



**'Improving Quality of Life and Enhancing  
Sustainable Economic Development'**

# **Umgeni Water Five-Year Business Plan 2014/15 to 2018/19**

Version: 29 May 2014



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## Strategic Highlights by the Chairperson of the Board

Umgeni Water's strategy and plans are inextricably linked to ministerial priorities (Water and Sanitation, effective May 2014). These are further aligned to the strategic priorities and outcomes of government which are aimed at reducing the triple-challenge of poverty, unemployment and inequality that still impact a large number of people in the country.

A significant development for Umgeni Water leading up to this year's Strategy and Business Plan is the finalisation of the Institutional Realignment initiative. The ministry has consolidated the 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 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.

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. The RWU will provide support functions to municipalities as a secondary activity.

The gazetting of new boundaries is expected to follow Umgeni Water's submission of the due diligence report which was submitted to the Ministry at the end of March 2014. The primary function of the Regional Water Utilities (RWUs) will be to plan, construct, operate and maintain Regional Bulk Infrastructure.

The proposed new Umgeni Water 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. The area spans 70 701 km<sup>2</sup> with 9 million people (2.28 million households) and is a 39% increase in households from the previous area of 21 155 km<sup>2</sup> with 6 million people (1.64 million households). The area covers twelve (12) water service authority areas (6 customers in previous area), which is a 50% increase in primary customers that now encompasses: 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.

Umgeni Water's response to this development has been to align its strategy and plans to these mandate changes.

Umgeni Water has completed its due diligence exercise and in the next twelve (12) months, is expected to formalise the business plan for provision of sustainable water services (bulk potable and bulk wastewater) to the new customer areas.

The Board of Umgeni Water will continue to give the necessary strategic guidance to the Executive Management. This will help the organisation to successfully implement its regional growth and expansion plans in order to fulfil its service delivery mandate and remain responsive to all customers and stakeholders.

Mr Andile Mahlalutye  
**Chairman of the Board**

31 May 2014

## Foreword by the Chief Executive

The finalisation of the Institutional Realignment initiative by the ministry has translated into proposed expansion of the area of operation of Umgeni Water. Supported by the strategic guidance of the Board, the organisation has internalised this development and accordingly aligned its strategic goals, objectives, initiatives and plans to these mandate changes.

The current business plan continues to respond to the organisation's strategies through targeting the resources, planned activities and outputs to progressively realise the ten organisational outcomes.

Umgeni Water will develop more formal service delivery plans that will be implemented in support of twelve (12) primary customer areas. Due to the landscape of new customer areas, mostly scattered small towns and sparsely populated rural areas, a phased approach will be adopted to the provision of sustainable regional bulk services.

Further regional service conceptualisation and planning will be co-created with customers over the next 12-month period in order to ensure mutual and sustainable value creation. New customers may lack understanding of value Umgeni Water provides and deem Umgeni Water to be costly as history has shown. Negative perceptions will be managed through leveraging value created through existing customer partnerships. A comprehensive structured communication plan will be developed and implemented to build all relationships, straddling KwaZulu-Natal and Eastern Cape customers and stakeholders, together with a targeted branding initiative that ensures communication is visible in the expanded regional water utility area.

Umgeni Water will ensure it continues to respond to customer needs by treating water to levels suitable for lifetime consumption and wastewater that does not impact on the environment and downstream communities. Potable water and wastewater compliance will continue to improve and the numbers of Blue and Green Drop certifications continue to increase over this business plan period. Furthermore, sound operations and asset management will be maintained to ensure consistency of supply.

Contribution to community sustainability will be expanded through leveraging the organisation's capital expansion programme. Umgeni Water will continue to ensure there is meaningful contractor participation, development of water sector graduates in engineering and water and wastewater process, planning and implementation of water education and awareness initiatives, CSI initiatives and job creation initiatives, executed collaboratively with KwaZulu-Natal and Eastern Cape stakeholders.

Umgeni Water will pursue sustainable growth in each region. This will be complemented by regional integrated water resources planning and implementation that sustainably address the constraints identified for each supply system/scheme. The total infrastructure capital investment over this business plan period is R6.5 billion, of which R3.3 billion (51%) 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. Key to sustainable implementation is expansion of funding collaborations and co-funding initiatives, without which, services to the largely indigent population in the expanded area will not be affordable.

Internal system constraints and blockages that could hamper project implementation for an expanded area will be reviewed and addressed. Forward-thinking strategies and internal policy options will be developed to streamline and improve turnaround that delivers timely infrastructure and service delivery. This will also include technology and process innovations that improve energy, water, chemicals and other materials usage to ensure better efficiencies.

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 expanded mandate from DWA provides the impetus for Umgeni Water to become a sustainable regional leader in its area of operation. This business plan conveys a plan for sound current operations whilst introducing initiatives for regional water utility preparedness.

Mr Cyril Vuyani Gamede  
**Chief Executive**

31 May 2014

# 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 Affairs, 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.

## 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 435 million cubic metres of potable water per annum (1 191 MI/d) are supplied to these customers.

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

- Approximately 746 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 Affairs and two (2) on behalf of the Ugu District Municipality,
- Thirteen (13) 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 are managed on behalf of the iLembe District Municipality.

The organisation also treats bulk wastewater totalling 31.8 million cubic metres per annum (87 MI/d) and in support of this operates five (5) wastewater treatment works.

## 1.4 Expanded Supply Area and Customers

The water board consolidation strategy as an outcome of the DWA realignment project has translated into 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 Umgeni Regional Water Utility (URWU) will be to plan, construct, operate and maintain Regional Bulk Infrastructure. The URWU will take on more responsibility for regional water resources infrastructure to achieve greater integration with bulk systems. In addition, the URWU 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:

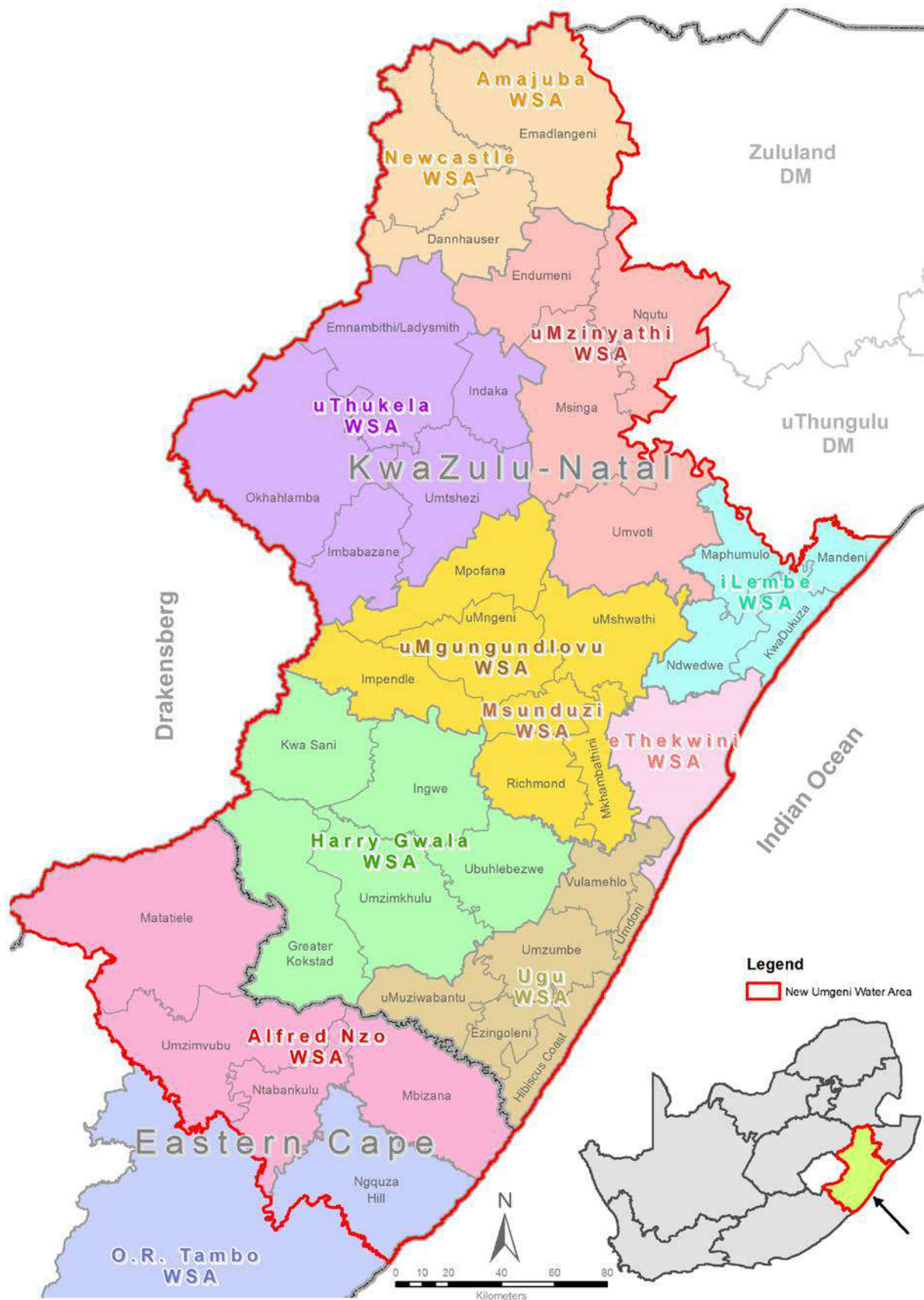
*Primary customers:*

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 has finalised its due diligence exercise and in the coming period will develop and implement plans for provision of sustainable regional water services to the new customer areas, the formal details of which will be included in the next business plan submission.

Figure 1: Proposed Regional Water Utility Area.





## 2 Strategy

### 2.1 Operating Environment and Alignment to DWA Priorities

It is essential to note that Umgeni Water's strategy and plans are tethered to and aligned with DWA priorities, which are further anchored to the strategic priorities and outcomes of government. These are aimed at reducing the compounded challenge of poverty, unemployment and inequality that still face a large number of the country's citizens.

In respect of DWA thrusts, key policy positions were developed and approved by the national cabinet in 2013, thereby enabling legislative amendments for developing an integrated National Water Act that would accelerate and enhance water equity and transformation for the country to be made. The key policy positions notably include the establishment of regional water utilities.

DWA has completed its realignment project and is moving rapidly forward with the formation of Regional Water Utilities. As an outcome of the realignment project the ministry has consolidated water boards in South Africa from twelve (12) to nine (9) Regional Water Utilities (RWU) to better address challenges of water supply in the country.

DWA's RWU implementation programme, as per its 2014/2015 Annual Performance Plan, specifically includes:

- Gazetting new boundaries in Q1 of 2014/2015 for two Water Boards;
- Establishing two 'proto' Regional Water Utilities by Q4 of 2014/2015; and
- Establishing two regional water utilities by 2015/2016 and a further three by 2016/2017.

Regarding boundaries, the water board consolidation strategy has translated into expansion of areas of operation, which for Umgeni Water includes:

- 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 Regional Water Utility 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.

In support of DWA goals and strategic objectives, DWA has indicated performance objectives for Water Boards in keeping with Water Board's mandates.

Umgeni Water's response has been to internalise these dictates and accordingly align its strategic goals, objectives, initiatives and plans to these mandate changes.

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

Opportunities / Enablers	Strengths / Enablers
<ol style="list-style-type: none"> <li>1. <b>Regional Water Utility</b> <i>Plan, construct, operate and maintain regional bulk infrastructure.</i></li> <li>2. <b>Facilitate Integrated Planning</b> <i>Facilitate planning and design with full water value-chain view (source-tap-source)</i></li> <li>3. <b>Provide Increased Support To Municipalities</b> <i>MWIG and Other Programmes</i></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Bulk Water and Wastewater Treatment Competencies</b> <i>Distinctive competencies in bulk water and wastewater treatment</i></li> <li>2. <b>Brand Value</b> <i>Strong Umgeni Water brand</i></li> <li>3. <b>Customer and Stakeholder Relationship</b> <i>Strong relationships with customers and stakeholders</i></li> <li>4. <b>Resource Mobilisation</b> <i>Experienced and committed people</i></li> <li>5. <b>Water Infrastructure Assets</b> <i>Sound infrastructure assets and balance sheet</i></li> </ol>
Threats / Constraints	Weaknesses / Constraints
<ol style="list-style-type: none"> <li>1. <b>Indigent consumer base and customer debt</b> <i>Customer ability to manage debt and sustain bulk purchases. High non-revenue water.</i></li> <li>2. <b>High capital requirement, slow customer off-take readiness and low densities.</b> <i>Require bulk infrastructure capital injection to offset low densities, off-take volumes and poor state of bulk infrastructure in expanded area.</i></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Wastewater Business Model</b> <i>Strengthen wastewater business model</i></li> <li>2. <b>EPCM Process for expanded Area</b> <i>Rapid yet cost-effective scalability of project office and procurement systems</i></li> <li>3. <b>Human Resources</b> <i>Capacity, Skills and Structure to support expansion strategy</i></li> <li>4. <b>Funding, Financing, Costs And Tariff</b> <i>Increasing costs, project funding models.</i></li> </ol>

## 2.2 Umgeni Water Vision, Mission, Strategic and Benevolent Intentions and Core Values

### Vision

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

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

### Mission

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

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

### Strategic Intent

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

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

### Benevolent Intent

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

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

## Values

### Customer focus

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

### Integrity

---

We commit ourselves to the highest ethical conduct.

### Developmental approach

---

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

### People-centred

---

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

### Environmentally sustainable

---

We are committed to protecting our diminishing natural resources.

### Innovation and Excellence

---

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

## 2.3 Umgeni Water Strategic Perspectives, Goals, Objectives and Outcomes

Umgeni Water has a balanced set of four strategic perspectives and goals elaborated through nine strategy objectives and ten outcomes. The organisation adopts a balanced scorecard approach to strategy. The strategy is eloquently mapped in section 2.4 and the detailed balanced scorecard is contained in the final chapter of this business plan.

### Customer and Stakeholder Perspective

**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 Objective 1:** Increase services and customers

**Strategic Objective 2:** Increase customer and stakeholder value

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

### Financial Perspective

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

**Strategic Objective 3:** Increase mobilisation of funds

**Strategic Objective 4:** Increase financial sustainability

**Strategic Objective 5:** Improve financial ratios

**Key outcome:** Financial Viability, Stakeholder Understanding and Support, Customer Satisfaction, Community Sustainability

### Process Perspective

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

**Strategic Objective 6:** Improve service delivery systems

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

### Organisational Capacity Perspective

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

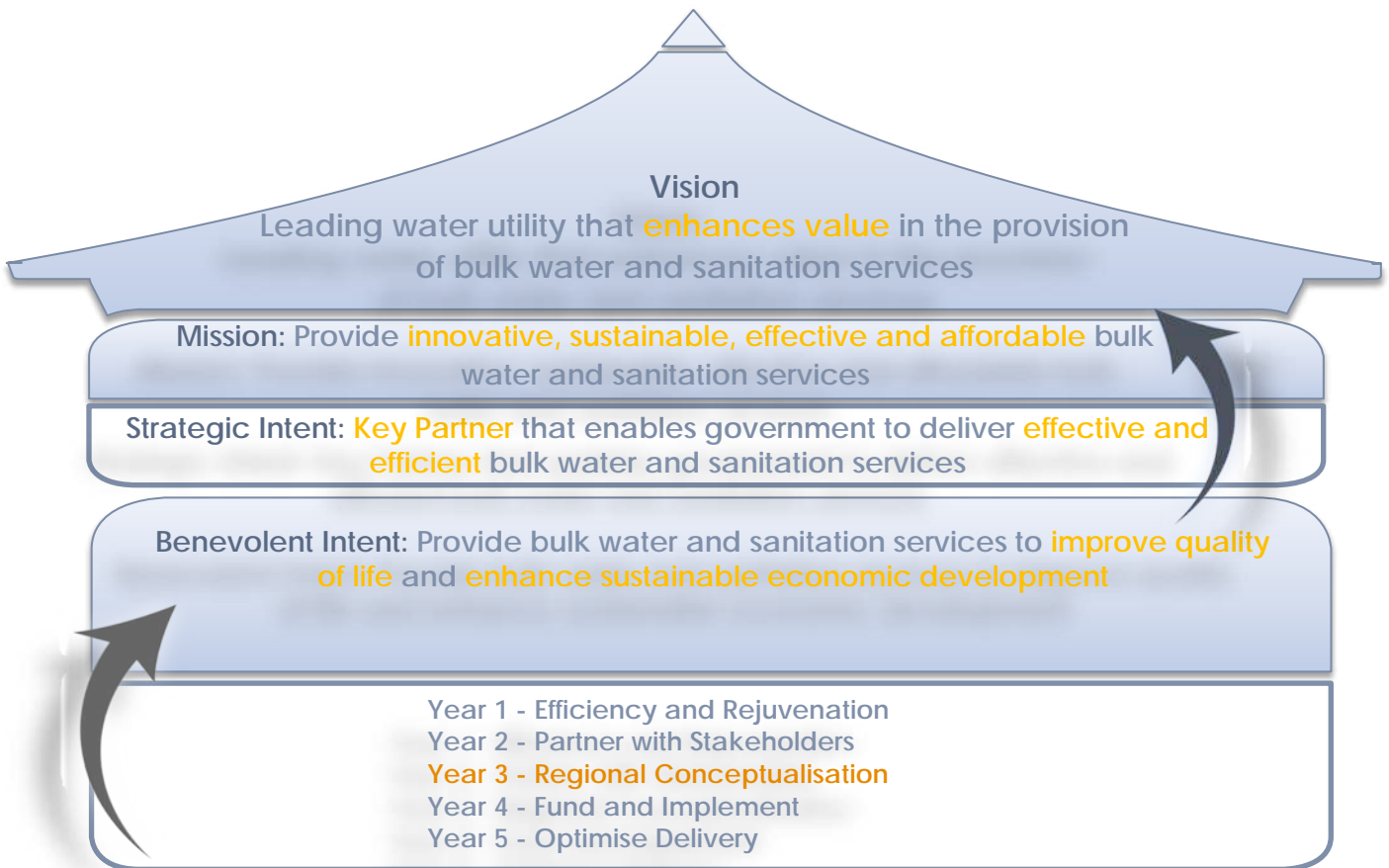
**Strategic Objective 7:** Improve and increase infrastructure assets

**Strategic Objective 8:** Increase water resources sustainability

**Strategic Objective 9:** Increase skills and competency

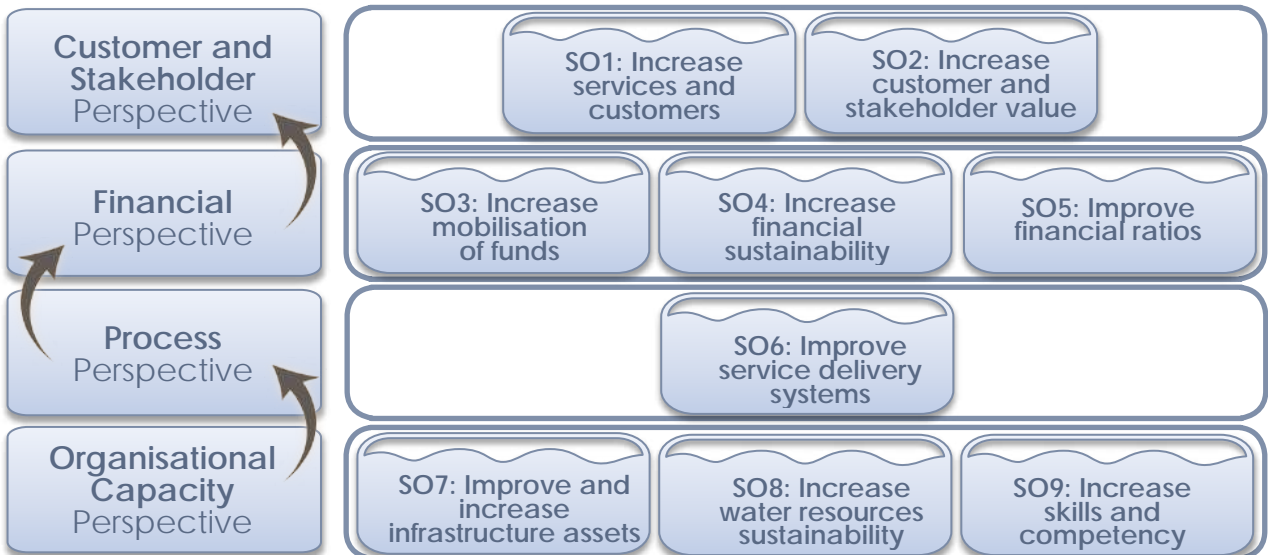
**Key outcomes:** Infrastructure Stability, Water Resources Adequacy, Leadership and Employee Development.

## 2.4 Strategy Map



### 4 Balanced Perspectives

### 9 Strategic Objectives



## 2.5 Umgeni Water Outcomes

### Outcomes relating to Customer and Stakeholder Objectives

- **Customer Satisfaction:** achieved when Umgeni Water provides reliable, responsive, and affordable services in line with explicit, customer-agreed service levels and receives timely customer feedback to maintain responsiveness to customer needs and emergencies.
- **Product Quality (Water and Wastewater):** achieved when Umgeni Water produces potable water and wastewater in full compliance with statutory and reliability requirements and consistent with customer and environmental needs.
- **Stakeholder Understanding and Support:** is attained when Umgeni Water engenders understanding and support from statutory, contracted and non-contracted bodies for service levels, tariff structures, operating budgets, capital improvement programmes, risk management decisions, and water resources adequacy.
- **Community and Environmental Sustainability:** achieved when Umgeni Water is explicitly cognisant of and attentive to the impacts it has on current and future community sustainability, supports socio-economic development, and manages its operations, infrastructure, and investments to protect, restore, and enhance the natural environment, whilst using energy and other natural resources efficiently.

### Outcomes relating to Financial Objectives

- **Financial Viability:** achieved when Umgeni Water understands the organisational life-cycle costs and maintains a balance between debt and assets while managing operating expenditures and increasing revenues. In addition, the organisation aims at a sustainable tariff that is consistent with customer expectations, recovers costs and provides for future expansion.
- Customer Satisfaction: As above.
- Stakeholder Understanding and Support: As above.
- Community and Environmental Sustainability: As above.

### Outcomes relating to Process Objectives

- **Operational Optimisation:** achieved when Umgeni Water has on-going, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations, minimises resource use, loss, and impacts from day-to-day operations and maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.
- **Operational Resiliency:** achieved when Umgeni Water's leadership and staff work together to anticipate and avoid problems and proactively identify, assess, and establish tolerance levels for, and proactively and effectively manages a full range of business risks, consistent with industry trends and system reliability goals.
- Community and Environmental Sustainability: As above.

### Outcomes relating to Organisational Capacity Objectives

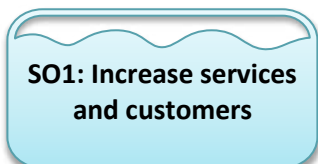
- **Infrastructure Stability:** achieved when Umgeni Water's understands the condition and costs associated with critical infrastructure assets and maintains and enhances the condition of all assets over the long-term. This is done at the lowest possible life-cycle cost and acceptable risk levels, is consistent with customer service and statutory-supported service levels, and consistent with anticipated growth and system reliability goals. The organisation further assures that asset repair, rehabilitation, and replacement efforts are coordinated to minimise disruptions and other negative consequences.
- **Water Resources Adequacy:** is achieved when Umgeni Water assesses the scarcity of freshwater resources, investigates sustainable alternatives, manages water abstractions assiduously and has access to stable raw water resources to meet current and future customer needs.
- **Leadership and Employee Development:** is achieved when Umgeni Water is a participatory, collaborative organisation dedicated to continual learning and improvement, recruits and retains a workforce that is competent, motivated, and adaptive and works safely, ensures institutional knowledge is retained and improved; provides opportunities for professional and leadership development, and creates an integrated and well-coordinated senior leadership team.

## 2.6 Umgeni Water Strategic Initiatives and Plans

Refer to Chapter 29 for Umgeni Water’s detailed Five-Year Scorecard.

### Customer and Stakeholder Perspective

**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.



**Umgeni Water KPI 1:** The extent to which UW has grown its services and customers.

*Initiatives/Plans*

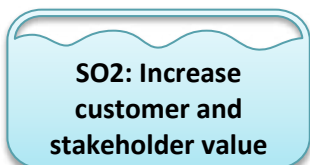
- Progressively develop RWU water service delivery plan.
- Increase value to customers and progressively grow bulk water services.

**Outcomes**

- Stakeholder Understanding and Support.
- Customer Satisfaction
- Community Sustainability

Links to DWA mandate for Water Boards

- Sustainable regional leader.
- Integrated Planning.
- Support water sector
- Regional bulk services
- Increase support and implement projects on behalf of WSAs



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

*Initiatives/Plans*

- Develop and implement branding initiatives to increase regional visibility.
- Develop and implement a comprehensive structured communication plan.
- Conclude bulk supply agreements with customers.
- Develop and submit all statutory accountability documents.
- Improve potable and wastewater compliance.
- Improve operations and asset management to eliminate unplanned supply disruptions.
- Develop and train water sector professionals for municipalities.
- Plan and implement collaborative water education initiatives.
- Plan and implement CSR initiatives
- Increase BBBEE spend and contractor participation.
- Create jobs.

**Outcomes**

- Product Quality
- Customer Satisfaction
- Stakeholder Understanding and Support
- Community Sustainability

Links to DWA mandate for Water Boards

- Sustainable regional leader.
- Customer support.
- Value for stakeholders.
- Regional cooperation
- Effective water services performance.
- Water quality compliance and supply reliability
- Communication and marketing.
- Water industry skills pool and competencies
- Integrated education and awareness.
- Corporate social responsibility.
- BBBEE.
- Job creation.



## 2.6.1 Financial Perspective

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

### SO3: Increase mobilisation of funds

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

#### Initiatives/Plans

- Identify all funding and revenue sources for water and develop and implement co-funding initiatives.
- Improve wastewater business model.
- Develop long-term cost and revenue growth plan for growth strategy.
- Balance debt and assets for long-term organisational sustainability.

#### Outcome

Financial Viability

Customer Satisfaction

Stakeholder Understanding and Support

Community Sustainability

Links to DWA mandate for Water Boards

- Sustainable regional leader.
- Increased access to services.
- Financial viability and sustainable debt

### SO4: Increase financial sustainability

**Umgeni Water KPI 4:** The extent to which there are sustainable financial returns for each system, area, region and the organisation.

#### Initiatives/Plans

- Ensure sustainable operations.
- Collect target revenue.
- Manage expenses.
- Manage debtors' days.
- Reduce irregular expenditure.

#### Outcome

Financial Viability

Stakeholder Understanding and Support

Links to DWA mandate for Water Boards

- Manage revenue and costs.
- Improve financial performance.
- Good Governance

### SO5: Improve financial ratios

**Umgeni Water KPI 5:** Ratios for financial viability and sustainability met

#### Initiatives/Plans

- Manage financial performance

#### Outcome

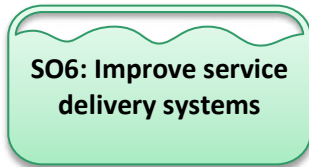
Financial Viability

Links to DWA mandate for Water Boards

- Improve financial performance

### 2.6.2 Process Perspective

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



#### Outcomes

Operational Resiliency

Operational Optimisation

Environmental Sustainability.

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

#### Initiatives/Plans

- Benchmark procurement system for engineering and construction and improve turnaround time.
- Review and implement an effective EPCM process.
- Develop and implement sustainable environmental resource plans.
- Review and implement effective ERP system.
- Monitor and review internal controls and risk system.
- Monitor and improve systems for laws, regulations and governance.
- Monitor and improve DIFR.
- Develop water utility benchmarking system.

#### Links to DWA mandate for Water Boards

- Effective performance
- Effective and efficient internal control environment.
- Ensure compliance to legislation.
- Good governance
- Unqualified audit.
- Improve water services information.

### 2.6.3 Organisational Capacity Perspective

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

**SO7: Improve and increase infrastructure assets**

**Umgeni Water KPI 7:** Infrastructure expenditure within target cash flows and completion dates.

*Initiatives/Plans*

- Develop and implement a mix of short, medium and long term infrastructure assets for water supply, wastewater treatment, for rural access and for regional services.

**Outcome**

**Infrastructure Stability**

Links to DWA mandate for Water Boards

- Capital infrastructure development and implementation.
- Capital infrastructure for rural access and socio-economic use.
- Asset management.

**SO8: Increase water resources sustainability assets**

**Umgeni Water KPI 8:** Sustainable water resource options identified for all systems.

*Initiatives/Plans*

- Develop and implement integrated water resources plans for each supply system and region.
- Manage water loss / unaccounted for water per system.

**Outcome**

**Water Resources Adequacy**

Links to DWA mandate for Water Boards

- Sustainable use of raw water.
- Integrated planning
- Equitable use / rural access .
- Water supply.
- Wastewater management.
- Water resources protection.
- Asset management.
- Water use efficiency / water conservation
- Non Revenue water / loss management

**SO9: Increase skills and competency**

**Umgeni Water KPI 9:** Effectiveness and efficiency of employee training and development programmes.

*Initiatives/Plans*

- Review organisational structure to support expanded functions and mandate and growth.
- Build leadership, management and functional competence.
- Develop technical skills for the organisation.
- Manage staff / skills retention.

**Outcome**

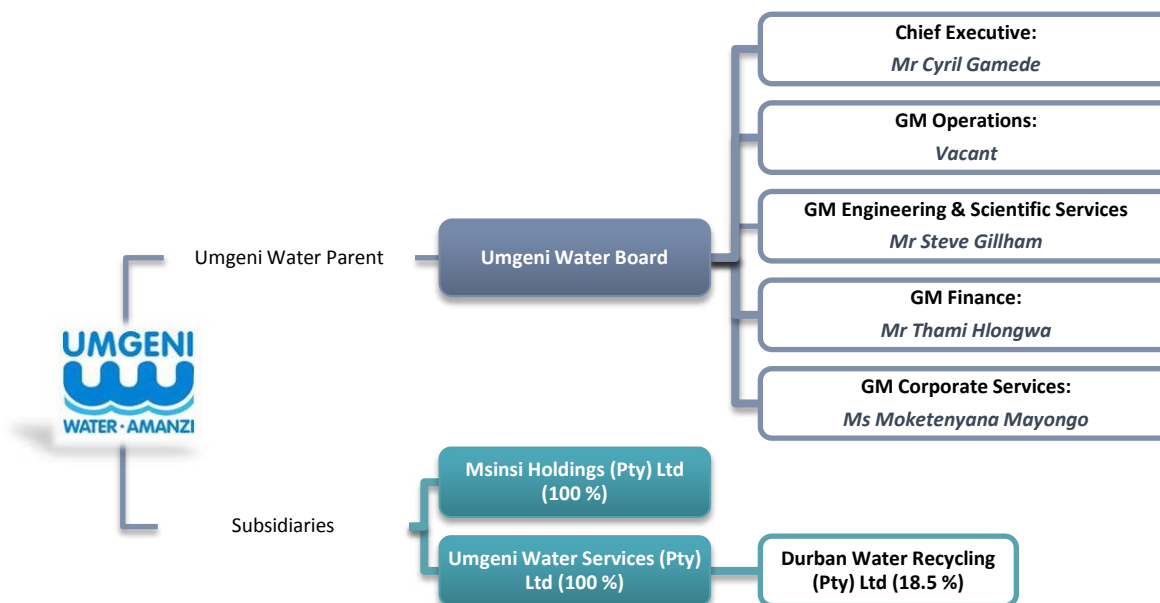
**Leadership and Employee Development**

Links to DWA mandate for Water Boards

- Human resources and skills.
- Training and development.
- Skills retention

## 2.7 Strategic Statements, Functions and Structure

Umgeni Water has the following structure that responds to its strategy. The core functions pertaining to each is articulated in the strategic statements that follow. Umgeni Water will continue to ensure a structure 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, manage risk, 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 financial 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.*

## **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 has finalised its due diligence exercise and identified preliminary water resource schemes for provision of sustainable water services to the new customer areas. This will be developed further over this business plan period to include the following phased approach to water services:

- Alleviating the immediate potable water need through implementing stand-alone bulk schemes;
- Integrating existing stand-alone schemes into sub-regional schemes; and
- Integrating all of the latter into sustainable regional schemes; as well as
- Delivering bulk wastewater services.

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 relationship with the six new WSA customers through open and honest interactions.

Over this period Umgeni Water will complete its 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 be undertaken 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 bulk 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 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 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 Stakeholder Communication Plan

### 4.1 Introduction

In the course of execution of its primary and secondary functions, Umgeni Water interacts with a wide array of stakeholders who are impacted on or have an interest in the business activities of the organisation. These stakeholders have been categorised into three 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 Affairs, the relevant Portfolio Committee, National Treasury and the three tiers of Government, with whom Umgeni Water, as a State-owned entity, is required to interact on a regular basis in order to ensure that statutory requirements are met and there is alignment with Government's objectives.

**Strategic Stakeholders:** Provincial Stakeholders to whom Umgeni Water provides information relating to organisational performance, capital infrastructure plans and assistance and expertise to assist vulnerable water boards and municipalities. These stakeholders include the Office of the Premier, Department of Co-operative Governance and Traditional Affairs and Provincial Planning Commission.

**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.

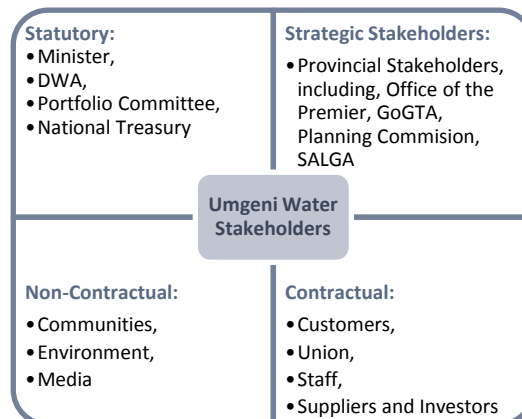
**Non-Contracted Stakeholders:** Stakeholders to whom Umgeni Water demonstrates its value as a socially responsible, efficient and high performing entity. These stakeholders include the media, community-based organisations, environmental groups, academia and civil society in general.

The objectives of Umgeni Water's Stakeholder Communication 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, and
- Facilitate effective collaboration and knowledge sharing between Umgeni Water and its stakeholders.

Umgeni Water has embarked on a growth and expansion plan which will be accompanied by intensification of engagements with stakeholders. 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,
- Stakeholder satisfaction surveys, and Internal Climate Surveys.





## 4.2 Stakeholder Value Proposition and Communication Plan

### 4.2.1 Minister of Water and Sanitation, Department of Water Affairs, Portfolio Committee & 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 communication plan indicated below.

#### Communication Plan 2014/15 to 2018/19 includes:

- Communication 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 and Business Plan, including the Strategy Plan in May, and Shareholder Compact in May-June.
- Communication and appraisal of Business Plan, including the Strategy Plan and signing of Shareholder Compact by DWA during September-October.
- Relevant Portfolio Committee communication and appraisal of annual performance and tariff in April-May, the latter motivated by strategy plan.

#### 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*

### 4.2.2 Provincial Planning Commission, SALGA, CoGTA and other Provincial Departments.

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.

#### Communication Plan 2014/15 to 2018/19 includes:

- Provision of all key inputs, presentations and reports aligned to the Provincial Government's cycle, including inputs into the Provincial 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,
  - Impact of the bulk tariff,
  - Water assurance plans for the Province, plans to meet future water demands and sharing Umgeni Water's growth and expansion plans.

#### Umgeni Water Value Proposition Statement to Province

*A high performing and sound partner in water services delivery, providing affordable services and contributing to regional economic growth and development.*

### 4.2.3 Customers

- |                     |                                 |
|---------------------|---------------------------------|
| 1. eThekweni MM     | 7. uThukela DM                  |
| 2. iLembe DM        | 8. Amajuba DM                   |
| 3. Ugu DM           | 9. Newcastle LM                 |
| 4. Harry Gwala DM   | 10. Umzinyathi DM               |
| 5. uMgungundlovu DM | 11. Alfred Nzo DM               |
| 6. Msunduzi LM      | 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.

**Umgeni Water Value Proposition Statement to Customers**

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

**Communication Plan for customers 2014/15 to 2018/19 includes:**

- 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,

**Table 4.1:** Targeted customer engagements specifically for the joint launching of key water and related projects

Customer	Target Event
Ugu District Municipality	Commissioning of Mhlabatshane Bulk Water Supply Scheme
iLembe District Municipality:	Launch of construction of Lower Thukela Bulk Water Supply Scheme Commissioning of Imvutshane Dam, as Phase 2 of the Maphumulo BWSS
uMgungundlovu District Municipality:	Completion of construction of Greater Eston Bulk Supply Scheme and Richmond Pipeline.
Alfred Nzo District Municipality and Mbizana Local Municipality:	Commissioning of the Ludeke Dam and Nomlacu WTP.
ALL	Workshop with customers communicating assistance and capacity for attaining and maintaining customer Blue Drop certifications.
Msunduzi Local Municipality	Upgrade of Darvill Wastewater Works
eThekweni Metro and iLembe District Municipality	Upgrade of Hazelmere Waterworks

### 4.2.4 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.

**Umgeni Water Value Proposition Statement to Unions and Staff**

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

**Communication Plan 2014/15 to 2018/19 includes:**

- 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.

**4.2.5 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.

**Communication Plan 2014/15 to 2018/19 includes:**

- Bi-annual engagements at Umgeni Water Supplier Forums.
- Advertising features on Umgeni Water's Five-Year Capex and implementation programme.
- Participation in and engagement at trade exhibitions aimed at the SMME sector.

**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.*

**4.2.6 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.

**Communication Plan 2014/15 to 2018/19 includes:**

- 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.*

**4.2.7 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.

**Communication Plan 2014/15 to 2018/19 includes:**

- Participation in Chamber of Business forums to identify and align to

**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*

- 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

### 4.2.8 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.

#### Communication Plan 2014/15 to 2018/19 includes:

- 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,
- 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.*

### 4.2.9 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.

#### Communication Plan 2014/15 to 2018/19 includes:

- 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

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 and one non-executive director), 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 three standing committees to assist it in discharging its responsibilities, namely:

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

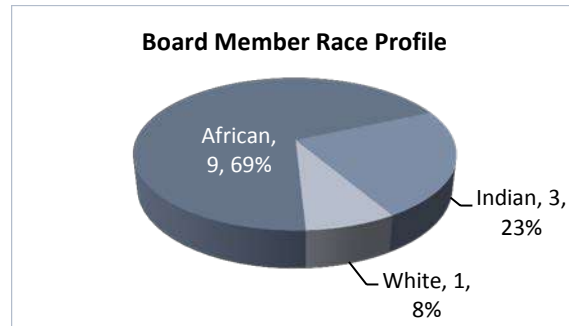
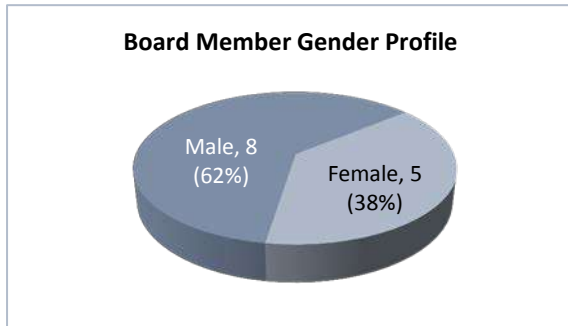
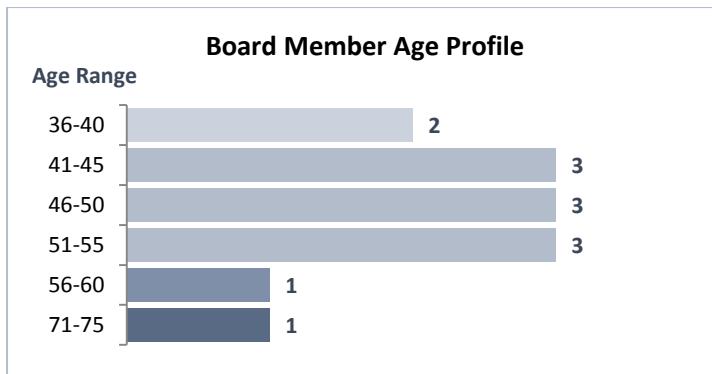
A Board Charter (reviewed in 2012) provides a framework for fiduciary duties, responsibilities and overall functioning of the Board. The Board Charter, is read in conjunction with the Public Finance Management Act (Act 1 of 1999), as amended together with Treasury Regulations (GG 27338) and as amended 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 2014/2015

Normal Board / Committee Meetings	2014				2015								Total
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
<b>Board Meetings</b>	Wed 30 <sup>th</sup>		Wed 17 <sup>th</sup>		Wed 26 <sup>th</sup>				Wed 11 <sup>th</sup>	Wed 22 <sup>nd</sup>			5
<b>Board Strategy Review</b>								Wed 4 <sup>th</sup>					1
<b>HR and Remuneration</b>		Wed 13 <sup>th</sup>		Wed 29 <sup>th</sup>				Wed 18 <sup>th</sup>			Wed 13 <sup>th</sup>	Wed 10 <sup>th</sup>	5
<b>Capex, Fixed Assets, SCM</b>		Wed 14 <sup>th</sup>		Wed 23 <sup>rd</sup>				Wed 11 <sup>th</sup>	Wed 18 <sup>th</sup>			Wed 17 <sup>th</sup>	5
<b>Audit</b>			Wed 3 <sup>rd</sup>		Wed 5 <sup>th</sup>			Wed 25 <sup>th</sup>	Wed 25 <sup>th</sup>		Wed 27 <sup>th</sup>	Wed 24 <sup>th</sup>	6

## Summary of Meetings and Attendance

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

- 83.3% for Board: Three normal meetings.
- 71.4% for Audit Committee: Two normal meetings.
- 78.6% for HR and Remuneration Committee: Two normal meetings.
- 90% 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	24-Jul-13	30-Sep-13	27-Nov-13	10-Mar-14	16-Apr-14
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  
 1 Chairman  
 2 AUDIT Chairman  
 3 CAPEX Chairperson  
 4 REMCO Chairperson  
 5 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. In 2012/2013 Umgeni Water established an Ethics Committee 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 D Msomi, is qualified Chartered Accountant is one of the founding partners of Ngubane & Company. Mr Msomi has been the engagement partner on several forensic investigations, internal audit and external audit assignments in the KZN area. He has led a number of audit, consulting and forensic assignments. 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 has 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, EEand BBEE;
- Good corporate citizenship, including promotion of equality, prevention of unfair discrimination, Corporate Social investment and reduction of corruption;
- 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;
- Financial ethics, including, irregular and wasteful and fruitless expenditure.

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 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 shall endeavour to create and maintain awareness of this facility and ensure 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 system of internal control. Umgeni Water policies, procedures, structures and delegation of authority frameworks 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 outsourced 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 is chaired by 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;
- 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 who 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 of the Divisions work towards the achievement of set strategic objectives for a predetermined period. Msinsi as an 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 they 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

<p><b>Mr Andile Mahlalutye</b></p> <p><i>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) &amp; Professional Quantity Surveyor (PrQS). Programme Certificate on Economic Regulation from the London School of Economics and Political Science.</i></p> <p><b>Appointed for 1st Board term in June 2009.</b></p> <p>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 Ubullelwane 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.</p>	<p><b>Dr Takalani Dube</b></p> <p><i>MBChB (UKZN); Diploma in Anaesthesia (DASA); Postgraduate Diploma in HIV Management in the Workplace (Stellenbosch University); 2<sup>nd</sup> Year MBA (2014)</i></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>Director of eThekweni Community Church since 2005; Founder and Chairperson of Centre of HOPE (HIV and Community Development Organisation) since 2000; President of Women of Virtue (Women Empowerment and Investment Organisation) since 2002. Recipient of the Paul Harris Award, Awarded by Rotary International, in recognition of humanitarian Contribution to the Community of KZN.</p>
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<p><b>Ms Ziphazethu (Gabsie) Mathenjwa</b></p> <p><i>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).</i></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>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.</p>	<p><b>Mr Graham Atkinson</b></p> <p><i>BSc Civil Engineering (UKZN); Post-Graduate Diploma in Town and Regional Planning (UKZN).</i></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>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 Umgeni Water from 1978 to 1986; Honorary Member of the Water Institute of Southern Africa (WISA) since 2002; Honorary member of the former Union of African Water Suppliers (UADE).</p>
<p><b>Mr Teboho Nkhahle</b></p> <p><i>Registered Professional Scientist; MPhil Stellenbosch University; Environmental Auditor (IRCA).</i></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>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.</p>	<p><b>Ms Nombuso Afolayan</b></p> <p><i>MBA (Finance) Luton University; Executive Leadership Development (UCT); Organisational Development Practitioner.</i></p> <p><b>Appointed for 2<sup>nd</sup> Board term in June 2009.</b></p> <p>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.</p>
<p><b>Ms Thokozile Shezi</b></p> <p><i>BSc in Social Psychology/Education (USA); MSc in Measurement and Evaluation(USA); Management Development Diploma(Wits); Project Management Diploma (UP)</i></p> <p><b>Appointed for the 2<sup>nd</sup> Board term in June 2009</b></p> <p>Senior Manager &amp; Head of Secretariat; KwaZulu Natal Climate Change and Sustainable Development Council in the office of the Premier. Non-executive Director of KZN Playhouse Company.</p>	<p><b>Mr Visvin Reddy</b></p> <p><i>Educator (Mathematics &amp; Computer Science) by profession. Various Diplomas and Certificates in Management and Communications.</i></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>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.</p>
<p><b>Ms Nompumelelo Chamane</b></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>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.</p>	<p><b>Prof Imtiaz Vally</b></p> <p><i>Master of Accountancy; Chartered Accountant (SA); Chartered Management Accountant (ACMA).</i></p> <p><b>Appointed for 1<sup>st</sup> Board term in June 2009.</b></p> <p>Chairman of Umgeni Water Board Audit Committee since 2009; Professor of Management Accounting and Finance at UKZN.</p>

**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.

**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).

**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.

**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.**

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.

**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 (Pty) Ltd from 2012. Planning Manager from 1999 to 2012. Engineer Umgeni Water from 1997 to 1999. Engineer with the Department of Water Affairs from 1984 to 1997.

**Mr Thamsanqa Hlongwa**

Chartered Accountant (SA); BCom Honours.

**Appointed as General Manager Finance in July 2013.**

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.

**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

## 7 Directives by the Minister

### 7.1 New Directives (received 2013/2014)

#### 7.1.1 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.

The due diligence report was duly submitted to the minister on 31 March 2014.

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

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

Umgeni Water will work with the Departments of Human Settlements, Water and Sanitation, Cooperative Governance and Traditional Affairs and WSAs in this regard.

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.

### 7.2 Previous / On-going Directives

In 2010/2011 Umgeni Water was requested to undertake further work to support the OR Tambo District Municipality. Progress as at 31 March 2014, is summarised below and further details of the project are provided in Chapter 14 (Other Activities) of this business plan.

### 7.2.1 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, is progressing well, and is due for completion during the second quarter of 2014.
- The raw water pump station and the raw water rising main to the Nomlacu Water Treatment Works, have been completed.
- An interim raw water pumping system has been installed at the Ludeke Dam site in order to enable the commissioning of Phase 1 of the upgraded and extended Nomlacu Water Treatment Works (with a design capacity of 10 Ml/d), and provide up to 4 Ml/d to the town of Bizana and surrounds.
- 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 progressing reasonably well. The expected date of completion has moved out to the third quarter of 2014.

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

#### Mthatha Bulk Water Intervention

- Work was completed in 2010/2011.

#### Ngquza Hill Regional Bulk Water Supply Scheme

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

#### Refurbishment of Water Treatment Works'

- Refurbishment of the four works' - Mbizana, Libode, Ngqeleni, and Port St Johns - was completed in 2010/2011.

## 8 Self-Appraisal

### 8.1 Projected 2013/2014 Performance against Key Indicators

Umgeni Water implements its strategy through a balanced scorecard. The 2013/2014 scorecard comprises 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 seventy (70) unambiguous and measurable *Result Indicators* for which responsibilities and accountabilities are agreed and *Quarterly Targets* approved for 2013/2014. (Included in the 70 *Result Indicators* are 45 indicators selected by DWA for quarterly reporting against Shareholder Compact. All 70 result indicators will be fully reported on in the 2013/2014 annual report).

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 2013/2014 remains sound.

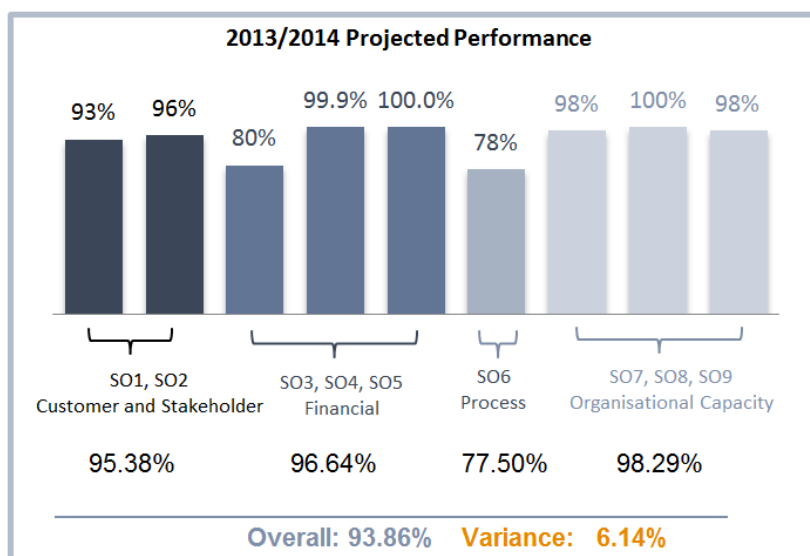
#### 8.1.1 Overall Performance

**Per cent targets met: 93.86%**

(91% at the end of 2012/2013)

**Per cent targets not met: 6.14%**

(9% at the end of 2012/2013)



The actuals per indicator for 2013/2014 is shown as the baseline in the detailed scorecard contained in Chapter 29 of this business plan.

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, SO1 and SO2 together achieved 95.4%.

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

There is slight variance with mainly three result indicators: Envisaged bulk WTWs not acquired for North-West Region (uThukela, Amajuba, Umzinyathi DMs) and variances in water and wastewater quality for iLembe boreholes/small schemes and the Darvill WWTW respectively. Action plans are in place to address these.

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

Financial Perspective, SO3, SO4 and SO5: 96.6%.

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

The result indicators not completely met include: research and development of the optimal wastewater business model and research and development of sustainable tariff and pricing models that will inform growth and expansion, as well as the confirmed RBIG value which was slightly below target for the year. Action plans are in place to address these.

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

Process Perspective, SO6: 77.5%.

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

Three result indicators were not completely met, namely, turnaround time for awarding of capex programme tenders, selection of ERP system and repeat and unresolved audit findings. Action plans to continue to improve these are in progress.

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

Organisational Capacity Perspective, SO7, SO8, and SO9: 98.3%.

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

Mainly two result indicators were not completely met: capex project milestones, which improved significantly since the previous period, and technical skills development which had slight variances in the number of artisans targeted for training due to a few employees exiting the programme. Action plans for these are in place.

### 8.1.3 Detailed Variance Report for Key Result Indicators

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

**Result Indicator 2.8** Number of boreholes and small schemes comply with SANS 241 and per cent water quality compliance.

Annual Target	Actual	Variance	Reason	Action Plan
iLembe schemes ≥ 85% compliant.	iLembe schemes 83.27% compliant with Operational category.  3 of 4 water quality categories compliant: Acute Health 1 Micro: 98.02%, Acute Health Chemical: 99.75%, Operational: 83.27%, Aesthetic: 94.16%	iLembe schemes had a variance of 1.73% with Operational category.	Operational non-compliance due to poor performance of process units, overdosing of coagulant, failure of disinfection unit, poor quality of raw water and inadequate process monitoring as the WTWs are unmanned during the night.	Optimisation of the treatment process including disinfection optimisation undertaken.  Business plans developed to assist the WSA to apply for Grant Funding (MWIG). Other small schemes will be upgraded subject to the availability of funds.  Some of the small schemes are to be decommissioned once supply from the Maphumulo Bulk Water Scheme has been established.

**Result Indicator 2.9** Number of WWTW and per cent water quality compliance with standards.

Annual Target	Actual	Variance	Reason	Action Plan
3 of 3 WWTW ≥ 85% compliant.	2 of 3 WWTW ≥ 85% compliant.  Darvill WWTW: 73.9% Howick WWTW: 87.2% Ixopo WWTW: 95.3%	Darvill WWTW had a variance of 11.1%	The treatment process remains significantly overloaded.  In addition, numerous rain events resulted in the spilling of the storm dam, causing combined final effluent non-compliance.	The main upgrade project currently under way at Darvill WWTW will address the capacity problems.  The aeration process has been maximised and chlorination increased to improve disinfection.  Optimisation of the primary settling process and dredging of the maturation river are underway.

**Result Indicator 2.16** Per cent BBBEE spend (of total spend).

Annual Target	Actual	Variance	Reason	Action Plan
70% of total spend	59% (Incl. SoE) 81% (Excl. SoE)	11% below target (Incl. SoE)	Increase in spend among "unclassified suppliers" and "Parastatals" has had a negative impact on BBBEE spend. The 37 Unclassified suppliers and 12 Parastatals confirmed that they do not have BBBEE certificates.	UW will continue to follow-up on "unclassified suppliers" and "parastatals" and encourage them to be rated in terms of BBBEE.

#### 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
R95m RBIG for 2013'14.	R84m (88%) RBIG confirmed for 2013'14.	R11m (12%).	Delays in confirming RBIG.	For the next year (2014'15), R203m (89%) of the RBIG required in support of the annual capex programme has been confirmed. Overall, 40% of the RBIG in support of the five year capex has been confirmed. Umgeni Water continues to liaise closely with DWA and NT to ensure an optimal funding mix to support expansion of water infrastructure to indigent areas.

**Result Indicator 3.2** Per cent wastewater business model developed and implemented.

Annual Target	Actual	Variance	Reason	Action Plan
100% developed and implemented	65% progress. Draft policy has been developed and is being reviewed.	Behind schedule.	Delays incurred with service provider.	Work on pricing policy / wastewater business model (regional expansion), will be completed and finalised for implementation in next period.

**Result Indicator 3.3** Per cent tariff and pricing plan reviewed and implemented.

Annual Target	Actual	Behind schedule.	Reason	Action Plan
100% reviewed and implemented.	65% progress. The Draft policy has been developed and is being reviewed.	Behind schedule.	Delays incurred with service provider.	Work on pricing / tariff policy and plan (regional expansion) will be completed and finalised for implementation in next period.

**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
60 working days	167 days	107 days above target.  77 days above proposed (2014/15) target of 90 days.	Bid Committee Timeframes (93.3 days against target of 31 days).  Tender Pricing Period (27 days against target of 29 days).  Project Manager (tender preparation) (46.8 days against a target of 10 days).	The Bid Tracker System is being used to manage bottlenecks in the processes.  Due to the complexity and size of the organization, coupled with legislative requirements the target of 60 working days is deemed too low and has been revised to 90 days for the 2014/15 year.  Umgeni Water will continue to streamline its processes to achieve this turnaround.

**Result Indicator 6.6** Unqualified / qualified external audit report.

Annual Target	Actual	Variance	Reason	Action Plan
Unqualified audit	Unqualified Financial and Performance audit achieved for 2012/2013.  2 low risk audit findings are currently being addressed.	2 low risk audit findings	1 finding is due to tender awards made to entities (suppliers) whose directors or members were in the service of the state.  1 finding is due to alterations to tender documents submitted.	Action plans in place to clear low risk audit findings and ensure the overall control environment is further strengthened. The resolution of external audit findings will be achieved with implementation of action plans by target dates.

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

Annual Target	Actual	Variance	Reason	Action Plan
0 repeat, 4 unresolved	1 repeat 6 unresolved	1 repeat finding and greater than 4 unresolved findings as detailed below.	Outstanding findings not completely cleared and additional internal audit findings in the year.	Effective action plans developed and resolution of findings will be achieved with implementation of these by target dates.
		1 repeat finding: - One (1) finding relating to Supply Chain Management processes.	Ineffective implementation of action plan to clear outstanding requisitions.	
		6 unresolved findings: - One (1) finding relating to legal compliance process	Inadequately coordinated legal compliance process.	
		- One (1) findings relating to human resources strategy implementation.	Remuneration Strategy and Policy not fully developed.	
		- Three (3) findings related to payroll processes together with HR data.	The HR data and payroll is validated manually resulting in some accuracy and completeness gaps. The sustainable control (implementation of ERP system) is long term (2016).	
		- One (1) finding relating to non-compliance to DWA licence/ authorisation limits for Darvill and Ixopo WWTW.	The sustainable control to adequately resolve this (i.e. capacity upgrade) is long term (2016).	

**KPI 7: Infrastructure expenditure within target cash flows and completion dates.****Result Indicator 7.2** Per cent variance of capex project milestone dates.

Annual Target	Actual	Q2 Variance	Reason	Action Plan
≤ 15%	22% variance (78% milestones met)	Allowed variance of 15% variance not met by 7%.	Intermediate target dates delayed for the following key projects:  Maphephethwa WTW Upgrade: Delay in tender preparation as a result of legal and technical aspects that had to be resolved.  Darvill WWTW Capacity Increase: Delay in Environmental authorisation has delayed start of construction and further delays incurred during tender award process.  Mhlabatshane BWSS: Construction started later than anticipated due to a delay in the tender process.	Action plans are in place to address delays:  The new construction contract to complete the remaining work is in tender stage.  The Environmental Authorisation has been obtained. Tender award negotiations are underway.  Construction is in progress and is progressing well and on track for completion in June 2014.

**KPI 9: Effectiveness and efficiency of employee training and development programmes.****Result Indicator 9.4** Number of artisans training plans met.

Annual Target	Actual	Variance	Reason	Action Plan
37 training plans met	37 artisans were trained.  32 Learners had qualified for their Trade Test.	5 below target	5 Learners withdrew from the programme prior to completing their Trade Tests.	Vacancies will be filled in 2015 during uptake of new learners.

## 9 Participation in Companies

### 9.1 Msinsi Holdings (Pty) Ltd

Umgeni Water has a 100% shareholding in Msinsi Holdings (Pty) 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 as soon as all regulatory and compliance requirements have been addressed to be effective before the end of the 2013/2014 financial year end.

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 DWA 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 for 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 Community and Environmental 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 of 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 activities on the water surface and within the purchase line.

### 9.2 Umgeni Water Services (Pty) Ltd

Umgeni Water has a 100% shareholding in Umgeni Water Services (UWS) (Pty) 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) (Pty) 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 area shown in **Table 10.1**. Umgeni Water sources water primarily from eleven impoundments and one weir on three 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 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	DWA	UW
	Mooi	Spring Grove Dam	139.4	DWA	UW
	Mgeni	Midmar Dam	235.4	DWA	UW
	Mgeni	Albert Falls Dam	290.1	DWA	UW
	Mgeni	Nagle Dam	24.6	UW	UW
	Mgeni	Inanda Dam	251.6	DWA	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	DWA	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>976</b>		

*# 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 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 has recently been completed, 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, which serves as a dual-purpose dam, 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 that 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 2015. The Imvutshane Dam will have a yield (at 98% level of assurance) of 2.4 million cubic metres per annum when completed.

The Ngcebo Bulk Water System abstracts water from the uThukela River at Middledrift. The current abstraction from the uThukela River averages 1 MI/day.

Several groundwater and surface water abstraction systems are utilised to supply raw water to Small Water Treatment and Borehole schemes currently managed by UW 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 E J Smith dams on the Mzinto and Mzimayi rivers respectively, and a sand abstraction system on the Mtwalume River. This system is substantially augmented by the Mgeni system via the South Coast Augmentation Pipeline and the South Coast Pipeline. The Nungwane Dam has a yield of 3.3 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. 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 raw water quality per supply source is presented in **Table 10.2**. Umgeni Water has set resource quality objectives for abstractions for water treatment that it will continue to use as alert triggers for mitigation against increased public health risks and higher treatment costs. 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 and will further quantify the impact of the Darvill waste discharge.

DWA is kept continuously apprised of the quality and risks associated with the source water and needs to more vigorously regulate catchment practices and waste discharges, to continue to ensure the long-term sustainability of these water resources.

**Table 10.2: Water Quality of Raw Water**

System	Catchment	Impoundment	Water Quality Status and Trend				Description of Raw Water Quality
			Mar-2011	Mar-2012	Mar-2013	Mar-2014	
Mgeni	Mooi, Mgeni	Mearns Weir, Midmar Dam	Good	Good	Good	<b>Good</b>	Elevated phosphates in the Mgeni inflow due to rainfall related runoff from the catchment. However water quality in the not affected by poor inflow quality it remained good.
	Mgeni	Albert Falls Dam	Good	Good	Good	<b>Good</b>	Excellent quality in Albert Falls Dam, from where water is stored and released for abstraction in Nagle Dam.
		Nagle Dam	Moderate	Moderate	Moderate	<b>Good</b>	Excellent water quality in Nagle Dam despite of heavy rainfall events.
	Mgeni	Inanda Dam	Moderate	Moderate	Moderate	<b>Moderate</b>	Poor quality in upper and lower reaches of the Dam, where there is high algal count associated with catchment related nutrient enrichment.
North Coast	Mdloti	Hazelmere Dam	Moderate	Moderate	Good	<b>Excellent</b>	Excellent water quality at the abstraction site, which is situated near the dam wall.
	Mvoti	Run-of-river abstractions			Moderate	<b>Good</b>	Water quality generally good with exception of elevated turbidity associated with high intensity rainfall/storm events.
		Boreholes			Good	<b>Good</b>	Generally good water quality from boreholes.
	Thukela (Ngcebo0)	Run-of-river abstractions				<b>Poor</b>	Unsatisfactory status due to elevated faecal contamination and Turbidity associated with high intensity rainfall events
	Imvutshane (Maphumulo)	Run-of-river abstractions				<b>Good</b>	Water quality generally good with exception of elevated turbidity associated with high intensity rainfall/storm events.
South Coast	Nungwane, Lovu	Nungwane Dam	Moderate	Moderate	Moderate	<b>Moderate</b>	Water quality generally good with exception of elevated turbidity associated with high rainfall/storm events..
	Mzimayi	E J Smith Dam	Poor	Poor	Poor	<b>Poor</b>	High algal count, significant aquatic weeds and high organic carbon, associated with eutrophication (Mzinto Town sewer problems). Algal blooms frequently include those producing toxins, requiring activated carbon dosing. Elevated turbidity and faecal contamination. High iron and manganese concentrations and odour, which all have to be managed during the treatment process.
	Mzinto	Mzinto Dam	Poor	Poor	Moderate	<b>Moderate</b>	Indication of increasing eutrophication. Some erosion runoff contamination.
	Mtwalume	River Abstraction	Moderate	Moderate	Moderate-Poor	<b>Moderate-Poor</b>	Faecal contamination. Increasing turbidity with rain related runoff.
	Ixopo, uMkhomazi	Ixopo Dam	Moderate	Poor	Poor	<b>Poor</b>	Faecal contamination, due to sewer problems in Ixopo Town. Eutrophication and elevated organic carbon, algal blooms and aquatic weed problems.

System	Catchment	Impoundment	Water Quality Status and Trend				Description of Raw Water Quality
			Mar-2011	Mar-2012	Mar-2013	Mar-2014	
	Ixopo, uMkhomazi	Ixopo Dam	Moderate	Poor	Poor	<b>Poor</b>	Unsatisfactory status due to elevated faecal contamination and Turbidity associated with high intensity rainfall events

## 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 DWA, 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	1,287
	Nagle Dam (Albert Falls Dam)		May 1985	November 2005
	Inanda Dam			2012 Resubmitted 2013
North Coast	Hazelmere Dam	45	31 1985/88	92 April 2010 Resubmitted 2013
	Mvoti River	16	11	18 April 2008
	Imvutshane Dam	N/A	7 August 2012	-
	Lower Thukela	N/A	110 2013	-
South Coast	Nungwane Dam	26.5*	-	-
	E J Smith Dam	12*	-	-
	Mzinto Dam			
	Mtwalume River Well points	8.5	3	5 May 2006
	Mhlabatshane Dam	N/A	4.1 June 2010	N/A
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

Total average water sales for the 2011/12 financial year was 1 135 Ml/day (414 million cubic metres per annum), and hence the 2012/13 sales (1 156 Ml/day, 422 million cubic metres per annum) are 2.2% year-on-year higher than the 2011/12 financial year. This can be compared to the 0.5% growth that was realized in the previous financial year.

The 2.2% positive growth over the 2012/2013 period shows an increase when compared against the 0.5% growth of the previous year and this is significant when compared against the negative growth that was experienced in 2010/2011.

The sales forecast for 2013/2014 and 2014/2015 are estimated to be 1 173 Ml/day and 1 186 Ml/day, respectively. This represents a 1.1% 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 0.5%.

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 Affairs (DWA), as the custodian of the country's water resources, have to be secured in a timely manner.

DWA 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 2 Mooi-Mgeni Transfer Scheme: Spring Grove Dam	2007	Behind Schedule	R 2 100 million	DWA
Phase 1 uMkhomazi Water Project: Smithfield Dam	2010	Behind Schedule	R 9 000 million	DWA
North Coast System: Raising of Hazelmere Dam	2014	Behind Schedule	R 420 million	DWA
Imvutshane Dam	2013	Behind Schedule	R 224 million	UW
Phase 1 Lower Thukela Bulk Water Supply Scheme	2015	On Schedule	R 1 351 million	UW
Lower uMkhomazi Bulk Water Supply Scheme	2019	Behind Schedule	R 1 143 million	UW
Lower Mvoti Bulk Water Supply Scheme: Welverdient Dam	2030	On Schedule	R 1 000 million	DWA

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,
- Feasibility study for wastewater reuse from the Darvill Wastewater Treatment Works,
- Further initiatives are described in the water conservation and demand management plan later in this business plan.

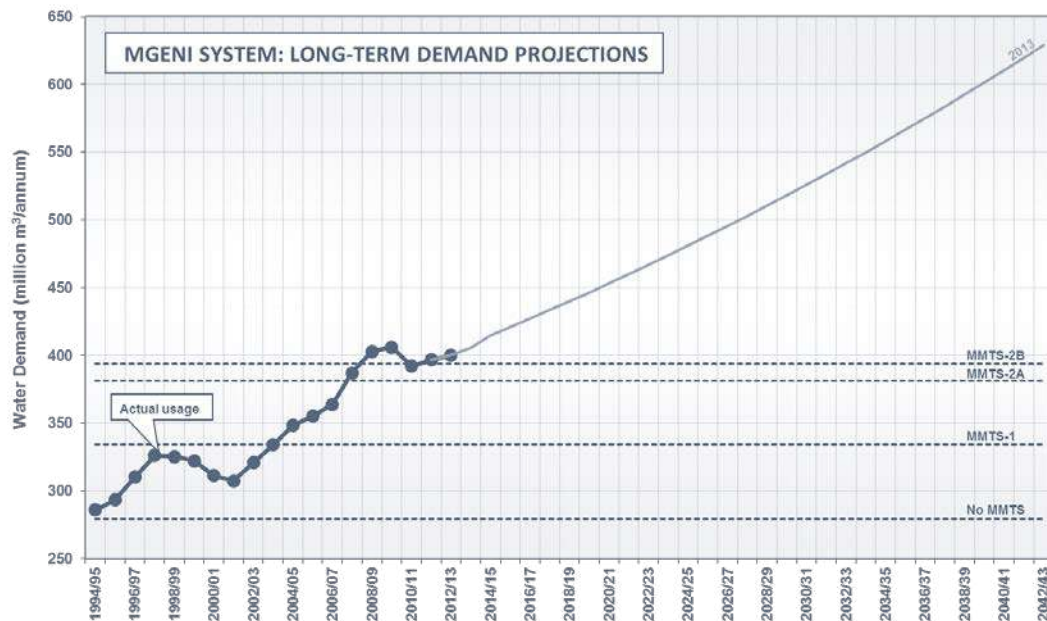
Going forward Umgeni Water as the Regional Water Utility will progressively take on more responsibility for regional water resources infrastructure to achieve greater integration with bulk systems. Umgeni Water will over the next 12-month period work closely with DWA regarding this,

### 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 River 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, which is within 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 was recently completed and the transfer of the first available water is expected in 2014. The construction of the water supply pipeline from the dam, which will maximise the transfer capacity from the dam, is scheduled for completion in 2015.

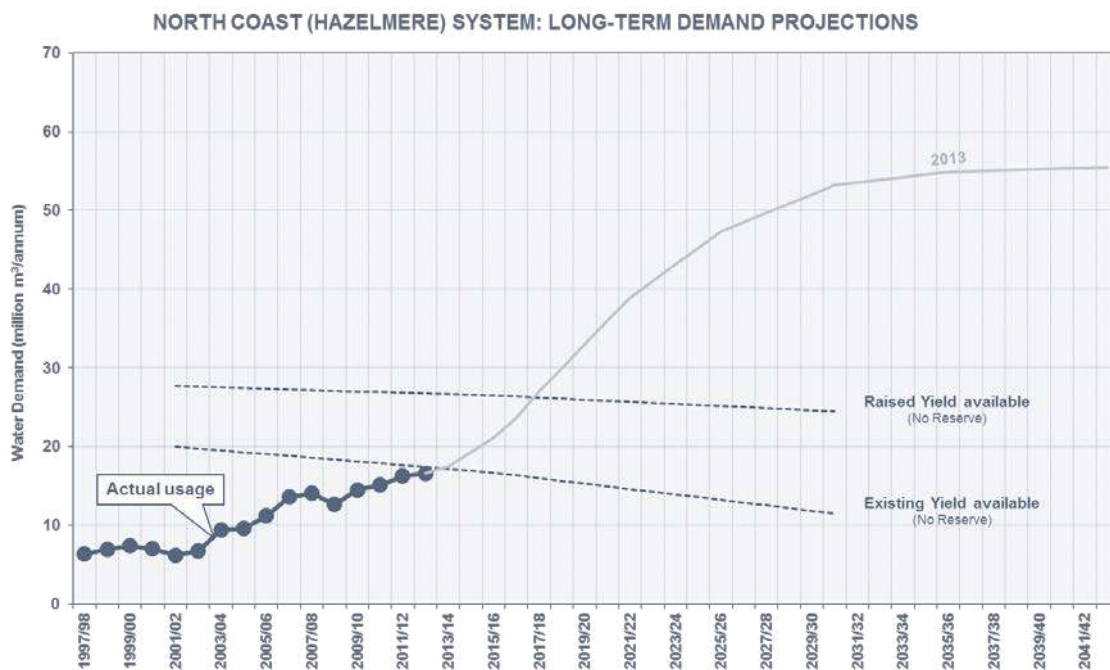
#### Phase 1 of the uMkhomazi Water Project: Smithfield Dam

It is evident from current and projected water demand trends (refer to **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 timeously and at the appropriate level of assurance. DWA has now initiated a detailed feasibility level investigation into this augmentation option. Umgeni Water is currently undertaking a detailed feasibility level investigation into the associated bulk potable water component and this is being undertaken simultaneously and in an integrated manner with the DWA 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



DWA 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 2014 and will be completed in 2015. The dam currently has sufficient yield available to cater for the initial demand increases that can be expected once the upgrade to associated bulk water supply infrastructure is completed by Umgeni Water. However, once the demand increases to above 55MI/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 Thukela River and will not require raw water storage. Construction of certain components of the scheme is currently being undertaken.

### 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 has recently 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 entails the construction of a dam on the Imvutshane River to replace the run-of-river abstraction system. This will increase the yield from the scheme and ensure a more sustainable supply. The construction of the dam is underway. A possible future extension to this scheme is to augment the Imvutshane Dam from the Hlimbitwa River.

### Lower Mvoti Bulk Water Supply Scheme: Welverdient Dam

DWA 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 DWA to urgently re-institute investigations 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 Welverdient 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. While the infrastructure linkages between the Mzinto, Mtwalume and Craigeiburn 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 DWA 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.

#### 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 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. .

#### Mhlabatshane Bulk Water Supply Scheme

Umgeni Water has constructed the Mhlabatshane BWSS as part of a larger regional scheme development by Ugu District Municipality 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 a water treatment works situated in close proximity to a command reservoir. Potable water is then supplied to Ugu District Municipality from the command reservoir for reticulation through an extensive gravity-fed network to the various communities in the area. Some of the reticulation 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 scheduled to commence in 2014.

### **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 is currently investigating the option of treating domestic sewage from its Darvill Wastewater Treatment Works to potable standards. The proposal would then be to return the treated water back into the distribution system at Umlaas Road. The water could then be 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. 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 before any decision is made on whether or not to proceed with the project. The feasibility study for this wastewater reclamation project will be completed in 2014.

#### **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.

A detailed feasibility study has now been initiated by Umgeni Water with a revised approach. The detailed feasibility investigation is considering the option of a 150 Ml/d plant on both the North Coast and South Coast. 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 July 2014.

Locations for the plants have now been established on both the North and South Coast 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.

#### DWA 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, DWA 2013

The outcome of the DWA convened a 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 Affairs (as per **Table 10.1**). This is currently undertaken with a signed agency agreement that Umgeni Water concluded with DWA in 2013.

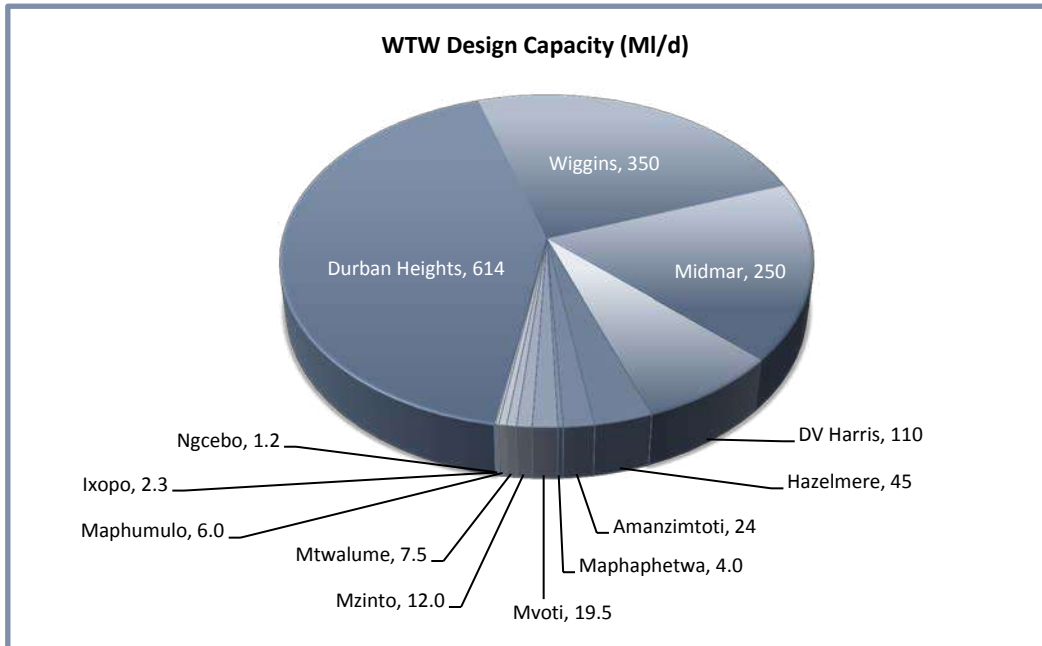
# 11 Bulk Potable Water Supply Plan

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

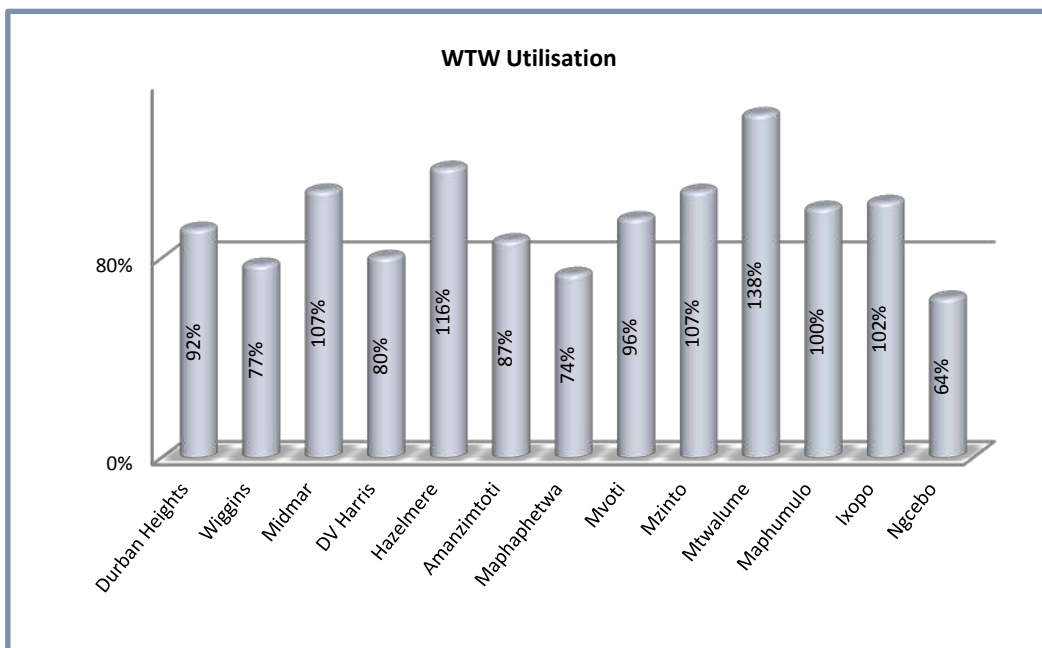
Umgeni Water operates thirteen bulk water treatment works, for which the works capacities and utilisation are shown in **Figures 11.1** and **11.2** respectively.

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

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



**Figure 11.2:** Water Treatment Works Capacity Utilisation.



## 11 Bulk Potable Water Supply Plan

An additional twenty-four (24), comprising fourteen (14) smaller water treatment works and ten (10) borehole schemes are managed on behalf of the iLembe District Municipality.

**Table 11.1:** Water quality produced per water treatment works for the period July 2013 to December 2013

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	42.4%	100	100	99.96	100
Wiggins	350	24.2%	100	100	100	100
Midmar	250	17.3%	100	100	99.74	99.89
DV Harris	110	7.60%	100	100	99.91	100
Hazelmere	45	3.11%	100	100	99.54	100
Amanzimtoti	24	1.66%	100	100	99.70	100
Mvoti <sup>1</sup>	19.5	1.00%	97.1	100	98.66	100
Mzinto	12	0.83%	100	100	98.21	100
Mtwalume	7.5	0.52%	100	100	99.33	100
Maphumulo	6	0.41%	100	100	99.47	100
Maphophethwa	4	0.28%	100	100	87.70	100
Ixopo	2.3	0.16%	100	100	100	100
Ngcebo	1.2	0.08%	100	100	98.55	100
iLembe Rural Schemes	6	0.41%	97.76	99.71	83.60	94.71

<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.
- **Hazelmere WTW:** Capacity constraint will be addressed through a works upgrade from 45ML/d to 75ML/d. In the short-term, a 5ML/d package plant is augmenting the supply to meet demands.
- **Mvoti WTW:** The Lower Thukela BWSS will replace this works by 2015/2016. As a short-term solution refurbishment of the filters was completed and a 2 ML/d package plant installed.
- **Maphophethwa WTW:** The works upgrade to 5 ML/d was undertaken in 2012/2013 and was partially commissioned in December 2012 to supply 4 ML/d. Additional required upgrade work will be progressively planned and implemented over the business plan period.
- **Ixopo, Mzinto and Mtwalume WTWs:** Operational and process enhancements will alleviate constraints for these works in the short term: the Mzinto system load is to be shed through the planned Scottburgh-Ellingham Link pipeline in 2014. 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 and Ixopo WTWs' capacity constraints is the extension of the South Coast Pipeline and related system upgrades.
- **iLembe Schemes:** 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.

## Asset Management Plan

Umgeni Water 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 is complemented by on-going unplanned, reactive and corrective maintenance in line with the 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 level of service to all 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.

Details of Umgeni Water's capital infrastructure programme are provided in later sections of the business plan with the full capital expenditure plan shown in the financial plan.

## Water Loss Management and Metering

Umgeni Water has over the years successfully maintained non-revenue water below 5%. 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 in turn ensures that all existing Blue Drop certifications for bulk sites are maintained, whilst the organisation progressively extends certification to the rest of its bulk supply systems over this business plan period.

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 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: 2011.

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 SANS 241: 2011 Drinking Water Standard 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.

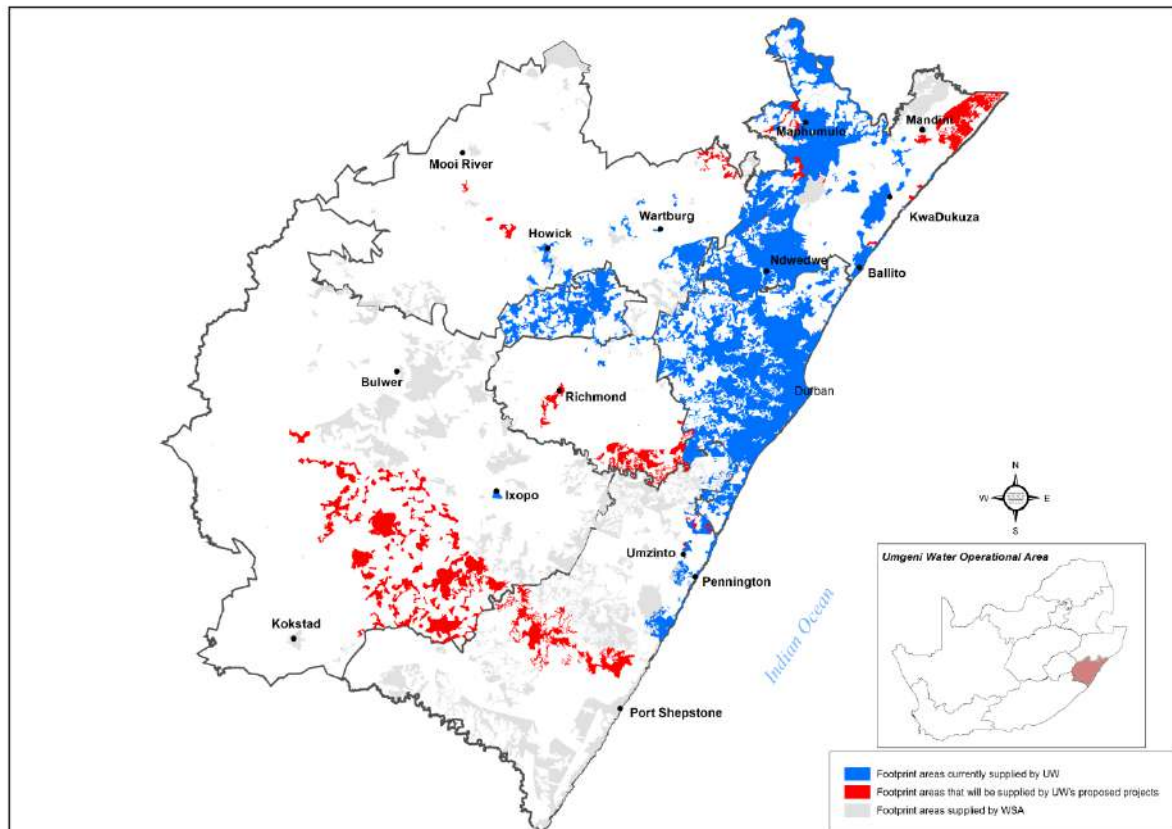
Information on water quality performance will be conveyed as per communication plan to all customers, stakeholders and legislative decision makers.

## 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.

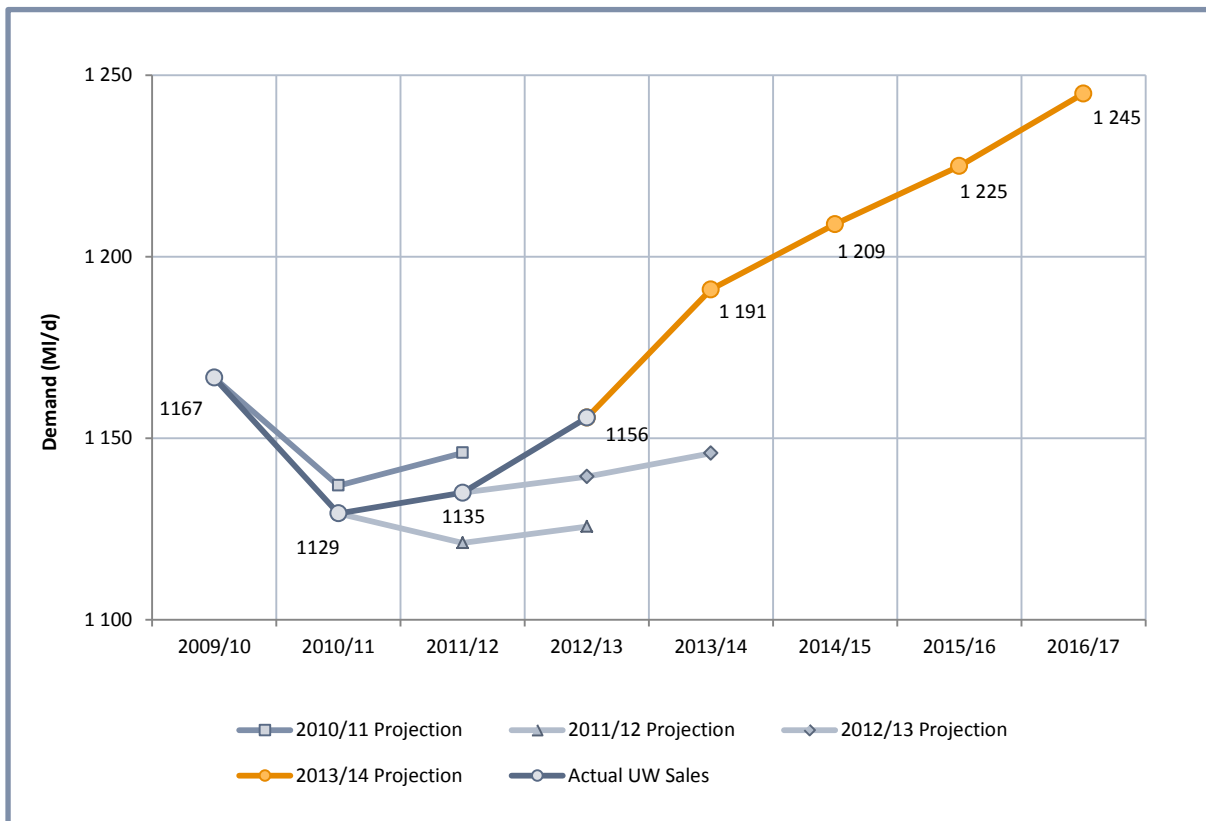
**Umgeni Water Short-Term Bulk Sales Forecast**

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 2013/2014 and 2014/2015 are estimated to be 1 191 MI/day and 1 209 MI/day, respectively (Figure 11.4). This represents a 1.5% 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





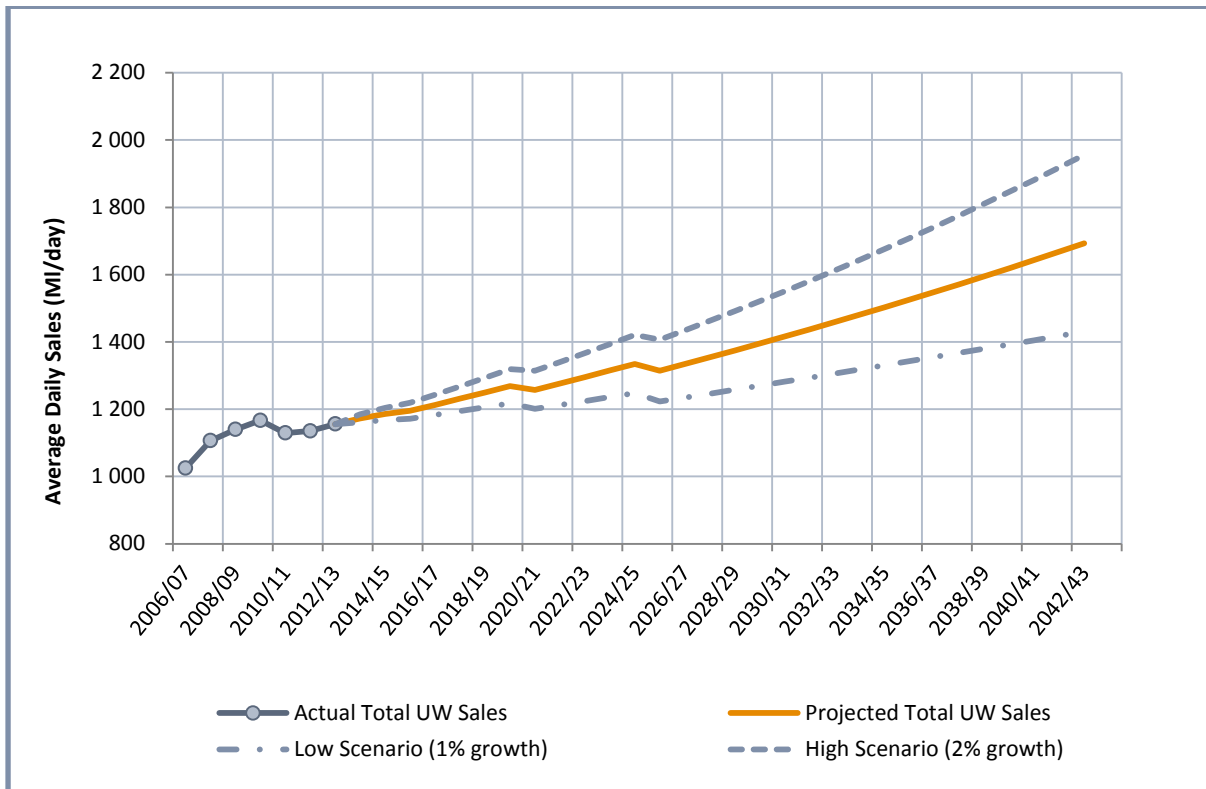
### Umgeni Water Long-Term Bulk Sales Forecast

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 2043/2044. 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” recently completed by DWA, 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 in **Figure 11.5**, is as a result of the anticipated commissioning by eThekweni Municipality of their 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



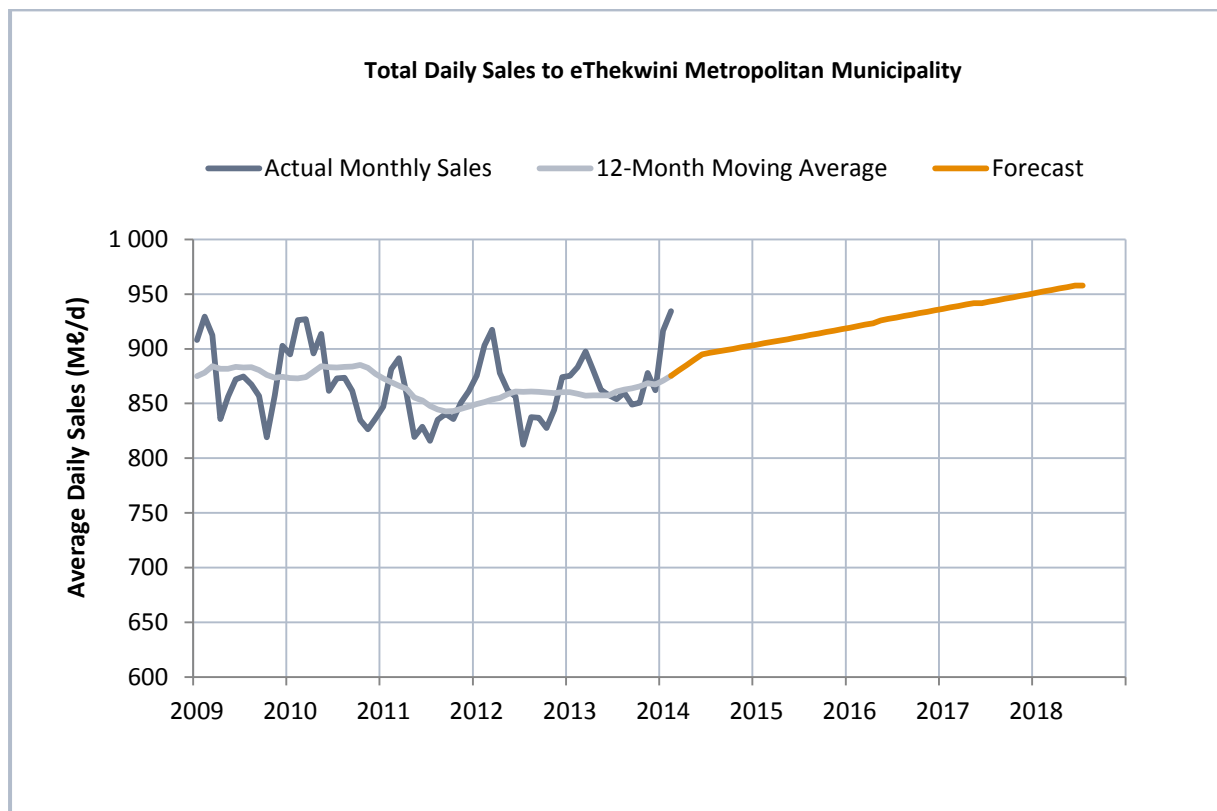
**eThekwini Metropolitan Municipality: Short-Term Bulk Sales Forecast**

In the 2012/2013 financial year, the year-on-year growth in sales to eThekwini Municipality increased by 1.3%. In 2013, it was predicted that substantial growth would still occur in the northern eThekwini area with the proposed development of formal housing projects and the industrial development of the Dube Trade Port. This is shown in **Figure 11.6**, where the twelve-month moving average of sales increased from 860 Ml/day in July 2012 to 868 Ml/day in December 2013.

eThekwini Municipality do not believe that their water demand management initiatives will further reduce these sales and have predicted an increase in demand from 866 Ml/day to 874 Ml/day over the 2013/2014 financial year and to 889 Ml/day in 2014/2015. The historical sales and future demand projection for eThekwini Municipality are presented in **Figure 11.6**.

eThekwini Municipality have predicted an increased demand from the Hazelmere WTP, due to proposed development on the KwaZulu-Natal North Coast. If possible, this demand will be shifted to the Durban Heights WTP. This load shift will occur via the eThekwini Northern Aqueduct and the Hazelmere to Verulam Pipeline.

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



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

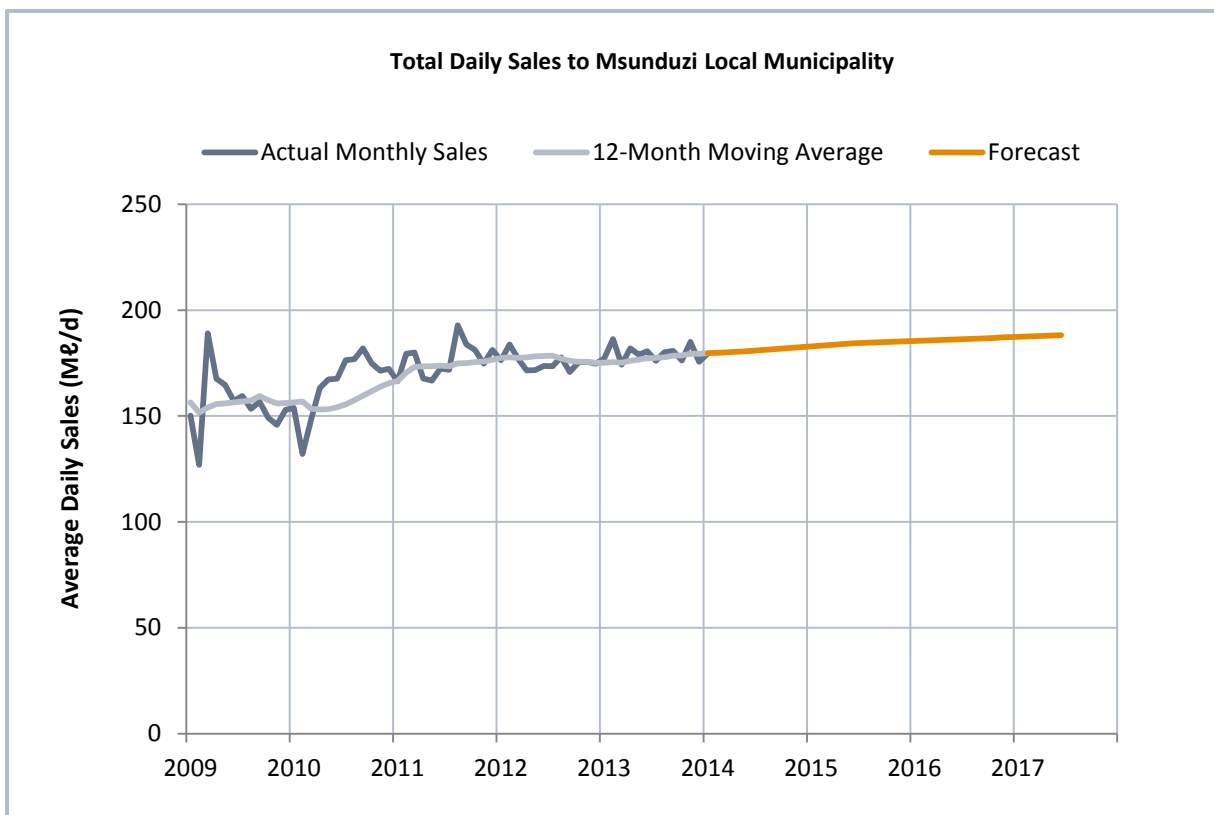
The water sales to Msunduzi Municipality decreased by 0.6% from 178 MI/day in the 2011/2012 financial year to 177 MI/day in 2012/2013.

The projected demands for 2012/2013 were determined in consultation with the municipality and it was agreed that the demand will decrease at a rate of 0.5% for the short term forecast. The following significant factors influenced this short term forecast:

- There are no significant developments (housing, commercial and industrial) that will result in an increase in demand.
- An intensive water demand reduction programme is being implemented. This is the driving force behind the negative forecast in demand.

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

**Figure 11.7:** Total Daily Sales to Msunduzi Local Municipality



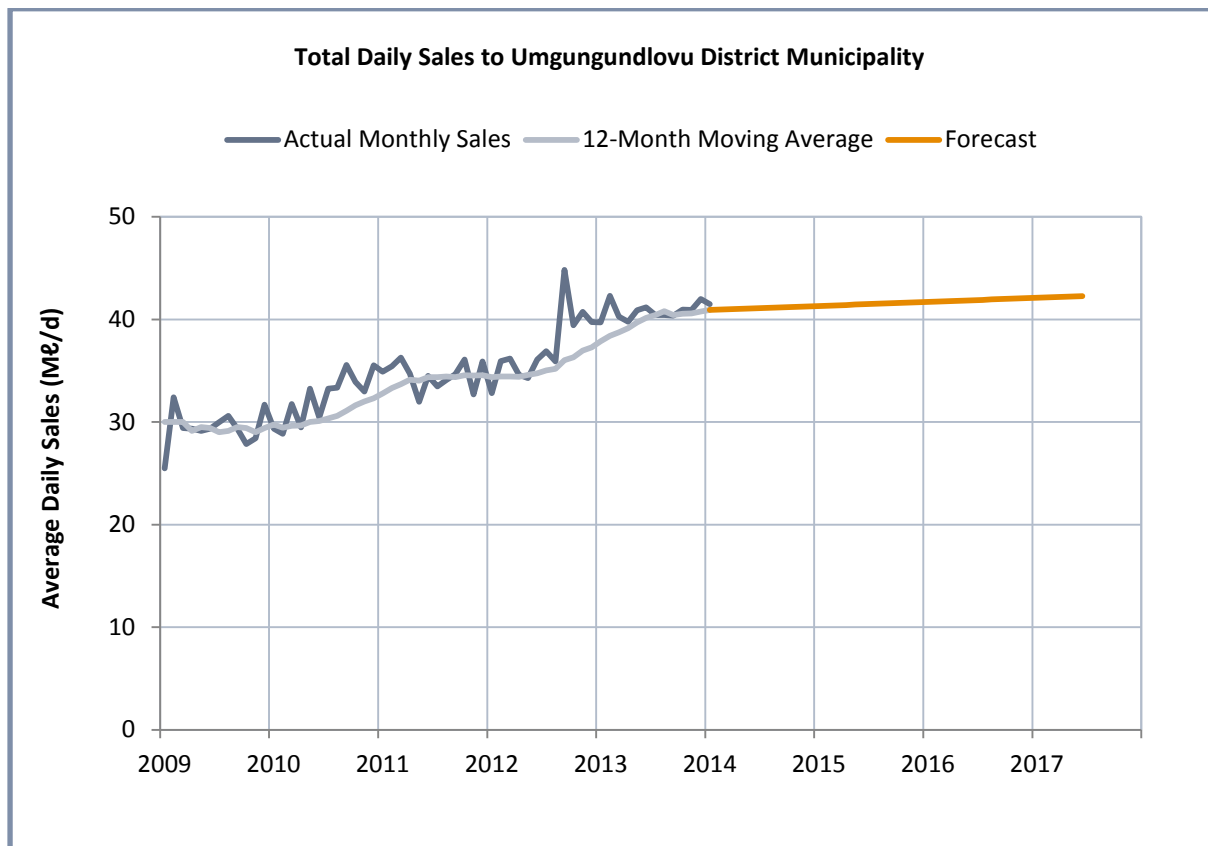
**uMgungundlovu District Municipality: Short-Term Bulk Sales Forecast**

The projected demands for 2013/2014 were determined in consultation with the municipality and it was agreed that the demand would increase at a rate of 1% for the short term forecast. The following significant factors influenced this short term forecast:

- Gradual implementation of the Greater Eston Bulk Water Supply Scheme
- Phase 1 of the Khayelisha housing development which consists of 500 units.
- 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



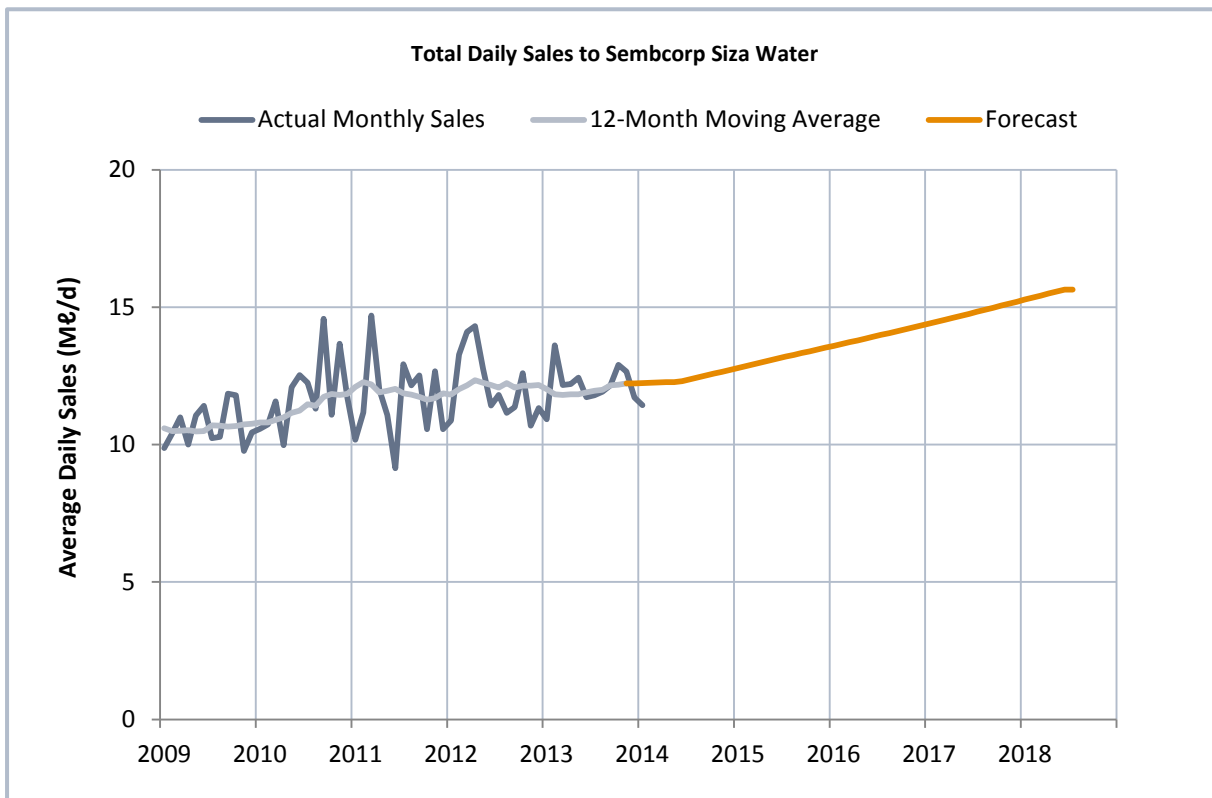
**iLembe District Municipality: Short-Term Bulk Sales Forecast**

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 in conjunction with Umgeni Water has implemented significant measures to manage the water demand in the North Coast area. This resulted in a negative growth rate of -2.23% for 2012/2013. Sembcorp Siza Water expects that developments in this area will increase the demand from 12.2 MI/day in 2012/2013 to 12.3 MI/day in 2013/2014 and 13.3 MI/day in 2014/2015. 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**



## 11 Bulk Potable Water Supply Plan

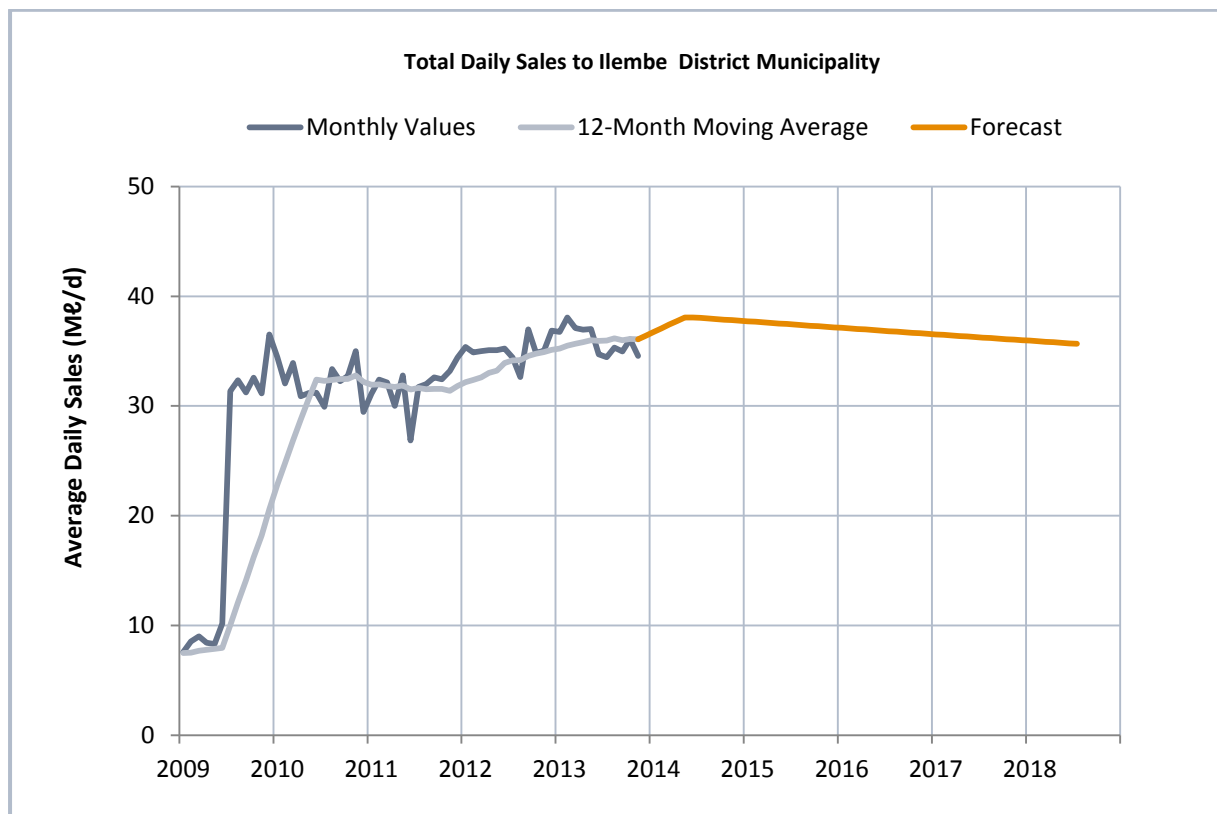
The remaining water sales to iLembe District Municipality for 2012/2013 include:

- Approximately 9.2 MI/day sales to the coastal areas from Umgeni Water's Hazelmere WTP;
- 16.9 MI/day sales to KwaDukuza (Stanger). 6 MI/day sales to 32 inland rural schemes owned by iLembe District Municipality and operated by Umgeni Water.

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 and it estimates 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 BWSS for the Southern Ndwedwe area.

The DM therefore predicts a 5.5% growth rate in 2013/2014 (38 MI/day) and a -1.6% growth rate thereafter in 2014/2015 (37.5 MI/day). The negative growth rate is attributed to the WDM initiatives and a restricted growth. 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 Thukela BWSS is commissioned during 2016. The iLembe District Municipality will then implement nine low-cost housing projects of approximately 15 000 houses each. 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

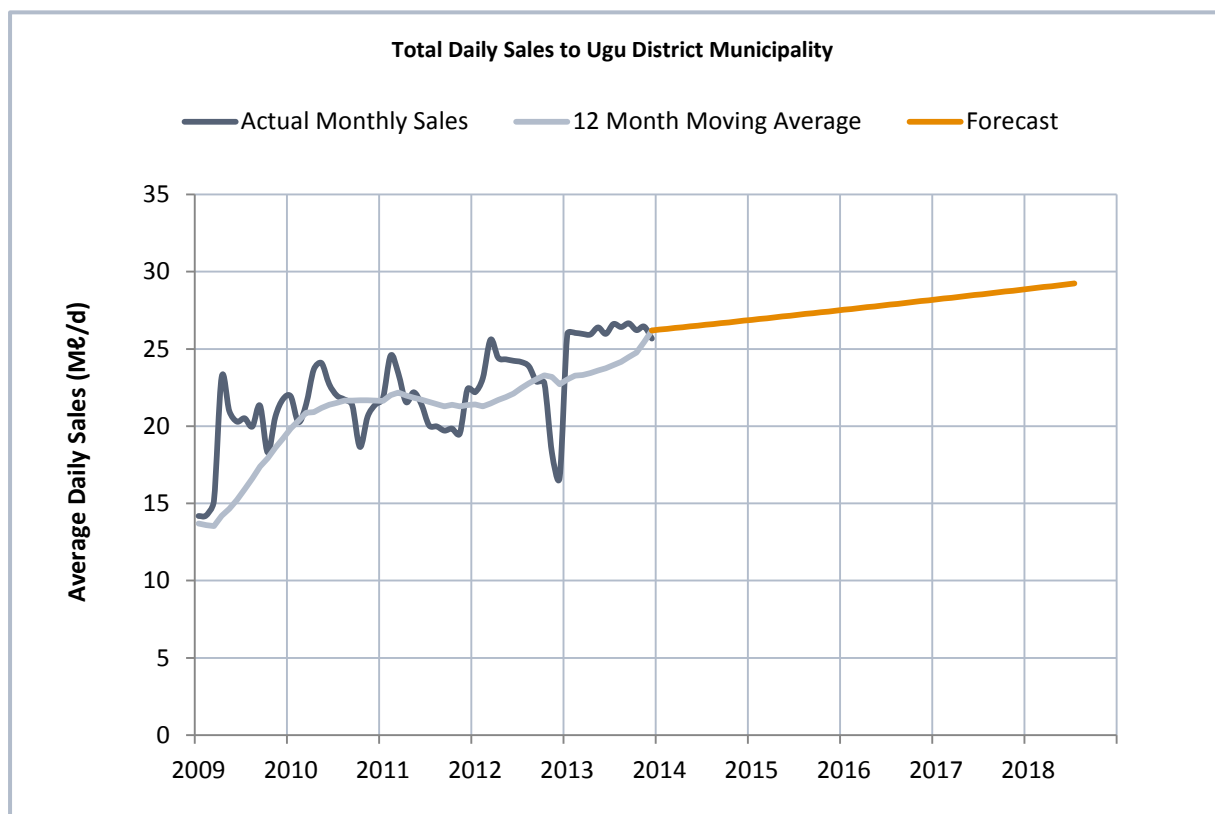
Total sales to the Ugu District Municipality has shown a steady increase over the last six months, apart from December 2013 which shows a significant increase compared to December 2012, this is due to the new rural supply systems that have been commissioned during the second quarter of 2013/2014 financial year by Ugu District Municipality. A 15% increase (22.7MI/d to 26.1MI/d) was experienced in the 2012/2013 financial year. The South Coast Pipeline volumes also showed a steady growth.

Ugu District Municipality is currently constructing a pipeline from its Hazelwood Reservoir to the Greater Vulamehlo area. This will allow water to be supplied from the Umzinto WTP supply system to Vulamehlo resulting in an expected growth rate of 2.5%.

The expected growth in sales to the Ugu District Municipality (as confirmed by the DM) is estimated at 2.2% in the 2013/2014 financial year and 2% in 2014/2015 (Figure 11.11). Ugu District Municipality highlighted potential growth of sales to the Middle South Coast following the commissioning of the South Coast Pipeline (SCP-2a). The full potential will be available once the Phase 2b is commissioned.

This expected growth would be as a result of Ugu District Municipality’s proposed initiatives towards the reduction of backlogs. Rapid growth in water sales in the inland rural areas of the municipality, specifically in the Greater Vulamehlo, Ifafa and Mathulini areas are thus expected. Ugu District Municipality has embarked on a number of water demand management initiatives. However, these are mainly in the Lower South Coast region area of supply and hence these are not expected to have a major impact on projected water demand growth rates.

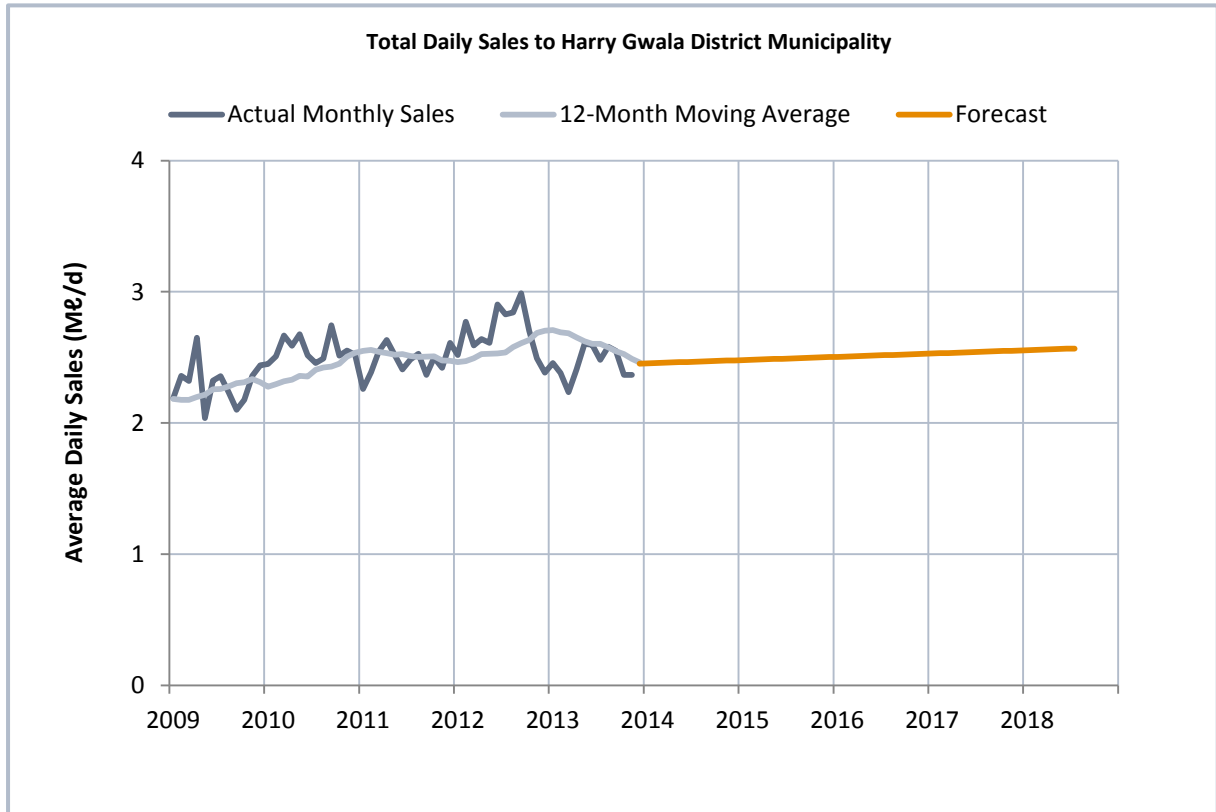
Figure 11.11: Total Daily Sales to Ugu District Municipality



**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 March 2013. This is attributed to WDM efforts by the municipality to eradicate water leakage. The average sales increased after commissioning are below the previously projected values. Following discussions with the municipality, the projection for Harry Gwala District Municipality, has been set at a 1% growth.

**Figure 11.12:** Total Daily Sales to Harry Gwala District Municipality





## 11.2.2 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 in 2015, 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 2024. 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 '69 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 is also implementing 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 project will provide 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 45Ml/d Hazelmere Water Treatment Works. With the current demand regularly exceeding the capacity of the plant, the operation of the plant is difficult and routine maintenance on components of the plant is near impossible. Although a 5Ml/d package plant has been installed at Hazelmere WTW to augment the existing plant, the comparatively high supply, when compared to the plant's overall capacity, and the expected increase in future demand has necessitated the upgrading the Water Treatment Works to 75Ml/d (98% assured yield of the raised Hazelmere Dam).

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 19M/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.

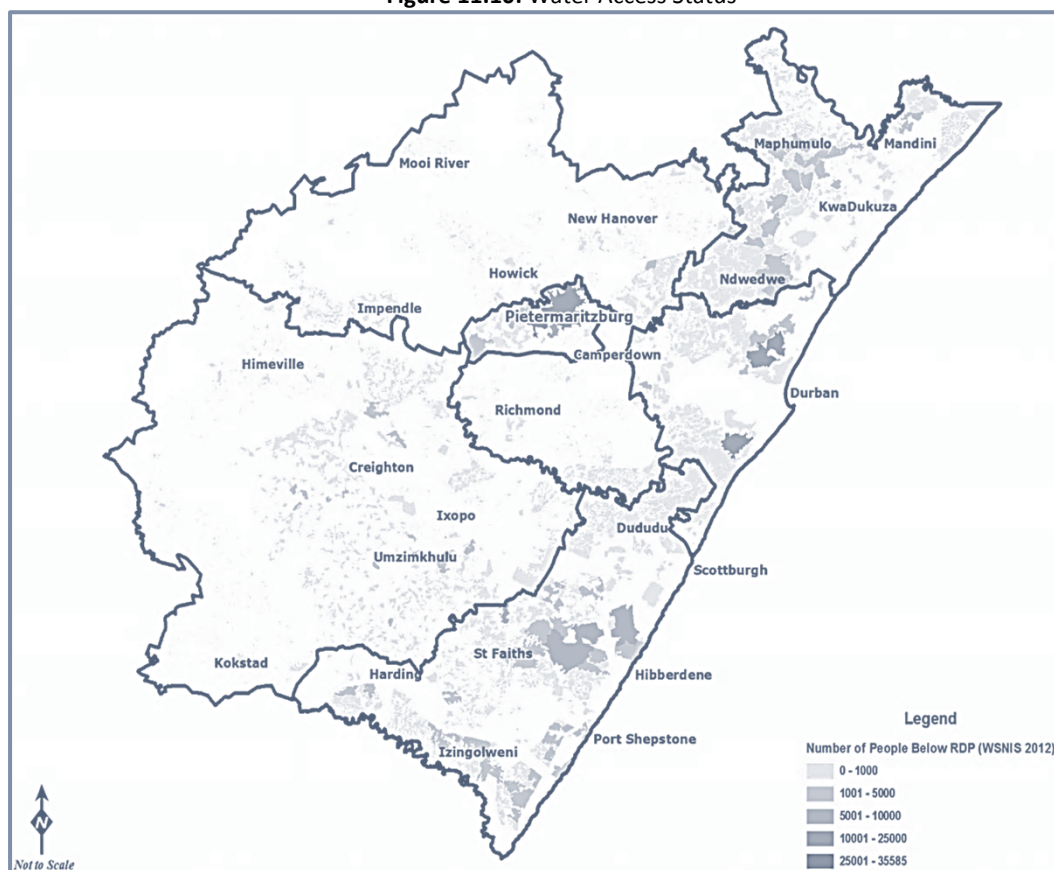
- DWA to raise the full supply level of Hazelmere Dam to increase its firm yield and Umgeni Water to upgrade the Hazelmere Water Treatment Works to supply up to 75Ml/d to the NCSS. In addition to the upgrade of the Water Treatment Works, pump stations and pipelines within the NCSS have been augmented 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 has been commissioned in May 2013 and is 100% operational. Phase 2, which includes the construction of the Imvutshane Dam and upgrade of the WTW to 12 Ml/day, will be complete by 2017.

### 11.2.3 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**



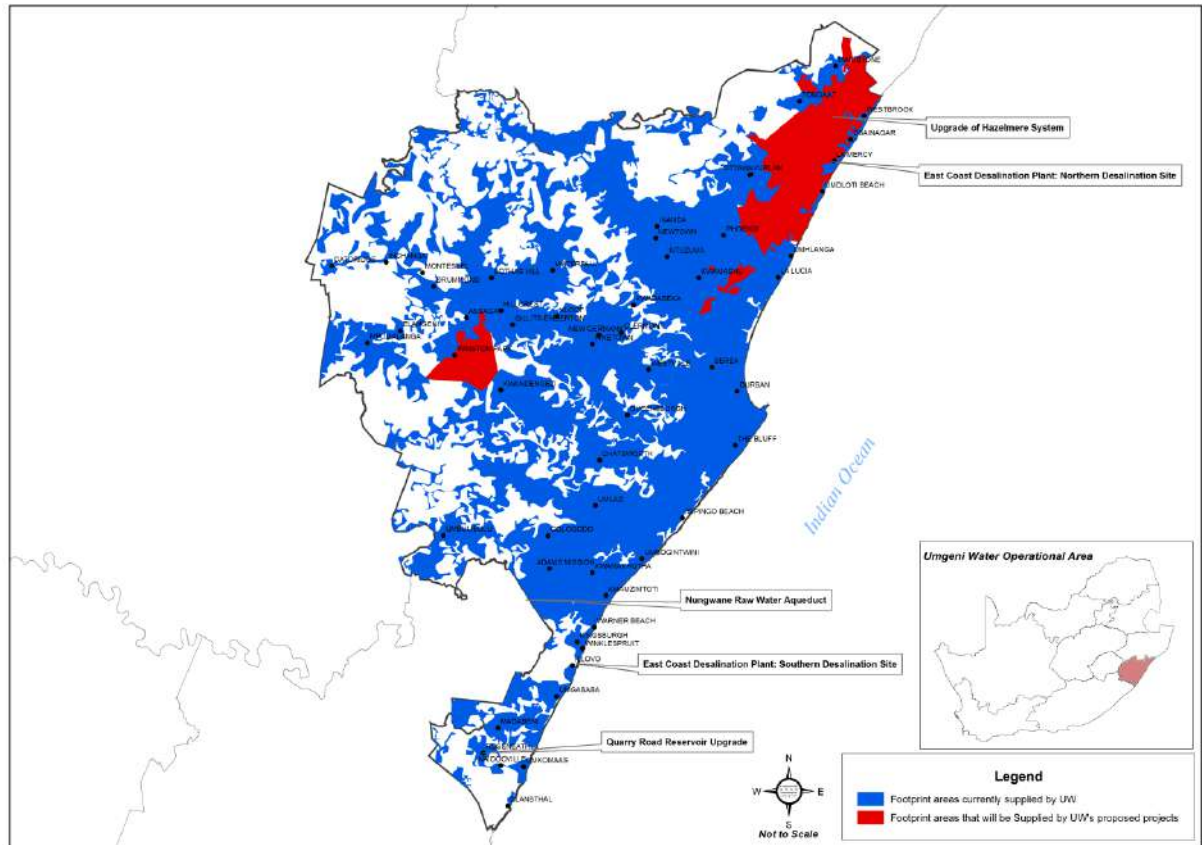
**Table 11.3: Water Access Status (Source: Census 2011 (Statistics SA 2013))**

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>

**eThekweni Metropolitan Municipality**

The following strategic projects (**Table 11.4**) will be undertaken within eThekweni 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 eThekweni District Municipality



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

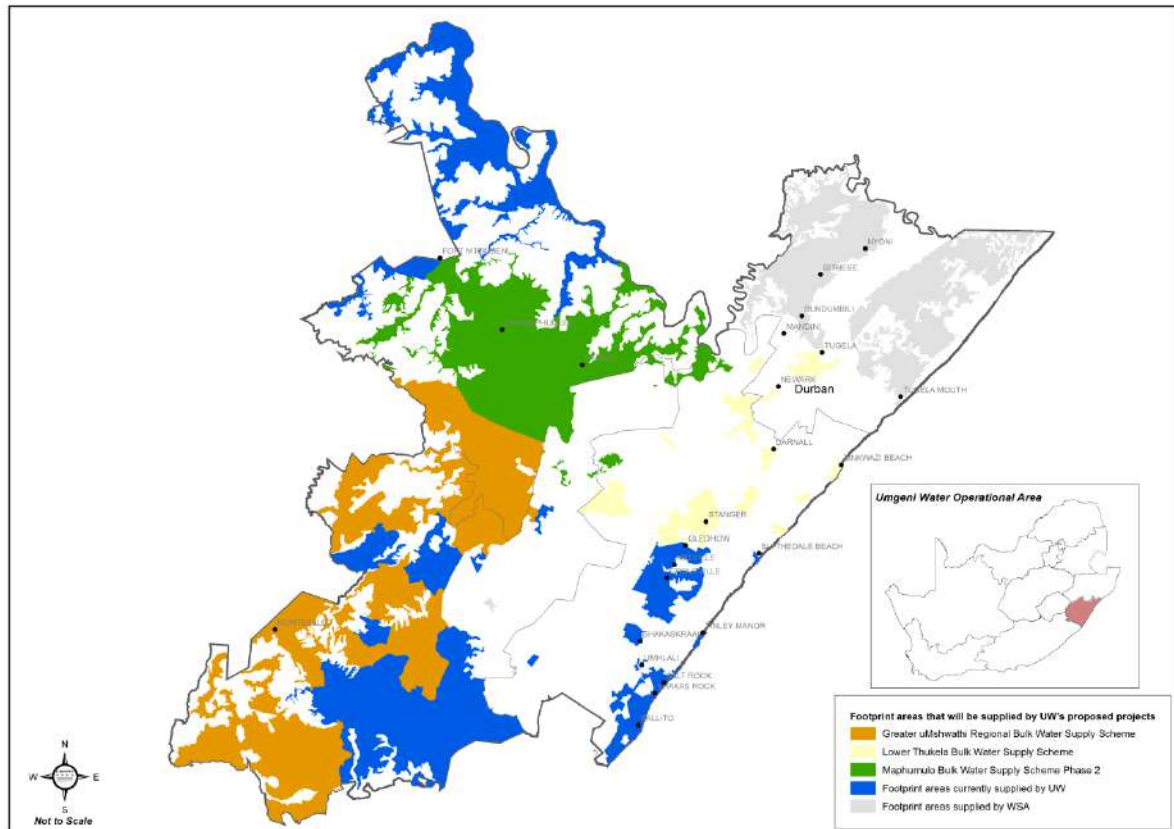
Objective	Major Project	Project Total (R'm)	2015	2016	2017	2018	2019
			R'm	R'm	R'm	R'm	R'm
Augmentation	Lower Mkomazi Bulk Water Scheme <sup>1</sup>	1,143	2.5	5	10	25	40
Augmentation	Umlaas New Water Project <sup>1</sup>	442				3	22
Upgrade	Durban Heights WTW – Various Projects	583	33	54	141	137	64
Upgrade	Wiggins WTW - Various Projects	153	27	25			5
Augmentation	Maphephethwa WW: Upgrade Plant (5.0 Ml/d)	56	8.5				
Asset Condition	Nagle Aqueducts 3 and 4 - Refurbishment	71					
Asset Condition	Durban Heights WTW – Reservoir 3 Roof Rehabilitation	34	4	16	14		
Upgrade	Amanzimtoti WTW Various Projects	29	9	2			1
Augmentation	East Coast Desalination Plants	17	4	1			

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

**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

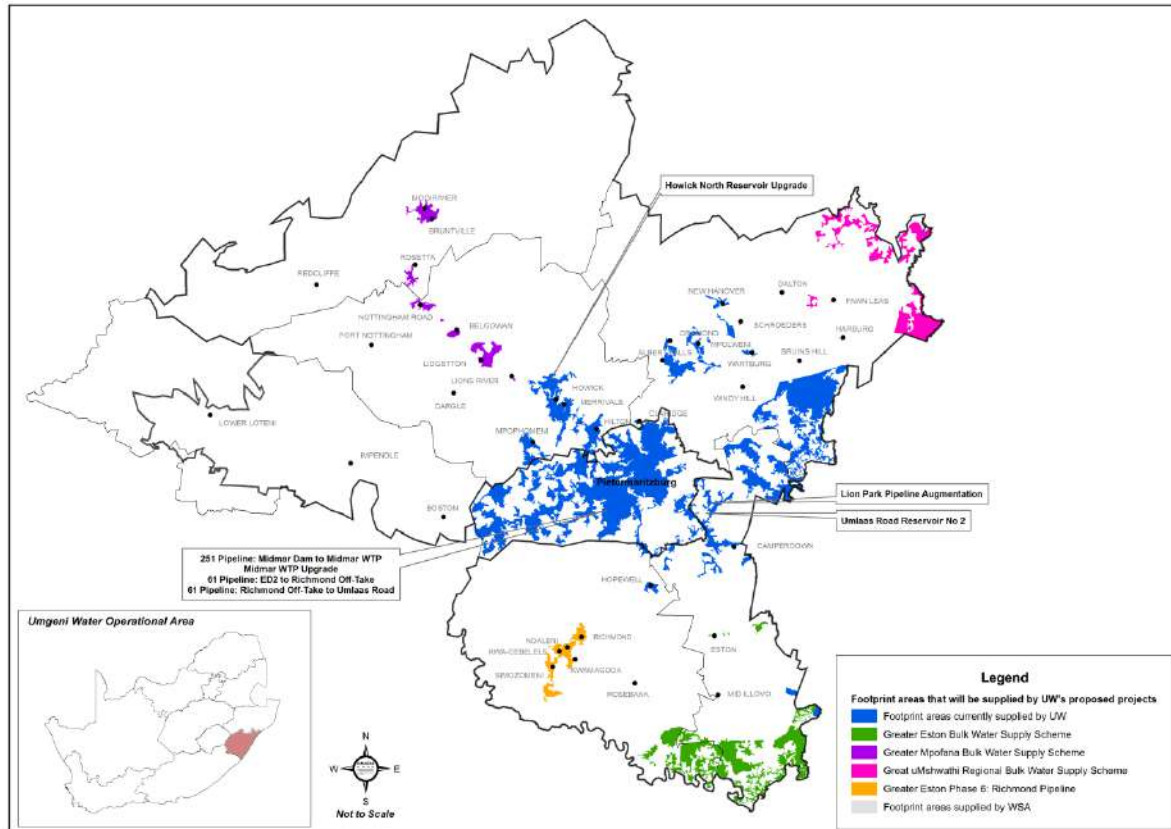
Objective	Major Project	Project Total (R'm)	2015 R'm	2016 R'm	2017 R'm	2018 R'm	2019 R'm
Rural Expansion	Lower Thukela BWS Scheme Phase 1	1,351	416	325	178		
Rural Expansion	uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3) <sup>1</sup>	1,010	116	143	268	282	105
Rural Expansion	Maphumulo BWS Scheme Phase 2	224	58	60			
Rural Expansion	Southern Ndwedwe BWS Pipeline and Reservoir)	386	2	2	0.5	10	30
Upgrade	Hazelmere WTW Various Projects	166	28	44	19	1	5
Augmentation	Hazelmere WTW: Upgrade (45MI/d to 75MI/d)	128	39	6			
Upgrade	North Coast Various Projects	36	10				

<sup>1</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)	2015	2016	2017	2018	2019
			R'm	R'm	R'm	R'm	R'm
Rural Expansion	Greater Mpofana Regional Scheme Phase 1	463	97	97	118	143	
Rural Expansion	uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3) <sup>1</sup>	1,010	116	143	268	282	105
Rural Expansion	Richmond P/L-30kms	224	49	30			
Rural Expansion	Greater Eston BWS Scheme	202	21	30			
Augmentation	Midmar WTW Upgrade (250 to 375MI/d) and Dam RWPS <sup>2</sup>	245	21	80	82	59	
Augmentation	61 p/l: extension (Richmond Offtake to Umlaas Road) <sup>2</sup>	166	15				
Augmentation	251/51 New RW p/l (Dam to Raw Water P/S) <sup>2</sup>	90	44	35	10		

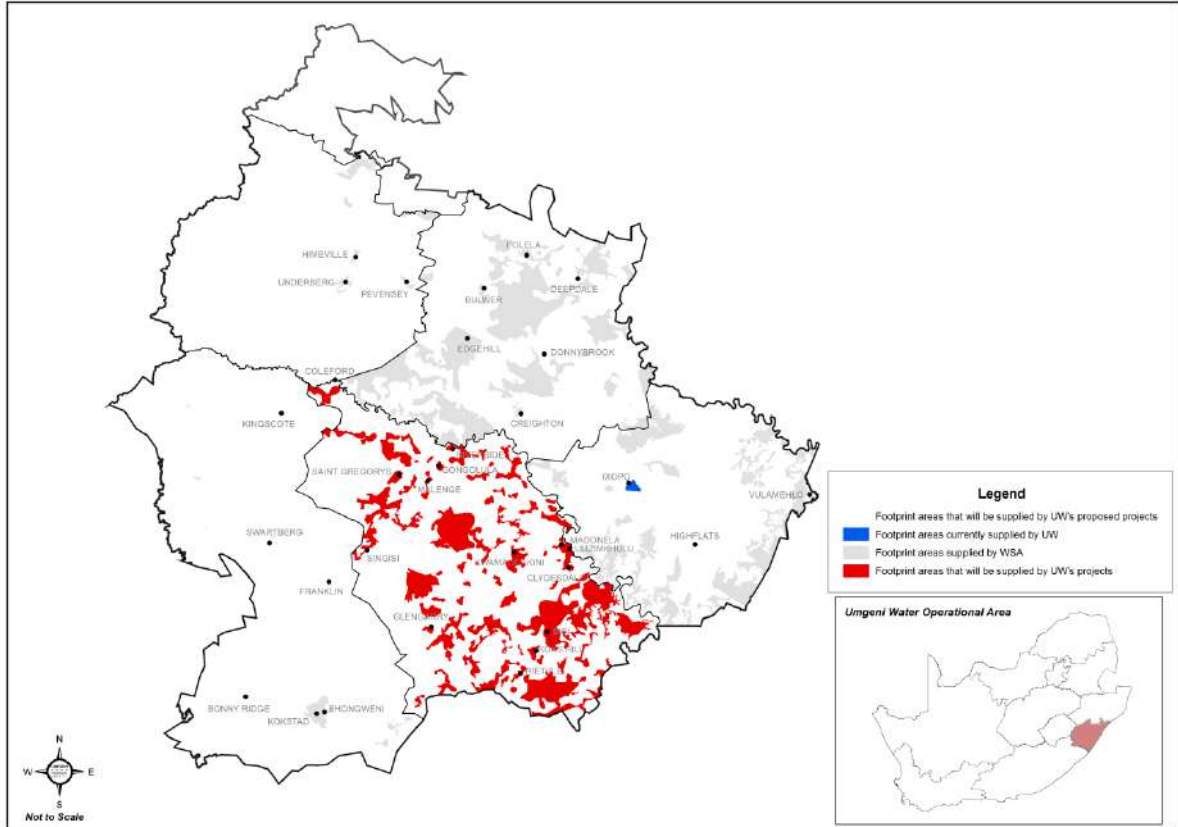
<sup>1</sup>Also see iLembe DM projects

<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. 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)	2015	2016	2017	2018	2019
			R'm	R'm	R'm	R'm	R'm
Rural Expansion	Harry Gwala Regional Schemes	20	1	2	4	3	10



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

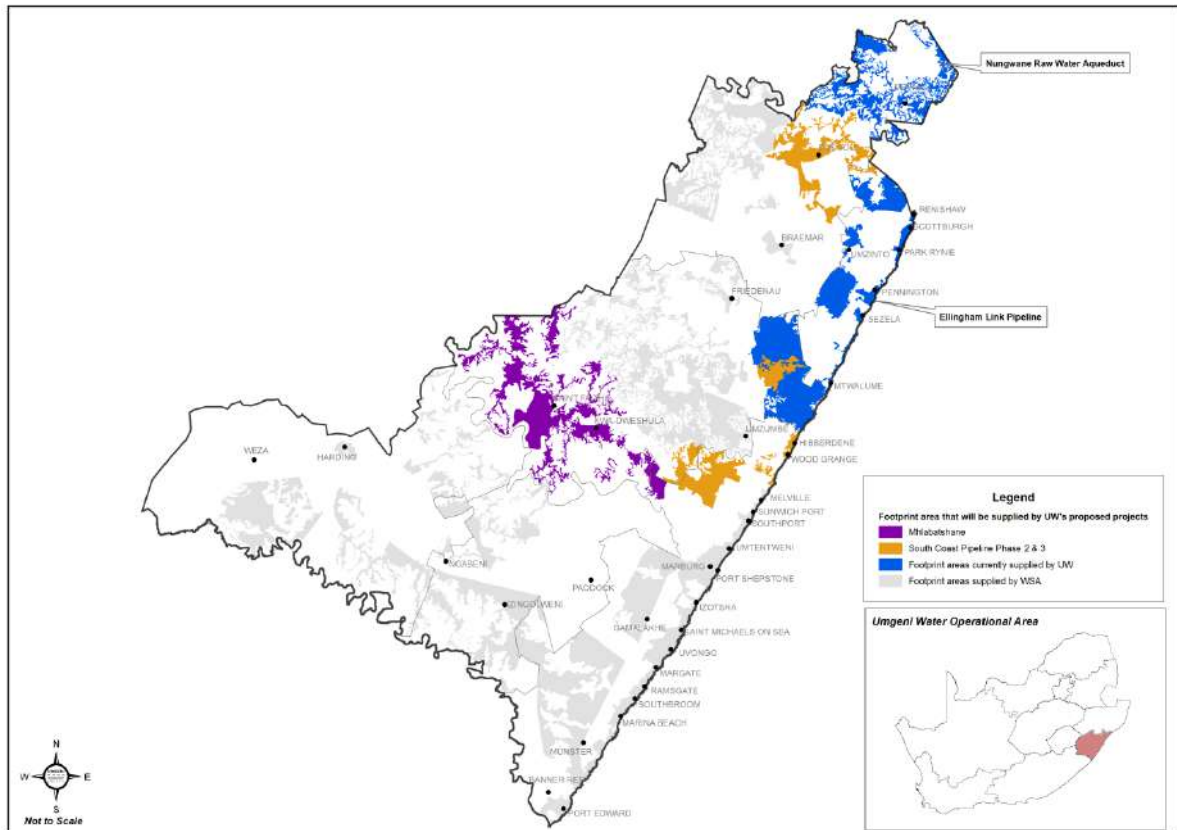


Table 11.8: Projects to be implemented in Ugu District Municipality within the next five years

Objective	Major Project	Project Total (R'm)	2015	2016	2017	2018	2019
			R'm	R'm	R'm	R'm	R'm
Rural Expansion	Mhlabatshane Sub-Regional Scheme	220	55.3				
Augmentation	South Coast Ph 2b (Scottburgh to Park Rynie; Kelso to Hibberdene)	172	9	56	66	41	
Rural Expansion	Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu R. abstraction	291	2	5	5	10	20
Augmentation	South Coast Augmentation Booster Pump Station	89					
Asset Condition	Nungwane Raw Water Aqueduct	78	15	30	30		
Augmentation	Ellingham Link Pipeline	37	21				
Upgrade	Umzinto WTW	12	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
Lower Thukela BWS Scheme Phase 1	Rural Expansion	iLembe DM	1,351	919
Lower Mkomazi Bulk Water Scheme	Augmentation	uMgungundlovu DM, eThekweni MM	1,143	83
uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3)	Rural Expansion	uMgungundlovu DM iLembe DM	1,010	914
Umlaas New Water Project	Augmentation	uMgungundlovu DM, eThekweni MM	442	25
Durban Heights WTW – Various Projects	Upgrade	eThekweni MM	583	429
Greater Mpofana Regional Scheme Phase 1	Rural Expansion	uMgungundlovu DM	463	455
Midmar WTW Upgrade (250 to 375Ml/d) and Dam RWPS	Augmentation	uMgungundlovu DM	245	242
Maphumulo BWS Scheme Phase 2	Rural Expansion	iLembe DM	224	118
Richmond P/L-30kms	Rural Expansion	uMgungundlovu DM	224	79
South Coast Ph 2b (Scottburgh to Park Rynie; Kelso to Umdoni)	Augmentation	Ugu DM	172	172
Southern Ndwedwe BWS Pipeline and Res)	Rural Expansion	iLembe DM	386	45
61 p/l: extension (Richmond to UmRd)	Augmentation	uMgungundlovu DM	166	15
Greater Eston BWS Scheme	Rural Expansion	uMgungundlovu DM	202	51
Wiggins WTW - Various Projects	Upgrade	eThekweni MM	153	57
Mhlabatshane Sub-Regional Scheme Ph 2 - Mzimkhulu R abstraction	Rural Expansion	Ugu DM	291	42
Hazelmere WTW Various Projects	Upgrade	iLembe DM	166	97
Hazelmere WTW: Upgrade (45-75Ml/d)	Augmentation	iLembe DM	128	45
251/51 New RW p/l (Dam to Raw Water P/S)	Augmentation	uMgungundlovu DM, eThekweni MM	90	89
Nungwane Raw Water Aqueduct	Asset Condition	Ugu DM	78	75
North Coast Various Projects	Upgrade	iLembe DM	36	10
Maphephethwa WW: Upgrade Plant (5.0 Ml/d)	Augmentation	eThekweni MM	56	9
Ellingham Link Pipeline	Augmentation	Ugu DM	37	21
Nagle Aqueducts 3 and 4 - Refurbishment	Asset Condition	eThekweni MM	71	
Durban Heights WTW – Reservoir 3 Roof Rehabilitation	Asset Condition	eThekweni MM	34	33
Amanzimtoti WTW Various Projects	Upgrade	eThekweni MM	29	12
Harry Gwala Regional Schemes	Rural Expansion	Harry Gwala DM	20	20
East Coast Desalination Plants	Augmentation	eThekweni MM	17	5
Umzinto WTW	Upgrade	Ugu DM	12	12

### **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.

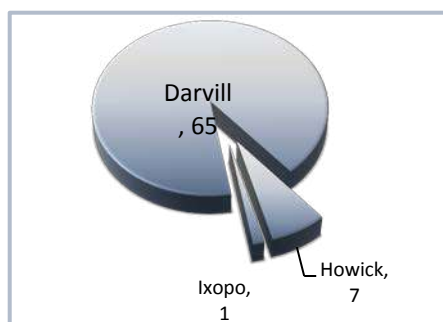
Quarterly operational liaison meetings with the municipalities will continue to ensure that customer requirements are continuously met and responses to new requirements are provided.

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.

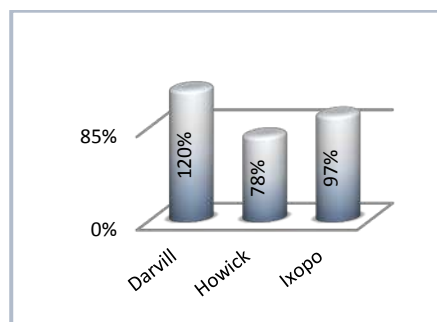
## 12 Bulk Wastewater Treatment and Disposal Plan

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. Two small “package” plants are also operated at Albert Falls Dam.

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



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



**Table 12.1:** Compliance projected to June 2014.

Wastewater Treatment Works	Design Capacity MI/d	UW Effluent Compliance			DWA Green Drop Ratings	
		2012	2013	2014 <sup>1</sup>	2012 Effluent Compliance	2012 Risk Rating
Darvill	79.7	86.0%	87.0%	70.6%	80.0%	68.8% (↑)
Howick	6.8	92.0%	82.7%	86.1%	64.5%	54.5% (↑)
Ixopo	1	83.2%	88.1%	95.2%	89.3%	82.4% (↑)

<sup>1</sup>valid as at 31 December 2013, to be updated with most recent information

### 12.1 Darvill Wastewater Treatment Works

The average daily flow of the Darvill Wastewater Treatment Works is 79.7 MI/d, with peaks estimated to exceed 300 MI/d during heavy rainfall events as a result of storm ingress. Flows over 110 MI/d cannot be processed, through the treatment works, the excess flow is diverted to the storm dam. In some instances, the storm dam spills over which results in the discharge of untreated sewage thus compromising the outgoing effluent quality. In addition to the increase in the hydraulic load, 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.

A recent planning investigation examined several growth scenarios in the Msunduzi Local Municipality and recommends an immediate capacity upgrade of 35MI/d, which will be adequate until 2023, and a further capacity upgrade of 20MI/d, the timing for which will be determined by the demand growth patterns.

Umgeni Water has been issued with a 20 year licence (No. 21065561) from 24 June 2010, renewable every five years. The permitted discharge is 75MI/d.

A capital project to undertake this work is in the Capex programme and commissioning is expected by March 2016. An interim upgrade of the works aeration capacity was implemented in October 2013 to minimise the impact of the increase in the organic load.

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

- Complete 35MI/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 the digesters is in progress.
- An artificial wetland system is under investigation as a possibility for improvement of otherwise untreated spillages out of the storm dam at times of high inflow.
- Green Drop Certification for the Darvill WWTW might be achieved in 2015 if the interim projects can meet the current load demands; otherwise this will first require completion of the major plant upgrade work.

## 12.2 Ixopo Wastewater Treatment Works

The current capacity of the Ixopo WWTW is 1MI/d. The projected 2013/2014 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 average daily inflow to the Ixopo WWTW in 2013 was 0.51 MI/day. 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 has been postponed. A new chlorinator has also been installed due to significant operational problems with the old unit leading to inadequate disinfection.

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

**Table 12.4:** Capex projects 2014/15 to 2018/19

Objective	Major Project	Project Total (R'm)	2015	2016	2017	2018	2019
			R'm	R'm	R'm	R'm	R'm
Upgrade	Ixopo Clarifier Upgrade	3	3				

### 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.
- Plans for a second clarifier are in design.
- Addition of an automated screen is under investigation and clearing of the storm dam is to be undertaken.
- 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 Waste Water 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.
- Green Drop Certification for the Ixopo WWTW is expected to be achievable in 2015.

## 12.3 Howick Wastewater Treatment Works

Umgeni Water has an Operations and Maintenance Contract with the uMgungundlovu District Municipality for the Howick WWTW. Effluent quality non-compliance is primarily due to the lack of adequate sludge dewatering. 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

- Completed multiple process optimisation interventions are being undertaken.
- Pumpstation issues are being addressed in the short term, whilst a longer-term project to upgrade these is under initial development with UMDM Municipality.
- Telemetry has been implemented to allow rapid response to problems.
- 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.
- A plan to build a new Mpophomeni WWTW, once implemented, it will reduce loads to Howick WWTW.
- Green Drop Certification for the Howick WWTW is expected to be achieved in 2015.

### 12.4 Albert Falls Wastewater Package Plants

Umgeni Water operates two small package plants – 0.01Ml/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.

### 12.5 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.

- Implementing agreed programmes with the WSA.
- Designing wastewater monitoring programmes for the WSA
- Increasing awareness through presentations and communications to improve understanding of requirements to achieve Green Drop certifications.
- Publication of effluent quality information in a format that is accessible to consumers.

## 13 Retail Supply

Umgeni Water does not provide any retail supplies.

## 14 Other Activities (Section 30)

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

Umgeni Water will continue to provide implementing agency services to OR Tambo District Municipality and Alfred Nzo District Municipality for bulk water services. Work will be undertaken in terms of the infrastructure funding agreement that was signed by the Department of Water Affairs (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 Affairs, the Alfred Nzo District Municipality and Umgeni Water.

#### 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

- The contract is to construct the Ludeke Dam, a 40 m high, Category 3, clay-core rockfill embankment dam on the Ludeke River, a tributary of the Mtamvuna River.
- Construction work on the Ludeke Dam is progressing well.
- Expected date of completion is May 2014.

#### 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.
- An interim raw water pumping system has been installed at the Ludeke Dam site in order to enable the commissioning of the works, and provide up to 4 Ml/d to the town of Bizana and surrounds.
- 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

- Phase 1 of the bulk treated water supply system, comprising 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 progressing reasonably well. The expected date of completion is August / September 2014.

The target date for completion of Phase 1 of the Scheme is September 2014 at a total capital cost of approximately R664 million (including VAT).

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 20Ml/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.



### Ingquza Hill Regional Bulk Water Supply Scheme

Umgeni Water has been appointed by the Department of Water Affairs as the Implementing Agent for the Study Phase of the Ingquza Hill Regional Bulk Water Supply Scheme, using the DWA RBIG “Framework for Implementation” as a guide in the implementation of this project.

No work has started on this project, as the RBIG Study Phase Agreement between the Department of Water Affairs and Umgeni Water has not been concluded. Once started, it is anticipated that this study will take about thirty three months to complete.

## 14.2 Agreement with DWA for Operation, Administration and Maintenance of Dams

Umgeni Water signed a 10 year renewable agreement for the operation, administration and maintenance of dams with DWA 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. The current contract expired at the end of March 2014. Whilst the Department is finalising its procurement process, Umgeni Water’s contract has been extended on a month-to-month basis for a maximum period of 6 months. The terrestrial weed programme (contract value R 2.1m for 6 months) will hire and train people from within the community as contractors or to be 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 Umgeni Water raw water supply catchments.

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

Project Name	Total Hectares	Total Person Days	Max People Employed per project
KZN Karkloof	269	1131	55
KZN Lions River	297	1860	55
KZN Midmar	202	800	33
KZN Nagle	339	1800	88
KZN Mgeni Valley	214	1250	66
KZN Upper Mvoti	121	710	55
KZN Upper Umgeni	272	1278	55
<b>Total</b>	<b>1 714</b>	<b>8 829</b>	<b>407</b>

## 14.4 Implementing Agent for DWA: RRU (Rapid Response unit)

DWA has established a Rapid Response Unit (RRU) as a facility to respond to emergencies and potential crises within the water sector. DWA has appointed Umgeni Water as the implementing agent to assist with the implementation of the RRU Projects. The scope of work of the RRU is:

- Responding to crises that result from water and wastewater infrastructure challenges, for example, cholera outbreaks and sewerage spillages.
- Augmenting DWA's capacity in responding to disasters i.e. floods, droughts and pollution of water.
- Designing and implementing proactive interventions aimed at pre-empting crises before they occur.
- Implementing small Capex and refurbishment projects.

The primary focus of the RRU will be on technical and operational issues, but proposals for sustainable medium term solutions to be implemented by DWA, municipalities and other relevant institutions will be drafted where resources and time permit. The RRU will also have the ability to undertake small capital and refurbishment works to give effect to the turnaround plans that are implemented in each particular situation. In municipalities that have been identified as high risk but not yet in a crisis, the RRU will also undertake proactive work such as the development of disaster management, water safety plans as well as the implementation of short-term projects that are listed as pre-requisites for the implementation of key long-term programmes e.g. water conservation and demand management plan for the Regional Bulk Infrastructure Grant (RBIG) projects.

The anticipated budget for the 2014/2015 financial year is R 6million.

## 14.5 Implementing Agent for DWA: KZN River Health (RHP) and Adopt a River Programme (AaRP) 2012 - 2015

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

## 14.6 Laboratory Services

Umgeni Water is providing laboratory testing services support to municipalities in order to improve Blue Drop and Green Drop compliance. Municipalities include Harry Gwala DM, Ugu DM, uMgungundlovu DM, Msunduzi LM and Alfred Nzo DM. Support for municipalities will continue as per agreed contracts or as per the DMs request where contracts do not exist.

Laboratory services are also provided to City of Mhlathuze LM, eThekweni MM, Amatola DM and uThukela Water where they lack capability or capacity.

Some laboratory services are also provided to the private sector.

## 14.7 Implementing Agent for DWA: Regional Bulk Infrastructure Grant (RBIG), Municipal Water Infrastructure Grant (MWIG) and Accelerated Community Infrastructure Programme (ACIP)

Umgeni Water was appointed by DWA in March 2013 to provide support for the Regional Bulk Infrastructure Grant Programme (RBIG), the Interim, Intermediate Water Supply Programme (IIWSP) and the Accelerated Community Infrastructure Programme (ACIP) for the period 1 April 2013 to 31 March 2014. This appointment has been further extended to September 2014.

Key support functions include (a) Development of appropriate strategies and business plans to implement these programmes nationally, (b) The development of implementation frameworks, (c) Technical evaluations of feasibility reports, (d) Development of RBIG/ACIP/MWIG guidelines, systems and various templates, (e) Coordination of RBIG/ACIP/MWIG activities of all the regions nationally, (f) Annual performance assessments of 80 RBIG projects in construction phase, and (g) Develop funding models for new projects.

Further information on the three DWA programmes is provided below.

### Regional Bulk Infrastructure Grant (RBIG):

The RBIG programme is a Division of Revenue Act (DoRA) schedule 6 programme, with the objective to supplement the financing of the social component of regional bulk water supply and sanitation infrastructure. The grant supports development of infrastructure required to connect or augment a water resource to infrastructure serving extensive areas across municipal boundaries or large regional bulk infrastructure serving numerous communities over a large area within a municipality and in the case of sanitation, supplement regional bulk collection as well as regional wastewater treatment works.

### Municipal Water Infrastructure Grant (MWIG)

The Municipal Water Infrastructure Grant (MWIG) was introduced in 2013 as a new Grant aimed to support WSA in the eradication of backlogs in the 24 priority District Municipalities. MWIG was established as a result of the development of an Interim, Intermediate Water Supply programme by DWA.

The programme main focus is to provide some water supply to all the people of South Africa by the end of June 2015. This will be achieved by either accelerating existing service delivery projects or by providing an interim or intermediate water supply solution, until more sustainable and permanent water supply solutions are implemented.

### Accelerated Community Infrastructure Programme (ACIP)

The Accelerated Community Infrastructure Programme (ACIP) is designed to assist Water Services Authorities to accelerate with the funding of interventions that will improve the functionality of existing water services infrastructure.

## 14.8 Implementing Agent for CoGTA: A concept plan to extend water services throughout KwaZulu-Natal

In November 2013, Umgeni Water agreed to programme manage 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 project is a consolidation of concurrent projects at CoGTA, the Department of Water Affairs (DWA) and at Umgeni Water and includes identification of water service delivery gaps and the provision of conceptual plans focussing on regional schemes. In areas where regional schemes aren't viable or where an interim water supply is needed a local scheme will be used.

The main immediate deliverable is the development of Universal Water Access Plans for each District Municipality in KwaZulu-Natal by the end of May 2014, with the completion of the project in the second half of 2014.

## **14.9 Implementing Agent for Human Settlements: Address Critical Water and Sanitation Service Delivery Challenges in KZN.**

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.

## 15 Human Resources Plan

### 15.1 Human Resources Strategy

Umgeni Water has reviewed and aligned Human Resources strategy to a consolidated and growth strategy. The purpose of Umgeni Water's 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 identified the ten human resources focus areas indicated with specific objectives for each:

- **Workforce Planning:** *To maintain a workforce that will enable it to deliver quality services to all its stakeholders.*
- **Resourcing:** *To ensure effective attraction, retention and engagement of staff with expertise, experience and skills, within a framework that ensures equity and diversity.*
- **Learning and Development:** *To create an environment in which all employees are recognised as well qualified, professionally engaged and committed to high quality and standards*
- **Performance Management:** *To ensure the achievement of Umgeni Water's strategic goals by managing skills, competencies, commitment of employees, recognizing good performance and managing poor performance effectively.*
- **Reward and Recognition:** *To ensure that it pays employees market related salaries and has in place career advancement and reward systems that remain attractive to employees.*
- **Employee Wellness:** *To manage all aspects of employee wellness that can have a negative impact on employee's ability to deliver on organisational objectives*
- **Employee Relations:** *To create an environment in which our employees feel valued and support the organisation's values, strategies and priorities.*
- **Organisational Development:** *To improve an organisational effectiveness and efficiency by utilising diagnostic data, designing and implementing appropriate organisational development solutions and interventions to measurable enable the organisation to optimise its strategy.*
- **HR Service Delivery:** *To measure employee engagement and satisfaction with delivery of HR services.*
- **Human Resources Information Technology:** *To provide real time reliable information and intelligence with improved discretion towards developing and delivering organisational strategy.*

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.

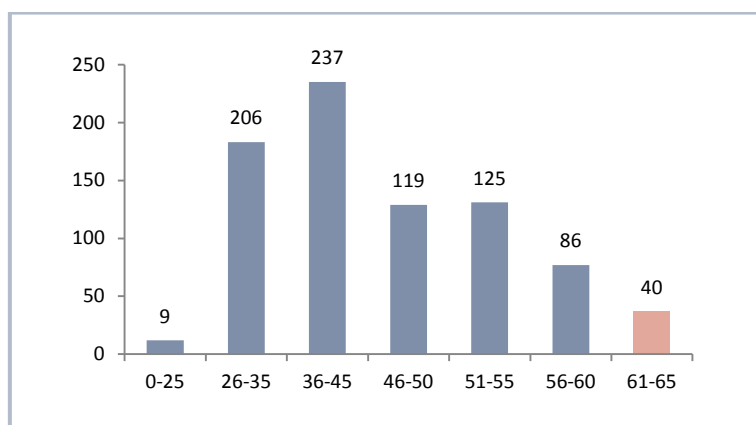
Workforce plan has been used as the basis to develop the Human Resources Plan which includes the projected additional human resource requirements as well as the age profile shown in **Table 15.1** and **Figures 15.1** respectively. This plan clearly shows that the workforce plan will be using the training programme interventions as well as succession planning to ensure that Umgeni Water addresses skills shortages whilst also addressing ageing and Employment Equity.

**Table 15.1:** Projected Workforce Profile for 2014/2015 to 2017/2018 (includes contract employees)

Occupational Levels	Baseline	2014/15	2015/16	2016/17	2017/18	2018/19
Top management	5	5	5	5	5	5
Senior management	30	30	30	30	30	30
Professionally qualified and experienced specialists and mid-management	210	214	221	223	223	223
Skilled technical and academically qualified workers, junior management, supervisors, foremen, and superintendents	407	415	433	434	434	434
Semi-skilled and discretionary decision making	199	206	214	218	218	218
Unskilled and defined decision making	137	143	147	147	147	147
<b>Total (excluding Board members)</b>	<b>988</b>	<b>1013</b>	<b>1050</b>	<b>1057</b>	<b>1057</b>	<b>1057</b>

During this business plan period, forty (40) employees of the total workforce are anticipated to retire normally from the organisation in five (5) years' time (**Figure 15.1**). The workforce age profile has been analysed and interventions have been put in place. The organisation currently has plans in place, such as succession plan and leadership / employee development programmes that will mitigate the loss of skills and institutional memory due to normal retirement. The training interventions will introduce more young employees into the organisation.

**Figure 15.1:** Current Workforce Age Profile



### 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

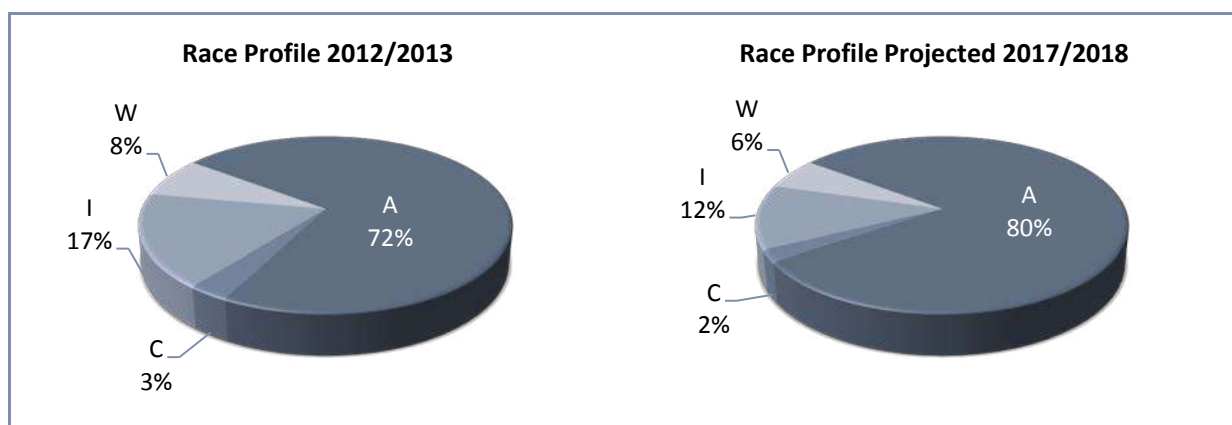


Figure 15.3: Gender Profile

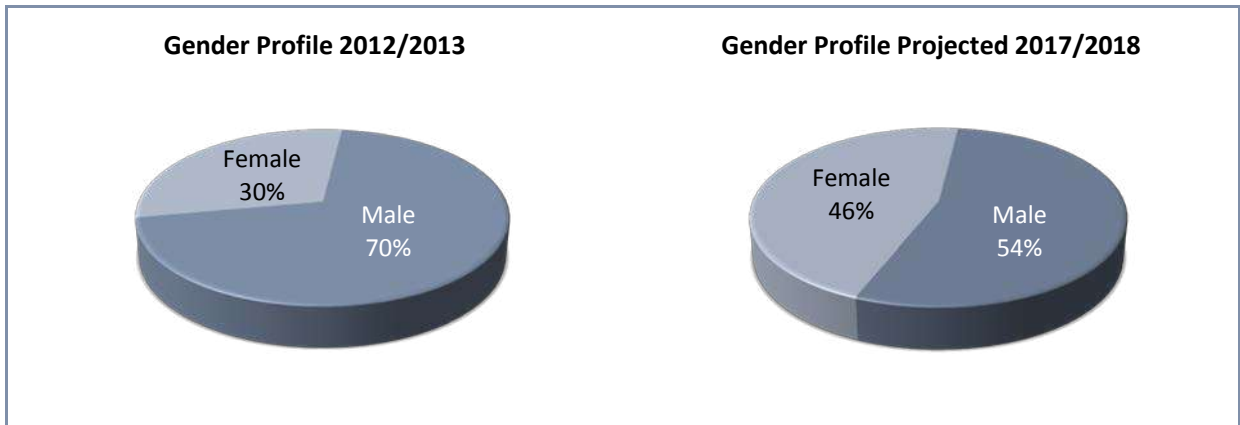
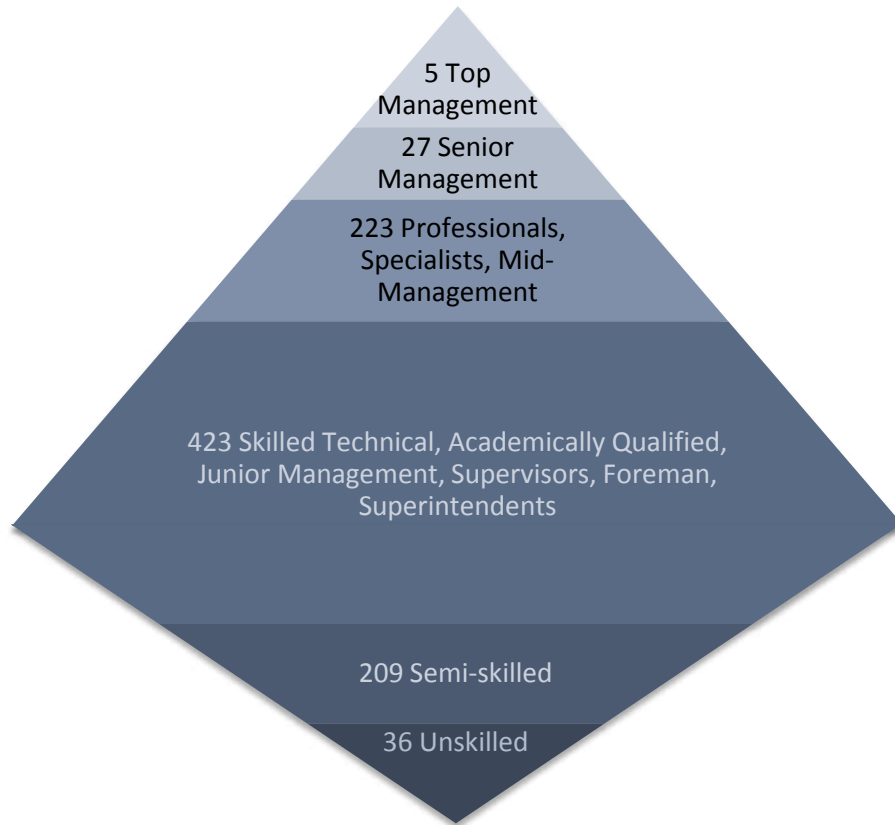


Figure 15.4: Occupational Categories



## 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.

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

### Learnerships and Apprenticeships

During this business plan period Umgeni Water will:

- Continue to develop and complete thirty-two (32) external Learnerships and fifteen internal staff Learnerships, in Water and Wastewater treatment, and
- Provide practical training for two (2) years to 32 external learners once they have acquired their trade tests in Mechanical Engineering, Electrical engineering and Instruments.
- Will continue to train twelve (12) apprentices, approved by EWSETA in 2013, in electrical, mechanical and instrumentation engineering disciplines.

### 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 and financial accounting.
- Continue to ring-fence eighteen positions in the structure for implementation of graduate development programmes as mechanisms for addressing the core, critical and scarce skills needed by the organisation.

### 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.

### 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**.

### 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.



### Build leadership, management and functional competence for regional water utility.

- Umgeni Water has concluded a Memorandum of Agreement with UKZN as part of the initiative to equip its leaders with the necessary and required skills and competencies in order to achieve its strategic objectives and to ensure that all Leaders are able to drive and implement the organisational strategy.
- UKZN has developed and customised a programme for Umgeni Water that will focus on the following leadership and managerial competencies:
  - Strategy generation and alignment;
  - Customer orientation;
  - Judgment and decision making
  - Risk Management;
  - Emotional Intelligence/ maturity;
  - Communication, networking and engagement;
  - Learning orientation;
  - Negotiations, influencing and conflict resolution;
  - Building effective teams;
  - Managing diversity;
  - Stakeholder mobilization;
  - Managing talent;
  - Results orientation;
  - Living Umgeni Water values, and
  - Business acumen.
- The programme will be structured into three phases to cater for three groups commencing from June 2014 to July 2016.
- Through this programme Umgeni Water will ensure sufficient competence is grown to support the regional water utility functions.

**Table 15.3: Staff Skills Development Plan for 2014/2015 to 2018/2019**

Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
<b>Develop technical skills for the organisation (artisans).</b>	Number of artisans training plans met.	32 training plans met (year 1 artisan)	32 training plans met (year 2 artisan)  20% of new artisans absorbed.	37 training plans met (year 1 learnership)	37 training plans met (year 2 learnership)	37 training plans met  32 trade tests passed	37 training plans met
<b>Develop technical skills for the organisation (process controllers).</b>	Number of process controllers training plans met.	56 training plans met	56 training plans met	56 training plans met	56 training plans met	56 training plans met	56 training plans met
<b>Develop technical skills for the organisation (apprentices electrical, mechanical and instruments).</b>	Number of apprentices training plans met.	12 training plans met	12 training plans met	12 training plans met	12 training plans met	12 training plans met	12 training plans met
<b>Develop technical skills for the organisation (graduates / interns).</b>	Number of graduates / interns development plans met and professional registrations obtained.	21 development plans met  1 professional registration.	18 development plans met	18 development plans met	18 development plans met	18 development plans met	18 development plans met.
<b>Develop technical skills for the organisation (bursars).</b>	Number of bursars' degree requirements met.	10 degree plans on track	10 degree plans met	10 degree plans met	10 degree plans met	10 degree plans met	10 degree plans met
<b>Develop and train water sector professionals for municipalities.</b>	Numbers of candidate engineers/ professionals developed and certification achieved.	44 in training.	44 developed.  4 certifications at year end.	40 developed.  11 certifications at year end.	29 developed.  11 certifications at year end.	18 developed.  18 certifications at year end.	-
<b>Enable training, development and assisted education as informed by Individual Development Plans.</b>		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)
<b>Superintendent</b>	5 (Class V)	5 (Class V)	1	4-Refresher Course 1-Advanced Operation Course	1-Advanced Operation Course 5-Refresher Course	1-Refresher Course
<b>Process and Quality Tech</b>	2 (Class V)	2 (Class V)	2	2 Advanced Water Operation	Process and Quality Tech	2 (Class V)
<b>Senior Operator</b>	2 (Class IV) 6 (Class V)	2 (Class V)	2	8-Refresher course	7-Refresher course	7-Refresher course
<b>Operator</b>	12 (Class 0) 2(Class II) 3 (Class III) 8 (Class IV) 11 (Class V)	3(Class II) 9 (Class III) 12 (Class IV) 6(Class V)	30	25-Refresher course 2-Enrolment in Learnership programme 1-Grandparenting 2-Skills programme	1 – Completing NTC III 1- Matriculation 20 - Require refresher training 1 – Enrol into WWW Learnership programme 4– Skills programme	1 – Currently completing B Tech 1 – Currently completing ND: Chemical Engineering – Require grand-parenting 3– Process environment experience 1 – to complete N3 1 – NTC III required 1 – Process training required 8–Refresher Course 3– Skills programme 2 – Water Purification Course
<b>Process Controllers</b>	12 (Class 0) 2(Class II) 1 (Class V) 1(not registered)	1(Class II) 10(Class III) 2 (Class IV) 4(Not registered)	17	15-Refresher course 1-Enrolment in Learnership programme 1-Skills programme	1 - Require refresher training 2 – Enrol into WWW Learnership programme Grand-parenting required- 2 10– Skills programme	2- Require refresher training 2 – Enrol into WWW Learnership programme 4-Grandparenting required 8– Skills programme
<b>Total</b>			<b>52</b>			

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

Type	No.	Field	No.
Candidate Engineer	8	Chemical Engineering	4
		Civil Engineering	3
		Electrical Engineering	1
Candidate Technician	3	Chemical Engineering	2
		Civil Engineering	1
Candidate Technologist	7	Chemical Engineering	2
		Civil Engineering	5
Professional Engineer	13	Civil Engineering	8
		Agriculture	1
		Chemical Engineering	1
		Mechanical Engineering	2
		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>42</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 of 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.

## 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.

### 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, referred to as the "Triple Zeros" strategy of zero new HIV Infections; 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 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.
- 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.

### 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 programs to ensure employee job fitness at all times
- There is a plan in place for a standardised comprehensive induction program site level to elevate risks associated with Umgeni Water operations for new and existing employees as well as contractors
- Continuous improvement initiatives to ensure that OHSAS 18001 certificate is maintained within the operations division
- Adequately trained emergency teams at site level to deal with operational emergencies
- Planned job observations that enforce compliance to the safe/ standard operating procedures

## 15.6 Employee Relations

Success in a competitive industry cannot be achieved without motivated, committed and unified workforce that is focused on achieving common objectives. Umgeni Water strives to create an environment in which our employees feel valued and support the organisation's values, strategies and priorities. 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 will maintain a sound employee relations environment which will bear positive results and provide value for the organisation. Formal employee relations are and will continue to be governed by collective bargaining and recognition agreements underpinned by the applicable legislation. 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) with fifty eight per cent (58%) of the total workforce. 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.

Umgeni Water currently implements environmental management programmes and plans throughout the life-cycle of its 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 for infrastructure projects.

### 16.1 Corporate Environmental Management

Umgeni Water is currently implementing corporate environmental sustainability initiatives aligned to global and national sustainability initiatives in the following areas:

- Biodiversity Management
- Waste Management
- Energy Efficiency
- Carbon Footprint Mapping

#### Biodiversity Management

Umgeni Water has developed a biodiversity management strategy which provides a framework for assessing the biodiversity status of Umgeni Water's 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 assessment 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. An avifauna study has been commissioned for the uMkhomazi Bulk Water Supply Scheme project and a search and rescue operation for protected trees and establishment of a nursery was implemented for the Lower Thukela Bulk Water Supply Scheme.

#### Waste Management

Umgeni Water has completed the alignment of its waste management strategy with the national strategy that 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:

- The completion of sample analysis for the water treatment residue classification project.
- Further investigations to be undertaken to implement the recommendations emanating from the study.
- Appointment of a service provider for the Corporate Waste initiative.

### Energy Efficiency

Energy audits for the various operational sites were completed in 2012 and the plans resulting from this are continuing to be implemented during this business plan period, including:

- Lighting efficiency project, and
- Hydropower Project.

### Carbon Footprint

Current measures will continue, including:

- Tree planting,
- Wetlands Project: The feasibility study is to be completed.
- Darvill WWW Co-generation: This project aims to use gas generated from the sludge digestion to generate electricity that will be used on the plant. Environmental Authorisation is in progress.

### Wastewater Reuse

Umgeni Water is currently investigating the option of treating domestic sewage from its Darvill Wastewater Treatment Works to potable standards. The proposal would then be to return the treated water back into the distribution system at Umlaas Road. The water could then be 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. 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 before any decision is made on whether or not to proceed with the project. The feasibility study for this wastewater reclamation project will be completed in 2014.

### 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 investigations that are of specific interest to Umgeni Water in this business plan period include:

- Evaluation, selection and implementation of energy-saving initiatives.
- Innovative cost-effective sludge handling and disposal strategy,
- Wastewater reclamation,
- Evaluation of alternate water treatment processes /chemicals for the treatment of low turbidity waters, currently being experienced in Umgeni Water.

## 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 and biodiversity management at the site, and
- Recommend management.

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.

### 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 thirteen projects in the business plan cycle that require a basic assessment or a Scoping and full environmental impact assessment study to be conducted. Table 16.1 shows key projects requiring environmental authorisations.

**Table 16.1:** Bulk Infrastructure Projects that will require environmental authorisations:

Project name	Requirements
East Coast Desalination	Obtain EA
Greater Mpofana Regional Scheme	Amend existing EA
Nungwane Raw Water Aqueducts	Obtain EA
Ngcebo WW Upgrade	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	Amend existing EA

Over and above the legal requirement - projects which are not listed activities - Umgeni Water will ensure there is environment best practise - through conducting screening assessments and developing operational environmental management plans for identified issues.

Seventeen projects in construction phase are currently monitored for compliance against the Environmental Management Plans and issues and mitigation 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 will be reviewed in the year to assess suitability to address current issues facing the region. Thrusts for this five year business plan will include a refresher on the water cycle and the finiteness of freshwater resources, integrated catchment management or a source-tap-source view of the water value chain, water quality and land-use management, sanitation, pollution prevention, the water, health and environment nexus, water treatment, water use, water re-use and conservation.

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 Grades 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.

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 have no 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.

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 Arbor 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. On-line materials and audio visual content will be 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 infrastructure (currently below 5%) and the organisation is committed to reducing / maintaining its water loss below this level.

However, the organisation recognises that significant savings could also be gained from customers' water loss measures. Water Service Authorities served by Umgeni Water are at various stages regarding implementation of water conservation and demand management measures within their respective areas. Umgeni Water will continue to collaboratively work with and assist customers in this regard.

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 undertook an assessment of water loss in the Swayimana area of uMgungundlovu District Municipality (UMDM). This pilot study included the monitoring of flows and identification of water loss in the district municipality's reticulation network. The result of the study showed high water loss and the UMDM was appraised of areas where significant water savings could be obtained through leak management. The study also showed that the behaviour of the rural communities toward water conservation could be a contributing factor towards high unaccounted for water. After initiating an education campaign in the area significant savings were realised. There are no known initiatives currently underway in the remaining uMgungundlovu municipal areas.

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.

Ugu and Harry Gwala district municipalities are implementing water demand management initiatives within the towns of KwaDukuza (Stanger), Port Shepstone, and Ixopo, respectively, which could offset the growth in demands for these areas.

The Msunduzi Local Municipality has recently embarked on an extensive water demand management programme consisting of a number of different initiatives. It has instituted an aggressive credit control policy which is expected to have an impact on water sales. During 2013, it is expected that its pressure reduction initiative in the reticulation system will contribute to reducing water losses.

Umgeni Water will continue with its education and public awareness programmes through the environmental education unit targeting schools and encouraging learners and educators to visit the organisation's water treatment works.

Furthermore, Umgeni Water, in conjunction with the Department of Water Affairs, is working closely with the Water Services Authorities to apply initiatives for the "No Drop" assessments, which forms part of the "Blue Drop" audit.

## 19 Corporate Social Investment (CSI) Plan

Umgeni Water is committed to supporting the alleviation of poverty, underdevelopment and inequity. 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 with respect to 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 (**Table 19.1**). In addition, CSI projects are also linked to the organisation's Capex Programme (**Table 19.2**).

**Table 19.1:** Projects approved by CSI Committee for funding and implementation

Project	Beneficiaries and Outcomes	Estimated Investment	Status and planned work.
Establishment of a concrete products manufacturing plant at Maphephethwa in Inanda.	A co-operative comprising a group of people from Maphephethwa has been formed with the assistance of Umgeni Water. The co-operative will manufacture bricks, blocks and other concrete building material for supply to local contractors and other home builders. The objective of the funding of this project is to create sustainable jobs	R730 000	The co-operative has been formally established, and equipment procured.  2014/2015 work: Establishment of concrete products manufacturing plant completed.
Refurbishment of drinking water infrastructure and sanitation facilities at the Woodlands Primary School in Woodlands, Pietermaritzburg	The potable water infrastructure and toilets used by learners at the Woodlands Primary School are in urgent need of repair and refurbishment. The poor state of both facilities has caused inconvenience and health risks for learners at the school. The investment is for the improvement of the drinking water trough and toilets.	R180 000	2014/2015 work: Project approved, specifications prepared and contractor appointed.
Purchase and installation of a booster pump at the primary health clinic in Swayimane, uMgungundlovu	The clinic in Swayimane supplied by the uMgungundlovu District Municipality is unable to provide water to patients because a booster pump is required for water to get to the taps at the clinic. Umgeni Water will therefore install the booster pump.	R20 000	The specifications for the booster pump have been developed and procurement is in progress.

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

Capex Programme Project	CSI Project	Estimated Investment	Status and planned work.
Darvill WWTW Upgrade	Darvill artificial wetland: Construction of an artificial wetland at the Darvill WWTW. Construction will commence in the latter part of 2014/2015.	R1 Million	Design and Environmental Assessment
Howick West Reservoir Upgrade	School Multi resource centre: Development of a Multi Resource Centre at KwaHaza Primary School.	R700,000	Not started
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.	R1 Million	In planning
Greater Mpofana Regional Scheme	Skills development and transfer: Training of technician and university students during the construction phase of the project.		
Pipeline 61 to Richmond	Early Childhood Development Facility rehabilitation: Facility rehabilitation and identification of equipment needs.	R300,000	Not started
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

A key outcome of Umgeni Water's financial objectives is Financial Viability. This will be achieved when Umgeni Water understands the organisational life-cycle costs and maintains a balance between debt and assets while managing operating expenditures and increasing revenues. In addition, the organisation aims at a sustainable tariff that is consistent with customer expectations, recovers costs and provides for future expansion. As a result, the financial plan continues to focus the financial resources toward realisation of the utility's Vision, Mission, Strategic and Benevolent Intentions and Core Values which will enable the organisation to achieve the stated outcome.

The financial plan has taken cognisance of Umgeni Water's intended role as a regional water utility and in this regard stabilised its financial standing through:

- Cost reduction initiatives
- Ascribing to strict debt management ratios (Debt:Equity ratio of not greater than 0.7 times; Debt :Asset of not greater than 0.4 times and interest cover ratio of greater than 2.5 times)
- Maintaining sufficient liquidity to finance current and future debt (Operational cashflows to not fall below R600m).

Therefore, Umgeni Water is in a sound position to respond to DWA's re-alignment programme and Regional Water Utility establishment.

Umgeni water has recognised that the above inflation price increases in key cost drivers need to be mitigated by tariff increases of at least CPI plus 2.5% in addition to cost containment measures to control operating costs. Therefore the projected financial statements indicate that the existing operations are projected to grow more steadily than the previous business plan. This is demonstrated through:

- Improved net profit margin trends (28% average NP% over the next 5 years)
- Positive operating cashflows at levels greater than R600m
- Improved current ratios and debt management ratios which can better buffer the impact of operational risk on the financial position of the entity.

Umgeni Water's capital expenditure over the next 6 years will be R6 894m which is R2 225m greater than the investment envisaged in the previous 2014 business plan ("2014 BP"). The increased capital expenditure programme is attributed to scope changes, updated estimates from planning stages and new projects. The increase in the capex programme has been offset by an increase in RBIG funding confirmed by DWA (R1 545m from R753m in the 2014 BP).

In terms of debt management, the debt levels are anticipated to increase from R1 250m in 2014, peaking in 2017 at R2 264m and thereafter reducing to R2 105m in 2019. The current borrowing limit of R1 750m expires on 30 June 2014. The new borrowing limits motivated to DWA and National Treasury cater for additional debt which may be required to fund the growth strategy in addition to the existing capex programme.

The funding strategy remains as a staggered debt issuance of R1.25bn over 2 years or a full issuance by 2017, both options having minimal impact on the debt management ratios.

The following key financial risks which could have a severe impact on the organisation, remain:

- Incorrect funding mix of developmental projects
- Charging an unsustainable tariff to the Umgeni Water customers
- Liquidity risk
- Credit risk
- Interest rate risk

These strategic risks are managed through mitigation interventions (Discussed fully in chapter 25 of this business plan).

## 20.2 Financial planning assumptions

### 20.2.1 Macroeconomic Factors

Table 20.1: Macroeconomic assumptions

	Actual			Budget F'14	Forecast					
	F'11	F'12	F'13		F'14	F'15	F'16	F'17	F'18	F'19
<b>Inflation</b>										
As measured by CPI per the BER	5.00%	5.60%	5.70%	5.60%	6.10%	5.70%	5.60%	5.40%	5.30%	5.30%
Internal Inflation										
- Direct costs (s29)					11.56%	8.42%	14.38%	9.24%	8.89%	9.13%
- total costs (s29)					22.7%	9.7%	10%	5.03%	8.34%	4.65%
<b>PPI</b>										
Per the BER	8.40%	6.90%	6.00%	4.70%	6.90%	5.90%	5.40%	5.30%	5.30%	5.30%
% Adjustment				1.70%	1.70%	1.00%	1.00%	1.00%	1.00%	1.00%
<b>Revised calendar average</b>	<b>8.40%</b>	<b>6.90%</b>	<b>6.00%</b>	<b>6.40%</b>	<b>8.60%</b>	<b>6.90%</b>	<b>6.40%</b>	<b>6.30%</b>	<b>6.30%</b>	<b>6.30%</b>
<b>Interest Rate - Borrowings *</b>										
Short-term				5.17%	7.00%	7.21%	7.65%	7.91%	8.11%	8.28%
Spread				0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%
<b>All in rates</b>				<b>5.77%</b>	<b>7.60%</b>	<b>7.81%</b>	<b>8.25%</b>	<b>8.51%</b>	<b>8.71%</b>	<b>8.88%</b>
Long-term				7.34%	8.70%	9.11%	9.15%	8.75%	8.68%	8.68%
Spread				1.60%	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%
<b>All in rates</b>				<b>9.74%</b>	<b>10.30%</b>	<b>10.71%</b>	<b>10.75%</b>	<b>10.35%</b>	<b>10.28%</b>	<b>10.28%</b>
<b>European Investment Bank = Variable</b>										
6 month jibar				5.35%	6.88%	7.88%	7.88%	7.88%	7.88%	7.88%
Add: 58.6bps (floating rate)				0.59%	0.59%	0.59%	0.59%	0.59%	0.59%	0.59%
<b>All in rate</b>				<b>5.94%</b>	<b>7.47%</b>	<b>8.47%</b>	<b>8.47%</b>	<b>8.47%</b>	<b>8.47%</b>	<b>8.47%</b>
<b>European Investment Bank = Fixed rate</b>				<b>8.44%</b>	<b>10.01%</b>	<b>10.01%</b>	<b>10.01%</b>	<b>10.01%</b>	<b>10.01%</b>	<b>10.01%</b>
<b>Interest Rate – Investments</b>	<b>5.91%</b>	<b>5.88%</b>	<b>5.39%</b>	<b>4.27%</b>	<b>6.10%</b>	<b>6.31%</b>	<b>6.75%</b>	<b>7.01%</b>	<b>7.21%</b>	<b>7.38%</b>
<b>Weighted average cost of capital</b>	<b>9.28%</b>	<b>9.34%</b>	<b>9.20%</b>	<b>9.28%</b>	<b>9.12%</b>	<b>9.54%</b>	<b>9.90%</b>	<b>10.02%</b>	<b>10.06%</b>	<b>10.11%</b>
<b>Exchange rates</b>										
R/\$	7.250	8.210	9.625	8.430	10.890	10.300	10.600	10.870	11.210	11.210
R/euro	10.080	10.550	12.528	10.810	14.266	13.081	13.356	13.914	14.461	14.461
R/pound sterling	11.620	13.000	14.754	13.390	17.533	16.171	16.536	17.175	17.936	17.936

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 2014
- BER interest Forecast – January 2014
- BER Exchange Rate forecast – January 2014

\*Interest rate borrowings:

- a) 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.
- b) 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

	Actual			Budget	Forecast					
	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
<b>Approved establishment Umgeni Water</b>	<b>841</b>	<b>847</b>	<b>907</b>	<b>927</b>	<b>929</b>	<b>954</b>	<b>991</b>	<b>998</b>	<b>998</b>	<b>998</b>
<b>Staff Complement Umgeni Water</b>										
Filled	789	787	832	927	863	954	991	998	998	998
Vacant	52	60	75		66					
<b>SUB-TOTAL: Permanent establishment</b>	<b>841</b>	<b>847</b>	<b>907</b>	<b>927</b>	<b>929</b>	<b>954</b>	<b>991</b>	<b>998</b>	<b>998</b>	<b>998</b>
contract Staff – Recoverable	38	37	50	55	59	59	59	59	59	59
contract Staff – General	13	18	21							
<b>Total complement Umgeni Water</b>	<b>892</b>	<b>902</b>	<b>978</b>	<b>982</b>	<b>988</b>	<b>1 013</b>	<b>1 050</b>	<b>1 057</b>	<b>1 057</b>	<b>1 057</b>
<b>Approved establishment Msinsi</b>	<b>81</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>Staff Complement Msinsi</b>										
Filled	81	77	73	141	109	144	144	144	144	144
Vacant		64	68	-	35	-	-	-	-	-
<b>Total complement Msinsi</b>	<b>81</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>TOTAL GROUP COMPLEMENT</b>	<b>973</b>	<b>1 043</b>	<b>1 119</b>	<b>1 123</b>	<b>1 132</b>	<b>1 157</b>	<b>1 194</b>	<b>1 201</b>	<b>1 201</b>	<b>1 201</b>

In 2014/15, the group has an approved and funded establishment of 1 157, of which the Umgeni Water parent establishment is 1 013 and subsidiary, Msinsi Holdings, establishment is 144.

The staff establishment increased in the previous period from 2012/13 (1119) to 2013/14 (1132) due to:

- The additional staff in the Project management unit to deliver on capex programme
- Process controllers to meet the new water quality standards requirements
- Additional staff to meet operational requirements for maintenance of bulk water infrastructure.
- Additional staff required to operate new schemes.

The staff increase from 2013/14 to 2016/17 is mainly due to:

- Additional staff required to operate new schemes (Hazelmere, Lower Thukela, Greater Mpofana)
- Additional Maintenance staff required to meet the operational requirements for maintenance of bulk water infrastructure for new schemes.
- Additional staff (Human Resources and Finance) required to provide Head office support for new schemes and growth projects.

Support staff form 59% of the establishment in 2014 and 2015.

Table 20.3: Staff Costs (R'000)

	Actual			Budget	Forecast					
	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
<b>Staff Costs : Umgeni Water</b>										
<b>Annual Salary Increase</b>	8.0%	8.3%	7.9%	9.0%	8.0%	9.0%	8.0%	7.9%	8.1%	8.1%
<b>[Based on nominal wage rate forecast by BER]</b>										
Per the Income statement:										
- Direct staff costs	100 944	105 291	117 203	138 279	134 324	164 352	196 487	215 885	233 372	252 275
- Indirect staff costs	140 573	152 979	174 112	206 092	210 099	238 427	257 501	277 844	300 349	324 678
Maintenance Payroll (incl in maintenance cost)	52 159	57 165	62 504	70 178	72 108	78 538	84 821	91 521	98 935	106 948
O&M Dams Payroll (recovered to S30 O&M costs)*	-	6 490	6 617	8 908	7 901	-	-	-	-	-
<b>Subtotal</b>	<b>293 676</b>	<b>321 924</b>	<b>360 436</b>	<b>423 457</b>	<b>424 433</b>	<b>481 317</b>	<b>538 809</b>	<b>585 250</b>	<b>632 656</b>	<b>683 901</b>
- % Increase before recoveries	7.0	9.6	12.0	14	17.8	13.4	11.9	8.6	8.1	8.1
- Less WIP Recoveries	(7 698)	(8 120)	(17 505)	(20 175)	(18 574)	(21 720)	(23 457)	(25 310)	(27 360)	(29 577)
- Less recovered to CPG Monitoring & Compliance	-	-	-	-	(903)	(1 418)	(1 532)	(1 653)	(1 787)	(1 931)
<b>Total staff costs</b>	<b>285 978</b>	<b>313 804</b>	<b>342 931</b>	<b>403 282</b>	<b>404 955</b>	<b>458 179</b>	<b>513 820</b>	<b>558 287</b>	<b>603 509</b>	<b>652 393</b>
- % Increase after recoveries	9.0	9.7	9.3	13.8	18.1	13.1	12.1	8.7	8.1	8.1
- Average pay (based on complement)	329	357	369	431	430	475	513	554	599	647
- % Increase	7.4	8.4	3.3	12.3	16.6	10.6	8.0	7.9	8.1	8.1
Productivity - Kl'000 per employee	465.1	462.3	432.9	426	440.1	435.7	425.8	429.9	436.4	442.9
<b>Staff costs: Msinsi</b>	<b>16 808</b>	<b>18 190</b>	<b>18 510</b>	<b>23 495</b>	<b>22 333</b>	<b>24 119</b>	<b>26 049</b>	<b>28 133</b>	<b>30 384</b>	<b>32 814</b>
<b>TOTAL GROUP STAFF COSTS</b>	<b>258 325</b>	<b>276 460</b>	<b>309 825</b>	<b>367 866</b>	<b>366 756</b>	<b>426 899</b>	<b>480 037</b>	<b>521 862</b>	<b>564 105</b>	<b>609 767</b>
<b>Other payroll related costs included in operating costs</b>										
<b>Retirement benefit costs (included in other operating costs)</b>										
- Post retirement medical aid	40 567	48 997	29 026	66 273	33 513	38 715	40 893	44 622	48 675	53 116
Current service cost	6 042	7 096	7 944	8 893	8 749	9 636	10 175	10 725	11 293	11 892
Interest cost	15 762	18 520	21 082	23 998	24 764	29 089	30 718	33 897	37 382	41 225
Actuarial (gain)/loss	18 763	23 381	-	33 381	-	-	-	-	-	-
- Pension	18 658	83 588	47 031	80 049	55 274	61 153	67 736	72 660	77 917	83 598
Current service cost	16 985	26 002	29 599	31 372	36 006	38 957	42 150	44 426	46 781	49 260
Interest cost	39 086	47 656	50 140	15 477	66 457	74 487	83 503	92 146	101 618	112 064
Expected return on assets	(37 991)	(44 072)	(36 093)	-	(47 189)	(52 291)	(57 917)	(63 911)	(70 482)	(77 727)
Past service cost	-	-	3 385	-	-	-	-	-	-	-
Actuarial (gain)/loss (pre 2013)	578	54 002	-	-	62 397	-	-	-	-	-
Conversion from DB to DC	-	-	-	33 200	-	-	-	-	-	-
<b>Total</b>	<b>59 225</b>	<b>132 585</b>	<b>76 057</b>	<b>146 322</b>	<b>88 787</b>	<b>99 878</b>	<b>108 629</b>	<b>117 282</b>	<b>126 592</b>	<b>136 714</b>
- % Increase	17.3	123.9	(42.6)	(6.6)	16.7	12.5	8.8	8.0	7.9	8.0
<b>Other payroll related costs included in Other Comprehensive Income</b>										
Other comprehensive income (IAS 19 - Actuarial Gain/Loss)	-	-	159 906	45 820	94 582	47 226	47 226	47 226	47 226	47 226
<b>Total Retirement Benefit Cost</b>	<b>59 225</b>	<b>132 585</b>	<b>235 963</b>	<b>192 142</b>	<b>183 369</b>	<b>147 104</b>	<b>155 855</b>	<b>164 508</b>	<b>173 818</b>	<b>183 940</b>
<b>Trainees</b>										
establishment cost	13	17	20	30	25	25	25	25	25	25
cost	1 428	1 544	2 212	4 288	4 171	3 671	3 965	4 278	4 624	4 999
<b>National Treasury trainees</b>										
establishment cost	-	-	52	50	52	52	48	37	26	-
cost	-	-	11 510	12 204	14 126	15 285	15 238	12 674	9 627	-
<b>Learners</b>										
establishment cost	37	37	47	45	50	50	55	55	55	55
cost	713	745	574	1 242	3 822	3 871	4 198	4 198	4 198	4 198

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



## 20.2.3 Operating costs

Table 20.4: Major operating costs (R'000)

	Actual			Budget	Forecast					
	F'11	F'12	F'13	F'14	F'14	F'15	F'16	F'17	F'18	F'19
<b>Energy</b>										
- Forecast Price increase			16%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	10.0%
- New schemes				1.0%			3.0%	1.0%	1.0%	
- total price and impact of new schemes			16%	9.0%	8.0%	8.0%	11.0%	9.0%	9.0%	10.0%
- Cost	90 844	107 013	111 898	150 048	142 436	175 452	194 752	212 280	231 385	254 524
<i>Direct</i>	87 657	103 391	107 884	146 014	138 464	170 752	189 535	206 593	225 187	247 705
<i>Indirect</i>	3 187	3 622	4 014	4 034	3 972	4 700	5 217	5 687	6 199	6 818
- Increase in cost (%)	52.9	17.8	4.6	9.2	27.3	23.2	11.0	9.0	9.0	10.0
- Cost per kilolitre	21.9	25.7	26.5	35.8	32.8	39.8	43.6	46.7	50.2	54.4
- Allocated to S30 O&M dams*		13 581	5 009	32 400	7 810	-	-	-	-	-
- Increase in cost (%)		100	(63)	141	55.9	(100)				
<b>TOTAL ENERGY COSTS</b>	<b>90 844</b>	<b>120 594</b>	<b>116 907</b>	<b>182 448</b>	<b>150 246</b>	<b>175 452</b>	<b>194 752</b>	<b>212 280</b>	<b>231 385</b>	<b>254 524</b>
<b>Chemicals</b>										
- Forecast Price increase			11.4%	13.0%	11.1%	9.5%	10.5%	10.5%	10.5%	10.5%
- Cost	36 727	41 786	50 452	62 452	47 871	53 223	58 812	64 987	71 811	79 351
- Increase in cost (%)	13.0	13.8	20.7	20.3	(5.1)	11.2	10.5	10.5	10.5	10.5
- Cost per kilolitre	8.9	10.0	11.9	14.9	11.0	12.1	13.2	14.3	15.6	16.9
<b>Maintenance</b>										
- Total Cost	133 251	145 287	152 335	181 887	161 326	189 567	205 018	221 715	239 779	259 322
<i>Direct</i>	109 851	130 804	137 456	161 908	146 896	171 811	186 126	201 633	218 431	236 630
<i>Indirect</i>	23 400	14 483	14 879	19 978	14 430	17 756	18 892	20 083	21 348	22 693
- Maintenance payroll	52 159	57 165	62 504	70 178	72 108	78 538	84 821	91 521	98 935	106 948
- Total excl Maint payroll	81 092	88 122	89 831	111 708	89 217	111 030	120 197	130 194	140 844	152 374
- Increase in cost (%)	4.9	9.0	4.9	9.4	5.9	17.5	8.2	8.1	8.1	8.2
- Increase in cost (excl Maint payroll) (%)	3.0	8.0	1.9	8.5	(0.7)	24.4	8.3	8.3	8.2	8.2
- % of Assets (PPE)	4.6	4.1	4.4	4.3	4.7	4.5	3.6	3.1	2.8	2.9

\* The energy costs incurred by the O&M of DWA owned dams will remain an operating cost to Umgeni Water and from 2015 onward will not be billed back to DWA. The contra impact will be a reduction in the raw water cost. The costs for 2014 reflect nine (9) months of the bill back of costs to DWA.

## 20.2.4 Raw water costs

Table 20.5: Raw water cost assumptions (R'000)

	Actual			Budget	Forecast					
	F'11	F'12	F'13	F'14	F'14	F'15	F'16	F'17	F'18	F'19
<b>Raw Water Abstraction Volumes (kl'm)</b>										
Volume Mgeni System	395	396	406	396	403	408	413	421	427	434
Volume Mdloti System	16	17	17	18	17	18	18	19	19	19
Volume Other	21	21	21	23	28	29	29	29	29	29
<b>Total Abstraction Volume</b>	<b>432</b>	<b>434</b>	<b>443</b>	<b>437</b>	<b>449</b>	<b>455</b>	<b>461</b>	<b>469</b>	<b>476</b>	<b>483</b>
<b>Raw Water Consumption Charge per System (c/kl)</b>										
<b>Mgeni System</b>										
Tariff existing infrastructure	18.33	20.86	23.11	26.45	26.67	29.89	33.18	36.83	40.88	45.38
Increase %	13.5	13.8	43.1	14.5	15.4	12.1	11.0	11.0	11.0	11.0
<b>Mdloti system</b>										
Tariff existing infrastructure	92.96	78.54	91.96	105.43	103.51	107.58	118.83	129.53	141.18	153.89
Increase %	10.8	(15.5)	9.6	14.7	12.6	3.9	10.5	9.0	9.0	9.0
<b>Consumption charge - New Capex</b>										
Cost Raising Hazelmere Dam Wall				15 200	-	-	19 000	19 000	19 000	19 000
Increase %				-	-	-	-	-	-	-
Spring Grove dam (c/kl)			40.8	40.80	40.80	42.60	44.80	47.10	47.5	47.8
Increase %				-		4.4	5.2	5.1	0.8	0.6
<b>Operation and maintenance Charge per System (c/kl)</b>										
<b>Mgeni System</b>										
Cost		9.86	8.88	17.94	10.88	1.3	1.37	1.45	1.53	1.62
Increase %				60.0	22.4	(88.1)	5.7	5.7	5.7	5.7
<b>Mdloti system</b>										
Cost		37.78	36.42	52.13	54.51	7.10	7.41	7.69	7.99	8.31
Increase %				12.7	49.7	(87.0)	4.3	3.8	4.0	4.0
<b>Water Resource Management Charge (based on registered volume) (c/kl)</b>										
Tariff - existing	1.99	2.18	2.30	2.54	2.57	2.84	3.00	3.17	3.35	3.54
Increase %	24.2	9.7	43.4	8.0	11.7	10.6	5.7	5.7	5.7	5.7
<b>Total Raw Water Costs</b>										
- Abstraction	87 222	95 777	109 102	123 859	125 428	141 565	159 031	179 261	201 648	226 838
- Abstraction - New Infrastructure	-	-	-	15 200	-	-	19 000	19 000	19 000	19 000
- Abstraction - C.U.C. – Recoverable#	-	-	-	171 200	-	-	-	-	-	-
- O & M Dams*		45 388	42 120	80 506	53 298	6 592	7 038	7 546	8 078	8 647
- Water Resource Management charge	8 729	9 433	10 168	11 123	11 515	12 928	13 829	14 865	15 948	17 110
<b>Total Raw Water Costs</b>	<b>95 951</b>	<b>150 598</b>	<b>161 390</b>	<b>401 887</b>	<b>190 241</b>	<b>161 085</b>	<b>198 898</b>	<b>220 672</b>	<b>244 674</b>	<b>271 595</b>
Increase in cost %	14.4	57.0	7.2	18.2	17.9	(15.3)	23.5	10.9	10.9	11.0
Effective unit cost	22.22	34.71	36.42	91.88	42.42	35.39	43.17	47.10	51.45	56.27
Increase in unit cost %	15.5	56.2	5.0	17.2	16.5	(16.6)	22.0	9.1	9.2	9.4

# The capital unit charge (C.U.C.) is an agreed 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 DWA that the costs borne by UW for the O&M of DWA owned dams will not be recovered from DWA. In turn, DWA will not charge UW as part of its raw water charge that amount which is required to recover the O&M of DWA owned dams carried out by UW.

## 20.3 Sales volumes

Table 20.6: Sales volumes projections (kl'000)

	Actual			Budget	Forecast					
	F'11	F'12	F'13	F'14	F'14	F'15	F'16	F'17	F'18	F'19
- Bulk	414 876	416 995	422 791	418 823	434 798	441 320	447 041	454 432	461 249	468 168
- eThekweni MM	310 994	311 434	315 669	313 443	323 385	328 292	333 283	339 560	344 654	349 823
- Sembcorp Siza Water	4 476	4 488	4 352	4 320	4 700	4 841	5 132	5 440	5 521	5 604
- other WSAs	99 407	101 073	102 770	101 060	106 712	108 187	108 626	109 432	111 074	112 740
- % Increase	(2.58)	0.51	1.4	0.6	2.8	1.5	1.3	1.7	1.5	1.5
- Raw water	550	787	595	784	641	641	641	632	632	632
- % Increase	13.01	42.98	(24.4)	-	7.7	-	-	(1.4)	-	-
- Wastewater	358	300	287	342	203	205	207	210	214	217
- % Increase	31.18	(16.19)	(0.0)	1.0	(0.3)	1.0	1.0	1.7	1.5	1.5

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

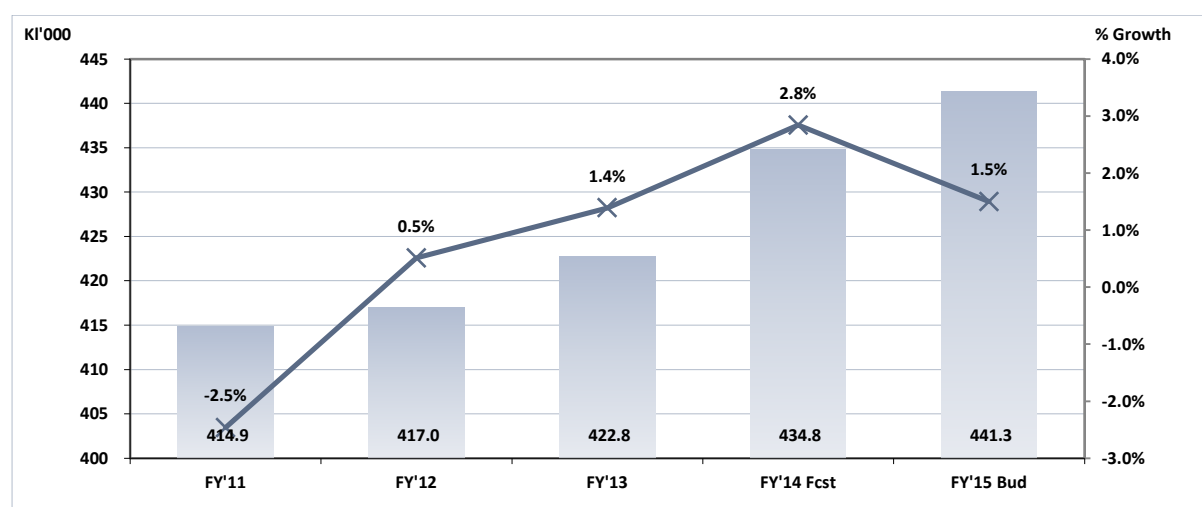


Table 20.7: Bulk water sales volume per customer

Customer	FY 2011	FY 2012	FY 2013		FY 2014				FY 2015	
	Actual Vol Kl'000	Actual Vol Kl'000	Actual Vol Kl'000	Growth %	Budget Vol Kl'000	Growth %	Forecast Vol Kl'000	Growth %	Budget Vol Kl'000	Growth %
eThekweni	310 994	311 434	315 669	1.4	313 443	(0.7)	323 385	2.4	328 292	1.5
Msunduzi	63 938	64 909	64 668	(0.4)	63 517	(1.8)	65 786	1.7	66 685	1.4
uMgungundlovu	11 112	11 195	14 772	31.9	13 866	(6.5)	15 013	1.6	15 163	1.0
Ugu	7 923	8 203	9 012	9.9	8 946	(0.7)	10 242	13.6	10 955	7.0
iLembe	11 569	12 514	13 244	5.8	13 567	2.4	14 668	10.8	14 381	(2.0)
Siza	4 476	4 488	4 352	(3.0)	4 320	(0.7)	4 700	8.0	4 841	3.0
Harry Gwala	921	587	936	59.6	940	0.4	852	(9.0)	859	0.8
Sappi	1 110	929	39	100.0	96	59.2	7	(100.0)	-	-
Other - Retail	2 833	2 736	97	(96.4)	127	23.4	143	47.4	143	-
<b>Total Bulk Potable</b>	<b>414 876</b>	<b>416 995</b>	<b>422 791</b>	<b>1.4</b>	<b>418 823</b>	<b>(0.9)</b>	<b>434 798</b>	<b>2.8</b>	<b>441 320</b>	<b>1.5</b>
Raw Water	550	787	595	(24.4)	784	24.1	641	7.7	641	-
<b>Total Bulk Water</b>	<b>415 427</b>	<b>417 782</b>	<b>423 386</b>	<b>1.3</b>	<b>419 607</b>	<b>(0.9)</b>	<b>435 439</b>	<b>2.8</b>	<b>441 961</b>	<b>1.5</b>

Figure 20.2: Composition of customer base 2014

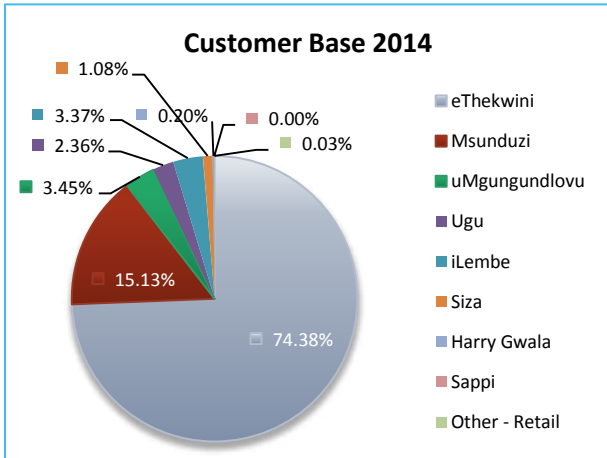
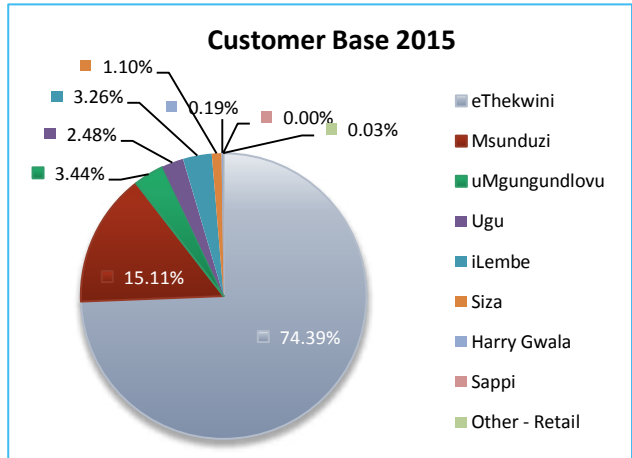
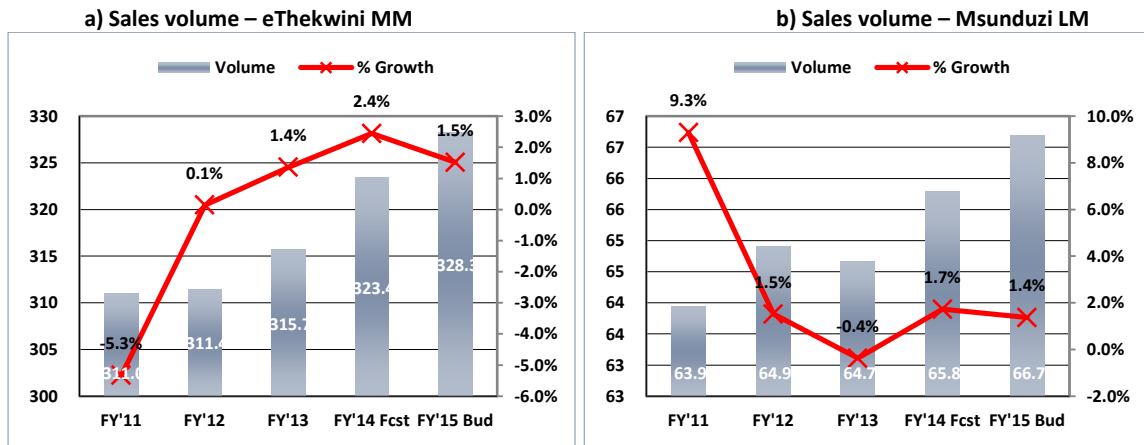


Figure 20.3: Composition of customer base 2015

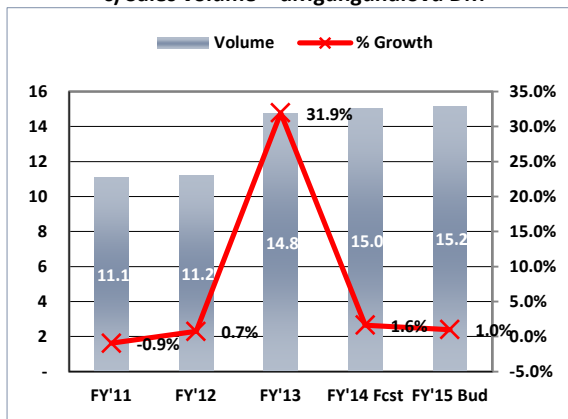


20.3.1 Volume Trends per customer

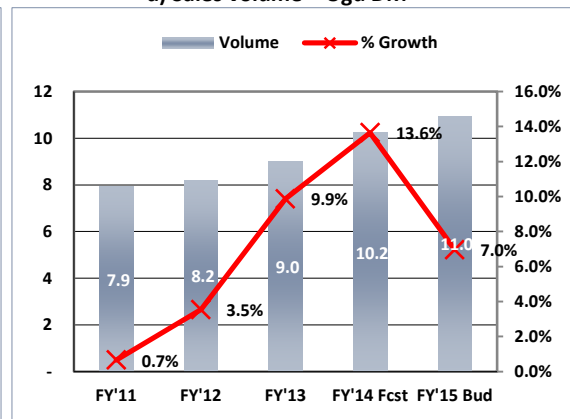
Figure 20.4 (a to g): Bulk sales per customer



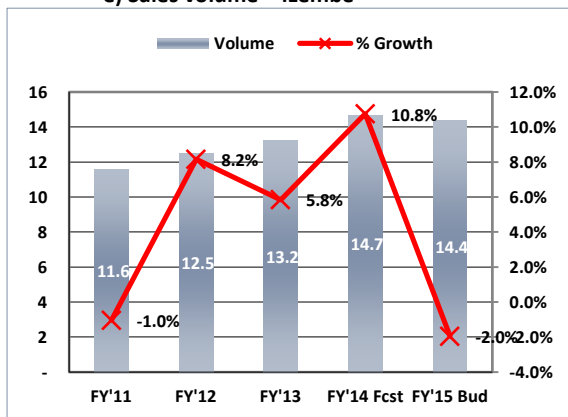
c) Sales volume – uMgungundlovu DM



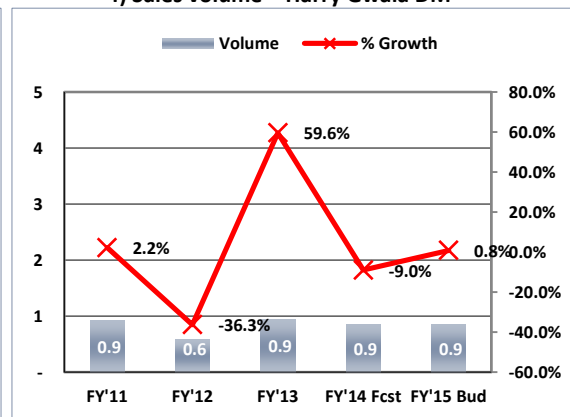
d) Sales volume – Ugu DM



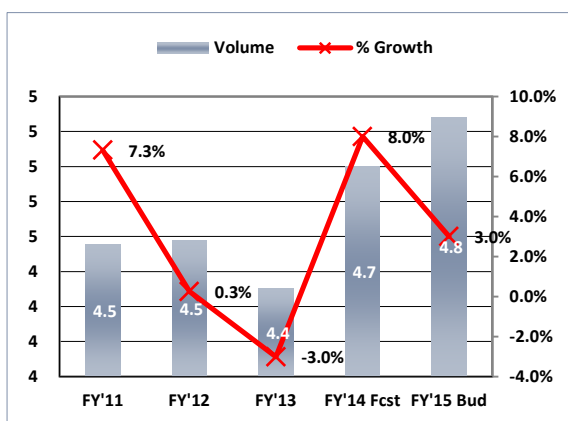
e) Sales volume – iLembe



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

Consultation was held on 08 November 2013 with Municipal customers, in compliance with S42 of the Municipal Finance Management Act. Representatives of Department of Water Affairs (DWA), SALGA and National Treasury were present. TCTA consulted with the stakeholders on the 2015 increase for the capital unit charge for MMTS-2. The contents of the presentation highlighted the operational risks facing Umgeni Water and the financial impact thereof. The legislative framework governing the tariff computation was highlighted and discussed with the customers and the infrastructure plan underlying the 2015 tariff computation was presented.

There was good interaction between the customers and Umgeni Water and the main issues raised by the customers were included in the submissions to DWA, SALGA and National Treasury.

#### 2. SALGA

SALGA's position in terms of UW's bulk water tariff increase for 2014/15 is that the proposed tariff increase is too high and UW may still be able to reduce the tariff increase without impacting on the financial sustainability of the organisation. In summary, Umgeni Water responded to the specific SALGA recommendations as follows:

COMMENT	RESPONSE
Review of the final tariff based on the final approved DWA raw water tariff increase if this is the major driver of the high raw water increase.	The DWA raw water charge used in the 2015 tariff computation is the charge approved by DWA for 2015. UW does not anticipate any change in this regard.
Consider the potential to reduce the proposed bulk water tariff from 2014/15 financial year by reducing interest coverage and increasing financial leverage by taking in more debt as discussed in the ratio analysis.	Maintaining the interest cover ratio to above 2.5 times is a loan covenant in the EIB loan contract. Should UW breach this it will be in default of the loan contract which may have an impact on other loan contracts, for example, the U21. This may result in the loan being immediately callable which increases UW's liquidity risk. Furthermore, should the non-controllable costs escalate by more than the projected increases, this will expose UW's interest cover ratio to operational risk which it may not afford as the years 2017 and 2018 are already projected to be less than the benchmark interest cover of 3 times thereby increasing the vulnerability towards the breach off covenants.
Consider recovering the full revenue requirements from the capital expansion programme over a longer period in a way that reflects the distribution of the benefits of the plant capacity increases to Umgeni Water's current and future customers.	New debt funding of R500m in 2015 and R500m in 2016 has already been assumed in the base case assumptions in calculating the 2015 tariff.
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.	The limit of debt to be incurred in any one year is limited to the borrowing limit imposed by NT and DWA in terms of S66 of the PFMA. The current limit of <b>R1.75 billion</b> expires at the end of June 2014. The limits for 2015 to 2019 have been motivated for by UW to be at <b>R2.5bn</b> for these years which are <b>R750m</b> more than the current limit. Should UW's application for higher borrowing limits be declined then UW would have to delay its capital expenditure programme or increase its bulk water tariff further.
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 customers.	The impairment costs in 2015 represent <b>14.6 cents</b> of the total cost per kl. Therefore full funding of this impairment cost by grant funding will reduce the bulk water tariff to UW's customers. In this regard, UW is in constant communication with DWA to obtain an increase in grant funding allocations toward the social development projects.
The labour costs which are controllable could have been absorbed in the increase in productivity assuming increasing efficiency levels in Umgeni Water. It would appear that municipalities are paying for lower productivity in the tariff increases.	The increase in the wage rate is in line with the Bureau for Economic Research projections. The increase in the staff establishment is required to implement service delivery growth and to operate and maintain new infrastructure. Furthermore, the increase in the operational staff establishment is needed to align to national regulations which require that water and wastewater treatment works be appropriately staffed to ensure no treatment risks.

### 3. National Treasury

National Treasury (NT) commended Umgeni Water for taking into account end-user affordability and maintaining the tariff increase proposed below the increases in the operational cost, whilst taking into consideration the impact of tariff increases on the municipality and ultimately on the users. However, NT also noted that Umgeni Water needs to continue managing direct operational costs as these continue to increase faster than annual tariff increases. The cost of Maintenance was a cause for concern as it was roughly 3% of the replacement value of the water board's assets. NT highlighted that this was less than the Public Works benchmark of 4-8%. However, Umgeni Water was commended for allocating a significant portion of its expenditure to maintenance, albeit below the benchmark.

#### 20.4.2 Bulk water tariff 2015: approval by DWA

DWA has tabled Umgeni Water's proposed tariff increase of 8.3% on average, at parliament.

#### 20.4.3 Bulk water tariff projections

Table 20.8: Tariffs for bulk water sales

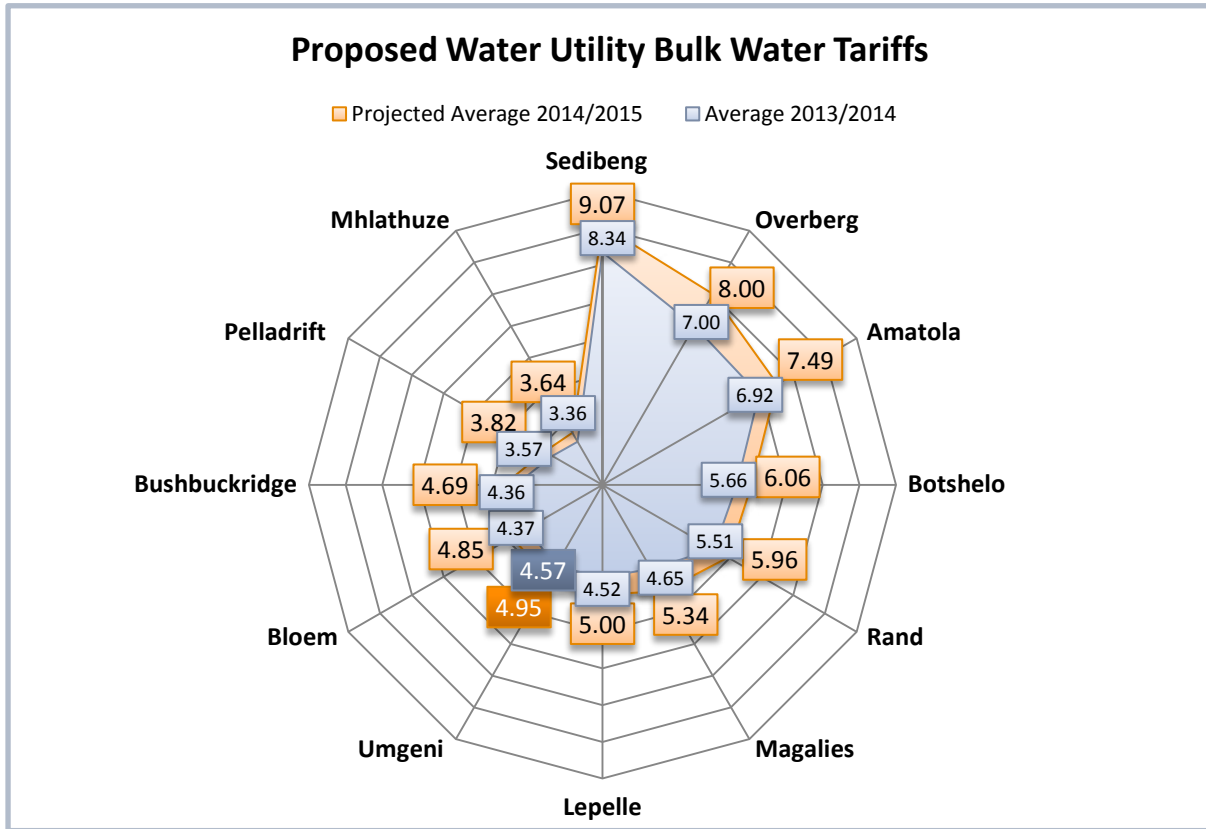
Tariff Increase (%)	Actual			Budget	Forecast						Beyond 2019
	F'11	F'12	F'13	F'14	F'14	F'15	F'16	F'17	F'18	F'19	
CPI	5.00%	5.60%	5.70%	5.60%	6.10%	5.70%	5.60%	5.40%	5.30%	5.30%	5.30%
+ provision for internal inflation	1.20%	0.60%	-0.10%	2.70%	2.20%	3.00%	2.70%	2.70%	2.70%	2.70%	2.70%
<b>Total Umgeni Water Tariff Increase</b>	<b>6.20%</b>	<b>6.20%</b>	<b>5.60%</b>	<b>8.30%</b>	<b>8.30%</b>	<b>8.70%</b>	<b>8.30%</b>	<b>8.10%</b>	<b>8.00%</b>	<b>8.00%</b>	<b>8.00%</b>
Capital Unit charge			100.00%	0.00%	0.00%	4.41%	5.60%	5.40%	5.30%	5.30%	
Effective all in tariff increase	6.20%	6.20%	16.84%	7.50%	7.52%	8.31%	8.03%	7.85%	7.42%	7.51%	
<b>- Bulk Tariff 1 (R/kl)</b>											
- Base Tariff	3.279	3.482	3.694	3.901	3.901	4.225	4.593	4.974	5.377	5.807	
- Tariff Increase	0.203	0.212	0.207	0.324	0.324	0.368	0.381	0.403	0.430	0.465	
- New Tariff - Umgeni Water	<b>3.482</b>	<b>3.694</b>	<b>3.901</b>	<b>4.225</b>	<b>4.225</b>	<b>4.593</b>	<b>4.974</b>	<b>5.377</b>	<b>5.807</b>	<b>6.272</b>	
- % Increase - Umgeni Water	6.2	6.2	5.6	8.3	8.3	8.7	8.3	8.1	8.0	8.0	
Add Capital unit charge			0.408	0.408	0.408	0.426	0.448	0.471	0.475	0.478	
- Spring Grove			0.408	0.408	0.408	0.426	0.448	0.471	0.475	0.478	
- Total Tariff	<b>3.482</b>	<b>3.694</b>	<b>4.309</b>	<b>4.633</b>	<b>4.633</b>	<b>5.019</b>	<b>5.422</b>	<b>5.848</b>	<b>6.282</b>	<b>6.750</b>	
- % Increase -Total	6.2	6.1	16.6	7.5	7.5	8.3	8.0	7.9	7.4	7.4	
<b>- Bulk Tariff 2 - eThekweni (R/kl)</b>											
- Base Tariff	3.215	3.414	3.622	3.825	3.825	4.142	4.502	4.876	5.271	5.693	
- Tariff Increase	0.199	0.208	0.203	0.317	0.317	0.360	0.374	0.395	0.422	0.455	
- New Tariff - Umgeni Water	<b>3.414</b>	<b>3.622</b>	<b>3.825</b>	<b>4.142</b>	<b>4.142</b>	<b>4.502</b>	<b>4.876</b>	<b>5.271</b>	<b>5.693</b>	<b>6.148</b>	
- % Increase - Umgeni Water	6.2	6.1	5.6	8.3	8.3	8.7	8.3	8.1	8.0	8.0	
Add Capital unit charge			0.408	0.408	0.408	0.426	0.448	0.471	0.475	0.478	
- Spring Grove			0.408	0.408	0.408	0.426	0.448	0.471	0.475	0.478	
- Total Tariff	<b>3.414</b>	<b>3.622</b>	<b>4.233</b>	<b>4.550</b>	<b>4.550</b>	<b>4.928</b>	<b>5.324</b>	<b>5.742</b>	<b>6.168</b>	<b>6.626</b>	
- % Increase -Total	6.2	6.1	16.9	7.5	7.5	8.3	8.0	7.9	7.4	7.4	
<b>- Bulk Tariff 3 -Siza<sup>1</sup> (R/kl)</b>											
- Base Tariff	3.279	3.482	3.726	3.935	3.935	4.262	4.633	5.018	5.424	5.858	
- Tariff Increase	0.203	0.244	0.209	0.327	0.327	0.371	0.385	0.406	0.434	0.469	
- New Tariff - Umgeni Water	<b>3.482</b>	<b>3.726</b>	<b>3.935</b>	<b>4.262</b>	<b>4.262</b>	<b>4.633</b>	<b>5.018</b>	<b>5.424</b>	<b>5.858</b>	<b>6.327</b>	
- % Increase - Umgeni Water	6.2	7.0	5.6	8.3	8.3	8.7	8.3	8.1	8.0	8.0	
Add Capital unit charge			0.408	0.408	0.408	0.426	0.448	0.471	0.475	0.478	
- Spring Grove			0.408	0.408	0.408	0.426	0.448	0.471	0.475	0.478	
- Total Tariff	<b>3.482</b>	<b>3.726</b>	<b>4.343</b>	<b>4.670</b>	<b>4.670</b>	<b>5.059</b>	<b>5.466</b>	<b>5.895</b>	<b>6.333</b>	<b>6.805</b>	
- % Increase -Total	6.2	7.0	16.6	7.5	7.5	8.3	8.0	7.8	7.4	7.5	
<b>WEIGHTED AVERAGE TARIFF</b>											
Excluding the capital unit charge	3.430	3.640	3.843	4.163	4.163	4.525	4.900	5.297	5.721	6.183	
- % Increase -Total	6.3	6.1	5.6	8.3	8.3	8.7	8.3	8.1	8.0	8.1	
Including the Capital unit charge	3.430	3.640	4.251	4.571	4.571	4.951	5.348	5.768	6.196	6.661	
- % Increase -Total	6.3	6.1	16.8	7.5	7.5	8.3	8.0	7.9	7.4	7.5	

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

### 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: DWA). 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 F'11	% change	Actual F'12	% change	Actual F'13	% change	Forecast F'14	% change	Budget F'15	% change
<b>Potable Water – Other (R/kl)</b>										
Sappi	3.535	7.0%	3.782	6.5%	4.028	6.5%	4.386	8.9%	4.768	8.7%
Retail	3.482	6.5%	3.830	10.0%	4.079	7.4%	4.442	8.9%	4.828	8.7%
Reticulation	9.338	6.5%	9.945	7.4%	N/A		N/A		N/A	
<b>Bulk Raw Water(R/kl)</b>										
Piped	1.917	15.0%	2.20	7.0%	2.359	7.2%	2.550	8.1%	2.754	8.0%
Dam	0.385	15.1%	0.44	37.8%	0.611	38.9%	0.662	8.3%	0.715	8.0%
<b>Wastewater(R/kl)</b>										
Ixopo	7.587	7.1%	8.125	7.5%	8.734	7.5%	9.459	7.5%	10.282	8.7%
<b>Management Fee( R'000)</b>										
Darvill Wastewater	45 372	7.1%	48 594	8.0%	52 481	8.0%	57 152	8.9%	62 239	8.9%
Howick wastewater	6 298	5.7%	6 657	5.5%	7 024	5.5%	8 164	16.2%	14 924	82.8%
Reticulation - Msunduzi	6 671	10.7%	7 387	10.7%	7 419	0.4%	455	-93.9%		N/A
<b>Water Research Levy(R/kl)</b>										
Levy	0.041	4.9%	0.043	7.0%	0.046	7%	0.049	5.7%	0.052	5.7%

Table 20.10: Tariff Cost Components

Components	2010/2011		2011/2012		2012/2013 Restated		2013/2014 BUDGET		2013/2014		2014/2015		2015/2016		2016/2017		2017/2018		2018/2019			
	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %		
<b>Direct Costs</b>																						
Chemicals	0.080	16%	0.089	11%	0.104	17%	0.131	20%	0.097	-7%	0.107	10%	0.117	9%	0.127	9%	0.138	9%	0.150	9%		
Depreciation	0.160	9%	0.172	7%	0.176	2%	0.207	26%	0.184	5%	0.166	-10%	0.175	5%	0.183	5%	0.191	5%	0.200	5%		
Energy	0.193	63%	0.224	16%	0.226	1%	0.316	9%	0.287	27%	0.353	23%	0.387	10%	0.415	7%	0.446	7%	0.483	8%		
Maintenance	0.243	5%	0.288	18%	0.299	4%	0.356	10%	0.305	2%	0.358	17%	0.384	7%	0.409	7%	0.438	7%	0.468	7%		
Raw Water	0.231	17%	0.361	56%	0.382	6%	0.960	18%	0.438	15%	0.365	-17%	0.445	22%	0.486	9%	0.530	9%	0.580	9%		
Staff Costs	0.214	11%	0.221	3%	0.244	11%	0.300	15%	0.279	14%	0.340	22%	0.405	19%	0.438	8%	0.467	7%	0.497	7%		
Other direct operating activities	0.021	0%	0.029	34%	0.069	143%	0.051	-19%	0.040	-42%	0.051	27%	0.060	17%	0.062	4%	0.066	5%	0.069	5%		
<b>Total Direct Costs</b>	<b>1.143</b>	<b>17%</b>	<b>1.384</b>	<b>21%</b>	<b>1.500</b>	<b>8%</b>	<b>2.321</b>	<b>14%</b>	<b>1.631</b>	<b>9%</b>	<b>1.741</b>	<b>7%</b>	<b>1.972</b>	<b>13%</b>	<b>2.120</b>	<b>8%</b>	<b>2.276</b>	<b>7%</b>	<b>2.448</b>	<b>8%</b>		
<b>Indirect Costs</b>																						
Overheads	0.247	11%	0.192	-22%	0.293	52%	0.293	21%	0.324	11%	0.429	32%	0.465	8%	0.470	1%	0.481	2%	0.492	2%		
staff costs	0.327	11%	0.358	10%	0.409	14%	0.489	15%	0.480	17%	0.537	12%	0.572	7%	0.608	7%	0.647	7%	0.689	7%		
Depreciation	0.040	15%	0.034	-15%	0.036	6%	0.029	-21%	0.027	-23%	0.049	79%	0.052	5%	0.054	5%	0.057	5%	0.059	5%		
Amortisation	0.233	0%	0.013	-94%	0.015	9%	0.014	-1%	0.009	-37%	0.010	0%	0.006	0%	0.006	0%	0.006	0%	0.005	0%		
Impairments	0.293	1176%	0.173	-41%	0.180	4%	0.231	45%	0.347	93%	0.211	-39%	0.195	-8%	0.109	-44%	0.130	19%	-	-100%		
Retirement benefits	0.085		0.239	182%	0.098	-59%	0.280		0.164	68%	0.187	14%	0.243	30%	0.258	4%	0.274	6%	0.292	6%		
<b>Total Indirect Costs</b>	<b>1.225</b>	<b>38%</b>	<b>1.010</b>	<b>-18%</b>	<b>1.029</b>	<b>2%</b>	<b>1.336</b>	<b>13%</b>	<b>1.352</b>	<b>31%</b>	<b>1.423</b>	<b>5%</b>	<b>1.534</b>	<b>8%</b>	<b>1.505</b>	<b>-2%</b>	<b>1.595</b>	<b>6%</b>	<b>1.538</b>	<b>-4%</b>		
Total direct & indirect cost	<b>2.368</b>	<b>27%</b>	<b>2.393</b>	<b>1%</b>	<b>2.529</b>	<b>6%</b>	<b>3.657</b>	<b>14%</b>	<b>2.982</b>	<b>18%</b>	<b>3.164</b>	<b>6%</b>	<b>3.505</b>	<b>11%</b>	<b>3.625</b>	<b>3%</b>	<b>3.870</b>	<b>7%</b>	<b>3.986</b>	<b>3%</b>		
<b>Finance Costs</b>	<b>0.038</b>	<b>-78%</b>	<b>(0.051)</b>	<b>-237%</b>	<b>(0.174)</b>	<b>238%</b>	<b>0.031</b>	<b>-153%</b>	<b>(0.050)</b>	<b>-71%</b>	<b>(0.025)</b>	<b>-50%</b>	<b>0.039</b>	<b>-256%</b>	<b>0.166</b>	<b>328%</b>	<b>0.284</b>	<b>71%</b>	<b>0.228</b>	<b>-20%</b>		
<b>Cost - Bulk Water</b>	<b>2.406</b>	<b>18%</b>	<b>2.342</b>	<b>-2.7%</b>	<b>2.356</b>	<b>1%</b>	<b>3.687</b>	<b>17%</b>	<b>2.932</b>	<b>24%</b>	<b>3.139</b>	<b>7%</b>	<b>3.544</b>	<b>13%</b>	<b>3.792</b>	<b>7%</b>	<b>4.155</b>	<b>10%</b>	<b>4.214</b>	<b>1%</b>		
Less: Sundry income	-0.034	-495%	0.115	-440%	0.036	-69%	0.005	-51%	0.040	14%	0.005	-88%	0.005	9%	0.006	7%	0.006	7%	0.006	7%		
<b>Net Cost - Bulk Water</b>	<b>2.439</b>	<b>21%</b>	<b>2.227</b>	<b>-9%</b>	<b>2.320</b>	<b>4%</b>	<b>3.682</b>	<b>17%</b>	<b>2.892</b>	<b>25%</b>	<b>3.134</b>	<b>8%</b>	<b>3.539</b>	<b>13%</b>	<b>3.786</b>	<b>7%</b>	<b>4.149</b>	<b>10%</b>	<b>4.207</b>	<b>1%</b>		
Contribution from Wastewater	0.026	51%	0.011	-56%	0.009	-19%	0.004	-160%	0.017	89%	0.019	13%	0.027	40%	0.029	8%	0.032	10%	0.027	-15%		
Contribution from Section 30 activities	0.007	-86%	(0.012)	-277%	0.033	-378%	0.033	10%	0.034	2%	0.017	-51%	0.002	-87%	0.002	-4%	0.002	3%	0.002	0%		
<b>Total cost</b>	<b>2.407</b>	<b>23%</b>	<b>2.228</b>	<b>-7%</b>	<b>2.277</b>	<b>2%</b>	<b>3.646</b>	<b>17%</b>	<b>2.840</b>	<b>25%</b>	<b>3.098</b>	<b>9%</b>	<b>3.510</b>	<b>13%</b>	<b>3.755</b>	<b>7%</b>	<b>4.114</b>	<b>10%</b>	<b>4.178</b>	<b>2%</b>		
<b>Average UW Tariff</b>	<b>3.431</b>	<b>6%</b>	<b>3.640</b>	<b>6.1%</b>	<b>3.843</b>	<b>5.6%</b>	<b>4.163</b>	<b>7.5%</b>	<b>4.163</b>	<b>8.3%</b>	<b>4.525</b>	<b>8.7%</b>	<b>4.900</b>	<b>8.3%</b>	<b>5.297</b>	<b>8.1%</b>	<b>5.721</b>	<b>8.0%</b>	<b>6.183</b>	<b>8.1%</b>		
<b>Net profit Margin/(deficit) applied to other comprehensive income</b>	<b>1.024</b>	<b>-19%</b>	<b>1.412</b>	<b>38%</b>	<b>1.566</b>	<b>11%</b>	<b>0.925</b>	<b>-19%</b>	<b>1.322</b>	<b>-16%</b>	<b>1.426</b>	<b>8%</b>	<b>1.391</b>	<b>-3%</b>	<b>1.543</b>	<b>11%</b>	<b>1.607</b>	<b>4%</b>	<b>2.006</b>	<b>25%</b>		
<b>Surplus Margin/(deficit) applied to capex</b>	<b>1.024</b>		<b>1.412</b>		<b>1.566</b>		<b>0.109</b>		<b>0.218</b>		<b>0.107</b>		<b>0.106</b>		<b>0.104</b>		<b>0.102</b>		<b>0.101</b>			
<b>Surplus Margin/(deficit) for future capex</b>	<b>(0.493)</b>		<b>0.258</b>		<b>0.053</b>		<b>(1.514)</b>		<b>(1.354)</b>		<b>(2.952)</b>		<b>(2.858)</b>		<b>(2.029)</b>		<b>(0.959)</b>		<b>0.556</b>			
<i>Projected water sales ( Ml )</i>	413.91	-3%	416.99	1%	422.79	1%	418.82	1%	434.80	3%	441.32	2%	447.04	1%	454.43	2%	461.25	1%	468.17	2%		
<i>Projected revenue ( R m )</i>	1860	14%	1887	1%	1915	1%	2271	10%	2190	14%	2117	-3%	2310	9%	2534	10%	2774	9%	3034	9%		
<i>Projected costs ( R m )</i>	1354	24%	1296	-4%	1251	-3%	1883	19%	1614	29%	1487	-8%	1687	14%	1832	9%	2032	11%	2095	3%		
<i>Projected surplus ( R m )</i>	505	-6%	591	17%	504	-15%	342	-28%	481	-4%	583	21%	576	-1%	655	14%	695	6%	891	28%		
<i>Reserves ( R m )</i>	3016	45%	3098	3%	3602	16%	3915	10%	4083	13%	4666	14%	5242	12%	5897	12%	6593	12%	7484	14%		
<i>Projected surplus as a % of reserves</i>	17%	-35%	19%	14%	14%	-27%	9%	-34%	12%	-16%	13%	6%	11%	-12%	11%	1%	11%	-5%	12%	13%		
<i>Debt service cost ( R m )</i>	114	-50%	85	-26%	66	-21%	79	19%	73	10%	68	-7%	62	-9%	113	84%	176	55%	169	-4%		
<i>Debt (Debt + Equity) ratio</i>	0.449	-38%	0.406	-10%	0.315	-22%	0.334	-14%	0.306	-3%	0.251	-18%	0.323	29%	0.384	19%	0.331	-14%	0.281	-15%		
<i>Capex ( R m )</i>	628	92%	481	-23%	639	33%	976	72%	1 069	67%	1 885	76%	1 852	-2%	1 576	-15%	1 136	-28%	632	-44%		

## 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 R5 974million with a specific allocation for the period 2014-2019 of R3 274million, representing 48% 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 104million or 35% funding by Umgeni Water.
- R3 870million or 65% funding by DWA for the remaining social components.

To date DWA has confirmed R1 545million RBIG whilst R2 325million 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'm)

Project	Project Funding and Source			Analysis of RBIG Funding			
	DWA	UW	Total	Total RBIG (DWA)	Invoiced and received to date Jan'14	Confirmed but not yet invoiced	Not confirmed
<b>TOTAL</b>	<b>3870</b>	<b>2104</b>	<b>5974</b>	<b>3870</b>	<b>355</b>	<b>1190</b>	<b>2325</b>
<b>%</b>	<b>65%</b>	<b>35%</b>	<b>100%</b>	<b>100%</b>	<b>9%</b>	<b>31%</b>	<b>60%</b>
Projects started with confirmed Grant Funding	1726	1280	3005	1726	355	1190	180
Projects Started with no confirmation of grant funding	161	700	862	161			161
Projects to start on confirmation of RBIG	1983	87	2070	1983			1983
Projects Funded by Umgeni Water and completed with 100% Umgeni Water Funding		37	37				

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

Project	Status of	Total	Cumulative	F'14	F'15	F'16	F'17	F'18	F'19	Beyond
Greater Eston / Richmond	Confirmed	209 681	135 163	15 921	27 895	30 702				
Greater Mpofana Regional Scheme Ph1	Not Confirmed	62 324		23 738	24 908	9 119	4 559			
Greater Mpofana Regional Scheme Ph 2	Not Confirmed	76 000								76 000
Greater Mpofana Regional Scheme Ph 3	Not Confirmed	110 000								110 000
Lower Thukela BWS - Phase 1	Confirmed	570 734	63 996	68 141	175 439	263 158				
Lower Thukela BWS - Phase 1	Not Confirmed	180 307					180 307			
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	290 945						42 400	60 000	188 545
uMshwathi Bulk Water Supply Scheme ( Wartburg Phase 1 - 3)	Confirmed	656 000					170 175	485 825		
Southern Ndwedwe BWS	Not Confirmed	386 323						10 000	30 000	346 323
Central Ndwedwe BWS Ph1: (Ozathini ext 31km p/I & 3 reservoirs)	Not Confirmed	234 912								234 912
Central Ndwedwe BWS Ph2: (Ozathini ext 19km p/I & 2 reservoirs)	Not Confirmed	161 315								161 315
Upper-Mvoti Regional Water Scheme	Not Confirmed	500 000								500 000
<b>Confirmed</b>	<b>40%</b>	<b>1 545 370</b>	<b>308 114</b>	<b>84 062</b>	<b>203 333</b>	<b>293 860</b>	<b>170 175</b>	<b>485 825</b>		
<b>Not Confirmed</b>	<b>60%</b>	<b>2 324 904</b>		<b>122 738</b>	<b>24 908</b>	<b>9 119</b>	<b>184 866</b>	<b>52 400</b>	<b>90 000</b>	<b>1 840 873</b>
<b>Total</b>		<b>3 870 273</b>	<b>308 114</b>	<b>206 800</b>	<b>228 241</b>	<b>302 979</b>	<b>355 042</b>	<b>538 225</b>	<b>90 000</b>	<b>1 840 873</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	Impairment %	Total Impairment	Cumulative to F'13	F'14	F'15	F'16	F'17	F'18	F'19
<b>Greater Eston / Richmond</b>	21%	104 881	46 485	26 345	17 207	14 844			
<b>Greater Mpofana Regional Scheme Phases 1</b>	37%	193 876	551	2 530	40 631	40 772	49 632	59 760	
<b>Maphumulo BWS Scheme Phase 1 &amp; 2</b>	45%	209 992	68 792	79 075	30 438	31 687			
<b>Mhlabatshane BWS Scheme Phase 1</b>	51%	125 880	83 444	42 436					
<b>Ngcebo BWS</b>	100%	43 993	38 613	380	5000				
<b>TOTAL</b>		<b>678 623</b>	<b>237 885</b>	<b>150 766</b>	<b>93 277</b>	<b>87 303</b>	<b>49 632</b>	<b>59 760</b>	

## 20.7 Challenges in collection of debtors

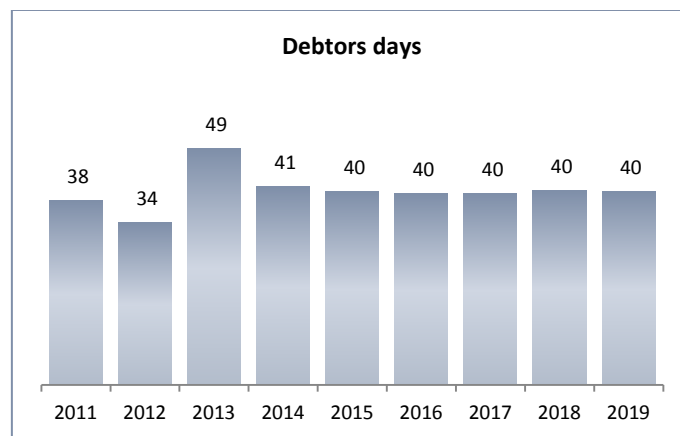
There have been no significant challenges in terms of collection of amounts due by debtors.

Known credit risk is in relation to the payment of the Capital Unit Charge on the Spring Grove Dam. All customers have paid the invoiced amounts to date with the exception of Ugu DM who has not paid since March 2013. Not all customers have signed the agreement with DWA/TCTA. Umgeni Water continues to engage TCTA/DWA on this matter.

Umgeni Water's risk in terms of exposure to this non-payment is limited in terms of its agreement with DWA.

Based on the historical debtors payment cycle Umgeni Water does not expect debtors days outstanding to exceed 40 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. Although the entity is projected to be profitable over the five year period to 2019 with positive operating cash flows, the entity is anticipating a loss for 2014 due to the downturn in the tourism industry, coupled with high fuel price increases which have led to a decrease in tourism revenue. 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.

The financial statements for the years ending 30 June 2013 are restated due to the adoption of the IAS19 Revised (IAS 19 R) which is the statement on retirement benefit plans. The impact of the revised standard was reallocation of actuarial gains and losses from operating costs to other comprehensive income/loss.

In addition, as the capital unit charge is an agreed cost, rather than a direct cost of operation, both the revenue and cost associated with the C.U.C. have not been reflected in the Income Statement.



Table 20.14: Umgeni Water Income Statement Total (R'000)

For the year ended June 30, TOTAL	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
Volume of Bulk treated water sold (in kl'000)	414 876	416 995	422 791	422 791	418 823	434 798	441 320	447 041	454 432	461 249	468 168
<b>Revenue</b>	<b>1 648 950</b>	<b>1 835 075</b>	<b>2 068 668</b>	<b>1 895 886</b>	<b>2 265 846</b>	<b>2 169 065</b>	<b>2 111 342</b>	<b>2 304 451</b>	<b>2 528 295</b>	<b>2 768 104</b>	<b>3 030 579</b>
Water Sales - Bulk	1 423 332	1 519 295	1 798 262	1 625 480	1 914 907	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Bulk water sales	1 423 332	1 519 295	1 625 480	1 625 480	1 743 708	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Capital Unit charge			172 781	-	171 200	-	-	-	-	-	-
Water Sales - Raw Water	338	429	428	428	527	579	625	677	722	780	842
Wastewater Sales	2 717	2 438	2 504	2 504	3 231	1 919	2 107	2 305	2 532	2 776	3 043
Wastewater Management Fee	45 372	48 594	52 481	52 481	57 152	57 152	62 239	66 595	71 990	78 037	84 514
Section 30 activities	177 191	264 318	214 993	214 993	290 029	299 028	49 037	43 695	45 271	47 010	48 861
<b>Cost of sales</b>	<b>661 821</b>	<b>856 808</b>	<b>1 042 691</b>	<b>869 910</b>	<b>1 294 732</b>	<b>1 034 219</b>	<b>854 812</b>	<b>972 781</b>	<b>1 060 381</b>	<b>1 152 399</b>	<b>1 255 320</b>
Changes in water inventory		(211)	(616)	(616)							
Chemicals	36 727	41 786	50 452	50 452	62 452	47 871	53 223	58 812	64 987	71 811	79 351
Depreciation	69 076	73 925	76 663	76 663	89 520	80 820	73 923	78 655	83 610	88 877	94 476
Energy	87 657	103 391	107 884	107 884	146 014	138 464	170 752	189 535	206 593	225 187	247 705
Maintenance	109 851	130 804	137 456	137 456	161 908	146 896	171 811	186 126	201 633	218 431	236 630
Raw Water	95 951	150 598	334 171	161 390	401 887	190 241	161 085	198 898	220 672	244 674	271 595
- Abstraction, O&M & WRM	95 951	150 598	161 390	161 390	230 688	190 241	161 085	198 898	220 672	244 674	271 595
- Capital Unit charge	-	-	172 781	-	171 200	-	-	-	-	-	-
Staff Costs	100 944	105 291	117 203	117 203	138 279	134 324	164 352	196 487	215 885	233 372	252 275
Section 30 activities	150 589	235 157	184 123	184 123	267 756	272 803	28 767	28 720	29 295	29 881	30 478
Other direct operating activities	11 027	16 067	35 365	35 365	26 915	22 798	30 897	35 549	37 706	40 167	42 810
<b>Gross profit</b>	<b>987 129</b>	<b>978 267</b>	<b>1 025 977</b>	<b>1 025 977</b>	<b>971 113</b>	<b>1 134 845</b>	<b>1 256 530</b>	<b>1 331 669</b>	<b>1 467 915</b>	<b>1 615 705</b>	<b>1 775 259</b>
	60%	53%	50%	54%	43%	52%	60%	58%	58%	58%	59%
<b>Other operating income</b>	<b>(9 643)</b>	<b>51 960</b>	<b>18 665</b>	<b>18 665</b>	<b>5 647</b>	<b>21 218</b>	<b>5 753</b>	<b>5 934</b>	<b>6 130</b>	<b>6 343</b>	<b>3 001</b>
<b>Administration Expenses</b>	<b>532 430</b>	<b>454 925</b>	<b>531 089</b>	<b>448 539</b>	<b>570 744</b>	<b>597 172</b>	<b>638 380</b>	<b>694 431</b>	<b>693 227</b>	<b>745 440</b>	<b>730 525</b>
Staff Costs (excl Maintenance Payroll costs)	140 573	152 979	174 112	174 112	206 092	210 099	238 427	257 501	277 844	300 349	324 678
Energy	3 187	3 622	4 014	4 014	4 034	3 972	4 700	5 217	5 687	6 199	6 818
Depreciation	17 139	14 787	15 481	15 481	12 211	12 027	21 806	23 201	24 663	26 217	27 868
Amortization	96 798	5 581	6 175	6 175	6 043	4 025	4 524	2 803	2 803	2 803	2 569
Impairments	121 706	72 013	76 034	76 034	96 791	150 766	93 277	87 303	49 632	59 760	-
Maintenance	23 400	14 483	14 879	14 879	19 978	14 430	17 756	18 892	20 083	21 348	22 693
Retirement Benefits	36 463	102 092	125 032	42 482	120 295	73 151	84 427	108 629	117 282	126 592	136 714
Other operating & administrative expenses (net of	93 163	89 368	115 362	115 362	105 301	128 703	173 464	190 884	195 234	202 173	209 185
<b>Operating income before interest</b>	<b>445 057</b>	<b>575 301</b>	<b>513 554</b>	<b>596 104</b>	<b>406 016</b>	<b>558 892</b>	<b>623 903</b>	<b>643 172</b>	<b>780 818</b>	<b>876 607</b>	<b>1 047 735</b>
<b>Net interest and finance charges</b>	<b>20 006</b>	<b>(15 512)</b>	<b>(67 552)</b>	<b>(67 552)</b>	<b>17 756</b>	<b>(17 044)</b>	<b>(6 658)</b>	<b>20 251</b>	<b>78 513</b>	<b>134 023</b>	<b>109 508</b>
Interest Paid	114 237	84 567	66 478	66 478	78 613	73 006	67 902	61 619	113 247	175 607	169 072
Interest Received	(94 231)	(100 079)	(134 029)	(134 029)	(60 857)	(90 050)	(74 560)	(41 368)	(34 734)	(41 584)	(59 564)
<b>Net Profit (Loss) for the year</b>	<b>425 051</b>	<b>590 813</b>	<b>581 105</b>	<b>663 655</b>	<b>388 260</b>	<b>575 935</b>	<b>630 560</b>	<b>622 922</b>	<b>702 305</b>	<b>742 584</b>	<b>938 227</b>
Other Comprehensive Income											
- Retirement Benefit adjustment (IAS 19)				159 906	45 820	94 582	47 226	47 226	47 226	47 226	47 226
<b>Other Comprehensive Income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>159 906</b>	<b>45 820</b>	<b>94 582</b>	<b>47 226</b>	<b>47 226</b>	<b>47 226</b>	<b>47 226</b>	<b>47 226</b>
<b>Total comprehensive income for the year</b>	<b>425 051</b>	<b>590 813</b>	<b>581 105</b>	<b>503 749</b>	<b>342 440</b>	<b>481 353</b>	<b>583 334</b>	<b>575 696</b>	<b>655 079</b>	<b>695 358</b>	<b>891 001</b>

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

For the year ended June 30, PRIMARY (S29)	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
Volume of treated water sold (in kl'000)	414 876	416 995	422 791	422 791	418 823	434 798	441 320	447 041	454 432	461 249	468 168
<b>Revenue</b>	<b>1 471 759</b>	<b>1 570 756</b>	<b>1 853 675</b>	<b>1 680 894</b>	<b>1 975 817</b>	<b>1 870 036</b>	<b>2 062 306</b>	<b>2 260 756</b>	<b>2 483 024</b>	<b>2 721 094</b>	<b>2 981 718</b>
Water Sales - Bulk	1 423 332	1 519 295	1 798 262	1 625 480	1 914 907	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Bulk water sales	1 423 332	1 519 295	1 625 480	1 625 480	1 743 708	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Capital Unit charge	-	-	172 781	-	171 200	-	-	-	-	-	-
Water Sales - Reticulation											
Water Sales - Raw Water	338	429	428	428	527	579	625	677	722	780	842
Wastewater Sales	2 717	2 438	2 504	2 504	3 231	1 919	2 107	2 305	2 532	2 776	3 043
Wastewater Management Fee	45 372	48 594	52 481	52 481	57 152	57 152	62 239	66 595	71 990	78 037	84 514
<b>Cost of sales</b>	<b>503 255</b>	<b>612 170</b>	<b>846 338</b>	<b>673 557</b>	<b>1 019 461</b>	<b>751 412</b>	<b>814 691</b>	<b>931 837</b>	<b>1 017 974</b>	<b>1 108 443</b>	<b>1 209 691</b>
Changes in water inventory	-	(211)	(616)	(616)	-	-	-	-	-	-	-
Chemicals	36 646	41 653	50 271	50 271	62 108	47 440	52 718	58 275	64 416	71 204	78 705
Depreciation	69 076	73 925	76 653	76 653	89 520	80 820	73 923	78 655	83 610	88 877	94 476
Energy	86 794	102 091	105 452	105 452	144 367	135 881	167 962	186 438	203 217	221 507	243 658
Maintenance	108 066	128 801	134 299	134 299	159 602	143 730	167 975	182 044	197 293	213 819	231 727
Raw Water	95 951	150 598	334 171	161 390	401 887	190 241	161 085	198 898	220 672	244 674	271 595
- Abstraction, O&M & WRM	95 951	150 598	161 390	161 390	230 688	190 241	161 085	198 898	220 672	244 674	271 595
- Capital Unit charge	-	-	172 781	-	171 200	-	-	-	-	-	-
Staff Costs	96 158	100 269	111 789	111 789	135 605	131 112	160 774	192 622	211 715	228 864	247 402
Other direct operating activities	10 564	15 044	34 319	34 319	26 372	22 187	30 253	34 906	37 050	39 498	42 127
<b>Gross margin/profit</b>	<b>968 504</b>	<b>958 586</b>	<b>1 007 337</b>	<b>1 007 337</b>	<b>956 356</b>	<b>1 118 624</b>	<b>1 247 614</b>	<b>1 328 919</b>	<b>1 465 050</b>	<b>1 612 651</b>	<b>1 772 027</b>
	<b>66%</b>	<b>61%</b>	<b>54%</b>	<b>60%</b>	<b>48%</b>	<b>60%</b>	<b>60%</b>	<b>59%</b>	<b>59%</b>	<b>59%</b>	<b>59%</b>
<b>Other operating income</b>	<b>(10 177)</b>	<b>51 429</b>	<b>18 665</b>	<b>18 665</b>	<b>5 647</b>	<b>21 218</b>	<b>5 753</b>	<b>5 934</b>	<b>6 130</b>	<b>6 343</b>	<b>3 001</b>
<b>Administration Expenses</b>	<b>516 100</b>	<b>429 697</b>	<b>526 592</b>	<b>444 038</b>	<b>569 605</b>	<b>595 742</b>	<b>636 757</b>	<b>692 664</b>	<b>691 327</b>	<b>743 393</b>	<b>728 319</b>
Staff Costs	135 565	149 380	172 859	172 859	204 603	208 748	236 936	255 891	276 107	298 471	322 648
Energy	3 187	3 622	4 014	4 014	4 034	3 972	4 700	5 217	5 687	6 199	6 818
Depreciation	16 948	14 570	15 470	15 470	12 208	12 027	21 806	23 201	24 663	26 217	27 868
Amortization	96 798	5 581	6 175	6 175	6 043	4 025	4 524	2 803	2 803	2 803	2 569
Impairments	121 706	72 013	76 034	76 034	96 791	150 766	93 277	87 303	49 632	59 760	-
Maintenance	22 229	13 275	13 735	13 735	19 873	14 281	17 691	18 823	20 009	21 270	22 610
Retirement Benefits	35 663	101 149	125 032	42 482	120 295	73 151	84 427	108 629	117 282	126 592	136 714
Other operating & administrative expenses	84 003	70 107	113 273	113 270	105 759	128 773	173 396	190 796	195 144	202 081	209 092
<b>Operating income before interest</b>	<b>442 228</b>	<b>580 318</b>	<b>499 410</b>	<b>581 964</b>	<b>392 398</b>	<b>544 100</b>	<b>616 610</b>	<b>642 188</b>	<b>779 854</b>	<b>875 601</b>	<b>1 046 710</b>
<b>Net interest and finance charges</b>	<b>20 004</b>	<b>(15 518)</b>	<b>(67 553)</b>	<b>(67 553)</b>	<b>17 756</b>	<b>(17 044)</b>	<b>(6 658)</b>	<b>20 251</b>	<b>78 513</b>	<b>134 023</b>	<b>109 508</b>
Interest Paid	114 235	84 561	66 476	66 476	78 613	73 006	67 902	61 619	113 247	175 607	169 072
Interest Received	(94 231)	(100 079)	(134 029)	(134 029)	(60 857)	(90 050)	(74 560)	(41 368)	(34 734)	(41 584)	(59 564)
<b>Net Profit (Loss)</b>	<b>422 224</b>	<b>595 836</b>	<b>566 964</b>	<b>649 517</b>	<b>374 642</b>	<b>561 144</b>	<b>623 268</b>	<b>621 938</b>	<b>701 341</b>	<b>741 578</b>	<b>937 202</b>
Other Comprehensive Income											
- Retirement Benefit adjustment (IAS 19)				156 247	45 266	93 329	46 632	46 657	46 661	46 661	46 661
<b>Other Comprehensive Income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>156 247</b>	<b>45 266</b>	<b>93 329</b>	<b>46 632</b>	<b>46 657</b>	<b>46 661</b>	<b>46 661</b>	<b>46 661</b>
<b>Total comprehensive income for the year</b>	<b>422 224</b>	<b>595 836</b>	<b>566 964</b>	<b>493 271</b>	<b>329 376</b>	<b>467 815</b>	<b>576 636</b>	<b>575 281</b>	<b>654 680</b>	<b>694 917</b>	<b>890 541</b>

Table 20.16: Umgeni Water Income statement - Bulk water segment (R'000)

For the year ended June 30, BULK WATER	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget			Forecast			
Volume of treated water sold (in kl'000)	414 876	416 995	422 791	422 791	418 823	434 798	441 320	447 041	454 432	461 249	468 168
<b>Revenue</b>	<b>1 423 670</b>	<b>1 519 724</b>	<b>1 798 690</b>	<b>1 625 909</b>	<b>1 915 434</b>	<b>1 810 965</b>	<b>1 997 960</b>	<b>2 191 856</b>	<b>2 408 502</b>	<b>2 640 281</b>	<b>2 894 161</b>
Water Sales - Bulk	1 423 332	1 519 295	1 798 262	1 625 480	1 914 907	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Bulk water sales	1 423 332	1 519 295	1 625 480	1 625 480	1 743 708	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Capital Unit charge	-	-	172 781	-	171 200	-	-	-	-	-	-
Water Sales - Reticulation	-	-	-	-	-	-	-	-	-	-	-
Water Sales - Raw Water	338	429	428	428	527	579	625	677	722	780	842
<b>Cost of sales</b>	<b>474 083</b>	<b>576 707</b>	<b>806 283</b>	<b>633 502</b>	<b>971 981</b>	<b>708 996</b>	<b>768 202</b>	<b>881 417</b>	<b>963 573</b>	<b>1 049 709</b>	<b>1 146 109</b>
Changes in water inventory	-	(211)	(616)	(616)	-	-	-	-	-	-	-
Chemicals	33 293	37 186	44 142	44 142	54 682	42 325	47 161	52 133	57 630	63 705	70 420
Depreciation	66 585	71 594	74 265	74 265	86 641	79 897	73 382	78 078	82 997	88 226	93 785
Energy	79 892	93 359	95 397	95 397	132 423	124 809	155 860	173 004	188 575	205 546	226 101
Maintenance	100 856	120 100	126 223	126 223	149 288	132 782	158 058	171 492	186 077	201 896	219 053
Raw Water	95 951	150 598	334 171	161 390	401 887	190 241	161 085	198 898	220 672	244 674	271 595
- Abstraction, O&M & WRM	95 951	150 598	161 390	161 390	230 688	190 241	161 085	198 898	220 672	244 674	271 595
- Capital Unit charge	-	-	172 781	-	171 200	-	-	-	-	-	-
Staff Costs	88 660	92 167	103 372	103 372	125 596	121 432	150 086	181 080	199 261	215 401	232 848
Other direct operating activities	8 846	11 914	29 329	29 329	21 463	17 509	22 570	26 731	28 360	30 260	32 308
<b>Gross margin/profit</b>	<b>949 587</b>	<b>943 018</b>	<b>992 407</b>	<b>992 407</b>	<b>943 453</b>	<b>1 101 969</b>	<b>1 229 757</b>	<b>1 310 438</b>	<b>1 444 930</b>	<b>1 590 572</b>	<b>1 748 052</b>
	67%	62%	55%	61%	49%	61%	62%	60%	60%	60%	60%
<b>Other operating income</b>	<b>(13 982)</b>	<b>47 819</b>	<b>15 053</b>	<b>15 053</b>	<b>2 033</b>	<b>17 604</b>	<b>2 135</b>	<b>2 362</b>	<b>2 558</b>	<b>2 771</b>	<b>3 001</b>
<b>Administration Expenses</b>	<b>508 429</b>	<b>421 042</b>	<b>517 370</b>	<b>435 872</b>	<b>559 504</b>	<b>587 648</b>	<b>628 183</b>	<b>685 647</b>	<b>683 868</b>	<b>735 464</b>	<b>719 890</b>
Staff Costs	135 565	149 380	172 859	172 859	204 603	208 748	236 936	255 891	276 107	298 471	322 648
Energy	3 187	3 622	4 014	4 014	4 034	3 972	4 700	5 217	5 687	6 199	6 818
Depreciation	16 534	14 104	15 145	15 145	12 109	11 939	21 715	23 104	24 560	26 107	27 752
Amortization	96 798	5 581	6 175	6 175	6 043	4 025	4 524	2 803	2 803	2 803	2 569
Impairments	121 706	72 013	75 978	75 978	96 791	150 766	93 277	87 303	49 632	59 760	-
Maintenance	21 027	12 456	13 356	13 356	19 474	13 965	17 301	18 409	19 568	20 801	22 112
Retirement Benefits	35 170	99 835	123 435	41 939	117 081	71 281	82 447	108 629	117 282	126 592	136 714
Other operating & administrative expenses	78 442	64 050	106 408	106 405	99 369	122 951	167 282	184 291	188 229	194 731	201 278
<b>Operating income before interest</b>	<b>427 177</b>	<b>569 794</b>	<b>490 090</b>	<b>571 588</b>	<b>385 982</b>	<b>531 925</b>	<b>603 709</b>	<b>627 153</b>	<b>763 620</b>	<b>857 878</b>	<b>1 031 162</b>
<b>Net interest and finance charges</b>	<b>15 559</b>	<b>(21 377)</b>	<b>(73 364)</b>	<b>(73 364)</b>	<b>12 861</b>	<b>(21 738)</b>	<b>(11 006)</b>	<b>17 364</b>	<b>75 626</b>	<b>131 137</b>	<b>106 722</b>
Interest Paid	109 790	78 702	60 665	60 665	73 718	68 311	63 554	58 732	110 361	172 720	166 286
Interest Received	(94 231)	(100 079)	(134 029)	(134 029)	(60 857)	(90 050)	(74 560)	(41 368)	(34 734)	(41 584)	(59 564)
<b>Net Profit (Loss)</b>	<b>411 618</b>	<b>591 172</b>	<b>563 454</b>	<b>644 952</b>	<b>373 121</b>	<b>553 663</b>	<b>614 715</b>	<b>609 789</b>	<b>687 994</b>	<b>726 742</b>	<b>924 441</b>
Other Comprehensive Income											
- Retirement Benefit adjustment (IAS 19)				151 627	43 934	90 671	45 379	45 456	45 470	45 470	45 470
<b>Other Comprehensive Income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>151 627</b>	<b>43 934</b>	<b>90 671</b>	<b>45 379</b>	<b>45 456</b>	<b>45 470</b>	<b>45 470</b>	<b>45 470</b>
<b>Total comprehensive income for the year</b>	<b>411 618</b>	<b>591 172</b>	<b>563 454</b>	<b>493 325</b>	<b>329 186</b>	<b>462 993</b>	<b>569 336</b>	<b>564 333</b>	<b>642 524</b>	<b>681 272</b>	<b>878 971</b>

Table 20.17: Umgeni Water Income statement Wastewater (R'000)

For the year ended June 30, WASTEWATER	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
Volume of treated water sold (in kl'000)	-	-	-	-	-	-	-	-	-	-	-
<b>Revenue</b>	<b>48 089</b>	<b>51 032</b>	<b>54 985</b>	<b>54 985</b>	<b>60 383</b>	<b>59 071</b>	<b>64 346</b>	<b>68 900</b>	<b>74 522</b>	<b>80 813</b>	<b>87 557</b>
Wastewater Sales	2 717	2 438	2 504	2 504	3 231	1 919	2 107	2 305	2 532	2 776	3 043
Wastewater Management Fee	45 372	48 594	52 481	52 481	57 152	57 152	62 239	66 595	71 990	78 037	84 514
<b>Cost of sales</b>	<b>29 172</b>	<b>35 464</b>	<b>40 055</b>	<b>40 055</b>	<b>47 480</b>	<b>42 416</b>	<b>46 489</b>	<b>50 420</b>	<b>54 401</b>	<b>58 733</b>	<b>63 581</b>
Chemicals	3 353	4 468	6 129	6 129	7 426	5 114	5 558	6 141	6 786	7 498	8 286
Depreciation	2 491	2 330	2 388	2 388	2 879	923	541	576	612	651	692
Energy	6 902	<b>8 732</b>	10 055	10 055	11 944	11 072	12 102	13 434	14 643	15 961	17 557
Maintenance	7 210	8 701	8 076	8 076	10 313	10 948	9 917	10 551	11 216	11 923	12 674
Staff Costs	7 498	8 101	8 417	8 417	10 008	9 681	10 688	11 543	12 455	13 463	14 554
Other direct operating activities	1 718	3 131	4 990	4 990	4 909	4 678	7 683	8 175	8 690	9 237	9 819
<b>Gross margin/profit</b>	<b>18 917</b>	<b>15 569</b>	<b>14 930</b>	<b>14 930</b>	<b>12 903</b>	<b>16 655</b>	<b>17 857</b>	<b>18 480</b>	<b>20 121</b>	<b>22 080</b>	<b>23 976</b>
	<b>39%</b>	<b>31%</b>	<b>27%</b>	<b>27%</b>	<b>21%</b>	<b>28%</b>	<b>28%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>
<b>Other operating income</b>	<b>3 805</b>	<b>3 610</b>	<b>3 612</b>	<b>3 612</b>	<b>3 614</b>	<b>3 614</b>	<b>3 618</b>	<b>3 572</b>	<b>3 572</b>	<b>3 572</b>	<b>-</b>
<b>Administration Expenses</b>	<b>7 671</b>	<b>8 655</b>	<b>9 221</b>	<b>8 166</b>	<b>10 101</b>	<b>8 095</b>	<b>8 574</b>	<b>7 017</b>	<b>7 459</b>	<b>7 929</b>	<b>8 428</b>
Staff Costs	-	-	-	-	-	-	-	-	-	-	-
Energy	-	-	-	-	-	-	-	-	-	-	-
Depreciation	414	466	325	325	98	88	91	97	103	110	116
Amortization	-	-	-	-	-	-	-	-	-	-	-
Impairments	-	-	56	56	-	-	-	-	-	-	-
Maintenance	1 202	819	379	379	399	316	390	415	441	469	498
Retirement Benefits	493	1 313	1 597	542	3 214	1 869	1 979	-	-	-	-
Other operating & administrative expenses	5 561	6 057	6 865	6 865	6 390	5 822	6 114	6 505	6 915	7 351	7 814
<b>Operating income before interest</b>	<b>15 052</b>	<b>10 523</b>	<b>9 321</b>	<b>10 376</b>	<b>6 416</b>	<b>12 175</b>	<b>12 901</b>	<b>15 035</b>	<b>16 234</b>	<b>17 723</b>	<b>15 547</b>
<b>Net interest and finance charges</b>	<b>4 445</b>	<b>5 859</b>	<b>5 811</b>	<b>5 811</b>	<b>4 895</b>	<b>4 695</b>	<b>4 348</b>	<b>2 886</b>	<b>2 886</b>	<b>2 886</b>	<b>2 786</b>
Interest Paid	4 445	5 859	5 811	5 811	4 895	4 695	4 348	2 886	2 886	2 886	2 786
Interest Received	-	-	-	-	-	-	-	-	-	-	-
<b>Net Profit (Loss)</b>	<b>10 607</b>	<b>4 665</b>	<b>3 510</b>	<b>4 565</b>	<b>1 521</b>	<b>7 481</b>	<b>8 553</b>	<b>12 149</b>	<b>13 347</b>	<b>14 836</b>	<b>12 761</b>
Other Comprehensive Income	-	-	-	-	-	-	-	-	-	-	-
- Retirement Benefit adjustment (IAS 19)	-	-	-	4 620	1 332	2 658	1 253	1 201	1 191	1 191	1 191
<b>Other Comprehensive Income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4 620</b>	<b>1 332</b>	<b>2 658</b>	<b>1 253</b>	<b>1 201</b>	<b>1 191</b>	<b>1 191</b>	<b>1 191</b>
<b>Total comprehensive income for the year</b>	<b>10 607</b>	<b>4 665</b>	<b>3 510</b>	<b>(55)</b>	<b>189</b>	<b>4 822</b>	<b>7 300</b>	<b>10 948</b>	<b>12 156</b>	<b>13 645</b>	<b>11 570</b>

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

For the year ended June 30, SECONDARY (S30)	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
Volume of treated water sold (in kl'000)	-	-	-	-	-	-	-	-	-	-	-
<b>Revenue</b>	<b>177 191</b>	<b>264 318</b>	<b>214 993</b>	<b>214 993</b>	<b>290 029</b>	<b>299 028</b>	<b>49 037</b>	<b>43 695</b>	<b>45 271</b>	<b>47 010</b>	<b>48 861</b>
S30 Revenue	177 191	264 318	214 993	214 993	290 029	299 028	49 037	43 695	45 271	47 010	48 861
<b>Cost of sales</b>	<b>158 567</b>	<b>244 638</b>	<b>196 353</b>	<b>196 353</b>	<b>275 272</b>	<b>282 808</b>	<b>40 121</b>	<b>40 944</b>	<b>42 407</b>	<b>43 956</b>	<b>45 629</b>
Chemicals	81	133	181	181	344	432	505	537	571	607	645
Depreciation	-	-	-	-	-	-	-	-	-	-	-
Energy	863	1 300	2 432	2 432	1 647	2 583	2 790	3 097	3 376	3 679	4 047
Maintenance	1 785	2 003	3 157	3 157	2 307	3 166	3 837	4 082	4 339	4 613	4 903
Staff Costs	4 786	5 022	5 414	5 414	2 675	3 212	3 578	3 864	4 170	4 507	4 873
Projects/WIP costs	150 589	235 157	184 123	184 123	267 756	272 803	28 767	28 720	29 295	29 881	30 478
Other direct operating activities	463	1 023	1 046	1 046	544	612	644	643	656	669	683
<b>Gross margin/profit</b>	<b>18 625</b>	<b>19 681</b>	<b>18 640</b>	<b>18 640</b>	<b>14 757</b>	<b>16 221</b>	<b>8 916</b>	<b>2 751</b>	<b>2 864</b>	<b>3 054</b>	<b>3 232</b>
	<b>11%</b>	<b>7%</b>	<b>9%</b>	<b>9%</b>	<b>5%</b>	<b>5%</b>	<b>18%</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>	<b>7%</b>
<b>Other operating income</b>	<b>534</b>	<b>531</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Administration Expenses</b>	<b>16 330</b>	<b>25 228</b>	<b>4 501</b>	<b>4 501</b>	<b>1 139</b>	<b>1 430</b>	<b>1 623</b>	<b>1 767</b>	<b>1 900</b>	<b>2 047</b>	<b>2 206</b>
Staff Costs	5 008	3 599	1 252	1 252	1 488	1 351	1 491	1 610	1 737	1 878	2 030
Energy	-	-	-	-	-	-	-	-	-	-	-
Depreciation	191	217	11	11	3	-	-	-	-	-	-
Amortization	-	-	-	-	-	-	-	-	-	-	-
Impairments	-	-	-	-	-	-	-	-	-	-	-
Maintenance	1 171	1 208	1 145	1 145	106	149	65	69	73	78	83
retirement benefits	800	944	-	-	-	-	-	-	-	-	-
Other operating & administrative expenses	9 160	19 261	2 092	2 092	(458)	(70)	68	88	90	92	93
<b>Operating income before interest</b>	<b>2 829</b>	<b>(5 016)</b>	<b>14 139</b>	<b>14 139</b>	<b>13 618</b>	<b>14 791</b>	<b>7 292</b>	<b>984</b>	<b>964</b>	<b>1 006</b>	<b>1 025</b>
<b>Net interest and finance charges</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Interest Paid	2	6	2	2	-	-	-	-	-	-	-
Interest Received	-	-	-	-	-	-	-	-	-	-	-
<b>Net Profit (Loss)</b>	<b>2 827</b>	<b>(5 023)</b>	<b>14 137</b>	<b>14 137</b>	<b>13 618</b>	<b>14 791</b>	<b>7 292</b>	<b>984</b>	<b>964</b>	<b>1 006</b>	<b>1 025</b>
<b>Other Comprehensive Income</b>											
- Retirement Benefit adjustment (IAS 19)	-	-	-	3 659	554	1 253	594	569	565	565	565
<b>Other Comprehensive Income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3 659</b>	<b>554</b>	<b>1 253</b>	<b>594</b>	<b>569</b>	<b>565</b>	<b>565</b>	<b>565</b>
<b>Total comprehensive income for the year</b>	<b>2 827</b>	<b>(5 023)</b>	<b>14 137</b>	<b>10 478</b>	<b>13 064</b>	<b>13 538</b>	<b>6 698</b>	<b>414</b>	<b>399</b>	<b>441</b>	<b>460</b>

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

As at June 30,	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
<b>ASSETS</b>											
<b>Non-current assets</b>	<b>2 912 924</b>	<b>3 133 724</b>	<b>3 472 121</b>	<b>3 472 121</b>	<b>4 168 942</b>	<b>4 576 275</b>	<b>6 125 828</b>	<b>7 557 286</b>	<b>8 871 317</b>	<b>9 418 053</b>	<b>10 003 826</b>
Property, plant and equipment	2 866 994	3 095 504	3 441 872	3 441 872	4 151 155	4 231 159	5 763 505	7 171 839	8 458 154	8 971 914	9 518 553
Other non-current assets	26 610	24 678	22 514	22 514	14 239	19 172	15 463	13 331	11 045	8	6 198
Investments	14 468	9 995	5 179	5 179	-	323 389	344 306	369 561	399 564	434 991	476 521
Investments in subsidiaries	4 853	3 548	2 556	2 556	3 548	2 555	2 555	2 555	2 555	2	2 555
<b>Assets held for sale</b>	<b>14 481</b>	<b>13 500</b>	<b>-</b>	<b>-</b>	<b>13 500</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>2 418 927</b>	<b>1 915 801</b>	<b>1 977 828</b>	<b>944 201</b>	<b>625 035</b>	<b>585 137</b>	<b>693 115</b>	<b>961 159</b>
Inventories	8 783	8 965	11 029	11 029	9 361	13 217	15 530	17 974	20 549	23 260	26 116
Accounts receivable	196 143	192 157	289 174	289 174	285 932	277 547	263 145	284 320	312 393	346 728	377 907
Sundry Debtors	14 720	10 271	10 271	10 271	10 271	10 271	10 271	10 271	10 271	10 271	10 271
Short-term investments	1 509 594	1 780 335	2 075 826	2 075 826	1 609 862	1 676 000	655 000	312 000	241 000	312 000	546 000
Interest Receivable	13 866	25 205	27 610	27 610	14	16	16	16	16	16	16
Bank balances and cash	99 826	9 974	5 017	5 017	360	777	238	455	909	840	850
<b>Total assets</b>	<b>4 770 336</b>	<b>5 174 131</b>	<b>5 891 048</b>	<b>5 891 048</b>	<b>6 098 242</b>	<b>6 554 102</b>	<b>7 070 029</b>	<b>8 182 321</b>	<b>9 456 454</b>	<b>10 111 167</b>	<b>10 964 985</b>
<b>Reserves</b>											
Accumulated reserves	2 507 194	3 098 008	3 679 113	3 601 757	3 914 966	4 083 109	4 666 444	5 242 140	5 897 219	6 592 577	7 483 578
<b>Non-current liabilities</b>	<b>1 487 535</b>	<b>1 461 073</b>	<b>1 461 793</b>	<b>1 539 149</b>	<b>1 682 475</b>	<b>1 817 776</b>	<b>1 831 049</b>	<b>2 448 410</b>	<b>3 119 327</b>	<b>3 147 731</b>	<b>3 230 896</b>
Interest bearing borrowings	1 257 788	1 136 306	1 025 930	1 025 930	1 179 708	1 171 358	1 092 526	1 613 509	2 184 302	2 104 894	2 075 275
Post employment medical benefit obligations	214 098	312 296	425 305	502 661	492 209	638 028	732 588	831 748	935 025	1 042 837	1 155 622
Other non-current liabilities	15 649	12 471	10 558	10 558	10 558	8 390	5 935	3 152	-	-	-
<b>Current liabilities</b>	<b>775 607</b>	<b>615 050</b>	<b>750 142</b>	<b>750 142</b>	<b>500 801</b>	<b>653 216</b>	<b>572 537</b>	<b>491 771</b>	<b>439 908</b>	<b>370 859</b>	<b>250 510</b>
Accounts payable (including accruals & leases)	554 915	396 228	565 032	565 032	299 633	501 646	421 646	341 646	290 559	225 778	156 641
Provisions	69 124	63 331	44 263	44 263	41 939	44 263	44 263	44 263	44 263	44 263	44 263
Current portion of interest bearing loans	115 006	120 831	109 451	109 451	129 613	78 662	78 832	79 017	79 208	79 408	29 619
Other payables/loans	36 562	34 660	31 396	31 396	29 616	28 646	27 796	26 846	25 879	21 411	19 987
Bank overdrafts											
<b>Total reserves and liabilities</b>	<b>4 770 336</b>	<b>5 174 131</b>	<b>5 891 048</b>	<b>5 891 048</b>	<b>6 098 242</b>	<b>6 554 102</b>	<b>7 070 029</b>	<b>8 182 321</b>	<b>9 456 454</b>	<b>10 111 167</b>	<b>10 964 985</b>

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

Statement of Changes in Equity (in R'000) For the Year ended June 30,	Capital Contributions	Accumulated Profit (Loss)	Total
<b>Balance at 30 June 2011</b>	<b>442 847</b>	<b>2 064 344</b>	<b>2 507 194</b>
Net movement	-	590 813	590 813
<b>Balance at 30 June 2012</b>	<b>442 847</b>	<b>2 655 157</b>	<b>3 098 008</b>
Net movement	-	503 749	503 749
<b>Balance at 30 June 2013</b>	<b>442 847</b>	<b>3 158 906</b>	<b>3 601 757</b>
Net movement	-	481 353	481 352
<b>Balance at 30 June 2014</b>	<b>442 847</b>	<b>3 640 260</b>	<b>4 083 109</b>
Net movement	-	583 334	583 334
<b>Balance at 30 June 2015</b>	<b>442 847</b>	<b>4 223 594</b>	<b>4 666 444</b>
Net movement	-	575 696	575 696
<b>Balance at 30 June 2016</b>	<b>442 847</b>	<b>4 799 290</b>	<b>5 242 140</b>
Net movement	-	655 079	655 079
<b>Balance at 30 June 2017</b>	<b>442 847</b>	<b>5 454 369</b>	<b>5 897 219</b>
Net movement	-	695 358	695 358
<b>Balance at 30 June 2018</b>	<b>442 847</b>	<b>6 149 728</b>	<b>6 592 577</b>
Net movement	-	891 001	891 001
<b>Balance at 30 June 2019</b>	<b>442 847</b>	<b>7 040 729</b>	<b>7 483 578</b>

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

For the year ended June 30,	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
<b>OPERATING ACTIVITIES</b>											
Operating profit before working capital changes	962 238	851 103	794 869	794 869	673 549	844 382	869 948	892 810	1 003 906	1 121 802	1 249 395
Changes in working capital	53 199	(166 382)	57 348	57 348	(32 099)	(53 947)	(67 912)	(103 618)	(81 735)	(101 828)	(103 171)
<b>Net cash from operating activities</b>	<b>1 015 437</b>	<b>684 721</b>	<b>852 217</b>	<b>852 217</b>	<b>641 450</b>	<b>790 435</b>	<b>802 036</b>	<b>789 192</b>	<b>922 171</b>	<b>1 019 974</b>	<b>1 146 224</b>
<b>INVESTING ACTIVITIES</b>											
Additions to property, plant and equipment	(374 915)	(481 208)	(639 465)	(639 465)	(975 502)	(1 069 060)	(1 884 932)	(1 852 159)	(1 575 789)	(1 136 456)	(631 664)
Additions to intangible assets	(3 860)	(3 947)	(2 990)	(2 990)	-	-	-	-	-	-	-
Proceeds on disposal of Property, plant & equipment	4 834	1 112	15 636	15 636	-	-	-	-	-	-	-
Grant Funding	9 977	131 056	167 080	167 080	95 249	84 062	203 333	293 860	170 175	485 825	-
Payments of intercompany borrowings	29	1 302	993	993	-	-	-	-	-	-	-
<b>Net cash used in investing activities</b>	<b>(363 935)</b>	<b>(351 685)</b>	<b>(458 746)</b>	<b>(458 746)</b>	<b>(880 253)</b>	<b>(984 998)</b>	<b>(1 681 599)</b>	<b>(1 558 299)</b>	<b>(1 405 613)</b>	<b>(650 631)</b>	<b>(631 664)</b>
<b>FINANCING ACTIVITIES</b>											
Net change in long-term borrowings	(144 655)	(115 656)	(121 756)	(121 756)	(76 051)	114 648	(78 662)	(78 832)	(79 017)	(79 208)	(79 408)
New Debt proposed	-	-	-	-	-	-	-	600 000	650 000	-	-
Net Investments - LTI & RED	(326 794)	(286 085)	(290 675)	(290 675)	382 182	83 217	1 021 000	343 000	71 000	(71 000)	(234 000)
Proceeds on disposal of available for sale investments financing	-	421	-	-	-	-	-	-	-	-	-
Net interest (Paid) Received	(62 805)	(21 568)	14 003	14 003	(67 694)	(7 541)	(63 315)	(94 845)	(158 087)	(219 205)	(201 142)
<b>Net cash used in financing activities</b>	<b>(534 254)</b>	<b>(422 888)</b>	<b>(398 428)</b>	<b>(398 428)</b>	<b>238 437</b>	<b>190 323</b>	<b>879 023</b>	<b>769 324</b>	<b>483 896</b>	<b>(369 413)</b>	<b>(514 550)</b>
<b>CASH AND CASH EQUIVALENTS</b>											
Net increase/(decrease) in cash and cash equivalents	117 247	(89 852)	(4 957)	(4 957)	(366)	(4 240)	(540)	217	454	(69)	10
At beginning of year	(17 421)	99 826	9 974	9 974	726	5 017	777	238	455	909	840
<b>At end of year</b>	<b>99 826</b>	<b>9 974</b>	<b>5 017</b>	<b>5 017</b>	<b>360</b>	<b>777</b>	<b>238</b>	<b>455</b>	<b>909</b>	<b>840</b>	<b>850</b>



Table 20.22: Notes to Umgeni Water Cashflow Statement (R'000)

NOTES TO THE CASHFLOW STATEMENT	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
<b>RECONCILIATION OF TOTAL COMPREHENSIVE INCOME TO CASH GENERATED FROM OPERATIONS</b>											
Total comprehensive Income	425 051	590 815	581 105	503 749	342 440	481 353	583 334	575 696	655 079	695 358	891 001
Adjust for:											
Amortisation of intangible asset	2 298	2 736	3 369	3 369							
Amortisation of financial asset	94 500	2 846	2 806	2 806	6 043	4 025	4 524	2 803	2 803	2 803	2 569
Asset Impairments	122 151	72 013	76 025	76 025	96 791	150 766	93 277	87 303	49 632	59 760	-
Depreciation	86 215	92 621	95 179	95 179	103 419	93 454	104 483	111 170	118 174	125 618	133 532
	(3 572)	(3 572)	(3 572)	(3 572)	(3 572)	(3 572)	(3 572)	(3 572)	(3 572)	(3 572)	-
Darville liability amorisation				572)							
Doubtful debts provision	4 013	15 952	12 376	12 376							
Fair value of biological assets	41	1 492									
Finance costs	114 237	84 567	66 477	66 477	78 613	73 006	67 902	61 619	113 247	175 607	169 072
Interest received	(94 231)	(100 079)	(134 029)	(134 029)	(60 857)	(90 050)	(74 560)	(41 368)	(34 734)	(41 584)	(59 564)
Increase/(decrease) in Provisions and non-current liabilities	33 754	92 800	95 598	172 954	110 671	135 400	94 560	99 160	103 278	107 812	112 785
Profit (loss) on disposal of PPE	(2 290)	(1 076)	392	392							
Profit (loss) on disposal of non-current asset held for sale			(858)	(858)							
Profit on disposal of shares		(12)									
Operating income before changes in working capital	782 168	851 103	794 869	794 869	673 549	844 382	869 948	892 810	1 003 906	1 121 802	1 249 395
Working capital changes:	233 269	(166 382)	57 348	57 348	(32 099)	(53 947)	(67 912)	(103 618)	(81 735)	(101 828)	(103 171)
	(176)	(182)	(2 063)	(2 063)	(204)	(2 188)	(2 314)	(2 443)	(2 575)	(2 712)	(2 855)
(Increase)/decrease in inventories				063)							
(Increase) decrease in accounts receivable	49 052	(7 205)	(109 393)	(109 393)	(26 895)	11 627	14 401	(21 174)	(28 073)	(34 335)	(31 179)
Increase/(decrease) in accounts payable	184 393	(158 995)	168 804	168 804	(5 000)	(63 386)	(80 000)	(80 000)	(51 087)	(64 781)	(69 137)
<b>Net Cash generated from operations</b>	<b>1 015 437</b>	<b>684 721</b>	<b>852 217</b>	<b>852 217</b>	<b>641 450</b>	<b>790 435</b>	<b>802 036</b>	<b>789 192</b>	<b>922 171</b>	<b>1 019 974</b>	<b>1 146 224</b>

Table 20.23: Msinsi Income Statement (R'000)

For the year ended June 30, TOTAL	F10	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Actual	Budget	Forecast					
<b>Revenue</b>	<b>25 895</b>	<b>25 852</b>	<b>26 284</b>	<b>27 904</b>	<b>36 440</b>	<b>34 029</b>	<b>38 675</b>	<b>41 468</b>	<b>45 693</b>	<b>50 620</b>	<b>56 485</b>
Enviromental Management	14 000	13 160	13 160	14 740	22 186	23 803	26 404	27 356	29 464	31 957	34 089
Eco-Tourism & Other Revenue	11 894	12 692	13 124	13 164	14 254	10 226	12 271	14 112	16 229	18 663	22 396
<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>25 895</b>	<b>25 852</b>	<b>26 284</b>	<b>27 904</b>	<b>36 440</b>	<b>34 029</b>	<b>38 675</b>	<b>41 468</b>	<b>45 693</b>	<b>50 620</b>	<b>56 485</b>
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<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>0</b>
<b>Administration Expenses</b>	<b>25 752</b>	<b>25 821</b>	<b>28 308</b>	<b>28 977</b>	<b>36 295</b>	<b>35 737</b>	<b>37 555</b>	<b>40 399</b>	<b>43 613</b>	<b>47 055</b>	<b>50 720</b>
Staff Costs	16 497	16 808	18 190	18 510	23 495	22 333	24 119	26 049	28 133	30 384	32 814
Energy											
Depreciation	636	875	860	742	642	821	936	850	900	925	900
Amortization											
Impairments											
Other operating &	8 619	8 138	9 258	9 725	12 158	12 583	12 500	13 500	14 580	15 746	17 006
<b>Operating income before interest</b>	<b>143</b>	<b>31</b>	<b>-2 025</b>	<b>-1 074</b>	<b>144</b>	<b>-1 707</b>	<b>1 120</b>	<b>1 069</b>	<b>2 080</b>	<b>3 565</b>	<b>5 764</b>
<b>Net interest and finance charges</b>	<b>230</b>	<b>85</b>	<b>12</b>	<b>-87</b>	<b>-144</b>	<b>-29</b>	<b>-30</b>	<b>10</b>	<b>30</b>	<b>15</b>	<b>25</b>
Interest Paid	21	26	35	107	180	64	75	55	45	50	45
Interest Received	251	111	47	20	36	34	45	65	75	65	70
<b>Net Profit (Loss)</b>	<b>373</b>	<b>116</b>	<b>-2 013</b>	<b>-1 161</b>	<b>0</b>	<b>-1 737</b>	<b>1 090</b>	<b>1 079</b>	<b>2 110</b>	<b>3 580</b>	<b>5 789</b>

Table 20.24: Msinsi Balance Sheet (R'000)

Msinsi Balance Sheet (in R'000) As at June 30,	F10	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Actual	Budget	Forecast					
<b>ASSETS</b>											
<b>Non-current assets</b>	<b>7 592</b>	<b>6 906</b>	<b>7 112</b>	<b>6 153</b>	<b>6 004</b>	<b>7 009</b>	<b>7 783</b>	<b>7 723</b>	<b>8 590</b>	<b>9 000</b>	<b>9 300</b>
Property, plant and equipment	2 944	2 556	2 109	2 063	1 750	2 860	3 925	4 075	4 175	4 750	5 350
Other non-current assets	4 649	4 244	4 898	4 089	4 149	4 149	3 858	3 649	4 415	4 250	3 950
Investments	0	105	105	0	105						
Employee loans											
<b>Current Assets</b>	<b>2 108</b>	<b>2 675</b>	<b>1 905</b>	<b>3 390</b>	<b>843</b>	<b>599</b>	<b>598</b>	<b>609</b>	<b>1 135</b>	<b>3 622</b>	<b>9 654</b>
Inventories	34	73	37	0	50						
Accounts receivable	138	142	265	796	163	263	120	217	246	286	236
Sundry Debtors		0	0	0	0	0	0	0	0	0	0
Current portion of employee loans		0	0	0	0	0	0	0	0	0	0
Inter - Company Loan	141	194	0	0	0	0	0	0	0	0	0
Interest Receivable											
Assets held for sale	105										
Bank balances and cash	1 690	2 266	1 604	2 594	631	336	478	392	889	3 336	9 418
<b>Total assets</b>	<b>9 700</b>	<b>9 581</b>	<b>9 017</b>	<b>9 543</b>	<b>6 847</b>	<b>7 608</b>	<b>8 381</b>	<b>8 332</b>	<b>9 724</b>	<b>12 621</b>	<b>18 953</b>
<b>Reserves</b>	<b>4 664</b>	<b>4 781</b>	<b>2 768</b>	<b>1 607</b>	<b>1 459</b>	<b>-130</b>	<b>960</b>	<b>2 039</b>	<b>4 150</b>	<b>7 730</b>	<b>13 519</b>
Accumulated reserves	4 664	4 781	2 768	1 607	1 459	-130	960	2 039	4 150	7 730	13 519
<b>Non-current liabilities</b>		<b>0</b>	<b>1 512</b>	<b>3 232</b>	<b>2 000</b>	<b>2 168</b>	<b>1 468</b>	<b>700</b>	<b>0</b>	<b>0</b>	<b>0</b>
Interest bearing borrowings		0	1 512	3 232	2 000	2 168	1 468	700	0	0	0
Post retirement medical benefit obligations											
Provisions											
<b>Current liabilities</b>	<b>5 036</b>	<b>4 800</b>	<b>4 737</b>	<b>4 704</b>	<b>3 388</b>	<b>5 570</b>	<b>5 953</b>	<b>5 593</b>	<b>5 574</b>	<b>4 891</b>	<b>5 434</b>
Accounts payable (including accruals & leases)											
Provisions	2 038	1 816	2 086	2 004	1 839	2 797	2 869	2 958	2 747	2 350	2 550
Inter - Company Loan Account											
Other payables/loans	2 998	2 985	2 650	2 699	1 549	2 773	3 084	2 635	2 827	2 541	2 884
Bank overdrafts											
<b>Total reserves and liabilities</b>	<b>9 700</b>	<b>9 581</b>	<b>9 017</b>	<b>9 543</b>	<b>6 847</b>	<b>7 608</b>	<b>8 381</b>	<b>8 332</b>	<b>9 724</b>	<b>12 621</b>	<b>18 953</b>

Table 20.25: Msinsi Cashflow Statement (R'000)

Msinsi Cash Flow Statement For the year ended June 30,	F10	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Actual	Budget	Forecast					
<b>OPERATING ACTIVITIES</b>											
Operating profit before working	267	-24	-1 528	-464	1 396	1 185	3 332	2 703	2 856	4 575	7 064
Changes in working capital	442	-110	1 288	1 274	-328	-731	-460	-1 031	-690	-643	493
<b>Net cash from operating activities</b>	<b>709</b>	<b>-134</b>	<b>-240</b>	<b>809</b>	<b>1 068</b>	<b>454</b>	<b>2 872</b>	<b>1 672</b>	<b>2 166</b>	<b>3 932</b>	<b>7 557</b>
<b>INVESTING ACTIVITIES</b>											
Additions to property, plant and Additions to intangible assets	-2 343	-510	-460	-743	-492	-1 618	-2 000	-1 000	-1 000	-1 500	-1 500
Proceeds on disposal of Property, Biological Assets	0	80	0	462	0	0	0	0	0	0	0
	170	1 055	27	550	0	0	0	0	0	0	0
<b>Net cash used in investing activities</b>	<b>-2 173</b>	<b>624</b>	<b>-433</b>	<b>268</b>	<b>-492</b>	<b>-1 618</b>	<b>-2 000</b>	<b>-1 000</b>	<b>-1 000</b>	<b>-1 500</b>	<b>-1 500</b>
<b>FINANCING ACTIVITIES</b>											
Net change in long-term	0	0	0	0	-1000	-1 064	-700	-768	-700	0	0
Interest received	251	111	47	20	36	34	45	65	75	65	70
Interest paid	-21	-26	-36	-107	-180	-64	-75	-55	-45	-50	-45
<b>Net cash used in financing activities</b>	<b>230</b>	<b>85</b>	<b>12</b>	<b>-87</b>	<b>-1 144</b>	<b>-1 094</b>	<b>-730</b>	<b>-758</b>	<b>-670</b>	<b>15</b>	<b>25</b>
<b>CASH AND CASH EQUIVALENTS</b>											
Net increase/(decrease) in cash and	-1 233	575	-661	990	-568	-2 257	142	-86	496	2 447	6 082
At beginning of year	2 923	1 690	2 266	1 604	1 200	2 594	336	478	392	889	3 336
<b>At end of year</b>	<b>1 690</b>	<b>2 266</b>	<b>1 604</b>	<b>2 594</b>	<b>632</b>	<b>336</b>	<b>478</b>	<b>392</b>	<b>889</b>	<b>3 336</b>	<b>9 418</b>

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

For the year ended June 30, TOTAL	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	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	21	24	27	28	29	32	34	37	40	43
Share of profit from associate	3 300	2 531	3 482							
Operating income before interest	3 279	2 507	3 455	-28	-29	-32	-34	-37	-40	-43
Net interest and finance charges	0	23	54	0	0	0	0	0	0	0
Interest Paid										
Interest Received	-	23	54							
Net Profit (Loss)	3 279	2 530	3 509	-28	-29	-32	-34	-37	-40	-43

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

As at June 30,	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Budget	Forecast					
<b>ASSETS</b>										
<b>Non-current assets</b>	<b>6 569</b>	<b>6 366</b>	<b>6 255</b>	<b>6 366</b>	<b>6 255</b>	<b>6 255</b>	<b>6 255</b>	<b>6 255</b>	<b>6 255</b>	<b>6 255</b>
Other non-current assets	536	360	250	360	250	250	250	250	250	250
Investments in subsidiaries and associates	6 033	6 005	6 005	6 005	6 005	6 005	6 005	6 005	6 005	6 005
<b>Current Assets</b>	<b>2 972</b>	<b>2 699</b>	<b>4 484</b>	<b>2 699</b>	<b>4 255</b>	<b>4 223</b>	<b>4 189</b>	<b>4 152</b>	<b>4 112</b>	<b>4 069</b>
<b>Total assets</b>	<b>9 541</b>	<b>9 065</b>	<b>10 539</b>	<b>9 065</b>	<b>10 510</b>	<b>10 478</b>	<b>10 444</b>	<b>10 407</b>	<b>10 367</b>	<b>10 324</b>
<b>Reserves</b>	<b>4 475</b>	<b>7 005</b>	<b>10 513</b>	<b>6 950</b>	<b>10 484</b>	<b>10 452</b>	<b>10 418</b>	<b>10 381</b>	<b>10 341</b>	<b>10 298</b>
Accumulated reserves	4 475	7 005	10 513	6 950	10 484	10 452	10 418	10 381	10 341	10 298
<b>Non-current liabilities</b>	<b>5 045</b>	<b>2 036</b>	<b>0</b>	<b>2 091</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
other non current liabilities	5 045	2 036	0	2 091	0	0	0	0	0	0
<b>Current liabilities</b>	<b>21</b>	<b>24</b>	<b>26</b>	<b>24</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>26</b>
Accounts payable (including accruals & leases)	21	24	26	24	26	26	26	26	26	26
<b>Total reserves and liabilities</b>	<b>9 541</b>	<b>9 065</b>	<b>10 539</b>	<b>9 065</b>	<b>10 510</b>	<b>10 478</b>	<b>10 444</b>	<b>10 407</b>	<b>10 367</b>	<b>10 324</b>

Table 20.28: Umgeni Water Group Income Statement (R'000)

For the year ended June 30,	F11	F12	F13	F13	F14	F15	F16	F17	F18	F 19	
	Actual	Actual	Actual	Restated	Budget	Forecast					
Volume of Bulk treated water sold (in kl'000)	414	416 995	416	416 995	418 823	434 798	441 320	447 041	454 432	461 249	468 168
<b>Revenue</b>	<b>1 660</b>	<b>1 847 151</b>	<b>2 081</b>	<b>1 908 833</b>	<b>2 287 536</b>	<b>2 179 291</b>	<b>2 121 613</b>	<b>2 317 563</b>	<b>2 543 524</b>	<b>2 785 267</b>	<b>3 051 475</b>
Water Sales - Bulk	1 423	1 519 295	1 798	1 625 480	1 914 907	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Bulk water sales	-	-	1 625	-	1 743	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
- Capital Unit charge	-	-	172	-	171	-	-	-	-	-	-
Water Sales - Reticulation	-	-	-	-	-	-	-	-	-	-	-
Water Sales - Raw Water	-	429	-	428	-	579	625	677	722	780	842
Wastewater Sales	2	2 438	2	2 504	10 157	1 919	2 107	2 305	2 532	2 776	3 043
Wastewater Management Fee	45	48 594	52	52 481	52 238	57 152	62 239	66 595	71 990	78 037	84 514
Section 30 activities	189	276 395	227	227 940	151 558	309 254	59 308	56 807	60 500	64 173	69 757
<b>Cost of sales</b>	<b>661</b>	<b>856 808</b>	<b>1 042</b>	<b>869 909</b>	<b>1 282 932</b>	<b>1 015 177</b>	<b>854 812</b>	<b>972 781</b>	<b>1 060 381</b>	<b>1 152 399</b>	<b>1 255 320</b>
Changes in water inventory	-	(211)	-	(616)	-	-	-	-	-	-	-
Chemicals	36	41 786	50	50 452	52 147	47 871	53 223	58 812	64 987	71 811	79 351
Depreciation	69	73 925	76	76 653	85 330	80 820	73 923	78 655	83 610	88 877	94 476
Energy	87	103 391	107	107 884	144 919	138 464	170 752	189 535	206 593	225 187	247 705
Maintenance	109	130 804	137	137 456	143 711	146 896	171 811	186 126	201 633	218 431	236 630
Raw Water	95	150 598	334	161 389	305 784	190 241	161 085	198 898	220 672	244 674	271 595
- Without CUC	-	-	161	-	154	190 241	161 085	198 898	220 672	244 674	271 595
-CUC	-	-	172	-	151	-	-	-	-	-	-
Staff Costs	100	105 291	117	117 203	131 492	134 324	164 352	196 487	215 885	233 372	252 275
Section 30 activities	150	235 157	184	184 123	118 566	253 761	28 767	28 720	29 295	29 881	30 478
Other direct operating activities	11	16 067	35	35 365	17 690	22 798	30 897	35 549	37 706	40 167	42 810
<b>Gross profit</b>	<b>999</b>	<b>990 343</b>	<b>1 038</b>	<b>1 038 924</b>	<b>1 004 603</b>	<b>1 164 114</b>	<b>1 266 801</b>	<b>1 344 781</b>	<b>1 483 143</b>	<b>1 632 868</b>	<b>1 796 155</b>
	<b>60%</b>	<b>54%</b>	<b>50%</b>	<b>54%</b>	<b>44%</b>	<b>52%</b>	<b>60%</b>	<b>58%</b>	<b>58%</b>	<b>58%</b>	<b>59%</b>
<b>Other operating income</b>	<b>(9)</b>	<b>52 109</b>	<b>18</b>	<b>18 814</b>	<b>5 647</b>	<b>21 218</b>	<b>5 753</b>	<b>5 934</b>	<b>6 130</b>	<b>6 343</b>	<b>3 001</b>
<b>Administration Expenses</b>	<b>544</b>	<b>469 197</b>	<b>545</b>	<b>462 738</b>	<b>604 118</b>	<b>628 177</b>	<b>647 564</b>	<b>706 509</b>	<b>706 412</b>	<b>759 078</b>	<b>745 699</b>
Staff Costs	156	170 325	192	192 622	229 587	232 432	262 547	283 550	305 977	330 733	357 492
Energy	3	3 622	4	4 014	4 034	3 972	4 700	5 217	5 687	6 199	6 818
Depreciation	18	15 648	15	15 111	12 853	12 848	22 741	24 051	25 563	27 142	28 768
Amortization	96	5 581	6	6 175	6 043	4 025	4 524	2 803	2 803	2 803	2 569
Impairments	122	72 013	75	75 978	96 791	150 766	93 277	87 303	49 632	59 760	-
Maintenance	23	14 483	16	16 068	19 978	14 430	17 756	18 892	20 083	21 348	22 693
Retirement Benefits	36	102 092	125	42 482	120 295	73 151	84 427	108 629	117 282	126 592	136 714
Other operating & administrative expenses	88	85 432	110	110 288	114 538	136 555	157 592	176 063	179 386	184 502	190 645
<b>Operating income before interest</b>	<b>445</b>	<b>573 255</b>	<b>512</b>	<b>595 000</b>	<b>406 132</b>	<b>557 155</b>	<b>624 991</b>	<b>644 207</b>	<b>782 861</b>	<b>880 133</b>	<b>1 053 457</b>
<b>Net interest and finance charges</b>	<b>19</b>	<b>(15 546)</b>	<b>67</b>	<b>(67 519)</b>	<b>17 900</b>	<b>(17 014)</b>	<b>(6 628)</b>	<b>20 241</b>	<b>78 483</b>	<b>134 008</b>	<b>109 483</b>
Interest Paid	114	84 589	134	66 507	78 613	73 006	67 902	61 619	113 247	175 607	169 072
Interest Received	(94)	(100 135)	(66)	(134 026)	(60)	(90 020)	(74 530)	(41 378)	(34 764)	(41 599)	(59 589)
<b>Share of profit from associate</b>	<b>3</b>	<b>2 531</b>	<b>3</b>	<b>3 482</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net Profit (Loss)</b>	<b>428</b>	<b>591 332</b>	<b>583</b>	<b>666 001</b>	<b>388 232</b>	<b>574 169</b>	<b>631 619</b>	<b>623 967</b>	<b>704 379</b>	<b>746 125</b>	<b>943 974</b>
Other Comprehensive Income	-	-	-	-	-	-	-	-	-	-	-
- Retirement Benefit adjustment (IAS 19)	-	-	-	159 906	45 820	94 582	47 226	47 226	47 226	47 226	47 226
<b>Total comprehensive income for the year</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>506 095</b>	<b>342 412</b>	<b>479 587</b>	<b>584 393</b>	<b>576 741</b>	<b>657 153</b>	<b>698 899</b>	<b>896 748</b>

Table 20.29: Umgeni Water Group Balance Sheet (R'000)

As at June 30,	F11	F12	F13	F13	F14	F14	F15	F16	F17	F19	
	Actual	Actual	Actual	Restated	Budget			Forecast			
<b>ASSETS</b>											
<b>Non-current assets</b>	<b>2 921</b>	<b>3 143</b>	<b>3 481</b>	<b>3 481 721</b>	<b>4 179</b>	<b>4 588 017</b>	<b>6 139 013</b>	<b>7 571 145</b>	<b>8 886 706</b>	<b>9 433 812</b>	<b>10 019 842</b>
Property, plant and equipment	2 869 548	3 097 613	3 443 935	3 443 935	4 152 905	4 234 019	5 767 430	7 175 914	8 462 329	8 976 663	9 523 902
Other non-current assets	30 852	29 575	26 603	26 603	18 748	23 570	19 570	17 229	15 710	13 093	10 397
Investments - Financial Instruments	14 468	9 995	5 179	5 179	-	323 389	344 306	369 561	399 564	434 991	476 521
Investments in subsidiaries and	6 138	6 110	6 005	6 005	7 567	7 039	7 707	8 441	9 104	9 064	9 022
Assets held for sale	14 481	13 500	-	-	13 500	-	-	-	-	-	-
<b>Current Assets</b>	<b>1 849 233</b>	<b>2 031 854</b>	<b>2 426 175</b>	<b>2 426 175</b>	<b>1 919 343</b>	<b>1 982 034</b>	<b>948 407</b>	<b>629 251</b>	<b>589 879</b>	<b>700 344</b>	<b>974 420</b>
Inventories	8 857	9 002	11 029	11 029	9 411	13 217	15 530	17 974	20 549	23 260	26 116
Accounts receivable	196 453	195 463	236 658	236 658	286 095	277 810	263 265	284 537	312 638	347 013	378 142
Sundry Debtors	18 372	10 271	67 441	67 441	12 970	13 879	13 879	13 879	13 879	13 879	13 879
Short-term investments	1 509 594	1 780 335	2 075 826	2 075 826	1 609 862	1 676 000	655 000	312 000	241 000	312 000	546 000
Interest Receivable	13 866	25 205	27 610	27 610	14	16	16	16	16	16	16
Bank balances and cash	102 091	11 578	7 611	7 611	991	1 113	716	847	1 798	4 176	10 268
<b>Total assets</b>	<b>4 784 720</b>	<b>5 188 647</b>	<b>5 907 897</b>	<b>5 907 897</b>	<b>6 112 063</b>	<b>6 570 052</b>	<b>7 087 420</b>	<b>8 200 396</b>	<b>9 476 585</b>	<b>10 134 156</b>	<b>10 994 262</b>
<b>Reserves</b>											
Accumulated reserves	2 516 445	3 107 777	3 691 228	3 613 872	3 923 375	4 093 463	4 677 855	5 254 596	5 911 750	6 610 649	7 507 395
<b>Non-current liabilities</b>	<b>1 487 534</b>	<b>1 461 073</b>	<b>1 461 793</b>	<b>1 539 149</b>	<b>1 684 475</b>	<b>1 817 776</b>	<b>1 831 049</b>	<b>2 448 410</b>	<b>3 119 327</b>	<b>3 147 731</b>	<b>3 230 896</b>
Interest bearing borrowings	1 257 787	1 136 306	1 025 930	1 025 930	1 181 708	1 171 358	1 092 526	1 613 509	2 184 302	2 104 894	2 075 275
Post retirement medical benefit	214 098	312 296	425 305	502 661	492 209	638 028	732 588	831 748	935 025	1 042 837	1 155 622
Other Non Current Liabilities	15 649	12 471	10 558	10 558	10 558	8 390	5 935	3 152	-	-	-
<b>Current liabilities</b>	<b>780 741</b>	<b>619 797</b>	<b>754 876</b>	<b>754 876</b>	<b>504 213</b>	<b>658 812</b>	<b>578 516</b>	<b>497 390</b>	<b>445 508</b>	<b>375 776</b>	<b>255 970</b>
Accounts payable (including accruals & Provisions)	558 414	399 121	568 649	568 649	299 657	501 672	421 672	341 672	290 585	225 804	156 666
Current portion of interest bearing	70 759	65 185	45 380	45 380	43 778	47 060	47 132	47 221	47 010	46 613	46 813
Other payables/loans	115 006	120 831	109 451	109 451	129 613	78 662	78 832	79 017	79 208	79 408	29 619
	36 562	34 660	31 396	31 396	31 165	31 419	30 880	29 481	28 706	23 952	22 871
<b>Total reserves and liabilities</b>	<b>4 784 720</b>	<b>5 188 647</b>	<b>5 907 897</b>	<b>5 907 897</b>	<b>6 112 063</b>	<b>6 570 052</b>	<b>7 087 420</b>	<b>8 200 396</b>	<b>9 476 585</b>	<b>10 134 156</b>	<b>10 994 262</b>



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

For the year ended June 30,	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
<b>OPERATING ACTIVITIES</b>											
Operating profit before working capital changes	782 286	1 876 987	1 974 773	1 897 417	674 944	845 567	873 280	895 513	1 006 762	1 126 377	1 256 460
Changes in working capital	230 072	(1 193 757)	(1 123 829)	(1 046 473)	(32 428)	(54 678)	(68 372)	(104 649)	(82 425)	(102 471)	(102 678)
<b>Net cash from operating activities</b>	<b>1 012 358</b>	<b>683 230</b>	<b>850 944</b>	<b>850 944</b>	<b>642 516</b>	<b>790 889</b>	<b>804 908</b>	<b>790 864</b>	<b>924 337</b>	<b>1 023 907</b>	<b>1 153 782</b>
<b>INVESTING ACTIVITIES</b>											
Additions to property, plant and equipment	(375 424)	(481 668)	(640 208)	(640 208)	(975 994)	(1 070 678)	(1 886 932)	(1 853 159)	(1 576 789)	(1 137 956)	(633 164)
Additions to intangible assets	(3 860)	(3 947)	(2 990)	(2 990)	-	-	-	-	-	-	-
Proceeds on disposal of Property, plant & equipment	4 914	1 112	15 636	15 636	-	-	-	-	-	-	-
Transfer to financial asset	-	-	-	-	-	-	-	-	-	-	-
Grant Funding	9 977	131 056	167 080	167 080	95 249	84 062	203 333	293 860	170 175	485 825	-
Proceeds on disposal of Biological Assets	1 055	-	550	550	-	-	-	-	-	-	-
Payments of intercompany borrowings	2 970	2 558	3 482	3 482	-	-	-	-	-	-	-
<b>Net cash used in investing activities</b>	<b>(360 368)</b>	<b>(350 889)</b>	<b>(456 449)</b>	<b>(456 449)</b>	<b>(880 745)</b>	<b>(986 616)</b>	<b>(1 683 599)</b>	<b>(1 559 299)</b>	<b>(1 406 613)</b>	<b>(652 131)</b>	<b>(633 164)</b>
<b>FINANCING ACTIVITIES</b>											
Net change in long-term borrowings	(144 655)	(115 656)	(121 756)	(121 756)	(77 051)	113 582	(79 360)	(79 602)	(79 715)	(79 208)	(79 410)
New Debt proposed	-	-	-	-	-	-	-	600 000	650 000	-	-
Net Investments - LTI & RED	(326 794)	(286 085)	(290 675)	(290 675)	382 182	83 217	1 021 000	343 000	71 000	(71 000)	(234 000)
Proceeds on disposal of available for sale investments	-	421	-	-	-	-	-	-	-	-	-
Proceeds from (repaid to) short-term borrowings	-	-	-	-	-	-	-	-	-	-	-
Net interest (Paid) received	(62 719)	(21 534)	13 970	13 970	(67 838)	(7 570)	(63 345)	(94 835)	(158 057)	(219 190)	(201 117)
<b>Net cash used in financing activities</b>	<b>(534 168)</b>	<b>(422 854)</b>	<b>(398 462)</b>	<b>(398 462)</b>	<b>237 293</b>	<b>189 229</b>	<b>878 295</b>	<b>768 563</b>	<b>483 228</b>	<b>(369 398)</b>	<b>(514 527)</b>
<b>CASH AND CASH EQUIVALENTS</b>											
Net increase/(decrease) in cash and cash equivalents	117 822	(90 513)	(3 967)	(3 967)	(935)	(6 498)	(397)	131	951	2 378	6 092
At beginning of year	(15 731)	102 091	11 578	11 578	1 926	7 611	1 113	716	847	1 798	4 176
<b>At end of year</b>	<b>102 091</b>	<b>11 578</b>	<b>7 611</b>	<b>7 611</b>	<b>991</b>	<b>1 113</b>	<b>716</b>	<b>847</b>	<b>1 798</b>	<b>4 176</b>	<b>10 268</b>

Table 20.31: Umgeni Water Group Notes to the Cashflow Statement (R'000)

NOTES TO THE CASHFLOW STATEMENT Reconciliation of total comprehensive income to cash generated from operations	F11	F12	F13	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Actual	Restated	Budget	Forecast					
Total comprehensive income	428 441	591 332	583 451	506 095	342 412	479 587	584 393	576 741	657 153	698 899	896 748
Adjust for:											
Amortisation of intangible asset	2 298	2 736	3 369	3 369	7 063	6 097	5 800	3 587	2 679	2 888	2 969
Amortisation of financial asset	94 500	2 846	2 806	2 806							
Asset Impairments	122 150	72 013	76 130	76 130	96 791	150 766	93 277	87 303	49 632	59 760	-
Depreciation	87 090	93 481	95 921	95 921	104 062	94 275	105 419	112 020	119 074	126 543	134 432
Darvill liability amortisation	-3 572	-3 572	-3 572	-3 572	-3 572	-3 572	-3 572	-3 572	-3 572	-3 572	-
Doubtful debts provision	4 013	15 952	12 376	12 376							
Fair value adjustment of biological assets	-237	838	273	273							
Finance costs	114 190	84 589	66 507	66 507	78 793	73 006	67 902	61 619	113 247	175 607	169 072
Interest received	-94 267	-100 135	-134 026	-134 026	-60 893	-90 020	-74 530	-41 378	-34 764	-41 599	-59 589
Profit from associate	-3 300	-2 531	-3 482	-3 482							
Increase/(decrease) in Provisions and non-current liabilities	33 700	93 071	94 859	172 215	110 310	135 400	94 559	99 161	103 277	107 812	112 785
Profit (loss) on disposal of PPE	-2 347	-1 029	438	438							
Profit (loss) on sale of biological assets	-373		-12	-12							
Profit (loss) on disposal of Noncurrent assets held for sale			-858	-858							
Profit (loss) on disposal of shares		-12									
Operating income before changes in working capital	782 286	849 579	794 181	794 181	674 966	845 539	873 248	895 480	1 006 726	1 126 338	1 256 417
Working capital changes:	230 072	-166 349	56 763	56 763	-32 449	-54 650	-68 340	-104 615	-82 389	-102 432	-102 636
(Increase)/decrease in inventories	-215	-145	-2 026	-2 026	-209	-2 189	-2 314	-2 444	-2 575	-2 713	-2 855
(Increase) decrease in accounts receivable	46 073	-6 859	-110 739	-110 739	-26 925	11 094	14 258	-21 078	-28 044	-34 295	-31 229
Increase/(decrease) in accounts payable	184 214	-159 345	169 528	169 528	-5 344	-63 584	-80 317	-81 128	-51 806	-65 464	-68 594
Increase/(decrease) in intercompany loan (UWS)					28	29	32	34	37	40	43
<b>Net Cash generated from operations</b>	<b>1 012 358</b>	<b>683 230</b>	<b>850 944</b>	<b>850 944</b>	<b>642 516</b>	<b>790 890</b>	<b>804 908</b>	<b>790 864</b>	<b>924 337</b>	<b>1 023 907</b>	<b>1 153 782</b>

Table 20.32: Umgeni Water Group Segmental Report (R'000)

Segmental Report (in R'000) For the year ended June 30,	F11				F'12			
	Primary		Actual		Primary		Actual	
	Bulk Water	Waste Water	S30	Total	Bulk Water	Waste Water	S30	Total
Volume sold	415 426	358	0	415 784	414 983	358	0	415 341
<b>Revenue</b>	<b>1 423 670</b>	<b>48 089</b>	<b>189 153</b>	<b>1 660 912</b>	<b>1 519 724</b>	<b>51 032</b>	<b>276 395</b>	<b>1 847 151</b>
<b>Cost of sales</b>	<b>-474 102</b>	<b>-29 172</b>	<b>-158 569</b>	<b>-661 843</b>	<b>-576 707</b>	<b>-35 463</b>	<b>-244 638</b>	<b>-856 808</b>
Changes in water inventory	121	0	0	121	211	0	0	211
Chemicals	-33 292	-3 353	-82	-36 727	-37 185	-4 468	-133	-41 786
Depreciation	-66 585	-2 491	0	-69 076	-71 595	-2 330	0	-73 925
Energy	-79 913	-6 902	-863	-87 678	-93 359	-8 732	-1 300	-103 391
Maintenance	-99 922	-7 417	-1 828	-109 167	-120 100	-8 701	-2 003	-130 804
Raw water	-95 951	0	0	-95 951	-150 598	0	0	-150 598
Section 30 activities	0	0	-150 589	-150 589	0	0	-235 157	-235 157
Staff costs	-88 660	-7 498	-4 786	-100 944	-92 168	-8 101	-5 022	-105 291
Other direct operating expenses	-9 900	-1 511	-421	-11 832	-11 913	-3 131	-1 023	-16 067
<b>Gross profit</b>	<b>949 568</b>	<b>18 917</b>	<b>30 584</b>	<b>999 069</b>	<b>943 017</b>	<b>15 569</b>	<b>31 757</b>	<b>990 343</b>
<b>Other income</b>	<b>-13 962</b>	<b>3 805</b>	<b>791</b>	<b>-9 366</b>	<b>47 819</b>	<b>3 610</b>	<b>680</b>	<b>52 109</b>
<b>Other operating and administration expenses</b>	<b>-508 430</b>	<b>-7 671</b>	<b>-28 538</b>	<b>-544 639</b>	<b>-421 251</b>	<b>-8 655</b>	<b>-39 291</b>	<b>-469 197</b>
Amortisation	-96 798		0	-96 798	-5 581	0	0	-5 581
Impairments and write-offs	-122 150			-122 150	-72 013	0	0	-72 013
Depreciation	-16 533	-414	-1 067	-18 014	-14 104	-466	-1 078	-15 648
Other expenses	-272 949	-7 257	-27 471	-307 677	-329 553	-8 189	-38 213	-375 955
<b>Profit from operations</b>	<b>427 176</b>	<b>15 051</b>	<b>2 837</b>	<b>445 064</b>	<b>569 585</b>	<b>10 524</b>	<b>-6 854</b>	<b>573 255</b>
Interest income	94 231	0	36	94 267	100 135	0	0	100 135
Finance costs	-109 791	-4 445	46	-114 190	-78 702	-5 859	-28	-84 589
Share of profit from associate	0	0	3 300	3 300	0	0	2 531	2 531
<b>Profit for the year</b>	<b>411 616</b>	<b>10 606</b>	<b>6 219</b>	<b>428 441</b>	<b>591 018</b>	<b>4 665</b>	<b>-4 351</b>	<b>591 332</b>
Other Comprehensive Income								
<b>Total comprehensive Income</b>	<b>411 616</b>	<b>10 606</b>	<b>6 219</b>	<b>428 441</b>	<b>591 018</b>	<b>4 665</b>	<b>-4 351</b>	<b>591 332</b>
<b>Capital expenditure</b>	<b>338 815</b>	<b>1 237</b>	<b>39 233</b>	<b>379 285</b>	<b>459 919</b>	<b>1 109</b>	<b>24 587</b>	<b>566 269</b>
Segment assets	2 937 750	85 662	69 503	3 092 915	3 166 286	85 654	61 160	3 313 100
Interest in associate	0	0	6 138	6 138	0	0	6 110	6 110
Unallocated				1 685 667				1 869 437
<b>Consolidated total assets</b>				<b>4 784 720</b>				<b>5 188 647</b>
Segment liabilities	1 176 037	33 428	163 327	1 372 792	1 227 274	29 863	73 697	1 330 834
Unallocated				895 483				750 036
<b>Consolidated total liabilities</b>				<b>2 268 275</b>				<b>2 080 870</b>

Table 20.32 continued

Segmental Report (in R'000) For the year ended June 30,	F'13				F'13			
	Primary		S30	Actual Total	Primary		S30	Restated Total
	Bulk Water	Waste Water			Bulk Water	Waste Water		
Volume sold	423 386	300	0	423 686	423 386	300	0	423 686
<b>Revenue</b>	<b>1 798 690</b>	<b>54 985</b>	<b>227 940</b>	<b>2 081 615</b>	<b>1 625 481</b>	<b>54 985</b>	<b>227 940</b>	<b>1 908 833</b>
<b>Cost of sales</b>	<b>-806 282</b>	<b>-40 056</b>	<b>-196 353</b>	<b>-1 042 691</b>	<b>-633 500</b>	<b>-40 056</b>	<b>-196 353</b>	<b>-869 909</b>
Changes in water inventory	616	0	0	616	616	0	0	616
Chemicals	-44 142	-6 129	-181	-50 452	-44 142	-6 129	-181	-50 452
Depreciation	-74 265	-2 388	0	-76 653	-74 265	-2 388	0	-76 653
Energy	-95 397	-10 055	-2 432	-107 884	-95 397	-10 055	-2 432	-107 884
Maintenance	-126 223	-8 076	-3 157	-137 456	-126 223	-8 076	-3 157	-137 456
Raw water	-334 171	0	0	-334 171	-161 389	0	0	-161 389
Section 30 activities	0	0	-184 123	-184 123	0	0	-184 123	-184 123
Staff costs	-103 372	-8 417	-5 414	-117 203	-103 372	-8 417	-5 414	-117 203
Other direct operating expenses	-29 329	-4 990	-1 046	-35 365	-29 329	-4 990	-1 046	-35 365
<b>Gross profit</b>	<b>992 408</b>	<b>14 930</b>	<b>31 587</b>	<b>1 038 924</b>	<b>992 408</b>	<b>14 930</b>	<b>31 587</b>	<b>1 038 924</b>
<b>Other income</b>	<b>15 053</b>	<b>3 612</b>	<b>149</b>	<b>18 814</b>	<b>15 053</b>	<b>3 612</b>	<b>149</b>	<b>18 814</b>
<b>Other operating and administration expenses</b>	<b>-517 367</b>	<b>-9 220</b>	<b>-18 699</b>	<b>-545 287</b>	<b>-435 872</b>	<b>-8 167</b>	<b>-18 699</b>	<b>-462 738</b>
Amortisation	-6 175	0	0	-6 175	-6 175	0	0	-6 175
Impairments and write-offs	-75 978	-56	-96	-76 130	-75 978	-56	-96	-76 130
Depreciation	-15 111	-325	-755	-16 190	-15 111	-325	-755	-16 190
Other expenses	-420 103	-8 840	-17 849	-446 792	-338 608	-7 786	-17 849	-364 243
<b>Profit from operations</b>	<b>490 094</b>	<b>9 321</b>	<b>13 036</b>	<b>512 451</b>	<b>571 589</b>	<b>10 375</b>	<b>13 036</b>	<b>595 000</b>
Interest income	134 026	0	0	134 026	134 026	0	0	134 026
Finance costs	-60 665	-5 811	-31	-66 506	-60 665	-5 811	-31	-66 506
Share of profit from associate	0	0	3 482	3 482	0	0	3 482	3 482
<b>Profit for the year</b>	<b>563 456</b>	<b>3 510</b>	<b>16 487</b>	<b>583 451</b>	<b>644 950</b>	<b>4 564</b>	<b>16 487</b>	<b>666 001</b>
Other comprehensive Income	0	0	0	0	0	0	0	159 906
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>563 456</b>	<b>3 510</b>	<b>16 487</b>	<b>583 451</b>	<b>644 950</b>	<b>4 564</b>	<b>16 487</b>	<b>506 095</b>
<b>Capital expenditure</b>	<b>623 723</b>	<b>19 475</b>	<b>0</b>	<b>643 198</b>	<b>623 723</b>	<b>19 475</b>	<b>0</b>	<b>643 198</b>
Segment assets	3 515 341	86 452	155 615	3 757 408	3 515 341	86 452	155 615	3 757 408
Interest in associate	0	0	6 005	6 005	0	0	6 005	6 005
Unallocated				2 144 483				2 144 483
<b>Consolidated total assets</b>				<b>5 907 897</b>				<b>5 907 897</b>
Segment liabilities	1 109 557	25 824	123 458	1 258 839	1 109 557	25 824	123 458	1 258 839
Unallocated				957 830				957 830
<b>Consolidated total liabilities</b>				<b>2 216 669</b>				<b>2 216 669</b>

Table 20.32 continued

Segmental Report (in R'000) For the year ended June 30,	F'14				F'15			
	Primary		S30	Forecast Total	Primary		S30	Forecast Total
	Bulk Water	Waste Water			Bulk Water	Waste Water		
Volume sold	434 798	0	0	434 798	441 320	0	0	441 320
<b>Revenue</b>	<b>1 810 965</b>	<b>59 071</b>	<b>309 254</b>	<b>2 179 291</b>	<b>1 997 960</b>	<b>64 346</b>	<b>59 308</b>	<b>2 121 613</b>
<b>Cost of sales</b>	<b>-708 996</b>	<b>-42 416</b>	<b>-263 765</b>	<b>-1 015 177</b>	<b>-768 202</b>	<b>-46 489</b>	<b>-40 121</b>	<b>-854 812</b>
Changes in water inventory	0	0	0	0	0	0	0	0
Chemicals	-42 325	-5 114	-432	-47 871	-47 161	-5 558	-505	-53 223
Depreciation	-79 897	-923	0	-80 820	-73 382	-541	0	-73 923
Energy	-124 809	-11 072	-2 583	-138 464	-155 860	-12 102	-2 790	-170 752
Maintenance	-132 782	-10 948	-3 166	-146 896	-158 058	-9 917	-3 837	-171 811
Raw water	-190 241	0	0	-190 241	-161 085	0	0	-161 085
Section 30 activities	0	-9 681	-244 080	-253 761	0	-10 688	-18 079	-28 767
Staff costs	-121 432	0	-12 892	-134 324	-150 086	0	-14 266	-164 352
Other direct operating expenses	-17 509	-4 678	-612	-22 798	-22 570	-7 683	-644	-30 897
<b>Gross profit</b>	<b>1 101 969</b>	<b>16 655</b>	<b>45 489</b>	<b>1 164 114</b>	<b>1 229 757</b>	<b>17 857</b>	<b>19 187</b>	<b>1 266 801</b>
<b>Other income</b>	<b>17 604</b>	<b>3 614</b>	<b>0</b>	<b>21 218</b>	<b>2 135</b>	<b>3 618</b>	<b>0</b>	<b>5 753</b>
<b>Other operating and administration expenses</b>	<b>-587 648</b>	<b>-8 095</b>	<b>-32 435</b>	<b>-628 177</b>	<b>-628 183</b>	<b>-8 574</b>	<b>-10 806</b>	<b>-647 564</b>
Amortisation	-4 025	0	0	-4 025	-4 524	0	0	-4 524
Impairments and write-offs	-150 766	0	0	-150 766	-93 277	0	0	-93 277
Depreciation	-11 939	-88	-821	-12 848	-21 715	-91	-936	-22 741
Other expenses	-420 918	-8 007	-31 614	-460 539	-508 667	-8 483	-9 871	-527 021
<b>Profit from operations</b>	<b>531 925</b>	<b>12 175</b>	<b>13 054</b>	<b>557 155</b>	<b>603 709</b>	<b>12 901</b>	<b>8 381</b>	<b>624 991</b>
Interest income	90 050	0	-29	90 020	74 560	0	-30	74 530
Finance costs	-68 311	-4 695	0	-73 006	-63 554	-4 348	0	-67 902
Share of profit from associate	0			0	0			0
<b>Profit for the year</b>	<b>553 663</b>	<b>7 481</b>	<b>13 025</b>	<b>574 169</b>	<b>614 715</b>	<b>8 553</b>	<b>8 351</b>	<b>631 619</b>
Other comprehensive Income	0	0	0	-94 582	0	0	0	-47,226
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>553 663</b>	<b>7 481</b>	<b>13 025</b>	<b>479 587</b>	<b>614 715</b>	<b>8 553</b>	<b>8 351</b>	<b>584 393</b>
<b>Capital expenditure</b>	<b>1 017 591</b>	<b>51 469</b>	<b>1 618</b>	<b>1 070 678</b>	<b>1 592 401</b>	<b>292 531</b>	<b>2 000</b>	<b>1 886 932</b>
Segment assets	4 232 386	136 910	156 412	4 525 708	5 778 773	428 808	157 477	6 365 058
Interest in associate			7 039	7 039			7 707	7 707
Unallocated				2 037 305				714 655
<b>Consolidated total assets</b>				<b>6 570 052</b>				<b>7 087 420</b>
				0				0
Segment liabilities	1 224 196	25 824	15 950	1 265 970	1 145 534	25 824	17 391	1 188 749
Unallocated				1 210 619				1 220 815
<b>Consolidated total liabilities</b>				<b>2 476 589</b>				<b>2 409 564</b>

## 20.10 Capital Expenditure Programme

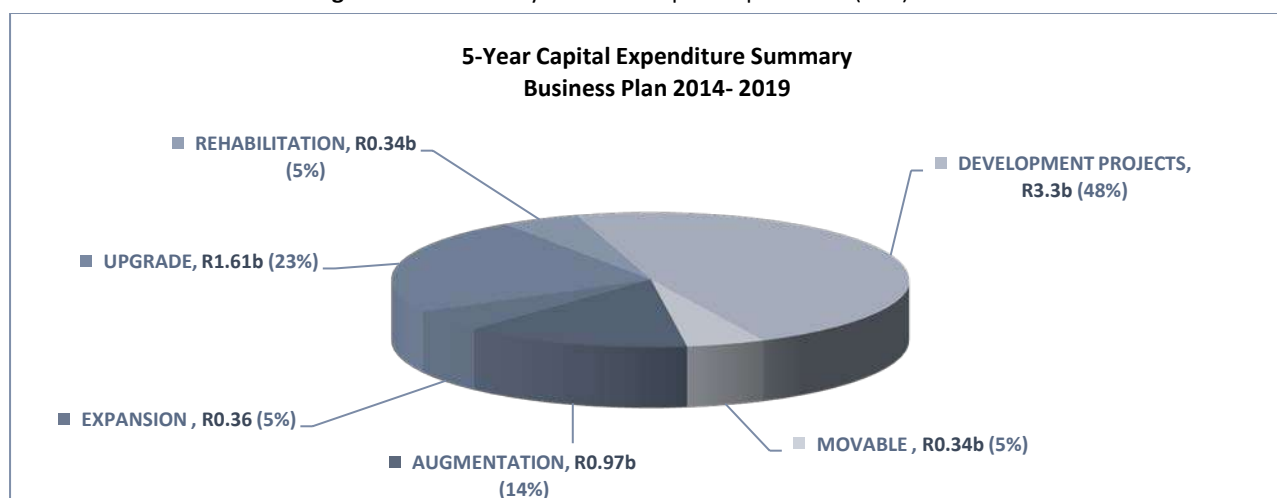
The capital expenditure programme is integral to the execution of Umgeni Water's growth and water services delivery strategy and is thus a significant component of Umgeni Water's Business Plan. The capital infrastructure programme is based on Umgeni Water's Infrastructure Master Plan which is aligned 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 2019 (R'000)

CASHFLOWS UNESCALATED											
CAPEX CATEGORY	Actual F'11	Actual F'12	Actual F'13	2014 Budget	Total 2014 - 2019	F14	F15	F16	F17	F18	F19
<b>AUGMENTATION</b>	193 123	183 508	172 386	196 725	952 877	175 542	188 651	169 815	141 061	122 280	155 528
<b>EXPANSION</b>				1 500	355 900	560	40 254	158 200	100 786	45 100	11 000
<b>UPGRADE</b>	27 492	51 778	78 817	266 525	1 634 395	159 534	465 380	417 753	338 954	167 614	85 161
<b>REHABILITATION</b>	447	2 142	53 293	15 950	337 930	36 044	191 586	60 800	49 500		
<b>DEVELOPMENT PROJECTS</b>	131 288	227 857	307 912	383 934	3 273 705	644 461	766 020	692 987	570 353	444 883	155 000
<b>IMMOVABLE</b>	<b>352 350</b>	<b>465 286</b>	<b>612 408</b>	<b>864 635</b>	<b>6 554 807</b>	<b>1 016 141</b>	<b>1 651 891</b>	<b>1 499 555</b>	<b>1 200 654</b>	<b>779 877</b>	<b>406 689</b>
Business Plan 2013/14					4 546 807	864 635	997 482	960 273	682 958	586 819	454 640
<b>% Increase / (Decrease)</b>					<b>44%</b>	<b>18%</b>	<b>66%</b>	<b>56%</b>	<b>76%</b>	<b>33%</b>	<b>248%</b>
<b>EQUIPMENT &amp; VEHICLES</b>	9 763	846	5 228	4 598	77 675	26 221	35 454	5 000	6 000	5 000	
<b>ICT</b>	11 190	15 598	17 947	25 821	206 309	20 244	58 700	48 950	27 150	38 265	13 000
<b>LABORATORY &amp; PROCESS SERVICES</b>	5 980	3 426	6 926	6 519	55 104	6 453	9 013	25 637	6 741	2 970	4 290
<b>MOVABLE</b>	<b>26 934</b>	<b>19 870</b>	<b>30 101</b>	<b>36 938</b>	<b>339 089</b>	<b>52 919</b>	<b>103 167</b>	<b>79 587</b>	<b>39 891</b>	<b>46 235</b>	<b>17 290</b>
Business Plan 2013/14					121 535	36 938	18 815	18 799	20 353	21 630	5 000
<b>% Increase / (Decrease)</b>					<b>179%</b>	<b>43%</b>	<b>448%</b>	<b>323%</b>	<b>100%</b>	<b>100%</b>	<b>1015%</b>
<b>TOTAL CAPITAL BUDGET</b>	<b>379 284</b>	<b>485 155</b>	<b>642 508</b>	<b>901 573</b>	<b>6 893 896</b>	<b>1 069 060</b>	<b>1 755 058</b>	<b>1 579 142</b>	<b>1 240 545</b>	<b>826 112</b>	<b>423 979</b>
Business Plan 2013/14					4 668 342	901 573	1 016 297	979 072	703 311	608 449	459 640
<b>Increase / (Decrease)</b>					<b>2 225 554</b>	<b>167 488</b>	<b>738 761</b>	<b>600 070</b>	<b>537 234</b>	<b>217 663</b>	<b>-35 661</b>
<b>% Increase / (Decrease)</b>					<b>48%</b>	<b>19%</b>	<b>73%</b>	<b>61%</b>	<b>76%</b>	<b>36%</b>	<b>-8%</b>
CASHFLOWS ESCALATED											
SUMMARY OF ESCALATED BUDGET				Total 2014 - 2019		F14	F15	F16	F17	F18	F19
<b>IMMOVABLE BUDGET</b>					7 147 054	1 016 141	1 774 131	1 758 812	1 525 118	1 072 852	605 905
<b>MOVABLE BUDGET</b>					371 342	52 919	110 801	93 347	50 671	63 604	25 759
<b>TOTAL CAPITAL BUDGET</b>					7 518 396	1 069 060	1 884 932	1 852 159	1 575 789	1 136 456	631 664
<b>ESCALATION %</b>					<b>9.1%</b>	<b>0%</b>	<b>7.4%</b>	<b>17.3%</b>	<b>27.0%</b>	<b>37.6%</b>	<b>49.0%</b>

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



### 20.10.1. Major movements from the 2014 business plan

**Table 20.34 (a):** Comparison of project totals 2014 BP vs 2015 BP (R'000)

CAPEX CATEGORY	Business Plan 2015 Project Total R'000	Business Plan 2014 Project Total R'000	Increase / (Decrease) R'000	
Augmentation	7 817 350	5 229 040	2 588 310	49%
Expansion	193 100	25 100	168 000	669%
Upgrade	2 108 867	1 348 472	760 395	56%
Rehabilitation	398 376	195 124	203 252	104%
Development Projects	5 974 319	4 484 291	1 490 028	33%
Information Communication & Technology	331 890	216 293	115 598	53%
Equipment Vehicles Laboratory & Process Services	327 224	67 508	259 716	385%
	<b>17 151 127</b>	<b>11 565 827</b>	<b>5 585 300</b>	<b>48%</b>

- Augmentation increases due to revision of planning cost estimates and prices based on latest tenders: Mkomazi BWS R1,092m, Lower Mkomazi R347m, Fawsley Park projects R382m, Mvoti river abstraction works R400m.
- Expansion increases due to new projects: Camperdown R70m, Mpophomeni R90m, Harry Gwala Planning Regional Schemes R20m, Sludge treatment technology evaluation R20m.
- Upgrade increases due to revision of price estimates and scope changes: Darvill plant capacity increase R283m, Durban Heights filter upgrade R214m, Upgrade new projects: Darvill sludge handling facility R65m, Raw water pipeline from Umzinto Dam to Water Treatment Plant R45m, Ultrafiltration full scale evaluation R30m.
- Rehabilitation increase due to price increases: Nagle aqueducts 3 and 4 refurbishment R39m, Nungwane raw water Aqueduct R10m, Rehabilitation new projects: Nagle Aqueducts 2 - Joint Refurbishment R100m, Nagle Aqueducts - Tunnel Penstocks R9m, 51 pipeline rehabilitation R35m.
- Developmental Projects increase due to revision of price estimates based on tenders and scope changes: Greater Eston R45m, Greater Mpofana phase 1 R179m, Greater Mpofana phase 2 & 3 R87m, Lower Thukela phase 1 R123m, Lower Thukela phase 2 R94m, Mhlabatshane phase 2 R160m, Southern Ndwedwe BWS R197m and uMshwathi BWS Phases 1-3 R237m.
- Information communication technology increase due to new projects: ERP system R104m.
- Equipment, vehicles, laboratory and process services increases due to increases in mobile plant and vehicles R135m, Mobile Water Treatment Plant R20m, Soil Equipment R23m and Automated Meter Reading R17m.

**Table 20.34 (b):** Major movement between the 2013 BP and 2014 BP (5 year Cashflows) (R'000)

CAPEX CATEGORY	Business Plan 2015 F'14 - F'19 R'000	%	Business Plan 2014 F'14 - F'19 R'000	%	(Decrease) / Increase R'000	
Augmentation	1 144 777	17%	1 043 483	22%	101 294	10%
Expansion	184 000	3%	6 100	0%	177 900	2916%
Upgrade	1 614 395	23%	907 047	19%	707 349	78%
Rehabilitation	337 930	5%	180 630	4%	157 300	87%
Development Projects	3 273 705	47%	2 409 548	52%	864 157	36%
Umgeni Water Movable	339 089	5%	121 535	3%	217 554	179%
	<b>6 893 896</b>	<b>100%</b>	<b>4 566 108</b>	<b>100%</b>	<b>2 225 554</b>	<b>48%</b>

The major movements between the 2014 business plan and the 2015 business plan are as follows:

**Table 20.35: Augmentation Cashflows 2014 -2019 (Increase R101m)**

Project	Change R'000	Comment
Midmar Dam RWPS - New Standby Pumpset & Manifolds	-19 750	Project Cancelled included in the Midmar Upgrade
Lower Mkomazi Bulk Water Scheme	37 000	Revised pricing and acceleration of Lower Mkomazi Bulk Water Scheme due to expectations of high risk to water supply. The project would offer the augmentation required.
Umlaas New Water Project	-120 000	Moved out of the 5 year planning horizon due to the implementation Mkomazi BWS project.
61 p/l: extension (Richmond Offtake to Umlaas Road)	-33 916	Acceleration of expenditure in F'13 resulting in lower cashflows required for the 5yr.
Fawsley Park - Various Projects	69 768	The reason for the increase is that the Fawsley Park WW estimate has now incorporated the Fawsley Park Reservoir (2 x 15MI) and increase in estimate based on current prices.
Harry Gwala Regional Schemes	20 000	New Project - To increase supply area in the Harry Gwala DM. Once planning is complete the total project cashflows will be included in the budget.
South Coast Ph. 2b (Kelso to Umdoni)	121 900	Acceleration of cash flows as project is required to meet current demands on the South Coast..
Wartburg to Bruyns Hill Pipeline	55 000	New Project - The existing pipeline is expected to reach capacity due to the growth in demand in Swayimane, new housing developments and plans to supply portion of Ilembe.
Lion Park Pipeline	20 646	Increase due to increase in pipe size and pipe material.
Mkomazi Bulk Water Supply	19 092	Revised estimate based on detailed feasibility study.
Umlaas Road Reservoir No.2 (45MI)	-74 450	Project Cancelled - Storage capacity is no longer a problem.

**Table 20.36: Expansion Cashflows 2014 -2019 (Increase R178m)**

Project	Change R'000	Comment
Camperdown WWW	70 000	New Project - Camperdown WWW is a project in line with the growth strategy for waste water works for which price estimates were reviewed.
Mpophomeni WWW	90 000	New Project - Mpophomeni WWW is a project in line with the growth strategy for waste water works for which price estimates were reviewed.

**Table 20.37: Upgrade Cashflows 2014 -2019 (Increase R707m)**

Project	Change R'000	Comment
Darvill WWW: Plant Capacity Increase (85MI/d) (MBR - 10MI/d in 3-5yrs)	284 472	Increases in scope and project estimates have been updated based on the actual tenders.
Darvill Sludge Handling Facility	65 298	New Project - Darvill Sludge handling facility increase due to scope change in terms of sludge handling. Previously de watering and sludge beds were to be used this has been revised back to the current method sludge disposal with increased focus on rehabilitation of the land.
Refurbishment Head Office	26 088	Due to provision made to refurbish head office.
Dbn Hts WW: Filter Upgrade	215 112	The Durban Heights filter upgrade has increased due it now being for the full replacement of the degremont filters. The previous amount was just for the air binding and refurbishment of the existing filters.
Hazelmere WW pumpstation upgrade	13 854	Increase in scope & tender prices came in higher than budgeted.
North Coast Projects	-20 000	This reduction is due to the outstanding contract with Ilembe District Municipality. The Capex will be reviewed once we conclude the agreement with IDM. In the interim there is R10million for the 2014 Fin Year for emergency projects should the need arise.
Sludge Treatment Technology Evaluation	20 000	New Project
Ultrafiltration Full Scale Evaluation	30 000	New Project - A full scale ultrafiltration evaluation is required for treating low turbidity water to drinking water quality standards.



Project	Change R'000	Comment
Raw water pipeline from Umzinto Dam to Water Treatment Plant – 450 diam 6km line	45 000	New Project - The project is required to convey raw water from the Umzinto dam to the WTP. The plant currently obtains water from EJ Smith dam and Umzinto dam. The current asbestos pipeline needs to be replaced.

Table 20.38: Development projects Cashflows 2014 -2019 (Increase R864m)

Project	Change R'000	Comment
Greater Eston	34 619	Combination of price increase and acceleration of project resulting in movement of cashflows.
Lower Thukela BWS - Phase 1	110 133	Due to acceleration of project, combination of price increase.
Richmond P/L-30kms	-15 034	Due to acceleration of project resulting in movement of cashflows.
Mhlabatshane Sub-Regional Scheme Ph 2 - Mkimkhulu River abstraction	-86 993	Cashflows revised in the 5 year planning horizon.
Maphumulo BWS PH 2	16 698	Acceleration of cash flows due to customer requirements.
Southern Ndwedwe BWS (33km p/l 3 res & 1 p/s)	2 587	Combination of price increase in the project and acceleration of cash flows.
Greater Bulwer/Donnybrook BWSS	-20 000	Project included in the Harry Gwala DM Project.
Greater Mpofana Regional Scheme Phases 1	177 792	Increase due to the change in materials. Steel pipe instead of HDPE and is also due to the pipe route changes in order to meet environmental requirements
uMshwathi Bulk Water Supply Scheme ( Wartburg Phase 2 - 3)	657 157	The movement is due to a combination of acceleration of cash flows within the 5 year to meet customer requirements and increase in prices based on the latest tenders.

Table 20.39: Movable assets Cashflows 2014 -2019 (Increase R218m)

Project	Change R'000	Comment
Information Communication & Technology	117 238	New ERP system (R104m) to replace the current fragmented IT systems with a single robust integrated ERP system. Based on the outcomes of the high level assessment conducted on business requirements and systems capability to address the current system issues, a single robust ERP System with the required capabilities to address the current business issues is the only viable option.
Automated Meter Reading	17,000	New project
Mobile Plant & Vehicles	48 041	Assessment and replacement of vehicles over 5 years due to high maintenance costs. Price estimates were reviewed.

## 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 R6bn has been planned for rural development. The value of Developmental projects is R3.3bn for 5 years and represents 48% of the 2014 to 2019 capex programme (In the previous 2014 business plan when developmental projects represented 49% 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 2014/15 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	DWA	UW	Total RBIG (DWA)	Invoiced to date Jan'14	Confirmed but not yet Invoiced	Not confirmed
<b>Projects started with confirmed Grant Funding</b>							
Greater Eston / Richmond	425 454 100%	209 681 49%	215 774 51%	209 681	146 482	63 198	
Lower Thukela BWS - Phase 1	1 351 041 100%	751 041 56%	600 000 44%	751 041	99 836	470 897	180 307
Mhlabatshane BWS Scheme - Phase 1	218 860 100%	108 955 50%	109 905 50%	108 955	108 955		
uMshwathi BWS	1 010 108 100%	656 000 65%	354 107 35%	656 000		656 000	
<b>Projects Started with no confirmation of grant funding</b>							
Maphumulo BWS Scheme - Phase 1 & 2	398 872 100%	99 000 25%	299 872 75%	99 000			99 000
Greater Mpofana - Phase I	462 695 100%	62 324 13%	400 371 87%	62 324			62 324
<b>Projects to start on Confirmation of RBIG</b>							
Greater Mpofana - Phase 2 & 3	273 000 100%	186 000 68%	87 000 32%	186 000			186 000
Lower Thukela BWS - Phase 2	223 777 100%	223 777 100%	0 0%	223 777			223 777
Mhlabatshane BWS Scheme - Phase 2	290 945 100%	290 945 100%	0 0%	290 945			290 945
Southern Ndwedwe BWS	386 323 100%	386 323 100%	0 0%	386 323			386 323
Central Ndwedwe BWS Ph1: (Ozwathini ext 31km p/l & 3 reservoirs)	234 912 100%	234 912 100%	0 0%	234 912			234 912
Central Ndwedwe BWS Ph2: (Ozwathini ext 19km p/l & 2 reservoirs)	161 315 100%	161 315 100%	0 0%	161 315			161 315
Upper-Mvoti Regional Water Scheme	500 000 100%	500 000 100%	0 0%	500 000			500 000
Ngcebo Scheme (Incl. Water Treatment Upgrade) Remaining Cost to incur	5 380 100%	0 0%	5 380 100%				
Manyavu Pipeline	21 771 100%	0 0%	21 771 100%				
Ndwedwe Res 1 Upgrade (2MI)	5 181 100%	0 0%	5 181 100%				
Ndwedwe Res 2 Upgrade (2MI)	4 685 100%	0 0%	4 685 100%				
Projects Completed by UW	37 017 100%	0 0%	37 017 100%				
<b>TOTAL</b>	<b>5 974 319</b> <b>100%</b>	<b>3 870 273</b> <b>65%</b>	<b>2 104 046</b> <b>35%</b>	<b>3 870 273</b> <b>100%</b>	<b>355 274</b> <b>9%</b>	<b>1 190 095</b> <b>31%</b>	<b>2 324 904</b> <b>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'13	F'14	F'15	F'16	F'17	F'18	F'19	Beyond F'19
Greater Eston / Richmond	Confirmed (*)	209 681	135 163	15 921	27 895	30 702				
Greater Mpofana Regional Scheme Ph 1	Not Confirmed	62 324		23 738	24 908	9 119	4 559			
Greater Mpofana Regional Scheme Ph 2	Not Confirmed	76 000								76 000
Greater Mpofana Regional Scheme Ph 3	Not Confirmed	110 000								110 000
Lower Thukela BWS - Phase 1	Confirmed (*)	570 734	63 996	68 141	175 439	263 158				
Lower Thukela BWS - Phase 1	Not Confirmed	180 307					180 307			
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	290 945						42 400	60 000	188 545
uMshwathi Bulk Water Supply Scheme (Wartburg Phase 1 - 3)	Confirmed (*)	656 000					170 175	485 825		
Southern Ndwedwe BWS	Not Confirmed	386 323						10 000	30 000	346 323
Central Ndwedwe BWS Ph1: (Ozwathini ext 31km p/l & 3 reservoirs)	Not Confirmed	234 912								234 912
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>3 870 273</b>	<b>308 114</b>	<b>206 800</b>	<b>228 241</b>	<b>302 979</b>	<b>355 042</b>	<b>538 225</b>	<b>90 000</b>	<b>1 840 873</b>
<b>Confirmed</b>	34%	<b>1 545 370</b>	<b>308 114</b>	<b>84 062</b>	<b>203 333</b>	<b>293 860</b>	<b>170 175</b>	<b>485 825</b>		
<b>Not Confirmed</b>	64%	<b>2 324 904</b>		<b>122 738</b>	<b>24 908</b>	<b>9 119</b>	<b>184 866</b>	<b>52 400</b>	<b>90 000</b>	<b>1 840 873</b>
<b>Total</b>		<b>3 870 273</b>	<b>308 114</b>	<b>206 800</b>	<b>228 241</b>	<b>302 979</b>	<b>355 042</b>	<b>538 225</b>	<b>90 000</b>	<b>1 840 873</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'13	F'14	F'15	F'16	F'17	F'18	F'19
Greater Eston / Richmond	21%	104 881	46 485	26 345	17 207	14 844			
Greater Mpofana Regional Scheme Phases 1	37%	193 876	551	2 530	40 631	40 772	49 632	59 760	
Maphumulo BWS Scheme Phase 1 & 2	45%	209 992	68 792	79 075	30 438	31 687			
Mhlabatshane BWS Scheme Phase 1	51%	125 880	83 444	42 436					
Ngcebo BWS	100%	43 993	38 613	380	5000				
<b>TOTAL</b>		<b>678 623</b>	<b>237 885</b>	<b>150 766</b>	<b>93 277</b>	<b>87 303</b>	<b>49 632</b>	<b>59 760</b>	

## 20.10.3 Summary of major capital investments 2015 to 2019

Table 20.43: Major projects

Project Description	Project Total Business Plan 2015	work In Progress 30/06/2013	2014-2019 Cashflows	Business Plan 2015 Cashflows 2014 - 2019						Cashflows Beyond 5 Years F'19 - F'42
				F'14	F'15	F'16	F'17	F'18	F'19	
				R'000	R'000	R'000	R'000	R'000	R'000	
<b>AUGMENTATION</b>	7 247 451	908 313	952 877	175 542	188 651	169 815	141 061	122 280	155 528	5 386 260
<b>EXPANSION</b>	743 000		355 900	560	40 254	158 200	100 786	45 100	11 000	387 100
<b>UPGRADE</b>	2 128 867	160 050	1 634 395	159 534	465 380	417 753	338 954	167 614	85 161	334 682
<b>REHABILITATION</b>	398 376	52 446	337 930	36 044	191 586	60 800	49 500			8 000
<b>DEVELOPMENT PROJECTS</b>	5 974 319	719 532	3 273 705	644 461	766 020	692 987	570 353	444 883	155 000	1 981 083
<b>IMMOVABLE</b>	16 492 012	1 840 341	6 554 807	1 016 141	1 651 891	1 499 555	1 200 654	779 877	406 689	8 097 125
<b>EQUIPMENT &amp; VEHICLES</b>	327 224		132 780	32 675	44 467	30 637	12 741	7 970	4 290	192 694
<b>INFORMATION COMMUNICATION TECHNOLOGY</b>	331 890	9 038	206 309	20 244	58 700	48 950	27 150	38 265	13 000	116 544
<b>MOVABLE</b>	659 115	9 038	339 089	52 919	103 167	79 587	39 891	46 235	17 290	309 238
<b>TOTAL CAPITAL BUDGET</b>	<b>17 151 127</b>	<b>1 849 379</b>	<b>6 893 896</b>	<b>1 069 060</b>	<b>1 755 058</b>	<b>1 579 142</b>	<b>1 240 545</b>	<b>826 112</b>	<b>423 979</b>	<b>8 406 363</b>

EIB Funded Projects	Umgeni System	Project Description	Customer	Project Total Business Plan 2015	work In Progress 30/06/2013	2014-2019 Cashflows	Business Plan 2015 Cashflows 2014 - 2019						Cashflows Beyond 5 Years F'19 - F'42
							F'14	F'15	F'16	F'17	F'18	F'19	
							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	90 132	132	90 000	1 200	43 555	35 245	10 000				
Upper Umgeni	61 p/l: extension (Richmond Offtake to Umlaas Road)	1,3	165 890	107 567	58 324	43 324	15 000						
Lower Umgeni	East Coast Desalination Plants	1,5,4	16 919	9 677	7 242	2 492	3 750	1 000					
South Coast	Ellingham Link Pipeline	4	36 500	1 150	35 350	14 033	21 317						
Lower Mvoti	Fawsley Park Bal Res ( Ph1 : 2 X 20MI)	5,7	95 140		55 140			1 500	13 640	40 000	40 000		
Lower Mvoti	Fawsley Park-Mvoti Balancing Res Pipeline (4km)	5,7	192 224		44 628			1 500	9 600	33 528	147 596		
EIB Hazelmere	Hazelmere WW: Raw Water Pipeline	1,5,7	20 312	13 422	6 890	6 890							
EIB Hazelmere	Hazelmere WW: Upgrade (45 to 75MI/day)	1,5,7	128 043	29 447	98 596	53 332	39 095	6 169					
Upper Umgeni	Howick Reservoir Upgrade (6.5 MI)	3	17 000	3 684	13 316	12 816	500						
Upper Umgeni	Howick West Reservoir Upgrade (8.5MI)	2,3	17 000		17 000	70	90	7 400	7 400	2 040			
Upper Umgeni	Lion Park Pipeline	3	49 952		49 952	600	29 351	20 001					
Mkomazi	Lower Mkomazi Bulk Water Scheme	1,4	1 143 000		83 000	500	2 500	5 000	10 000	25 000	40 000	1 060 000	
Lower Umgeni	Mapaphetwa WW: Upgrade Plant (5.0 MI/d) (incl reseivour)	1	56 428	44 294	12 133	3 618	8 515						
EIB Upper Umgeni	Midmar WW Upgrade Ph 2 (250 to 375MI/d) & Midmar Dam RWPS	1,2,3	245 001	201	244 800	2 868	21 271	80 000	81 661	59 000			
Upper Mkomazi System	Mkomazi Bulk Water Supply	1,3	2 703 707	1 615	22 092	1 793	299				20 000	2 680 000	
South Coast	South Coast Augmentation Booster Pump Station	1,4	88 762	75 779	12 983	12 983							
Upper Umgeni	Umlaas New Water Project	1,3	442 000		25 000				3 000	22 000	417 000		
Upper Umgeni	Wartburg to Bruyns Hill Pipeline	3,5	55 000		55 000		1 000	15 000	29 000	10 000			
<b>Various Projects &lt;R5m Cashflows within the 5Yr</b>				<b>1 684 442</b>	<b>621 346</b>	<b>21 432</b>	<b>19 024</b>	<b>2 408</b>				<b>1 041 664</b>	
<b>Sub Total: Augmentation Projects</b>				<b>7 247 451</b>	<b>908 313</b>	<b>952 877</b>	<b>175 542</b>	<b>188 651</b>	<b>169 815</b>	<b>141 061</b>	<b>122 280</b>	<b>155 528</b>	<b>5 386 260</b>

EIB Funded Projects	Umgeni System	Project Description	Customer	Project Total Business Plan 2015	work in Progress 30/06/2013	2014-2019 Cashflows	Business Plan 2015 Cashflows 2014 - 2019						Cashflows Beyond 5 Years F'19 - F'42
							F'14	F'15	F'16	F'17	F'18	F'19	
							R'000	R'000	R'000	R'000	R'000	R'000	
<b>EXPANSION PROJECTS</b>													
Upper Umgeni		Camperdown WWW	1,3	70 000		70 000	10 000	50 000	10 000				
Upper Umgeni		Mpophomeni WWW	1,3	90 000		90 000	20 000	50 000	20 000				
Upper Umgeni		Harry Gwala Planning - Regional Schemes	1,3	20 000		20 000	1 000	2 000	4 000	3 000	10 000		
South Coast		South Coast Ph. 2b (Kelso to Umdoni)	4	171 900		171 900	110	8 954	55 700	66 036	41 100		
<b>Various Projects &lt;R5m Cashflows within the 5Yr</b>				<b>391 100</b>		<b>4 000</b>	<b>450</b>	<b>300</b>	<b>500</b>	<b>750</b>	<b>1 000</b>	<b>1 000</b>	<b>387 100</b>
<b>Sub Total: Expansion Projects</b>				<b>743 000</b>		<b>355 900</b>	<b>560</b>	<b>40 254</b>	<b>158 200</b>	<b>100 786</b>	<b>45 100</b>	<b>11 000</b>	<b>387 100</b>

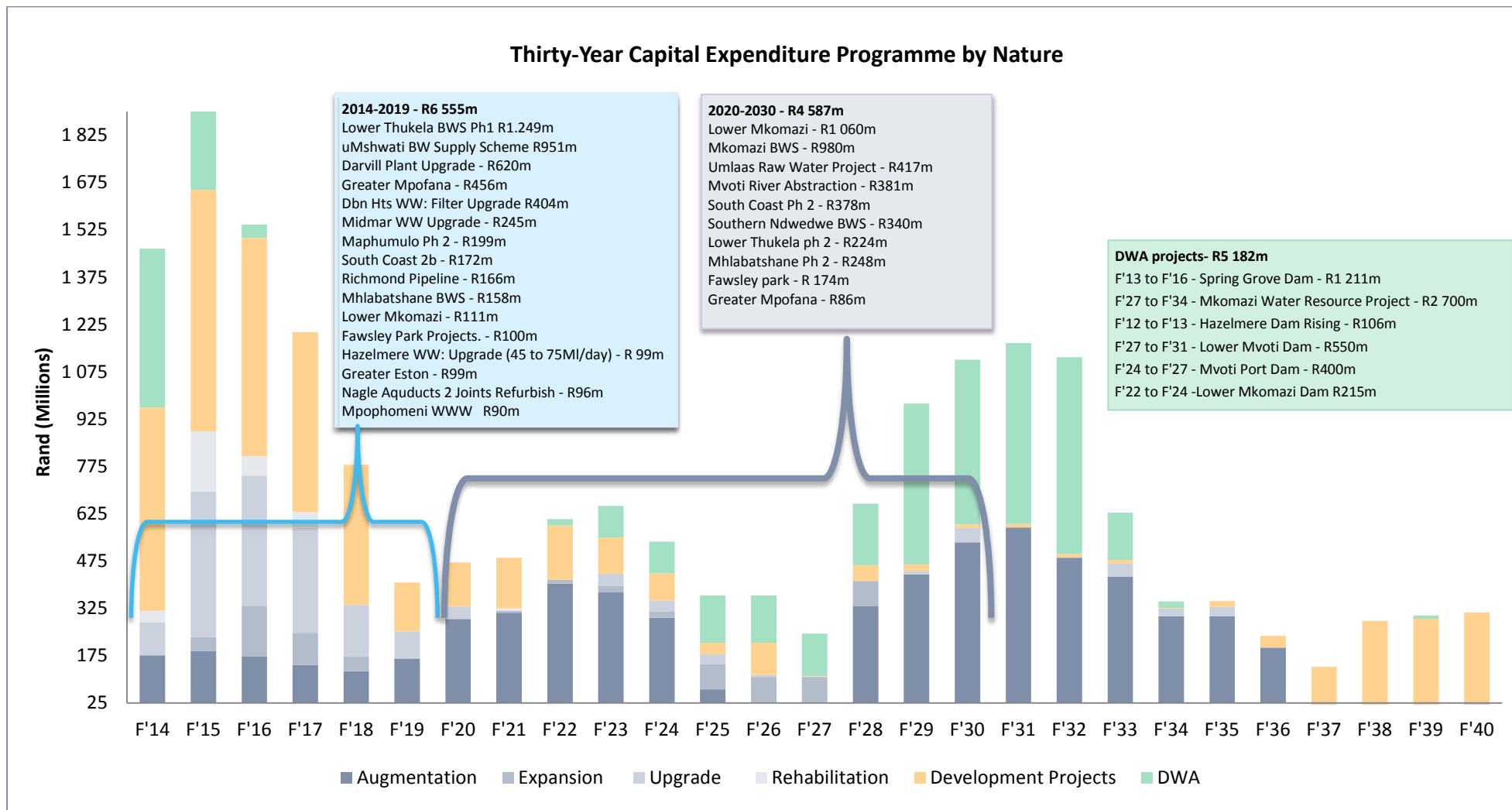
EIB Funded Projects	Umgeni System	Project Description	Customer	Project Total Business Plan 2015	work in Progress 30/06/2013	2014-2019 Cashflows	Business Plan 2015 Cashflows 2014 - 2019						Cashflows Beyond 5 Years F'19 - F'42
							F'14	F'15	F'16	F'17	F'18	F'19	
							R'000	R'000	R'000	R'000	R'000	R'000	
<b>UPGRADE PROJECTS</b>													
Upper Umgeni		Aircon Renewal:Head Office		22 246	14 954	7 292	7 292						
South Coast		Amanzimtoti WTP - Filter Upgrade	1	7 000		7 000	2 000	5 000					
South Coast		Amanzimtoti WW: Chloramination Booster System for SCP	1	7 981	1 318	6 663	150	4 040	2 473				
Upper Umgeni		Darvill Sludge Handling Facility	2,3	65 298		65 298	6 203	28 006	11 020	10 023	10 046		
Upper Umgeni		Darvill WWW: Co Generation	2,3	41 534	108	41 426	590	30 060	10 776				
Upper Umgeni		Darvill WWW: Digestor Upgrade	2,3	14 339	2 416	11 923	8 400	3 524					
Upper Umgeni		Darvill WWW: Plant Capacity Increase (85MI/d) (MBR - 10MI/d in 3-5yrs)	2,3	627 013	6 917	620 097	42 409	258 947	200 938	117 803			
Lower Umgeni		Dbn Heights KwaDabeka Pumpstation Transformer relocation	1	8 236	122	8 114	45	8 069					
Lower Umgeni		Dbn Hts WW: Candy Filters and Actuators upgrade	1	16 774	118	16 656	15 473	1 183					
Lower Umgeni		Dbn Hts WW: Filter Upgrade	1	404 397	59	404 337	1 221	9 238	53 664	141 319	136 681	62 215	
Hazelmere		Hazelmere WW - Sludge Treatment Plant Upgrade	1,5,7	26 500		26 500	472	4 712	20 000	1 316			
Hazelmere		Hazelmere WW - Upgrade of Reservoir No.2	1,5,7	25 500		25 500		6 894	17 196	1 410			
EIB	Hazelmere	Hazelmere WW pumpstation upgrade	1,5,7	52 100	1 593	49 315	18 186	16 872	14 257			1 191	
Hazelmere		North Coast Projects	1,5,7	36 483	26 483	10 000		10 000					
Upper Umgeni		Office Space Rationalisation		8 250	589	7 661	661	3 000	1 300	1 300	1 400		
South Coast		Quarry Reservoir upgrade (7.5MI)	1,4	15 899	2 050	13 849	13 849						
South Coast		Raw water pipeline from Umzinto Dam to Water Treatment Plant – 450 diam 6km line	4	45 000		45 000			20 000	25 000			
Upper Umgeni		Refurbishment Head Office		40 857	6 769	34 088	1 088	8 000	10 000	10 000	5 000		
		Ultrafiltration Full Scale Evaluation		30 000		30 000		3 000	10 000	9 000	8 000		
South Coast		Umzinto Water Works	4	12 000		12 000	500	11 500					
Lower Umgeni		Wiggins Critical Isolation Valve Replacement	1,4	5 500		5 500		5 500					
Lower Umgeni		Wiggins Dam Safety: Concrete Rehab	1,4	11 800		11 800	350	11 450					
Lower Umgeni		Wiggins Filter Valve & Actuator Upgrade	1,4	5 810	195	5 615	4 595	1 020					
Lower Umgeni		Wiggins Ozone Plant Rahb and Element Replacement (every ten years)	1,4	34 538		34 538	538	9 000	25 000				
		Sludge Treatment Technology Evaluation		20 000		20 000		5 000	5 000	5 000	5 000		
<b>Various Projects &lt;R5m Cashflows within the 5Yr</b>				<b>543 814</b>	<b>96 360</b>	<b>114 224</b>	<b>41 717</b>	<b>50 062</b>	<b>9 445</b>	<b>100</b>	<b>12 900</b>	<b>333 490</b>	
<b>Sub Total: Upgrade Projects</b>				<b>2 128 867</b>	<b>160 050</b>	<b>1 634 395</b>	<b>159 534</b>	<b>465 380</b>	<b>417 753</b>	<b>338 954</b>	<b>167 614</b>	<b>85 161</b>	<b>334 682</b>

EIB Funded Projects	Umgeni System	Project Description	Customer	Project Total Business Plan 2015	work In Progress 30/06/2013	2014-2019 Cashflows	Business Plan 2015 Cashflows 2014 - 2019					Cashflows Beyond 5 Years F19 - F42	
							F'14	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>REHABILITATION PROJECTS</b>													
		51 Pipeline Rehabilitation	1,3,3	35 000		35 000	6 000	29 000					
Lower Umgeni		Dbn Heights Existing Asbestos Replacement on Roofs	1	10 000		10 000		3 800	5 200	1 000			
Lower Umgeni		Dbn Hts WW: Reservoir 3 Roof Rehabilitation & Dam Safety	1	33 823		33 823	543	3 780	16 000	13 500			
Hazelmere		Mvoti WTP - Gravity Main to Saunders Street	5	15 000		15 000			10 000	5 000			
Lower Umgeni		Nagle Aqueduct 1 & 2 - Refurbish	1	7 189	1 880	5 309	2 809	2 500					
Lower Umgeni		Nagle Aqueduct 3 & 4 - Refurbish	1	71 053	49 812	21 241	21 241						
Lower Umgeni		Nagle Aqueducts - Tunnel Penstocks	1	9 000		9 000		9 000					
Lower Umgeni		Nagle Aqueducts 2 - Joint Refurbishment	1	99 500		99 500		99 500					
South Coast		Nungwane Raw Water Aqueduct (450dia x 18km)	1,4	77 741	684	77 057	2 250	15 206	29 600	30 000			
South Coast		Park Rynie Office	1	14 000		14 000	1 500	12 500					
Upper Umgeni		Refurbishment of Pineside Regional Offices		10 000		10 000	1 000	9 000					
<b>Various Projects &lt;R5m Cashflows within the 5Yr</b>				<b>16 070</b>	<b>70</b>	<b>8 000</b>	<b>700</b>	<b>7 300</b>				<b>8 000</b>	
<b>Sub Total: Rehabilitation Projects</b>				<b>398 376</b>	<b>52 446</b>	<b>337 930</b>	<b>36 044</b>	<b>191 586</b>	<b>60 800</b>	<b>49 500</b>		<b>8 000</b>	
EIB Funded Projects	Umgeni System	Project Description	Customer	Project Total Business Plan 2015	work In Progress 30/06/2013	2014-2019 Cashflows	Business Plan 2015 Cashflows 2014 - 2019					Cashflows Beyond 5 Years F19 - F42	
							F'14	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>DEVELOPMENT PROJECTS</b>													
Upper Umgeni		Greater Eston	3	201 780	102 971	98 809	48 250	20 841	29 718				
Mooi		Greater Mpofana Regional Scheme Phases 1	3	462 695	6 232	456 463	1 122	96 969	97 303	118 450	142 620		
Mooi		Greater Mpofana Regional Scheme Phases 2	3	119 000								119 000	
Mooi		Greater Mpofana Regional Scheme Phases 3	3	154 000								154 000	
Lower Thukela		Lower Thukela BWS - Phase 1	1,5,7	1 351 041	101 982	1 249 059	330 042	415 845	324 884	178 289			
Lower Thukela		Lower Thukela BWS - Phase 2	1,5,7	223 777								223 777	
Upper Mvoti		Maphumulo BWS PH 2	5	224 159	24 846	199 313	81 308	57 816	60 189				
EIB	South Coast	Mhlabatshane Sub-Regional Scheme	4	218 860	163 615	55 245	55 245						
	South Coast	Mhlabatshane Sub-Regional Scheme Ph 2 - Mkimkhulu River abstraction	4	290 945		42 702	702	2 000	5 000	5 000	10 000	20 000	
	Upper Mvoti	Ngcebo BWS Scheme Phase 1 - Upgrade of Water Treatment	5	5 218		5 218	218	5 000					
EIB	Upper Umgeni	Richmond P/L-30kms	2,3	223 674	57 293	166 381	86 889	49 000	30 493				
	Hazelmere	Southern Ndwedwe BWS (33km p/l 3 res & 1 p/s)	5	386 323		46 487	1 887	2 100	2 000	500	10 000	30 000	
	Upper Umgeni	uMshwathi Bulk Water Supply Scheme ( Wartburg Phase 1)	3,5	352 951	59 468	293 483	32 412	81 000	60 000	100 071	20 000		
	Upper Umgeni	uMshwathi Bulk Water Supply Scheme ( Wartburg Phase 2 - 3)	3,5	657 157		657 157	3 000	35 450	83 400	168 044	262 263	105 000	
<b>Various Projects &lt;R5m Cashflows within the 5Yr</b>				<b>206 512</b>	<b>203 125</b>	<b>3 387</b>	<b>3 387</b>						
<b>Sub Total: Development Projects</b>				<b>5 974 319</b>	<b>719 532</b>	<b>3 273 705</b>	<b>644 461</b>	<b>766 020</b>	<b>692 987</b>	<b>570 353</b>	<b>444 883</b>	<b>155 000</b>	<b>1 981 083</b>
<b>TOTAL IMMOVABLES</b>				<b>16 492 012</b>	<b>1 840 341</b>	<b>6 554 807</b>	<b>1 016 141</b>	<b>1 651 891</b>	<b>1 499 555</b>	<b>1 200 654</b>	<b>779 877</b>	<b>406 689</b>	<b>8 097 125</b>
ICT		Sub Total: Information Communication & Technology		331 890	9 038	206 309	20 244	58 700	48 950	27 150	38 265	13 000	116 544
OTHER		Sub Total: Equipment , Vehicles, Laboratory & Process Services		327 224		132 780	32 675	44 467	30 637	12 741	7 970	4 290	192 694
<b>TOTAL MOVABLES</b>				<b>659 115</b>	<b>9 038</b>	<b>339 089</b>	<b>52 919</b>	<b>103 167</b>	<b>79 587</b>	<b>39 891</b>	<b>46 235</b>	<b>17 290</b>	<b>309 238</b>
<b>TOTAL UW CAPEX</b>				<b>17 151 127</b>	<b>1 849 379</b>	<b>6 893 896</b>	<b>1 069 060</b>	<b>1 755 058</b>	<b>1 579 142</b>	<b>1 240 545</b>	<b>826 112</b>	<b>423 979</b>	<b>8 406 363</b>

A1 = In Construction A2 = In Tender B1 = In Detailed Design B2 = In Preliminary Design C1 = In Detailed Feasibility C2 = In Pre-Feasibility O = Commissioned

Customers 1: eThekwin 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.

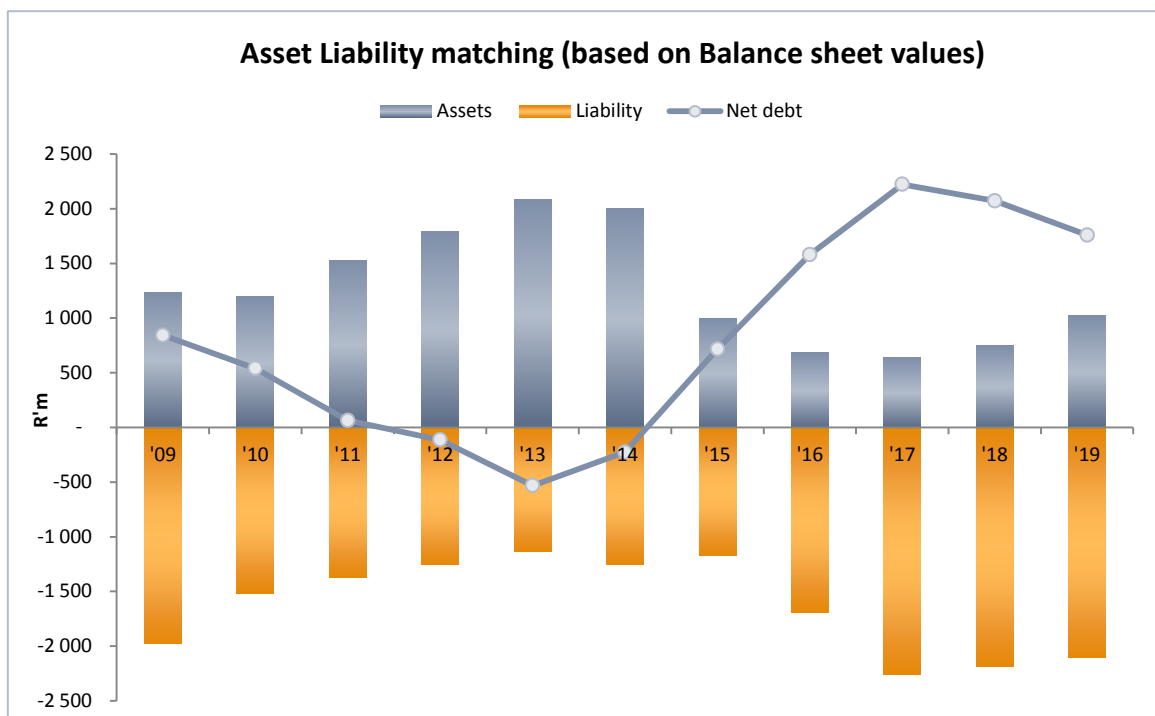
**3. Optimal Debt Level**

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

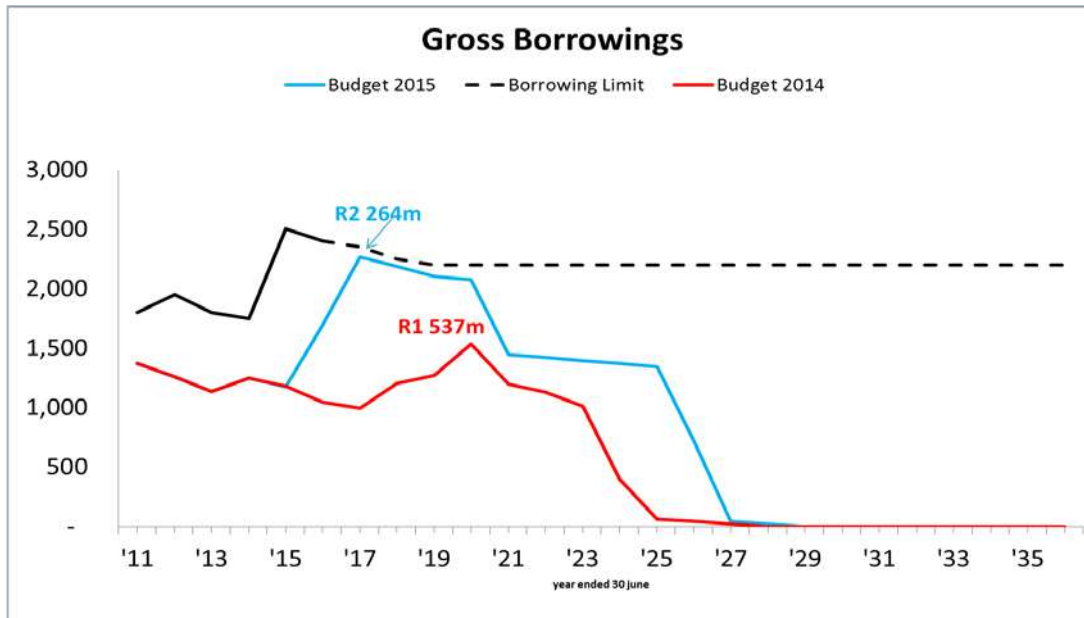




## 21.2 Debt Curve

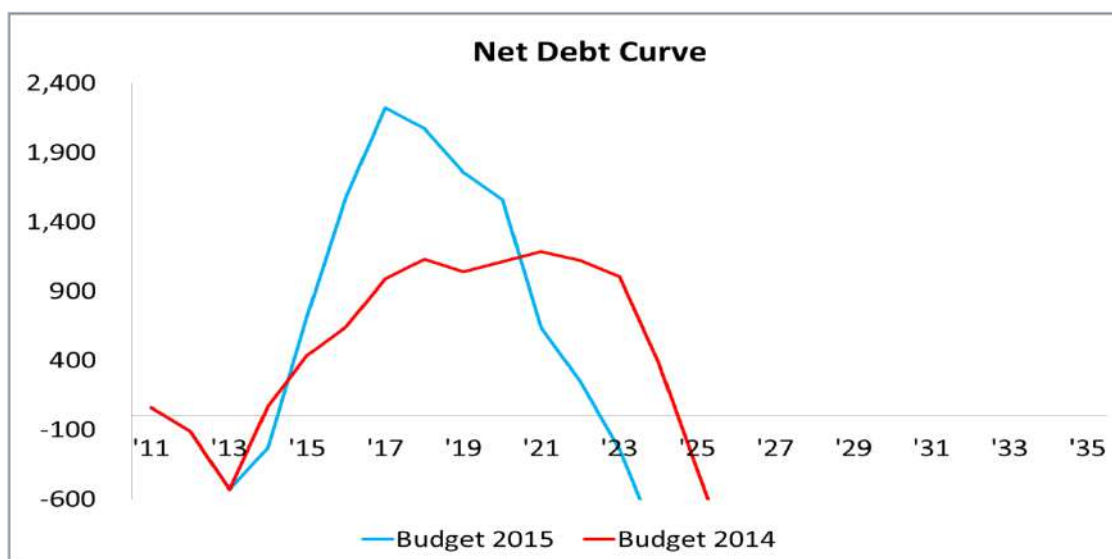
The 2014 Business Plan indicated that gross borrowings will peak at R1 537m in 2020. The gross borrowings curve has increased since then due to the increase in the project totals for development and augmentation projects as a result of revision of project estimates, scope changes and project acceleration. Therefore the peak in gross borrowings is expected to occur in 2017 at R2 264m.

Figure 21.2: Gross borrowings (R'm)



Umgeni Water projects to remain in a net asset position to June 2014. 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 economy has entered an increasing interest rate cycle which is positive for the investment in long term assets but negative for the new debt issuances. Hence the funding strategy recommends a long term issuance from 2016, a year later than the funding strategy in the 2014 Business plan, to meet the funding requirements. This is also captured as the base case funding strategy in the 2015 Business plan per Table 21.1.

**Table 21.1:** Funding requirements 2014 to 2019

FUNDING REQUIREMENTS Financial Year (R'm)	Short term		Medium Term			L/Term
	F14	F15	F16	F17	F18	F19
Operational Cash flows	790	802	789	922	1 020	1 146
CapEx - Gross (Escalated)	(1 069)	(1 885)	(1 852)	(1 576)	(1 136)	(632)
<b>Net Operating and CapEx cash flow</b>	<b>(279)</b>	<b>(1 083)</b>	<b>(1 063)</b>	<b>(654)</b>	<b>(116)</b>	<b>515</b>
CapEx - Grants: Confirmed	84	203	294	170	486	-
Refinance - Capital (existing Debt net of asset capital)	(35)	(53)	(54)	(54)	(54)	(54)
<b>New Debt - capital</b>		-	600	650	-	-
EIB – capital	372	(25)	(25)	(25)	(25)	(25)
Refinance - Finance costs (existing Debt)	4	(30)	(63)	(129)	(192)	(177)
EIB - Interest costs	(11)	(34)	(32)	(29)	(27)	(24)
<b>Funding Requirements</b>	<b>135</b>	<b>(1 022)</b>	<b>(343)</b>	<b>(71)</b>	<b>71</b>	<b>234</b>
Redemption Portfolio - New bond	(322)					
<b>Net Incremental Funding</b>	<b>(187)</b>	<b>(1 022)</b>	<b>(343)</b>	<b>(71)</b>	<b>71</b>	<b>234</b>
<b>Requirement p.a.</b>						
<b>Net (Funding) Investing requirements</b>						
Opening Balance Call investments	1 669	1 482	460	118	47	118
<b>Closing Balance</b>	<b>1 482</b>	<b>460</b>	<b>118</b>	<b>47</b>	<b>118</b>	<b>352</b>

### 21.3.2 Short-term (F14 to F15) funding strategy

- All surplus cash be invested in financial assets that ensures sufficient liquidity.
- Draw down on the EIB loan (R372m in F14).
- In F14 invest in sinking fund for the redemption of the UG21 given the higher interest rate on long term assets.

### 21.3.3 Medium-term (F16 to F18) funding strategy

- All surplus cash is invested in short-term financial assets (3 to 6 month term deposits).
- New issuance of debt in 2016 and 2017 (R600m in 2016 and R650m 2017) 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 ***if long term debt is issued, the issuance will need to be secured before F17 and will be phased in from F16.***

### 21.3.4 Long-term funding strategy (F19 to F24)

**Table 21.2:** Funding requirements 2019 to 2024

FUNDING REQUIREMENTS	L/Term	L/Term	L/Term	L/Term	L/Term	L/Term
Financial Year (R'm)	F19	F20	F21	F22	F23	F24
Operational Cash flows	1 146	1 186	1 345	1 466	1 431	1 626
CapEx - Gross (Escalated)	(632)	(800)	(817)	(1 045)	(1 058)	(822)
<b>Net Operating and CapEx cash flow</b>	<b>515</b>	<b>385</b>	<b>528</b>	<b>421</b>	<b>373</b>	<b>804</b>
CapEx - Grants: Confirmed	-	-	-	-	-	-
Refinance - Capital (existing Debt net of asset capital)	(54)	(4)	(5)	-	-	-
New Debt (Bond via DMTN) – capital	-	-	-	-	-	-
UG21	-	-	(600)	-	-	-
EIB – capital	(25)	(25)	(25)	(25)	(25)	(25)
Refinance - Finance costs (existing Debt)	(177)	(164)	92	(67)	(67)	(29)
EIB - Interest costs	(24)	(22)	(20)	(17)	(15)	(13)
<b>Funding Requirements</b>	<b>234</b>	<b>170</b>	<b>(30)</b>	<b>312</b>	<b>266</b>	<b>737</b>
Redemption Portfolio - New bond			322	-	(51)	(245)
<b>Net Incremental Funding</b>	<b>234</b>	<b>170</b>	<b>291</b>	<b>312</b>	<b>215</b>	<b>493</b>
<b>Requirement p.a.</b>						
<b>Net (Funding) Investing requirements</b>						
Opening Balance Call investments	118	352	522	813	1 125	1 340
<b>Closing Balance</b>	<b>352</b>	<b>522</b>	<b>813</b>	<b>1 125</b>	<b>1 340</b>	<b>1 833</b>

The long term funding requirements indicate that the entity will generate cashflows to fund both capex and operating expenditure.

## 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	50	50	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>250</b>	<b>150</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 2014 (forecast) is R250million, which is a variable interest rate fifteen-year loan.

### 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	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Debt: Equity</b>	0.548	0.406	0.315	0.306	0.251	0.323	0.384	0.331	0.281
<b>Interest Cover</b>	3.896	4.323	5.184	4.599	5.360	5.813	4.827	3.911	4.815

## 21.6 Debt guaranteed by government

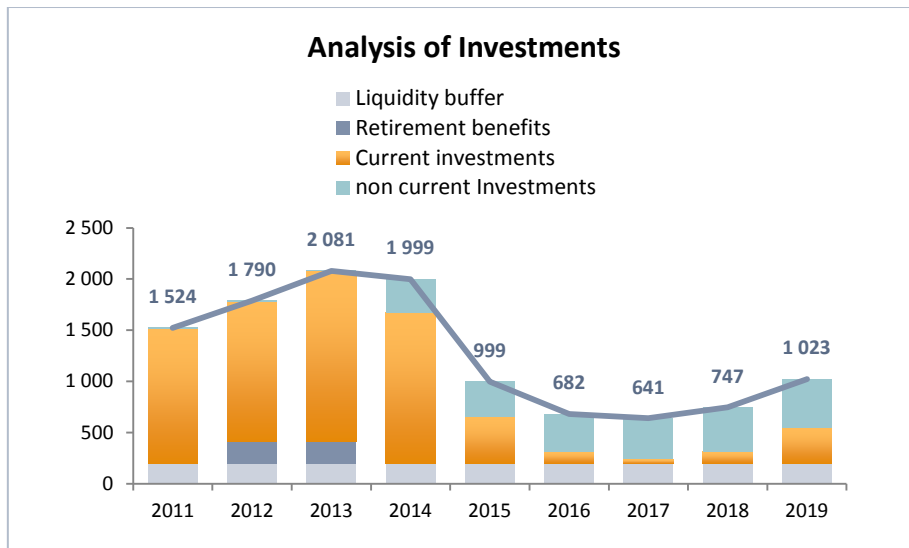
Umgeni water does not have any government guaranteed debt.

## 21.7 Maturity profile of debt and investments

**Table 21.5:** Maturity profile of investments (R'm)

Investment maturity structure	F'11	F'12	F'13	F'14	F'15	F'16	F'17	F'18	F'19
<b>&lt; 1year</b>	1 510	1 780	2 076	1 676	655	312	241	312	546
	99%	99%	100%	84%	66%	46%	38%	42%	53%
<b>1-5 years</b>	14	10	5	323	344	370	400	435	477
<b>Total Investments</b>	<b>1 524</b>	<b>1 790</b>	<b>2 081</b>	<b>1 999</b>	<b>999</b>	<b>682</b>	<b>641</b>	<b>747</b>	<b>1 023</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 and will decrease in F'17 and F'18.

Table 21.6: Debt maturity structure (R'm)

Debt maturity structure	F'11	F'12	F'13	F'14	F'15	F'16	F'17	F'18	F'19
< 1year	115	121	109	79	79	79	79	79	30
	8%	10%	10%	6%	7%	5%	3%	4%	1%
1-5 years	519	461	417	346	897	843	789	735	731
	38%	37%	37%	28%	77%	50%	35%	34%	35%
5-10 years	739	675	609	731	126	726	1376	1370	1344
	54%	54%	54%	58%	11%	43%	61%	63%	64%
+10 Years				94	69	44	19		
	0%	0%	0%	8%	6%	3%	1%	0%	0%
Total Borrowings	1 373	1 257	1 135	1 250	1 171	1 693	2 264	2 184	2 105

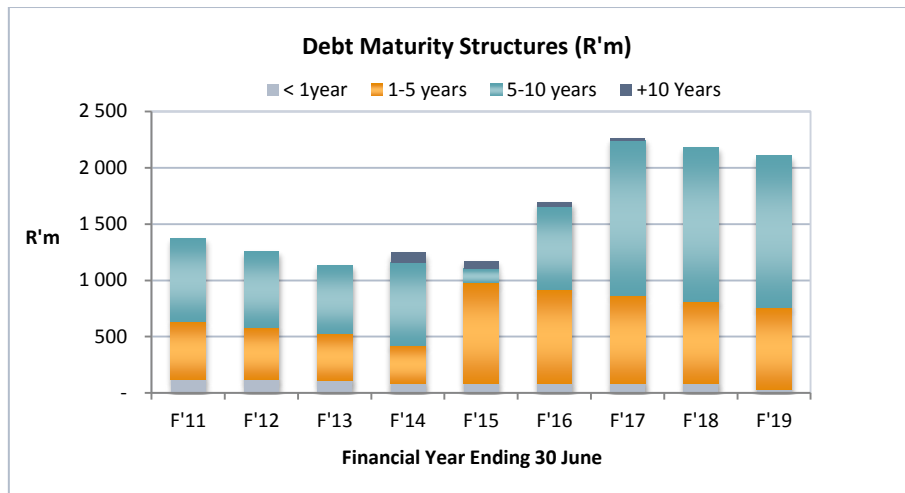
Table 21.7: Ratio of Fixed to floating rate debt

Ratio of Fixed to floating interest rate debt	F14	F15	F16	F17	F18	F19
Fixed Interest Rate Debt	65.0%	68.1%	81.6%	89.0%	91.5%	94.2%
Floating Interest Rate Debt	35.0%	31.9%	18.4%	11.0%	8.5%	5.8%

Table 21.8: Profiles of existing loans (R'm)

Loan	lender	maturity date	capital outstanding					
			2014	2015	2016	2017	2018	2019
loan 71	DBSA	2019/03/31	250	200	150	100	50	0
loan 72	DBSA	2021/03/31	28	24	21	17	13	9
ug 21	Capital mkt		600	600	600	600	600	600
Loan proposed	EIB 1	2028/12/18	187	174	161	148	135	123
Loan proposed	EIB 2	2019/03/31	185	173	160	148	136	123
Loan proposed	Bond issue 1	2026/06/30			600	600	600	600
Loan proposed	Bond issue 2	2026/06/30				650	650	650
short term funding			1 250	1 171	1 693	2 264	2 184	2 105

Figure 21.11: Debt maturity structure



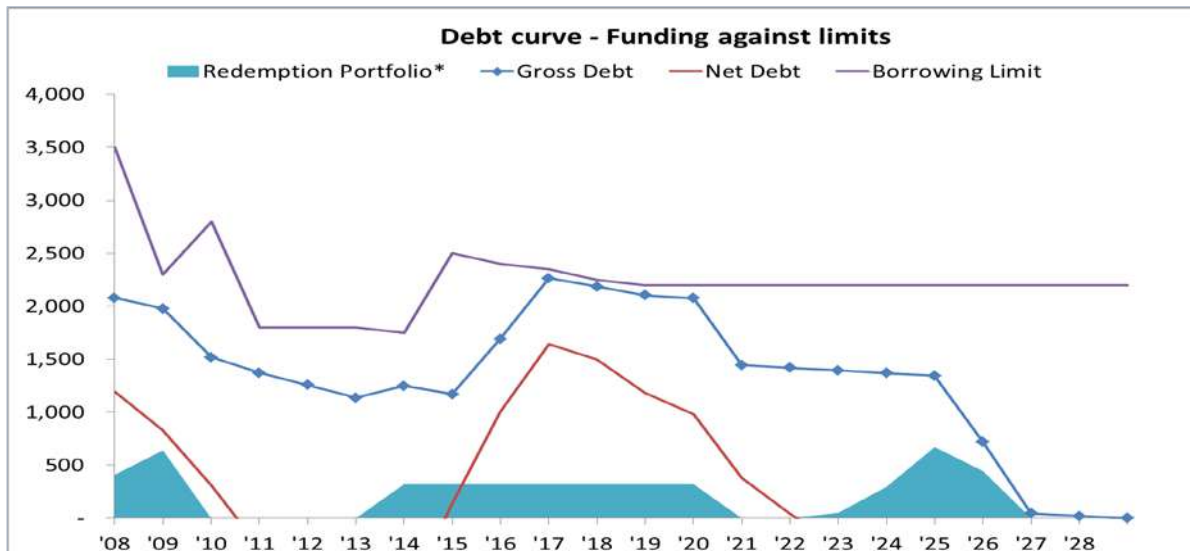
The increase in the amounts maturing in 5 to 10 years' time from 2015 onward is due to the UG21 which will be redeemed in 2021.

### 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:

- F13 – R1 800m
- F14 – R1 750m
- F15 – R2 500m (R2 200m is confirmed and R300m is unconfirmed)

Figure 21.1: Debt curve against funding limits (R'm)



## 21 Debt Management Plan

**Table 21.9:** Gross borrowings (R'm)

Borrowing Limit	F14	F15	F16	F17	F18	F19
Gross Borrowings	1 250	1 171	1 693	2 264	2 184	2 105
Contingencies	500	1 329	707	86	66	95
<b>TOTAL GROSS BORROWINGS</b>	<b>1 750</b>	<b>2 500</b>	<b>2 400</b>	<b>2 350</b>	<b>2 250</b>	<b>2 200</b>
Approved borrowing Limit	1 750	2 500	2 400	2 350	2 250	2 200
- Confirmed borrowing limit	1 750	2 200	2 100	2 050	1 950	1 900
- Unconfirmed borrowing limit	-	300	300	300	300	300

## 21.9 Proposed Borrowings

**Table 21.10:** Total borrowings (R'000)

DATE OF BORROWING	TOTAL GROSS BORROWING		TOTAL PORTION				
	LONG TERM				SHORT TERM		
	Actual	Actual			Actual Total Short term	Short-term portion of long term debt	Short-term borrowings
2010/2011	1 372 794	1 257 788			115 006	115 006	0
2011/2012	1 257 118	1 136 293			120 825	120 825	0
2011/2013	1 135 381	1 025 930			109 451	109 451	0
	Projected	Projected	Proposed	Total	Projected	Projected	Projected
2013/2014	1 250 020	986 358	185 000	1 171 358	78 662	78 662	0
2014/2015	1 171 358	1 092 526	0	1 092 526	78 832	78 832	0
2015/2016	1 692 526	1 013 509	600 000	1 613 509	79 017	79 017	0
2016/2017	2 263 509	1 534 302	650 000	2 184 302	79 208	79 208	0
2017/2018	2 184 302	2 104 894	0	2 104 894	79 408	79 408	0
2018/2019	2 104 894	2 075 275	0	2 075 275	29 619	29 619	0

**Table 21.11:** Foreign borrowings (EIB) (R'000)

DATE OF BORROWING	TOTAL GROSS BORROWING		FOREIGN PORTION				
	LONG TERM				SHORT TERM		
	Actual	Actual			Actual Total Short term	Short-term portion of long term debt	Short-term borrowings
2010/2011	0	0			0	0	0
2011/2012	0	0			0	0	0
2012/2013	0	0			0	0	0
	Projected	Projected	Proposed	Total	Projected	Projected	Projected
2013/2014	372 097	161 860	185 000	346 860	25 237	25 237	0
2014/2015	346 860	321 624	0	321 624	25 237	25 237	0
2015/2016	321 624	296 387	0	296 387	25 237	25 237	0
2016/2017	296 387	271 151	0	271 151	25 237	25 237	0
2017/2018	271 151	245 914	0	245 914	25 237	25 237	0
2018/2019	245 914	220 677	0	220 677	25 237	25 237	0

**Table 21.12:** Domestic borrowing programme (R'000)

DATE OF BORROWING	TOTAL GROSS BORROWING		DOMESTIC PORTION				
	LONG TERM				SHORT TERM		
	Actual	Actual			Actual Total Short term	Short-term portion of long term debt	Short-term borrowings
2010/2011	1 372 794	1 257 788	0	0	115 006	115 006	0
2011/2012	1 257 118	1 136 293	0	0	120 825	120 825	0
2012/2013	1 135 381	1 025 930	0	0	109 451	109 451	0
	Projected	Projected	Proposed	Total	Projected	Projected	Projected
2013/2014	877 923	824 498	0	824 498	53 425	53 425	0
2014/2015	824 498	770 903	0	770 903	53 595	53 595	0
2015/2016	1 370 903	717 122	600 000	1 317 122	53 780	53 780	0
2016/2017	1 967 122	1 263 151	650 000	1 913 151	53 971	53 971	0
2017/2018	1 913 151	1 858 980	0	1 858 980	54 171	54 171	0
2018/2019	1 858 980	1 854 597	0	1 854 597	4 383	4 383	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-Umgenei 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 Umgenei Water bonds	X	X
Written OTC interest rate options on non-Umgenei Water bonds which are on the approved list		X
Purchased OTC interest rate options on Umgenei Water bonds	X	X
Purchased OTC interest rate options on Non-Umgenei Water bonds		X

- Delegation of Authority**
- The Board of Umgenei 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**
- Umgenei 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 outsourced to professional independent internal auditors; 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	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Restated	Budget			Forecast			
<b>A Performance criteria/indicators</b>										
1 Volume of water sold (kl'000)	414 876	416 995	422 791	418 823	434 798	441 320	447 041	454 432	461 249	468 168
eThekweni Metropolitan Municipality (kl'000)	310 994	311 434	315 669	313 443	323 385	328 292	333 283	339 560	344 654	349 823
Sembcorp Siza Water (kl'000)	4 476	4 488	4 352	4 320	4 700	4 841	5 132	5 440	5 521	5 604
Other WSAs (kl'000)	99 406	101 073	102 770	101 060	106 712	108 187	108 626	109 432	111 074	112 740
2 Total gross revenue (R'000)	1 648 950	1 835 075	1 895 886	2 265 846	2 169 065	2 111 342	2 304 451	2 528 295	2 768 104	3 030 579
3 Total Bulk Revenue (R'000)	1 423 332	1 519 295	1 625 480	1 914 907	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
eThekweni Metropolitan Municipality (R'000)	1 061 732	1 128 210	1 207 439	1 298 279	1 339 462	1 477 969	1 625 089	1 789 822	1 962 113	2 150 715
Sembcorp Siza Water (R'000)	15 587	16 748	17 126	18 414	20 033	22 430	25 752	29 505	32 344	35 458
Other WSAs (R'000)	346 014	374 337	400 916	598 215	450 891	496 936	540 338	588 453	645 044	707 147
4 Bulk Revenue Growth	13.04%	6.74%	6.99%	8.86%	14.44%	22.88%	21.03%	20.55%	20.46%	20.17%
5 Weighted average Water tariff (R/kl)	3.430	3.640	3.843	4.163	4.163	4.525	4.900	5.297	5.721	6.183
eThekweni Metropolitan Municipality	3.414	3.622	3.825	4.142	4.142	4.502	4.876	5.271	5.693	6.148
Sembcorp Siza Water	3.482	3.726	3.935	4.262	4.262	4.633	5.018	5.424	5.858	6.327
Other WSAs	3.482	3.694	3.901	4.225	4.225	4.593	4.974	5.377	5.807	6.272
6 Net profit (loss) for the year	425 051	590 813	663 655	388 260	575 935	630 560	622 922	702 305	742 584	938 227
7 Profit from Operations/Revenue	0.270	0.314	0.314	0.179	0.258	0.296	0.279	0.309	0.317	0.346
8 Total expenditure/Revenue	0.736	0.706	0.660	0.831	0.744	0.704	0.732	0.725	0.734	0.691
9 Cost of sales/Revenue	0.401	0.467	0.459	0.571	0.477	0.405	0.422	0.419	0.416	0.414
10 Total cost/volume (Rand/kl) (Bulk only)	2.406	2.342	2.356	3.687	2.932	3.139	3.544	3.792	4.155	4.214
11 Net Finance costs (Rand/kl)	0.048	(0.037)	(0.160)	0.042	(0.039)	(0.015)	0.045	0.173	0.291	0.234
12 Personnel cost ratio	0.202	0.197	0.221	0.185	0.211	0.270	0.272	0.282	0.281	0.291
13 Personnel cost per kilolitre (Total organisation)	0.582	0.619	0.689	0.822	0.792	0.913	1.016	1.086	1.157	1.232
14 Personnel cost per kilolitre (Primary only)	0.503	0.599	0.673	0.812	0.782	0.901	1.003	1.073	1.143	1.218
15 Number of employees	892	902	978	982	988	1 013	1 050	1 057	1 057	1 057
16 Kl'000 sold per employee	465	462	432	426	440	436	426	430	436	443

Financial Indicators and Ratios	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Restated	Budget	Forecast					
<b>B Operating Risks</b>										
17 Working ratio	0.613	0.663	0.644	0.776	0.707	0.660	0.678	0.6497	0.6430	0.614
18 Operating Ratio	0.625	0.655	0.608	0.784	0.700	0.657	0.687	0.681	0.691	0.650
19 Controllable working ratio	0.555	0.581	0.558	0.598	0.620	0.583	0.592	0.562	0.555	0.524
20 Return on assets	13.71%	17.00%	15.65%	9.05%	12.27%	10.28%	8.57%	8.86%	9.36%	10.54%
21 Asset turnover	0.508	0.542	0.498	0.505	0.476	0.348	0.307	0.287	0.296	0.305
22 Gross margin %	59.86%	53.31%	54.12%	42.86%	52.32%	59.51%	57.79%	58.06%	58.37%	58.58%
23 Current asset turnover	4.947	7.442	5.526	7.406	7.186	7.301	7.362	7.347	7.263	7.300
24 Fixed asset turnover	0.575	0.593	0.551	0.546	0.513	0.366	0.321	0.299	0.309	0.318
25 Trade debtors collection period	38.085	33.527	48.835	40.404	40.969	39.905	39.503	39.560	40.105	39.925
26 Accounts receivable turnover	8.407	9.550	6.556	7.924	7.815	8.023	8.105	8.093	7.984	8.019
<b>C Financial Risks</b>										
27 Current ratio	2.376	3.298	3.225	3.825	3.028	1.649	1.271	1.330	1.869	3.837
28 Debt ratio	0.288	0.243	0.193	0.215	0.191	0.166	0.207	0.239	0.216	0.192
29 Gross Debt-equity ratio	0.548	0.406	0.315	0.334	0.306	0.251	0.323	0.384	0.331	0.281
30 Net Debt-equity ratio	(0.060)	(0.172)	(0.263)	(0.077)	(0.184)	0.037	0.193	0.275	0.218	0.145
31 Weighted Average Cost of Capital (WACC) (Per AFS)	9.28%	9.34%	9.20%	9.28%	9.12%	9.54%	9.90%	10.02%	10.06%	10.11%
32 Weighted Average Cost of Capital (WACC) (Finance costs/Gross borrowings)	8.32%	6.73%	5.86%	6.00%	5.84%	5.80%	3.64%	5.00%	8.04%	8.03%
33 Financial Leverage (Net of redemption assets)	0.351	0.287	0.239	0.251	0.185	0.151	0.202	0.240	0.210	0.179
<b>D Debt Management</b>										
<b>Net Debt</b>										
Total Borrowings (as per Balance sheet)	1 372 794	1 257 118	1 135 381	1 309 321	1 250 020	1 171 358	1 692 526	2 263 509	2 184 302	2 104 894
Total Investment (as per Balance sheet)	1 524 061	1 789 540	2 081 005	1 609 862	1 999 389	999 306	681 561	640 564	746 991	1 022 521
Net Borrowings	<b>(151 268)</b>	<b>(532 422)</b>	<b>(945 624)</b>	<b>(300 541)</b>	<b>(749 369)</b>	<b>172 052</b>	<b>1 010 966</b>	<b>1 622 946</b>	<b>1 437 311</b>	<b>1 082 373</b>
<b>E Business Credit Risk</b>										
34 Interest Cover ratio	3.098	4.544	5.260	3.194	4.599	5.360	5.840	4.827	3.911	4.815
35 EBITDA interest coverage	5.498	7.918	10.446	6.536	8.982	10.665	12.136	7.876	5.663	6.936
36 Cash from operations/average total debt	0.740	0.545	0.751	0.490	0.632	0.685	0.466	0.407	0.467	0.545
37 Return on average total capital	0.178	0.186	0.166	0.104	0.137	0.134	0.123	0.132	0.133	0.140
38 EBITDA/Sales	0.381	0.365	0.366	0.227	0.302	0.343	0.325	0.353	0.359	0.387
39 Funds flow net debt pay back	0.701	0.677	0.700	0.514	0.675	0.743	0.528	0.444	0.514	0.594
<b>F Surplus Ratios</b>										
40 Accounting Surplus	0.148	0.191	0.193	0.094	0.136	0.109	0.087	0.083	0.083	0.099
41 Return on turnover (Total organisation)	0.258	0.322	0.350	0.171	0.266	0.299	0.270	0.278	0.268	0.310
42 Return on turnover (S29)	0.287	0.379	0.386		0.300	0.302	0.275	0.282	0.273	0.314
43 Return on turnover (S30)	0.016	(0.019)	0.066		0.049	0.149	0.023	0.021	0.021	0.021
44 EBITDA	628 070	669 595	694 413	513 790	655 764	724 156	747 831	891 893	994 504	1 172 649
45 Net Debt/EBIDAR	2.186	1.877	1.635	2.548	1.906	1.618	2.263	2.538	2.196	1.795

Table 23.2: Umgeni Water Group financial indicators and ratios

Financial Indicators and Ratios	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Restated	Budget	Forecast					
<b>A Performance criteria/indicators</b>										
1 Total gross revenue (R'000)	1 660 912	1 847 151	1 908 833	2 287 536	2 179 291	2 121 613	2 317 563	2 543 524	2 785 267	3 051 475
2 <u>Bulk Water Business segment</u>										
2.1 Volume of water sold (kl'000)	414 876	416 995	416 995	418 823	434 798	441 320	447 041	454 432	461 249	468 168
2.2 Total Bulk Revenue (R'000)	1 423 332	1 519 295	1 625 480	1 914 907	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319
2.3 Average increase in revenue	3.6%	6.7%	7.0%	8.1%	-5.5%	10.3%	9.7%	9.9%	9.6%	9.6%
2.4 Weighted average Water tariff (R/kl)	3.430	3.640	3.843	4.571	4.163	4.525	4.900	5.297	5.721	6.183
2.5 Total cost per kl sold	2.406	2.341	2.341	4.496	3.713	3.368	3.775	4.032	4.405	4.476
3 Net profit (loss) for the year	428 442	591 332	666 001	388 232	574 169	631 619	623 967	704 379	746 125	943 974
4 Profit from Operations/Revenue	0.268	0.310	0.312	0.178	0.256	0.295	0.278	0.308	0.316	0.345
5 Total expenditure/Revenue	0.738	0.709	0.663	0.833	0.746	0.705	0.733	0.725	0.734	0.692
6 Cost of sales/Revenue	0.398	0.464	0.456	0.561	0.466	0.403	0.420	0.417	0.414	0.411
7 Total cost/volume (Rand/kl) (Consolidated)	2.956	3.143	3.034	4.548	3.740	3.389	3.802	4.061	4.435	4.508
8 Net Finance costs (Rand/kl)	0.048	(0.037)	(0.162)	0.043	(0.039)	(0.015)	0.045	0.173	0.291	0.234
9 Personnel cost ratio	0.213	0.208	0.232	0.195	0.223	0.284	0.286	0.295	0.295	0.305
10 Personnel cost per kilolitre	0.621	0.661	0.743	0.878	0.844	0.967	1.074	1.148	1.223	1.302
<b>B Operating Risks</b>										
11 Working ratio	0.616	0.666	0.647	0.778	0.709	0.660	0.679	0.651	0.644	0.615
12 Operating Ratio	0.628	0.658	0.611	0.785	0.701	0.657	0.688	0.681	0.692	0.650
13 Controllable working ratio	0.558	0.585	0.562	0.602	0.622	0.585	0.593	0.564	0.556	0.526
14 Return on assets	13.65%	16.87%	15.55%	9.02%	12.19%	10.27%	8.57%	8.86%	9.38%	10.56%
15 Asset turnover	0.509	0.544	0.499	0.508	0.477	0.348	0.308	0.288	0.297	0.306
16 Gross margin %	60.15%	53.61%	54.43%	43.92%	53.42%	59.71%	58.03%	58.31%	58.63%	58.86%
17 Current asset turnover	4.890	7.344	5.448	7.392	7.121	7.231	7.305	6.550	7.172	7.123
18 Fixed asset turnover	0.579	0.596	0.554	0.551	0.515	0.368	0.323	0.301	0.310	0.320
19 Debtors collection period	37.870	33.881	39.696	40.043	40.815	39.730	39.309	39.354	39.890	39.677
20 Accounts receivable turnover	8.455	9.450	8.066	7.996	7.845	8.059	8.145	8.136	8.026	8.070
* Accounts receivable is made up as follows:										
Trade Debtors	196 453	195 463	236 658	286 095	277 810	263 265	284 537	312 638	347 013	378 142
Provision for Doubtful debts	-	-	-	-	-	-	-	-	-	-
	196 453	195 463	236 658	286 095	277 810	263 265	284 537	312 638	347 013	378 142
<b>C Financial Risks</b>										
21 Current ratio	2.369	3.278	3.214	3.807	3.008	1.639	1.265	1.324	1.9	3.8
22 Debt ratio	0.287	0.242	0.192	0.215	0.190	0.165	0.206	0.239	0.216	0.191
23 Gross Debt-equity ratio	0.546	0.405	0.314	0.334	0.305	0.250	0.322	0.383	0.330	0.280
24 Net Debt-equity ratio	(0.060)	(0.172)	(0.262)	(0.076)	(0.183)	0.037	0.192	0.275	0.217	0.144
25 Weighted Average Cost of Capital (WACC) (Per AFS)	9.28%	9.34%	9.20%	9.28%	9.12%	9.54%	9.90%	10.02%	10.06%	10.11%
26 Weighted Average Cost of Capital (WACC) (Finance)	8.32%	6.73%	5.86%	5.99%	5.84%	5.80%	3.64%	5.00%	10.02%	10.02%
27 Financial Leverage (Net of redemption assets)	0.351	0.286	0.238	0.251	0.185	0.150	0.201	0.240	0.209	0.178

Financial Indicators and Ratios	F11	F12	F13	F14	F14	F15	F16	F17	F18	F19
	Actual	Actual	Restated	Budget	Forecast					
<b>D Debt Management</b>										
<b>Net Debt</b>										
28 Total Borrowings (as per Balance sheet)	1 372 793	1 257 137	1 135 381	1 311 321	1 250 020	1 171 358	1 692 526	2 263 509	2 184 302	2 104 894
29 Total Investment (as per Balance sheet)	1 524 062	1 790 330	2 081 005	1 609 862	1 999 389	999 306	681 561	640 564	746 991	1 022 521
30 Net Borrowings	<b>(151 269)</b>	<b>(533 193)</b>	<b>(945 624)</b>	<b>(298 541)</b>	<b>(749 369)</b>	<b>172 052</b>	<b>1 010 966</b>	<b>1 622 946</b>	<b>1 437 311</b>	<b>1 082 373</b>
<b>E Business Credit Risk</b>										
31 Interest Cover	3.099	4.527	5.249	5.166	4.585	5.369	5.850	4.840	3.297	4.842
32 EBITDA interest coverage	5.508	7.902	10.419	6.545	8.970	10.694	12.167	7.902	5.689	6.975
33 Cash from operations/average total debt	0.737	0.543	0.749	0.490	0.633	0.687	0.467	0.408	0.469	0.548
34 Return on average total capital	0.177	0.184	0.165	0.104	0.136	0.134	0.123	0.132	0.133	0.140
35 EBITDA/Sales	0.379	0.362	0.363	0.225	0.300	0.342	0.323	0.352	0.359	0.386
36 Funds flow net debt pay back	0.570	1.493	1.671	0.515	0.676	0.746	0.529	0.445	0.516	0.597
<b>F Surplus Ratios</b>										
37 Accounting Surplus	0.149	0.191	0.193	0.093	0.136	0.110	0.087	0.083	0.083	0.099
38 Return on turnover	0.258	0.320	0.349	0.170	0.263	0.298	0.269	0.277	0.268	0.309
39 EBITDA	628 953	668 409	692 939	514 548	654 848	726 180	749 716	894 837	998 954	1 179 271
40 Net Debt/EBIDAR	(0.241)	(0.798)	(1.365)	(0.580)	(1.144)	0.237	1.348	1.814	1.439	0.918

#### 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

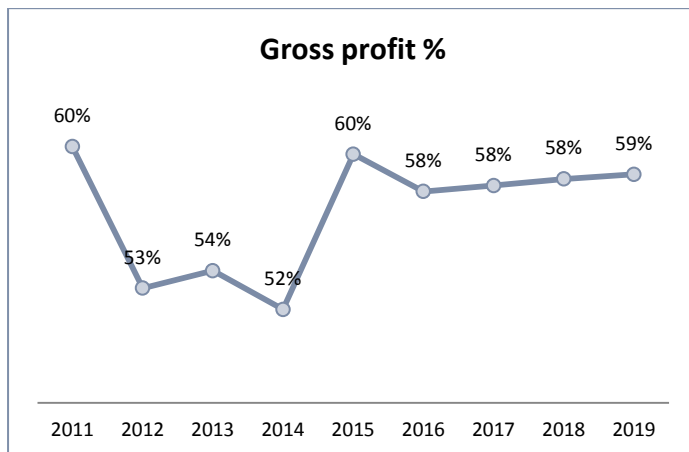
## 24 Self-Evaluation on Financial Viability

### 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

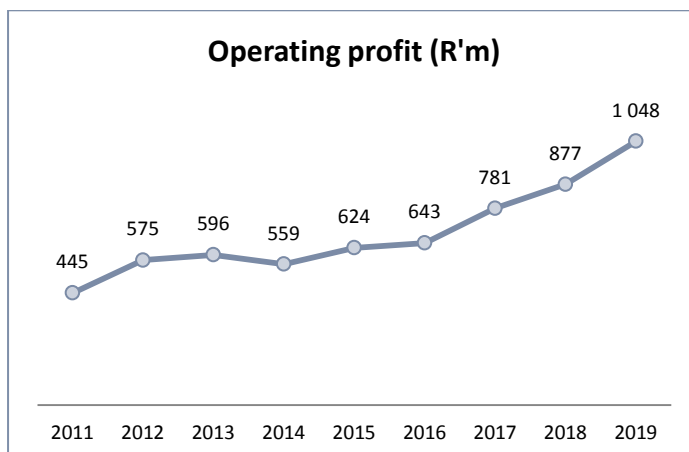


GP margins declined from 54% in 2013 to 52% in 2014.

GP margins increase in 2015 to 60% and then decline slightly to 58-59% in 2016 to 2019.

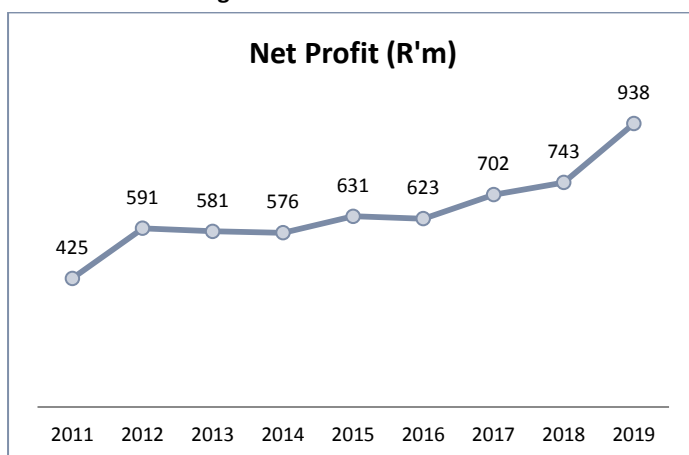
The increase in GP margins in 2015 is mainly due to lower direct operating costs, increased sales volumes and Bulk water tariff increase of 8.3% (average).

Figure 24.2: Operating Profit



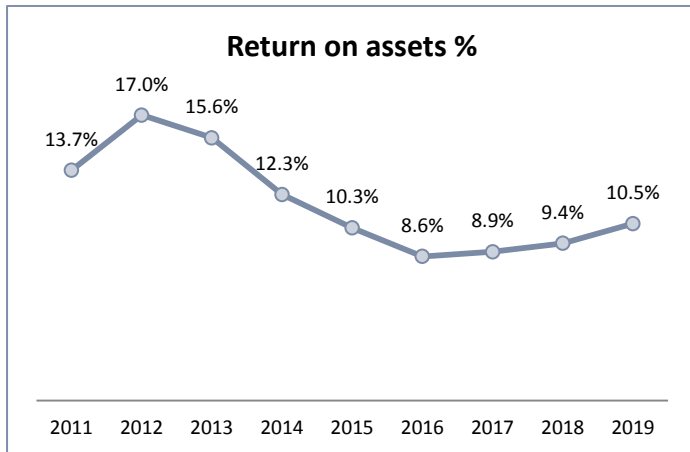
Operating profits dip slightly in 2014. Apart from this the operating profit is expected to increase steadily due to positive sales volume growth, Tariff increases of 8% and lower operating costs.

Figure 24.3: Net Profit



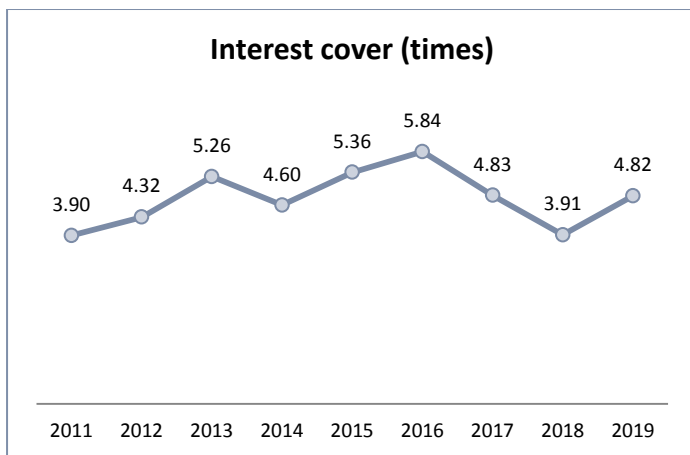
Net profit margins decrease slightly in 2014 and will increase by 10% in 2015 to R631m. The increase is due to tariff increases above CPI, positive volume growth from new schemes and lower operating costs.

Figure 24.4: Return on assets



The return on assets ratio is expected to decline to 12.23% in 2014 from 15.6% in 2013. Further declines are expected in 2015 to 10.3% and 2016 to 8.6%. The declines are mainly due to the increase in the asset base (new assets commissioned). The return on the assets will be low and until the asset has reached its full operating potential.

Figure 24.5: Interest cover



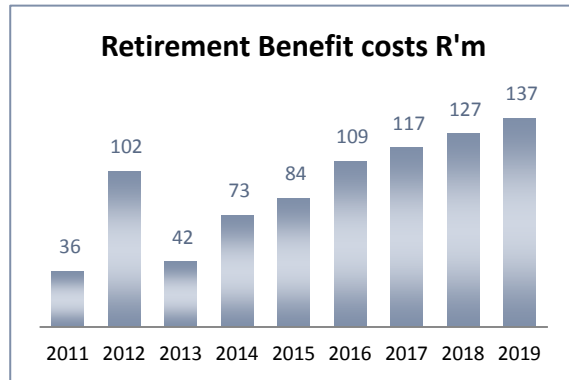
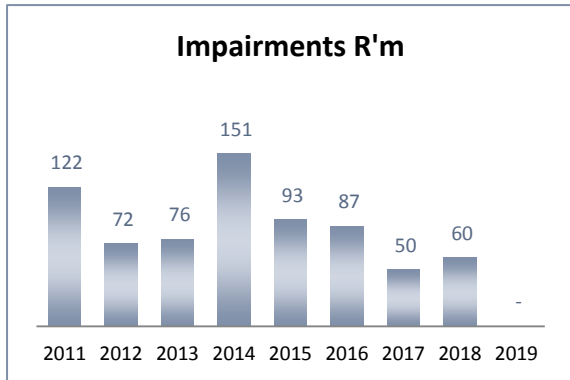
The interest cover ratio over the next 5 years is expected to be within the covenant level of greater than 2.5.



### 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:

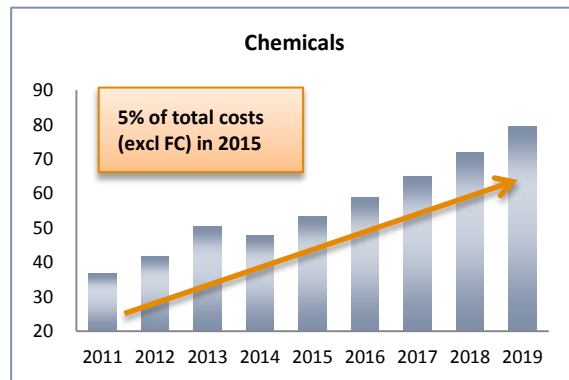
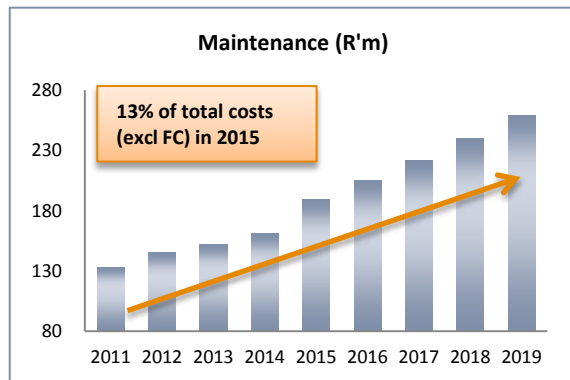
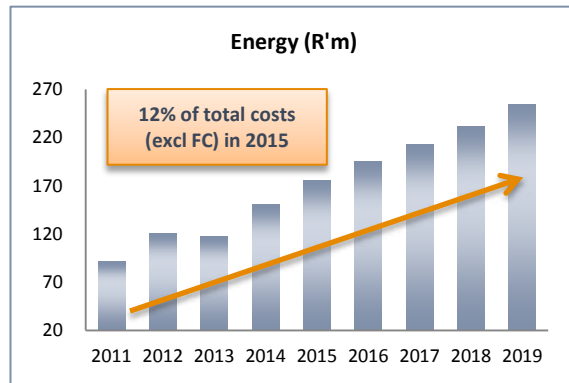
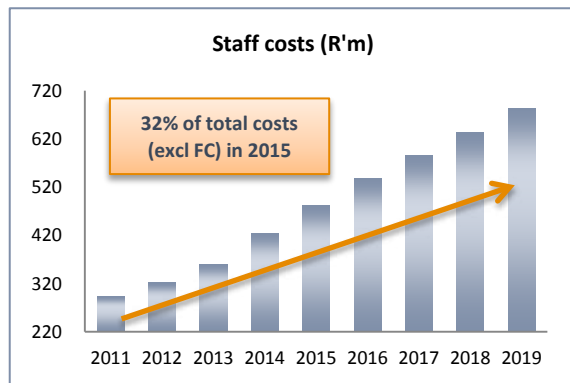


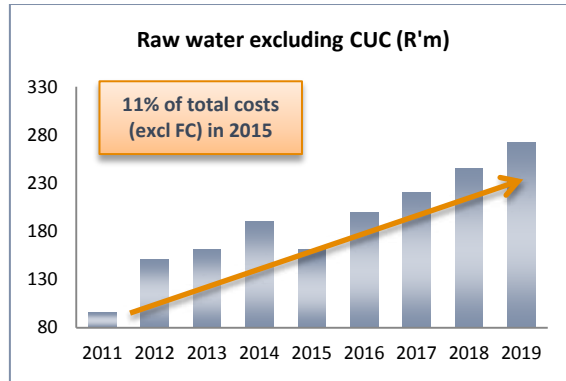
Impairment cost will be 9% of total operating costs in 2014 and 6% in 2015. A total of R711m in impairments will be recognised in from 2011 to 2019. An increase in the impairments may compromise compliance with the interest cover ratio.

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:





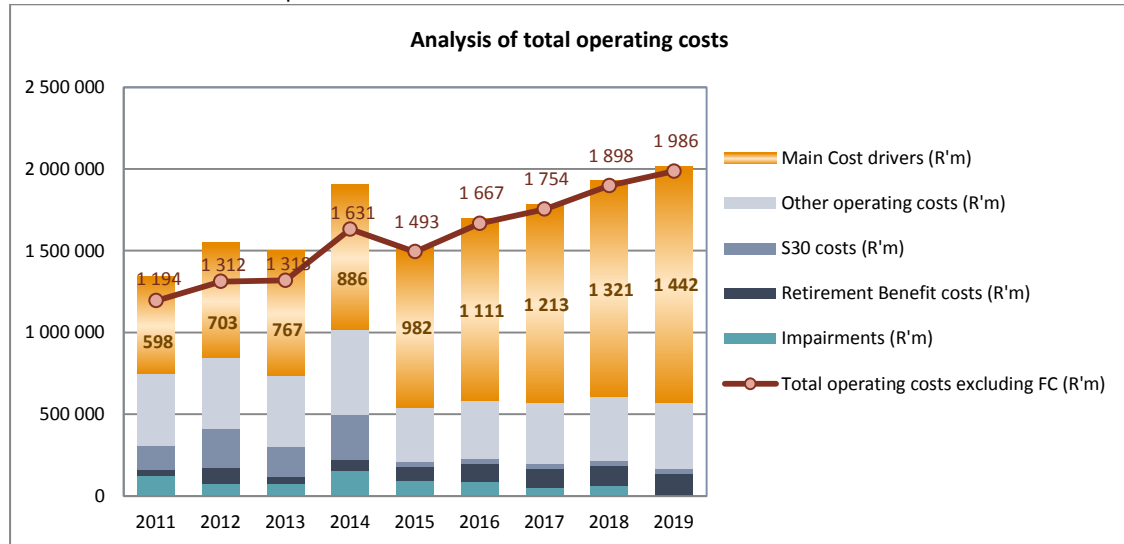
In 2013/14 **raw water costs** increased by 17.9% due to the 1.4% increase in abstraction volumes and 16.5% in the O&M costs. Raw water costs will decrease by 15.3% in 2014/15 due to an agreement with DWA that the costs borne by UW for the O&M of DWA owned dams will not be recovered from DWA. In turn, DWA will not charge UW as part of its raw water charge that amount which is required to recover the O&M of DWA owned dams carried out by UW. This has resulted in a reduction in raw water charges

**Chemicals** used for water treatment processes reduce by 5.1% in 2013/14 due to a change in the chemical usage mix where cheaper chemicals could be used instead of expensive chemicals. Chemical costs increase by 11.2% in 2014/15 due to an average price increase of 9.5% per annum and an increase in usage of chemicals to maintain raw water quality;

**Energy costs** increase by 29% in 2012/2013 and 9.2% per cent in 2013/14 due to price increases of 16% and 8% respectively, together with additional pumping requirements.

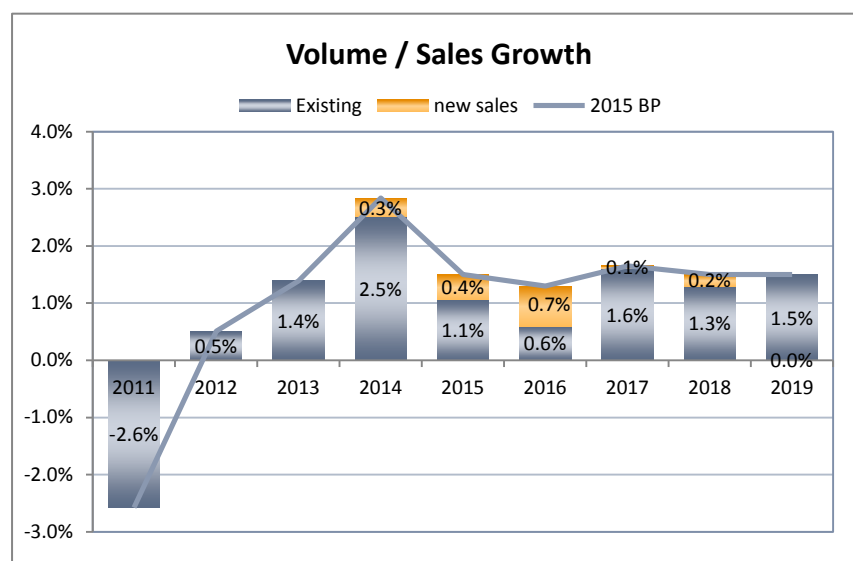
**Maintenance costs** for 2012/2013 increase by 14.4% (9.4% in 2013/14) due to major renewals undertaken in the entity's north coast bulk water infrastructure.

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 54% in 2014 to 73% by 2019. This is due to the higher than inflationary increases in the main cost drivers.

### 3. Volume growth not commensurate with the level of capital expenditure incurred.



The natural growth in volume demand is projected at 1.5% from 2018 onward. The commissioning of the Richmond, Greater Eston, Maphumulo, and Mhlabatshane projects by 2016, Greater Mpofana project by 2017 and uMshwathi project by 2018 will increase the sales growth in those years but by no more than 1%. UW would have spent R3bn by 2019 on the rural developmental projects, however, given the low volume sales, the recovery of this investment will not occur over the next 20 years.

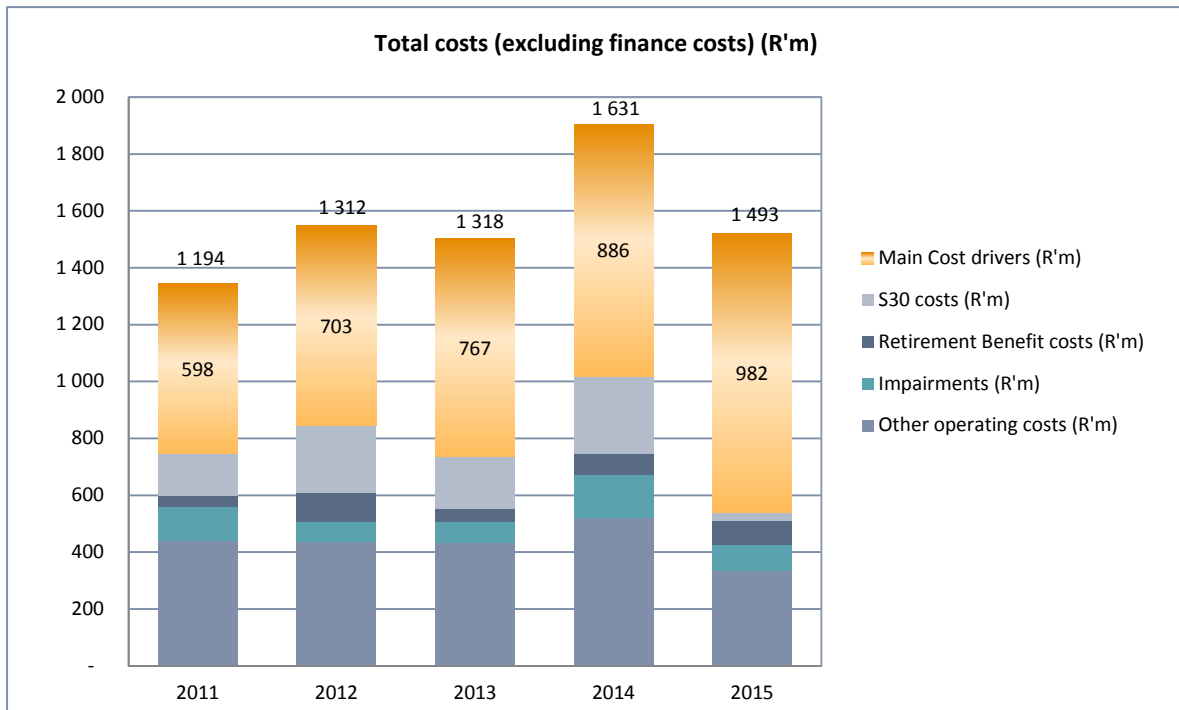
### Increase in cost per kl of bulk water sold places pressure on tariffs charged per annum.

Total Bulk Water cost per kl is projected to increase in 2014 by 25% and in 2015 by 9% as follows:

**Table 24.1: Cost per kl**

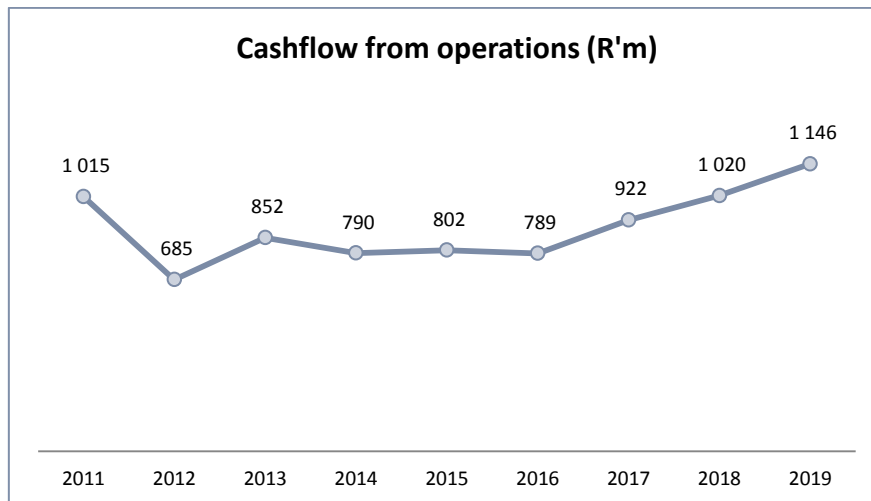
Components	2010/2011		2011/2012		2012/2013		2013/2014 BUDGET		2013/2014		2014/2015	
	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %	Tariff R.c/kl	Change %
<b>Direct Costs</b>												
Chemicals	0.080	16%	0.089	11%	0.104	17%	0.131	20%	0.097	-7%	0.107	10%
Depreciation	0.160	9%	0.172	7%	0.176	2%	0.207	26%	0.184	5%	0.166	-10%
Energy	0.193	63%	0.224	16%	0.226	1%	0.316	9%	0.287	27%	0.353	23%
Maintenance	0.243	5%	0.288	18%	0.299	4%	0.356	10%	0.305	2%	0.358	17%
Raw Water	0.231	17%	0.361	56%	0.382	6%	0.960	18%	0.438	15%	0.365	-17%
Staff Costs	0.214	11%	0.221	3%	0.244	11%	0.300	15%	0.279	14%	0.340	22%
Other direct operating activities	0.021	0%	0.029	34%	0.069	143%	0.051	-19%	0.040	-42%	0.051	27%
<b>Total Direct Costs</b>	<b>1.143</b>	<b>17%</b>	<b>1.384</b>	<b>21%</b>	<b>1.500</b>	<b>8%</b>	<b>2.321</b>	<b>14%</b>	<b>1.631</b>	<b>9%</b>	<b>1.741</b>	<b>7%</b>
<b>Indirect Costs</b>												
Overheads	0.574	11%	0.550	-4%	0.702	28%	0.782	17%	0.804	15%	0.966	20%
Depreciation	0.040	15%	0.034	-15%	0.036	6%	0.029	-21%	0.027	-23%	0.049	79%
Amortisation	0.233	0%	0.013	-94%	0.015	9%	0.014	-1%	0.009	-37%	0.010	0%
Impairments	0.293	1176%	0.173	-41%	0.180	4%	0.231	45%	0.347	93%	0.211	-39%
Retirement benefits	0.085		0.239	182%	0.098	-59%	0.280	-7%	0.164	-68%	0.187	14%
<b>Total Indirect Costs</b>	<b>1.225</b>	<b>38%</b>	<b>1.010</b>	<b>-18%</b>	<b>1.029</b>	<b>2%</b>	<b>1.336</b>	<b>13%</b>	<b>1.352</b>	<b>31%</b>	<b>1.423</b>	<b>5%</b>
<b>Total direct &amp; indirect cost</b>	<b>2.368</b>	<b>27%</b>	<b>2.393</b>	<b>1%</b>	<b>2.529</b>	<b>6%</b>	<b>3.657</b>	<b>14%</b>	<b>2.982</b>	<b>18%</b>	<b>3.164</b>	<b>6%</b>
<b>Finance Costs</b>	<b>0.038</b>	<b>-78%</b>	<b>(0.051)</b>	<b>-237%</b>	<b>(0.174)</b>	<b>238%</b>	<b>0.031</b>	<b>-153%</b>	<b>(0.050)</b>	<b>-71%</b>	<b>(0.025)</b>	<b>-50%</b>
<b>Cost - Bulk Water</b>	<b>2.406</b>	<b>18%</b>	<b>2.342</b>	<b>-2.7%</b>	<b>2.356</b>	<b>1%</b>	<b>3.687</b>	<b>17%</b>	<b>2.932</b>	<b>24%</b>	<b>3.139</b>	<b>7%</b>
Less: Sundry income	-0.034	-495%	0.115	-440%	0.036	-69%	0.005	-51%	0.040	14%	0.005	-88%
<b>Net Cost - Bulk Water</b>	<b>2.439</b>	<b>21%</b>	<b>2.227</b>	<b>-9%</b>	<b>2.320</b>	<b>4%</b>	<b>3.682</b>	<b>17%</b>	<b>2.892</b>	<b>25%</b>	<b>3.134</b>	<b>8%</b>
Contribution from Wastewater	0.026	51%	0.011	-56%	0.009	-19%	0.004	-160%	0.017	89%	0.019	13%
Contribution from Section 30 activities	0.007	-86%	(0.012)	-277%	0.033	-378%	0.033	10%	0.034	2%	0.017	-51%
<b>Total cost</b>	<b>2.407</b>	<b>23%</b>	<b>2.228</b>	<b>-7%</b>	<b>2.277</b>	<b>2%</b>	<b>3.646</b>	<b>17%</b>	<b>2.840</b>	<b>25%</b>	<b>3.098</b>	<b>9%</b>
<b>Total Average UW Tariff</b>	<b>3.431</b>	<b>6.0%</b>	<b>3.639</b>	<b>6.0%</b>	<b>3.843</b>	<b>5.6%</b>	<b>4.163</b>	<b>8.3%</b>	<b>4.163</b>	<b>8.3%</b>	<b>4.525</b>	<b>8.7%</b>

24.1.3 Cost control



The graph indicates that the costs which are not controllable especially the main cost drivers such as chemicals, energy, staff, maintenance and raw water costs have been growing since 2011. In terms of other costs, the growth from 2013 to 2014 is projected at 20% but for 2015, the other costs will be kept at 2013 levels thus indicating the projected benefit from cost control measures.

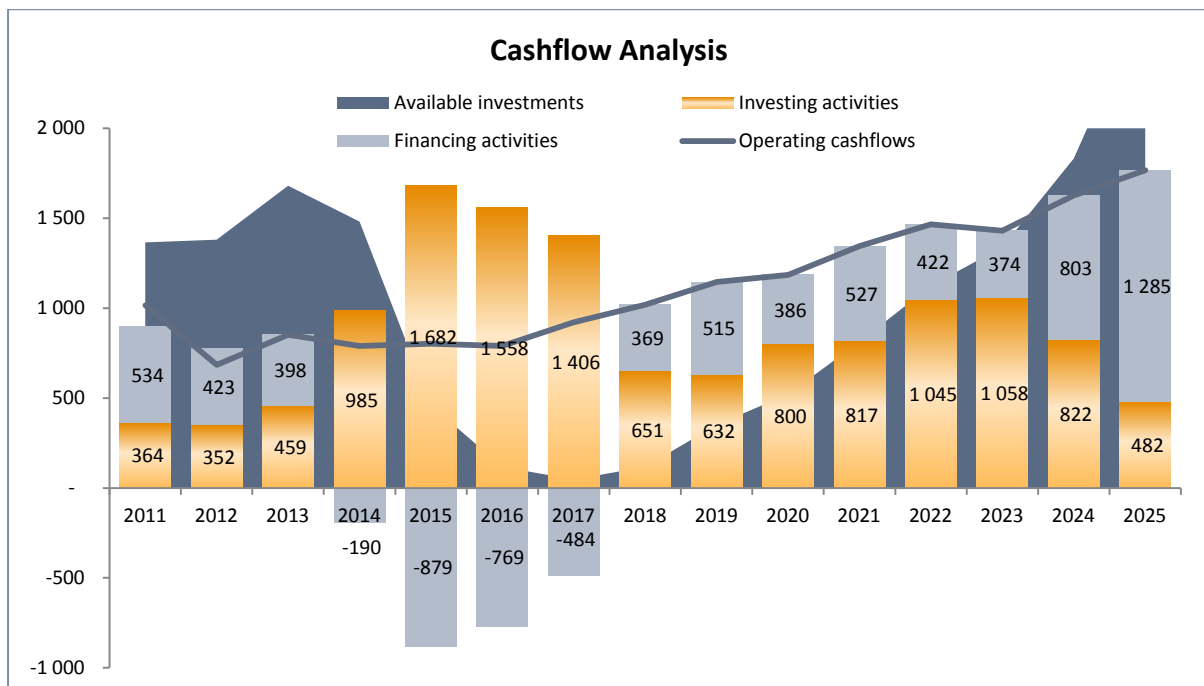
## 24.2 Cashflow Analysis



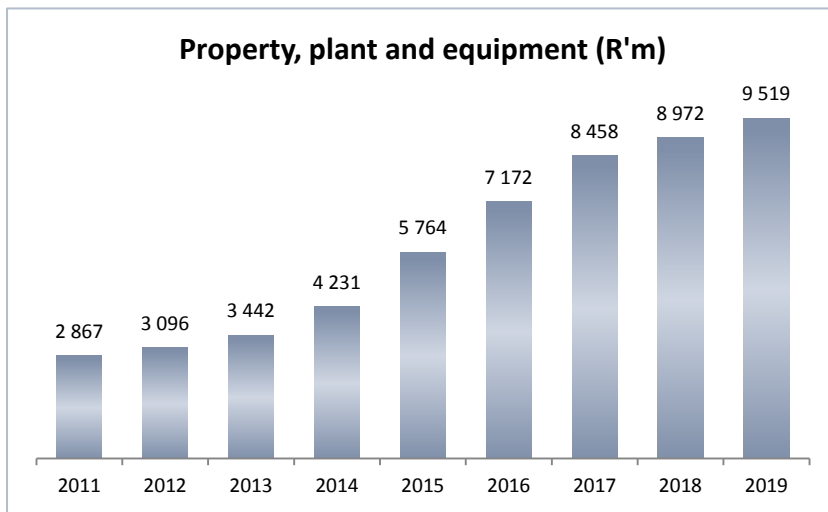
Net cash generated from operations is expected to increase above R600m from 2014. This is due to the increase in operating profit arising from above CPI tariff increases and better cost control.

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.

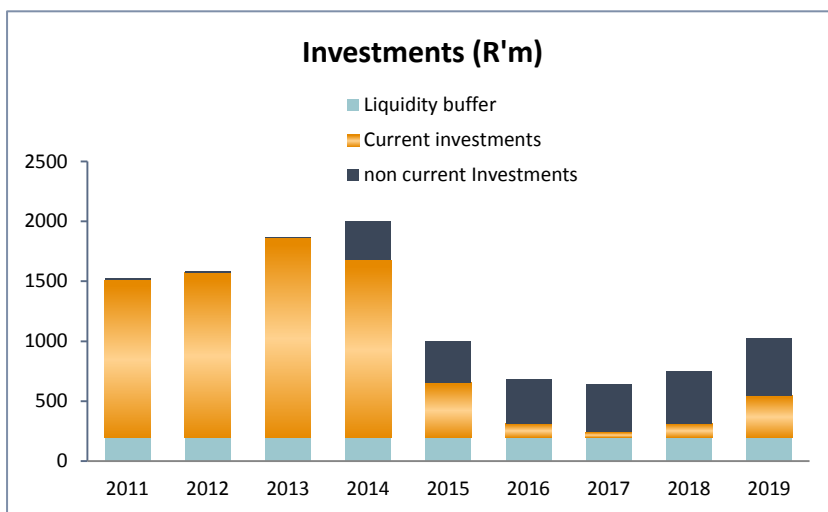
**Note:** the capex spend in the graph is net of grant funding.



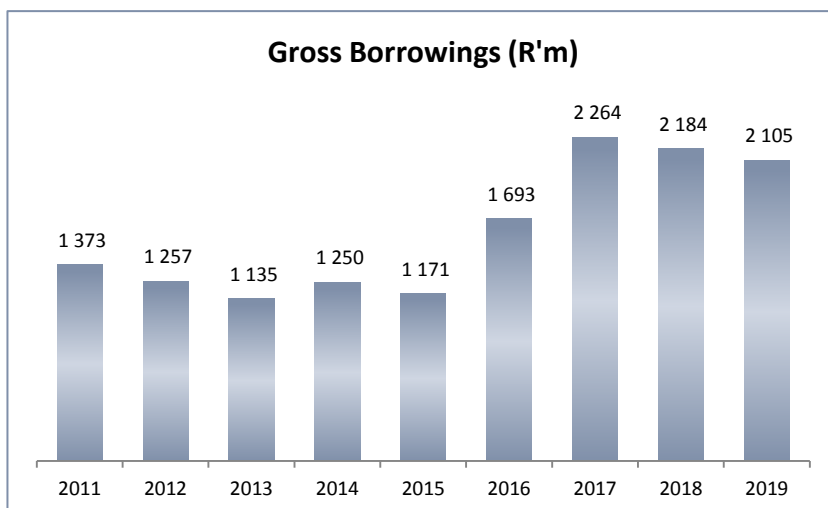
### 24.3 Financial Position



PPE is projected to increase to R9.5bn by 2019 from R4.2bn achieved in 2014. The increase is due to the R6.9bn capital expenditure over the next 5 years offset by R414m impairments from 2014 to 2019.

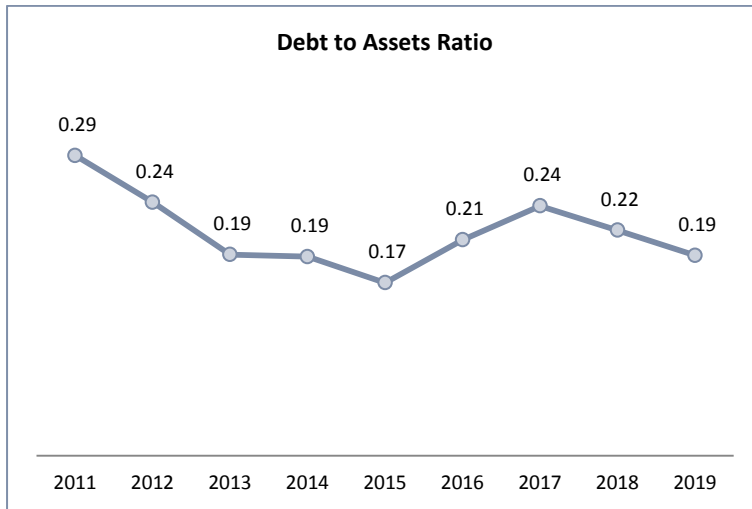


To ensure sufficient liquidity, UW will maintain a liquidity buffer of R200m or more. In 2014, long term investment represents the first redemption asset toward the redemption of the UG21. Current investments are held for the funding of operating and capital expenditure requirements.

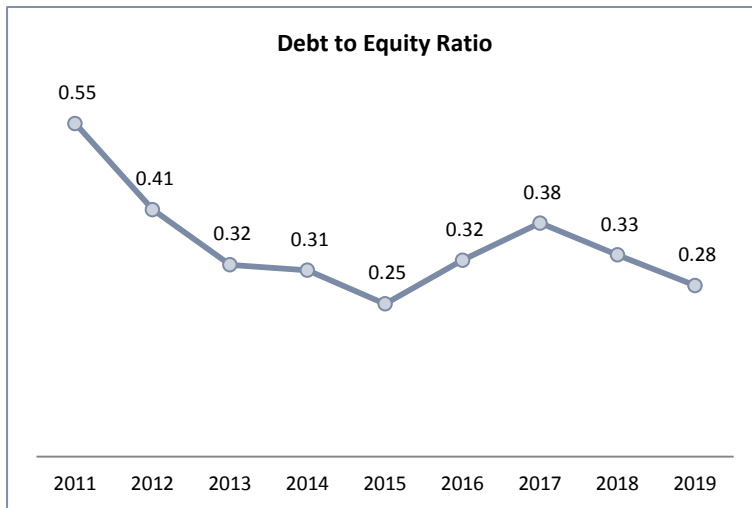


Total borrowings will increase in 2016 and 2017 due to the entity requiring additional financing to fund capex which will result in an increase in gross borrowings to R2 105m by 2019.

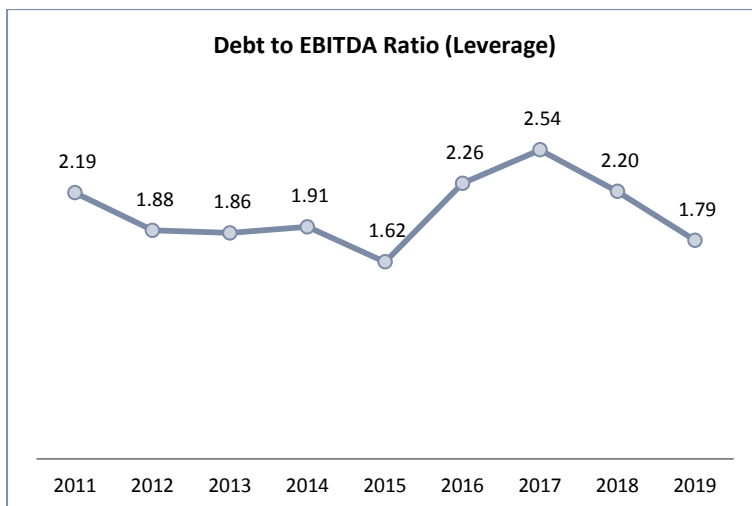
## 24.4 Debt Management



The ratio of debt to assets will decline favourable over the next 2 years to 0.17 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 favourable over the next 3 years to 0.25 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 2.26 times in 2016 and 2.54 times in 2017 due to new debt in 2016 and 2017. A temporary recovery of the ratio is expected in 2018 to 2019.

## 24.5 Business Segment Information

**Table 24.2:** Business segments: Operating Profit

	2013		2014		2015
	R'm		R'm		R'm
<b>Bulk</b>	565	-5.8%	532	13.5%	604
<b>Wastewater</b>	15	-20%	12	8.3%	13
<b>S30</b>	16	-7.7%	15	-50.7%	7
<b>TOTAL</b>	<b>596</b>	<b>-6.2%</b>	<b>559</b>	<b>11.6%</b>	<b>624</b>

### Bulk Segment

In 2014 the operating profit margin is 5.8% lower than the prior year owing to the increase in impairments and the increase in the main cost drivers.

### Wastewater Segment

The bulk wastewater segment is projected to show a 20% decline in 2014 owing to the high operating costs with relatively low management fee increases. In 2015 the wastewater operating profit margin will increase to R12.9m owing lower operating costs and higher management fee increase for Darvill at 8.9%.

### Section 30 Segment

Analysis of S30 segment is shown in Table 24.3.

**Table 24.3:** Analysis of S30 segment in terms of projects

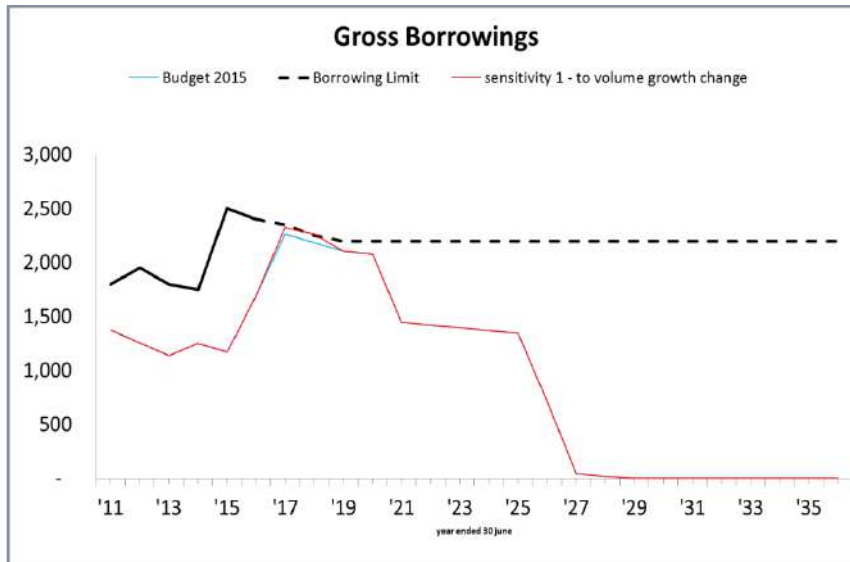
	FY 2012 Actual	FY 2013 Restated	FY 2014 Forecast	Inc / (Dec) Act F'13	FY 2015 Budget	Inc / (Dec) F'14
	R'000	R'000	R'000	%	R'000	%
<b>Revenue</b>						
<b>Other - Section 30</b>	264 318	214 993	299 028	39.1	49 037	(83.6)
<b>Sect 30 - Revenue : Laboratory Services</b>	1 961	2 817	3 200	13.6	3 520	10.0
<b>Sect 30 - Revenue : Research</b>	3 634	1 705	485	(71.6)	-	(100.0)
<b>Sect 30 - Revenue : Scientific &amp; Environ</b>	55 848	35 106	55 911	59.3	11 557	(79.3)
<b>Sect 30 - Revenue : Sanitation</b>	1 621	759	4 417	481.8	-	(100.0)
<b>Sect 30 - Revenue : Water Infrastructure</b>	145 074	107 792	163 352	51.5	-	(100.0)
<b>Sect 30 - Revenue : Other</b>	1 898	14 053	16 806	19.6	19 036	13.3
<b>Sect 30 - Revenue : O &amp; M</b>	54 283	52 761	54 858	4.0	14 924	(72.8)
<b>TOTAL REVENUE</b>	<b>264 318</b>	<b>214 993</b>	<b>299 028</b>	<b>39.1</b>	<b>49 037</b>	<b>(83.6)</b>
<b>Direct Costs</b>						
<b>Other-Section 30 Costs</b>	235 157	184 123	272 803	48.2	28 767	(89.5)
<b>Sect 30 - Laboratory Services</b>	630	879	1 600	82.0	1 760	10.0
<b>Sect 30 - Projects : Research</b>	3 114	1 855	245	(86.8)	-	(100.0)
<b>Sect 30 - Projects : Scientific &amp; Environ</b>	52 806	31 719	50 288	58.5	9 702	(80.7)
<b>Sect 30 - Projects : Sanitation</b>	1 711	462	3 929	750.8	-	(100.0)
<b>Sect 30 - Projects : Water Infrastructure</b>	136 514	101 064	155 223	53.6	-	(100.0)
<b>Sect 30 - Projects : Other</b>	40 383	48 145	61 518	27.8	17 305	(71.9)
<b>Other Direct Costs</b>	9481	12 235	10 005	(18.2)	11 354	(81.5)
<b>Total Direct Costs</b>	<b>244 638</b>	<b>196 358</b>	<b>282 808</b>	<b>44.0</b>	<b>49 037</b>	<b>(82.7)</b>
<b>GROSS PROFIT / (LOSS)</b>	<b>19 681</b>	<b>18 640</b>	<b>16 221</b>	<b>(13.0)</b>	<b>8 916</b>	<b>(45.0)</b>
<b>GP %</b>	<b>7.4%</b>	<b>8.7%</b>	<b>5.4%</b>		<b>18.2%</b>	
<b>Net Admin&amp; Indirect Costs</b>	<b>25 228</b>	<b>2 612</b>	<b>1 430</b>	<b>(45.3)</b>	<b>1 623</b>	<b>13.5)</b>
<b>OPERATING PROFIT / (LOSS)</b>	<b>(5 016)</b>	<b>16 028</b>	<b>14 791</b>	<b>(7.7)</b>	<b>7 292</b>	<b>(50.7)</b>



## 24.6 Sensitivity Analysis

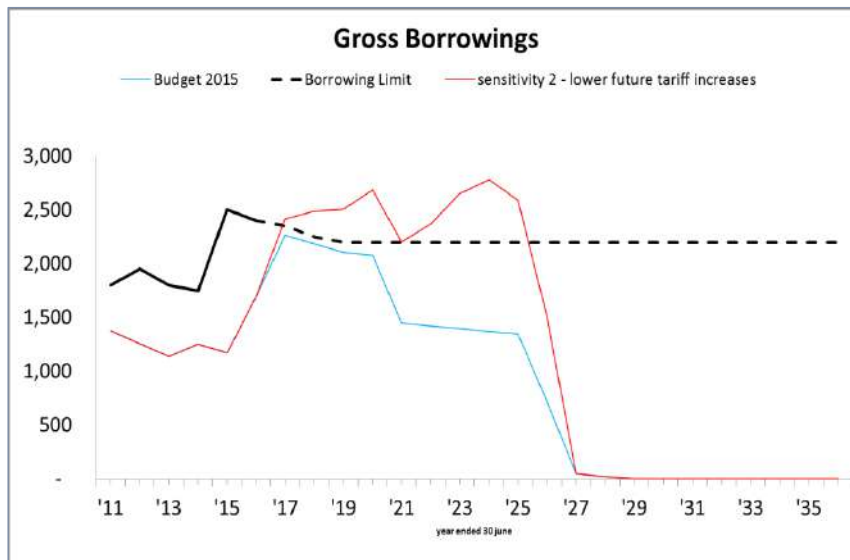
The financial viability of Umgeni Water is sensitive to the a change in volume growth and a bulk tariff increase that is below 8%.

### 24.6.1 Change in volume growth trend



The debt curve is sensitive to the change in volume growth. For example, if the volume growth is below 1% for eThekweni MM for 2015 to 2017. The graph indicates that the debt in 2017 will peak at R2 325m higher than the base case of R2 264m.

### 24.6.2 Lower than 8% tariff increase for 2016 to 2019



Umgeni Water has set its future tariff increases to 8%. However, should a tariff increase lower than 8% be approved by DWA, this will have a negative impact on the debt curve of Umgeni Water resulting in debt levels peaking at R2 779m in 2024.

## 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, R1 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.



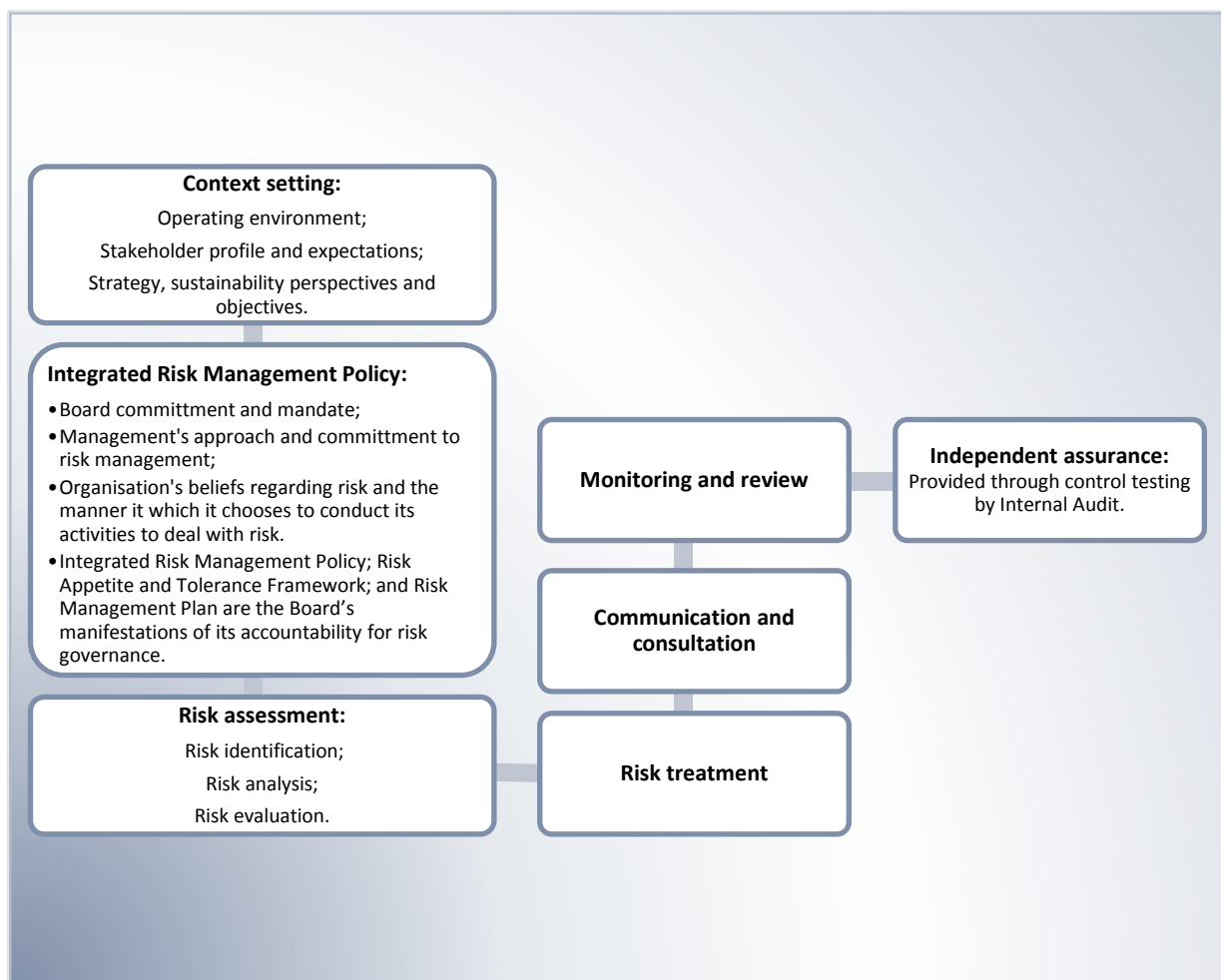
## 27 Analysis of Risk

### 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. Umgeni Water's risk management process is aligned to strategy, which ensures a focused and directed process of risk management in the organisation.

#### Integrated Risk Management Framework

**Figure 27.1:** Umgeni Water's integrated risk management framework



## 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, 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 nine strategic risks rated as low, 89% have been treated to a level equal to or above 50% (reasonable) overall control strength and 67% of risks to a level equal to or above 70% (good) overall control strength. All strategic risks are within the organisation's risk tolerance level.

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
- Construction industry investigations
- Alternate water resources to freshwater (desalination, reclamation / re-use)
- Loss of information - offsite storage of records.

The following risks have been identified in context of Umgeni Water's Growth strategy and require the risk assessment process to be applied going forward:

- Credit risk

Table 27.1 Umgeni Water Strategic Risks as at March 2014

Risk #	Risk Name, Score and Status	Cause, Context and Treatment	Main Strategic, Perspective, Objectives and Outcomes Impacted
1	<p><b>Performance of bulk wastewater infrastructure assets.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Reasonable 50%</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></p> <p>10.8</p> <p>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, 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><u>Customer and Stakeholder Perspective:</u> SO2: Increase customer and stakeholder value.</p> <p><u>Organisational Capacity Perspective:</u> SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes</b> Infrastructure Stability Product Quality Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
2	<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></p> <p>9.5</p> <p>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><u>Customer and Stakeholder Perspective:</u> SO1: Increase services and customers. SO2: Increase customer and stakeholder value.</p> <p><u>Organisational Capacity Perspective:</u> SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes</b> Infrastructure Stability Product Quality Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
3	<p><b>Ability to deliver projects on time and within budget.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Reasonable 55%</li> <li>Severity: Moderate: 10</li> <li>Probability: 55% 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></p> <p>5.5</p> <p>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: Actual cost and delivery time of projects may significantly differ from approved plans.</p> <p><i>Treatment Approach: Implement effective engineering, procurement and construction management (EPCM) process within the specified time-frames.</i></p>	<p><u>Customer and Stakeholder Perspective:</u> SO1: Increase services and customers. SO2: Increase customer and stakeholder value.</p> <p><u>Organisational Capacity Perspective:</u> SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes</b> Infrastructure Stability Product Quality Customer Satisfaction Stakeholder Understanding and Support 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></p> <p>3.6</p> <p>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. Enhanced stakeholder engagement to secure grant funding for developmental projects.</i></p>	<p><u>Customer and Stakeholder Perspective:</u> SO1: Increase services and customers. SO2: Increase customer and stakeholder value.</p> <p><u>Financial Perspective:</u> SO4: Increase financial sustainability.</p> <p><u>Organisational Capacity Perspective:</u> SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes:</b> Financial Viability Infrastructure Stability Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>
5	<p><b>Water resources availability</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Poor 30%</li> <li>Severity: Minor: 5</li> <li>Probability: 50 % Fairly poor &amp;/or could possibly occur within 2 years</li> </ul>	<p>Cause &amp; Context: Assurance of supply &lt;98%. Planning horizons and prioritisation to match supply and demand.</p>	<p><u>Customer and Stakeholder Perspective:</u> SO1: Increase services and customers SO2: Increase customer and stakeholder value</p> <p><u>Organisational Capacity Perspective:</u> SO8: Increase water resources sustainability</p>

## 27 Analysis of Risk

Risk #	Risk Name, Score and Status	Cause, Context and Treatment	Main Strategic, Perspective, Objectives and Outcomes Impacted
	<ul style="list-style-type: none"> <li>Risk Owner: GM Engineering &amp; Scientific Services</li> </ul> <p><b>Score</b> 2.5 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><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.</i></p>	<p><b>Outcomes:</b> Water Resources Adequacy Customer Satisfaction Stakeholder Understanding and Support 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> 2.3 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.</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. Disposal of property no longer in use.</i></p>	<p><b>Customer and Stakeholder Perspective:</b> SO2: Increase customer and stakeholder value. <b>Organisational Capacity Perspective:</b> SO7: Improve and increase infrastructure assets.</p> <p><b>Outcomes</b> Infrastructure Stability Stakeholder Understanding and Support 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> 2 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> SO1: Increase services and customers SO2: Increase customer and stakeholder value <b>Financial Perspective:</b> SO3: Increase mobilisation of funds <b>Organisational Capacity Perspective:</b> SO7: Improve and increase infrastructure assets</p> <p><b>Outcomes</b> Infrastructure Stability Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability Financial Viability.</p>
8	<p><b>Skill availability, attraction and retention.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Good 70%</li> <li>Severity: Minor: 3</li> <li>Probability: 50 % Fairly poor &amp;/or could possibly occur within 2 years</li> <li>Risk Owner: GM Corporate Services</li> </ul> <p><b>Score</b> 1.5 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: Scarcity of critical and core skills and competitive external jobs environment. Extent of implementation of succession plan in relation to critical and core skills.</p> <p><i>Treatment Approach: Implementation of succession plans and approved workforce plans. Programmes to build leadership, management and functional competence and to develop technical skills for the organisation are included in current strategy plan.</i></p>	<p><b>Organisational Capacity Perspective:</b> SO9: Increase skills and competency.</p> <p><b>Outcomes</b> Leadership and Employee Development</p>
9	<p><b>Performance of bulk potable water infrastructure assets.</b></p> <ul style="list-style-type: none"> <li>Overall Control Strength: Very Good 90%</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> 1 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> SO2: Increase customer and stakeholder value.</p> <p><b>Outcomes:</b> Product Quality Customer Satisfaction Stakeholder Understanding and Support Community and Environmental Sustainability.</p>



## 27.2 Key Internal Audit Issues

As at 31 May 2014 the organisation had 1 Repeat and 6 unresolved findings.

One (1) repeat finding:

- One (1) finding relating to Supply Chain Management processes where outstanding requisitions have not been cleared.

Six (6) unresolved findings:

- One (1) finding relating to an inadequately co-ordinated legal compliance process
- One (1) finding relating to human resources strategy implementation
- Three (3) findings related to inaccuracies between payroll and HR data systems.
- One (1) finding relating to DWA licence/authorisation limits for Darvill and Ixopo WWTW.

The resolution of unresolved internal audit findings will be achieved with implementation of action plans by target dates. Some findings will be resolved in the long-term.

## 27.3 Key Litigation Issues

Umgeni Water is currently engaged in six (6) minor litigation matters. The more significant matters are:

- **Termination of contracts with contractors for CAPEX projects**  
Umgeni Water is currently involved in legal disputes involving termination of contracts with two contractors for two separate CAPEX projects. Financial provision, totalling R 12 million, has been ring-fenced in trust pending finalisation of these matters.
- **Alleged breach of employment contract**  
Umgeni Water is engaged in litigation with regards to an alleged breach of employment contract by the former Chief Executive. Judgement on this matter is expected by end of May 2014.

## 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 2014/15.
- **Guarantees**  
Guarantees are given by certain financial institutions in respect to payments to utility service providers.  
This amount is R0.822million for 2014/15.

## 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, the Board of Umgeni Water has converted the former Fraud Prevention Committee into an Ethics Committee. The Committee has a broad mandate to promote ethical behaviour, which includes preventing incidences of fraud, bribery and other corrupt activities. The premise is that fraud arises out of unethical behaviour and is one of the many elements that Umgeni Water should assess, monitor and disclose within its broader ethics mandate.

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, including a written fraud policy 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,
- 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 below.

**Table 28.1: Fraud implementation Plan**

Task	Plan 2014/15 to 2018/19	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 sessions twice per annum	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 Service. 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 can help in both prevention and detection efforts.	Chief Executive, Corporate Services
	Continuous training and induction programmes must be implemented.	Chief Executive, Corporate Services
	Senior Management candidates are subject to a detailed National Intelligence Agency vetting process.	Chief Executive, Corporate Services
	Staff vetting processes for all new employees	Chief Executive, Corporate Services
	Provide certified copies of qualification certificates	Chief Executive, Corporate Services

Task	Plan 2014/15 to 2018/19	Primary Responsibility
	Ethics/ Fraud awareness should be a standing item on agenda of induction programmes.	Chief Executive, Corporate Services
Disclosure of interest	Board/Exco declaration register Organisational Disclosures Declarations of Bid Committees must be signed at all meetings	Chief Executive, Ethics Committee, Audit Committee Board, EXCO, all employees
	Gifts and donations register & declaration	Chief Executive, Ethics Committee, Audit Committee Board, EXCO, all employees
Information and use of UW property	Information security - Internal audit and external audit 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 should be made aware of Umgeni Water fraud policy and management thereof	Chief Executive, Corporate Services
Financial Ethics	Finance internal controls , policies and procedures DOA is updated every two years or amended as required Irregular expenditure procedure Wasteful & fruitless expenditure procedure	Chief Executive, Finance
	Materiality and Significance Framework Duty to report corrupt transactions & actions	Chief Executive, Finance
Corporate Social Initiatives	Implementation of project, amount of project, which targeted sector, economic/social value add, Job creation and capacity building	Chief Executive , Corporate Stakeholder Management
Environmental Integrity	Environmental report Complaints –EIA reports Water quality issues (public health)	Chief Executive, Engineering and Scientific Services
Customer and stakeholder feedback and complaints	Customer feedback reports	Chief Executive , Corporate Stakeholder Management

### 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 inductions sessions, supplier breakfasts as well as and other means deemed effective and appropriate.

## 29 Umgeni Water Balanced Scorecard

Indicators that have a ★ are indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators in this scorecard will be reported on in the Annual Report.

### Customer and Stakeholder Perspective

**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.

**SO 1:** Increase services and customers.

#### Outcomes

Stakeholder Understanding and Support.

Customer Satisfaction

Community Sustainability

#### Links to DWA mandate for Water Boards

- Sustainable Regional Water Utility.
- Integrated Planning.
- Regional Water Infrastructure planning, development and implementation.
- Increase support and value to customers, particularly weak and vulnerable WSAs

Key Performance Indicator (KPI)	#	Initiatives / Plans	Result Indicator	Baseline <sup>1</sup> (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
KPI 1: The extent to which UW has grown its services and customers.	1.1	Progressively develop Regional concept plan for KZN and Eastern Cape (Alfred Nzo and Ngquza Hill).	Per cent regional concept plan developed.	Universal access plan developed (Covers 4 existing WSAs and 3 new WSAs).	Regional concept plan 100% developed.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.
	1.2	Increase value to existing customers and progressively grow bulk water services.	Number of new business growth proposals implemented for existing customers.	1 implemented. 1 developed	1 implemented. 1 developed.	1 implemented. 1 developed.	1 implemented. 1 developed.	1 implemented. 1 developed.	1 implemented. 1 developed.
	1.3	Progressively develop value and bulk water services for new customers.	Number of new business growth proposals implemented for new customers.	Due diligence completed. 3 DMs proposals drafted.	1 implemented. 1 developed.	1 implemented. 1 developed.	1 implemented. 1 developed.	1 implemented. 1 developed.	1 implemented. 1 developed.

<sup>1</sup> Baseline informs the 2014/2015 target and is the 2013/2014 performance. This will be based on the Q3 actuals projected to 30 June 2014.

## Customer and Stakeholder Perspective, continued

**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.

**SO 2:** Increase customer and stakeholder value.

### Outcomes

Product Quality

Customer Satisfaction

Stakeholder Understanding and Support

Community Sustainability

### Links to DWA mandate for Water Boards

- Regional Cooperation , Communication and Sustainable RWU
- Customer and Stakeholder Support and Value.
- Effective water services performance.
- Water quality compliance.
- Water industry skills pool and competencies
- Integrated education and awareness.
- Corporate social responsibility.
- Implement projects on behalf of WSAs
- BBBEE.
- Job creation.

Key Performance Indicator (KPI)	#	Initiatives / Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
<b>KPI 2:</b> The extent to which customer and stakeholder needs have been met.	2.1	Develop and implement branding initiatives to increase regional visibility.	Number of Umgeni Water branded initiatives implemented to increase regional visibility.	1 implemented	1 implemented	1 implemented	1 implemented	1 implemented	1 implemented
	2.2	Develop and implement a Comprehensive Structured Communication Plan.	Per cent of customer and stakeholder communication plan developed and implemented.	100% communication plan developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.
	2.3	Develop and communicate strategies, outcomes and accountability information to shareholder (Executive Authority & DWA).	Per cent of shareholder (Executive Authority & DWA) communication plan developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.
	2.4	Conclude bulk supply agreements with customers.	Per cent customer bulk supply agreements (BSAs) in place, signed and timely renewed. ★	100 % (6 of 6) signed	100 % (6 of 6) signed BSAs	100 % (6 of 6) signed BSAs 6 Draft BSAs for new WSAs.	100 % (12 of 12) signed BSAs	100 % (12 of 12) signed BSAs	100 % (12 of 12) signed BSAs
	2.5	Develop and submit all statutory accountability documents.	Per cent submissions in respect of quarterly reports, annual report, tariff, business plan and SHC on time. ★	100% (8 of 8) developed and submitted on time.	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.

Key Performance Indicator (KPI)	#	Initiatives / Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
	2.6	Improve potable water compliance.	Number of WTW compliant with SANS 241 water quality standard and per cent compliance. ★	13 of 13 WTW, 100% compliant.	13 of 13 WTW, 100% compliant.	13 of 13 WTW, 100% compliant.	13 of 13 WTW, 100% compliant.	13 of 13 WTW, 100% compliant.	13 of 13 WTW, 100% compliant.
	2.7	Improve potable water compliance for small schemes and boreholes.	Number of boreholes and small schemes compliant with SANS 241 and per cent compliance. ★	iLembe schemes 83% compliant.	Schemes ≥ 85% compliant.	Schemes ≥ 85% compliant.	Schemes ≥ 85% compliant.	Schemes ≥ 85% compliant.	Schemes ≥ 85% compliant.
	2.8	Improve wastewater compliance.	Number of WWTW and per cent water quality compliance with standards. ★	2 of 3 WWTW ≥ 85% compliant.	4 of 4 WWTW ≥ 85% compliant.	4 of 4 WWTW ≥ 85% compliant.	4 of 4 WWTW ≥ 85% compliant.	4 of 4 WWTW ≥ 85% compliant.	4 of 4 WWTW ≥ 85% compliant.
	2.9	Improve operations and asset management to eliminate unplanned supply disruptions.	Per cent supply disrupted > 24 hours (over total supply days). ★	0% supply disrupted.	0% supply disrupted.	0% supply disrupted.	0% supply disrupted.	0% supply disrupted.	0% supply disrupted.
	2.10	Develop and train water sector professionals for municipalities.	Numbers of candidate engineers/ professionals developed and certification achieved. ★	44 in training.	44 developed. 4 certifications at year end.	40 developed. 11 certifications at year end.	29 developed. 11 certifications at year end.	18 developed. 18 certifications at year end.	-
	2.11	Plan and implement collaborative water education initiatives	Number of water education initiatives implemented.	3 implemented	3 implemented	3 implemented	3 implemented	3 implemented	3 implemented
	2.12	Contribute to interim / intermediate water supply.	Numbers of projects and cost, Rm, implemented on behalf of water services authorities. ★	6 projects , R5.9m, implemented.  2 in progress 3 planned  7 business plans approved.	1 project implemented. 1 new business plan approved.	1 project implemented. 1 new business plan approved.	1 project implemented. 1 new business plan approved.	1 project implemented. 1 new business plan approved.	1 project implemented. 1 new business plan approved.
	2.13	Plan and implement CSI initiatives	Number of CSI initiatives implemented. ★	1 implemented.	1 implemented.	1 implemented.	1 implemented.	1 implemented.	1 implemented.
	2.14	Increase PSP and contractor participation.	Per cent PSP and contractor order values awarded to BBBEE suppliers.	33% for PSPs 38% for contractors.	30% for PSPs 35% for contractors.	30% for PSPs 35% for contractors.	30% for PSPs 35% for contractors.	30% for PSPs 35% for contractors.	30% for PSPs 35% for contractors.
	2.15	Increase BBBEE spend.	Per cent BBBEE spend (of total spend). ★	59% (incl SOEs). 81% (excl SOEs)	60% (incl. SOEs). 80% (excl. SOEs).	60% (incl. SOEs). 80% (excl. SOEs).	60% (incl. SOEs). 80% (excl. SOEs).	60% (incl. SOEs). 80% (excl. SOEs).	60% (incl. SOEs). 80% (excl. SOEs).
	2.16	Increase number of new entrants.	Number of new BBBEE entrants. ★	13	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
	2.17	Create temporary jobs through capex programme.	Number of temporary jobs created. ★	473 jobs.	≥ 300 jobs.	≥ 300 jobs.	≥ 300 jobs.	≥ 300 jobs.	≥ 300 jobs.

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

## Financial Perspective

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

**SO 3:** Increase mobilisation of funds

### Outcome

Financial Viability

Customer Satisfaction

Stakeholder Understanding  
and Support

Community Sustainability

Links to DWA mandate for Water Boards

- Sustainable regional leader.
- Increased access to services.
- Financial viability and Sustainable debt

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline <sup>1</sup> (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
<b>KPI 3:</b> Increased funding collaboration and funds mobilised for sustainable growth, expansion and access	3.1	Identify and implement co-funding initiatives.	Total RBIG and other funding received, Rm.	R84m	R203m	R294m	R170m	R486m	R0m
	3.2	Improve wastewater business model.	Wastewater business model developed and implemented.	100% developed.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.
	3.3	Develop tariff and pricing strategies to support market penetration and market development plans.	Tariff and pricing plan reviewed and implemented.	100% reviewed.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.
	3.4	Manage long-term debt and ensure adequate reserves are maintained.	Debt/gearing plan for growth reviewed and implemented.	100% reviewed.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.	100% reviewed and implemented.

<sup>1</sup> Baseline informs the 2014/2015 target and is the 2013/2014 performance. This will be based on the Q3 actuals projected to 30 June 2014.



## Financial Perspective, continued

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

**SO 4:** Increase financial sustainability

### Outcome

Financial Viability

Stakeholder Understanding and Support

Links to DWA mandate for Water Boards

- Manage revenue and costs.
- Improve financial performance.
- Good Governance

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
<b>KPI 4:</b> The extent to which there are sustainable financial returns for each system, area, region and the organisation.	4.1	Ensure sustainable operations.	Total surplus (loss) Rm and per cent variance ★	R629m	R631m ± 10%	R620m ± 10%	R702m ± 10%	R743m ± 10%	R938m ± 10%
	4.2	Collect target revenue.	Total revenue, Rm and per cent variance. ★	R1.6bn	R2.11bn± 10%	R2.30bn± 10%	R2.53bn± 10%	R2.77bn± 10%	R3.03bn± 10%
	4.3	Manage expenses within target.	Total expenditure, Rm and per cent variance. ★	R1.0bn	R1.49bn± 10%	R1.67bn± 10%	R1.75bn± 10%	R1.90bn± 10%	R1.99bn± 10%
	4.4	Manage s30 revenue.	Total s30 revenue, Rm and per cent of turnover. ★	R211m, 13%	R49m, 2%	R44m, 2%	R45m, 2%	R47m, 2%	R49m, 2%
	4.5	Reduce operating costs and ensure investment decisions meet business needs.	Per cent return on assets. ★	18%	10.28%	8.54%	8.86%	9.36%	10.54%
	4.6	Manage debtors days.	Number of debtor days. ★	33	≤ 40	≤ 40	≤ 40	≤ 40	≤ 40
	4.7	Reduce irregular expenditure.	Number of breaches in materiality and significance framework. ★	0	0	0	0	0	0

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

## Financial Perspective, continued

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

**SO 5:** Improve financial ratios

### Outcome

Financial Viability

Links to DWA mandate for Water Boards

• Improve financial performance

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
KPI 5: Ratios for financial viability and sustainability met	5.1	Manage financial performance	Debt to Equity ratio. ★	25.6%	≤ 25.1%	≤ 32.3%	≤ 38.4%	≤ 33.1%	≤ 28.1%
	5.2	Manage financial performance	Interest cover ratio.	7.2	≥ 5.36	≥ 5.81	≥ 4.83	≥ 3.91	≥ 4.82
	5.3	Manage financial performance	Liquidity - operating cash flows, Rm ★	R775m	≥ R600m	≥ R600m	≥ R600m	≥ R600m	≥ R600m
	5.4	Manage financial performance	Gross surplus margin % for primary activity ★	61%	≥ 60%	≥ 59%	≥ 59%	≥ 59%	≥ 59%
	5.5	Manage financial performance	Net surplus margin for % primary activity ★	44%	≥ 30%	≥ 27%	≥ 28%	≥ 27%	≥ 31%
	5.6	Manage financial performance	Gross surplus margin % for secondary activity ★	6%	≥ 18%	≥ 6%	≥ 6%	≥ 6%	≥ 7%
	5.7	Manage financial performance	Net surplus margin % for secondary activity. ★	5%	≥ 14%	≥ 1%	≥ 1%	≥ 1%	≥ 1%

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

## Process Perspective

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

**SO 6:** Improve service delivery systems.

### Outcomes

Operational Resiliency

Operational Optimisation

Environmental Sustainability.

Links to DWA mandate for Water Boards

- Effective performance
- Effective and efficient internal control environment.
- Compliance with legislation.
- Good governance
- Unqualified audit.
- Improved water services information.

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
<b>KPI 6:</b> 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 (BSC to tender award).	167 days.	≤ 90 days.	≤ 90 days.	≤ 90 days.	≤ 90 days.	≤ 90 days.
	6.2	Improve turnaround time for issuing of signed contract and/or purchase order.	Number of working days from tender for issuing of signed contract and/or purchase order (from tender award).	14 working days	≤ 24 days.	≤ 24 days.	≤ 24 days.	≤ 24 days.	≤ 24 days.
	6.3	Review and implement effective EPCM process.	EPCM process reviewed and aligned to capex programme.	100% reviewed. Alignment plan developed.	100% reviewed and aligned.	100% reviewed and aligned.	100% reviewed and aligned.	100% reviewed and aligned.	100% reviewed and aligned.
	6.4	Develop and implement sustainable environmental resource plans.	Number of environmental sustainability and R&D initiatives implemented.	7 implemented.	7 implemented.	7 implemented.	7 implemented.	7 implemented.	7 implemented.
	6.5	Review and implement effective ERP system.	ERP system reviewed and implemented.	Review and selection in progress.	50% implemented.	75% implemented.	100% implemented.	-	-
	6.6	Monitor and review systems for performance and financial controls.	Unqualified / qualified external audit report. ★	Unqualified audit.	Unqualified audit.	Unqualified audit.	Unqualified audit.	Unqualified audit.	Unqualified audit.
	6.7	Monitor and review internal controls and risk system.	Number of repeat and unresolved findings. ★	1 repeat 6 unresolved.	0 repeat 4 unresolved.	0 repeat 4 unresolved.	0 repeat 2 unresolved.	0 repeat 1 unresolved.	0 repeat 0 unresolved.
	6.8	Monitor and manage strategic risks.	Number of strategic risks outside tolerance and/or appetite levels with mitigating actions developed and monitored.	100% mitigating actions developed and monitored.	≥80%	≥80%	≥80%	≥80%	≥80%
	6.9	Monitor and review fiduciary performance / governance system.	Per cent Board member attendance. ★	84% attendance.	≥ 80% attendance.	≥ 80% attendance.	≥ 80% attendance.	≥ 80% attendance.	≥ 80% attendance.
	6.10	Monitor and improve ethics	Performance against Code of Ethics	100%	100%.	100%.	100%.	100%.	100%.

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
		and governance.	and governance charters monitored and reported.						
	6.11	Monitor and improve legal processes.	Number of significant unresolved litigation matters.	3	≤ 3	≤ 2	≤ 2	≤ 2	≤ 2
	6.12	Monitor and reduce disabling injuries.	DIFR ratio.	0.1	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
	6.13	Develop water utility benchmarking system.	Water utility benchmarking system developed.	Concept developed.	100% developed and implemented.	100% monitored and reviewed.	100% monitored and reviewed.	100% monitored and reviewed.	100% monitored and reviewed.

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

## Organisational Capacity Perspective

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

**SO 6:** Improve and increase infrastructure assets.

### Outcome

Infrastructure Stability

Links to DWA mandate for Water Boards

- Capital infrastructure development and implementation.
- Capital infrastructure for rural access and socio-economic use.
- Infrastructure Asset management.

Key Performance Indicator (KPI)	#	Initiatives/ Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
KPI 7: Infrastructure expenditure within target cash flows and completion dates.	7.1	Implement capex plan.	Total capex implemented for water infrastructure projects Rm, per cent variance. ★	R924m	R1365m <sup>(i)</sup> ± 10%	R1398m ± 10%	R1092m ± 10%	R675m ± 10%	R179m ± 10%
	7.2	Meet capex project milestone dates.	Per cent variance of capex project milestone dates.★	22%	≤15%	≤15%	≤15%	≤15%	≤15%
	7.3	Implement rural areas capex plan.	Rural capital projects implemented Rm, per cent variance and number of projects.★	R580m 9 projects implemented.	R689m <sup>(i)</sup> ± 10% ≥ 7 projects implemented	R624m ± 10% ≥ 7 projects implemented	R513m ± 10% ≥ 7 projects implemented	R401m ± 10% ≥ 7 projects implemented	R140m ± 10% ≥ 7 projects implemented

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

(i) Target set at 90% of Umgeni Water Project Office capex

## Organisational Capacity Perspective, continued

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

**SO 8:** Increase water resources sustainability.

### Outcome

Water Resources Adequacy

Links to DWA mandate for Water Boards

- Regional Water Resources Planning, Development and Implementation.
- Infrastructure Asset management.
- Equitable use / rural access.
- Water resources protection, Wastewater management, Sustainable raw water supply
- Water use efficiency, WC/DM, NRW and water loss management

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
KPI 8: Sustainable water resource options identified for all systems.	8.1	Develop and implement integrated water resources plans for each supply system and region.	Per cent integrated water resources plan reviewed/developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.	100% developed and implemented.
	8.2	Manage water loss / unaccounted for water per system.	Per cent water loss. ★	2.2% total water loss.	≤ 5%	≤ 5%	≤ 5%	≤ 5%	≤ 5%

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

## Organisational Capacity Perspective, continued

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

**SO 9:** Increase skills and competency

### Outcome

Leadership and  
Employee Development

Links to DWA mandate for Water Boards

- Human resources , skills and competencies
- Training and development.
- Skills retention

Key Performance Indicator (KPI)	#	Initiatives/Plans	Result Indicator	Baseline (2013/2014)	Year 1 (2014/2015)	Year 2 (2015/2016)	Year 3 (2016/2017)	Year 4 (2017/2018)	Year 5 (2018/2019)
<b>KPI 9:</b> Effectiveness and efficiency of employee training and development programmes.	9.1	Review organisational structure to support expanded functions and mandate of RWU.	Per cent organisation's structure reviewed and optimised for a RWU.	100% structure reviewed and optimised.	100% structure and functions reviewed and optimised for RWU.	100% structure and functions reviewed and optimised for RWU.	100% structure and functions reviewed and optimised for RWU.	100% structure and functions reviewed and optimised for RWU.	100% structure and functions reviewed and optimised for RWU.
	9.2	Build leadership, management and functional competence for a RWU.	Per cent leadership, management and functional competence developed and implemented for a RWU. ★	100% Management Development Programme developed.	100% Leadership and Management Development Programmes implemented.	100% Leadership and Management Development Programmes implemented.	100% Leadership and Management Development Programmes implemented	100% reviewed, developed and implemented	100% reviewed, developed and implemented
	9.3	Develop technical skills for the organisation (artisans and apprentices)	Number of artisans and apprentices training plans met. ★	44 training plans met.	44 training plans met. 20% of new artisans absorbed.	49 training plans met.	49 training plans met.	49 training plans met. 32 trade tests passed	49 training plans met.
	9.4	Develop technical skills for the organisation (process controllers).	Number of process controllers training plans met. ★	66 training plans met	56 training plans met	56 training plans met	56 training plans met	56 training plans met	56 training plans met
	9.5	Develop technical skills for the organisation (graduates, interns, bursars).	Number of graduates, interns and bursars plans met ★	31 plans met.	28 plans met.	28 plans met.	28 plans met.	28 plans met.	28 plans met.
	9.6	Manage staff / skills retention.	Per cent staff turnover. ★	2%	≤ 10%	≤ 10%	≤ 10%	≤ 10%	≤ 10%

★ Specific indicators required by DWA to be included in Annexure 1 of the shareholder compact for quarterly reporting purposes. All indicators will be reported on in the Annual Report.

## 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 2014**



**MR ANDILE MAHLALUTYE**

**Chairperson of the Board**

**31 May 2014**





*'Improving Quality of Life and Enhancing  
Sustainable Economic Development'*

# Annexure A

To Umgeni Water Five-Year Business Plan  
2014/15 to 2018/19

## Working Template for Annual Financial Statements

Version: 29 May 2014



## WATER BOARD

### PROJECTED FINANCIAL STATEMENTS FOR THE 6 YEARS 2013/2014 TO 2018/2019

**ALL AMOUNTS TO BE ENTERED IN R000'S**  
**TOTALS DRIVEN BY FORMULA - PROTECTED**  
 INPUT CELLS

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#### STATEMENT OF COMPREHENSIVE INCOME

R000'S

Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
<b>423 686</b>	<b>Water sold (kilolitres)</b>	<b>435 642</b>	<b>442 166</b>	<b>447 889</b>	<b>455 275</b>	<b>462 095</b>	<b>469 017</b>	2.82	1.71
595	- Raw water sales (kl)	641	641	641	632	632	632	7.73	1.02
422 791	- Potable water sales (kl)	434 798	441 320	447 041	454 432	461 249	468 168	2.84	1.71
300	- Waste water sales (kl)	203	205	207	210	214	217	(32.37)	(5.27)
	- Section 30 activities								
<b>1 908 833</b>	<b>TOTAL REVENUE (Primary and secondary activities)</b>	<b>2 179 291</b>	<b>2 121 613</b>	<b>2 317 563</b>	<b>2 543 524</b>	<b>2 785 267</b>	<b>3 051 475</b>	14.17	8.13
1 680 893	Revenue (Primary activity)	1 870 036	2 062 306	2 260 756	2 483 024	2 721 094	2 981 718		
428	- Raw water sales	579	625	677	722	780	842	35.12	11.92
1 625 480	- Potable water sales	1 810 386	1 997 335	2 191 179	2 407 780	2 639 502	2 893 319	11.38	10.09
2 503	- Waste water sales	1 919	2 107	2 305	2 532	2 776	3 043	(23.32)	3.31
	- Industrial water sales								
52 481	- Wastewater management fee	57 152	62 239	66 595	71 990	78 037	84 514	8.90	8.26
-	-								
-	-								
227 940	Revenue (Secondary activity)	309 254	59 308	56 807	60 500	64 173	69 757	35.67	(17.91)
	- Retail water operation								
	- Waste water management fee								
	- Management fee - consulting								
	- Management fee - other								
227 940	- Section 30 activities	309 254	59 308	56 807	60 500	64 173	69 757	35.67	(17.91)
-	-								
-	-								
<b>357 741</b>	<b>TOTAL COST OF SALES</b>	<b>454 007</b>	<b>201 206</b>	<b>239 842</b>	<b>263 079</b>	<b>288 631</b>	<b>317 224</b>	26.91	(1.98)
161 388	Cost of sales (raw water purchased)	190 241	161 085	198 898	220 672	244 674	271 595	17.88	9.06
161 388	- Raw water	190 241	161 085	198 898	220 672	244 674	271 595	17.88	9.06
	-								
196 353	Cost of sales (secondary activities)	263 766	40 121	40 944	42 407	43 956	45 629	34.33	(21.59)
5 414	- Employee costs	3 212	3 578	3 864	4 170	4 507	4 873	(40.68)	(1.74)
181	- Chemicals and purification	432	505	537	571	607	645	138.63	23.61
2 432	- Energy	2 583	2 790	3 097	3 376	3 679	4 047	6.23	8.86
3 157	- Repairs and maintenance	3 166	3 837	4 082	4 339	4 613	4 903	0.29	7.62
	- General and administration expenses								
184 123	-Project / WIP costs	253 761	28 767	28 720	29 295	29 881	30 478	37.82	(25.90)
1 046	- Other direct operating activities	612	644	643	656	669	683	(41.52)	(6.87)
<b>1 551 092</b>	<b>GROSS INCOME</b>	<b>1 725 284</b>	<b>1 920 407</b>	<b>2 077 721</b>	<b>2 280 445</b>	<b>2 496 637</b>	<b>2 734 251</b>	11.23	9.91
<b>81.3</b>	<b>Gross profit %</b>	<b>79.2</b>	<b>90.5</b>	<b>89.7</b>	<b>89.7</b>	<b>89.6</b>	<b>89.6</b>	(2.57)	1.64

Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
90.4	- Gross profit % - primary activity	89.8	92.2	91.2	91.1	91.0	90.9	(0.63)	0.09
13.9	- Gross profit % - secondary activity	14.7	32.4	27.9	29.9	31.5	34.6	6.15	16.47
	Government grants and other funding								
22 296	Other operating income	21 218	5 753	5 934	6 130	6 343	3 001	(4.83)	(28.41)
	- Commission income and insurance	10 106							
2 549	- Game and grazing sales (net of expenses)								
	- House and other rentals - all related income	2 000	2 100	2 363	2 559	2 771	3 001	(21.54)	2.76
	- Other income (scrap, telephone, refurbishment, lab)								
	- Project income								
	- Bad debts recovered								
	- Profit (Loss) on sale of fixed assets								
	- Profit (loss) on disposal of investments								
	- Profit (loss) on sale of biological assets								
	- Profit (Loss) on sale of intangible assets								
19 747	- Wastewater - Darville revenue amort	3 572	3 572	3 572	3 572	3 572			
	- Sundry Income	5 541	82					(71.94)	(100.00)
<b>1 573 388</b>	<b>TOTAL OPERATING INCOME</b>	<b>1 746 502</b>	<b>1 926 160</b>	<b>2 083 655</b>	<b>2 286 575</b>	<b>2 502 979</b>	<b>2 737 252</b>	11.00	9.67
<b>974 906</b>	<b>TOTAL EXPENSES</b>	<b>1 189 347</b>	<b>1 301 170</b>	<b>1 439 448</b>	<b>1 503 713</b>	<b>1 622 845</b>	<b>1 683 795</b>	22.00	9.54
607 308	- Variable costs (related to cost of sales)	711 936	746 884	820 240	846 934	923 528	938 095	17.23	7.52
111 173	- Employee costs	131 112	160 774	192 617	211 715	228 865	247 402	17.94	14.26
	- Directors emoluments ( include in general)								
87 464	- Employee salaries - (including leave, annual bonus, 13th cheque)	102 793	124 837	153 805	169 837	183 632	198 545	17.53	14.64
5 156	- Performance bonuses	4 895	5 915	6 388	6 892	7 451	8 054	(5.06)	7.72
7 634	- Company contributions - Medical contributions and expenses	10 293	14 092	15 219	16 421	17 751	19 189	34.83	16.60
551	- Company contribution - UIF and SDL	552	607	656	707	763	824	0.23	6.94
10 983	- Contributions to pension and provident funds	12 580	15 324	16 550	17 857	19 268	20 790	14.53	11.22
	- OID contributions								
	- Changes in post employment liabilities								
-616	- Changes in water inventory							(100.00)	(100.00)
	-								
50 271	- Chemicals	47 440	52 718	58 275	64 416	71 204	78 705	(5.63)	7.76
105 300	- Energy	135 881	167 962	186 438	203 217	221 507	243 658	29.04	15.01
134 290	- Repairs and maintenance - (cost of sales related)	143 730	167 975	182 044	197 293	213 819	231 727	7.03	9.52
	- Property and buildings								
134 290	- Plant, machinery and equipment	143 730	167 975	182 044	197 293	213 819	231 727	7.03	9.52
	- Other - to be included in general expenses								
	-								
171 955	- Depreciation	231 586	167 200	165 957	133 242	148 637	94 476	34.68	(9.50)
95 921	- Depreciation property, plant and equipment	80 820	73 923	78 655	83 610	88 877	94 476	(15.74)	(0.25)
	- Amortisation of intangible assets								
76 034	- Impairments of property, plant and equipment	150 766	93 277	87 303	49 632	59 760		98.29	(100.00)
	- impairments of intangible assets								
	- Impairment of trade receivables								
34 319	- Other direct costs	22 187	30 254	34 910	37 050	39 497	42 127	(35.35)	3.48
	- Motor vehicle repairs and running expenses								
34 319	- Other direct	22 187	30 254	34 910	37 050	39 497	42 127	(35.35)	3.48
367 598	- General expenses	477 411	554 286	619 207	656 779	699 317	745 699	29.87	12.51
1 747	- Advertising and promotions	1 881	1 880					7.64	(100.00)
3 369	- Amortisation - office intangibles	1 223	1 722					(63.70)	(100.00)
	- Amortisation of biological assets								
1 639	- Audit fees	1 909	2 062	2 194	2 332	2 479	2 635	16.48	8.24
	- Bad debts								
48	- Bursaries, donations and gifts	20	21	23	24	26	27	(57.31)	(8.82)



Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
666 001	<b>PROFIT (LOSS) FOR YEAR</b>	574 169	631 619	623 967	704 379	746 125	943 974	(13.79)	5.99
159 906	<b>Other comprehensive income</b>	94 582	47 226	47 226	47 226	47 226	47 226	(40.85)	(18.39)
159 906	- 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 - Retirement Benefit adjustment (IAS 19)	94 582	47 226	47 226	47 226	47 226	47 226	(40.85)	(18.39)
506 095	<b>TOTAL COMPREHENSIVE INCOME (LOSS) FOR THE YEAR</b>	479 587	584 393	576 741	657 153	698 899	896 748	(5.24)	10.00

STATEMENT OF FINANCIAL POSITION

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Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
	<b>ASSETS</b>								
	<b>Non-current assets</b>								
3 443 935	Property, plant and equipment	4 234 019	5 767 430	7 175 914	8 462 329	8 976 663	9 523 902	22.94	18.47
3 097 613	Carrying value - opening balance	3 443 935	4 234 019	5 767 430	7 175 914	8 462 329	8 976 663	11.18	19.40
473 127	Additions - (will be carried to cashflow)	986 616	1 683 599	1 559 299	1 406 613	652 131	633 164	108.53	4.98
-95 921	Depreciation - (ex income statement)	-93 667	-96 664	-102 707	-109 173	-116 019	-123 245	(2.35)	4.27
-1 705	Disposals - carrying value							(100.00)	(100.00)
-76 034	Impairments - (ex income statement)	-150 766	-93 277	-87 303	-49 632	-59 760		98.29	(100.00)
46 855	Revaluations - (ex income statement)								
	Interest capitalised	48 507	48 507	48 507	48 507	48 507	48 507	3.53	0.58
	Grant funding								
	Other	-606	-8 754	-9 313	-9 900	-10 526	-11 187		
9 374	Intangible assets	8 151	6 429	6 429	6 429	6 429	6 429	(13.05)	(6.09)
9 753	Carrying value - opening balance	9 374	8 151	6 429	6 429	6 429	6 429	(3.89)	(6.71)
2 990	Additions - (will be carried to cashflow)							(100.00)	(100.00)
-3 369	Amortisation - (ex income statement)	-1 223	-1 722					(63.70)	(100.00)
	Disposals - carrying value								
	Impairments - (ex income statement)								
	Revaluations - (ex income statement)								
4 089	Biological assets	4 089	4 089	4 089	4 089	4 089	4 089		
4 898	Carrying value - opening balance	4 089	4 089	4 089	4 089	4 089	4 089	(16.52)	(2.96)
	Additions - (will be carried to cashflow)								
	Amortisation - (ex income statement)								
-536	Disposals - carrying value							(100.00)	(100.00)
	Impairments - (ex income statement)								
-273	Fair value adjustment							(100.00)	(100.00)
6 005	Investments in subsidiaries and associates	7 039	7 707	8 441	9 104	9 064	9 022	17.22	7.02
6 110	Opening balance	6 005	7 039	7 707	8 441	9 104	9 064	(1.72)	6.79
-105	Changes in year	1 034	668	734	663	-40	-42	(1084.76)	(14.16)
5 179	Investments - financial instruments	323 389	344 306	369 561	399 564	434 991	476 521	6144.24	112.47

Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
5 179	Held to maturity	323 389	344 306	369 561	399 564	434 991	476 521	6144.24	112.47
	Loans receivable								
	Employee loans								
13 139	Other financial assets	11 330	9 051	6 710	5 190	2 576	-124	(13.77)	#NUM!
13 139	Other non-current assets	11 330	9 051	6 710	5 190	2 576	-124	(13.77)	#NUM!
<b>3 481 721</b>		<b>4 588 017</b>	<b>6 139 013</b>	<b>7 571 144</b>	<b>8 886 706</b>	<b>9 433 812</b>	<b>10 019 840</b>	31.77	19.26
	<b>Assets held for sale - net</b>								
	Dams								
	Farms								
	Reservoirs								
	Other								
	<b>Current assets</b>								
2 075 826	Investments	1 676 000	655 000	312 000	241 000	312 000	546 000	(19.26)	(19.96)
2 075 826	Short term	1 676 000	655 000	312 000	241 000	312 000	546 000	(19.26)	(19.96)
	Available for sale								
11 030	Inventories	13 217	15 531	17 973	20 548	23 259	26 117	19.83	15.45
653	Piping	780	917	1 059	1 212	1 370	1 542	19.45	15.40
	Electrical								
1 926	Maintenance spares	2 313	2 718	3 145	3 596	4 071	4 570	20.09	15.49
1 978	Water	2 366	2 780	3 217	3 678	4 164	4 675	19.62	15.41
3 414	Chemical stores	4 097	4 814	5 572	6 370	7 211	8 096	20.01	15.48
	Consumables								
3 059	Miscellaneous	3 661	4 302	4 980	5 692	6 443	7 234	19.68	15.42
236 658	Trade receivables	277 810	263 265	284 537	312 638	347 013	378 142	17.39	8.12
236 658	Trade receivables - bulk and waste water	277 810	263 265	284 537	312 638	347 013	378 142	17.39	8.12
	Trade receivables - other activities								
	less: provision for doubtful debts / impairments - balance b/f								
	Change in prov - doubtful/impairments - ex income statement								
67 441	Sundry debtors	13 879	13 879	13 879	13 879	13 879	13 879	(79.42)	(23.16)
67 441	-	13 879	13 879	13 879	13 879	13 879	13 879	(79.42)	(23.16)
	-								
27 610	Interest receivable	16	16	16	16	16	16	(99.94)	(71.13)
	Loans and financial receivables								
	Employee loans								
	Other loans								
7 611	Cash and cash equivalents	1 113	716	847	1 798	4 176	10 268	(85.38)	5.12
7 611	Cash on hand	1 113	716	847	1 798	4 176	10 268	(85.38)	5.12



Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
	Interest payable								
568 649	Trade and other payables	501 670	421 671	341 671	290 585	225 803	156 668	(11.78)	(19.33)
281 504	Trade payables	245 817	206 619	167 418	142 387	110 642	76 768	(12.68)	(19.47)
40 600	Trade payables - related parties	35 117	29 517	23 917	20 341	15 806	10 967	(13.50)	(19.60)
32 427	Statutory payables - employees tax / benefits funds								
	SARS - VAT	30 100	25 300	20 500	17 435	13 548	9 400	(7.18)	(18.65)
	Amounts received in advance								
	Accrual - audit fees								
214 118	Accruals - other	190 635	160 235	129 835	110 422	85 806	59 533	(10.97)	(19.21)
31 396	Other payables / loans	31 420	30 880	29 481	28 705	23 952	22 871	0.08	(5.14)
45 380	Provisions	47 060	47 132	47 221	47 010	46 613	46 813	3.70	0.52
21 157	Leave pay	21 930	21 964	22 005	21 907	21 722	21 814	3.65	0.51
16 587	Bonuses	17 224	17 250	17 283	17 205	17 060	17 134	3.84	0.54
7 636	Legal fees - costs and claims	7 906	7 918	7 933	7 898	7 831	7 865	3.54	0.49
	Other								
	Bank overdraft								
	Current account 1								
	Current account 2								
	Current account 3								
754 876		658 812	578 515	497 390	445 508	375 776	255 971	(12.73)	(16.49)
5 907 897	<b>Total equity and liabilities</b>	<b>6 570 052</b>	<b>7 087 420</b>	<b>8 200 396</b>	<b>9 476 585</b>	<b>10 134 156</b>	<b>10 994 262</b>	<b>11.21</b>	<b>10.91</b>
		0	-0	0	0	-0	-0		

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STATEMENT OF CASHFLOW

Actual 2012/2013	ELEMENT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
	<b>OPERATING ACTIVITIES</b>								
666 001	Net profit for period before changes	574 169	631 619	623 967	704 379	746 125	943 974	(13.79)	5.99
104862	Adjustments for non-cash items, interest and other	228 642	185 035	210 250	237 288	309 788	232 728	118.04	14.21
95921	- Depreciation and amortisation	94 890	98 386	102 707	109 173	116 019	123 245	(1.07)	4.27
76034	- Impairments of PPE, intangibles and biological assets	150 766	93 277	87 303	49 632	59 760		98.29	(100.00)
	- Retirement benefits provisions								
426	- Profit (loss) on sale of fixed, intangible and biological assets							(100.00)	(100.00)
(134026)	- Interest received - (deduct from profit)	-90 021	-74 530	-41 378	-34 763	-41 598	-59 589	(32.83)	(12.64)
66507	- Interest paid - (add to profit)	73 006	67 902	61 619	113 247	175 607	169 072	9.77	16.82
	- Revaluations of assets								
	- Impairment of trade receivables								
170848	Adjustments for:	-93 972	-38 473	-37 913	-37 325	-36 700	-36 040		
	- Discontinued operations								
170848	- other non cashflow adjustments	-93 972	-38 473	-37 913	-37 325	-36 700	-36 040		
69139	Working capital changes	-55 076	-67 696	-103 625	-81 973	-102 266	-102 921	(179.66)	#NUM!
(2026)	- Inventories	-2 187	-2 314	-2 442	-2 575	-2 711	-2 858	7.95	5.90
(110739)	- Trade debtors	-41 152	14 545	-21 272	-28 101	-34 375	-31 129	(62.84)	(19.06)



Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
169528	- Sundry debtors	53 562							
12376	- Trade and other payables	-66 979	-79 999	-80 000	-51 086	-64 783	-69 135	(139.51)	#NUM!
	- Provisions	1 680	72	89	-211	-397	200	(86.43)	(49.72)
<b>1010850</b>	<b>Net cash generated from operating activities</b>	<b>653 763</b>	<b>710 485</b>	<b>692 678</b>	<b>822 369</b>	<b>916 947</b>	<b>1 037 741</b>	(35.33)	0.44
(456450)	<b>INVESTING ACTIVITIES - NET CASH UTILISED</b>	-960 056	-1 684 267	-1 560 033	-1 407 276	-652 091	-633 122	110.33	5.60
(473127)	- Additions to property, plant and equipment	-986 616	-1 683 599	-1 559 299	-1 406 613	-652 131	-633 164	108.53	4.98
(2990)	- Additions to intangible assets							(100.00)	(100.00)
	- Additions to biological assets								
15635	- Proceeds on disposal of fixed and intangible assets							(100.00)	(100.00)
550	- Proceeds on disposal of biological assets							(100.00)	(100.00)
3482	- Investments in subsidiaries and associates	-1 034	-668	-734	-663	40	42	(129.70)	(52.11)
	- Interest receivable movement	27 594							
	- Movement in assets held for sale								
	- Increase (decrease) in capital								
<b>(558367)</b>	<b>FINANCING ACTIVITIES - NET CASH UTILISED</b>	<b>299 795</b>	<b>973 386</b>	<b>867 484</b>	<b>585 859</b>	<b>-262 478</b>	<b>-398 524</b>	(153.69)	(5.47)
(121756)	- Movement in long term borrowings	145 428	-78 832	520 983	570 792	-79 408	-29 619	(219.44)	(20.99)
(290675)	- Movement in investments	81 616	1 000 083	317 745	40 997	-106 427	-275 530	(128.08)	(0.89)
	- Proceeds (repayment) short term borrowings	-30 789	170	185	191	200	-49 789		
	- Movement in loan receivables	-335	-716	-1 841	-2 408	-2 139	1 619		
130662	- Interest received	90 021	74 530	41 378	34 763	41 598	59 589	(31.10)	(12.27)
(116692)	- Interest paid	-73 006	-67 902	-61 619	-113 247	-175 607	-169 072	(37.44)	6.37
(159906)	- Movement in retirement benefit obligations	135 367	94 560	99 160	103 277	107 812	112 785	(184.65)	#NUM!
	- Adjustment for non-cash interest	-48 507	-48 507	-48 507	-48 507	-48 507	-48 507		
	<b>CASH AND CASH EQUIVALENTS</b>								
(3967)	- Net increase (decrease) in cash utilised for the year	-6 498	-397	129	951	2 378	6 094	63.81	#NUM!
11 578	- At beginning of year	7 611	1 113	716	847	1 798	4 176	(34.26)	(15.63)
<b>7 611</b>	<b>- AT END OF YEAR</b>	<b>1 113</b>	<b>716</b>	<b>845</b>	<b>1 798</b>	<b>4 176</b>	<b>10 270</b>	(85.38)	5.12
0		0	-0	2	-0	-0	-2		
7611	- end of year per balance sheet	1 113	716	847	1 798	4 176	10 268		

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**CAPITAL EXPENDITURE PROGRAM**

Actual 2012/2013	CAPEX CATEGORY	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
	<b>Immovable capex</b>								
251203	Augmentation and upgrade	336 694	704 429	690 152	610 734	400 298	360 090	34.03	6.19
	Expansion	560	43 233	185 551	128 022	62 043	16 388		
53293	Rehabilitation	36 044	205 763	71 312	62 877			(32.37)	(100.00)
140832	Development projects	560 400	619 373	518 937	554 310	126 186	230 927	297.92	8.59
<b>445328</b>		<b>933 698</b>	<b>1 572 798</b>	<b>1 465 952</b>	<b>1 355 943</b>	<b>588 527</b>	<b>607 405</b>	109.67	5.31
	<b>Movable capex</b>								
6978	Equipment and vehicles	26 221	38 078	5 864	7 621	6 878		275.77	(100.00)
15169	Information technology communication	20 244	63 044	57 413	34 487	52 640	19 368	33.46	4.16
8642	Laboratory and process services	6 453	9 680	30 069	8 563	4 086	6 391	(25.33)	(4.90)
<b>30789</b>		<b>52 918</b>	<b>110 801</b>	<b>93 347</b>	<b>50 671</b>	<b>63 604</b>	<b>25 759</b>	71.87	(2.93)

Actual 2012/2013	ACCOUNT	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
								2014/2013	2019/2013
	<b>Summary</b>								
445328	Immovable capex	933 698	1 572 798	1 465 952	1 355 943	588 527	607 405	109.67	5.31
30789	Movable capex	52 918	110 801	93 347	50 671	63 604	25 759	71.87	(2.93)
476117		<b>986 616</b>	<b>1 683 599</b>	<b>1 559 299</b>	<b>1 406 614</b>	<b>652 131</b>	<b>633 164</b>	107.22	4.87
	% of total	<b>14.3%</b>	<b>24.3%</b>	<b>22.5%</b>	<b>20.3%</b>	<b>9.4%</b>	<b>9.1%</b>		
	Total forecast period - 2014 to 2019	<b>6 921 423</b>	<b>38.6%</b>	<b>46.9%</b>	<b>42.9%</b>	<b>29.7%</b>	<b>18.6%</b>		
	<b>Reconciliation</b>								
476117	Capex above	986 616	1 683 599	1 559 299	1 406 614	652 131	633 164	107.22	4.87
-473 127	Capitalised fixed assets - per fixed assets entry	-986 616	-1 683 599	-1 559 299	-1 406 613	-652 131	-633 164	108.53	4.98
-2 990	Capitalised intangibles - per intangibles entry							(100.00)	(100.00)
	Written off to expenses								
	Difference	-0	0	-0	0	-0	0		
	Cumulative difference	-0	0	-0	0	0	0		

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#### FINANCIAL RATIOS

CATEGORY	Estimated actual 2013/2014	Projected 2014/2015	Budget 2015/2016	Budget 2016/2017	Budget 2017/2018	Budget 2018/2019	Growth %	
							2014/2013	2019/2013
<b>Performance indicators</b>								
0.096 - Cost of raw water / primary revenue	0.102	0.078	0.088	0.089	0.090	0.091	5.96	(0.87)
0.506 - Cost of sales / total revenue	0.535	0.447	0.457	0.436	0.435	0.411	5.82	(3.38)
0.193 - General expenses / total revenue	0.219	0.261	0.267	0.258	0.251	0.244	13.76	4.05
726.585 - Employees costs / per megalitre	844.454	968.131	1074.600	1149.267	1223.964	1303.510	16.22	10.23
0.231 - Employee costs / total costs excl finance costs	0.224	0.285	0.287	0.296	0.296	0.306	(3.09)	4.77
613 - Operating profit (loss) per employee	492	540	540	652	733	877	(19.73)	6.15
976 - Total staff complement	1132	1157	1194	1201	1201	1201	15.98	3.52
243 - Management	379	393	394	396	396	396	55.97	8.48
733 - Other	753	764	800	805	805	805	2.73	1.57
<b>Operating risks</b>								
39.7 - Debtors days (trade debtors excl VAT/ revenue x 365 days)	40.8	39.7	39.3	39.4	39.9	39.7	2.82	(0.01)
15.6% - Return on assets (EBIT / total assets excluding investments)	12.2%	10.3%	8.6%	8.9%	9.4%	10.6%	(22.05)	(6.33)
<b>Financial risks</b>								
3.214 - Current ratio (current assets / current liabilities)	3.008	1.639	1.265	1.324	1.864	3.807	(6.39)	2.86
0.314 - Gross debt / equity ratio (total debt liabilities / total equity)	0.305	0.250	0.322	0.383	0.330	0.280	(2.80)	(1.88)
0.192 - Debt / assets ratio (total debt / total assets)	0.190	0.165	0.206	0.239	0.216	0.191	(1.00)	(0.06)
<b>Business credit risk</b>								
8.999 - interest cover (EBIT / interest paid)	7.632	9.204	10.455	6.913	5.012	6.231	(15.19)	(5.94)
<b>Surplus ratios</b>								
0.27 - Return on turnover (net profit / turnover)	0.22	0.28	0.25	0.26	0.25	0.29	(17.00)	1.73