liabilities</b>          | <b>9 065</b> | <b>10 539</b> | <b>14 183</b> | <b>10 478</b> | <b>14 155</b> | <b>14 125</b> | <b>14 093</b> | <b>14 059</b> | <b>14 023</b> | <b>13 985</b> |

Table 20.28: Umgeni Water Group Income Statement (R'ooo)

| For the year ended June 30,                   | F12<br>Actual    | F13<br>Actual    | F14<br>Actual    | F15<br>Budget    | F15              | F16              | F17<br>Forecast  | F18              | F19              | F20              |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Volume of Bulk treated water sold (in kl'ooo) | 416 995          | 416 995          | 439 542          | 441 320          | 448 948          | 457 928          | 468 740          | 481 313          | 488 533          | 492 246          |
| <b>Revenue</b>                                | <b>1 847 151</b> | <b>1 908 833</b> | <b>2 204 140</b> | <b>2 121 613</b> | <b>2 248 525</b> | <b>2 391 132</b> | <b>2 643 636</b> | <b>2 946 508</b> | <b>3 251 906</b> | <b>3 565 465</b> |
| Water Sales - Bulk                            | 1 519 295        | 1 625 480        | 1 830 137        | 1 997 335        | 2 031 928        | 2 241 867        | 2 485 337        | 2 773 867        | 3 063 344        | 3 358 464        |
| Water Sales - Reticulation                    | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Water Sales - Raw Water                       | 429              | 428              | 415              | 625              | 615              | 679              | 729              | 792              | 862              | 938              |
| Wastewater Sales                              | 2 438            | 2 504            | 1 682            | 2 107            | 19 648           | 22 869           | 25 014           | 27 463           | 30 327           | 33 247           |
| Wastewater Management Fee                     | 48 594           | 52 481           | 58 083           | 62 239           | 64 268           | 76 899           | 83 282           | 90 610           | 98 584           | 107 260          |
| Section 30 activities                         | 276 395          | 227 940          | 313 822          | 59 308           | 132 066          | 48 819           | 49 275           | 53 777           | 58 789           | 65 557           |
| <b>Cost of sales</b>                          | <b>856 808</b>   | <b>869 909</b>   | <b>1 034 890</b> | <b>854 812</b>   | <b>987 310</b>   | <b>1 038 177</b> | <b>1 171 457</b> | <b>1 288 767</b> | <b>1 414 948</b> | <b>1 544 168</b> |
| Changes in water inventory                    | (211)            | (616)            | 246              | -                | -                | -                | -                | -                | -                | -                |
| Chemicals                                     | 41 786           | 50 452           | 47 181           | 53 223           | 50 172           | 59 017           | 65 214           | 72 061           | 79 628           | 87 989           |
| Depreciation                                  | 73 925           | 76 653           | 92 897           | 73 923           | 104 717          | 131 637          | 140 589          | 150 008          | 159 759          | 170 143          |
| Energy  | 103 391          | 107 884          | 136 074          | 170 752          | 190 758          | 229 879          | 261 349          | 297 128          | 337 805          | 384 050          |
| Maintenance                                   | 130 804          | 137 456          | 143 313          | 171 811          | 189 189          | 200 525          | 217 232          | 235 331          | 254 937          | 276 177          |
| Raw Water                                     | 150 598          | 161 389          | 190 540          | 161 085          | 159 916          | 170 592          | 210 652          | 236 162          | 262 167          | 280 842          |
| Staff Costs                                   | 105 291          | 117 203          | 130 305          | 164 352          | 156 450          | 185 106          | 210 916          | 228 534          | 246 589          | 266 069          |
| Section 30 activities                         | 235 157          | 184 123          | 271 560          | 28 767           | 106 212          | 28 612           | 30 444           | 32 270           | 34 207           | 36 259           |
| Other direct operating activities             | 16 067           | 35 365           | 22 776           | 30 897           | 29 895           | 32 807           | 35 062           | 37 272           | 39 859           | 42 640           |
| <b>Gross profit</b>                           | <b>990 343</b>   | <b>1 038 924</b> | <b>1 169 250</b> | <b>1 266 801</b> | <b>1 261 216</b> | <b>1 352 955</b> | <b>1 472 180</b> | <b>1 657 742</b> | <b>1 836 958</b> | <b>2 021 297</b> |
|   | 54%              | 54%              | 53%              | 52%              | 56%              | 56%              | 55%              | 56%              | 56%              | 56%              |
| <b>Other operating income</b>                 | <b>52 109</b>    | <b>18 814</b>    | <b>28 778</b>    | <b>5 753</b>     | <b>29 934</b>    | <b>8 106</b>     | <b>8 483</b>     | <b>8 890</b>     | <b>5 760</b>     | <b>6 238</b>     |
| <b>Administration Expenses</b>                | <b>469 197</b>   | <b>461 925</b>   | <b>596 217</b>   | <b>647 564</b>   | <b>669 634</b>   | <b>769 065</b>   | <b>813 560</b>   | <b>852 880</b>   | <b>897 127</b>   | <b>838 478</b>   |
| Staff Costs                                   | 170 325          | 192 622          | 223 615          | 262 547          | 247 345          | 277 838          | 299 560          | 322 708          | 348 231          | 375 773          |
| Energy  | 3 622            | 4 014            | 4 845            | 4 700            | 5 951            | 6 780            | 7 708            | 8 764            | 9 963            | 11 327           |
| Depreciation                                  | 15 648           | 15 111           | 16 439           | 22 741           | 43 367           | 45 610           | 48 650           | 51 875           | 55 161           | 58 688           |
| Amortization                                  | 5 581            | 6 175            | 5 239            | 4 524            | 6 382            | 5 875            | 6 364            | 6 402            | 6 225            | -                |
| Impairments                                   | 72 013           | 75 978           | 183 976          | 93 277           | 103 552          | 99 626           | 124 439          | 116 497          | 111 179          | -                |
| Maintenance                                   | 14 483           | 16 068           | 16 874           | 17 756           | 32 917           | 24 801           | 17 944           | 19 146           | 20 391           | 21 716           |
| Retirement Benefits                           | 102 092          | 42 482           | 93 719           | 84 427           | 75 956           | 88 201           | 111 777          | 120 783          | 130 566          | 141 196          |
| Other operating & administrative expenses     | 85 432           | 109 475          | 51 509           | 157 592          | 154 164          | 220 334          | 197 117          | 206 705          | 215 411          | 229 777          |
| <b>Operating income before interest</b>       | <b>573 255</b>   | <b>595 813</b>   | <b>601 811</b>   | <b>624 991</b>   | <b>621 516</b>   | <b>591 996</b>   | <b>667 102</b>   | <b>813 752</b>   | <b>945 591</b>   | <b>1 189 058</b> |
| <b>Net interest and finance charges</b>       | <b>(15 546)</b>  | <b>(67 519)</b>  | <b>(76 991)</b>  | <b>(6 628)</b>   | <b>(23 831)</b>  | <b>69 504</b>    | <b>113 998</b>   | <b>184 866</b>   | <b>174 686</b>   | <b>153 825</b>   |
| Interest Paid                                 | 84 589           | 66 507           | 45 555           | 67 902           | 66 148           | 129 605          | 158 760          | 229 614          | 222 854          | 219 431          |
| Interest Received                             | (100 135)        | (134 026)        | (122 546)        | (74 530)         | (89 979)         | (60 101)         | (44 762)         | (44 748)         | (48 169)         | (65 606)         |
| <b>Share of profit from associate</b>         | <b>2 531</b>     | <b>3 482</b>     | <b>3 627</b>     | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         |
| <b>Net Profit (Loss)</b>                      | <b>591 332</b>   | <b>666 814</b>   | <b>682 429</b>   | <b>631 619</b>   | <b>645 347</b>   | <b>522 493</b>   | <b>553 104</b>   | <b>628 886</b>   | <b>770 905</b>   | <b>1 035 233</b> |

Table 20.29: Umgeni Water Group Balance Sheet (R'ooo)

| As at June 30,                                 | F12<br>Actual    | F13<br>Actual    | F14<br>Actual    | F'15<br>group    | F'15      | F'16      | F'17      | F'18       | F'19       | F'20       |
|--|------------------|------------------|------------------|------------------|-----------|-----------|-----------|------------|------------|------------|
|  |                  |                  |                  |                  | Forecast  |           |           |            |            |            |
| <b>ASSETS</b>                                  |                  |                  |                  |                  |           |           |           |            |            |            |
| <b>Non-current assets</b>                      | <b>3 143 293</b> | <b>3 481 721</b> | <b>4 111 452</b> | <b>6 139 013</b> | 5 686 804 | 7 381 237 | 9 106 199 | 9 570 452  | 10 401 228 | 10 602 836 |
| Property, plant and equipment                  | 3 097 613        | 3 443 935        | 3 988 282        | 5 767 430        | 5 575 063 | 7 200 986 | 8 847 699 | 9 225 855  | 9 962 112  | 10 581 049 |
| Other non-current assets                       | 29 575           | 26 603           | 33 604           | 19 570           | 28 067    | 22 984    | 20 599    | 18 312     | 15 952     | 15 782     |
| Investments - Financial Instruments            | 9 995            | 5 179            | 83 561           | 344 306          | 77 669    | 151 262   | 231 896   | 320 280    | 417 159    | -          |
| Investments in subsidiaries and associates     | 6 110            | 6 005            | 6 005            | 7 707            | 6 005     | 6 005     | 6 005     | 6 005      | 6 005      | 6 005      |
| Assets held for sale                           | 13 500           | -                | -                | -                | -         | -         | -         | -          | -          | -          |
| <b>Current Assets</b>                          | <b>2 031 854</b> | <b>2 426 175</b> | <b>2 694 074</b> | <b>948 407</b>   | 1 573 135 | 1 186 999 | 874 162   | 948 059    | 835 000    | 1 646 114  |
| Inventories                                    | 9 002            | 11 029           | 11 456           | 15 530           | 11 900    | 12 371    | 12 869    | 13 395     | 13 952     | 14 541     |
| Accounts receivable                            | 195 463          | 236 658          | 258 048          | 263 265          | 291 263   | 308 889   | 339 458   | 378 740    | 413 147    | 457 940    |
| Sundry Debtors                                 | 10 271           | 67 441           | 194 362          | 13 879           | 29 158    | 29 129    | 29 098    | 29 065     | 29 030     | 28 992     |
| Short-term investments                         | 1 780 335        | 2 075 826        | 2 156 793        | 655 000          | 1 218 249 | 822 900   | 476 742   | 507 653    | 355 459    | 1 114 461  |
| Interest Receivable                            | 25 205           | 27 610           | 40 722           | 16               | -         | -         | -         | -          | -          | -          |
| Bank balances and cash                         | 11 578           | 7 611            | 32 693           | 716              | 22 565    | 13 710    | 15 996    | 19 206     | 23 412     | 30 179     |
| <b>Total assets</b>                            | <b>5 188 647</b> | <b>5 907 897</b> | <b>6 805 526</b> | <b>7 087 420</b> | 7 259 939 | 8 568 236 | 9 980 361 | 10 518 512 | 11 236 228 | 12 248 951 |
| <b>Reserves</b>                                |                  |                  |                  |                  |           |           |           |            |            |            |
| Accumulated reserves                           | 3 107 777        | 3 613 872        | 4 416 184        | 4 677 856        | 5 061 536 | 5 584 029 | 6 137 133 | 6 766 020  | 7 536 925  | 8 572 157  |
| <b>Non-current liabilities</b>                 | <b>1 461 073</b> | <b>1 539 149</b> | <b>1 630 540</b> | <b>1 831 049</b> | 1 587 858 | 2 404 770 | 3 235 115 | 3 209 213  | 3 240 721  | 2 679 032  |
| Interest bearing borrowings                    | 1 136 306        | 1 025 930        | 1 171 766        | 1 092 526        | 1 093 331 | 1 864 712 | 2 645 902 | 2 566 892  | 2 537 671  | 1 908 226  |
| Post retirement medical benefit obligations    | 312 296          | 502 661          | 450 383          | 732 588          | 488 592   | 536 906   | 589 213   | 642 320    | 703 050    | 770 806    |
| Other Non Current Liabilities                  | 12 471           | 10 558           | 8 391            | 5 935            | 5 935     | 3 152     | ( )       | ( )        | ( )        | ( )        |
| <b>Current liabilities</b>                     | <b>619 797</b>   | <b>754 876</b>   | <b>758 802</b>   | <b>578 516</b>   | 610 546   | 579 436   | 608 113   | 543 280    | 458 583    | 997 761    |
| Accounts payable (including accruals & leases) | 399 121          | 568 649          | 602 688          | 421 672          | 449 474   | 389 474   | 394 474   | 329 086    | 293 968    | 230 910    |
| Provisions                                     | 65 185           | 45 380           | 50 445           | 47 132           | 51 433    | 51 613    | 51 688    | 51 880     | 51 594     | 51 937     |
| Current portion of interest bearing loans      | 120 831          | 109 451          | 78 263           | 78 832           | 78 434    | 78 619    | 78 810    | 79 010     | 29 221     | 629 445    |
| Other payables/loans                           | 34 660           | 31 396           | 27 406           | 30 880           | 31 205    | 59 730    | 83 141    | 83 303     | 83 799     | 85 470     |
| <b>Total reserves and liabilities</b>          | <b>5 188 647</b> | <b>5 907 897</b> | <b>6 805 526</b> | <b>7 087 420</b> | 7 259 939 | 8 568 236 | 9 980 361 | 10 518 512 | 11 236 228 | 12 248 951 |

Table 20.30: Umgeni Water Group Cashflow Statement (R'000)

| For the year ended June 30,                            | F12<br>Actual    | F13<br>Actual    | F14<br>Actual    | F15<br>group       | F15                | F16                | F17                | F18              | F19                | F20              |
|--|------------------|------------------|------------------|--------------------|--------------------|--------------------|--------------------|------------------|--------------------|------------------|
|  |                  |                  |                  |                    | Forecast           |                    |                    |                  |                    |                  |
| <b>OPERATING ACTIVITIES</b>                            |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Operating profit before working capital changes        | 1 876 987        | 794 186          | 955 903          | 873 280            | 914 001            | 918 990            | 1 031 879          | 1 187 292        | 1 334 989          | 1 485 853        |
| Changes in working capital                             | (1 193 757)      | 60 240           | (94 136)         | (68 372)           | (18 902)           | (78 152)           | (26 142)           | (104 739)        | (70 517)           | (108 213)        |
| <b>Net cash from operating activities</b>              | <b>683 230</b>   | <b>854 426</b>   | <b>861 767</b>   | <b>804 908</b>     | <b>895 100</b>     | <b>840 838</b>     | <b>1 005 737</b>   | <b>1 082 552</b> | <b>1 264 472</b>   | <b>1 377 639</b> |
| <b>INVESTING ACTIVITIES</b>                            |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Additions to property, plant and equipment             | (481 668)        | (640 208)        | (1 013 194)      | (1 886 932)        | (1 843 352)        | (2 136 760)        | (2 082 059)        | (1 143 854)      | (1 023 849)        | (809 262)        |
| Additions to intangible assets                         | (3 947)          | (2 990)          | (11 150)         | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Proceeds on disposal of Property, plant & equipment    | 1 112            | 15 635           | 121              | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Transfer to financial asset                            | -                | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Grant Funding  | 131 056          | 167 080          | 245 343          | 203 333            | 53 442             | 282 471            | 170 175            | 485 825          | -                  | -                |
| Proceeds on disposal of Biological Assets              | -                | 550              | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Increase of intercompany borrowings                    | 2 558            | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| <b>Net cash used in investing activities</b>           | <b>(350 889)</b> | <b>(459 932)</b> | <b>(778 880)</b> | <b>(1 683 599)</b> | <b>(1 789 910)</b> | <b>(1 854 289)</b> | <b>(1 911 884)</b> | <b>(658 029)</b> | <b>(1 023 849)</b> | <b>(809 262)</b> |
| <b>FINANCING ACTIVITIES</b>                            |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Net change in long-term borrowings                     | (115 656)        | (121 756)        | 114 648          | (79 360)           | (78 961)           | (79 168)           | (78 594)           | (79 688)         | (79 010)           | (29 221)         |
| New Debt proposed                                      | -                | -                | -                | -                  | -                  | 850 000            | 860 000            | -                | -                  | -                |
| Net Investments - LTI & RED                            | (286 085)        | (290 675)        | (159 349)        | 1 021 000          | 967 720            | 349 000            | 297 000            | (83 000)         | 97 000             | (294 000)        |
| Proceeds on disposal of available for sale investments | 421              | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Equity Contribution from parent                        | -                | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| Net interest (Paid) received                           | (21 534)         | 13 970           | (13 104)         | (63 345)           | (4 077)            | (115 235)          | (169 973)          | (258 625)        | (254 406)          | (238 389)        |
| Net Repo & Market-making                               | -                | -                | -                | -                  | -                  | -                  | -                  | -                | -                  | -                |
| <b>Net cash used in financing activities</b>           | <b>(422 854)</b> | <b>(398 461)</b> | <b>(57 805)</b>  | <b>878 295</b>     | <b>884 682</b>     | <b>1 004 597</b>   | <b>908 433</b>     | <b>(421 313)</b> | <b>(236 416)</b>   | <b>(561 610)</b> |
| <b>CASH AND CASH EQUIVALENTS</b>                       |                  |                  |                  |                    |                    |                    |                    |                  |                    |                  |
| Net increase/(decrease) in cash and cash equivalents   | (90 513)         | (3 967)          | 25 082           | (397)              | (10 128)           | (8 855)            | 2 287              | 3 210            | 4 206              | 6 767            |
| At beginning of year                                   | 102 091          | 11 578           | 7 611            | 1 113              | 32 692             | 22 565             | 13 710             | 15 996           | 19 206             | 23 412           |
| <b>At end of year</b>                                  | <b>11 578</b>    | <b>7 611</b>     | <b>32 693</b>    | <b>716</b>         | <b>22 564</b>      | <b>13 710</b>      | <b>15 997</b>      | <b>19 206</b>    | <b>23 412</b>      | <b>30 179</b>    |

Table 20.31: Umgeni Water Group Notes to the Cashflow Statement (R'ooo)

| NOTES TO THE CASHFLOW STATEMENT<br>RECONCILIATION OF NET PROFIT TO<br>CASH GENERATED FROM OPERATIONS | F12<br>Actual  | F13<br>Actual  | F14<br>Actual  | F15<br>BUDGET  | F15            | F16            | F17              | F18              | F19              | F20              |
|--|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|
|  |                |                |                |                | Forecast       |                |                  |                  |                  |                  |
| NET PROFIT   | 591 332        | 666 814        | 682 429        | 584 393        | 645 347        | 522 493        | 553 104          | 628 886          | 770 905          | 1 035 233        |
| Adjust for:  |                |                |                |                |                |                |                  |                  |                  |                  |
| Amortisation of intangible asset   | 2 736          | 3 369          | 2 420          | 5 800          | 6 094          | 5 349          | 2 232            | 5 756            | 2 569            | 0                |
| Amortisation of financial asset  | 2 846          | 2 806          | 2 819          |                |                |                |                  |                  |                  |                  |
| Asset Impairments  | 72 013         | 76 130         | 183 976        | 93 277         | 103 552        | 99 626         | 124 439          | 116 332          | 111 179          | 0                |
| Depreciation   | 93 481         | 95 921         | 109 022        | 105 419        | 148 084        | 177 248        | 189 239          | 201 883          | 214 920          | 228 831          |
| Darville liability amorisation   | -3 572         | -3 572         | -3 572         | -3 572         | -3 572         | -3 572         | -3 572           | -3 572           | 0                | 0                |
| Doubtful debts provision   | 15 952         | 12 376         | -16 818        |                |                |                |                  |                  |                  |                  |
| Fair value adjustment of biological assets   | 838            | 273            | -475           |                |                |                |                  |                  |                  |                  |
| Finance costs  | 84 589         | 66 507         | 45 555         | 67 902         | 66 148         | 129 605        | 158 760          | 229 614          | 222 854          | 219 431          |
| Interest received  | -100 135       | -134 026       | -122 546       | -74 530        | -89 979        | -60 101        | -44 762          | -44 748          | -48 169          | -65 606          |
| Profit from associate  | -2 531         | -3 482         | -3 627         |                |                |                |                  |                  |                  |                  |
| Increase/(decrease) in Provisions and non-current liabilities  | 93 071         | 11 502         | 74 074         | 94 559         | 53 333         | 48 494         | 52 382           | 53 300           | 60 444           | 68 099           |
| Profit (loss) on disposal of PPE   | -1 029         | 438            | 2 442          |                |                |                |                  |                  |                  |                  |
| Profit (loss) on sale of biological assets   |                | -12            | 204            |                | 92             | 0              | 100              | 0                | -35              | 170              |
| (Profit) loss on disposal of Non-current asset held for sale   |                | -858           |                |                |                |                |                  |                  |                  |                  |
| Profit (loss) on disposal of shares  | -12            |                |                |                |                |                |                  |                  |                  |                  |
| Operating income before changes in working capital   | 849 579        | 794 186        | 955 903        | 873 248        | 929 100        | 919 141        | 1 031 923        | 1 187 451        | 1 334 668        | 1 486 158        |
| Working capital changes:   | -166 349       | 60 240         | -94 137        | -68 341        | -33 999        | -78 303        | -26 187          | -104 899         | -70 196          | -108 519         |
| (Increase)/decrease in inventories   | -145           | -2 026         | -426           | -2 314         | -445           | -471           | -498             | -526             | -557             | -589             |
| (Increase) decrease in accounts receivable   | -6 859         | -109 972       | -143 240       | 14 258         | 131 930        | -17 626        | -30 569          | -39 282          | -34 408          | -44 793          |
| Increase/(decrease) in accounts payable  | -159 345       | 172 238        | 49 530         | -80 317        | -165 512       | -60 236        | 4 850            | -65 123          | -35 267          | -63 174          |
| Increase/(decrease) in intercompany loan (UWS)   |                |                |                | 32             | 27             | 29             | 31               | 33               | 35               | 37               |
| <b>Net Cash generated from operations</b>  | <b>683 230</b> | <b>854 426</b> | <b>861 767</b> | <b>804 908</b> | <b>895 100</b> | <b>840 838</b> | <b>1 005 737</b> | <b>1 082 552</b> | <b>1 264 472</b> | <b>1 377 640</b> |



Table 20.32: Umgeni Water Group Segmental Report (R'ooo)

| Segmental Report<br>(in R'ooo)<br>For the year ended June 30, | F13              |                |                 |                  | F14              |                |                 |                   |
|---|------------------|----------------|-----------------|------------------|------------------|----------------|-----------------|-------------------|
|   | Primary          |                | S30             | Actual<br>Total  | Primary          |                | S30             | Total             |
|   | Bulk<br>Water    | Waste<br>Water |                 |                  | Bulk<br>Water    | Waste<br>Water |                 |                   |
| Volume sold   | 423 386          |                | 0               | 423 386          | 440 118          | 0              | 0               | 440 118           |
| <b>Revenue</b>  | <b>1 625 909</b> | <b>54 985</b>  | <b>227 940</b>  | <b>1 908 834</b> | <b>1 830 552</b> | <b>59 766</b>  | <b>313 822</b>  | <b>2 204 140</b>  |
| <b>Cost of sales</b>  | <b>-633 502</b>  | <b>-40 056</b> | <b>-196 353</b> | <b>-869 910</b>  | <b>-707 827</b>  | <b>-45 966</b> | <b>-281 097</b> | <b>-1 034 890</b> |
| Changes in water inventory                                    | 616              | 0              | 0               | 616              | -246             | 0              | 0               | -246              |
| Chemicals   | -44 142          | -6 129         | -181            | -50 452          | -41 393          | -5 391         | -397            | -47 181           |
| Depreciation  | -74 265          | -2 388         | 0               | -76 653          | -90 576          | -2 321         | 0               | -92 897           |
| Energy  | -95 397          | -10 055        | -2 432          | -107 884         | -121 871         | -11 510        | -2 693          | -136 074          |
| Maintenance   | -126 223         | -8 076         | -3 157          | -137 456         | -127 500         | -12 848        | -2 965          | -143 313          |
| Raw water   | -161 390         | 0              | 0               | -161 390         | -190 540         | 0              | 0               | -190 540          |
| Section 30 activities   | 0                | 0              | -184 123        | -184 123         | 0                | 0              | -271 560        | -271 560          |
| Staff costs   | -103 372         | -8 417         | -5 414          | -117 203         | -117 533         | -9 577         | -3 195          | -130 305          |
| Other direct operating expenses                               | -29 329          | -4 990         | -1 046          | -35 365          | -18 168          | -4 319         | -287            | -22 774           |
| <b>Gross profit</b>   | <b>992 407</b>   | <b>14 930</b>  | <b>31 587</b>   | <b>1 038 924</b> | <b>1 122 725</b> | <b>13 800</b>  | <b>32 726</b>   | <b>1 169 250</b>  |
| <b>Other income</b>   | <b>15 053</b>    | <b>3 612</b>   | <b>149</b>      | <b>18 814</b>    | <b>16 888</b>    | <b>3 871</b>   | <b>8 018</b>    | <b>28 778</b>     |
| <b>Other operating and administration expenses</b>            | <b>-434 005</b>  | <b>-9 220</b>  | <b>-18 699</b>  | <b>-461 925</b>  | <b>-587 259</b>  | <b>-8 095</b>  | <b>-863</b>     | <b>-596 217</b>   |
| Amortisation  | -6 175           | 0              | 0               | -6 175           | -5 239           | 0              | 0               | -5 239            |
| Impairments and write-offs                                    | -75 978          | -56            | -96             | -76 130          | -183 976         | 0              | 0               | -183 976          |
| Depreciation  | -15 111          | -325           | -755            | -16 190          | -15 370          | -218           | -853            | -16 441           |
| Other expenses  | -336 741         | -8 840         | -17 849         | -363 430         | -382 674         | -7 877         | -10             | -390 561          |
| <b>Profit from operations</b>                                 | <b>573 455</b>   | <b>9 321</b>   | <b>13 037</b>   | <b>595 813</b>   | <b>552 355</b>   | <b>9 576</b>   | <b>39 880</b>   | <b>601 811</b>    |
| Interest income   | 134 026          | 0              | 0               | 134 026          | 122 558          | 0              | -12             | 122 546           |
| Finance costs   | -60 665          | -5 811         | -31             | -66 506          | -41 009          | -4 501         | -45             | -45 555           |
| Share of profit from associate                                | 0                | 0              | 3 482           | 3 482            | 0                | 0              | 3 627           | 3 627             |
| <b>Profit for the year</b>                                    | <b>646 816</b>   | <b>3 510</b>   | <b>16 488</b>   | <b>666 814</b>   | <b>633 904</b>   | <b>5 075</b>   | <b>43 450</b>   | <b>682 429</b>    |
| Other Comprehensive Income                                    | 0                | 0              | 0               | 0                | 0                | 0              | 0               | 0                 |
| <b>TOTAL COMPREHENSIVE INCOME</b>                             | <b>646 816</b>   | <b>3 510</b>   | <b>16 488</b>   | <b>666 814</b>   | <b>633 904</b>   | <b>5 075</b>   | <b>43 450</b>   | <b>682 429</b>    |
| <b>Capital expenditure</b>                                    | <b>623 722</b>   | <b>19 475</b>  | <b>0</b>        | <b>643 197</b>   | <b>1 008 786</b> | <b>15 558</b>  | <b>0</b>        | <b>1 024 344</b>  |
| Segment assets  | 3 515 341        | 86 452         | 155 615         | 3 757 408        | 4 086 067        | 95 531         | 277 200         | 4 458 798         |
| Interest in associate   | 0                | 0              | 6 005           | 6 005            | 0                | 0              | 6 005           | 6 005             |
| Unallocated   |                  |                |                 | 2 144 483        |                  |                |                 | 2 340 723         |
| <b>Consolidated total assets</b>                              |                  |                |                 | <b>5 907 897</b> |                  |                |                 | <b>6 805 526</b>  |
| Segment liabilities   | 1 109 557        | 25 824         | 123 458         | 1 258 839        | 1 228 781        | 21 249         | 142 116         | 1 392 145         |
| Unallocated   |                  |                |                 | 957 830          |                  |                |                 | 997 197           |
| <b>Consolidated total liabilities</b>                         |                  |                |                 | <b>2 216 669</b> |                  |                |                 | <b>2 389 342</b>  |
|   |                  |                |                 | 0                |                  |                |                 | 0                 |

Table 20.32 continued

| Segmental Report<br>(in R'000)                     | F'15                        |            |          |           | F'16                        |         |         |            |
|--|-----------------------------|------------|----------|-----------|-----------------------------|---------|---------|------------|
|  | For the year ended June 30, |            |          |           | For the year ended June 30, |         |         |            |
|  | Primary                     |            | S30      | Total     | Primary                     |         | S30     | Total      |
| Bulk Water   | Waste Water                 | Bulk Water |          |           | Waste Water                 |         |         |            |
| Volume sold  | 448 948                     | 0          | 0        | 448 948   | 422 856                     | 9       | 0       | 422 865    |
| <b>Revenue</b>                                     | 2 032 543                   | 83 916     | 132 066  | 2 248 525 | 2 242 546                   | 99 768  | 48 819  | 2 391 132  |
| <b>Cost of sales</b>                               | -815 020                    | -66 077    | -106 212 | -987 310  | -941 434                    | -68 131 | -28 612 | -1 038 177 |
| Changes in water inventory                         | 0                           | 0          | 0        | 0         | 0                           | 0       | 0       | 0          |
| Chemicals  | -46 070                     | -4 102     | 0        | -50 172   | -54 531                     | -4 486  | 0       | -59 017    |
| Depreciation                                       | -101 882                    | -2 836     | 0        | -104 717  | -127 350                    | -4 287  | 0       | -131 637   |
| Energy   | -174 038                    | -16 720    | 0        | -190 758  | -210 305                    | -19 574 | 0       | -229 879   |
| Maintenance  | -167 492                    | -21 697    | 0        | -189 189  | -183 337                    | -17 189 | 0       | -200 525   |
| Raw water  | -159 916                    | 0          | 0        | -159 916  | -170 592                    | 0       | 0       | -170 592   |
| Section 30 activities                              | 0                           | 0          | -106 212 | -106 212  | 0                           | 0       | -28 612 | -28 612    |
| Staff costs  | -142 698                    | -13 752    | 0        | -156 450  | -169 955                    | -15 151 | 0       | -185 106   |
| Other direct operating expenses                    | -22 924                     | -6 971     | 0        | -29 895   | -25 363                     | -7 444  | 0       | -32 807    |
| <b>Gross profit</b>                                | 1 217 523                   | 17 839     | 25 854   | 1 261 216 | 1 301 112                   | 31 637  | 20 206  | 1 352 955  |
| <b>Other income</b>                                | 26 317                      | 3 617      | 0        | 29 934    | 4 486                       | 3 620   | 0       | 8 106      |
| <b>Other operating and administration expenses</b> | -631 598                    | -9 792     | -28 245  | -669 634  | -736 342                    | -11 136 | -21 588 | -769 065   |
| Amortisation                                       | -6 382                      | 0          | 0        | -6 382    | -5 875                      | 0       | 0       | -5 875     |
| Impairments and write-offs                         | -103 552                    | 0          | 0        | -103 552  | -99 626                     | 0       | 0       | -99 626    |
| Depreciation                                       | -42 089                     | -403       | -874     | -43 367   | -44 344                     | -366    | -900    | -45 610    |
| Other expenses                                     | -479 575                    | -9 388     | -27 370  | -516 333  | -586 496                    | -10 770 | -20 688 | -617 954   |
| <b>Profit from operations</b>                      | 612 243                     | 11 664     | -2 391   | 621 516   | 569 257                     | 24 121  | -1 382  | 591 996    |
| Interest income                                    | 88 998                      | 0          | 981      | 89 979    | 59 926                      | 0       | 175     | 60 101     |
| Finance costs                                      | -56 693                     | -9 455     | 0        | -66 148   | -109 046                    | -20 559 | 0       | -129 605   |
| Share of profit from associate                     | 0                           | 0          | 0        | 0         | 0                           | 0       | 0       | 0          |
| <b>Profit for the year</b>                         | 644 548                     | 2 209      | -1 410   | 645 347   | 520 137                     | 3 563   | -1 207  | 522 493    |
| Other Comprehensive Income                         | 0                           | 0          | 0        | 0         | 0                           | 0       | 0       | 0          |
| <b>TOTAL COMPREHENSIVE INCOME</b>                  | 644 548                     | 2 209      | -1 410   | 645 347   | 520 137                     | 3 563   | -1 207  | 522 493    |
| <b>Capital expenditure</b>                         | 1 549 161                   | 291 191    | 3 000    | 1 843 352 | 1 806 399                   | 327 861 | 2 500   | 2 136 760  |
| Segment assets                                     | 5 232 675                   | 383 483    | 279 326  | 5 895 484 | 6 551 387                   | 706 691 | 280 926 | 7 539 004  |
| Interest in associate                              |                             |            | 6 005    | 6 005     |                             |         | 6 005   | 6 005      |
| Unallocated  |                             |            |          | 1 358 450 |                             |         |         | 1 023 227  |
| <b>Consolidated total assets</b>                   |                             |            |          | 7 259 939 |                             |         |         | 8 568 236  |
|  |                             |            |          | 0         |                             |         |         | 0          |
| Segment liabilities                                | 1 099 137                   | 21 249     | 8 300    | 1 128 685 | 1 116 342                   | 21 249  | 957     | 1 138 547  |
| Unallocated  |                             |            |          | 1 069 718 |                             |         |         | 1 845 659  |
| <b>Consolidated total liabilities</b>              |                             |            |          | 2 198 403 |                             |         |         | 2 984 206  |
|  |                             |            |          | 0         |                             |         |         | 0          |

## 20.10 Capital Expenditure Programme

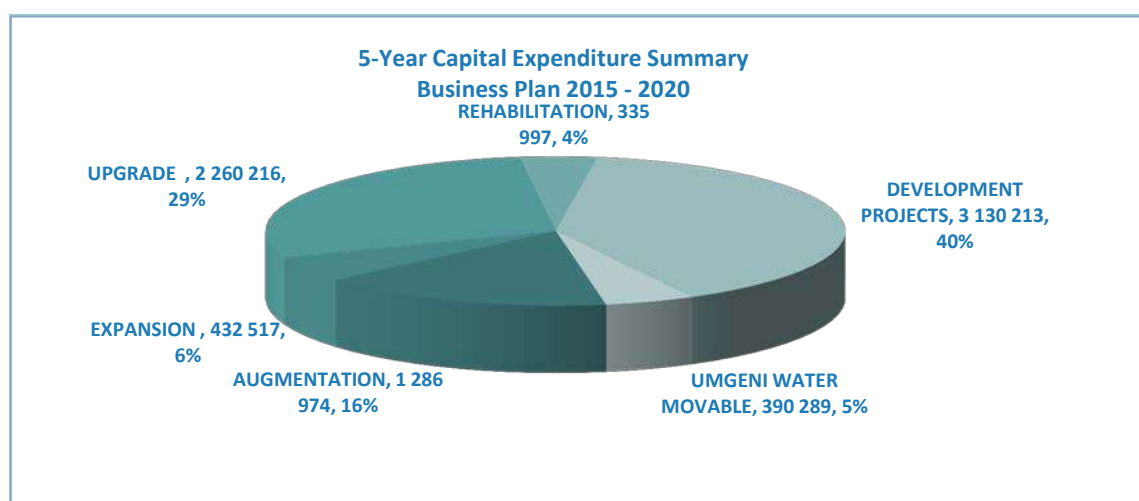
The capital expenditure programme is integral to the execution of Umgeni Water's growth and water services delivery strategy and is thus a significant component of Umgeni Water's Business Plan. The capital infrastructure programme is based on Umgeni Water's Infrastructure Master Plan which is aligned 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 20.33:** Summary of capex cashflow to 2020 (R'000)

| CASHFLOWS UNESCALATED         |                |                |                   |                  |                      |                  |                  |                  |                |                |                |
|-------------------------------|----------------|----------------|-------------------|------------------|----------------------|------------------|------------------|------------------|----------------|----------------|----------------|
| CAPEX CATEGORY                | Actual F'12    | Actual F'13    | Actual F'14, 2015 | Budget           | Total<br>2015 - 2020 | F15              | F16              | F17              | F18            | F19            | F20            |
| AUGMENTATION                  | 183 508        | 172 386        | 158 671           | 188 651          | 1 286 974            | 127 683          | 210 013          | 286 494          | 188 914        | 183 870        | 290 000        |
| EXPANSION                     |                |                | 83                | 40 254           | 432 517              | 4 933            | 37 285           | 205 090          | 150 960        | 34 000         | 250            |
| UPGRADE                       | 51 778         | 78 817         | 89 182            | 465 380          | 2 260 216            | 423 302          | 673 927          | 620 085          | 231 943        | 145 648        | 165 310        |
| REHABILITATION                | 2 142          | 53 293         | 42 376            | 191 586          | 335 997              | 208 567          | 68 127           | 50 303           | 9 000          |                |                |
| DEVELOPMENT PROJECTS          | 227 857        | 307 912        | 693 844           | 766 020          | 3 130 213            | 910 349          | 843 464          | 571 291          | 322 359        | 372 751        | 110 000        |
| IMMOVABLE                     | 465 286        | 612 408        | 984 155           | 1 651 891        | 7 445 917            | 1 674 834        | 1 832 815        | 1 733 263        | 903 175        | 736 269        | 565 560        |
| Business Plan 2014/15         |                |                |                   |                  | 6 008 916            | 1 651 891        | 1 499 555        | 1 200 654        | 779 877        | 406 689        | 470 250        |
| % Increase / (Decrease)       |                |                |                   |                  | 24%                  | 1%               | 22%              | 44%              | 16%            | 81%            | 20%            |
| EQUIPMENT & VEHICLES          | 846            | 5 228          | 22 013            | 35 454           | 51 460               | 2 855            | 12 105           | 4 500            | 2 000          | 30 000         |                |
| ICT                           | 15 598         | 17 947         | 7 138             | 58 700           | 283 860              | 135 037          | 111 163          | 14 200           | 19 460         | 2 000          | 2 000          |
| LABORATORY & PROCESS SERVICES | 3 426          | 6 926          | 8 447             | 9 013            | 54 969               | 27 626           | 5 553            | 9 305            | 3 225          | 6 250          | 3 010          |
| MOVABLE                       | 19 870         | 30 101         | 37 598            | 103 167          | 390 289              | 165 518          | 128 821          | 28 005           | 24 685         | 38 250         | 5 010          |
| Business Plan 2014/15         |                |                |                   |                  | 320 274              | 103 167          | 79 587           | 39 891           | 46 235         | 17 290         | 34 104         |
| % Increase / (Decrease)       |                |                |                   |                  | 22%                  | 60%              | 62%              | -30%             | -47%           | 121%           | -85%           |
| <b>TOTAL CAPITAL BUDGET</b>   | <b>485 155</b> | <b>642 508</b> | <b>1 021 753</b>  | <b>1 755 058</b> | <b>7 836 206</b>     | <b>1 840 352</b> | <b>1 961 636</b> | <b>1 761 268</b> | <b>927 860</b> | <b>774 520</b> | <b>570 570</b> |
| Business Plan 2014/15         |                |                |                   |                  | 6 329 190            | 1 755 058        | 1 579 142        | 1 240 545        | 826 112        | 423 979        | 504 354        |
| Increase / (Decrease)         |                |                |                   |                  | 1 507 016            | 85 294           | 382 494          | 520 722          | 101 748        | 350 541        | 66 216         |
| % Increase / (Decrease)       |                |                |                   |                  | 24%                  | 5%               | 24%              | 42%              | 12%            | 83%            | 13%            |
| CASHFLOWS ESCALATED           |                |                |                   |                  |                      |                  |                  |                  |                |                |                |
| SUMMARY OF ESCALATED BUDGET   |                |                |                   |                  | Total<br>2015 - 2020 | F15              | F16              | F17              | F18            | F19            | F20            |
| IMMOVABLE BUDGET              |                |                |                   |                  | 8 602 554            | 1 674 834        | 1 994 103        | 2 047 969        | 1 112 644      | 972 335        | 800 669        |
| MOVABLE BUDGET                |                |                |                   |                  | 426 782              | 165 518          | 140 157          | 33 090           | 30 410         | 50 514         | 7 093          |
| TOTAL CAPITAL BUDGET          |                |                |                   |                  | 9 029 336            | 1 840 352        | 2 134 260        | 2 081 059        | 1 143 054      | 1 022 849      | 807 762        |
| ESCALATION %                  |                |                |                   |                  | 15%                  | 0%               | 9%               | 18%              | 23%            | 32%            | 42%            |

**Figure 20.6:** Summary of 5-Year Capital Expenditure (R'000)



## 20.10.1. Major movements from the 2015 business plan

Table 20.34 (a): Comparison of project totals 2015 BP vs 2016 BP (R'000)

| CAPEX CATEGORY                                   | Business Plan 2016<br>Project Total<br>R'000 | Business Plan 2015<br>Project Total<br>R'000 | Increase / (Decrease)<br>R'000 |     |
|--|--|--|--------------------------------|-----|
| Augmentation                                     | 8 108 635                                    | 7 247 451                                    | 861 185                        | 12% |
| Expansion  | 819 367                                      | 743 000                                      | 76 367                         | 10% |
| Upgrade  | 3 003 653                                    | 2 128 867                                    | 874 786                        | 41% |
| Rehabilitation                                   | 490 754                                      | 398 376                                      | 92 378                         | 23% |
| Development Projects                             | 6 463 241                                    | 5 974 319                                    | 488 921                        | 8%  |
| Information Communication & Technology           | 417 208                                      | 331 890                                      | 85 318                         | 26% |
| Equipment Vehicles Laboratory & Process Services | 392 610                                      | 327 224                                      | 65 386                         | 20% |
|  | 19 695 468                                   | 17 151 127                                   | 2 544 341                      | 15% |

- Augmentation increases due to new projects: Hydropower unit on MMTS2 R78m, Umbumbulu Pump Station R125m, Table Mountain BWSS R100m, Vulindlela PS and Reservoir R72m and revision of planning cost estimates and prices based on stage of the project: Mkomazi BWS R967m.
- Expansion increases due to revision of planning cost estimates and prices based on latest tenders and escalation: Camperdown R15m, Mpophomeni R52m and South Coast Ph. 2b (Kelso to Umdoni) R9m.
- Upgrade increases due to revision of price estimates based on the stage of the project and scope changes: Groenkloof Reservoir and Pumpstation Upgrade (6MI) R84m, Darvill plant capacity increase R92m, Darvill WWTW: Co Generation R17m, Durban Heights filter upgrade R117m, Durban Heights WTW: Critical Isolation Valves Replacement R30m, Raw water pipeline from Umzinto Dam to Water Treatment Plant R28m and Refurbishment Head Office R49m. Upgrade new projects to address operational risks: Darvill WWTW - Electrical Dual Supply R15m, Nagle Aquaduct Con, Repair on Pipe as per Eddy current report R90m, Installation of 42 No. 1400 dia valves and chambers R80m, Chlorine Upgrade R75m, Actuators for all Critical Valves R15m and Wiggins High Lift Pump Station R60m.
- Rehabilitation increase due to revision of price estimates based on the stage of the project and based on latest tenders: 51 Pipeline Rehabilitation R30m, Nagle Aqueducts 2 - Joint Refurbishment R31m and Durban Heights WTW: Reservoir 3 Roof Rehabilitation & Dam Safety R22m. Rehabilitation new projects to address operational risks: Howick WWTW - Major Rehab of Constrained Unit Processes R17m.
- Developmental Projects increase due to revision of price estimates based on the stage of the project and latest tenders: Greater Mpofana phase 1 R133m and uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1, 2 & 3) R119m. Developmental new projects: Impendle BWSS R200m and Maphumulo Phase 4 : Weir on Hlimbitwe River R94m.
- Information communication technology increase due to increase in project budget for ERP system in order to cater for the purchase of new servers to accommodate the new ERP system: R95m. The servers have been due for upgrade for the past 2 years but were deferred until the implementation of the ERP in order to ensure that the specifications are accommodative of the ERP system.
- Equipment, vehicles, laboratory and process services increases due to increases in Mobile plant and vehicles R34m and Mobile Water Treatment Plant R16m. New lab projects: Soil equipment: Discrete analyser R12m and Soil equipment: Metals analyser (ICP-MS) R14m.

Table 20.34 (b): Major movement between the 2015 BP and 2016 BP (5 year Cashflows) (R'000)

| CAPEX CATEGORY       | Business Plan 2016<br>F'15 - F'20<br>R'000 | %           | Business Plan 2015<br>F'15 - F'20<br>R'000 | %           | (Decrease) / Increase<br>R'000 |            |
|----------------------|--|-------------|--|-------------|--------------------------------|------------|
| Augmentation         | 1 286 974                                  | 16%         | 1 068 335                                  | 17%         | 218 638                        | 20%        |
| Expansion            | 432 517                                    | 6%          | 355 590                                    | 6%          | 76 927                         | 22%        |
| Upgrade              | 2 260 216                                  | 29%         | 1 513 861                                  | 24%         | 746 355                        | 49%        |
| Rehabilitation       | 335 997                                    | 4%          | 301 886                                    | 5%          | 34 110                         | 11%        |
| Development Projects | 3 130 213                                  | 40%         | 2 769 243                                  | 44%         | 360 970                        | 13%        |
| Umgeni Water Movable | 390 289                                    | 5%          | 320 274                                    | 5%          | 70 015                         | 22%        |
|                      | <b>7 836 206</b>                           | <b>100%</b> | <b>6 329 190</b>                           | <b>100%</b> | <b>1 507 016</b>               | <b>24%</b> |

The major movements between the 2015 business plan and the 2016 business plan are as follows:

Table 20.35: Augmentation Cashflows 2015 -2020 (Increase R219m)

| Project                                | Change<br>R'000 | Comment   |
|--|-----------------|---|
| 251/51 New RW p/l (Dam - RW P/S)       | 41 581          | Project budget revised in line with tender prices received and escalation.  |
| Umbumbulu Pump Station                 | 70 200          | New project required based on interaction with customer in order to provide surety of water supply.   |
| Howick West Reservoir Upgrade (16MI)   | 37 989          | Increase in 5 year cash flows due to change in project scope from 8,5ml to 16ml as per request from Operations in line with increase in demand. |
| Wartburg to Bruyns Hill Pipeline       | 23 441          | Project budget estimate has been revised based on stage of the project.   |
| Umlaas New Water Project               | -28 000         | Project has been cancelled based on instruction from the customer.  |
| Lower Mkomazi Bulk Water Scheme        | 103 762         | Project cash flows have been accelerated and brought forward into the 5 year in line with revised project timelines.                            |
| Fawsley Park Bal Res ( Ph1 : 2 X 20MI) | -55 140         | Fawsley Park Balancing Reservoir Project has been moved and included in the Fawsley Park-Mvoti Balancing Res Pipeline (4km) project cash flow.  |
| Hazelmere WW: Upgrade (45 to 75MI/day) | 24 613          | Project cash flow has increased due to multiple design changes and variation orders.  |

Table 20.36: Expansion Cashflows 2015 -2020 (Increase R77m)

| Project        | Change<br>R'000 | Comment  |
|----------------|-----------------|--|
| Mpophomeni WWW | 51 919          | Increase in cash flows in the 5 year is due to revision of prices based on project stage and escalation. |
| Camperdown WWW | 15 434          | Increase in cash flows in the 5 year is due to revision of prices based on project stage and escalation. |

Table 20.37: Upgrade Cashflows 2015 -2020 (Increase R746m)

| Project  | Change<br>R'000 | Comment   |
|--|-----------------|---|
| Darvill WWW: Plant Capacity Increase (85MI/d) (MBR - 10MI/d in 3-5yrs) | 128 266         | Increase in cash flows in the 5 year due to revision of prices based on tender prices received, escalation and variation orders.  |
| Darvill WWW: Co Generation   | 17 695          | Increase in cash flows in the 5 year due to revision of prices based escalation.  |
| Darvill WWW - Electrical Dual Supply                                   | 15 000          | New project to provide surety of power supply in Darvill WWW.   |
| Nagle Dam Sleeve and Needle Valves                                     | 12 000          | New project required to address the safety risks when undertaking work on the Nagle dam sleeve and needle valves.   |
| Nagle Aquaduct Con, Repair on Pipe as per Eddy current report          | 90 000          | Remedial work required on the raw water source conveyance line (Nagle Aqueducts 2, 3 and 4) which currently poses the greatest threat of non-compliance to the Bulk Supply Agreement. |

| Project   | Change R'000 | Comment  |
|---|--------------|--|
| Dbn Hts WW: Filter Upgrade                          | 83 764       | Increase in project budget due to project scope being more clearly defined since the last budget review and adjustment for escalation.       |
| Dbn Hts WW: Candy Filters and Actuators upgrade     | 12 906       | Cash flows for this project were accelerated to F'15 due to urgency of the upgrade to address operating risk.                                |
| Dbn Hts WW: Critical Isolation Valves Replacement   | 29 774       | Initial estimate excluded further valves that now need replacement. Scope of work has thus increased resulting in an increase in cash flows. |
| Installation of 42 No. 1400 dia valves and chambers | 80 000       | Installation of new valves which control flow on the Aqueducts to ensure compliance with the Ethekewini Bulk Supply Agreement.               |
| Chlorine Upgrade                                    | 75 000       | Upgrade required to ensure plant meets water quality standards.  |
| Actuators for all Critical Valves                   | 15 000       | Increase in cash flows in the 5 year is due to revision of prices based on project stage and escalation.                                     |
| Wiggins Critical Isolation Valve Replacement        | 14 775       | Initial estimate excluded further valves that now need replacement. Scope of work has thus increased resulting in an increase in cash flows. |
| Refurbishment Head Office                           | 48 777       | Increase in budgeted cash flows in line with changes in the scope of the project.  |
| Training Room Upgrade: Head Office & UTC            | 13 800       | Increase in budgeted cash flows in line with changes in the scope of the project.  |

Table 20.38: Rehabilitation projects Cashflows 2015 -2020 (Increase R34m)

| Project  | Change R'000 | Comment   |
|--|--------------|---|
| 51 Pipeline Rehabilitation                               | 35 700       | Project cash flows have been revised in line with tender prices received.                     |
| Nagle Aqueducts 2 - Joint Refurbishment                  | 31 000       | Project cash flows have been revised in line with tender prices received.                     |
| Dbn Hts WW: Reservoir 3 Roof Rehabilitation & Dam Safety | -30 654      | Cash flows were delayed and pushed out of the 5 year window, based on project prioritisation. |

Table 20.39: Development projects Cashflows 2015 -2020 (Increase R361m)

| Project   | Change R'000 | Comment  |
|---|--------------|--|
| Greater Mpofana Regional Scheme Phases 1                            | 132 733      | Project cash flows have been revised in line with tender prices received which were a lot higher than previously budgeted for. |
| Richmond P/L-30kms  | -21 290      | Cash flows for this project were accelerated in F'14, resulting in a reduction in planned cash flows for F'15 and F'16.        |
| Impendle BWSS   | 189 000      | New project required based on interaction with customer in order to provide surety of water supply.                            |
| uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1, 2 & 3)        | 79 319       | Project budget estimate has been revised based on stage of the project, tender prices received and escalation.                 |
| Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu River abstraction | -94 720      | Cash flows were delayed and pushed out of the 5 year window, based on project prioritisation.                                  |
| Lower Thukela BWS - Phase 1   | 73 962       | Project budget estimate has been revised based on stage of the project, tender prices received and escalation.                 |
| Southern Ndwedwe BWS (33km p/l 3 res & 1 p/s)                       | -21 866      | Project budget has been revised based on the latest information available from the studies that are on-going.                  |
| North Coast Emergency Pipeline                                      | 32 453       | An emergency raw water transfer scheme implemented to address the raw water shortage at the Hazelmere Dam.                     |

Table 20.40: Movable assets Cashflows 2015 -2020 (Increase R70m)

| Project                                | Change R'000 | Comment   |
|--|--------------|---|
| Information Communication & Technology | 95 000       | Increase in project budget in order to cater for the purchase of new servers to accommodate the new ERP system. |
| Mobile Plant & Vehicles                | -25 000      | Cash flows delayed and pushed out of the 5 year window, based on project prioritisation.                        |

### 20.10.2. Rural developmental projects

In response to customer water demands and the need to eliminate water service delivery backlogs, a capital expenditure programme of approximately R6.5bn has been planned for rural development. The value of Developmental projects is R3.1bn for 5 years and represents 40% of the 2015 to 2020 capex programme (In the previous 2015 business plan when developmental projects represented 48% of 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 comprehensive income as impairments. These impairments are recognised 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 Projects in support of the 2015/16 Business plan assumptions (Excl. Vat and Interest).

**Table 20.40: Projected Funding mix for development projects (R'000)**

| Project  | Project Funding           |                          |                          | Analysis of RBIG Funding  |                         |                                |                          |
|--|---------------------------|--------------------------|--------------------------|---------------------------|-------------------------|--------------------------------|--------------------------|
|  | Total                     | DWS                      | UW                       | Total RBIG (DWS)          | Invoiced to date Feb'15 | Confirmed but not yet Invoiced | Not confirmed            |
| <b>Projects started with confirmed Grant Funding</b>             |                           |                          |                          |                           |                         |                                |                          |
| Greater Eston  | 201 780<br>100%           | 171 487<br>85%           | 30 293<br>15%            | 171 487                   | 138 405                 | 33 081                         |                          |
| Richmond   | 220 600<br>100%           | 38 194<br>17%            | 182 406<br>83%           | 38 194                    | 38 194                  |                                |                          |
| Lower Thukela BWS - Phase 1                                      | 1 392 306<br>100%         | 792 306<br>57%           | 600 000<br>43%           | 792 306                   | 294 420                 | 276 313                        | 221 572                  |
| Mhlabatshane BWS Scheme - Phase 1                                | 220 528<br>100%           | 108 955<br>49%           | 111 573<br>51%           | 108 955                   | 108 955                 |                                |                          |
| uMshwathi BWS  | 1 129 050<br>100%         | 656 000<br>58%           | 473 049<br>42%           | 656 000                   |                         | 656 000                        |                          |
| <b>Projects Started with no confirmation of grant funding</b>    |                           |                          |                          |                           |                         |                                |                          |
| Maphumulo BWS Scheme - Phase 1 & 2                               | 401 220<br>100%           | 99 000<br>25%            | 302 220<br>75%           | 99 000                    |                         |                                | 99 000                   |
| Greater Mpofana - Phase I  | 596 167<br>100%           | 62 324<br>10%            | 533 843<br>90%           | 62 324                    |                         |                                | 62 324                   |
| <b>New capex projects with no confirmed grant funding</b>        |                           |                          |                          |                           |                         |                                |                          |
| Impendle BWSS  | 200 000<br>100%           | 0%<br>0%                 | 200 000<br>100%          |                           |                         |                                |                          |
| Maphumulo Phase 3 : 6MI WW                                       | 37 030<br>100%            | 0%<br>0%                 | 37 030<br>100%           |                           |                         |                                |                          |
| Maphumulo Phase 4 : Weir on Hlimbitwe River                      | 94 370<br>100%            | 0%<br>0%                 | 94 370<br>100%           |                           |                         |                                |                          |
| North Coast Emergency Pipeline                                   | 32 453<br>100%            | 0%<br>0%                 | 32 453<br>100%           |                           |                         |                                |                          |
| <b>Projects to start on Confirmation of RBIG</b>                 |                           |                          |                          |                           |                         |                                |                          |
| Greater Mpofana - Phase 2  | 119 000<br>100%           | 119 000<br>100%          | 0%<br>0%                 | 119 000                   |                         |                                | 119 000                  |
| Lower Thukela BWS - Phase 2                                      | 223 777<br>100%           | 223 777<br>100%          | 0%<br>0%                 | 223 777                   |                         |                                | 223 777                  |
| Mhlabatshane BWS Scheme - Phase 2                                | 291 662<br>100%           | 291 662<br>100%          | 0%<br>0%                 | 291 662                   |                         |                                | 291 662                  |
| Southern Ndwedwe BWS   | 341 984<br>100%           | 341 984<br>100%          | 0%<br>0%                 | 341 984                   |                         |                                | 341 984                  |
| Central Ndwedwe BWS Ph1: (Ozwathini ext 31km p/l & 3 reservoirs) | 300 000<br>100%           | 300 000<br>100%          | 0%<br>0%                 | 300 000                   |                         |                                | 300 000                  |
| Central Ndwedwe BWS Ph2: (Ozwathini ext 19km p/l & 2 reservoirs) | 161 315<br>100%           | 161 315<br>100%          | 0%<br>0%                 | 161 315                   |                         |                                | 161 315                  |
| Upper-Mvoti Regional Water Scheme                                | 500 000<br>100%           | 500 000<br>100%          | 0%<br>0%                 | 500 000                   |                         |                                | 500 000                  |
| <b>TOTAL</b>   | <b>6 463 241<br/>100%</b> | <b>3 866 004<br/>60%</b> | <b>2 597 237<br/>40%</b> | <b>3 866 004<br/>100%</b> | <b>579 975<br/>15%</b>  | <b>965 395<br/>25%</b>         | <b>2 320 634<br/>60%</b> |

Table 20.40 shows the timing of funding for developmental projects projected to be received from RBIG.

**Table 20.41: RBIG funding (R'000)**

| Project  | Status of Grant | Total RBIG Funding | Cumulative to F'14 | F'15           | F'16           | F'17           | F'18           | F'19          | F'20          | Beyond F'20      |
|--|-----------------|--------------------|--------------------|----------------|----------------|----------------|----------------|---------------|---------------|------------------|
| Greater Eston  | Confirmed (*)   | 171 488            | 129 773            | 22 402         | 19 313         |                |                |               |               |                  |
| Richmond P/L-3okms   | Confirmed (*)   | 38 194             | 38 194             |                |                |                |                |               |               |                  |
| Greater Mpofana Regional Scheme Phases 1                         | Not Confirmed   | 62 324             |                    | 48 646         | 9 119          | 4 559          |                |               |               |                  |
| Greater Mpofana Regional Scheme Phases 2                         | Not Confirmed   | 119 000            |                    |                |                |                |                |               |               | 119 000          |
| Lower Thukela BWS - Phase 1                                      | Confirmed (*)   | 570 734            | 276 536            | 31 040         | 263 158        |                |                |               |               |                  |
| Lower Thukela BWS - Phase 1                                      | Not Confirmed   | 221 572            |                    |                |                | 221 572        |                |               |               |                  |
| Lower Thukela BWS - Phase 2                                      | Not Confirmed   | 223 777            |                    |                |                |                |                |               |               | 223 777          |
| Maphumulo BWS Scheme Phase 1 & 2                                 | Not Confirmed   | 99 000             |                    | 99 000         |                |                |                |               |               |                  |
| Mhlabatshane BWS Scheme Phase 1                                  | Confirmed (*)   | 108 955            | 108 955            |                |                |                |                |               |               |                  |
| Mhlabatshane Sub-Regional Scheme Phase 2                         | Not Confirmed   | 291 662            |                    |                |                |                |                |               |               | 291 662          |
| uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3)        | Confirmed (*)   | 656 000            |                    |                |                | 170 175        | 485 825        |               |               |                  |
| Southern Ndwedwe BWS   | Not Confirmed   | 341 984            |                    |                |                |                | 10 000         | 30 000        | 60 000        | 241 984          |
| Central Ndwedwe BWS Ph1: (Ozwathini ext 31km p/l & 3 reservoirs) | Not Confirmed   | 300 000            |                    |                |                |                |                |               |               | 300 000          |
| Central Ndwedwe BWS Ph2: (Ozwathini ext 19km p/l & 2 reservoirs) | Not Confirmed   | 161 315            |                    |                |                |                |                |               |               | 161 315          |
| Upper-Mvoti Regional Water Scheme                                | Not Confirmed   | 500 000            |                    |                |                |                |                |               |               | 500 000          |
| <b>Sub Total</b>   |                 | <b>3 866 004</b>   | <b>553 457</b>     | <b>201 088</b> | <b>291 590</b> | <b>396 307</b> | <b>495 825</b> | <b>30 000</b> | <b>60 000</b> | <b>1 837 738</b> |
| <b>Confirmed</b>   | <b>40%</b>      | <b>1 545 370</b>   | <b>553 457</b>     | <b>53 442</b>  | <b>282 471</b> | <b>170 175</b> | <b>485 825</b> |               |               |                  |
| <b>Not Confirmed</b>   | <b>60%</b>      | <b>2 320 634</b>   |                    | <b>147 646</b> | <b>9 119</b>   | <b>226 131</b> | <b>10 000</b>  | <b>30 000</b> | <b>60 000</b> | <b>1 837 738</b> |
| <b>Total</b>   |                 | <b>3 866 004</b>   | <b>553 457</b>     | <b>201 088</b> | <b>291 590</b> | <b>396 307</b> | <b>495 825</b> | <b>30 000</b> | <b>60 000</b> | <b>1 837 738</b> |

### 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 20.42: Impairments (R'000)**

| Project                                 | Impairment % | Total Impairment | Cumulative to F'14 | F'15           | F'16          | F'17           | F'18           | F'19           | F'20 |
|---|--------------|------------------|--------------------|----------------|---------------|----------------|----------------|----------------|------|
| Greater Eston                           | 15%          | 31 310           | 31 775             | -1 916         | 1 451         |                |                |                |      |
| Richmond                                | 11%          | 26 240           | 32 769             | -6 967         | 438           |                |                |                |      |
| Greater Mpofana Regional Scheme Phase 1 | 66%          | 472 164          | 5 814              | 57 514         | 85 722        | 98 224         | 114 963        | 109 928        |      |
| Maphumulo BWS Scheme Phase 1 - 3        | 65%          | 313 348          | 232 913            | 50 027         | 8 478         | 21 931         |                |                |      |
| Mhlabatshane BWS Scheme Phase 1         | 47%          | 110 927          | 108 974            | 1 953          |               |                |                |                |      |
| uMshwathi BWS Wartburg Phase 1 - 3      | 1%           | 13 549           |                    | 2 942          | 3 537         | 4 284          | 1 534          | 1 251          |      |
| Impendle BWS                            | 86%          | 201 178          |                    |                |               | 55 324         | 70 412         | 75 442         |      |
| Ngcebo BWS                              | 100%         | 39 036           | 39 036             |                |               |                |                |                |      |
| <b>TOTAL</b>                            |              | <b>1 207 753</b> | <b>451 281</b>     | <b>103 552</b> | <b>99 626</b> | <b>179 763</b> | <b>186 910</b> | <b>186 621</b> |      |



## 20.10.3 Summary of major capital investments 2016 to 2020

Table 20.43: Major projects

| Project Description                         | Project Total Business Plan 2016 | work In Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2016 Cashflows 2015 - 2020 |           |           |         |         |         | Cashflows Beyond 5 Years F20 - F44 |
|---|----------------------------------|-----------------------------|---------------------|--|-----------|-----------|---------|---------|---------|------------------------------------|
|   |                                  |                             |                     | F'15                                     | F'16      | F'17      | F'18    | F'19    | F'20    |                                    |
|   |                                  |                             |                     | R'000                                    | R'000     | R'000     | R'000   | R'000   | R'000   |                                    |
| <b>AUGMENTATION</b>                         | 8 108 635                        | 1 038 157                   | 1 286 974           | 127 683                                  | 210 013   | 286 494   | 188 914 | 183 870 | 290 000 | 5 783 505                          |
| <b>EXPANSION</b>                            | 819 367                          |                             | 432 517             | 4 933                                    | 37 285    | 205 090   | 150 960 | 34 000  | 250     | 386 850                            |
| <b>UPGRADE</b>                              | 3 003 653                        | 160 928                     | 2 260 216           | 423 302                                  | 673 927   | 620 085   | 231 943 | 145 648 | 165 310 | 582 508                            |
| <b>REHABILITATION</b>                       | 490 754                          | 79 793                      | 335 997             | 208 567                                  | 68 127    | 50 303    | 9 000   |         |         | 74 964                             |
| <b>DEVELOPMENT PROJECTS</b>                 | 6 463 241                        | 1 371 011                   | 3 130 213           | 910 349                                  | 843 464   | 571 291   | 322 359 | 372 751 | 110 000 | 1 962 016                          |
| <b>IMMOVABLE</b>                            | 18 885 649                       | 2 649 890                   | 7 445 917           | 1 674 834                                | 1 832 815 | 1 733 263 | 903 175 | 736 269 | 565 560 | 8 789 843                          |
| <b>EQUIPMENT &amp; VEHICLES</b>             | 392 610                          | 52 174                      | 106 429             | 30 481                                   | 17 658    | 13 805    | 5 225   | 36 250  | 3 010   | 234 008                            |
| <b>INFORMATION COMMUNICATION TECHNOLOGY</b> | 417 208                          | 26 497                      | 283 860             | 135 037                                  | 111 163   | 14 200    | 19 460  | 2 000   | 2 000   | 106 851                            |
| <b>MOVABLE</b>                              | 809 819                          | 78 671                      | 390 289             | 165 518                                  | 128 821   | 28 005    | 24 685  | 38 250  | 5 010   | 340 859                            |
| <b>TOTAL CAPITAL BUDGET</b>                 | 19 695 468                       | 2 728 560                   | 7 836 206           | 1 840 352                                | 1 961 636 | 1 761 268 | 927 860 | 774 520 | 570 570 | 9 130 702                          |

| EIB Funded Projects          | Umgeni System  | Project Description                                       | Customer | Project Total Business Plan 2016 | work In Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2016 Cashflows 2015 - 2020 |                |                |                |                |                  | Cashflows Beyond 5 Years F20 - F44 |
|------------------------------|--|---|----------|----------------------------------|-----------------------------|---------------------|--|----------------|----------------|----------------|----------------|------------------|------------------------------------|
|                              |  |   |          |                                  |                             |                     | F'15                                     | F'16           | F'17           | F'18           | F'19           | F'20             |                                    |
|                              |  |   |          |                                  |                             |                     | R'000                                    | R'000          | R'000          | R'000          | R'000          | R'000            |                                    |
| <b>AUGMENTATION PROJECTS</b> |  |   |          |                                  |                             |                     |  |                |                |                |                |                  |                                    |
|                              | Upper Umgeni   | 251/51 New RW p/l (Dam - RW P/S)                          | 1,2,3    | 131 185                          | 804                         | 130 381             | 24 819                                   | 39 872         | 59 186         | 6 504          |                |                  |                                    |
|                              | Upper Umgeni   | Umbumbulu Pump Station                                    | 3        | 125 000                          |                             | 70 200              |  | 200            | 5 000          | 25 000         | 40 000         | 54 800           |                                    |
| EIB                          | Upper Umgeni   | Midmar WW Upgrade Ph 2 (250 to 375ML/d) & Midmar Dam RWPS | 1,2,3    | 214 847                          | 3 270                       | 211 578             | 9 241                                    | 60 603         | 71 990         | 69 745         |                |                  |                                    |
|                              | Upper Umgeni   | 61 p/l: extension (Richmond Offtake to Umlaas Road)       | 1,3      | 170 890                          | 154 101                     | 16 788              | 3 182                                    | 6 000          | 2 606          | 5 000          |                |                  |                                    |
|                              | Upper Umgeni   | Howick West Reservoir Upgrade (16ML)                      | 3        | 54 919                           |                             | 54 919              | 189                                      | 1 420          | 53 310         |                |                |                  |                                    |
|                              | Upper Umgeni   | Vulindlela PS and Reservoir                               | 3        | 72 000                           |                             | 7 000               |  | 2 000          | 5 000          |                |                | 65 000           |                                    |
|                              | Upper Umgeni   | Wartburg to Bruyns Hill Pipeline                          | 3        | 78 441                           |                             | 78 441              | 2 416                                    | 28 013         | 48 012         |                |                |                  |                                    |
|                              | Upper Umgeni   | Lion Park Pipeline  | 3        | 47 478                           | 470                         | 47 008              | 5 559                                    | 25 160         | 16 289         |                |                |                  |                                    |
|                              | Lower Umgeni   | Mapaphetwa WW: Upgrade Plant (5.0 ML/d) (incl resevoir)   | 1        | 61 290                           | 46 109                      | 15 180              | 3 661                                    | 5 200          | 6 319          |                |                |                  |                                    |
|                              | Lower Umgeni   | East Coast Desalination Plants                            | 1,5,4    | 26 510                           | 13 507                      | 13 003              | 6 003                                    | 7 000          |                |                |                |                  |                                    |
|                              | Upper Mkomazi System                                     | Mkomazi Bulk Water Supply                                 | 1,3      | 3 670 963                        | 3 396                       | 52 567              | 1 867                                    | 700            |                | 10 000         | 10 000         | 30 000           |                                    |
|                              | South Coast  | Ellingham Link Pipeline                                   | 4        | 25 620                           | 14 821                      | 10 799              | 10 799                                   |                |                |                |                |                  |                                    |
|                              | South Coast  | South Coast Augmentation Booster Pump Station             | 1,4      | 94 260                           | 89 116                      | 5 144               | 254                                      | 2 100          | 1 395          | 1 395          |                |                  |                                    |
|                              | Mkomazi  | Lower Mkomazi Bulk Water Scheme                           | 1,4      | 1 142 572                        |                             | 414 262             | 3 012                                    | 3 250          | 5 500          | 60 000         | 127 500        | 215 000          |                                    |
|                              | Lower Mvoti  | Fawsley Park-Mvoti Balancing Res Pipeline (4km)           | 5,7      | 203 799                          |                             | 56 450              | 100                                      | 490            | 1 220          | 8 270          | 46 370         | 147 349          |                                    |
| EIB                          | Hazelmere  | Hazelmere WW: Upgrade (45 to 75ML/day)                    | 1,5,7    | 145 911                          | 76 034                      | 69 877              | 47 362                                   | 22 515         |                |                |                |                  |                                    |
|                              | <b>Various Projects &lt;R5m Cashflows within the 5Yr</b> |   |          | <b>1 842 950</b>                 | <b>636 528</b>              | <b>33 377</b>       | <b>9 220</b>                             | <b>5 490</b>   | <b>10 667</b>  | <b>3 000</b>   | <b>5 000</b>   | <b>1 173 046</b> |                                    |
|                              | <b>Sub Total: Augmentation Projects</b>                  |   |          | <b>8 108 635</b>                 | <b>1 038 157</b>            | <b>1 286 974</b>    | <b>127 683</b>                           | <b>210 013</b> | <b>286 494</b> | <b>188 914</b> | <b>183 870</b> | <b>290 000</b>   | <b>5 783 505</b>                   |

| EIB Funded Projects                                      | Umgeni System | Project Description                   | Customer | Project Total Business Plan 2016 | work in Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2016 Cashflows 2015 - 2020 |               |                |                |               | Cashflows Beyond 5 Years F'20 - F'44 |
|--|---------------|---------------------------------------|----------|----------------------------------|-----------------------------|---------------------|--|---------------|----------------|----------------|---------------|--------------------------------------|
|  |               |                                       |          |                                  |                             |                     | F'15                                     | F'16          | F'17           | F'18           | F'19          |                                      |
|  |               |                                       |          | R'000                            | R'000                       | R'000               | R'000                                    | R'000         | R'000          | R'000          | R'000         | R'000                                |
| <b>EXPANSION PROJECTS</b>                                |               |                                       |          |                                  |                             |                     |  |               |                |                |               |                                      |
| Upper Umgeni   |               | Mpophomeni WWW                        | 1,3      | 141 919                          |                             | 141 919             | 2 019                                    | 12 172        | 85 152         | 42 576         |               |                                      |
| Upper Umgeni   |               | Camperdown WWW                        | 1,3      | 85 434                           |                             | 85 434              | 1 842                                    | 13 366        | 41 517         | 28 709         |               |                                      |
| Upper Umgeni   |               | Harry Gwala Planning Regional Schemes | 6        | 20 000                           |                             | 20 000              | 250                                      | 2 400         | 8 675          | 8 675          |               |                                      |
| South Coast  |               | South Coast Ph. 2b (Kelso to Umdoni)  | 1,4      | 180 913                          |                             | 180 913             | 764                                      | 8 154         | 68 995         | 70 000         | 33 000        |                                      |
| <b>Various Projects &lt;R5m Cashflows within the 5Yr</b> |               |                                       |          | <b>391 100</b>                   |                             | <b>4 250</b>        | <b>57</b>                                | <b>1 193</b>  | <b>750</b>     | <b>1 000</b>   | <b>1 000</b>  | <b>250</b>                           |
| <b>Sub Total: Expansion Projects</b>                     |               |                                       |          | <b>819 367</b>                   |                             | <b>432 517</b>      | <b>4 933</b>                             | <b>37 285</b> | <b>205 090</b> | <b>150 960</b> | <b>34 000</b> | <b>250</b>                           |

| EIB Funded Projects     | Umgeni System | Project Description  | Customer | Project Total Business Plan 2016 | work in Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2016 Cashflows 2015 - 2020 |         |         |         |         | Cashflows Beyond 5 Years F'20 - F'44 |
|-------------------------|---------------|--|----------|----------------------------------|-----------------------------|---------------------|--|---------|---------|---------|---------|--------------------------------------|
|                         |               |  |          |                                  |                             |                     | F'15                                     | F'16    | F'17    | F'18    | F'19    |                                      |
|                         |               |  |          | R'000                            | R'000                       | R'000               | R'000                                    | R'000   | R'000   | R'000   | R'000   | R'000                                |
| <b>UPGRADE PROJECTS</b> |               |  |          |                                  |                             |                     |  |         |         |         |         |                                      |
| Upper Umgeni            |               | Midmar PLC Upgrades (10-yr upgrade cycle)                              | 1,2,3    | 45 000                           |                             | 15 000              |  |         |         | 15 000  |         | 30 000                               |
| Upper Umgeni            |               | Howick WWW - PLC & Scada Upgrade                                       | 2,3      | 6 000                            |                             | 6 000               |  | 6 000   |         |         |         |                                      |
| Upper Umgeni            |               | Groenekloof Reservoir and Pumpstation Upgrade (6MI)                    | 3        | 104 000                          |                             | 10 000              |  |         | 5 000   | 5 000   |         | 94 000                               |
| Upper Umgeni            |               | Darvill WWW: Plant Capacity Increase (85MI/d) (MBR - 10MI/d in 3-5yrs) | 2,3      | 718 679                          | 12 725                      | 705 954             | 276 652                                  | 251 016 | 178 286 |         |         |                                      |
| Upper Umgeni            |               | Darvill WWW: Digester Upgrade  | 2,3      | 17 719                           | 6 569                       | 11 151              | 9 041                                    | 613     | 1 497   |         |         |                                      |
|                         |               | Ultrafiltration Full Scale Evaluation                                  |          | 30 000                           |                             | 30 000              | 3 010                                    | 11 900  | 13 990  | 1 100   |         |                                      |
|                         |               | Sludge Treatment Technology Evaluation                                 |          | 20 000                           |                             | 20 000              | 2 000                                    | 8 000   | 5 000   | 5 000   |         |                                      |
| Upper Umgeni            |               | Darvill Sludge Handling Facility                                       | 2,3      | 47 761                           |                             | 47 761              | 1 408                                    | 7 603   | 26 324  | 5 078   | 7 348   |                                      |
| Upper Umgeni            |               | Darvill WWW: Co Generation   | 2,3      | 58 846                           | 315                         | 58 531              | 1 134                                    | 15 694  | 41 703  |         |         |                                      |
| Upper Umgeni            |               | Darvill WWW - Electrical Dual Supply                                   | 2,3      | 15 000                           |                             | 15 000              |  | 15 000  |         |         |         |                                      |
| Lower Umgeni            |               | Inanda Dam Pumpstation Pump/Motor Protection System                    | 1        | 8 000                            |                             | 8 000               | 500                                      | 500     |         |         | 7 000   |                                      |
| Lower Umgeni            |               | Inanda Dam River Valves  | 1        | 7 500                            |                             | 7 500               |  | 7 500   |         |         |         |                                      |
| Lower Umgeni            |               | Nagle Dam - Standby Genset Upgrade                                     | 1        | 12 500                           |                             | 6 500               |  | 1 500   |         |         | 5 000   | 6 000                                |
| Lower Umgeni            |               | Aqueducts 2,3,&4 Steel Pipe coating/wrapping - bridge crossings        | 1        | 10 000                           |                             | 10 000              |  | 3 000   | 7 000   |         |         |                                      |
| Lower Umgeni            |               | Nagle Dam Sleeve and Needle Valves                                     | 1        | 12 000                           |                             | 12 000              |  | 7 000   | 5 000   |         |         |                                      |
| Lower Umgeni            |               | Nagle Aquaduct Con, Repair on Pipe as per Eddy current report          | 1        | 90 000                           |                             | 90 000              |  | 10 000  | 80 000  |         |         |                                      |
| Lower Umgeni            |               | Dbn Hts WW: Filter Upgrade   | 4        | 520 997                          | 1 117                       | 486 881             | 2 437                                    | 10 839  | 70 731  | 137 956 | 126 301 | 138 618                              |
| Lower Umgeni            |               | Dbn Hts WW: Shaft Pump Lifts   | 1        | 24 439                           | 4 439                       | 5 000               |  |         |         | 5 000   |         | 15 000                               |
| Lower Umgeni            |               | Dbn Hts WW: Candy Filters and Actuators upgrade                        |          | 16 696                           | 2 607                       | 14 089              | 14 089                                   |         |         |         |         |                                      |
| Lower Umgeni            |               | Dbn Hts WW: Critical Isolation Valves Replacement                      | 1        | 34 582                           | 108                         | 34 474              | 34 474                                   |         |         |         |         |                                      |
| Lower Umgeni            |               | Dbn Hts WW: Res 2 and 3 Sales Meter Replacment                         | 1        | 21 209                           | 960                         | 5 248               | 248                                      |         | 5 000   |         |         | 15 000                               |
| Lower Umgeni            |               | Dbn Heights KwaDabeka Pumpstation Transformer relocation               | 1        | 8 974                            | 185                         | 8 789               | 2 164                                    | 5 225   | 1 400   |         |         |                                      |
| Lower Umgeni            |               | Durban Heights WW - Transformer Replacement                            | 1        | 6 000                            |                             | 6 000               |  | 6 000   |         |         |         |                                      |
| Lower Umgeni            |               | Unit Process valves  | 1        | 10 000                           |                             | 10 000              |  | 10 000  |         |         |         |                                      |
| Lower Umgeni            |               | Installation of 42 No. 1400 dia valves and chambers                    | 1        | 80 000                           |                             | 80 000              |  | 20 000  | 40 000  | 20 000  |         |                                      |
| Lower Umgeni            |               | Chlorine Upgrade   | 1        | 75 000                           |                             | 75 000              |  | 55 000  | 20 000  |         |         |                                      |
| Lower Umgeni            |               | Clarifier Desludge Valves and Actuators Upgrade                        | 1        | 5 000                            |                             | 5 000               |  | 5 000   |         |         |         |                                      |
| Lower Umgeni            |               | Lime Dosing System Upgrade   | 1        | 5 000                            |                             | 5 000               |  | 5 000   |         |         |         |                                      |
| Lower Umgeni            |               | Actuators for all Critical Valves                                      | 1        | 15 000                           |                             | 15 000              |  | 8 000   | 7 000   |         |         |                                      |
| Upper Umgeni            |               | Wiggins PLC Upgrade (5-yr upgrade cycle)                               | 1,4      | 25 000                           |                             | 5 000               |  | 1 000   | 1 000   | 1 000   | 1 000   | 20 000                               |

| EIB Funded Projects | Umgeni System  | Project Description              | Customer         | Project Total Business Plan 2016 | work In Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2016 Cashflows 2015 - 2020 |                |                |                |                        |        | Cashflows Beyond 5 Years F'20 - F'44 |
|---------------------|--|----------------------------------|------------------|----------------------------------|-----------------------------|---------------------|--|----------------|----------------|----------------|------------------------|--------|--------------------------------------|
|                     |  |                                  |                  |                                  |                             |                     | F'15                                     | F'16           | F'17           | F'18           | F'19                   | F'20   |                                      |
|                     |  |                                  |                  |                                  |                             |                     | R'000                                    | R'000          | R'000          | R'000          | R'000                  | R'000  |                                      |
| Lower Umgeni        | Wiggins Ozone Plant Rahb and Element Replacement (every ten years) | 1,4                              | 31 816           | 544                              | 31 272                      | 1 841               | 17 300                                   | 12 131         |                |                |                        |        |                                      |
| Lower Umgeni        | Wiggins Dam Safety: Concrete Rehab                                 | 1,4                              | 19 890           | 45                               | 19 846                      | 614                 | 650                                      | 12 171         | 6 410          |                |                        |        |                                      |
| Lower Umgeni        | Wiggins Critical Isolation Valve Replacement                       | 1,4                              | 14 775           |                                  | 14 775                      | 14 775              |  |                |                |                |                        |        |                                      |
| Lower Umgeni        | Wiggins WW High Lift Pumpstation Pump/Motor Protection System      | 1,4                              | 7 000            |                                  | 7 000                       |                     | 4 000                                    |                |                |                | 3 000                  |        |                                      |
| Lower Umgeni        | Wiggins High Lift Floors   | 1,4                              | 8 000            |                                  | 8 000                       |                     |  | 2 500          | 5 500          |                |                        |        |                                      |
| Lower Umgeni        | Wiggins P/S Non Return Valves                                      | 1,4                              | 5 000            |                                  | 5 000                       |                     | 5 000                                    |                |                |                |                        |        |                                      |
| Lower Umgeni        | Wiggins Sub Stations Sub A and Sub B MV                            | 1,4                              | 12 000           |                                  | 12 000                      |                     | 12 000                                   |                |                |                |                        |        |                                      |
| Ixopo System        | Ixopo WWW Upgrade (Clarifier)                                      | 6                                | 10 960           | 460                              | 10 500                      | 500                 | 10 000                                   |                |                |                |                        |        |                                      |
| South Coast         | Umzinto Water Works  | 4                                | 16 087           | 8                                | 16 079                      | 79                  | 10 600                                   | 5 400          |                |                |                        |        |                                      |
| South Coast         | Umnini Pumpstation Standby Generator                               | 4                                | 11 454           | 1 454                            | 5 000                       |                     |  |                |                |                | 5 000                  | 5 000  |                                      |
| South Coast         | Amanzimtoti WW: Chloramination Booster System for SCP              | 1                                | 8 550            |                                  | 8 550                       | 1 500               | 7 050                                    |                |                |                |                        |        |                                      |
| South Coast         | Amanzimtoti WTP - Filter Upgrade                                   | 1                                | 7 000            |                                  | 7 000                       |                     | 1 000                                    | 6 000          |                |                |                        |        |                                      |
| South Coast         | Umtwalume WW - Standby Genset Upgrade                              | 4                                | 11 500           |                                  | 6 500                       |                     | 1 500                                    |                |                |                | 5 000                  | 5 000  |                                      |
| EIB                 | Hazelmere  | Hazelmere WW pumpstation upgrade | 1,5,7            | 48 726                           | 17 545                      | 31 181              | 25 985                                   | 5 196          |                |                |                        |        |                                      |
| Hazelmere           | Hazelmere WW: PLC Upgrade (10-yr upgrade cycle)                    | 1,5,7                            | 15 000           |                                  | 5 000                       |                     |  |                |                | 5 000          |                        | 10 000 |                                      |
| Hazelmere           | Hazelmere WW: Upgrade Clarifier No. 03                             | 1,5,7                            | 9 000            |                                  | 9 000                       |                     | 9 000                                    |                |                |                |                        |        |                                      |
| Upper Umgeni        | Hazelmere WW - Sludge Treatment Plant Upgrade                      | 1,5,7                            | 28 222           |                                  | 28 222                      | 405                 | 2 430                                    | 19 209         | 6 178          |                |                        |        |                                      |
| Upper Mvoti         | Maphumulo standby generator  | 5                                | 7 500            |                                  | 7 500                       |                     | 7 500                                    |                |                |                |                        |        |                                      |
|                     | Office Space Rationalisation                                       |                                  | 9 250            | 1 473                            | 7 777                       | 2 804               | 4 973                                    |                |                |                |                        |        |                                      |
|                     | Refurbishment Head Office  |                                  | 90 000           | 8 224                            | 81 777                      | 8 556               | 20 000                                   | 35 000         | 18 221         |                |                        |        |                                      |
|                     | Training Room Upgrade:Head Office & UTC                            |                                  | 15 000           |                                  | 15 000                      | 600                 | 11 250                                   | 3 150          |                |                |                        |        |                                      |
|                     | Renovations to Prince Alfred Street Building                       |                                  | 5 000            |                                  | 5 000                       |                     | 5 000                                    |                |                |                |                        |        |                                      |
|                     | <b>Various Projects &lt;R5m Cashflows within the 5Yr</b>           |                                  | <b>561 022</b>   | <b>102 153</b>                   | <b>109 361</b>              | <b>18 487</b>       | <b>68 089</b>                            | <b>15 593</b>  | <b>5 500</b>   | <b>1 000</b>   | <b>692 349 508</b>     |        |                                      |
|                     | <b>Sub Total: Upgrade Projects</b>                                 |                                  | <b>3 003 653</b> | <b>160 928</b>                   | <b>2 260 216</b>            | <b>423 302</b>      | <b>673 927</b>                           | <b>620 085</b> | <b>231 943</b> | <b>145 648</b> | <b>165 310 582 508</b> |        |                                      |

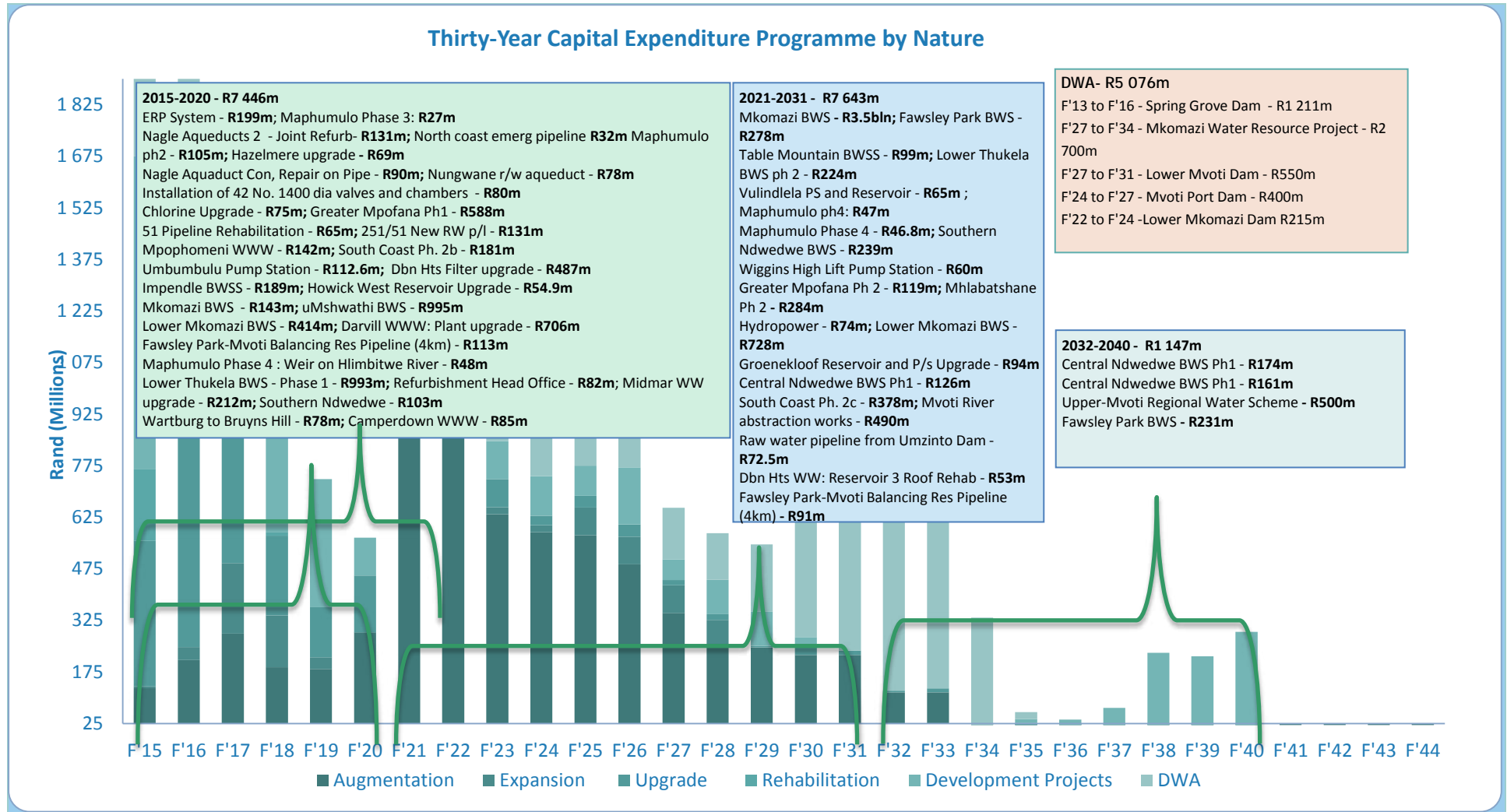
| EIB Funded Projects            | Umgeni System  | Project Description | Customer       | Project Total Business Plan 2016 | work In Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2016 Cashflows 2015 - 2020 |               |              |       |               |       | Cashflows Beyond 5 Years F'20 - F'44 |
|--------------------------------|--|---------------------|----------------|----------------------------------|-----------------------------|---------------------|--|---------------|--------------|-------|---------------|-------|--------------------------------------|
|                                |  |                     |                |                                  |                             |                     | F'15                                     | F'16          | F'17         | F'18  | F'19          | F'20  |                                      |
|                                |  |                     |                |                                  |                             |                     | R'000                                    | R'000         | R'000        | R'000 | R'000         | R'000 |                                      |
| <b>REHABILITATION PROJECTS</b> |  |                     |                |                                  |                             |                     |  |               |              |       |               |       |                                      |
| Upper Umgeni                   | 51 Pipeline Rehabilitation                               | 1,3                 | 64 700         |                                  | 64 700                      | 44 700              | 20 000                                   |               |              |       |               |       |                                      |
| Upper Umgeni                   | Howick WWW - Major Rehab of Constrained Unit Processes   | 3                   | 17 000         |                                  | 17 000                      |                     | 3 000                                    | 5 000         | 9 000        |       |               |       |                                      |
| Lower Umgeni                   | Nagle Aqueducts 2 - Joint Refurbishment                  | 1                   | 130 500        |                                  | 130 500                     | 130 500             |  |               |              |       |               |       |                                      |
| Lower Umgeni                   | Dbn Heights Existing Asbestos Replacement on Roofs       | 1                   | 10 000         |                                  | 10 000                      |                     | 10 000                                   |               |              |       |               |       |                                      |
| South Coast                    | Nungwane Raw Water Aqueduct (450dia x 18km)              | 1,4                 | 80 595         | 2 966                            | 77 629                      | 8 199               | 29 127                                   | 40 303        |              |       |               |       |                                      |
| Lower Umgeni                   | Refurbishment of Pineside Regional Offices               | 1                   | 10 000         | 1 000                            | 9 000                       | 7 000               | 2 000                                    |               |              |       |               |       |                                      |
| South Coast                    | Park Rynie Office  | 4                   | 17 000         |                                  | 17 000                      | 10 000              | 2 000                                    | 5 000         |              |       |               |       |                                      |
|                                | <b>Various Projects &lt;R5m Cashflows within the 5Yr</b> |                     | <b>160 959</b> | <b>75 827</b>                    | <b>10 168</b>               | <b>8 168</b>        | <b>2 000</b>                             |               |              |       | <b>74 964</b> |       |                                      |
|                                | <b>Sub Total: Rehabilitation Projects</b>                |                     | <b>490 754</b> | <b>79 793</b>                    | <b>335 997</b>              | <b>208 567</b>      | <b>68 127</b>                            | <b>50 303</b> | <b>9 000</b> |       | <b>74 964</b> |       |                                      |

| EIB Funded Projects                                      | Umgeni System  | Project Description   | Customer | Project Total Business Plan 2015 | work In Progress 30/06/2014 | 2015-2020 Cashflows | Business Plan 2015 Cashflows 2015 - 2020 |                  |                  |                |                |                | Cashflows Beyond 5 Years F20 - F44 |
|--|--|---|----------|----------------------------------|-----------------------------|---------------------|--|------------------|------------------|----------------|----------------|----------------|------------------------------------|
|  |  |   |          |                                  |                             |                     | F'15                                     | F'16             | F'17             | F'18           | F'19           | F'20           |                                    |
|  |  |   |          |                                  |                             |                     | R'000                                    | R'000            | R'000            | R'000          | R'000          | R'000          | R'000                              |
| <b>DEVELOPMENT PROJECTS</b>                              |  |   |          |                                  |                             |                     |  |                  |                  |                |                |                |                                    |
|  | Mooi   | Greater Mpofana Regional Scheme Phases 1                            | 3        | 596 167                          | 8 093                       | 588 074             | 71 866                                   | 108 234          | 124 020          | 145 155        | 138 798        |                |                                    |
| EIB  | Upper Umgeni   | Richmond P/L-3okms  | 2,3      | 220 600                          | 162 397                     | 58 203              | 54 521                                   | 1 000            | 2 682            |                |                |                |                                    |
|  | Upper Umgeni   | Greater Eston   | 3        | 201 780                          | 162 748                     | 39 032              | 29 675                                   | 1 000            | 3 357            | 5 000          |                |                |                                    |
|  | Upper Umgeni   | Impendle BWSS   | 3        | 200 000                          |                             | 189 000             |  | 4 000            | 20 000           | 40 000         | 75 000         | 50 000         | 11 000                             |
|  | Upper Umgeni   | uMshwathi Bulk Water Supply Scheme ( Wartburg Phase 1,2 & 3)        | 3        | 1 129 050                        | 134 503                     | 994 547             | 110 657                                  | 284 731          | 347 030          | 127 858        | 124 271        |                |                                    |
| EIB  | South Coast  | Mhlabatshane Sub-Regional Scheme                                    | 4        | 220 528                          | 208 593                     | 11 935              | 11 935                                   |                  |                  |                |                |                |                                    |
|  | South Coast  | Mhlabatshane Sub-Regional Scheme Ph 2 - Mkimkhulu River abstraction | 4        | 291 662                          | 302                         | 7 280               | 3 705                                    | 3 575            |                  |                |                |                | 284 080                            |
|  | Upper Mvoti  | Maphumulo BWS PH 2  | 5        | 224 235                          | 119 565                     | 104 669             | 99 169                                   | 5 500            |                  |                |                |                |                                    |
|  | Upper Mvoti  | Maphumulo Phase 3 : 6MI WW  | 5        | 37 030                           |                             | 6 357               |  | 2 000            |                  |                | 4 357          |                | 30 672                             |
|  | Upper Mvoti  | Maphumulo Phase 4 : Weir on Hlimbitwe River                         | 5        | 94 370                           |                             | 870                 |  |                  | 200              | 345            | 325            |                | 93 500                             |
|  | Lower Thukela  | Lower Thukela BWS - Phase 1   | 1,5,7    | 1 392 306                        | 399 326                     | 992 980             | 503 569                                  | 421 409          | 68 002           |                |                |                |                                    |
|  | Hazelmere  | Southern Ndwedwe BWS (33km p/l 3 res & 1 p/s)                       | 5        | 341 984                          | 578                         | 102 734             | 1 844                                    | 890              | 6 000            | 4 000          | 30 000         | 60 000         | 238 672                            |
|  | Upper Mvoti  | North Coast Emergency Pipeline                                      | 5        | 32 453                           |                             | 32 453              | 21 329                                   | 11 124           |                  |                |                |                |                                    |
| <b>Various Projects &lt;R5m Cashflows within the 5Yr</b> |  |   |          | <b>1 481 077</b>                 | <b>174 905</b>              | <b>2 080</b>        | <b>2 080</b>                             |                  |                  |                |                |                | <b>1 304 092</b>                   |
| <b>Sub Total: Development Projects</b>                   |  |   |          | <b>6 463 241</b>                 | <b>1 371 011</b>            | <b>3 130 213</b>    | <b>910 349</b>                           | <b>843 464</b>   | <b>571 291</b>   | <b>322 359</b> | <b>372 751</b> | <b>110 000</b> | <b>1 962 016</b>                   |
| <b>TOTAL IMMOVABLES</b>                                  |  |   |          | <b>18 885 649</b>                | <b>2 649 890</b>            | <b>7 445 917</b>    | <b>1 674 834</b>                         | <b>1 832 815</b> | <b>1 733 263</b> | <b>903 175</b> | <b>736 269</b> | <b>565 560</b> | <b>8 789 843</b>                   |
| ICT  | Sub Total: Information Communication & Technology              |   |          | 417 208                          | 26 497                      | 283 860             | 135 037                                  | 111 163          | 14 200           | 19 460         | 2 000          | 2 000          | 106 851                            |
| OTHER  | Sub Total: Equipment , Vehicles, Laboratory & Process Services |   |          | 392 610                          | 52 174                      | 106 429             | 30 481                                   | 17 658           | 13 805           | 5 225          | 36 250         | 3 010          | 234 008                            |
| <b>TOTAL MOVABLES</b>                                    |  |   |          | <b>809 819</b>                   | <b>78 671</b>               | <b>390 289</b>      | <b>165 518</b>                           | <b>128 821</b>   | <b>28 005</b>    | <b>24 685</b>  | <b>38 250</b>  | <b>5 010</b>   | <b>340 859</b>                     |
| <b>TOTAL UW CAPEX</b>                                    |  |   |          | <b>19 695 468</b>                | <b>2 728 560</b>            | <b>7 836 206</b>    | <b>1 840 352</b>                         | <b>1 961 636</b> | <b>1 761 268</b> | <b>927 860</b> | <b>774 520</b> | <b>570 570</b> | <b>9 130 702</b>                   |

AUG = Augmentation EXP = Expansion UPG = Upgrade REH = Rehabilitation DEV = Development Projects ICT = Information & Communication Technology Other = Equipment & Vehicles

Customers 1: eThekweni MM 2: Msunduzi LM 3: uMgungundlovu DM 4: Ugu DM 5: iLembe DM 6: Harry Gwala DM 7: SembCorp Siza Water

Figure 20.7: 30 year capex programme by nature



## 21 Debt Management Plan

### 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.

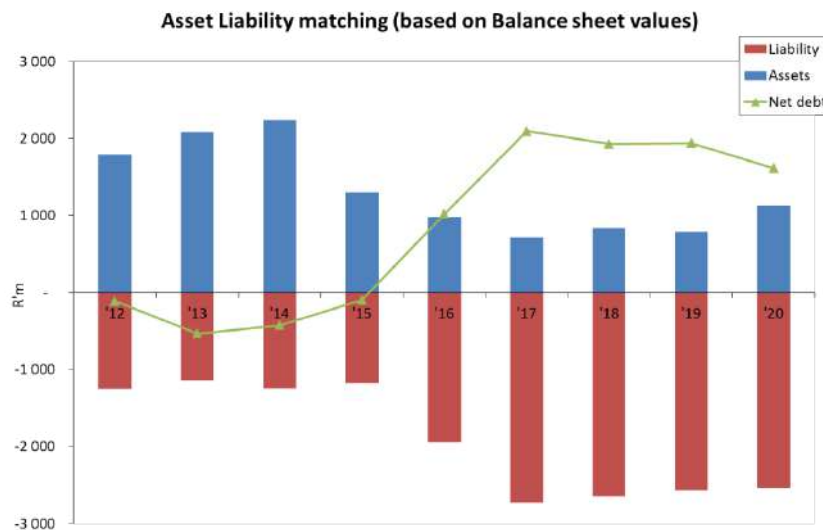
#### 3. Optimal Debt Level

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 bond, exposes Umgeni Water to forward starting interest rate and refinancing risk. These risks are eliminated through redemption portfolio management.

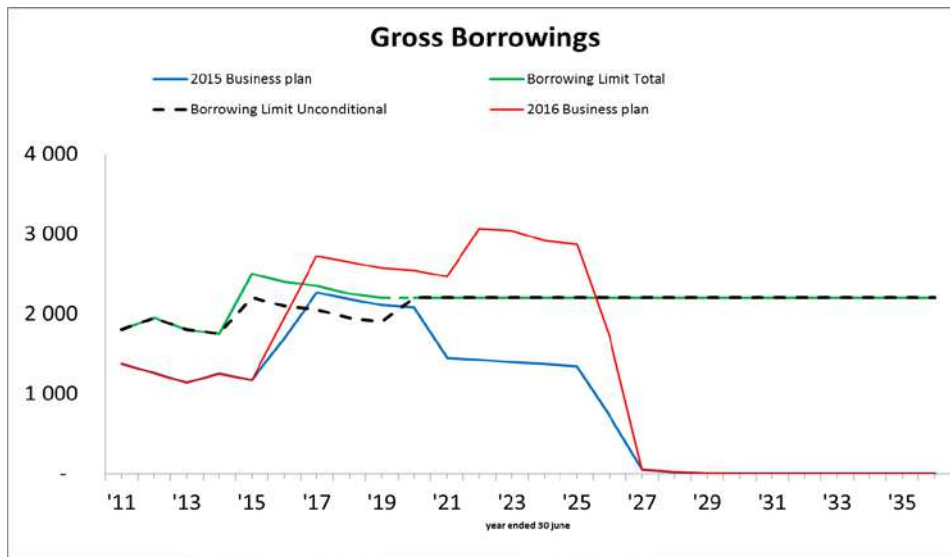
Figure 21.1: Asset liability matching



### 21.2 Debt Curve

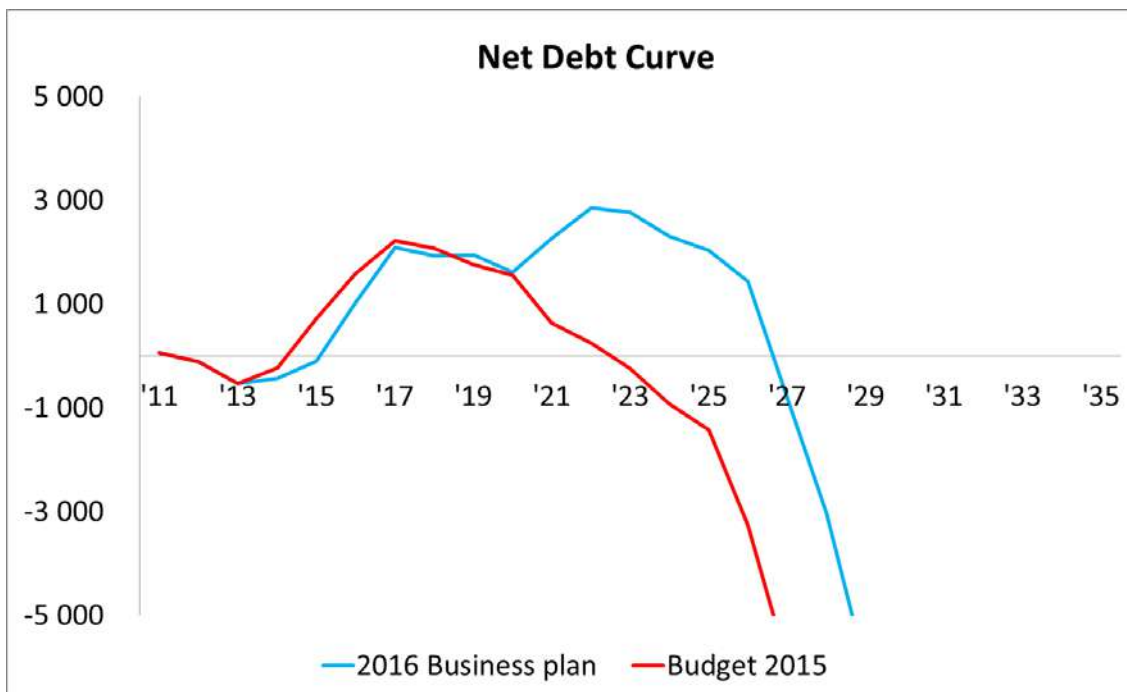
The 2015 Business Plan indicated that gross borrowings will peak at R2 264m in 2017. The gross borrowings curve has increased since then due to the increase in the project totals for development and augmentation projects as a result of revision of project estimates, scope changes and project acceleration. Therefore the peak in gross borrowings is expected to occur in 2022 at R3 093m.

Figure 21.2: Gross borrowings (R'm)



Umgeni Water projects to remain in a net asset position to June 2015. Thereafter, 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)



## 21.3 Funding Strategy

### 21.3.1 Introduction

In the short term, i.e. by June 2015, Umgeni Water does not have a funding requirement and the available investments will be sufficient to fund operating and capital expenditure requirements. The funding strategy recommends a long term issuance from 2016 as indicated in the 2015 Business Plan, to meet the funding requirements. This is also captured as the base case funding strategy in the 2016 Business plan per Table 21.1.

**Table 21.1:** Funding requirements 2015 to 2020 (R'm)

| FUNDING REQUIREMENTS<br>Financial Year (R'm)             | Short term   |                | Medium Term    |             |             | L/Term     |
|--|--------------|----------------|----------------|-------------|-------------|------------|
|  | F15          | F16            | F17            | F18         | F19         | F20        |
| Operational Cash flows                                   | 901          | 847            | 1 002          | 1 078       | 1 260       | 1 370      |
| CapEx - Gross (Escalated)                                | (1 840)      | (2 134)        | (2 081)        | (1 143)     | (1 023)     | (808)      |
| <b>Net Operating and CapEx cash flow</b>                 | <b>(939)</b> | <b>(1 288)</b> | <b>(1 079)</b> | <b>(65)</b> | <b>237</b>  | <b>562</b> |
| CapEx - Grants: Confirmed                                | 53           | 282            | 170            | 486         | -           | -          |
| Refinance - Capital (existing Debt net of asset capital) | (53)         | (54)           | (54)           | (54)        | (54)        | (4)        |
| New Debt (Bond via DMTN) - capital                       | -            | 850            | 860            | -           | -           | -          |
| EIB - capital  | (25)         | (25)           | (25)           | (25)        | (25)        | (25)       |
| Refinance - Finance costs (existing Debt)                | 23           | (88)           | (145)          | (235)       | (233)       | (219)      |
| EIB - Interest costs                                     | (29)         | (27)           | (25)           | (23)        | (21)        | (19)       |
| <b>Funding Requirements</b>                              | <b>(969)</b> | <b>(349)</b>   | <b>(297)</b>   | <b>83</b>   | <b>(97)</b> | <b>294</b> |
| Redemption Portfolio - New bond                          |              |                |                |             |             |            |
| Redemption Portfolio - Interest                          |              |                |                |             |             | -          |
| <b>Net Incremental Funding Requirement p.a.</b>          | <b>(969)</b> | <b>(349)</b>   | <b>(297)</b>   | <b>83</b>   | <b>(97)</b> | <b>294</b> |
| <b>Net (Funding) Investing requirements</b>              |              |                |                |             |             |            |
| Opening Balance Call investments                         | 1 676        | 707            | 358            | 61          | 144         | 47         |
| <b>Closing Balance</b>                                   | <b>707</b>   | <b>358</b>     | <b>61</b>      | <b>144</b>  | <b>47</b>   | <b>341</b> |

### 21.3.2 Short-term (F15 to F16) funding strategy

- All surplus cash be invested in financial assets that ensures sufficient liquidity.
- Issue a RFP for proposed funding solutions – with the intention to secure R850m funding by the first quarter in 2016.

### 21.3.3 Medium-term (F17 to F19) funding strategy

- All surplus cash is invested in short-term financial assets (3 to 6 month term deposits).
- New issuance of debt in 2017 of approximately R860m given the long term funding requirements in Table 21.1. The new issuance of debt will be a mix of bond and bank financing required to relieve pressure on borrowing limits.

### 21.3.4 Long-term funding strategy (F20 to F25)

**Table 21.2:** Funding requirements 2020 to 2027 (R'm)

| FUNDING REQUIREMENTS<br>Financial Year (R'm)             | L/Term     | L/Term       | L/Term       | L/Term     | L/Term     | L/Term     | L/Term     | L/Term       |
|--|------------|--------------|--------------|------------|------------|------------|------------|--------------|
|  | F20        | F21          | F22          | F23        | F24        | F25        | F26        | F27          |
| Operational Cash flows                                   | 1 370      | 1 585        | 1 729        | 1 950      | 2 165      | 2 401      | 2 659      | 2 942        |
| CapEx - Gross (Escalated)                                | (808)      | (2 217)      | (2 052)      | (1 551)    | (1 419)    | (1 568)    | (1 672)    | (1 188)      |
| <b>Net Operating and CapEx cash flow</b>                 | <b>562</b> | <b>(632)</b> | <b>(323)</b> | <b>399</b> | <b>746</b> | <b>832</b> | <b>987</b> | <b>1 755</b> |
| Refinance - Capital (existing Debt net of asset capital) | (4)        | (5)          | (0)          | -          | -          | -          | -          | -            |
| New Debt (Bond via DMTN) - capital                       | -          | -            | -            | -          | -          | -          | (850)      | (860)        |
| UG21   | -          | (600)        | -            | -          | -          | -          | -          | -            |
| EIB - capital  | (25)       | (25)         | (25)         | (25)       | (25)       | (25)       | (25)       | (25)         |



| FUNDING REQUIREMENTS<br>Financial Year (R'm)    | L/Term     | L/Term         | L/Term         | L/Term         | L/Term         | L/Term         | L/Term       | L/Term       |
|---|------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|
|   | F20        | F21            | F22            | F23            | F24            | F25            | F26          | F27          |
| Refinance - Finance costs (existing Debt)       | (219)      | (8)            | (265)          | (307)          | (290)          | (286)          | (161)        | (21)         |
| EIB - Interest costs                            | (19)       | (17)           | (15)           | (13)           | (11)           | (10)           | (7)          | (6)          |
| <b>Funding Requirements</b>                     | <b>294</b> | <b>(1 287)</b> | <b>(628)</b>   | <b>54</b>      | <b>419</b>     | <b>512</b>     | <b>(57)</b>  | <b>843</b>   |
| Redemption Portfolio - New bond                 |            | 363            | -              | (70)           | (331)          | (506)          | 325          | 582          |
| Redemption Portfolio - Interest                 | -          |                |                |                |                |                |              |              |
| <b>Net Incremental Funding Requirement p.a.</b> | <b>294</b> | <b>(924)</b>   | <b>(628)</b>   | <b>(16)</b>    | <b>88</b>      | <b>6</b>       | <b>268</b>   | <b>1 426</b> |
| <b>Net (Funding) Investing requirements</b>     |            |                |                |                |                |                |              |              |
| Opening Balance Call investments                | 47         | 341            | (583)          | (1 211)        | (1 227)        | (1 139)        | (1 133)      | (865)        |
| <b>Closing Balance</b>                          | <b>341</b> | <b>(583)</b>   | <b>(1 211)</b> | <b>(1 227)</b> | <b>(1 139)</b> | <b>(1 133)</b> | <b>(865)</b> | <b>561</b>   |

- (a) The long term funding requirements indicate that the entity will require a further R1227m by 2023 to finance the deficit in funding as a result of debt servicing requirements for debt issued in 2016 and 2017.

## 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 R3 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         | 50    | 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                     |
|                            |       |                  | <b>0</b>    | <b>170</b> | <b>70</b>            | <b>100</b>             |

#### 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 DBSA loan 71 and the loan balance as at 30 June 2015 (forecast) is R200million, which is a variable interest rate fifteen-year loan. The EIB loans are annuity loans which is forecast to be at R174m (variable interest rate) and R173m (fixed interest rate) by 30 June 2015.

#### 21.4.4 Capital Market Bonds

##### Domestic Medium Term Note (DMTN) Programme

The DMTN Programme was established in 2009 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 3 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 UG21 bond 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.

#### 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                 | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Debt: Equity</b>   | 0.406 | 0.315 | 0.334 | 0.232 | 0.348 | 0.444 | 0.391 | 0.341 | 0.297 |
| <b>Interest Cover</b> | 4.323 | 5.184 | 2.697 | 5.567 | 3.362 | 3.206 | 3.022 | 3.601 | 5.388 |

### 21.6 Debt guaranteed by government

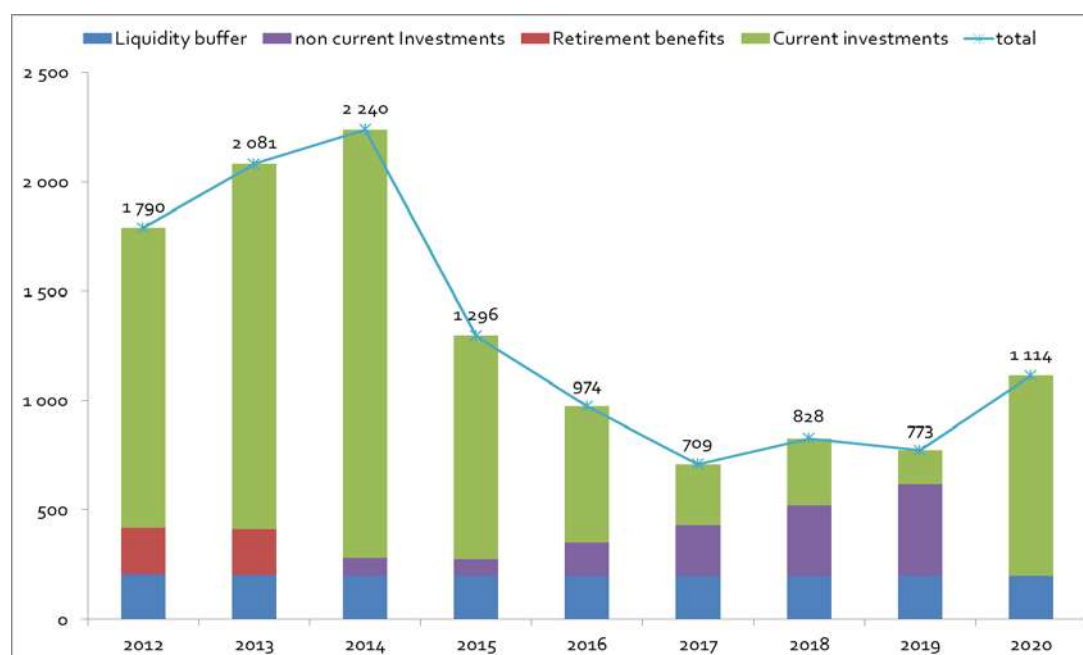
Umgeni water does not have any government guaranteed debt.

## 21.7 Maturity profile of debt and investments

Table 21.5: Maturity profile of investments (R'm)

| Investment maturity structure (R'm) | F'12         | F'13          | F'14         | F'15         | F'16       | F'17       | F'18       | F'19       | F'20          |
|-------------------------------------|--------------|---------------|--------------|--------------|------------|------------|------------|------------|---------------|
| < 1 year                            | 1 780<br>99% | 2 076<br>100% | 2 157<br>96% | 1 218<br>94% | 823<br>85% | 477<br>68% | 508<br>62% | 355<br>47% | 1 114<br>100% |
| 1-5 years                           | 10           | 5             | 84           | 78           | 151        | 232        | 320        | 417        | -             |
| <b>Total Investments</b>            | <b>1 790</b> | <b>2 081</b>  | <b>2 240</b> | <b>1 296</b> | <b>974</b> | <b>709</b> | <b>828</b> | <b>773</b> | <b>1 114</b>  |

Figure 21.10: 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. 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'12         | F'13         | F'14         | F'15         | F'16         | F'17         | F'18         | F'19         | F'20         |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| < 1 year                      | 121<br>10%   | 109<br>10%   | 79<br>6%     | 79<br>7%     | 79<br>4%     | 79<br>3%     | 79<br>3%     | 30<br>1%     | 629<br>25%   |
| 1-5 years                     | 461<br>37%   | 417<br>37%   | 346<br>28%   | 895<br>76%   | 841<br>43%   | 787<br>29%   | 733<br>28%   | 729<br>28%   | 974<br>38%   |
| 5-10 years                    | 675<br>54%   | 609<br>54%   | 731<br>58%   | 124<br>11%   | 973<br>50%   | 1 834<br>67% | 1 828<br>69% | 1 809<br>70% | 934<br>37%   |
| +10 Years                     | 0%           | 0%           | 94<br>8%     | 74<br>6%     | 49<br>3%     | 24<br>1%     | 6<br>0%      | 0%           | 0%           |
| <b>Total Borrowings</b>       | <b>1 257</b> | <b>1 135</b> | <b>1 250</b> | <b>1 172</b> | <b>1 943</b> | <b>2 725</b> | <b>2 646</b> | <b>2 567</b> | <b>2 538</b> |

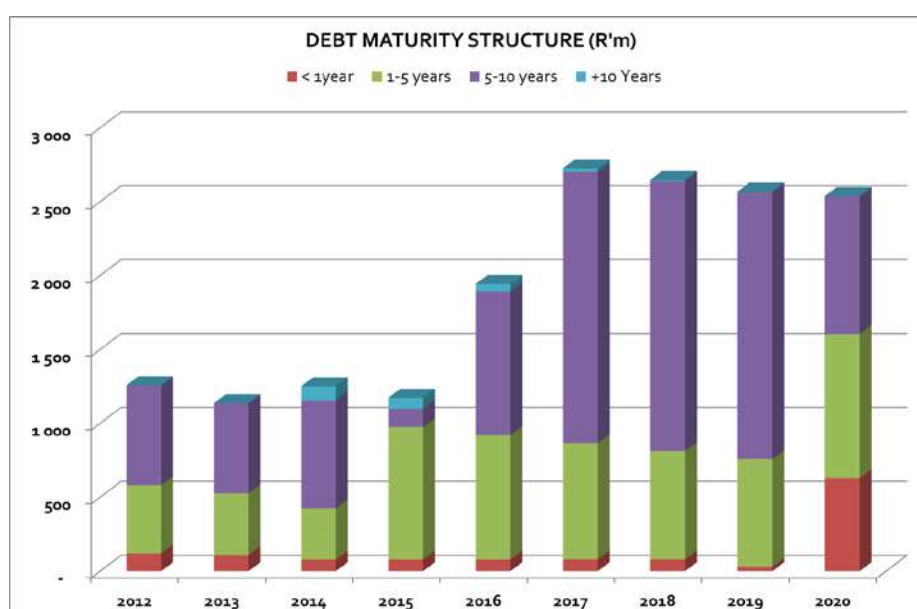
Table 21.7: Ratio of Fixed to floating rate debt

| Ratio of Fixed to floating interest rate debt | F'15  | F'16  | F'17  | F'18  | F'19  | F'20  |
|---|-------|-------|-------|-------|-------|-------|
| Fixed Interest Rate Debt                      | 68.1% | 84.0% | 90.9% | 93.0% | 95.2% | 95.7% |
| Floating Interest Rate Debt                   | 31.9% | 16.0% | 9.1%  | 7.0%  | 4.8%  | 4.3%  |

Table 21.8: Profiles of existing loans (R'm)

| Loan          | lender                    | maturity date | capital outstanding |       |       |       |       |       |       |
|---------------|---------------------------|---------------|---------------------|-------|-------|-------|-------|-------|-------|
|               |                           |               | 2014                | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  |
| loan 71       | DBSA                      | 2019/03/31    | 250                 | 200   | 150   | 100   | 50    | 0     |       |
| loan 72       | DBSA                      | 2021/03/31    | 28                  | 24    | 21    | 17    | 13    | 9     | 5     |
| ug 21         | Capital mkt               |               | 600                 | 600   | 600   | 600   | 600   | 600   | 600   |
| EIB 1         | EIB 1                     | 2028/12/18    | 187                 | 174   | 161   | 148   | 135   | 123   | 110   |
| EIB 2         | EIB 2                     | 2029/12/15    | 185                 | 173   | 161   | 149   | 137   | 125   | 113   |
| Loan proposed | Capital mkt/Bank funding  | 2026/06/30    |                     |       | 850   | 850   | 850   | 850   | 850   |
| Loan proposed | Capital mkt/ bank funding | 2027/06/30    |                     |       |       | 860   | 860   | 860   | 860   |
|               |                           |               | 1 250               | 1 171 | 1 943 | 2 724 | 2 645 | 2 567 | 2 538 |

Figure 21.11: Debt maturity structure



The increase in the amounts maturing in 5 to 10 years' time from 2015 onward is due to the UG21 which will be redeemed in 2021 and the proposed funding strategy of an issuance in F'16 (R850m) and F'17 (R860m), each with 10 year maturities.

## 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 Affairs and National Treasury which is based on:

- F15 – R2 500m (R2 200m is confirmed and R300m is conditional)
- F16 – R2 400m (R2 100m is confirmed and R300m is conditional)
- F17 – R2 350m (R2 050m is confirmed and R300m is conditional)
- F18 – R2 250m (R1 950m is confirmed and R300m is conditional)
- F'19 – R2 200m (R1900m is confirmed and R300m is conditional)

Figure 21.1: Debt curve against funding limits (R'm)

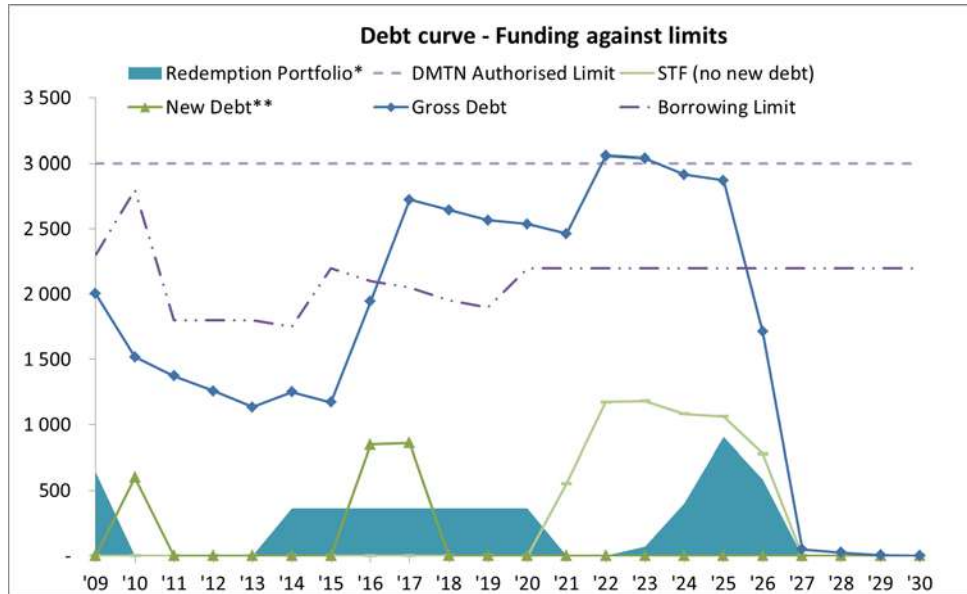


Table 21.9: Gross borrowings (R'm)

| Borrowing Limit          | F15   | F16   | F17   | F18   | F19   | F20     |
|--------------------------|-------|-------|-------|-------|-------|---------|
| Gross Borrowings         | 1 172 | 1 943 | 2 725 | 2 646 | 2 567 | 2 538   |
| Approved borrowing Limit |       |       |       |       |       |         |
| - Confirmed              | 2 200 | 2 100 | 2 050 | 1 950 | 1 900 |         |
| - Unconfirmed            | 300   | 300   | 300   | 300   | 300   |         |
| (Over) Under utilisation | 1 328 | 457   | (375) | (396) | (367) | (2 538) |

The funding strategy proposed also hinges on the concurrent approval by NT and DWS for the increase in the borrowing limits for the years 2017 to 2019, first by the conditional limits and second by at least R500m per annum allow for flexibility in drawdowns or issuances.

## 21.9 Proposed Borrowings

Table 21.10: Total borrowings (R'000)

| BORROWING | BORROWING | LONG TERM |          |           | SHORT TERM              |                                      |                       |
|-----------|-----------|-----------|----------|-----------|-------------------------|--------------------------------------|-----------------------|
|           |           | Actual    | Actual   | Actual    | Actual Total Short term | Short-term portion of long term debt | Short-term borrowings |
| 2011/2012 | 1 257 137 | 1 136 306 |          |           | 120 831                 | 120 831                              | 0                     |
| 2011/2013 | 1 135 381 | 1 025 930 |          |           | 109 451                 | 109 451                              | 0                     |
| 2013/2014 | 1 250 029 | 986 765   | 185 000  | 1 171 765 | 78 264                  | 78 264                               | 0                     |
|           | Projected | Projected | Proposed | Total     | Projected               | Projected                            | Projected             |
| 2014/2015 | 1 171 765 | 1 093 331 | 0        | 1 093 331 | 78 434                  | 78 434                               | 0                     |
| 2015/2016 | 1 943 331 | 1 014 712 | 850 000  | 1 864 712 | 78 619                  | 78 619                               | 0                     |
| 2016/2017 | 2 724 712 | 1 785 902 | 860 000  | 2 645 902 | 78 810                  | 78 810                               | 0                     |
| 2017/2018 | 2 645 902 | 2 566 892 | 0        | 2 566 892 | 79 010                  | 79 010                               | 0                     |
| 2018/2019 | 2 566 892 | 2 537 671 | 0        | 2 537 671 | 29 221                  | 29 221                               | 0                     |
| 2019/2020 | 2 537 671 | 1 908 226 | 0        | 1 908 226 | 629 445                 | 629 445                              | 0                     |

Table 21.11: Foreign borrowings (EIB) (R'000)

| DATE OF BORROWING | TOTAL GROSS BORROWING | FOREIGN PORTION |          |         |                         |                                      |                       |
|-------------------|-----------------------|-----------------|----------|---------|-------------------------|--------------------------------------|-----------------------|
|                   |                       | LONG TERM       |          |         | SHORT TERM              |                                      |                       |
|                   | Actual                | Actual          | Actual   | Actual  | Actual Total Short term | Short-term portion of long term debt | Short-term borrowings |
| 2011/2012         | 0                     | 0               |          | 0       | 0                       |                                      |                       |
| 2012/2013         | 0                     | 0               |          | 0       | 0                       |                                      |                       |
| 2013/2014         | 372 097               | 162 258         | 185 000  | 347 258 | 24 839                  | 24 839                               | 0                     |
|                   | Projected             | Projected       | Proposed | Total   | Projected               | Projected                            | Projected             |
| 2014/2015         | 347 258               | 322 419         | 0        | 322 419 | 24 839                  | 24 839                               | 0                     |
| 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                     |
| 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                     |

Table 21.12: Domestic borrowing programme (R'000)

| DATE OF BORROWING | TOTAL GROSS BORROWING | DOMESTIC PORTION |          |           |                         |                                      |                       |
|-------------------|-----------------------|------------------|----------|-----------|-------------------------|--------------------------------------|-----------------------|
|                   |                       | LONG TERM        |          |           | SHORT TERM              |                                      |                       |
|                   | Actual                | Actual           | Actual   | Actual    | Actual Total Short term | Short-term portion of long term debt | Short-term borrowings |
| 2011/2012         | 1 257 137             | 1 136 306        | 0        | 0         | 120 831                 | 120 831                              | 0                     |
| 2012/2013         | 1 135 381             | 1 025 930        | 0        | 0         | 109 451                 | 109 451                              | 0                     |
| 2013/2014         | 877 932               | 824 507          | 0        | 824 507   | 53 425                  | 53 425                               | 0                     |
|                   | Projected             | Projected        | Proposed | Total     | Projected               | Projected                            | Projected             |
| 2014/2015         | 824 507               | 770 912          | 0        | 770 912   | 53 595                  | 53 595                               | 0                     |
| 2015/2016         | 1 620 912             | 717 132          | 850 000  | 1 567 132 | 53 780                  | 53 780                               | 0                     |
| 2016/2017         | 2 427 132             | 1 513 161        | 860 000  | 2 373 161 | 53 971                  | 53 971                               | 0                     |
| 2017/2018         | 2 373 161             | 2 318 989        | 0        | 2 318 989 | 54 171                  | 54 171                               | 0                     |
| 2018/2019         | 2 318 989             | 2 314 606        | 0        | 2 314 606 | 4 383                   | 4 383                                | 0                     |
| 2019/2020         | 2 314 606             | 1 710 001        | 0        | 1 710 001 | 604 606                 | 604 606                              | 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.



## 22 Materiality and Significance Framework

The framework is applied under two main categories: quantitative aspects and qualitative aspects.

### Quantitative aspects: Materiality level

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.

### 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 co-sourced and independent; and
  - A three year Internal Audit Coverage Plan, based on annual risk assessments.

### 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.
  - 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.

## 23 Financial Ratios

The financial ratios reflected in the following tables are defined wherever applicable in the footnotes that follow table 23.2

**Table 23.1:** Umgeni Water financial indicators and ratios

| Financial Indicators and Ratios |   | F12       | F13       | F14       | F15       | F15       | F16       | F17       | F18       | F19       | F20       |
|---------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 |   | Actual    | Actual    | Actual    | BUDGET    | FORECAST  |           |           |           |           |           |
| <b>A</b>                        | <b>Performance criteria/indicators</b>      |           |           |           |           |           |           |           |           |           |           |
| 1                               | Volume of water sold (kl'ooo)               | 416 995   | 422 791   | 439 542   | 441 320   | 448 948   | 457 928   | 468 740   | 481 313   | 488 533   | 492 246   |
|                                 | eThekwini Municipality(kl'ooo)              | 311 434   | 315 669   | 327 011   | 328 292   | 333 168   | 338 832   | 346 832   | 356 135   | 361 477   | 366 554   |
|                                 | Siza Water                                  | 4 488     | 4 352     | 4 767     | 4 841     | 4 827     | 4 998     | 5 116     | 5 253     | 5 332     | 5 493     |
|                                 | Other WSA's(kl'ooo)                         | 101 073   | 102 769   | 107 764   | 108 187   | 110 954   | 114 099   | 116 793   | 119 925   | 121 724   | 120 199   |
| 2                               | Total gross revenue (R'ooo)                 | 1 835 075 | 1 895 886 | 2 187 886 | 2 111 342 | 2 237 085 | 2 376 273 | 2 625 805 | 2 926 002 | 3 228 324 | 3 537 167 |
| 3                               | Total Bulk Revenue (R'ooo)                  | 1 519 295 | 1 625 480 | 1 914 907 | 1 997 335 | 2 031 928 | 2 241 867 | 2 485 337 | 2 773 867 | 3 063 344 | 3 358 464 |
|                                 | eThekwini Municipality(R'ooo)               | 1 128 210 | 1 207 439 | 1 207 439 | 1 477 969 | 1 499 922 | 1 644 350 | 1 822 948 | 2 034 597 | 2 246 939 | 2 456 890 |
|                                 | Siza Water                                  | 16 748    | 17 126    | 17 126    | 22 430    | 22 363    | 32 576    | 36 112    | 40 306    | 44 510    | 49 155    |
|                                 | Other WSA's(R'ooo)                          | 374 337   | 400 916   | 690 343   | 496 936   | 509 644   | 564 941   | 626 276   | 698 963   | 771 895   | 852 418   |
| 4                               | Bulk Revenue Growth (excl Cap Unit Charge)  | 6.74%     | 6.99%     | 4.39%     | 22.88%    | 11.03%    | 10.33%    | 10.86%    | 11.61%    | 10.44%    | 9.63%     |
| 5                               | Weighted average Water tariff (R/kl)        | 3.641     | 3.845     | 4.164     | 4.526     | 4.526     | 4.896     | 5.302     | 5.763     | 6.270     | 6.822     |
|                                 | eThekwini Municipality                      | 3.622     | 3.825     | 4.142     | 4.502     | 4.502     | 4.853     | 5.256     | 5.713     | 6.216     | 6.763     |
|                                 | Siza Water                                  | 3.726     | 3.935     | 4.262     | 4.633     | 4.633     | 6.518     | 7.059     | 7.673     | 8.348     | 9.083     |
|                                 | Other WSA's                                 | 3.694     | 3.901     | 4.225     | 4.593     | 4.593     | 4.951     | 5.362     | 5.828     | 6.341     | 6.899     |
| 6                               | Net profit (loss) for the year              | 590 813   | 664 468   | 673 969   | 630 560   | 661 170   | 529 046   | 550 505   | 625 493   | 766 433   | 1 028 442 |
| 7                               | Profit from Operations/Revenue              | 0.314     | 0.315     | 0.273     | 0.296     | 0.285     | 0.252     | 0.253     | 0.277     | 0.292     | 0.334     |
| 8                               | Total expenditure/Revenue                   | 0.706     | 0.659     | 0.705     | 0.704     | 0.718     | 0.781     | 0.794     | 0.789     | 0.764     | 0.711     |
| 9                               | Cost of sales/Revenue                       | 0.467     | 0.459     | 0.473     | 0.405     | 0.441     | 0.437     | 0.446     | 0.440     | 0.438     | 0.437     |
| 10                              | Total cost/volume (Rand/kl) (Bulk only)     | 2.341     | 2.351     | 3.687     | 3.139     | 3.150     | 3.771     | 4.153     | 4.493     | 4.729     | 4.767     |
| 11                              | Net Finance costs (Rand/kl)                 | (0.037)   | (0.160)   | (0.175)   | (0.015)   | (0.051)   | 0.152     | 0.243     | 0.384     | 0.358     | 0.313     |
| 12                              | Personnel cost ratio                        | 0.197     | 0.221     | 0.205     | 0.270     | 0.234     | 0.245     | 0.245     | 0.246     | 0.246     | 0.257     |
| 13                              | Personnel cost per kilolitre                | 0.619     | 0.689     | 0.754     | 0.913     | 0.849     | 0.956     | 1.031     | 1.085     | 1.153     | 1.235     |
| 14                              | Personnel cost per kilolitre (Primary only) | 0.599     | 0.673     | 0.812     | 0.901     | 0.849     | 0.956     | 1.031     | 1.085     | 1.153     | 1.235     |
| 15                              | Personnel cost per kilolitre (Bulk only)    | 0.579     | 0.653     | 0.788     | 0.877     | 0.818     | 0.923     | 0.996     | 1.048     | 1.114     | 1.193     |
| <b>B</b>                        | <b>Operating Risks</b>                      |           |           |           |           |           |           |           |           |           |           |
| 16                              | Working ratio                               | 0.663     | 0.643     | 0.688     | 0.660     | 0.659     | 0.675     | 0.6760    | 0.6552    | 0.642     | 0.603     |
| 17                              | Operating Ratio                             | 0.655     | 0.608     | 0.653     | 0.657     | 0.649     | 0.704     | 0.719     | 0.718     | 0.696     | 0.647     |
| 18                              | Controllable working ratio                  | 0.581     | 0.558     | 0.601     | 0.583     | 0.588     | 0.603     | 0.596     | 0.574     | 0.561     | 0.524     |
| 19                              | Return on assets                            | 17.00%    | 15.66%    | 13.30%    | 10.28%    | 10.72%    | 7.89%     | 7.17%     | 8.37%     | 9.00%     | 10.64%    |
| 20                              | Asset turnover                              | 0.542     | 0.497     | 0.487     | 0.348     | 0.376     | 0.313     | 0.283     | 0.302     | 0.309     | 0.318     |
| 21                              | Gross margin %                              | 53.31%    | 54.12%    | 52.70%    | 59.51%    | 55.87%    | 56.31%    | 55.39%    | 55.95%    | 56.17%    | 56.34%    |
| 22                              | Current asset turnover                      | 7.442     | 5.526     | 7.151     | 7.301     | 6.805     | 6.850     | 6.953     | 7.005     | 7.127     | 7.096     |

| Financial Indicators and Ratios |  | F12       | F13       | F14       | F15       | F15       | F16       | F17       | F18       | F19       | F20       |
|---------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 |  | Actual    | Actual    | Actual    | BUDGET    | FORECAST  |           |           |           |           |           |
| 23                              | Fixed asset turnover   | 0.593     | 0.551     | 0.527     | 0.366     | 0.402     | 0.330     | 0.297     | 0.317     | 0.324     | 0.335     |
| 24                              | Debtors collection period *  | 33.527    | 48.835    | 41.843    | 39.905    | 41.648    | 41.603    | 41.365    | 41.416    | 40.946    | 41.430    |
| 25                              | Trade debtors collection period  | 33.527    | 48.835    | 41.843    | 39.905    | 41.648    | 41.603    | 41.365    | 41.416    | 40.946    | 41.430    |
| 26                              | Accounts receivable turnover   | 9.550     | 6.556     | 7.652     | 8.023     | 7.688     | 7.696     | 7.740     | 7.731     | 7.819     | 7.728     |
|                                 | * Accounts receivable is made up as follows:                                     |           |           |           |           |           |           |           |           |           |           |
|                                 | Trade Debtors  | 192 157   | 289 174   | 285 932   | 263 145   | 291 000   | 308 769   | 339 241   | 378 494   | 412 862   | 457 705   |
|                                 | Provision for Doubtful debts   | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         |
|                                 |  | 192 157   | 289 174   | 285 932   | 263 145   | 291 000   | 308 769   | 339 241   | 378 494   | 412 862   | 457 705   |
| <b>C</b>                        | <b>Financial Risks</b>   |           |           |           |           |           |           |           |           |           |           |
| 27                              | Current ratio  | 3.297     | 3.215     | 3.825     | 1.649     | 2.549     | 2.028     | 1.411     | 1.711     | 1.770     | 1.620     |
| 28                              | Debt ratio   | 0.243     | 0.193     | 0.215     | 0.166     | 0.162     | 0.227     | 0.273     | 0.252     | 0.229     | 0.207     |
| 29                              | Gross Debt-equity ratio  | 0.420     | 0.315     | 0.334     | 0.251     | 0.232     | 0.348     | 0.444     | 0.391     | 0.341     | 0.297     |
| 30                              | Net Debt-equity ratio)   | (0.178)   | (0.263)   | (0.077)   | 0.037     | (0.025)   | 0.174     | 0.329     | 0.269     | 0.238     | 0.166     |
| 31                              | Weighted Average Cost of Capital (WACC) (Per AFS)                                | 9.34%     | 9.20%     | 9.28%     | 9.54%     | 9.35%     | 9.52%     | 9.90%     | 10.03%    | 10.04%    | 9.86%     |
| 32                              | Weighted Average Cost of Capital (WACC) (Finance costs/Gross borrowings)         | 6.73%     | 5.86%     | 3.48%     | 5.80%     | 5.65%     | 6.67%     | 5.83%     | 8.68%     | 8.68%     | 8.65%     |
| 33                              | Financial Leverage (D/(D+E)) (Net of redemption assets)                          | 0.294     | 0.239     | 0.251     | 0.151     | 0.178     | 0.243     | 0.289     | 0.256     | 0.222     | 0.229     |
| <b>C</b>                        | <b>Debt Management</b>   |           |           |           |           |           |           |           |           |           |           |
|                                 | <b>Net Debt</b>  |           |           |           |           |           |           |           |           |           |           |
|                                 | Total Borrowings (as per Balance sheet)  | 1 257 137 | 1 135 381 | 1 250 029 | 1 171 358 | 1 171 765 | 1 943 331 | 2 724 712 | 2 645 902 | 2 566 892 | 2 537 671 |
|                                 | Total Investment (as per Balance sheet)  | 1 790 330 | 2 081 005 | 1 609 862 | 999 306   | 1 295 918 | 974 162   | 708 638   | 827 933   | 772 618   | 1 114 461 |
|                                 | Net Borrowings (Total Borrowings - Total Investment)                             | (533 193) | (945 624) | (359 833) | 172 052   | (124 153) | 969 170   | 2 016 075 | 1 817 969 | 1 794 274 | 1 423 210 |
| <b>D</b>                        | <b>Business Credit Risk</b>  |           |           |           |           |           |           |           |           |           |           |
| 34                              | Interest Cover ratio (EBIT/int paid)   | 4.544     | 5.267     | 5.082     | 5.360     | 5.567     | 3.362     | 3.206     | 3.022     | 3.601     | 5.388     |
| 35                              | EBITDA interest coverage (EBITDA/int paid)                                       | 7.918     | 10.458    | 15.609    | 10.665    | 11.972    | 6.026     | 5.412     | 4.432     | 5.211     | 6.427     |
| 36                              | Cash from operations/average total debt  | 0.649     | 0.753     | 0.490     | 0.685     | 0.769     | 0.436     | 0.368     | 0.407     | 0.491     | 0.540     |
| 37                              | Return on average total capital  | 0.192     | 0.166     | 0.152     | 0.134     | 0.126     | 0.107     | 0.108     | 0.120     | 0.125     | 0.138     |
| 38                              | EBITDA/Sales   | 0.365     | 0.367     | 0.325     | 0.343     | 0.354     | 0.329     | 0.327     | 0.348     | 0.360     | 0.399     |
| 39                              | Funds flow net debt pay back (cash from op before WC adj/total int bearing debt) | 0.782     | 0.700     | 0.514     | 0.743     | 0.794     | 0.476     | 0.377     | 0.447     | 0.518     | 0.582     |
| <b>E</b>                        | <b>Surplus Ratios</b>  |           |           |           |           |           |           |           |           |           |           |
| 40                              | Accounting Surplus (NP)/Fixed Assets (PPE)                                       | 0.191     | 0.193     | 0.162     | 0.109     | 0.119     | 0.074     | 0.062     | 0.068     | 0.077     | 0.097     |
| 41                              | Return on turnover (NP)/Revenue (Total org)                                      | 0.322     | 0.350     | 0.308     | 0.299     | 0.296     | 0.223     | 0.210     | 0.214     | 0.237     | 0.291     |
| 42                              | Return on turnover (NP)/Revenue (S29)  | 0.379     | 0.387     | 0.190     | 0.302     | 0.306     | 0.224     | 0.212     | 0.216     | 0.240     | 0.294     |
| 43                              | Return on turnover (NP)/Revenue (S30)  | (0.019)   | 0.066     | 0.047     | 0.149     | 0.119     | 0.157     | 0.032     | 0.030     | 0.028     | 0.027     |
| 44                              | EBITDA   | 669 595   | 695 226   | 710 351   | 724 156   | 791 912   | 780 947   | 859 236   | 1 017 744 | 1 161 399 | 1 410 248 |
| 45                              | Net Debt/EBIDAR  | 1.877     | 1.633     | 1.760     | 1.618     | 1.480     | 2.488     | 3.171     | 2.600     | 2.210     | 1.799     |

Table 23.2: Umgeni Water Group financial indicators and ratios

| Financial Indicators and Ratios |  | F12       | F13       | F14       | F15       | F15       | F16       | F17       | F18       | F19       | F20       |
|---------------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 |  | Actual    | Actual    | Actual    | Budget    | Forecast  |           |           |           |           |           |
| <b>A</b>                        | <b>Performance criteria/indicators</b>   |           |           |           |           |           |           |           |           |           |           |
| 1                               | Total gross revenue (R'000)  | 1 847 151 | 1 908 833 | 2 204 140 | 2 121 613 | 2 248 525 | 2 391 132 | 2 643 636 | 2 946 508 | 3 251 906 | 3 565 465 |
| 2                               | <b>Bulk Water Business segment</b>   |           |           |           |           |           |           |           |           |           |           |
| 2.1                             | Volume of water sold (kl'000)  | 416 995   | 416 995   | 439 542   | 441 320   | 448 948   | 457 928   | 468 740   | 481 313   | 488 533   | 492 246   |
| 2.2                             | Total Bulk Revenue (R'000)   | 1 519 295 | 1 625 480 | 1 830 137 | 1 997 335 | 2 031 928 | 2 241 867 | 2 485 337 | 2 773 867 | 3 063 344 | 3 358 464 |
| 2.3                             | Average increase in revenue  | 6.7%      | 7.0%      | 12.6%     | 9.1%      | 1.7%      | 10.3%     | 10.9%     | 11.6%     | 10.4%     | 9.6%      |
| 2.4                             | Weighted average Water tariff (R/kl) (total bulk rev/total bulk vol)   | 3.643     | 3.898     | 4.164     | 4.526     | 4.526     | 4.896     | 5.302     | 5.763     | 6.271     | 6.823     |
| 2.5                             | Total cost per kl sold   | 2.406     | 2.351     | 3.687     | 3.139     | 3.150     | 3.771     | 4.153     | 4.493     | 4.729     | 4.767     |
| 3                               | Net profit (loss) for the year   | 591 332   | 666 814   | 682 429   | 631 619   | 645 347   | 522 493   | 553 104   | 628 886   | 770 905   | 1 035 233 |
| 4                               | Profit from Operations/Revenue   | 0.310     | 0.312     | 0.273     | 0.295     | 0.276     | 0.248     | 0.252     | 0.276     | 0.291     | 0.333     |
| 5                               | Total expenditure/Revenue  | 0.709     | 0.662     | 0.705     | 0.705     | 0.726     | 0.785     | 0.794     | 0.790     | 0.765     | 0.711     |
| 6                               | Cost of sales/Revenue  | 0.464     | 0.456     | 0.470     | 0.403     | 0.439     | 0.434     | 0.443     | 0.437     | 0.435     | 0.433     |
| 7                               | Total cost/volume (Rand/kl) (Consolidated)   | 3.143     | 3.032     | 3.536     | 3.389     | 3.638     | 4.098     | 4.478     | 4.834     | 5.090     | 5.153     |
| 8                               | Net Finance costs (Rand/kl)  | (0.037)   | (0.162)   | (0.175)   | (0.015)   | (0.053)   | 0.152     | 0.243     | 0.384     | 0.358     | 0.312     |
| 9                               | Personnel cost ratio (Total Personnel costs/Total Costs excl finance costs)                                    | 0.208     | 0.233     | 0.217     | 0.284     | 0.244     | 0.256     | 0.257     | 0.257     | 0.257     | 0.269     |
| 10                              | Personnel cost per kilolitre (Personnel costs/Annual volume)   | 0.661     | 0.743     | 0.805     | 0.967     | 0.899     | 1.011     | 1.089     | 1.145     | 1.218     | 1.304     |
| <b>B</b>                        | <b>Operating Risks</b>   |           |           |           |           |           |           |           |           |           |           |
| 11                              | Working ratio (total expenses excluding depreciation, amortisation and finance costs divided by Total revenue) | 0.666     | 0.646     | 0.688     | 0.660     | 0.668     | 0.679     | 0.677     | 0.656     | 0.643     | 0.604     |
| 12                              | Operating Ratio (Total Costs excluding depreciation & amortisation/Total Revenue)                              | 0.658     | 0.611     | 0.653     | 0.657     | 0.658     | 0.708     | 0.720     | 0.719     | 0.697     | 0.647     |
| 13                              | Controllable working ratio (total expenses excl. raw water, deprec, amort & inter. divided by total. rev.)     | 0.585     | 0.562     | 0.602     | 0.585     | 0.597     | 0.608     | 0.597     | 0.576     | 0.562     | 0.525     |
| 14                              | Return on assets (income before interest & taxes divided by total assets excluding investments)                | 16.87%    | 15.57%    | 13.18%    | 10.27%    | 10.42%    | 7.80%     | 7.20%     | 8.40%     | 9.04%     | 10.68%    |
| 15                              | Asset turnover (revenue divided by total assets excluding investments)   | 0.544     | 0.499     | 0.483     | 0.348     | 0.377     | 0.315     | 0.285     | 0.304     | 0.311     | 0.320     |
| 16                              | Gross margin %   | 53.61%    | 54.43%    | 53.05%    | 59.71%    | 56.09%    | 56.58%    | 55.69%    | 56.26%    | 56.49%    | 56.69%    |
| 17                              | Current asset turnover (revenue divided by current assets excl investments)                                    | 7.344     | 5.448     | 4.102     | 7.231     | 6.336     | 6.567     | 6.003     | 6.690     | 6.781     | 6.706     |
| 18                              | Fixed asset turnover (revenue divided by fixed assets)   | 0.596     | 0.554     | 0.553     | 0.368     | 0.403     | 0.332     | 0.299     | 0.319     | 0.326     | 0.337     |
| 19                              | Debtors collection period (debtors divided by revenue times 365) (Excl. VAT) *                                 | 33.881    | 39.696    | 37.484    | 39.730    | 41.474    | 41.361    | 41.112    | 41.155    | 40.678    | 41.123    |
| 20                              | Accounts receivable turnover (revenue divided by accounts receivable) (Excl. VAT)                              | 9.450     | 8.066     | 8.542     | 8.059     | 7.720     | 7.741     | 7.788     | 7.780     | 7.871     | 7.786     |
|                                 | * Accounts receivable is made up as follows:   |           |           |           |           |           |           |           |           |           |           |
|                                 | Trade Debtors  | 195 463   | 236 658   | 258 048   | 263 265   | 291 263   | 308 889   | 339 458   | 378 740   | 413 147   | 457 940   |

| Financial Indicators and Ratios |   | F12       | F13       | F14       | F15       | F15       | F16       | F17       | F18       | F19       | F20       |
|---------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                 |   | Actual    | Actual    | Actual    | Budget    | Forecast  |           |           |           |           |           |
| Provision for Doubtful debts    |   | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         |
|                                 |   | 195 463   | 236 658   | 258 048   | 263 265   | 291 263   | 308 889   | 339 458   | 378 740   | 413 147   | 457 940   |
| <b>C Financial Risks</b>        |   |           |           |           |           |           |           |           |           |           |           |
| 21                              | Current ratio (current assets divided by current liabilities)                     | 3.278     | 3.214     | 3.550     | 1.639     | 2.577     | 2.049     | 1.438     | 1.7       | 1.8       | 1.6       |
| 22                              | Debt ratio (total debt divided by total assets)                                   | 0.242     | 0.192     | 0.184     | 0.165     | 0.161     | 0.227     | 0.273     | 0.252     | 0.228     | 0.207     |
| 23                              | Gross Debt-equity ratio (total liabilities divided by total accumulated reserves) | 0.405     | 0.314     | 0.283     | 0.250     | 0.232     | 0.348     | 0.444     | 0.391     | 0.341     | 0.296     |
| 24                              | Net Debt-equity ratio (Net liabilities divided by total accumulated reserves)     | (0.172)   | (0.262)   | (0.224)   | 0.037     | (0.025)   | 0.174     | 0.329     | 0.269     | 0.238     | 0.166     |
| 25                              | Weighted Average Cost of Capital (WACC) (Per AFS)                                 | 9.34%     | 9.20%     | 9.28%     | 9.54%     | 9.35%     | 9.52%     | 9.90%     | 10.03%    | 10.04%    | 10.06%    |
| 26                              | Weighted Average Cost of Capital (WACC) (Finance costs/Gross borrowings)          | 6.73%     | 5.86%     | 3.64%     | 5.80%     | 5.65%     | 6.67%     | 5.83%     | 8.68%     | 8.68%     | 8.65%     |
| 28                              | Financial Leverage (D/(D+E)) (Net of redemption assets)                           | 0.286     | 0.238     | 0.209     | 0.150     | 0.178     | 0.243     | 0.289     | 0.256     | 0.222     | 0.228     |
| <b>C Debt Management</b>        |   |           |           |           |           |           |           |           |           |           |           |
| <b>Net Debt</b>                 |   |           |           |           |           |           |           |           |           |           |           |
| 29                              | Total Borrowings (as per Balance sheet)   | 1 257 137 | 1 135 381 | 1 250 029 | 1 171 358 | 1 171 765 | 1 943 331 | 2 724 712 | 2 645 902 | 2 566 892 | 2 537 671 |
| 30                              | Total Investment (as per Balance sheet)   | 1 790 330 | 2 081 005 | 2 240 354 | 999 306   | 1 295 918 | 974 162   | 708 638   | 827 933   | 772 618   | 1 114 461 |
| 31                              | Net Borrowings (Total Borrowings - Total Investment)                              | (533 193) | (945 624) | (990 325) | 172 052   | (124 153) | 969 170   | 2 016 075 | 1 817 969 | 1 794 274 | 1 423 210 |
| <b>D Business Credit Risk</b>   |   |           |           |           |           |           |           |           |           |           |           |
| 32                              | Interest Cover (EBIT/int paid)  | (12.337)  | (5.924)   | (3.012)   | (4.615)   | 48.915    | (3.873)   | (58.441)  | (3.176)   | 4.243     | 5.419     |
| 33                              | EBITDA interest coverage (EBITDA/int paid)  | 7.902     | 10.431    | 15.726    | 10.694    | 11.731    | 5.981     | 5.434     | 4.451     | 5.235     | 6.462     |
| 34                              | Cash from operations/average total debt   | 0.543     | 0.753     | 0.689     | 0.687     | 0.764     | 0.433     | 0.369     | 0.409     | 0.493     | 0.543     |
| 35                              | Return on average total capital   | 0.184     | 0.165     | 0.136     | 0.134     | 0.123     | 0.106     | 0.109     | 0.120     | 0.125     | 0.139     |
| 36                              | EBITDA/Sales  | 0.362     | 0.363     | 0.325     | 0.342     | 0.345     | 0.324     | 0.326     | 0.347     | 0.359     | 0.398     |
| 37                              | Funds flow net debt pay back (cash from op before WC adj/total int bearing debt)  | 1.493     | 0.699     | 0.765     | 0.746     | 0.780     | 0.473     | 0.379     | 0.449     | 0.520     | 0.586     |
| <b>E Surplus Ratios</b>         |   |           |           |           |           |           |           |           |           |           |           |
| 38                              | Accounting Surplus (NP)/Fixed Assets (PPE)  | 0.191     | 0.194     | 0.171     | 0.110     | 0.116     | 0.073     | 0.063     | 0.068     | 0.077     | 0.098     |
| 39                              | Return on turnover (NP)/Revenue   | 0.320     | 0.349     | 0.310     | 0.298     | 0.287     | 0.219     | 0.209     | 0.213     | 0.237     | 0.290     |
| 40                              | EBITDA  | 668 409   | 693 752   | 716 387   | 726 180   | 775 982   | 775 119   | 862 706   | 1 022 037 | 1 166 736 | 1 417 889 |
| 41                              | Net Debt/EBIDAR   | (0.798)   | (1.363)   | (1.382)   | 0.237     | (0.160)   | 1.250     | 2.337     | 1.779     | 1.538     | 1.004     |

#### 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

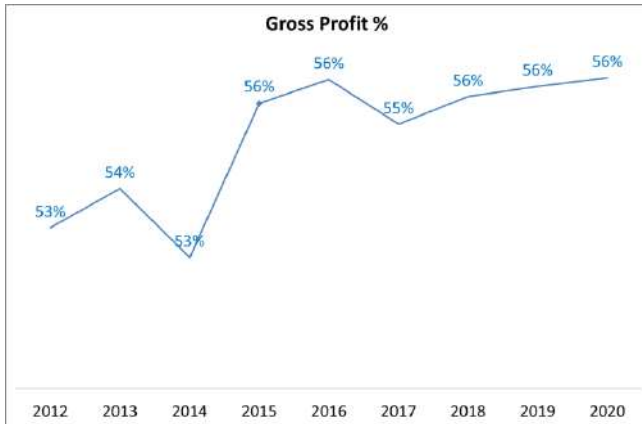
## 24 Self-Evaluation on Financial Viability

### 24.1 Operating performance Analysis

#### 24.1.1 Key indicators of operating performance

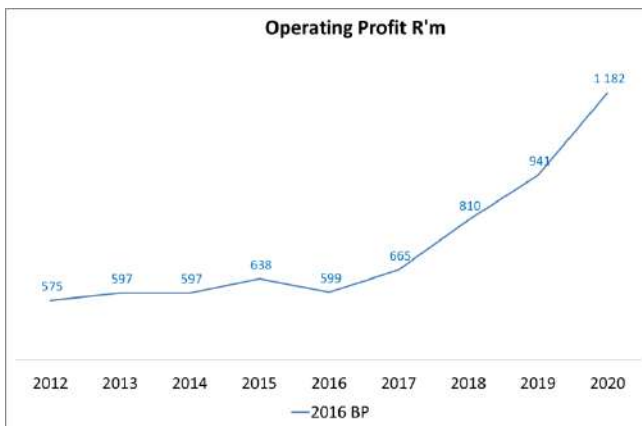
Umgeni Water’s operating performance can be measured in terms of the key indicators: Gross Profit, Operating Profit, Net Profit, Return on Asset and Interest Cover. Each of these is illustrated and discussed below.

**Figure 24.1: Gross Profit**



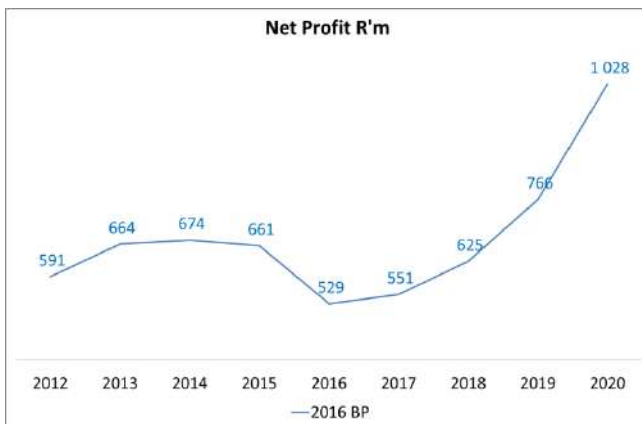
GP margins are projected to increase to 56% in 2015 and 2016. This positive trend will continue to 2020. The increase in the GP% in 2015 is due mainly to the increased sales volume and higher tariff increases

**Figure 24.2: Operating Profit**



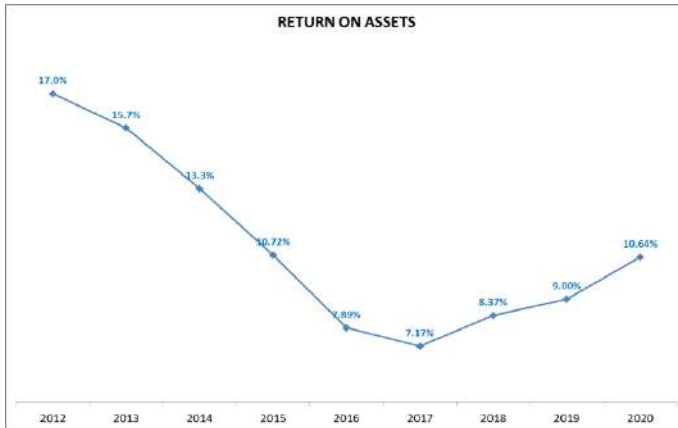
Operating profits is projected to increase to R638m in 2015 with a decline projected in 2016 to R599m. The improvement in operating margin in 2015 is due to the higher sales volumes (2% growth) and tariff increase of 8.7%. Furthermore, operating costs in 2015 is projected to have a y-o-y increase of 0.5% against 2014. In 2016, the decrease is due to operating costs increasing by 9.6% or R157m y-o-y against 2015.

**Figure 24.3: Net Profit**



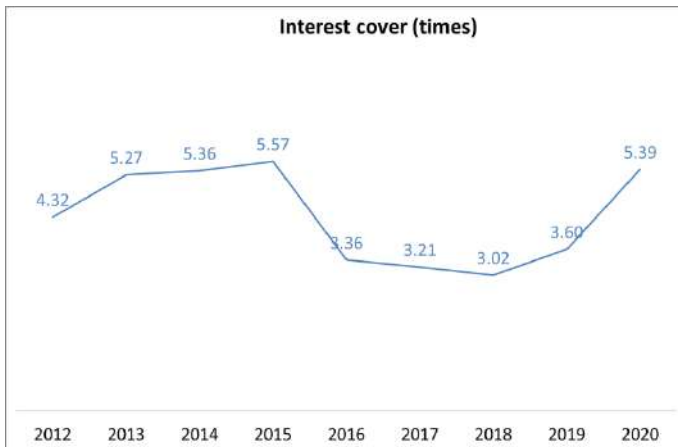
Net profit is projected to decrease to R661m in 2015 and R529m in 2016 mainly due to the changes noted for operating profit and an increase in net finance costs.

Figure 24.4: Return on assets



The return on assets ratio is expected to decline in 2015 to 10.72% and further in 2016 to 7.89%. The low ROA is anticipated due to the intensive capital expenditure programme being implemented over the next 5 years – the returns on these projects only being realised after 5 years.

Figure 24.5: Interest cover



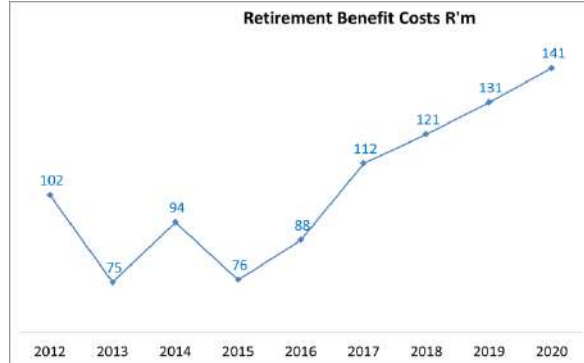
The interest cover ratio over the next 5 years is expected to be within the covenant level of greater than 2.5.



### 24.1.2 Factors impacting on operating performance

The operating performance of UW is being negatively impacted by:

#### 1. The cost of impairments and increase in retirement benefit costs:

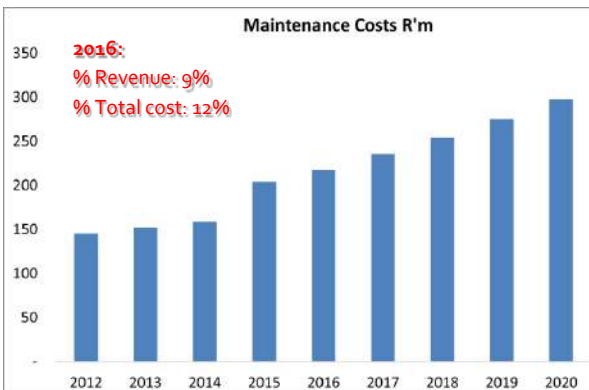
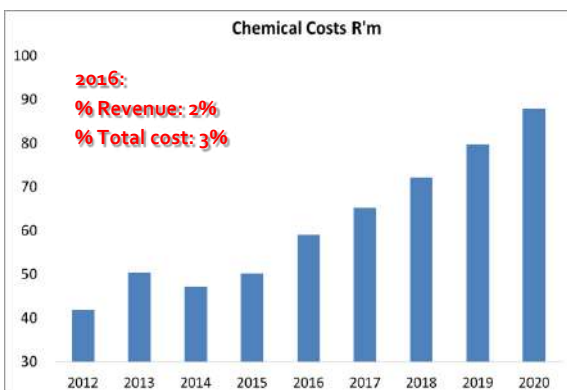
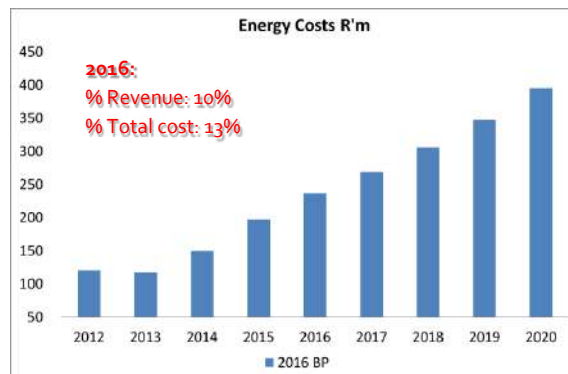
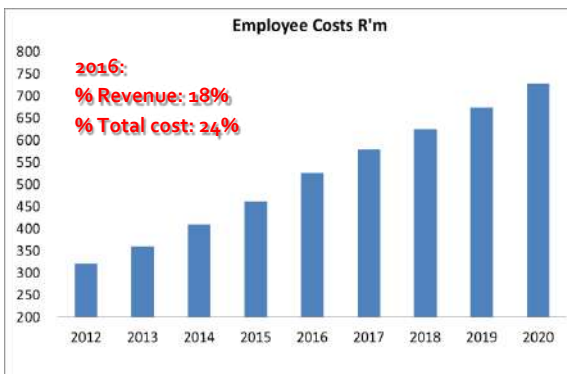


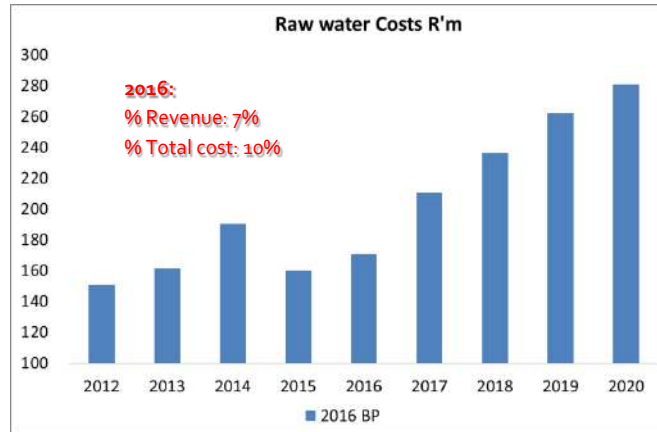
Impairment cost will be 6% of total operating costs in 2014 and 6% in 2015. A total of R555m in impairments will be recognised in from 2015 to 2020. An increase in the impairments may compromise compliance with the interest cover ratio.

The increasing cost of retirement benefit cost is due to the defined benefit pension fund not being converted to a defined contribution fund. Therefore, any deficit in the fund will be funded by the employer.

#### 2. Higher than inflationary increases in the main operating cost drivers

The main operating cost drivers are as follows:





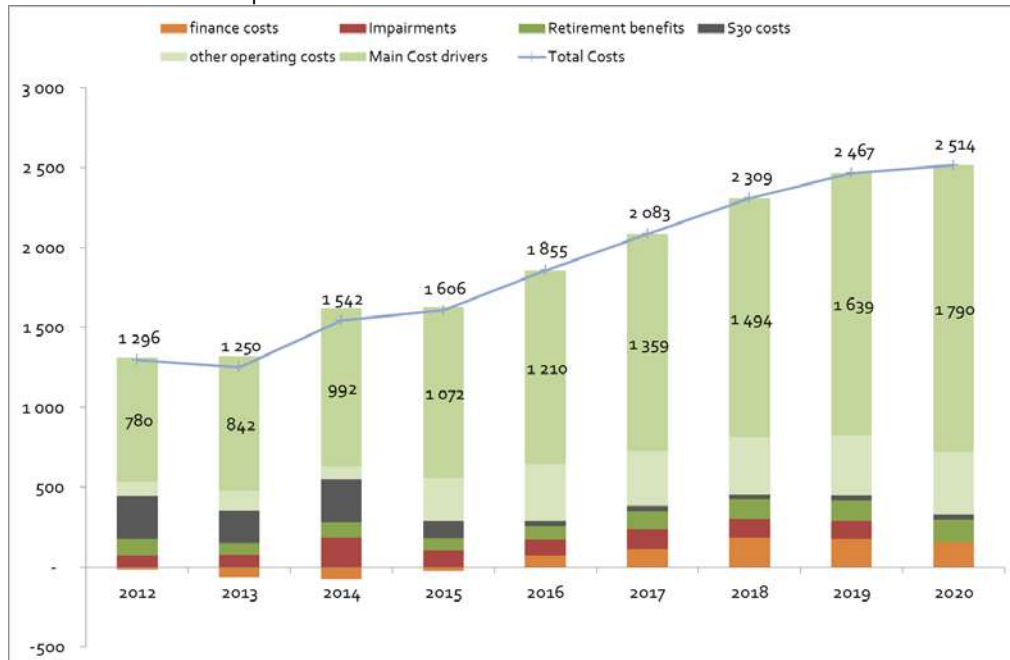
In 2015 Raw water costs will decrease by 14% due to an agreement with DWS that the costs borne by UW for the O&M of DWA owned dams will not be recovered from DWS. In turn, DWS will not charge UW as part of its raw water charge that amount which is required to recover the O&M of DWS owned dams carried out by UW. This has resulted in a reduction in raw water charges

**Chemicals** used for water treatment processes is projected to increase by 6.3% in 2014/15 due an average price increase of 9.5% per annum and an increase in usage of chemicals to maintain raw water quality. In 2015/16 due to the new schemes coming on line and price increases of chemicals, the cost to UW will increase by 17.6%

**Energy costs** increase by 24% in 2015 and 20.3% per cent in 2016 due to price increases of 12.7%, together with additional pumping requirements.

**Maintenance costs** for 2015 increase by 4.9% in 2015 and 6.5% in 2016 due to major renewals undertaken in terms of the entity's asset management plan..

A combined view of the impact of the main cost drivers relative to total costs is shown below.



The ratio of the main cost drivers to total operating costs is predicted to increase from 67% in 2015 to 71% by 2020. This is due to the higher than inflationary increases in the main cost drivers.

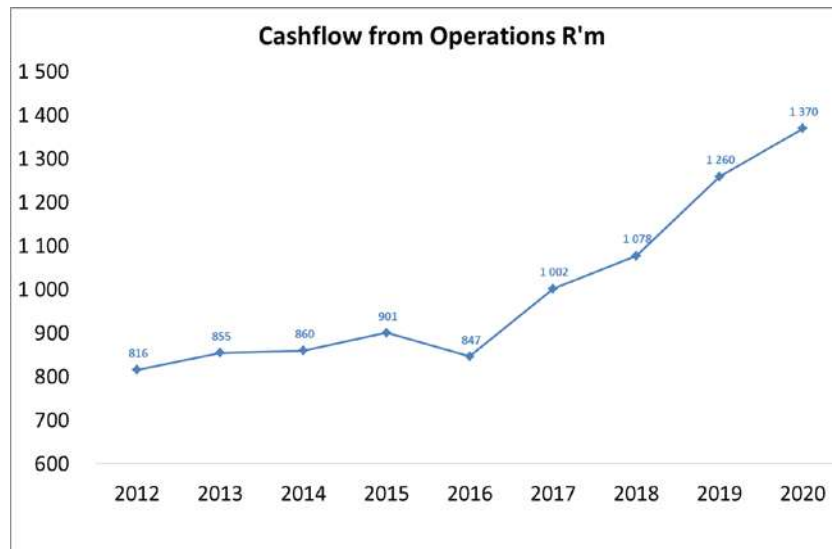
## Increase in cost per kl of bulk water sold places pressure on tariffs charged per annum.

Total Bulk Water cost per kl is projected to increase in 2015 by 16% and in 2016 by 22% as follows:

**Table 24.1: Cost per kl**

| Components                              | 2011/2012      |             | 2012/2013      |             | 2013/2014      |             | 2014/2015      |             | 2014/2015      |             | 2015/2016      |             |
|---|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
|   | Tarif<br>R.c/k | Chan<br>%   | Tarif<br>R.c/k | Chan<br>%   | Tarif<br>R.c/k | Chan<br>%   | Tarif<br>R.c/k | Chan<br>%   | Tarif<br>R.c/k | Chan<br>%   | Tarif<br>R.c/k | Chan<br>%   |
| <b>Direct Costs</b>                     |                |             |                |             |                |             |                |             |                |             |                |             |
| Chemicals                               | 0.08           | 11%         | 0.10           | 17%         | 0.09           | -10%        | 0.107          | 10%         | 0.10           | 9%          | 0.119          | 16%         |
| Depreciation                            | 0.17           | 7%          | 0.17           | 2%          | 0.20           | 17%         | 0.16           | -10%        | 0.22           | 10%         | 0.27           | 23%         |
| Energy                                  | 0.22           | 16%         | 0.22           | 1%          | 0.277          | 23%         | 0.353          | 23%         | 0.38           | 40%         | 0.45           | 18%         |
| Maintenance                             | 0.28           | 18%         | 0.29           | 4%          | 0.29           | -3%         | 0.35           | 17%         | 0.373          | 29%         | 0.40           | 7%          |
| Raw Water                               | 0.36           | 56%         | 0.38           | 6%          | 0.43           | 14%         | 0.36           | -17%        | 0.35           | -18%        | 0.373          | 5%          |
| Staff Costs                             | 0.22           | 3%          | 0.24           | 11%         | 0.26           | 9%          | 0.34           | 22%         | 0.31           | 19%         | 0.371          | 17%         |
| Other direct operating                  | 0.02           | 34%         | 0.06           | 143%        | 0.04           | -40%        | 0.05           | 27%         | 0.05           | 24%         | 0.05           | 8%          |
| <b>Total Direct Costs</b>               | <b>1.38</b>    | <b>21%</b>  | <b>1.50</b>    | <b>8%</b>   | <b>1.61</b>    | <b>7%</b>   | <b>1.741</b>   | <b>7%</b>   | <b>1.81</b>    | <b>13%</b>  | <b>2.05</b>    | <b>13%</b>  |
| <b>Indirect Costs</b>                   |                |             |                |             |                |             |                |             |                |             |                |             |
| Overheads                               | 0.19           | -22%        | 0.21           | 10%         | 0.20           | -4%         | 0.42           | 32%         | 0.39           | 97%         | 0.53           | 35%         |
| staff costs                             | 0.35           | 10%         | 0.40           | 14%         | 0.45           | 11%         | 0.537          | 12%         | 0.50           | 10%         | 0.55           | 10%         |
| Depreciation                            | 0.03           | -15%        | 0.03           | 6%          | 0.03           | -2%         | 0.04           | 79%         | 0.09           | 168%        | 0.09           | 3%          |
| Amortisation                            | 0.01           | -94%        | 0.01           | 9%          | 0.01           | -18%        | 0.01           | 0%          | 0.01           | 19%         | 0.013          | -10%        |
| Impairments                             | 0.173          | -41%        | 0.18           | 4%          | 0.41           | 133%        | 0.21           | -39%        | 0.23           | -45%        | 0.21           | -6%         |
| Retirement benefits                     | 0.23           | 182%        | 0.17           | -27%        | 0.21           | 21%         | 0.187          | 14%         | 0.16           | -21%        | 0.193          | 14%         |
| <b>Total Indirect Costs</b>             | <b>1.01</b>    | <b>-18%</b> | <b>1.02</b>    | <b>2%</b>   | <b>1.336</b>   | <b>30%</b>  | <b>1.42</b>    | <b>5%</b>   | <b>1.40</b>    | <b>5%</b>   | <b>1.60</b>    | <b>14%</b>  |
| <b>Total direct &amp; indirect cost</b> | <b>2.39</b>    | <b>1%</b>   | <b>2.52</b>    | <b>6%</b>   | <b>2.94</b>    | <b>17%</b>  | <b>3.16</b>    | <b>6%</b>   | <b>3.22</b>    | <b>9%</b>   | <b>3.66</b>    | <b>14%</b>  |
| <b>Finance Costs</b>                    | <b>(0.05)</b>  | <b>-</b>    | <b>(0.17)</b>  | <b>238%</b> | <b>(0.18)</b>  | <b>7%</b>   | <b>(0.02)</b>  | <b>-50%</b> | <b>(0.07)</b>  | <b>-61%</b> | <b>0.107</b>   | <b>-</b>    |
| <b>Cost - Bulk Water</b>                | <b>2.34</b>    | <b>-</b>    | <b>2.35</b>    | <b>0%</b>   | <b>2.76</b>    | <b>17%</b>  | <b>3.13</b>    | <b>7%</b>   | <b>3.15</b>    | <b>14%</b>  | <b>3.77</b>    | <b>20%</b>  |
| Less: Sundry income                     | 0.11           | -           | 0.03           | -69%        | 0.03           | 8%          | 0.00           | -88%        | 0.05           | 53%         | 0.01           | -83%        |
| <b>Net Cost - Bulk Water</b>            | <b>2.22</b>    | <b>-9%</b>  | <b>2.31</b>    | <b>4%</b>   | <b>2.72</b>    | <b>17%</b>  | <b>3.13</b>    | <b>8%</b>   | <b>3.09</b>    | <b>14%</b>  | <b>3.76</b>    | <b>22%</b>  |
| Contribution from Wastewater            | 0.01           | -56%        | 0.00           | -26%        | 0.01           | 39%         | 0.01           | 13%         | 0.00           | -57%        | 0.00           | 58%         |
| Contribution from Section 30            | (0.01)         | -           | 0.03           | -           | 0.08           | 138%        | 0.017          | -51%        | 0.03           | -60%        | 0.01           | -64%        |
| <b>Total cost</b>                       | <b>2.22</b>    | <b>-7%</b>  | <b>2.27</b>    | <b>2%</b>   | <b>2.63</b>    | <b>16%</b>  | <b>3.09</b>    | <b>9%</b>   | <b>3.05</b>    | <b>16%</b>  | <b>3.74</b>    | <b>22%</b>  |
| <b>Total Average UW Tariff</b>          | <b>3.64</b>    | <b>6.1%</b> | <b>3.84</b>    | <b>5.6%</b> | <b>4.16</b>    | <b>8.3%</b> | <b>4.52</b>    | <b>8.7%</b> | <b>4.52</b>    | <b>8.7%</b> | <b>4.89</b>    | <b>8.2%</b> |

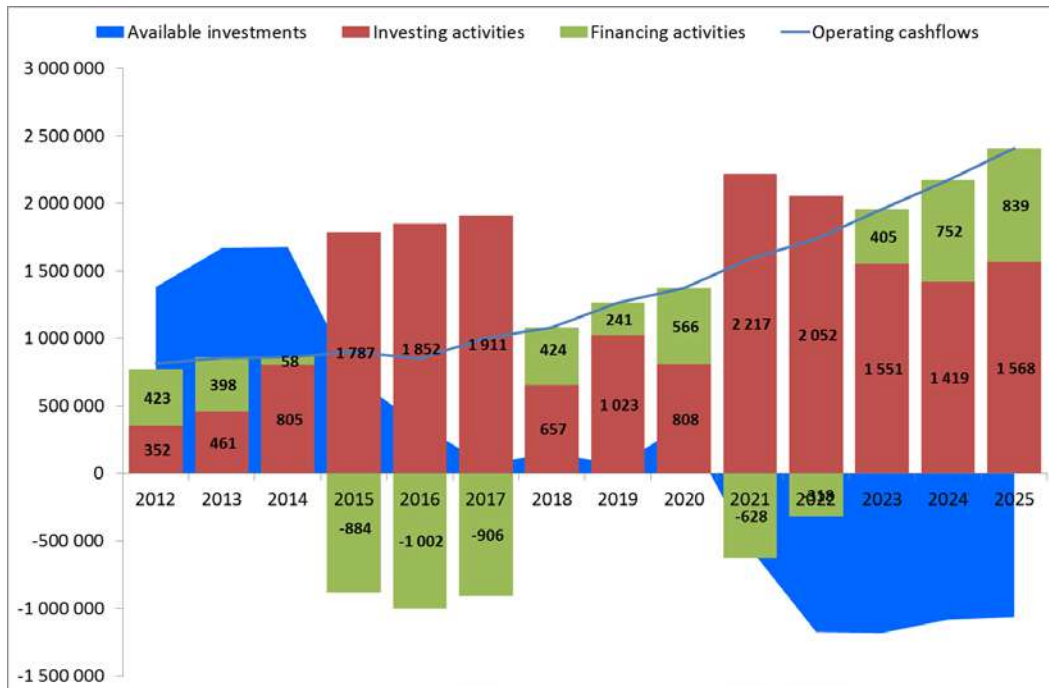
## 24.2 Cashflow Analysis



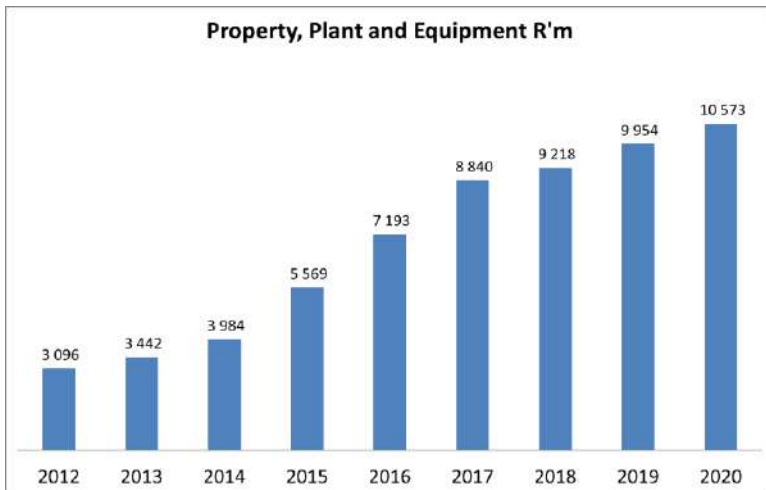
Net cash generated from operations is expected to continue its trend in terms of being in excess of R600m. This is due to the increase in operating profit arising from above CPI tariff increases and better cost control.

Over the next 5 years, operating cashflow will be increasingly directed toward the capex and operational expenditure cashflow but is insufficient to fund both for 2014 onward and results in a funding requirement in 2016 and 2017.

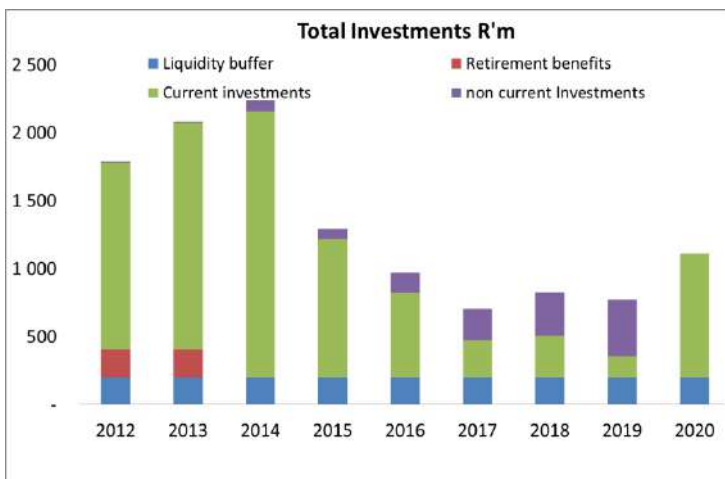
**Note:** the capex spend in the graph is net of grant funding.



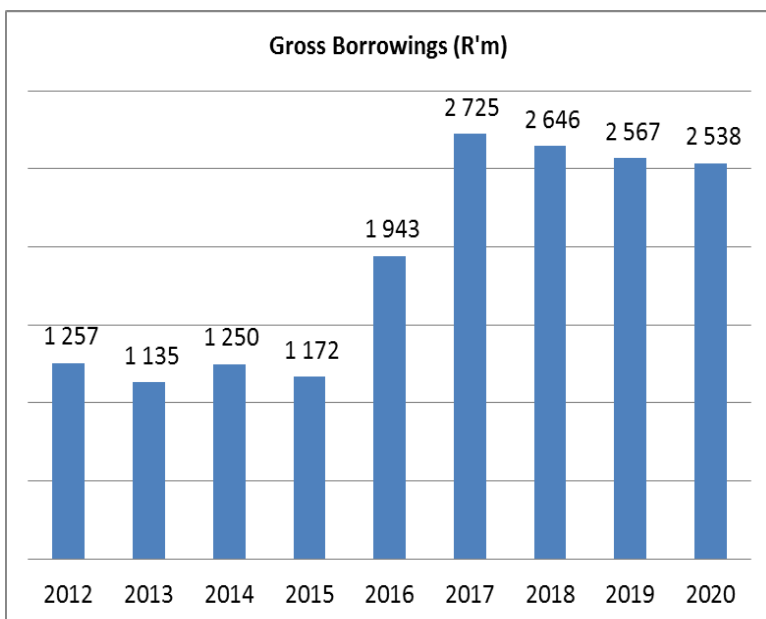
### 24.3 Financial Position



PPE is projected to increase to R10.6bn by 2020 from R5.6bn achieved in 2015. The increase is due to the R7.4bn capital expenditure over the next 5 years offset by R758m impairments from 2015 to 2020.

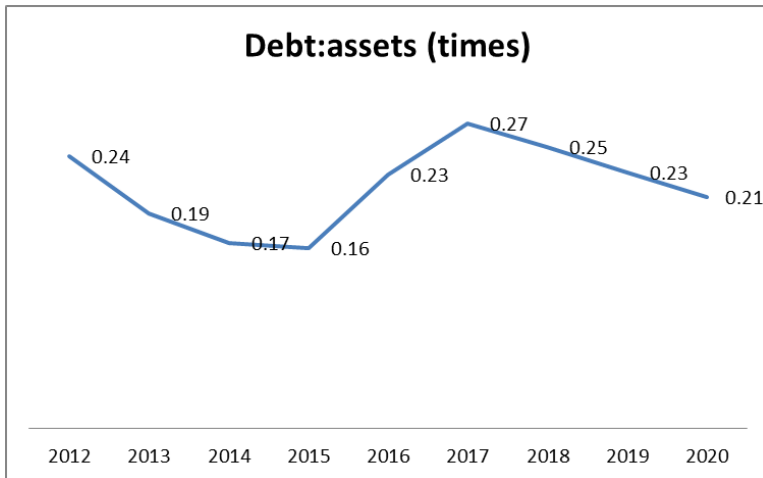


To ensure sufficient liquidity, UW will maintain a liquidity buffer of R200m or more. In 2014, long term investment represents the first redemption asset toward the redemption of the UG21. Current investments are held for the funding of operating and capital expenditure requirements.

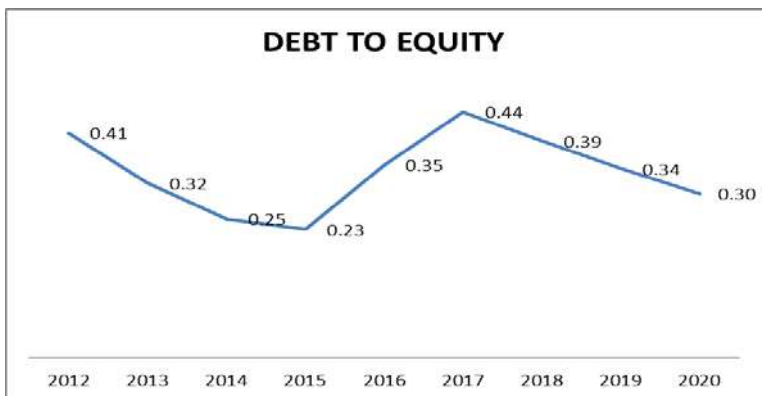


Total borrowings will increase in 2016 and 2017 due to the entity requiring additional financing to fund capex which will result in an increase in gross borrowings to R2 538m by 2020.

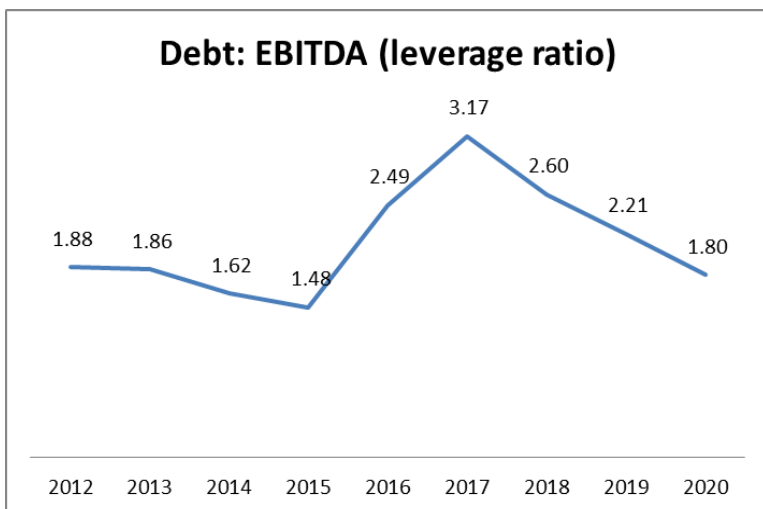
### 24.4 Debt Management



The ratio of debt to assets is projected to decline favourably to 0.16 in 2015. From 2016 the entity may see an increase in the ratio due to additional funding requirements from capex and opex. However, even in the long term the ratio does not look to exceed the target of less than 0.4.



The ratio of debt to equity will decline favourably to 0.23 in 2015. From 2016 the entity may see an increase in the ratio due to additional funding requirements from capex and opex. However, even in the long term the ratio does not look to exceed the target of less than 0.7.



The ratio of debt to EBITDA ("Leverage ratio") will increase to 2.49 times in 2016 and 3.17 times in 2017 due to new debt in 2016 and 2017. A recovery of the ratio is expected from 2018 onward as EBITDA improves.

## 24.5 Business Segment Information

Table 24.2: Business segments: Operating Profit

|                   | 2014       |              | 2015       |               | 2016       |
|-------------------|------------|--------------|------------|---------------|------------|
|                   | R'm        |              | R'm        |               | R'm        |
| <b>Bulk</b>       | 552        | 10.84%       | 612        | -7.02%        | 569        |
| <b>Wastewater</b> | 10         | 22%          | 12         | 106.80%       | 24         |
| <b>S30</b>        | 35         | -58.81%      | 14         | -62.91%       | 5          |
| <b>TOTAL</b>      | <b>597</b> | <b>6.94%</b> | <b>638</b> | <b>-6.20%</b> | <b>599</b> |

### Bulk Segment

In 2015 the operating profit margin is 10.8% higher than the prior year owing to higher sales revenue and lower operating costs than 2014. However in 2016, due to the increase in the main cost drivers the operating profit margin declines by 7.02%.

### Wastewater Segment

The bulk wastewater segment is projected to show a 22% improvement in 2015 owing to lower operating costs. In 2016 owing to the high operating costs with relatively low management fee increases. In 2015 the wastewater operating profit margin will increase to R24m owing lower operating costs and higher management fee increase for Darvill at 20%.

### Section 30 Segment

Analysis of S30 segment is shown in Table 24.3.

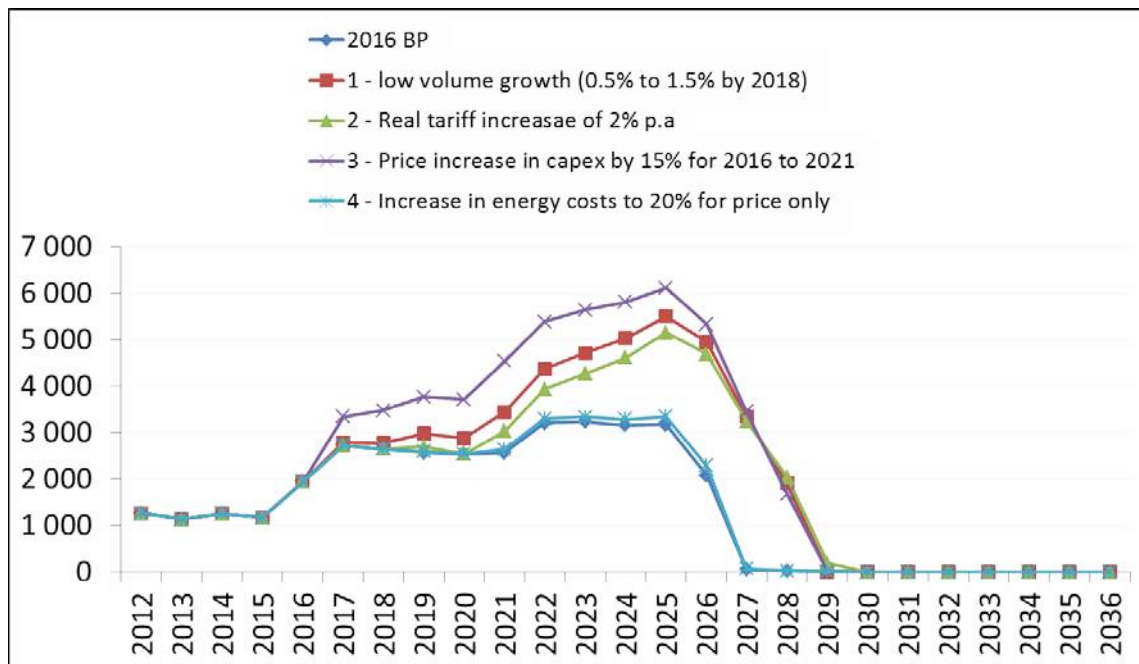
Table 24.3: Analysis of S30 segment in terms of projects

|   | FY 2014        |                | FY 2015             |               | FY 2016       |                     |               |
|---|----------------|----------------|---------------------|---------------|---------------|---------------------|---------------|
|   | Actual         | Forecast       | Inc / (Dec)<br>F'14 |               | Budget        | Inc / (Dec)<br>F'15 |               |
|   | R'000          | R'000          | R'000               | %             | R'000         | R'000               | %             |
| <b>Revenue</b>                            |                |                |                     |               |               |                     |               |
| Other - Section 30                        | 288 871        | 120 626        | (168 245)           | (58.2)        | 33 959        | (86 667)            | (71.8)        |
| Sect 30 - Revenue : Laboratory Serv       | 2 711          | 2 930          | 219                 | 8.1           | 3 296         | 366                 | 12.5          |
| Sect 30 - Revenue : Research              | 185            | 793            | 609                 | 329.8         | 600           | (193)               | (24.4)        |
| Sect 30 - Revenue : Scientific & Environ  | 43 547         | 50 663         | 7 115               | 16.3          | 11 147        | (39 516)            | (78.0)        |
| Sect 30 - Revenue : Sanitation            | (1 205)        | -              | 1 205               | (100.0)       | -             | -                   | -             |
| Sect 30 - Revenue : Water Infrastructure  | 184 158        | 47 868         | (136 290)           | (74.0)        | -             | (47 868)            | (100.0)       |
| Sect 30 - Revenue : Other                 | 16 034         | 18 372         | 2 338               | 14.6          | 18 916        | 544                 | 3.0           |
| Sect 30 - Revenue : O & M                 | 43 443         | -              | (43 443)            | (100.0)       | -             | -                   | -             |
| <b>TOTAL REVENUE</b>                      | <b>288 871</b> | <b>120 626</b> | <b>(168 245)</b>    | <b>(58.2)</b> | <b>33 959</b> | <b>(86 667)</b>     | <b>(71.8)</b> |
| <b>Direct Costs</b>                       |                |                |                     |               |               |                     |               |
| Maintenance - Internal                    | 45             | -              | (45)                | (100.0)       | -             | -                   | -             |
| Other-Section 30 Costs                    | 271 560        | 106 212        | (165 347)           | (60.9)        | 28 612        | (77 600)            | (73.1)        |
| Sect 30 - Laboratory Services             | 1 302          | 1 465          | 163                 | 12.5          | 1 648         | 183                 | 12.5          |
| Sect 30 - Projects : Research             | 175            | 793            | 619                 | 353.8         | 600           | (193)               | (24.4)        |
| Sect 30 - Projects : Scientific & Environ | 38 980         | 42 933         | 3 953               | 10.1          | 9 168         | (33 765)            | (78.6)        |
| Sect 30 - Projects : Sanitation           | (1 212)        | -              | 1 212               | (100.0)       | -             | -                   | -             |
| Sect 30 - Projects : Water Infrastructure | 174 700        | 44 319         | (130 381)           | (74.6)        | -             | (44 319)            | (100.0)       |
| Sect 30 - Projects : Other                | 57 615         | 16 702         | (40 913)            | (71.0)        | 17 197        | 495                 | 3.0           |
| Plant & Equipment Hired - External        | 12             | -              | (12)                | (100.0)       | -             | -                   | -             |
| Staff Costs                               | 246            | -              | (246)               | (100.0)       | -             | -                   | -             |
| <b>Total Direct Costs</b>                 | <b>271 863</b> | <b>106 212</b> | <b>(165 650)</b>    | <b>(60.9)</b> | <b>28 612</b> | <b>(77 600)</b>     | <b>(73.1)</b> |
| <b>GROSS PROFIT / (LOSS)</b>              | <b>17 009</b>  | <b>14 413</b>  | <b>(2 595)</b>      | <b>(15.3)</b> | <b>5 347</b>  | <b>(9 067)</b>      | <b>(62.9)</b> |
| <b>GP MARGIN %</b>                        | <b>5.9%</b>    | <b>11.9%</b>   |                     | <b>3.7%</b>   | <b>15.7%</b>  | <b>3.8%</b>         |               |

|                                  | FY 2014        | FY2015         | Inc / (Dec) F'14 |                | FY 2016       |                  |               |
|----------------------------------|----------------|----------------|------------------|----------------|---------------|------------------|---------------|
|                                  | Actual         | Forecast       |                  |                | Budget        | Inc / (Dec) F'15 |               |
|                                  | R'000          | R'000          | R'000            | %              | R'000         | R'000            | %             |
| Sundry Income                    | 7 723          | -              | (7 723)          | (100.0)        | -             | -                | -             |
| <b>Total Sundry Income</b>       | <b>7 723</b>   | <b>-</b>       | <b>(7 723)</b>   | <b>(100.0)</b> | <b>-</b>      | <b>-</b>         | <b>-</b>      |
| Net Indirect Costs               | (12 181)       | -              | 12 181           | (100.0)        | -             | -                | -             |
| <b>TOTAL OPERATING COSTS</b>     | <b>259 682</b> | <b>106 212</b> | <b>(153 469)</b> | <b>(59.1)</b>  | <b>28 612</b> | <b>(77 600)</b>  | <b>(73.1)</b> |
| <b>OPERATING PROFIT / (LOSS)</b> | <b>36 913</b>  | <b>14 413</b>  | <b>(22 499)</b>  | <b>(61.0)</b>  | <b>5 347</b>  | <b>(9 067)</b>   | <b>(62.9)</b> |
| Net Finance Costs                | -              | -              | -                | -              | -             | -                | -             |
| <b>PROFIT / (LOSS)</b>           | <b>36 913</b>  | <b>14 413</b>  | <b>(22 499)</b>  | <b>(61.0)</b>  | <b>5 347</b>  | <b>(9 067)</b>   | <b>(62.9)</b> |
| <b>NET PROFIT %</b>              | <b>12.8%</b>   | <b>11.9%</b>   |                  | <b>-0.8%</b>   | <b>15.7%</b>  | <b>3.8%</b>      |               |

### 24.6 Sensitivity Analysis

A "What-if" analysis was performed based on the the scenarios presented in the graph below. The scenarios presented are assumed as mutually exclusive events to illustrate the impact of each on the debt curve of the organisation.



All three scenarios would increase the levels of debt to greater than R3.5bn. Scenarios 1 and 3 will result in the interest cover ratio covenant of greater than 2.5 times being breached in 2018 only. The mitigating action would be to defer projects in that year that are not financially viable or tariff increases may have to be greater than CPI plus 3%.



## 25 Analysis of Financial Risk

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.

### 25.1 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 DWA on funding requirements.
- Transparent Tariff consultation process.
- Project evaluations to assess the optimal funding mix.

### 25.2 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.

### 25.3 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; and

- *Borrowing limits approved by National Treasury*, which are currently: R 1,800million for F'13, R 1 750million for F'14 and R2 500million for F'15 of which R2 200million is confirmed and R300million is unconfirmed.

## 25.4 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.

## 25.5 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.

## 27 Analysis of Risk

### 27.1 Integrated Risk Management

Umgeni Water defines risk as all sources of uncertainty that could, positively or negatively, affect the organisation's ability to achieve its strategic objectives and outcomes. Risk management in the organisation 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 organisation.

#### Integrated Risk Management Governance structure

- The **Board** is ultimately accountable for integrated risk management, providing guidance and direction and is kept informed of the status and effectiveness of the risk management system.
- The **Audit Committee** monitors the status of strategic risks quarterly and the overall effectiveness of the organisation's risk management function and its implementation by management and reports the status to the Board.
- The **Corporate Risk Committee**, which comprises a member of the Audit Committee, the Chief Executive, the Executive Management, the Company Secretary and the Risk Manager assists the Audit Committee in discharging its duties relating to implementation of the integrated risk management framework 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 III prior to approval by the Board, via the Audit Committee.
- The **Management Risk Committee**, which comprises the Executive and Senior Managers ensures implementation of the integrated risk management framework in compliance with all applicable legal and regulatory requirements and that there is management of risk at the operational levels of the organisation. Risks that potentially affect the organisation's ability to meet its objectives are escalated to the Corporate Risk Committee.
- 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, monitor existing risks and report the status of the risks assigned to them.

The organisation's strategic risks are shown in **Table 27.1** and show the link to strategic perspectives, objectives and outcomes and how these have been treated / mitigated.

Of a total of eight (8) strategic risks, 88% (7) have been treated to a level equal to or above 70% (good) overall control strength. One strategic risk is rated as a high risk and is outside the organisation's risk appetite and tolerance level, the balance are rated as low with three being outside the organisation's risk appetite but within risk tolerance.

Financial risks are detailed in the financial section of this business plan.

#### Emerging Risks

In line with the regular revision of strategy and as required by governance frameworks, the Board, assisted by its Sub-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 affect the organisation meeting its objectives but for which there is insufficient information to fully understand. These risks will be monitored on an on-going basis. The following risks have been classified as emerging risks:

- Climate change
- Credit risk – associated with proposed new customers in the expanded area and requires the risk assessment process to be applied going forward:

Table 27.1 Umgeni Water Strategic Risks as at March 2015

| Risk # | Risk Name, Score and Status   | Cause, Context and Treatment   | Main Strategic, Perspective, Strategic Objectives and Outcomes Impacted   |
|--------|---|--|---|
| 1      | <p><b>Water resources availability</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Poor 40%</li> <li>Severity: Catastrophic: 400</li> <li>Probability: 91% Virtually certain and/or already occurred</li> <li>Risk Owner: GM Engineering &amp; Scientific Services</li> </ul> <p><b>Score</b><br/>364<br/>High</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Outside Appetite</li> <li>Outside Tolerance</li> </ul>   | <p>Cause &amp; Context: Assurance of supply &lt;98% and has been exacerbated by drought conditions, especially where storage capacity is limited and water demand is exceeded even with the highest possible restrictions. Planning horizons and prioritisation to match supply and demand.</p> <p><i>Treatment Approach: Integrated planning and implementation for short, medium and long-term augmentation of systems with stakeholders. Water conservation and demand management initiatives. Review of water resources mix including reuse and desalination. Impelmenteation of emergency schemes on South Coast, Maphulmulo and North Coast to augment supply during drought conditions.</i></p> | <p><b>Customer and Stakeholder Perspective:</b><br/>SO1: Increase services and customers<br/>SO2: Increase customer and stakeholder value</p> <p><b>Organisational Capacity Perspective:</b><br/>SO8: Increase water resources sustainability</p> <p><b>Outcomes:</b><br/>Water Resources Adequacy<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support<br/>Community and Environmental Sustainability.</p>  |
| 2      | <p><b>Performance of bulk wastewater infrastructure assets.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Reasonable 75%</li> <li>Severity: Moderate-Low: 15</li> <li>Probability: 72% Likely &amp;/or could occur within 1 year</li> <li>Risk Owner: GM Operations</li> </ul> <p><b>Score</b><br/>10.8<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Outside Appetite</li> <li>Within Tolerance</li> </ul>   | <p>Cause &amp; Context: Process failures, capacity and technology constraints, poor influent quality- illegal discharges and stormwater infiltration resulting in non-compliance with effluent discharge requirements.</p> <p><i>Treatment Approach: Initiatives planned and implemented at each WWTW and critical refurbishment and upgrades of major works included and implemented as part of capital programme.</i></p>  | <p><b>Customer and Stakeholder Perspective:</b><br/>SO2: Increase customer and stakeholder value.</p> <p><b>Organisational Capacity Perspective:</b><br/>SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes:</b><br/>Infrastructure Stability<br/>Product Quality<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support<br/>Community and Environmental Sustainability.</p>  |
| 3      | <p><b>Infrastructure investment to meet service delivery mandate and growth plans.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Good 78%</li> <li>Severity: Moderate: 19</li> <li>Probability: 50% Fairly poor &amp;/or could possibly occur within 2 years</li> <li>Risk Owner: GM Engineering &amp; Scientific Services</li> </ul> <p><b>Score</b><br/>9.5<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Outside Appetite</li> <li>Within Tolerance</li> </ul> | <p>Cause &amp; Context: Alignment and prioritisation of the infrastructure plan and budget to increase capacity to meet demand, improve service levels and for growth.</p> <p><i>Treatment Approach: Critical supply infrastructure is annually identified, aligned, prioritised, funded and implemented as part of the organisation's capital infrastructure programme linked to strategy.</i></p>  | <p><b>Customer and Stakeholder Perspective:</b><br/>SO1: Increase services and customers.<br/>SO2: Increase customer and stakeholder value.</p> <p><b>Organisational Capacity Perspective:</b><br/>SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes:</b><br/>Infrastructure Stability<br/>Product Quality<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support<br/>Community and Environmental Sustainability.</p>                                      |
| 4      | <p><b>Sustainable Tariff</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Good 70%</li> <li>Severity: Minor-High: 7</li> <li>Probability: 51% Even probability &amp;/or could occur within 1- 2 years</li> <li>Risk Owner: GM Finance</li> </ul> <p><b>Score</b><br/>3.6<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Within Appetite</li> <li>Within Tolerance</li> </ul>  | <p>Cause &amp; Context: Constraints on ability to charge a tariff that will ensure financial viability and protection of operating cash flows against operating risk including low volume growth, above inflation input costs, significant capital investments with low returns and high impairment costs.</p> <p><i>Treatment Approach: Tariff policy ensures transparency and formal tariff process. Scenario analysis on the impact of operational risk factors on financial viability. On-going optimisation of funding mix from tariff, grants and borrowing for capital programme.</i></p>   | <p><b>Customer and Stakeholder Perspective:</b><br/>SO1: Increase services and customers.<br/>SO2: Increase customer and stakeholder value.</p> <p><b>Financial Perspective:</b><br/>SO4: Increase financial sustainability.</p> <p><b>Organisational Capacity Perspective:</b><br/>SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes:</b><br/>Financial Viability<br/>Infrastructure Stability<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support</p> |

| Risk # | Risk Name, Score and Status   | Cause, Context and Treatment   | Main Strategic, Perspective, Strategic Objectives and Outcomes Impacted  |
|--------|---|--|--|
|        |   | <i>Enhanced stakeholder engagement to secure grant funding for developmental projects.</i>   | Community and Environmental Sustainability.  |
| 5      | <p><b>Ability to deliver projects on time and within budget.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Good 70%</li> <li>Severity: Minor: 5</li> <li>Probability: 51% Even probability &amp;/or could occur within 1- 2 years</li> <li>Risk Owner: GM Engineering &amp; Scientific Services</li> </ul> <p><b>Score</b><br/>2.5<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Within Appetite</li> <li>Within Tolerance</li> </ul> | <p>Cause &amp; Context: Actual cost and delivery time of projects may significantly differ from approved plans.</p> <p><i>Treatment Approach: Alignment of effective engineering, procurement and construction management (EPCM) process within the specified time-frames.</i></p>   | <p><b>Customer and Stakeholder Perspective:</b><br/>SO1: Increase services and customers.<br/>SO2: Increase customer and stakeholder value.</p> <p><b>Organisational Capacity Perspective:</b><br/>SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes:</b><br/>Infrastructure Stability<br/>Product Quality<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support<br/>Community and Environmental Sustainability.</p>   |
| 6      | <p><b>Protection and safeguarding of assets.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Good 75%</li> <li>Severity: Minor: 4</li> <li>Probability: 58 % Even probability &amp;/or could occur within 1- 2 years</li> <li>Risk Owner: GM Corporate Services</li> </ul> <p><b>Score</b><br/>2.3<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Outside Appetite</li> <li>Within Tolerance</li> </ul>                                  | <p>Cause &amp; Context: Illegal settlements and unauthorised construction on properties and servitudes. Umgeni Water's right of access limited. General encroachment and impact on assets. Increased vandalism and theft especially in remote areas.</p> <p><i>Treatment Approach: Implementation of servitude management procedure. Safety and security measures to protect staff, assets and public. Properties and servitudes maintained and monitored. Replacement and strengthening of infrastructure. Disposal of property no longer in use.</i></p> | <p><b>Customer and Stakeholder Perspective:</b><br/>SO2: Increase customer and stakeholder value.</p> <p><b>Organisational Capacity Perspective:</b><br/>SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes:</b><br/>Infrastructure Stability<br/>Stakeholder Understanding and Support<br/>Community and Environmental Sustainability.</p>   |
| 7      | <p><b>Ability to secure funding to meet developmental goals.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Good 80%</li> <li>Severity: Minor: 5</li> <li>Probability: 40 % Fairly poor &amp;/or could possibly occur within 2 years</li> <li>Risk Owner: GM Finance</li> </ul> <p><b>Score</b><br/>2<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Within Appetite</li> <li>Within Tolerance</li> </ul>                               | <p>Cause &amp; Context: Inability to secure required project grant funding. Delayed receipt of funding resulting in projects not being delivered on time.</p> <p><i>Treatment Approach: Enhanced stakeholder engagement to secure grant funding for developmental projects. On-going optimisation of funding mix from tariff, grants and borrowing.</i></p>  | <p><b>Customer and Stakeholder Perspective:</b><br/>SO1: Increase services and customers<br/>SO2: Increase customer and stakeholder value</p> <p><b>Financial Perspective:</b><br/>SO3: Increase mobilisation of funds</p> <p><b>Organisational Capacity Perspective:</b><br/>SO7: Improve and increase infrastructure assets</p> <p><b>Outcomes:</b><br/>Infrastructure Stability<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support<br/>Community and Environmental Sustainability<br/>Financial Viability.</p> |
| 8      | <p><b>Performance of bulk potable water infrastructure assets.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Excellent 95%</li> <li>Severity: Minor-Low: 3</li> <li>Probability: 35 % Doubtful &amp;/or unlikely to occur within next 2 years</li> <li>Risk Owner: GM Operations</li> </ul> <p><b>Score</b><br/>1<br/>Low</p> <p><b>Risk Appetite and Tolerance</b></p> <ul style="list-style-type: none"> <li>Within Appetite</li> <li>Within Tolerance</li> </ul>                  | <p>Cause &amp; Context: Process failures, capacity and technology constraints at water treatment plants resulting in final water non-compliance with potable water standard.</p> <p><i>Treatment Approach: Initiatives planned and implemented at each WTW and critical refurbishment and upgrades of works included and implemented as part of asset programme.</i></p>   | <p><b>Customer and Stakeholder Perspective:</b><br/>SO2: Increase customer and stakeholder value.</p> <p><b>Outcomes:</b><br/>Product Quality<br/>Customer Satisfaction<br/>Stakeholder Understanding and Support<br/>Score Community and Environmental Sustainability.</p>  |

## 27.2 Key Internal Audit Issues

As at 31 May 2015 the organisation had 8 unresolved findings.

Four (4) of these will be sustainably addressed in the long-term with implementation of infrastructure projects, notably the upgrade of Darvill WWTW, and the implementation of the SAP ERP ICT system which will address gaps in HR and Finance related processes, amongst others.

A further four (4) findings relate to Corporate Communications, Monitoring of succession planning, Training schedules and Employee Development.

These are envisaged to be closed with implementation of action plans by target dates within 2015/2016.

## 27.3 Compliance Management

In the prior year Umgeni Water developed a Compliance Framework and determined its Compliance Universe. During 2014/2015 a formal Compliance Register was developed and will be used as the basis for reporting compliance in a structured manner commencing 2015/2016.

To facilitate this the organisational level register has been cascaded in the organisation and is informing development of divisional compliance registers. In addition, training on compliance is being rolled out in the organisation.

## 27.4 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 2015/16.

- **Guarantees**

Guarantees are given by certain financial institutions in respect to payments to utility service providers.

This amount is R0.822million for 2015/16.



Figure 27.1: Umgeni Water Integrated Risk Management Framework

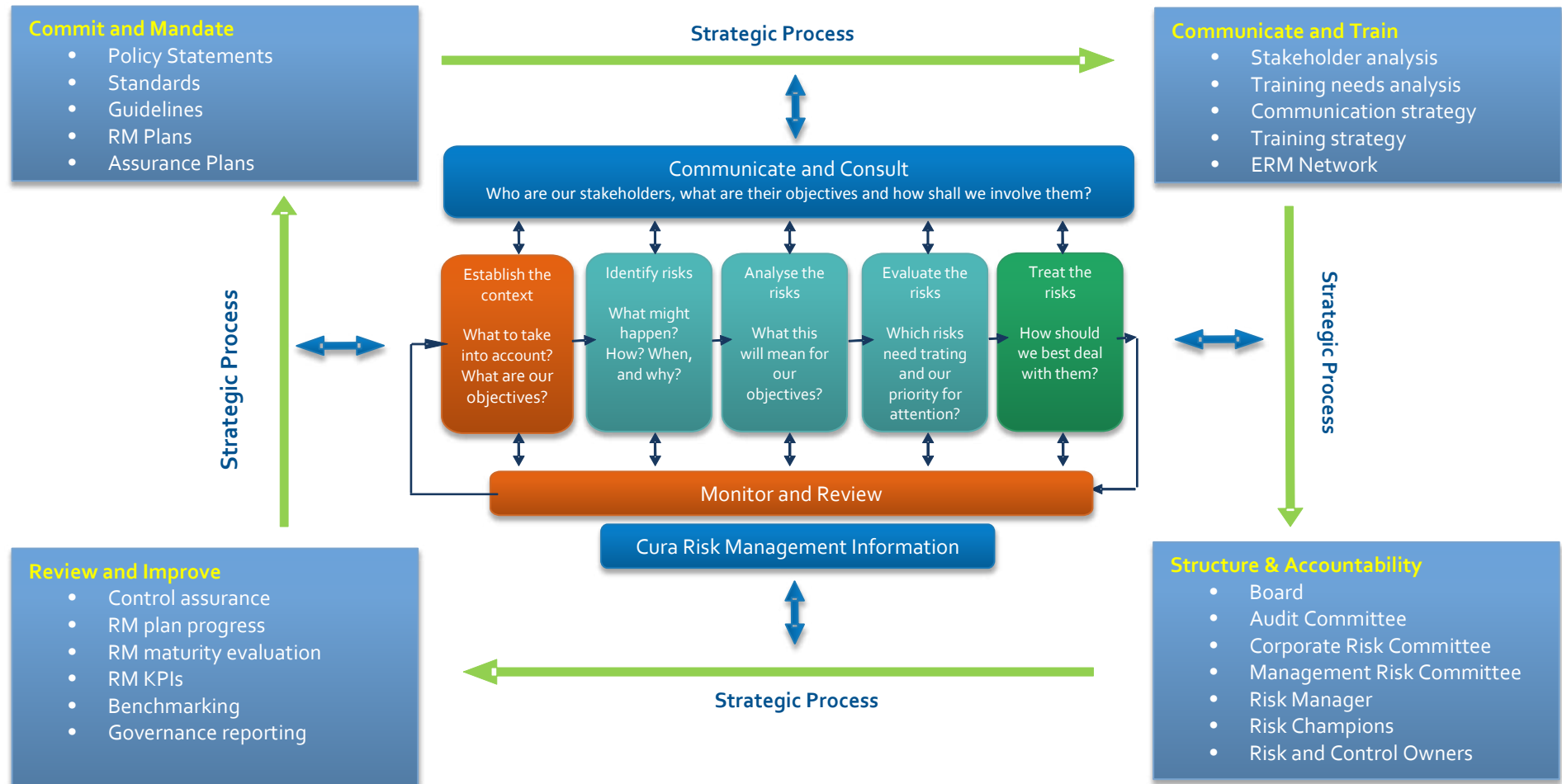
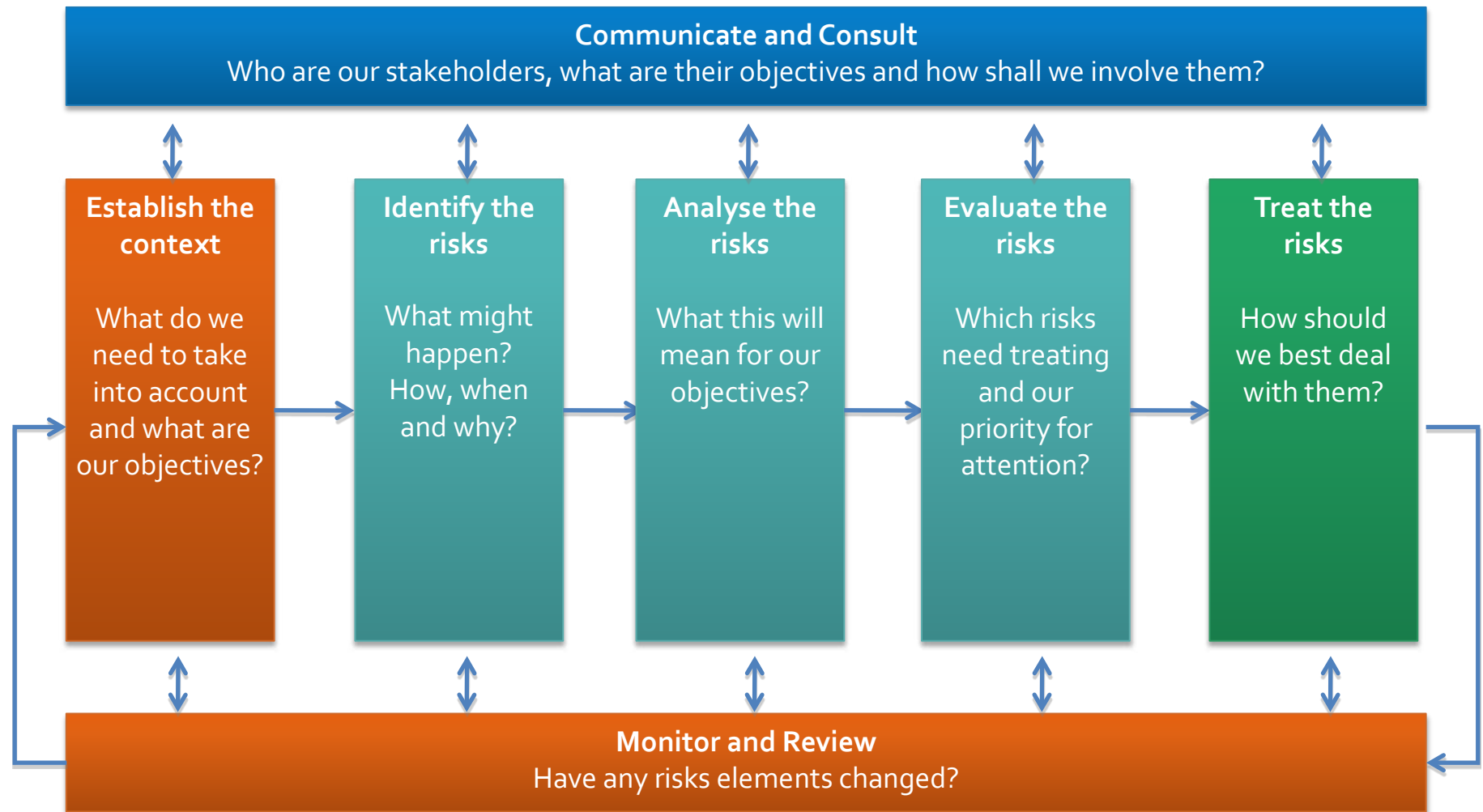


Figure 27.2: Umgeni Water IRM Process





## 28 Fraud Prevention Plan

The King III Code on Corporate Governance for South Africa ("King III") and the Companies Act No. 71 of 2008 obliges all state-owned enterprises to establish a Social and Ethics Committee, the functions of which includes:

- Monitoring the organisation's activities regarding prevailing codes of best practice,
- Promotion of equality,
- Prevention of unfair discrimination, and
- Eliminating corruption.

In line with this, Umgeni Water has in place a fully functional Ethics Committee. The Committee has a broad mandate to promote ethical behaviour, which includes preventing incidences of fraud, bribery and other corrupt activities. The committee further looks at all aspects of the ethics relating to the triple bottom line, i.e. Environmental, Financial and Social Ethics.

Umgeni Water addresses fraud specifically through an Integrated Fraud Management Framework managed by five guiding principles.

### Principle 1 - Fraud Governance Structure

The fraud governance structure is the Ethics Committee, composed of:

- **Executive Management** (prescribed officers),
- A **Non-Executive Director** – who is not involved in the day to day running of the business,
- An **Independent Chairperson** - who is neither a member of management nor a member of the Board, and
- Members, including a **Board** member, **Managers** and **Organised Labour**.
- The Ethics Committee accounts to the Board, through the **Audit Committee**. The Audit Committee is mandated to achieve the highest level of financial management, accounting and reporting to the shareholder. The Audit Committee guided by its charter, sets out its responsibilities regarding risk management and specifically has oversight of financial reporting risks and internal financial controls as well as fraud and IT risks as they relate to financial reporting.
- Matters that fall within its competence are subjected to both **Internal** and **External Audit** as part of the organisation's combined assurance framework.

The Board of Umgeni Water is committed to sound governance and manages fraud risks by ensuring that written policies and procedures are in place to manage fraud risk. A fraud risk management framework is in place to convey the expectations of the Board and senior management regarding managing fraud risk. The approved fraud prevention policy has the following objectives:

- Promote standards of honest and fair conduct,
- Prevent fraud and corruption,
- Detect and investigate fraud and corruption,
- Take appropriate action against offenders,
- Recover any losses, and
- Maintain strong systems of internal control.

Expectations of the Board and senior management regarding managing fraud risk are communicated.

### Principle 2 - Fraud Risk Assessments

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 implementation plan.

### Principle 3 - Fraud Prevention Plan and Implementation Plan

Umgeni Water's Code of Ethics establishes a set of principles to promote and encourage ethical behaviour and decision making by all employees, board members and stakeholders.

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.

Umgeni Water has aligned its fraud Implementation plan, which also has well-established systems of delegation of authority, procurement and recruitment processes, with the new Code of Ethics as indicated in Table 28.1.

### Principles 4 and 5: Fraud Detection and Investigation - Anonymous Hotline Facility

Umgeni Water uses its external whistle-blowing hotline service managed by an external service provider as means of fraud detection. 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.



Table 28.1: Fraud implementation Plan

| Task   | Plan 2015/16 to 2019/20   | 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 Fraud Policy and Plans                    | Annual review and alignment with legislative imperatives and best practise.   | Chief Executive, Executive Management, Ethics Committee, Audit Committee, Board.         |
| Fraud Awareness  | General staff and line management communication at meetings and quarterly staff Information sessions.   | Executive Management, All Umgeni Water Divisions, Corporate Stakeholder Management Unit. |
| Communication of Code of Ethics and Awareness of Hotline calls | 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.                                  |
| Fraud 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.  | Chief Executive, Corporate Services.   |
|  | Continuous training and induction programmes implemented.   | Chief Executive, Corporate Services  |
|  | Senior Management candidates subject to detailed National Intelligence Agency vetting process.  | Chief Executive, Corporate Services  |
|  | Staff vetting processes for all new employees.  | Chief Executive, Corporate Services  |
|  | Obtaining certified copies of qualification certificates.   | Chief Executive, Corporate Services.   |
|  | Ethics/ Fraud awareness a standing item on agenda of induction programmes.  | Chief Executive, Corporate Services.   |
| Disclosure of interest   | Board/EXCO declaration registers.<br>Organisational Disclosures.<br>Declarations of Bid Committees signed at all meetings.  | Chief Executive, Ethics Committee, Audit Committee Board, EXCO, all employees.           |
|  | Gifts and donations register and declaration.   | Chief Executive, Ethics Committee, Audit Committee Board, EXCO, all employees.           |
| Information and use of UW property                             | Information security - Internal audit and external audit<br>Penetration testing by external vendor to indicate loopholes in information security  | Chief Executive, Corporate Services  |
| Suppliers and Business Partners                                | BBBEE status report and CPG status.   | Chief Executive, Corporate Services.   |
|  | Tender issues, appeals, objections.   | Chief Executive, Corporate Services.   |
|  | All suppliers and contractors made aware of Umgeni Water's fraud policy and management thereof.   | Chief Executive, Corporate Services.   |
| Financial Ethics   | Finance internal controls, policies and procedures.<br>DOA is updated every two years or amended as required.<br>Irregular expenditure procedure.<br>Wasteful and fruitless expenditure procedure.  | Chief Executive, Finance.  |
|  | Materiality and Significance Framework.<br>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, Corporate Stakeholder Management.                                       |
| 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.                                       |

## 30 Signed Declaration

Umgeni Water hereby declares that all information is disclosed, is correctly disclosed and included in this Business 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 CYRIL VUYANI GAMEDE**

Chief Executive

31 May 2015



**MR ANDILE MAHLALUTYE**

Chairperson of the Board

31 May 2015





'Improving Quality of Life and Enhancing Sustainable Economic Development'



# Annexure A

## To Umgeni Water Five-Year Business Plan 2015/16 to 2019/20

### Financial Statements

Version: 31 May 2015

## UMGENI WATER

### PROJECTED FINANCIAL STATEMENTS FOR THE 6 YEARS

ALL AMOUNTS TO BE ENTERED IN R000'S

TOTALS DRIVEN BY FORMULA - PROTECTED

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT   | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|---|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |   |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| 440 294           | <b>Water sold (kilolitres)</b>                          | <b>449 766</b>              | <b>458 761</b>       | <b>469 592</b>       | <b>482 167</b>       | <b>489 390</b>       | <b>493 105</b>       | 2.15      | 1.91      |
| 574               | - Raw water sales (kl)                                  | 615                         | 615                  | 632                  | 632                  | 632                  | 632                  | 7.19      | 1.63      |
| 439 542           | - Potable water sales (kl)                              | 448 949                     | 457 928              | 468 740              | 481 313              | 488 533              | 492 246              | 2.14      | 1.91      |
| 178               | - Waste water sales (kl)                                | 203                         | 217                  | 220                  | 222                  | 225                  | 227                  | 13.98     | 4.13      |
|                   |   |                             |                      |                      |                      |                      |                      |           |           |
| <b>2 204 140</b>  | <b>TOTAL REVENUE (Primary and secondary activities)</b> | <b>2 248 525</b>            | <b>2 391 132</b>     | <b>2 643 636</b>     | <b>2 946 508</b>     | <b>3 251 906</b>     | <b>3 565 465</b>     | 2.01      | 8.35      |
| 1 890 318         | Revenue (Primary activity)                              | 2 116 459                   | 2 342 314            | 2 594 361            | 2 892 732            | 3 193 118            | 3 499 908            |           |           |
| 415               | - Raw water sales                                       | 615                         | 679                  | 729                  | 792                  | 862                  | 938                  | 47.98     | 14.53     |
| 1 830 137         | - Potable water sales                                   | 2 031 928                   | 2 241 867            | 2 485 337            | 2 773 867            | 3 063 344            | 3 358 464            | 11.03     | 10.65     |
| 1 682             | - Waste water sales                                     |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   | - Industrial water sales                                |                             |                      |                      |                      |                      |                      |           |           |
| 58 083            | - Wastewater management fee                             | 83 916                      | 99 768               | 108 296              | 118 073              | 128 912              | 140 507              | 44.48     | 15.86     |
| -                 | -   |                             |                      |                      |                      |                      |                      |           |           |
| -                 | -   |                             |                      |                      |                      |                      |                      |           |           |
|                   |   |                             |                      |                      |                      |                      |                      |           |           |
| 313 822           | Revenue (Secondary activity)                            | 132 066                     | 48 819               | 49 275               | 53 777               | 58 789               | 65 557               | (57.92)   | (22.97)   |
|                   | - Retail water operation                                |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Waste water management fee                            |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Management fee - consulting                           |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Management fee - other                                |                             |                      |                      |                      |                      |                      |           |           |
| 313 822           | - Section 30 activities                                 | 132 066                     | 48 819               | 49 275               | 53 777               | 58 789               | 65 557               | (57.92)   | (22.97)   |
| -                 | -   |                             |                      |                      |                      |                      |                      |           |           |
| -                 | -   |                             |                      |                      |                      |                      |                      |           |           |
|                   |   |                             |                      |                      |                      |                      |                      |           |           |
|                   |   |                             |                      |                      |                      |                      |                      |           |           |
| <b>462 648</b>    | <b>TOTAL COST OF SALES</b>                              | <b>266 128</b>              | <b>199 205</b>       | <b>241 096</b>       | <b>268 432</b>       | <b>296 373</b>       | <b>317 101</b>       | (42.48)   | (6.10)    |
| 190 786           | Cost of sales (raw water purchased)                     | 159 916                     | 170 592              | 210 652              | 236 162              | 262 167              | 280 842              | (16.18)   | 6.66      |
| 190 540           | - Raw water   | 159 916                     | 170 592              | 210 652              | 236 162              | 262 167              | 280 842              | (16.07)   | 6.68      |
| 246               | - Change in water inventory                             |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   |   |                             |                      |                      |                      |                      |                      |           |           |
| 271 863           | Cost of sales (secondary activities)                    | 106 212                     | 28 612               | 30 444               | 32 270               | 34 207               | 36 259               | (60.93)   | (28.52)   |
| 246               | - Employee costs  |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   | - Chemicals and purification                            |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Energy  |                             |                      |                      |                      |                      |                      |           |           |
| 45                | - Repairs and maintenance                               |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |





## UMGENI WATER

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ALL AMOUNTS TO BE ENTERED IN R000'S

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT  | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|--|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |  |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| -                 | -  |                             |                      |                      |                      |                      |                      |           |           |
| 47 181            | - Chemicals  | 50 172                      | 59 017               | 65 214               | 72 061               | 79 628               | 87 989               | 6.34      | 10.95     |
| 136 074           | - Energy   | 190 758                     | 229 879              | 261 349              | 297 128              | 337 805              | 384 050              | 40.19     | 18.88     |
| 143 313           | - Repairs and maintenance - (cost of sales related)  | 189 189                     | 200 525              | 217 232              | 235 331              | 254 937              | 276 177              | 32.01     | 11.55     |
| 143 313           | - Property and buildings<br>- Plant, machinery and equipment<br>- Other - to be included in general expenses | 189 189                     | 200 525              | 217 232              | 235 331              | 254 937              | 276 177              | 32.01     | 11.55     |
| -                 | -  |                             |                      |                      |                      |                      |                      |           |           |
| 276 872           | - Depreciation   | 208 270                     | 231 263              | 265 028              | 266 505              | 270 938              | 170 143              | (24.78)   | (7.79)    |
| 92 897            | - Depreciation property, plant and equipment<br>- Amortisation of intangible assets                          | 104 717                     | 131 637              | 140 589              | 150 008              | 159 759              | 170 143              | 12.72     | 10.61     |
| 183 976           | - Impairments of property, plant and equipment<br>- impairments of intangible assets                         | 103 552                     | 99 626               | 124 439              | 116 497              | 111 179              |                      | (43.71)   | (100.00)  |
|                   | - Impairment of trade receivables  |                             |                      |                      |                      |                      |                      |           |           |
| 22 719            | - Other direct costs   | 29 895                      | 32 807               | 42 175               | 45 701               | 48 952               | 52 452               | 31.59     | 14.96     |
| 22 719            | - Motor vehicle repairs and running expenses<br>- Other direct   | 29 895                      | 32 807               | 42 175               | 45 701               | 48 952               | 52 452               | 31.59     | 14.96     |
| 412 242           | - General expenses   | 566 082                     | 669 440              | 689 121              | 736 382              | 785 948              | 838 478              | 37.32     | 12.56     |
| 1 799             | - Advertising and promotions   | 2 264                       | 2 317                | 2 479                | 2 628                | 2 785                | 2 980                | 25.82     | 8.77      |
| 2 420             | - Amortisation - office intangibles<br>- Amortisation of biological assets                                   | 4 176                       | 3 562                | 3 562                | 3 562                | 3 242                |                      | 72.54     | (100.00)  |
| 2 094             | - Audit fees   | 1 915                       | 2 068                | 2 212                | 2 345                | 2 486                | 2 660                | (8.57)    | 4.07      |
| -16 818           | - Bad debts  |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| 18                | - Bursaries, donations and gifts   | 34                          | 36                   | 38                   | 40                   | 43                   | 46                   | 91.94     | 17.37     |
| 3 818             | - Cleaning - all administration areas<br>- Computer and IT consumables                                       | 4 986                       | 5 870                | 6 457                | 7 103                | 7 813                | 8 595                | 30.58     | 14.48     |
| 834               | - Conferences, seminars and workshops  | 1 518                       | 2 018                | 2 159                | 2 289                | 2 426                | 2 596                | 81.99     | 20.83     |
| 10 208            | - Consultants and professional fees<br>- Contractors   | 22 362                      | 25 482               | 27 265               | 28 901               | 30 635               | 32 780               | 119.07    | 21.46     |
| 4 697             | - Courier and postage  | 4 609                       | 4 781                | 5 116                | 5 423                | 5 748                | 6 151                | (1.88)    | 4.60      |
| 16 439            | - Depreciation of office assets<br>- Directors - performance bonuses   | 43 367                      | 45 610               | 48 650               | 51 875               | 55 161               | 58 688               | 163.80    | 23.63     |
| 3 559             | - Directors emoluments   | 4 754                       | 5 177                | 5 695                | 6 151                | 6 643                | 7 174                | 33.57     | 12.39     |
| 223 615           | - Employee costs - (related to administration)   | 247 345                     | 277 838              | 299 560              | 322 708              | 348 231              | 375 773              | 10.61     | 9.04      |
| 4 845             | - Energy - related to administration areas<br>- Impairments of biological assets                             | 5 951                       | 6 780                | 7 708                | 8 764                | 9 963                | 11 327               | 22.81     | 15.20     |
| 5 428             | - Insurance<br>- Lease costs   | 6 767                       | 9 736                | 10 709               | 11 780               | 12 958               | 14 254               | 24.66     | 17.46     |
| 9 209             | - Legal and contract fees  | 5 000                       | 7 000                | 7 490                | 7 939                | 8 416                | 9 005                | (45.70)   | (0.37)    |

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT  | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|--|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |  |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
|                   | - Marketing - not advertising and promotions           |                             |                      |                      |                      |                      |                      |           |           |
| 7 541             | - Motor vehicle expenses (not in direct costs)         | 12 029                      | 11 160               | 11 941               | 12 658               | 13 417               | 14 356               | 59.52     | 11.33     |
| 192               | - Operating leases - photocopiers etc                  | 222                         | 213                  | 228                  | 242                  | 256                  | 274                  | 15.50     | 6.14      |
| 69 509            | - Other operating expenses                             | 105 794                     | 156 214              | 139 248              | 146 599              | 153 182              | 160 684              | 52.20     | 14.99     |
| 2 322             | - Printing and stationery                              | 2 750                       | 3 035                | 3 247                | 3 442                | 3 649                | 3 904                | 18.44     | 9.05      |
|                   | - Protective clothing and uniforms                     |                             |                      |                      |                      |                      |                      |           |           |
| 2 527             | - Rates and taxes                                      | 3 000                       | 3 300                | 3 630                | 3 993                | 4 392                | 4 832                | 18.73     | 11.41     |
| 197               | - Relocation costs - all items                         | 200                         | 200                  | 200                  | 200                  | 200                  | 200                  | 1.45      | 0.24      |
|                   | - Rent paid - equipment hire and other hiring costs    |                             |                      |                      |                      |                      |                      |           |           |
| 13 055            | - Repairs and maintenance                              | 27 931                      | 18 931               | 17 944               | 19 146               | 20 391               | 21 716               | 113.95    | 8.85      |
| 21 011            | - Safety and security                                  | 29 045                      | 33 206               | 35 530               | 37 662               | 39 922               | 42 717               | 38.24     | 12.55     |
|                   | - Service contracts                                    |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Software and other small assets expensed             |                             |                      |                      |                      |                      |                      |           |           |
| 1 307             | - Staff welfare  | 1 819                       | 2 099                | 2 246                | 2 381                | 2 524                | 2 700                | 39.17     | 12.85     |
| 7 415             | - Subscriptions, licences and membership fees          | 8 000                       | 14 077               | 15 062               | 15 966               | 16 924               | 18 109               | 7.89      | 16.05     |
| 13 070            | - Training and development                             | 17 484                      | 25 673               | 27 470               | 29 118               | 30 865               | 33 026               | 33.77     | 16.71     |
|                   | - Telephone and fax                                    |                             |                      |                      |                      |                      |                      |           |           |
| 1 929             | - Travel and entertainment                             | 2 762                       | 3 057                | 3 271                | 3 467                | 3 675                | 3 933                | 43.18     | 12.60     |
|                   | - Veterinary services, supplies and biological costs   |                             |                      |                      |                      |                      |                      |           |           |
| <b>605 439</b>    | <b>OPERATING PROFIT (LOSS) FOR YEAR</b>                | <b>621 516</b>              | <b>591 996</b>       | <b>667 102</b>       | <b>813 752</b>       | <b>945 591</b>       | <b>1 189 058</b>     | 2.66      | 11.91     |
| 122 546           | Finance income - (enter as positive)                   | 89 979                      | 60 101               | 44 762               | 44 748               | 48 169               | 65 606               | (26.58)   | (9.89)    |
|                   | - Trade receivables                                    |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Extended payment trade receivables - deemed interest |                             |                      |                      |                      |                      |                      |           |           |
| 119 009           | - Short term deposits - call accounts                  | 65 792                      | 32 066               | 12 769               | 8 102                | 6 310                | 17 763               | (44.72)   | (27.17)   |
| 1 760             | - Held to maturity financial assets                    | 23 282                      | 27 244               | 31 476               | 36 295               | 41 685               | 47 843               | 1222.72   | 73.40     |
|                   | - Available for sale investments                       |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Employee advances                                    |                             |                      |                      |                      |                      |                      |           |           |
|                   | - SARS   |                             |                      |                      |                      |                      |                      |           |           |
| 840               | - Other  |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| 937               | - 57 pipeline  | 905                         | 792                  | 517                  | 351                  | 174                  |                      | (3.39)    | (100.00)  |
|                   | -  |                             |                      |                      |                      |                      |                      |           |           |
| -45 555           | Finance costs - (enter as negative)                    | -66 148                     | -129 605             | -158 760             | -229 614             | -222 854             | -219 431             | 45.20     | 29.96     |
| -115 064          | - Long term borrowings                                 | -113 251                    | -176 996             | -206 478             | -267 702             | -261 362             | -257 938             | (1.58)    | 14.40     |
|                   | - Bank overdraft                                       |                             |                      |                      |                      |                      |                      |           |           |
|                   | - SARS   |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Finance leases                                       |                             |                      |                      |                      |                      |                      |           |           |
| 71 936            | - Borrowing costs capitalised (positive)               | 48 507                      | 48 507               | 48 507               | 38 507               | 38 507               | 38 507               | (32.57)   | (9.89)    |

## UMGENI WATER

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT  | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|--|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |  |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| -768              | - Other  |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| -1 659            | - Darvill revenue in advance                           | -1 404                      | -1 116               | -789                 | -419                 |                      |                      | (15.34)   | (100.00)  |
|                   |  |                             |                      |                      |                      |                      |                      |           |           |
| <b>682 430</b>    | <b>PROFIT (LOSS) FOR YEAR</b>                          | <b>645 347</b>              | <b>522 493</b>       | <b>553 104</b>       | <b>628 886</b>       | <b>770 905</b>       | <b>1 035 233</b>     | (5.43)    | 7.19      |
| -119 883          | <b>Other comprehensive income</b>                      |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   | - Gain on revaluation of property, plant and equipment |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Gain on revaluation of intangible assets             |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Transfers (to) from general reserves                 |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Gains / (losses) on retirement benefit plans         |                             |                      |                      |                      |                      |                      |           |           |
| -119 883          | - Retirement benefit adjustment (IAS19)                |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   |  |                             |                      |                      |                      |                      |                      |           |           |
| <b>802 313</b>    | <b>TOTAL COMPREHENSIVE INCOME (LOSS) FOR THE YEAR</b>  | <b>645 347</b>              | <b>522 493</b>       | <b>553 104</b>       | <b>628 886</b>       | <b>770 905</b>       | <b>1 035 233</b>     | (19.56)   | 4.34      |

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#### STATEMENT OF FINANCIAL POSITION

| ACTUAL<br>2013/14 | ACCOUNT                                   | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|---|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |   |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
|                   | <b>ASSETS</b>                             |                             |                      |                      |                      |                      |                      |           |           |
|                   | <b>Non-current assets</b>                 |                             |                      |                      |                      |                      |                      |           |           |
| 3 988 282         | Property, plant and equipment             | 5 575 063                   | 7 200 986            | 8 847 699            | 9 225 855            | 9 962 112            | 10 581 049           | 39.79     | 17.66     |
| 3 443 935         | Carrying value - opening balance          | 3 988 282                   | 5 575 063            | 7 200 986            | 8 847 699            | 9 225 855            | 9 962 112            | 15.81     | 19.37     |
| 767 851           | Additions - (will be carried to cashflow) | 1 789 910                   | 1 854 289            | 1 911 884            | 658 029              | 1 023 849            | 809 262              | 133.11    | 0.88      |
| -109 022          | Depreciation - ( ex income statement)     | -148 084                    | -177 248             | -189 239             | -201 883             | -214 920             | -228 831             | 35.83     | 13.15     |
| -2 442            | Disposals - carrying value                |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| -183 976          | Impairments - (ex income statement)       | -103 552                    | -99 626              | -124 439             | -116 497             | -111 179             |                      | (43.71)   | (100.00)  |
|                   | Revaluations - (ex income statement)      |                             |                      |                      |                      |                      |                      |           |           |
| 71 936            | Interest capitalised                      | 48 507                      | 48 507               | 48 507               | 38 507               | 38 507               | 38 507               | (32.57)   | (9.89)    |
|                   |   |                             |                      |                      |                      |                      |                      |           |           |
| 18 104            | Intangible assets                         | 13 928                      | 10 366               | 6 804                | 3 242                | 0                    | 0                    | (23.06)   | (84.50)   |
| 9 374             | Carrying value - opening balance          | 18 104                      | 13 928               | 10 366               | 6 804                | 3 242                | 0                    | 93.13     | (82.70)   |
| 11 150            | Additions - (will be carried to cashflow) |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |





## UMGENI WATER

### PROJECTED FINANCIAL STATEMENTS FOR THE 6 YEARS

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT  | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|--|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |  |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| 2 694 074         |  | 1 573 135                   | 1 186 998            | 874 162              | 948 059              | 835 000              | 1 646 114            | (41.61)   | (7.88)    |
| 6 805 527         | <b>TOTAL ASSETS</b>  | 7 259 939                   | 8 568 296            | 9 980 361            | 10 518 512           | 11 236 228           | 12 248 951           | 6.68      | 10.29     |
|                   | <b>EQUITY AND LIABILITIES</b>                                |                             |                      |                      |                      |                      |                      |           |           |
|                   | <b>Capital and reserves</b>                                  |                             |                      |                      |                      |                      |                      |           |           |
| 442 847           | Capital  | 442 847                     | 442 847              | 442 847              | 442 847              | 442 847              | 442 847              |           |           |
|                   | Reserves   |                             |                      |                      |                      |                      |                      |           |           |
|                   | Opening balance  |                             |                      |                      |                      |                      |                      |           |           |
|                   | Transfers in (out)   |                             |                      |                      |                      |                      |                      |           |           |
| 3 973 337         | Accumulated profit (loss)                                    | 4 618 689                   | 5 141 182            | 5 694 286            | 6 323 172            | 7 094 077            | 8 129 310            | 16.24     | 12.67     |
| 3 355 125         | Opening balance  | 3 973 337                   | 4 618 689            | 5 141 182            | 5 694 286            | 6 323 172            | 7 094 077            | 18.43     | 13.29     |
| 682 429           | Comprehensive income (loss) for year - (ex income statement) | 645 347                     | 522 493              | 553 104              | 628 886              | 770 905              | 1 035 233            | (5.43)    | 7.19      |
| -64 217           | Other  | 5                           |                      |                      |                      |                      |                      |           |           |
| 4 416 184         |  | 5 061 536                   | 5 584 029            | 6 137 133            | 6 766 019            | 7 536 924            | 8 572 157            | 14.61     | 11.69     |
|                   | <b>Non-current liabilities</b>                               |                             |                      |                      |                      |                      |                      |           |           |
| 1 171 766         | Long term debt   | 1 093 330                   | 1 864 712            | 2 645 901            | 2 566 892            | 2 538 069            | 1 908 885            | (6.69)    | 8.47      |
| 196 669           | Bank loan - fixed rate                                       | 182 201                     | 165 518              | 148 643              | 131 569              | 114 283              | 96 774               | (7.36)    | (11.15)   |
| 375 097           | Bank loan - variable rate                                    | 311 129                     | 249 194              | 187 258              | 125 323              | 113 786              | 102 111              | (17.05)   | (19.50)   |
| 600 000           | Bonds - fixed rate   | 600 000                     | 1 450 000            | 2 310 000            | 2 310 000            | 2 310 000            | 1 710 000            |           | 19.07     |
|                   | Bonds - variable rate  |                             |                      |                      |                      |                      |                      |           |           |
|                   | Loans - interest free  |                             |                      |                      |                      |                      |                      |           |           |
|                   | Settlement agreements  |                             |                      |                      |                      |                      |                      |           |           |
|                   | Income received in advance                                   |                             |                      |                      |                      |                      |                      |           |           |
|                   | Finance lease obligation                                     |                             |                      |                      |                      |                      |                      |           |           |
| 8 391             | Other non-current liabilities                                | 5 935                       | 3 152                |                      |                      |                      |                      | (29.27)   | (100.00)  |
| 450 383           | Post retirement benefit obligations                          | 488 591                     | 536 905              | 589 212              | 642 319              | 702 652              | 770 147              | 8.48      | 9.35      |
| 242 883           | Defined benefit and contribution plans - opening             | 134 004                     | 134 004              | 134 004              | 134 004              | 134 004              | 134 004              | (44.83)   | (9.44)    |
| -108 879          | Actuarial movement on defined benefit contribution           | 5 897                       | 16 431               | 27 140               | 36 483               | 50 778               | 69 851               | (100.00)  | (100.00)  |



## UMGENI WATER

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT                      | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|------------------------------|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |                              |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| 758 802           |                              | 610 545                     | 579 498              | 608 114              | 543 282              | 458 583              | 997 762              | (19.54)   | 4.67      |
| 6 805 526         | Total equity and liabilities | 7 259 937                   | 8 568 296            | 9 980 359            | 10 518 512           | 11 236 228           | 12 248 951           | 6.68      | 10.29     |
| 1                 |                              | 2                           | 0                    | 2                    | 0                    |                      |                      |           |           |

#### STATEMENT OF CASHFLOW

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| ACTUAL<br>2013/14 | ELEMENT  | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|--|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |  |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
|                   | <b>OPERATING ACTIVITIES</b>  |                             |                      |                      |                      |                      |                      |           |           |
| 682 429           | Net profit for period before changes                               | 645 347                     | 522 493              | 553 104              | 628 886              | 770 905              | 1 035 233            | (5.43)    | 7.19      |
| 280672            | Adjustments for non-cash items, interest and other                 | 231 981                     | 349 939              | 431 239              | 506 808              | 504 027              | 382 656              | (17.35)   | 5.30      |
| 114 261           | - Depreciation and amortisation                                    | 152 260                     | 180 810              | 192 801              | 205 445              | 218 162              | 228 831              | 33.26     | 12.27     |
| 183976            | - Impairments of PPE, intangibles and biological assets            | 103 552                     | 99 626               | 124 439              | 116 497              | 111 179              |                      | (43.71)   | (100.00)  |
| 74074             | - Retirement benefits provisions                                   |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| 2646              | - Profit (loss) on sale of fixed, intangible and biological assets |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| (122546)          | - Interest received - (deduct from profit)                         | -89 979                     | -60 101              | -44 762              | -44 748              | -48 169              | -65 606              | (26.58)   | (9.89)    |
| 45555             | - Interest paid - (add to profit)                                  | 66 148                      | 129 605              | 158 760              | 229 614              | 222 854              | 219 431              | 45.21     | 29.96     |
| (475)             | - Revaluations of assets   |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| (16818)           | - Impairment of trade receivables                                  |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
| (7199)            | Adjustments for:   | 7                           | -2                   | 2                    | -2                   |                      |                      |           |           |
|                   | - Discontinued operations  |                             |                      |                      |                      |                      |                      |           |           |
| (7199)            | - other non cashflow adjustments                                   | 7                           | -2                   | 2                    | -2                   |                      |                      |           |           |
| (94136)           | Working capital changes  | 147 031                     | -78 796              | -26 146              | -105 583             | -70 484              | -108 175             | (256.19)  | 2.34      |
| (426)             | - Inventories  | -444                        | -471                 | -498                 | -526                 | -557                 | -589                 | 4.26      | 5.55      |
| (143240)          | - Trade debtors  | 131 408                     | -17 626              | -30 569              | -39 282              | -34 408              | -44 793              | (191.74)  | (17.61)   |
|                   | - Sundry debtors   | 581                         | 29                   | 31                   | 33                   | 35                   | 37                   |           |           |
| 49530             | - Trade and other payables   | 15 486                      | -60 729              | 4 890                | -65 808              | -35 555              | -62 830              | (68.73)   | #NUM!     |
|                   | - Provisions   |                             |                      |                      |                      |                      |                      |           |           |
| 861767            | Net cash generated from operating activities                       | 1 024 366                   | 793 633              | 958 198              | 1 030 109            | 1 204 448            | 1 309 715            | 18.87     | 7.23      |



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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT   | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|---|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |   |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| (778880)          | <b>INVESTING ACTIVITIES - NET CASH UTILISED</b>         | -1 749 188                  | -1 854 289           | -1 911 884           | -658 029             | -1 023 849           | -809 262             | 124.58    | 0.64      |
| (767851)          | - Additions to property, plant and equipment            | -1 789 910                  | -1 854 289           | -1 911 884           | -658 029             | -1 023 849           | -809 262             | 133.11    | 0.88      |
| (11150)           | - Additions to intangible assets                        |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   | - Additions to biological assets                        |                             |                      |                      |                      |                      |                      |           |           |
| 121               | - Proceeds on disposal of fixed and intangible assets   |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   | - Proceeds on disposal of biological assets             |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Investments in subsidiaries and associates            |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Interest receivable movement                          | 40 722                      |                      |                      |                      |                      |                      |           |           |
|                   | - Movement in assets held for sale                      |                             |                      |                      |                      |                      |                      |           |           |
|                   | - Increase (decrease) in capital                        |                             |                      |                      |                      |                      |                      |           |           |
| (57805)           | <b>FINANCING ACTIVITIES - NET CASH UTILISED</b>         | <b>714 694</b>              | <b>1 051 801</b>     | <b>955 972</b>       | <b>-368 870</b>      | <b>-176 392</b>      | <b>-493 685</b>      | (1336.39) | 42.97     |
| 114648            | - Movement in long term borrowings                      | -78 436                     | 771 382              | 781 189              | -79 009              | -28 823              | -629 184             | (168.41)  | #NUM!     |
| (159349)          | - Movement in investments                               | 944 436                     | 321 756              | 265 524              | -119 295             | 55 315               | -341 843             | (692.68)  | 13.57     |
|                   | - Proceeds (repayment) short term borrowings            | 2 832                       | 29 682               | 23 726               | 976                  | -49 144              | 602 009              |           |           |
|                   | - Movement in loan receivables                          | -167 670                    | -1 322               | -4 268               | -1 276               | -880                 | 169                  |           |           |
| 108606            | - Interest received                                     | 89 979                      | 60 101               | 44 762               | 44 748               | 48 169               | 65 606               | (17.15)   | (8.06)    |
| (121710)          | - Interest paid   | -66 148                     | -129 605             | -158 760             | -229 614             | -222 854             | -219 431             | (45.65)   | 10.32     |
|                   | - Movement in retirement benefit obligations            | 38 208                      | 48 314               | 52 306               | 53 107               | 60 332               | 67 495               |           |           |
|                   | - Adjustment for non-cash interest                      | -48 507                     | -48 507              | -48 507              | -38 507              | -38 507              | -38 507              |           |           |
|                   | <b>CASH AND CASH EQUIVALENTS</b>                        |                             |                      |                      |                      |                      |                      |           |           |
| 25082             | - Net increase (decrease) in cash utilised for the year | -10 128                     | -8 855               | 2 286                | 3 210                | 4 206                | 6 768                | (140.38)  | (19.61)   |
| 7611              | - At beginning of year                                  | 32 693                      | 22 565               | 13 710               | 15 996               | 19 206               | 23 412               | 329.55    | 20.60     |
| <b>32 693</b>     | <b>- AT END OF YEAR</b>                                 | <b>22 565</b>               | <b>13 710</b>        | <b>15 996</b>        | <b>19 206</b>        | <b>23 412</b>        | <b>30 179</b>        | (30.98)   | (1.32)    |
| (0)               |   | 0                           | -0                   | -0                   | -0                   | -0                   | -0                   |           |           |
| 32693             | -end of year per balance sheet                          | 22 565                      | 13 710               | 15 996               | 19 206               | 23 412               | 30 179               |           |           |

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#### CAPITAL EXPENDITURE PROGRAM

| ACTUAL<br>2013/14 | CAPEX CATEGORY           | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|--------------------------|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |                          |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
|                   | <b>Immovable capex</b>   |                             |                      |                      |                      |                      |                      |           |           |
| 247853            | Augmentation and upgrade | 553 985                     | 977 311              | 1 089 791            | 457 610              | 552 584              | 646 369              | 123.51    | 17.32     |
| 83                | Expansion                | 4 933                       | 41 118               | 246 310              | 163 856              | 56 913               |                      | 5859.84   | (100.00)  |
| 42376             | Rehabilitation           | 208 567                     | 75 131               | 60 413               | 9 769                |                      |                      | 392.19    | (100.00)  |
| 448500            | Development projects     | 856 907                     | 618 665              | 481 736              |                      | 350 324              | 155 796              | 91.06     | (16.16)   |

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT   | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|---|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |   |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| 738811.6825       |   | 1 624 392                   | 1 712 225            | 1 878 250            | 631 235              | 959 822              | 802 166              | 119.87    | 1.38      |
|                   | <b>Movable capex</b>                              |                             |                      |                      |                      |                      |                      |           |           |
| 22013             | Equipment and vehicles                            | 2 855                       | 13 349               | 5 404                | 2 171                | 50 217               |                      | (87.03)   | (100.00)  |
| 7138              | Information technology communication              | 135 037                     | 122 591              | 17 054               | 21 122               | 3 348                | 2 833                | 1791.76   | (14.28)   |
| 8447              | Laboratory and process services                   | 27 626                      | 6 124                | 11 175               | 3 501                | 10 462               | 4 263                | 227.03    | (10.77)   |
| 37598.08844       |   | 165 518                     | 142 064              | 33 634               | 26 794               | 64 028               | 7 096                | 340.23    | (24.26)   |
|                   | <b>Summary</b>                                    |                             |                      |                      |                      |                      |                      |           |           |
| 738811.6825       | Immovable capex                                   | 1 624 392                   | 1 712 225            | 1 878 250            | 631 235              | 959 822              | 802 166              | 119.87    | 1.38      |
| 37598.08844       | Movable capex                                     | 165 518                     | 142 064              | 33 634               | 26 794               | 64 028               | 7 096                | 340.23    | (24.26)   |
| 776409.771        |   | 1 789 910                   | 1 854 289            | 1 911 884            | 658 029              | 1 023 849            | 809 262              | 130.54    | 0.69      |
|                   | % of total  | 22.2%                       | 23.0%                | 23.8%                | 8.2%                 | 12.7%                | 10.1%                |           |           |
|                   | Total forecast period - 2014 to 2019              | 8 047 223                   | 45.3%                | 46.8%                | 31.9%                | 20.9%                | 22.8%                |           |           |
|                   | <b>Reconciliation</b>                             |                             |                      |                      |                      |                      |                      |           |           |
| 776409.771        | Capex above                                       | 1 789 910                   | 1 854 289            | 1 911 884            | 658 029              | 1 023 849            | 809 262              | 130.54    | 0.69      |
| -767 851          | Capitalised fixed assets - per fixed assets entry | -1 789 910                  | -1 854 289           | -1 911 884           | -658 029             | -1 023 849           | -809 262             | 133.11    | 0.88      |
| -11 150           | Capitalised intangibles - per intangibles entry   |                             |                      |                      |                      |                      |                      | (100.00)  | (100.00)  |
|                   | Written off to expenses                           |                             |                      |                      |                      |                      |                      |           |           |
| -2591.22905       | Difference  |                             |                      |                      |                      | 0                    | 0                    | (100.00)  | #NUM!     |
|                   | Cumulative difference                             |                             |                      |                      |                      | 0                    | 0                    |           |           |

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#### FINANCIAL RATIOS

| ACTUAL<br>2013/14 | CATEGORY  | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|---|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |   |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
|                   | <b>Performance indicators</b>                     |                             |                      |                      |                      |                      |                      |           |           |
| 0.101             | - Cost of raw water / primary revenue             | 0.076                       | 0.073                | 0.081                | 0.082                | 0.082                | 0.080                | (25.14)   | (3.75)    |
| 0.553             | - Cost of sales / total revenue                   | 0.485                       | 0.476                | 0.490                | 0.477                | 0.469                | 0.433                | (12.27)   | (3.99)    |
| 0.187             | - General expenses / total revenue                | 0.252                       | 0.280                | 0.261                | 0.250                | 0.242                | 0.235                | 34.61     | 3.89      |
| 811.351           | - Employees costs / per megalitre                 | 908.360                     | 1020.406             | 1084.042             | 1138.537             | 1210.422             | 1296.284             | 11.96     | 8.12      |
| 0.219             | - Employee costs / total costs excl finance costs | 0.247                       | 0.259                | 0.256                | 0.256                | 0.256                | 0.268                | 12.58     | 3.44      |

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

| ACTUAL<br>2013/14 | ACCOUNT   | ESTIMATED ACTUAL<br>2014/15 | PROJECTED<br>2015/16 | PROJECTED<br>2016/17 | PROJECTED<br>2017/18 | PROJECTED<br>2018/19 | PROJECTED<br>2019/20 | Growth %  |           |
|-------------------|---|-----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------|-----------|
|                   |   |                             |                      |                      |                      |                      |                      | 2015/2014 | 2020/2014 |
| 695               | - Operating profit (loss) per employee                              | 614                         | 565                  | 624                  | 760                  | 883                  | 1110                 | (11.73)   | 8.12      |
| 871               | - Total staff complement  | 1013                        | 1048                 | 1069                 | 1071                 | 1071                 | 1071                 | 16.30     | 3.51      |
| 241               | - Management  | 304                         | 314                  | 321                  | 321                  | 321                  | 321                  | 26.10     | 4.91      |
| 630               | - Other   | 709                         | 734                  | 748                  | 750                  | 750                  | 750                  | 12.56     | 2.94      |
|                   | <b>Operating risks</b>  |                             |                      |                      |                      |                      |                      |           |           |
| 61.4              | - Debtors days (trade debtors excl VAT/ revenue x 365 days)         | 41.5                        | 41.4                 | 41.1                 | 41.2                 | 40.7                 | 41.1                 | (32.45)   | (6.46)    |
| 13.3%             | - Return on assets (EBIT / total assets excluding investments)      | 10.4%                       | 7.8%                 | 7.2%                 | 8.4%                 | 9.0%                 | 10.7%                | (21.42)   | (3.55)    |
|                   | <b>Financial risks</b>  |                             |                      |                      |                      |                      |                      |           |           |
| 3.550             | - Current ratio (current assets / current liabilities)              | 2.577                       | 2.048                | 1.437                | 1.745                | 1.821                | 1.650                | (27.43)   | (11.99)   |
| 0.289             | - Gross debt / equity ratio (total debt liabilities / total equity) | 0.237                       | 0.359                | 0.458                | 0.403                | 0.352                | 0.306                | (17.91)   | 0.95      |
| 0.188             | - Debt / assets ratio (total debt / total assets)                   | 0.166                       | 0.234                | 0.281                | 0.260                | 0.236                | 0.214                | (11.81)   | 2.23      |
|                   | <b>Business credit risk</b>   |                             |                      |                      |                      |                      |                      |           |           |
| 13.290            | - interest cover (EBIT / interest paid)                             | 9.396                       | 4.568                | 4.202                | 3.544                | 4.243                | 5.419                | (29.30)   | (13.89)   |
|                   | <b>Surplus ratios</b>   |                             |                      |                      |                      |                      |                      |           |           |
| 0.36              | - Return on turnover (net profit / turnover )                       | 0.29                        | 0.22                 | 0.21                 | 0.21                 | 0.24                 | 0.29                 | (21.15)   | (3.70)    |