

## 9. STRATEGIC PLANNING

### 9.1 DEVELOPING STRATEGY

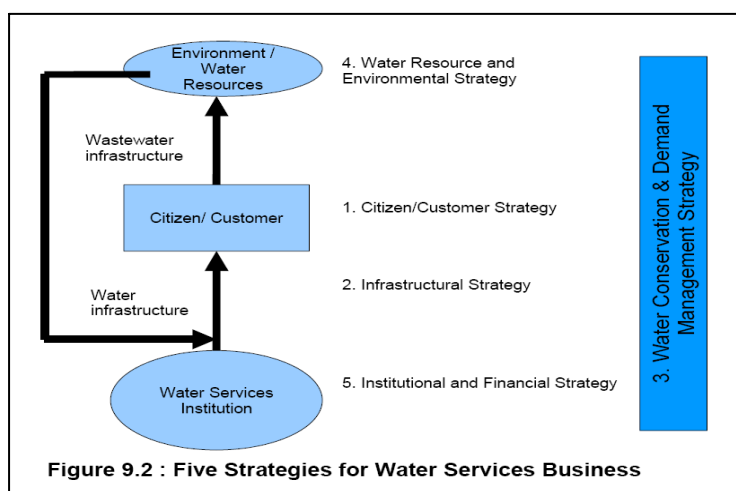
#### Step 1

The process is outlined in Figure 9.1 “The Strategic Planning Process”. [Figure 9.1](#) This is an ongoing process and happens at both a “micro” and “macro” level of strategic planning.

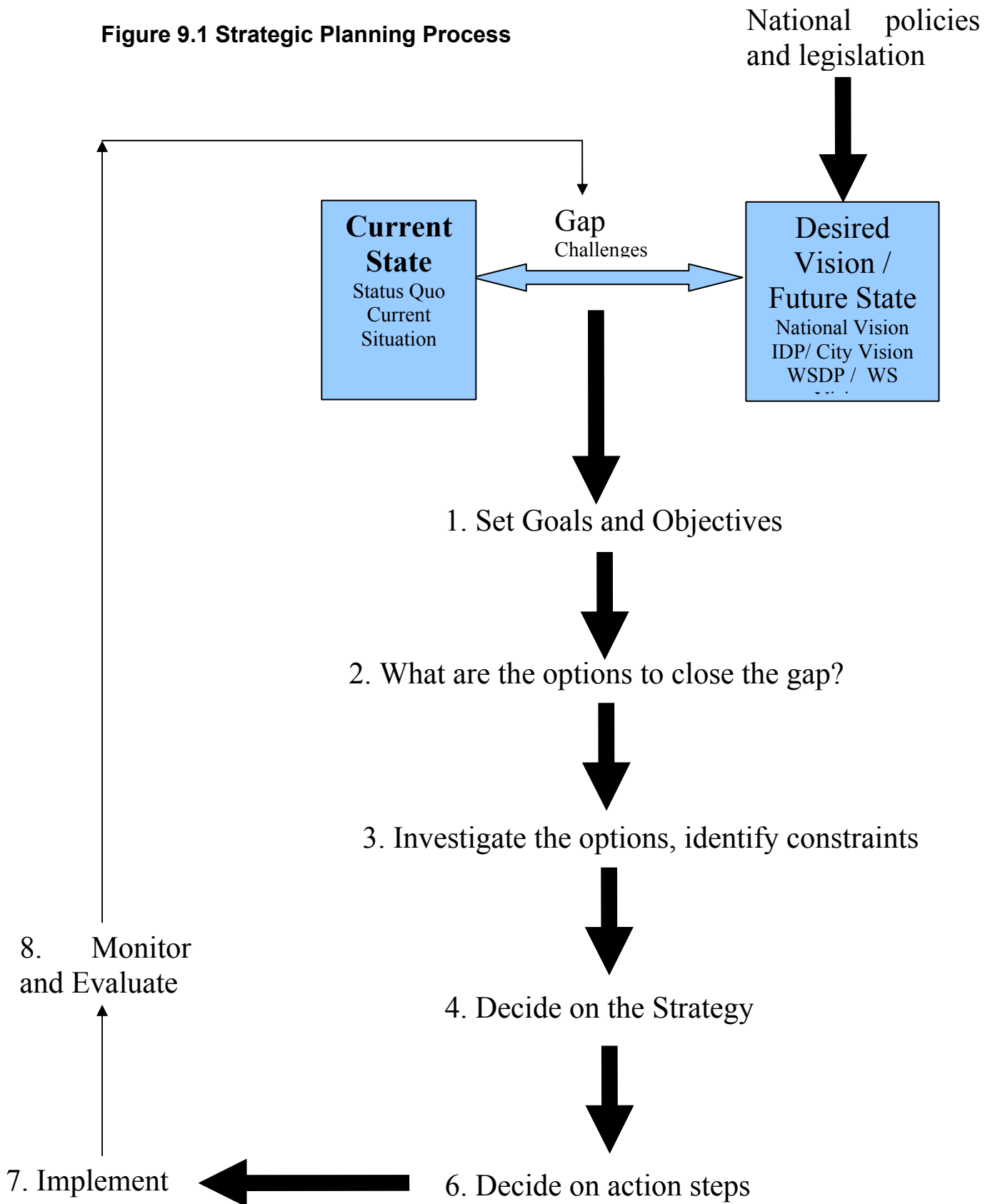
- Data is captured in terms of the various chapter headings of the Water Services Development Plan. These chapter headings identify the key components of the water services business.
- The data is analysed and the current state of the key components was identified.
- The national agenda as contained in the Water Services Act (Act 109 of 1997) and the Strategic Framework for Water Services (September 2003), and the City’s Integrated development Plan (IDP) informed the desired future state or vision for Cape Town Water Services.
- From the current state and desired future state a strategic gap analysis is done and the challenges determined.
- Goals and objectives are set
- The options to achieve these goals and objectives are identified
- The options are investigated and the constraints of each option identified
- The most suitable option is chosen and action steps to implement the option identified.
- The implementation of the strategy and action steps then follows.
- Monitoring and evaluating the effectiveness of the strategy is ongoing. (Is the gap closing?)
- Gap closing? – continue with strategy. Gap not closing or is not closing sufficiently fast? – revise strategy
- Go through the cycle again.

#### Step 2

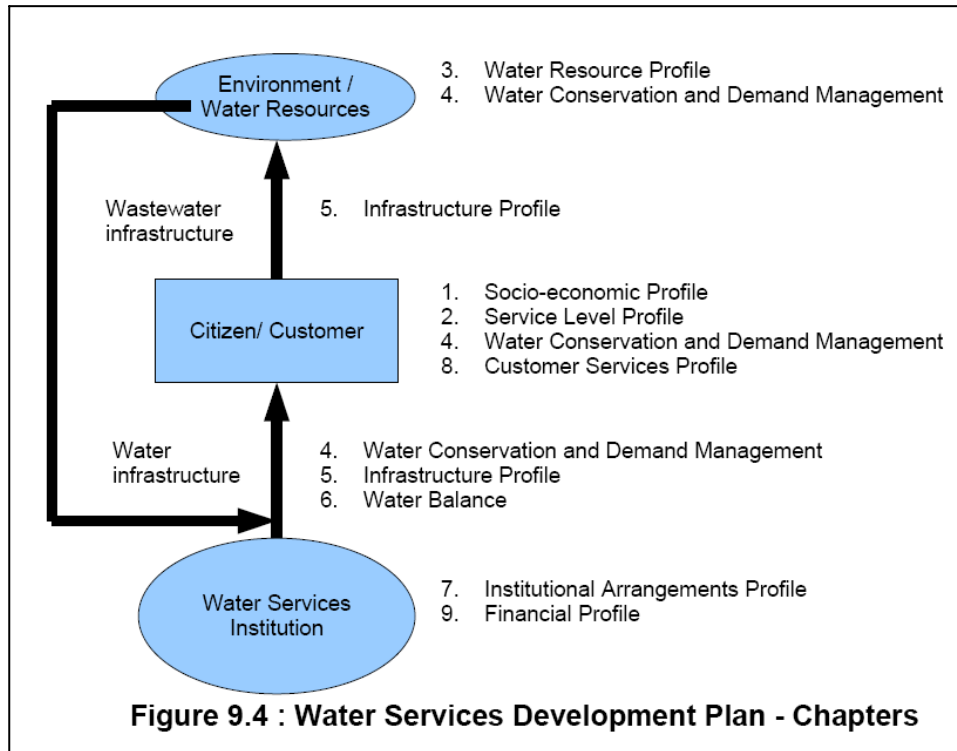
The key components (from the Chapter headings) were then reduced to 5 main components [Figure 9.2](#),



**Figure 9.1 Strategic Planning Process**



A strategy was then developed for each component ensuring that each key component was identified under one of the main components ([Figure 9.4](#)). Water Conservation and Demand Management, an important strategy cuts across all the other four strategies.



### Step 3

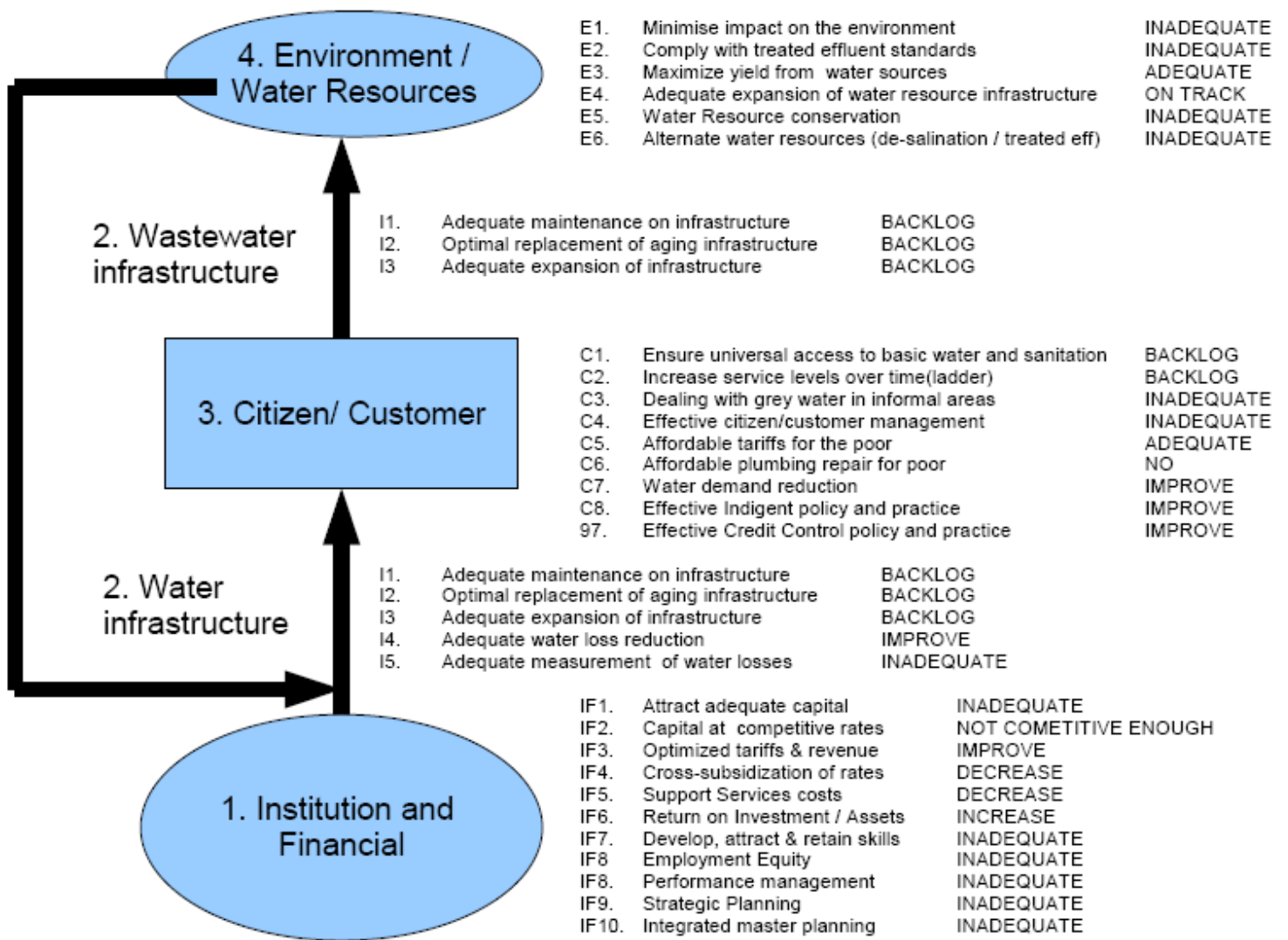
For each of these components / strategies the challenges were highlighted ([Figure 9.3](#)) and objectives determined.

### Step 4

Throughout the process and at the end ensure that all five strategies align with each other and IDP.

### Step 5

Combine the strategies, strategic goals and strategic objectives into a strategy map. Refer to [Figure 9.6](#)



**Figure 9.3 : “Current State”**

## 9.2 CURRENT STATE

The current state of Cape Town Water Services is given in [Figure 9.3](#). From this it can be identified that there are major challenges that need to be overcome.

## 9.3 SUMMARY OF STRATEGIC ISSUES / CHALLENGES

There are a number of challenges facing Water Services, which could prevent it from meeting its vision. These are:

- Eradication of basic services backlog in a fast-track manner
- Successful implementation of Water Demand Management Strategy and achieving the targeted reduction
- Finding a balance between the unaffordable proposed stricter National standards for Wastewater effluent and the impact on the water quality of rivers and water bodies
- Standpipe greywater runoff quality
- Timely provision of infrastructure to meet development growth needs
- Maintenance of infrastructure to ensure continued operation
- High financial requirements
- Financial sustainability of the service and Cost recovery and debt management
- Service Affordability
- Increased performance
- Establishing a new institutional arrangement

The 2004 WSDP Review [GOTO 1.2 Web](#) or [GOTO 1.2](#) as well as the Financial Planning Study of 2005 [GOTO 8.3](#) has highlighted some specific issues.

## 9.4 VISION

### 9.4.1 National

The Strategic Framework for Water Services (September 2003) [GOTO 3.3](#) is a critical policy document setting out the vision, goals and targets as well as the approach to the provision of water services.

The Vision of the Strategic Framework is “Water is Life, Sanitation is dignity” which has implications as set out in [Figure 9.7](#) below.

#### **Figure 9.7 Sector Vision from the Strategic Framework for Water Services**

**Sector vision: Water is life, sanitation is dignity**

All people living in South Africa have access to adequate, safe, appropriate and affordable water and sanitation services, use water wisely and practise safe sanitation.

Water supply and sanitation services are provided by effective, efficient and sustainable institutions that are accountable and responsive to those whom they serve. Water services institutions reflect the cultural, gender and racial diversity in South Africa.

Water is used effectively, efficiently and sustainably in order to reduce poverty, improve human health and promote economic development. Water and wastewater are managed in an environmentally responsible and sustainable manner.

#### 9.4.2 City / IDP

The City's vision as set out in the IDP 2005/06 and 2006/07 is shown in [Figure 9.10](#)

**Figure 9.10 Vision for the City of Cape Town (IDP 0506 and 0607)**



#### 9.4.3 Water Services Vision

The Vision for Cape Town Water Services is aligned to the national and City vision:

**“To become leaders in the provision of equitable, sustainable, people-centred, affordable and credible water services to all”**

### 9.5 GOALS AND OBJECTIVES

#### 9.5.1 National

The goals and targets for Water Services in South Africa are set out in the Strategic Framework. For a comprehensive list of the goals refer to [GOTO Figure 9.8](#) and for a list of the targets refer to [GOTO Figure 9.9](#)

The most significant targets impacting Cape Town are:

- All people are to have access to functioning basic water supply by 2008
- All people are to have access to functioning basic sanitation by 2010
- Investment in water services infrastructure should total > 0,75% of GDP
- Institutional reform of regional water services providers to be completed by 2013.
- Annual reporting on key performance indicators

#### 9.5.2 City / IDP

The City's 2020 goals are set out below:

##### The City's 2020 Goals

- 100% improvement in key human development indicators
- <5% of population in informal settlements
- Universal access to basic services

- Levels of violent crime reduced by 90%
- Water use and waste production down 30%
- Access to safe green space within walking distance
- Renewable energy share equal to 10% of energy consumed
- Average real per capita income doubled while reducing inequality
- Unemployment <8%
- <5% population illiterate

Water Services have contributed input to and comment on the Draft IDP 2006/2007 ([GOTO 1.6](#)), to ensure that its issues are incorporated in the Corporate Plan and also that its own Strategic Plans are in alignment.

#### *The City's Strategic Framework*

In support of the vision and goals, five themes focused on socio-economic development and improved service delivery are set out below:

- Integrated Human Settlement
- Economic Growth and Job Creation
- Access and Mobility
- Building Strong Communities
- Equitable and Effective Service Delivery

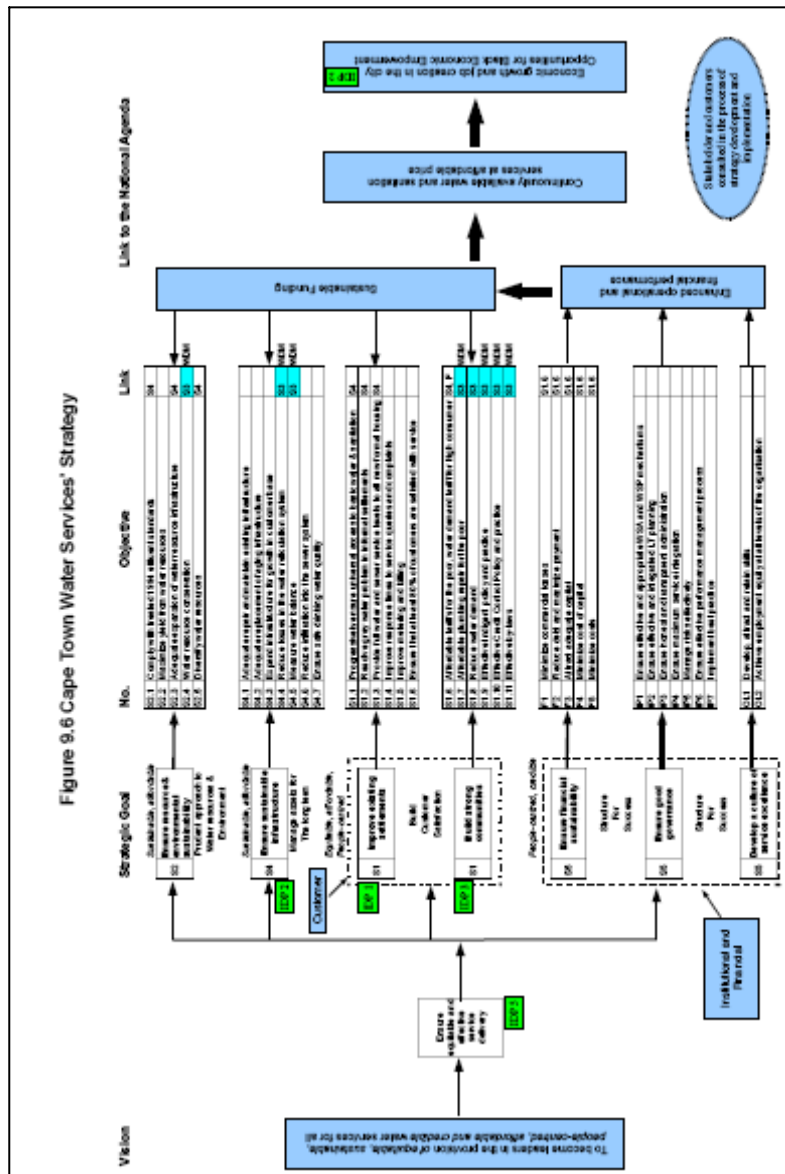
#### 9.5.3 Water Services Strategic Goals

- **EQUITABLE**
  - To ensure access to a basic water supply to all informal settlements is ensured by 2008.
  - To ensure access to a basic sanitation service to at least 70% of all informal settlements by 2010.
- **AFFORDABLE**
  - To establish fair tariff that ensures all residents have access to basic water and sanitation services, including indigent households.
  - To ensure that tariffs are fair and in line with comparable organisations and cities.
- **PEOPLE-CENTRED**
  - To ensure that we reach 80% satisfaction of all customers with the provision of basic water services annually.
  - To create an environment that develops and utilises the skills, competencies and innovation potential of all employees are developed and utilised to meet the objectives of the organisation.
  - To create an enabling environment that ensures devolvement of meaningful relationships with all stakeholders.
- **CREDIBLE**
  - To ensure the implementation of international best management practices in the provision of water services.
  - To become the organisation as the preferred water services institution for all customers.
- **SUSTAINABLE**
  - To ensure the availability and reliability of water resources at all times.

- To ensure the supply of safe drinking water that meets quality standards at all times.
- To ensure the protection of the environment and that 90% of treated effluent is in compliance with current (1984) DWAF standards by 2010.

### 9.6 STRATEGY MAP

The above strategic goals and objectives are incorporated into the Strategy Map in [Figure 9.6](#). This Strategy Map shows the link to the IDP Strategic Framework.



The goals in the IDP 2005/06 that are set for achieving by 2020 and that are applicable to Water Services are:

- Universal access to basic services. Current levels are 96% of households to water and 91% to sanitation.
- Water use down by 20% on the unconstrained projected demand by 2010.

Water Services contribute to 4 of 5 of the City's strategic themes:

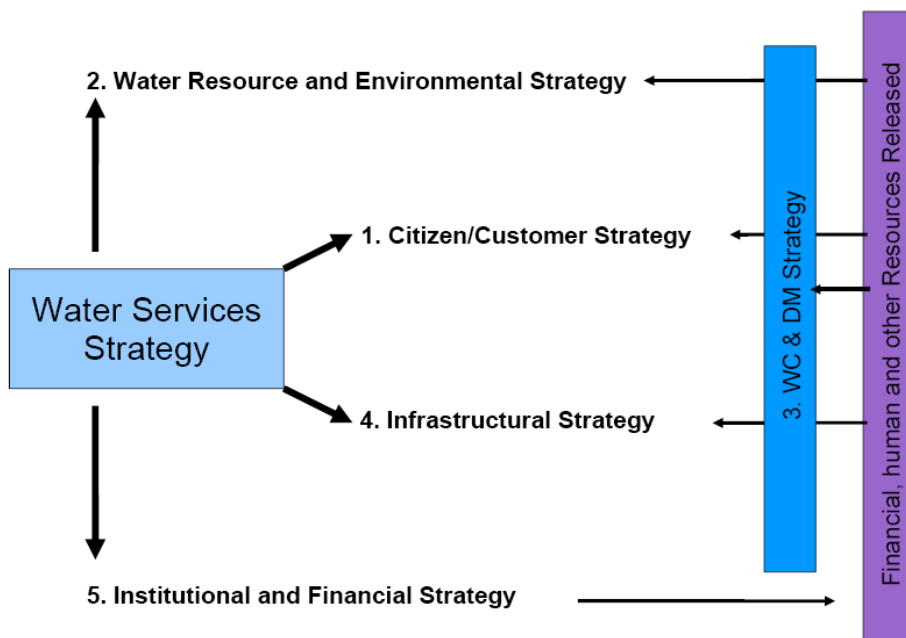
- Theme 1 : Integrated human settlement
  - Area-based urban-renewal projects such as the N2 gateway will reduce the number of informal households which are difficult to service cost-effectively to more than basic or rudimentary level.
  - Increasing service provision to new or upgraded low-income household areas. City aims to upgrade all informal settlements within next 10 years.
  - Improving settlement planning includes optimizing regional infrastructure capacity to meet the need for water services.
  - Combining development of the urban core to higher density with decentralized industrial and commercial development close to existing settlements, does mean that infrastructure have to be provided and upgraded throughout the City.
  
- Theme 2 : Economic growth and job creation
  - The City is committed to making use of the Expanded public works programme in the provision of infrastructure, in order to create employment and build skills.
  - Supporting economic urban developments by the timeous and assured provision of bulk infrastructure through partnerships with the private sector developer as well as own funding of regional infrastructure.
  
- Theme 3 : Access and Mobility
  - Not applicable
  
- Theme 4 : Building strong communities
  - Targeted social support by way of the Indigent Tariff policy (6 000 litres free water and 4 200 litres free sanitation removal per month to all households).
  - The stepped tariff encourages the user to manage his service account by saving water.
  - Provision of sanitation services helps to prevent the spread of water-borne diseases.
  
- Theme 5 : Equitable and effective service delivery
  - Underpinning all social and economic development is the need for the extension and maintenance of the services infrastructure required.
  - Managing water supply and demand to meet future need:
    - ❖ Cape Town is a water-scarce region with the recent drought highlighting the need to implement strategies to increase water supply and reduce consumption.
    - ❖ A new Water Demand Management Strategy has been developed in conjunction with DWAF, aiming to achieve a continual reduction in the projected consumption. Apart from increasing water-saving awareness, the eradication of inefficient fittings, leak reduction and increased use of treated effluent for irrigation and industry is being pursued.
    - ❖ The large Berg River Project is being built by DWAF and paid for by the City and will be commissioned by 2007, to provide an acceptable assurance of supply for at least another six years.
    - ❖ Additional water sources are being investigated, such as deep ground-water extraction from the large area Table Mountain Group Aquifer and the desalination of sea water.
    - ❖ Pipelines, reservoirs and treatment plants have to be maintained on an ongoing basis to prevent service interruptions and failure due to ageing infrastructure. There is a large backlog in this area due to funding constraints in the past.

- ❖ The upgrading and provision of new infrastructure to meet urban growth is also proving to be a financial challenge. A new reservoir and treatment plant is needed for development of the northern and west coast areas.
- Managing wastewater treatment
  - ❖ The upgrading and expansion of wastewater treatment capacity and bulk sewerage conveyance is needed to meet development pressures. Projects include work on Athlone, Potsdam, Borchers Quarry and Zandvliet WWTWs. A new works is needed in the Fisantekraal area to the north.
  - ❖ Financial analysis has shown that conventional funding is insufficient to address the infrastructural needs demanded by city growth.
  - ❖ The standards of treated effluent discharged into rivers and streams are proving difficult to maintain due to the funding constraints. This has an environmental impact on river health and that of people coming into contact with the water.

## 9.7 WATER SERVICES STRATEGY

The key to addressing the challenges that Cape Town Water Services face and achieving Water Services' vision and goals is to ensure that Water Services is structured financially and institutionally to achieve enhanced operational and financial performance. The foundation of the Water Services Strategy is therefore to effectively separate the Authority and Provider roles and to structure the provider (Financial and Institutional Strategy) in a way that achieves this. This will result in sustainable funding and sustainable institutional mechanisms to ensure that the other strategies, namely Customer, Water Resource and Environment, Infrastructure and Water Conservation and Demand Management can be optimised.

The strategy is shown diagrammatically in [Figure 9.5](#) below:



**Figure 9.5 Water Services Strategy**

The key indicators as to whether the service is effectively structured will be determined by whether it is enabled to achieve the above and whether it is able to

- attract adequate loan capital,
- attract this capital at competitive rates,
- source adequate government funding (MIG),

- deal effectively with the equitable share allocations,
- reduce costs over time,
- attract, develop and retain skilled staff,
- integrate with other council services,
- plan effectively for the long

#### 9.7.1 Strategy 1 : Customer : Build Customer Satisfaction

The strategy will ensure that the majority of customers are satisfied with the service.

##### 9.7.1.1 Levels of Service

###### Basic and Emergency Level of service

Emergency and Basic levels of service are described in Section 3.3 and listed in Table 3.3. The current coverage of basic services is given in Table 3.4. Basic and emergency level services are provided free to households in informal settlements until such time that they can be accommodated in formal housing in accordance with the City's housing programme.

The strategy has been, and still is to provide a very basic (emergency) level of service as quickly as possible to about 95% of the approximately 195 informal settlements. The emergency service is below the basic level of service in terms of distance from household or household ratios/service point.

The City prescribes to "the water ladder" concept (as proposed in DWAF's "Strategic Framework for Water Services, September 2003"). So while the City's priority is to first provide an emergency level of service to all households in all settlements, it is also extending the coverage and density of services to the basic level.

Upgrading on an annual basis for informal areas on developable land is proceeding as funds are obtained. The estimated cost for upgrading informal settlements to a basic level of service and to provide for the influx is given in Table 9.1a below;

**Table 9.1a Informal Settlements: Backlog Costing**

	<b>WATER (Rands)</b>	<b>SANITATION (Rands)</b>
<b><u>BACKLOG</u></b>		
Informal households without basic services	30 000	70 000
Standard of service (hh/service)	25	5
No of services needed (standpipes and toilets)	1 200	14 000
Unit cost of service provision	R 1 500	R 4 000
Total cost of service provision	R 1 800 000	R 56 000 000
Years to provide	2	5
Total annual cost of service provision	<b>R 900 000</b>	<b>R 11 200 000</b>
<b><u>INFLUX</u></b>		
Influx informal households/annum	15 000	15 000
No of services needed/annum	600	3 000
Total cost of service provision/annum	<b>R 900 000</b>	<b>R 12,000 000</b>

A programme to eradicate the backlogs and keep up with the influx is outlined in outlined in Table 9.1b below:

	05/06	06/07	07/08	08/9	09/10	10/11	11/12	12/13	13/14	14/15
Water backlog eradication (2 yrs)	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sanitation backlog eradication (5 yrs)	11.2	11.2	11.2	11.2	11.2	0.0	0.0	0.0	0.0	0.0
Water influx sustain	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Sanitation influx sustain	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
<b>TOTAL</b>	<b>25.0</b>	<b>25.0</b>	<b>24.1</b>	<b>24.1</b>	<b>24.1</b>	<b>12.9</b>	<b>12.9</b>	<b>12.9</b>	<b>12.9</b>	<b>12.9</b>

Conveyance of grey water, which has been a problem in informal settlements, is receiving attention for health and amenity reasons through a pilot project which, if successful, will be rolled out to other informal settlements.

#### Full Level of Service

The full level of service applies to formal households and is described in Section 3.3.

#### Eradicating the Housing Backlog

The ultimate aim is to provide all customers living in informal settlements and backyard shacks with a full level of service on a formal site. This is however dependent on the City's housing programme.

The N2 Gateway ([GOTO 9.5](#)) is an example of the City's housing programme. The 2001 Census figures indicated that a significant number of un-serviced erven are located along the N2 corridor near the Cape Town International Airport. This project is set to accommodate all these residents in new housing developments targeted for completion by end June 2006.

For an extract from the draft 2006/07 IDP that gives the housing project targets for the next 5 years [GOTO 9.6](#).

The cost to eradicate the backlog is given in Table 9.2a below. [GOTO 9.1](#) for the spreadsheet calculations.

	Amount( in R)
<b><u>BACKLOG</u></b>	
Informal households	115,000
Backyard dwellers, others	150,000
Total backlog	260,000
Unit cost of service provision, water and sanitation	R 10 000
Total cost of service provision, water and sanitation/annum	R 2 600 000 000
Years to provide	20
Total annual cost of service provision	<b>R 130 000 000</b>
<b><u>INFLUX</u></b>	
No of houses needed/annum	15 000
Total cost of service provision, water and	<b>R 150 000 000</b>

<b>TABLE 9.2a – SERVICING HOUSING DEVELOPMENTS</b>	
<b>Amount( in R)</b>	
sanitation/annum	

A possible programme to eradicate the backlog of the full level of service for water and sanitation over a 20 year period is given in Table 9.2b below:

<b>TABLE 9.2b : POSSIBLE HOUSING DEVELOPMENT PROGRAMME (Costs on R mil)</b>										
	05/06	06/07	07/08	08/9	09/10	10/11	11/12	12/13	13/14	14/15
Water and sanitation backlog eradication (20 yrs)	130	130	130	130	130	130	130	130	130	130
Water and sanitation influx sustain	150	150	150	150	150	150	150	150	150	150
<b>TOTAL</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>

This programme would be funded through the City's housing programme. Depending on the speed of implementing this programme, the informal settlement programme would be changed to align the two.

#### Free Basic Services

Due to the financial constraints, it is proposed that free basic water and sanitation only be provided for in informal settlements and for indigents in formal housing.

#### Issues to be resolved

Septic Tank removal programme – this will be discussed in a later version of this report.

Backyard dwellers – issue of free basic water and sewer will be investigated

Farm dwellers – will investigate water and sanitation on farms

#### 9.7.1.2 Quality of Service

Water Services is committed to providing efficient, uninterrupted and affordable services, which are clean and safe to all consumers.

Customer satisfaction on the quality of service will be achieved by “over-delivering” on the Customer Charter. [Figure 3.7](#) The standards will be set at a level that can be achieved within a reasonable period of time and at least at the minimum level expected. This will achieve the goal of under-promising and over-delivering – a key ingredient to achieving customer satisfaction.

Knowledge of water services customer will be progressively improved over time to ensure an increasing level of customer satisfaction. As customer satisfaction is improved it is likely that their response to reducing their water demands, their willingness to pay, etc will improve.

There are ten key strategic issues on which a sound Customer and Meter Management System is based:

- Effective Processes
- Customer Surveys
- Affordable tariffs
- An Effective Debt Management Process

- Meter Verification and Meter Accuracy
- Meter Management and Billing
- Meter Reading
- Technical Operation Centre (24hr Emergency Service)
- Corporate Call Centre
- Customer Interaction and Communication

### Effective Processes

Water Services plans to extend the implementation of the ISO 9001 Quality Management System throughout Water Services now that the new organisation structure is being populated. Refer to Section 9.7.5 b.

### Customer Charter and Surveys

The Customer Charter (refer to [Figure 3.7a](#)) introduced during 2001 as part of the ISO 9001 process, will be updated during 2006.

Since 2002, Water Services has been commissioning research on an annual basis, to discover what the needs and perceptions of the consumers of water are.

The findings from the research are being used:

- as input to the ISO 9001:2000 certification auditing, helping to ensure that an acceptable level of service satisfaction is achieved and maintained
- to uncover needs not currently being addressed, especially informal areas
- to uncover needs among specific groups, such as business and commerce
- to prepare input for updating the Water Services Customer Charter
- to measure the level of satisfaction with the service

Information is being gathered from a range of users in the CCT by a professional market research consultant. Samples taken are statistically representative of all the users, which implies that the findings are taken seriously.

The following issues are addressed:

- Perception of services received: drinking water, effluent water or sewer (sanitation) drainage
- Evaluation of services rendered when reporting problems or enquiring about water services
- Awareness of environmental initiatives, including water conservation or restrictions
- Effectiveness of marketing drives such as around Water Week
- Issues relating to payment and billing procedures for services
- Importance rating and evaluation of services supplied
- Demographics of the market

Presentations on all the findings are given on the Cape Town website [GOTO 3.9 Web](#) or for the latest 2004 findings, the PDF document [GOTO 3.9](#).

### Affordable Tariffs

Refer to 9.7.1c – Service Affordability

### Debt Management Process

The main objective of the policy is to promote a culture of good payment habits and instil a sense of responsibility towards the payment of Water Services and reducing debt. It is reliant on effective and enforceable Indigent and Credit Control Policies. The Integrated Water Leaks Project will ensure that poor and indigent household's

monthly consumption is brought to affordable levels and that ongoing plumbing repairs are affordable.

#### Meter Verification and Meter Accuracy

The CCT is committed to ensure through its accredited Meter Verification Laboratory that each metered customer has the right and recourse to challenge the accuracy of its meter through a process as provided for in terms of the Trade Metrology Act and the SABS 1529-1:2003.

#### Meter Management and Billing

The CCT is committed to reading and billing all consumers monthly and has provided a line of communication for customers to lodge any queries in respect of their accounts through the Corporate Call Centre. Water Services deal with the management of the water meter, its accuracy and the preparation of the customers account before invoicing by the Corporate Finance Directorate.

#### Meter Reading

The CCT currently reads approximately 87% of 588 000 water meters and 86 000 electricity meters monthly, while approximately 13% are estimated. There are major advantages to the customer in a read versus an estimated meter reading. Water Services has implemented a project and set a target to read 95% of the meters and reduce the number of estimates to 5% by 2010.

There is concern that meter readings are not always done especially on poor communities. Meter reading quality checks will therefore be instituted by 1 July 2006.

#### Technical Operation Centre (24hr Emergency Service)

During 2004, Water Services set up a centralised Technical Operation Centre (Tel. 086 010 3054) to respond to all technical complaints and enquiries such as:

- Burst, leaking and damaged water and mains/leadings and meters
- Water taste and discoloration problems
- Low water pressure or interrupted supply
- Water restriction contravention reporting or advice

As part of the ISO process, reactionary processes in the different districts are currently being standardised, on the basis of different levels of response urgency.

Water restrictions are policed and monitored by Water Officers who not only respond to complaints but also pro-actively investigate suburbs where water wastage is detected.

#### Corporate Call Centre

A Corporate Call Centre (Tel 086 010 3089, Fax 086 010 3090, e-mail [accounts@Cape\\_Town.gov.za](mailto:accounts@Cape_Town.gov.za)) has been established by the City, which receives most complaints and requests, also those in respect of water account queries. Any technical complaints or others related to water that cannot be dealt with by the Corporate Call Centre, is forwarded via an electronic notification to the Technical Operation Centre for action.

#### Customer Interaction

The public is engaged and educated in the awareness of Water Conservation, Water Pollution and Water Demand Management. The broad-impact of citizen queries and correspondence as well as matters that are logged at the Corporate Call Centre but which require specialist investigations are dealt with.

Customer education, communication and liaison is a key strategic issue and is afforded a high priority in the new organizational structure of Water Services.

Poor communities will be a special focus area due to the more complex nature of delivery (plumbing leaks, inferior plumbing, inferior infrastructure, access to services such as telephones etc).

#### 9.7.1.3 Service Affordability

The lower steps of the water and sewer tariffs, and the zero fixed charge and R20 grant for property values less than R100 000 are mechanisms to ensure that water and sanitation is affordable to the poor and indigent. Under conditions of no plumbing leaks, they would consume a relatively low quantity of water. The Integrated Leaks Project is a major initiative to ensure that these household plumbing leaks are minimized and therefore that the cost of these services is affordable for them.

The water conservation and demand management strategy, besides being necessary due to the Western Cape being a water scarce region, will also reduce the cost of the service in the long term by postponing new resource and bulk infrastructure schemes. Reductions in water consumption in the higher steps will result in the need for upward adjustments in the tariff steps but on their own will not result in an increase in the average water and sewer bill to the consumer.

In terms of the asset management strategy as part of the Infrastructure Strategy there will be increased costs and therefore tariffs in the short term but the strategy will ensure service affordability in the long term.

The Financial and Institutional Strategy should result in reduce costs for running the organisation.

### 9.7.2 Strategy 2 : Conservative Approach to Water Resources and the Environment

#### 9.7.2.1 Water Resources

To reduce over-exposure to climate change and the potential decrease in system yield due to environmental reserve requirements, the strategy is to diversify water resources to lessen the dependence on surface water schemes. Schemes to be pursued under this strategy are Table Mountain Group Aquifer, other ground water schemes, desalination, and treated wastewater effluent re-use.

As part of this diversification strategy the City will strengthen its partnership with Department of Water Affairs and Forestry in the process of reviewing and updating the Western Cape Systems Analysis ("Reconciliation" Study)

#### 9.7.2.2 Environment

In partnership with DWAF, alien vegetation will continue to be removed from the dam catchment areas.

The upgrading of and the operational improvement programme (see Infrastructure Strategy) for the wastewater treatment plants (WWTPs) and the introduction of the

Environmental Management System (EMS) for each WWTP will ensure that the current impact on the environment is reduced over time.

Water Services will ensure that 90% of treated effluent is in compliance with current DWAF standards (1984 standards) by 2010 and will work in partnership with DWAF to ensure this.

### 9.7.3 Strategy 3 : Sustainable Water Demand

A comprehensive Water Conservation and Demand Management Strategy ([GOTO 4.11](#)) with detailed programmes and budgets has been developed. This has been summarised into a Ten-Point Plan. As mentioned previously, the WC and DM Strategy cuts across the other four strategies as outlined in Table 9.3 below:

**Table 9.3 Alignment of 10 Point Plan with other Water Services' Strategies**

	<b>10 Point Plan</b>	<b>WS Strategy</b>
1	Reduce Network and Commercial Losses	Institutional and Financial - Strategy 5 and Infrastructure – Strategy 2
2	Reduce low-income household leaks	Customer - Strategy 1
3	Reduce Council consumption Losses	Institutional and Financial - Strategy 5
4	Ensure equitable tariffs	Customer - Strategy 1
5	Control water wastage through by-laws and ensure that all new developments are water-wise	Customer - Strategy 1
6	Promote retrofitting and capacity-building programmes	Customer - Strategy 1
7	Communicate, educate and provide Informative Billing	Customer - Strategy 1
8	Promote alternative technologies and launch water-saving campaigns	Customer - Strategy 1
9	Conserve CCT's water supply	Water Resources and the Environment – Strategy 4
10	Create an enabling environment for long term effective WC/WDM	Institutional and Financial - Strategy 5

In terms of each of the four Water Services Strategies:

- Institutional and Financial (Strategy 5): The City and Water Services will lead by example by reducing its demand and will commit the necessary financial and human resources to achieve the water conservation and water demand reduction objectives (Points 3 and 10). Commercial losses will be reduced through a comprehensive meter management programme (Point 1).
- Customer (Strategy 1): Customers will be encouraged to reduce their water demand. The mechanisms currently being used will be enhanced:
  - education and communication campaigns – Point 7,
  - five-step tariff – Point 4, and
  - special projects in poor communities – Point 2

Programmes to be introduced:

- retrofit programmes (Point 6),
- water conservation measures in the Water By-laws (Point 5), and
- informative billing (Point 7)

The education and communication campaigns encourage the wise use of water, retrofitting with water wise fittings and the use of alternative water resources such as grey water and borehole water (Point 8).

- Infrastructure (Strategy 2): The Water Leakage Detection and Reduction and the Pipe Network Replacement Programmes in the Reticulation systems will be enhanced. (Point 1)
- Water Resources and the Environment (Strategy 4): In partnership with DWAF, alien vegetation will continue to be removed from the dam catchment areas. The upgrading of and the operational improvement programme for the wastewater treatment plants will ensure that the current impact on the environment is reduced over time. (Point 9)

#### 9.7.4 Strategy 4: Infrastructure : Manage Assets for Life

Water Services is an asset (Infrastructure and other assets) intense business. Assets are therefore a major cost driver.

##### 9.7.4.1 Existing Infrastructure

The Strategic Municipal Asset Management Programme is based on asset management principles and the requirements of asset management, and utilizes PRAGMA's asset management improvement programme (AMiP).

The Strategic Municipal Asset Management Plan [AMP] encompasses stages one, two and three, listed below and forms the basis of a Basic Asset Management Plan [BAMP]. The implementation of stages 4, 5, and 6, will form the basis of a further project dependent upon the satisfactory progress of this project.

Stage 1:	Improvement Strategy Development
Stage 2:	Basic Asset Register
Stage 3:	Basic Asset Management
Stage 4:	Improved Maintenance Management
Stage 5:	Introduce Advanced Asset Management Techniques
Stage 6:	System Optimization

The programme will continue to be facilitated through the asset care centre (ACC)<sup>1</sup> [Footer](#) and managed through a bureau arrangement with asset performance management specialist PRAGMA Africa. Water Services has extended PRAGMA's services to September 2006 to allow for a skills transfer process to train municipal staff to take over the ACC function.

Maintenance Tactics for the Wastewater sites have been developed and implemented into SAP PM. They are under development for Bulk Water and will be completed early in the new year. A project has been undertaken to address the shortfalls in the SAP PM Master data. The project will update the SAP PM Master data with condition of the asset, remaining life, estimate replacement cost and attribute data (name plate information). This will be used to determine CAPEX replacement program for by updating the WADMS.

In terms of stage 2 "Basic Asset Register" [GOTO 5.6](#) for the latest information on "Asset Databases in Water Services – their State and Condition from an Infrastructure Asset Management Perspective."

The implementation of the ACC has been extended to cover all the Wastewater Department and the Bulk Water Department sites. Reticulation will be incorporated during 2006.

The replacement value of the Infrastructure assets is given in [Table 5.1](#). From this table it can be seen that the water and sewer reticulation network make up R12.2 (approximately 70%) of the total R17.5 billion replacement value. In terms of minimizing the long term costs of owning the assets, therefore, the replacement programme for these networks is very significant.

Therefore condition records of the networks will be dramatically improved. Meticulous records of burst mains and blockages, on a Metro basis, will be introduced and maintained. Burst main and blockage incidents are proposed to be reported under the following topics:

- Street address of burst locality including locality sketch
- GIS code/SAP Asset Code
- Pipe details (size, type, lining, sheathing etc.)
- Ground conditions
- Details of fracture/blockage

From these records, investigations and tools such a CCTV cameras for sewer pipes, a comprehensive pipe replacement programme will be developed.

#### 9.7.4.2 New Infrastructure

Lead times for planning bulk infrastructure is up to 7 years. It is therefore critical that the growth (including the areas that the growth is taking place) in water demand and wastewater production is well forecast. Effective integrated planning with other departments is therefore critical. It is also critical that projects approval be obtained to ensure that the project does not “stop and start”.

In order to improve integrated masterplanning a Bureau arrangement, similar to that in Blaauwberg will be investigated and, if feasible, will be implemented.

The partnership approach with developers will be continued. Development contributions from the developers are determined and agreed on for each Development Node or Corridor and which funds can be used to provide the required infrastructure. This will ensure that development can continue. An outstanding issue that needs to be resolved is bridging finance as the funds are not all made available to the City upfront.

#### 9.7.5 Strategy 5 : Structure for Success

##### 9.7.5.1 Financial

The Financial report from Palmer Development group is still in draft form (Draft 2 - dated 17 November 2005). The financial strategy therefore still needs to be development. The report outlines “Strategic Issues and Choices” as detailed below:

- A sustainable capital programme must cater for three important elements simultaneously: (1) elimination of backlogs and provision for new demand (2) bulk expansion to cater for new demand, and (3) rehabilitation and replacement of existing infrastructure.
- An affordable long term capital expenditure programme appears to be in the region of R500 million per annum (smoothed over time),, though it is recognised that actual expenditure will be lumpy.

- At present there is an inadequate provision for depreciation of assets. This must change to ensure sustainability. Depreciation should encompass all assets, including grant funded assets and assets fully paid for.
- At present there is inadequate maintenance of infrastructure. Expenditure (and efficiency in spending) must increase significantly in real terms. It is not clear by how much without more detailed study.
- Adequate cash collections is critical to the business. This is not in the control of the business and failure to perform in this area could seriously jeopardise the business.
- In all of the scenarios modelled, there is a need to increase tariffs significantly in real terms to ensure sustainability.
- Much more attention needs to be given to the financial aspects of the business. This is a R1.5 billion per annum (or more) business. It needs dedicated attentions from a high level financial person adequately resourced with skilled staff such as cost accountants to improve the overall financial performance and efficiency of the business. Joburg Water, probably the best performance water services utility in the country have about 40 staff dedicated to the finances of the business with a senior Chief Financial Officer.
- The current tariff structure is in need of urgent reform. It is an inherently unstable tariff structure and places the water services business in potential financial jeopardy. See inter-city comparison of tariffs for more detail.
- Much more attention needs to be given to data integrity (see separate report produced during the long term water demand study for more detail).

#### 9.7.5.2 Institutional

##### *Institutional Arrangements and Mechanisms*

In order to bring into effect the national and City's strategic intent and the Council resolution of June 2004 (refer to Section 8.2.1), the necessary mechanisms need to be established. The process of separating the WSA and WSP should begin immediately with the view that a separate Water Services Authority and Water Services Provider can be fully operational by 1 July 2006. Information on the WSA and WSP and the regulatory Framework are contained in the Strategic Framework for Water Services September 2003. For an extract of the regulatory Framework [GOTO 9.7](#). For a document outlining the roles and definitions of the WSA and WSP [GOTO 9.8](#)

Accountability for the entire service will rest with the Director: Water Services who will then be expected to deliver on the city's strategic goals through a Service Provision Agreement (SPA) and a 3-year rolling business plan. This WSDP and annual updates thereof will form the basis for the 3-year rolling business plan.

The Water Services Provider will be set up in such a way to enable it to:

- attract adequate loan capital,
- attract this capital at competitive rates,
- source adequate government funding (MIG),
- deal effectively with the equitable share allocations,
- reduce costs over time,
- attract, develop and retain skilled staff,
- integrate with other council services,
- plan effectively for the long

The adequacy of the WSP arrangement will determine whether or not it can achieve these goals. Close monitoring is called for to determine whether or not other external mechanisms will have to be explored in the future. It is considered that achievement of these goals will ensure a solid foundation for achieving Water Services' Vision, overcoming its challenges and reaching the City's Strategic goals

### Organisational Structure

For the current macro Water Services' organisation structure in the context of that of the City, [GOTO 9.9](#)

### HR Strategy

The strategy is to attract, develop and retain the appropriate skilled staff:

- Develop and adopt appropriate systems and procedures to ensure fair, efficient and effective personnel strategies and administration, in line with all relevant legislation directives.
- Monitor, measure and evaluate the performance of the staff compliment, correcting where necessary.
- Establish a "Loss of skills minimization" programme
- Science and Technology
  - Establish Science and Technology mentorship and job shadowing programmes.
  - Science and Technology staff impact reduction programme.
  - Actively head hunt – Humanity Science and Technology students via Tertiary Educational Institutions, build partnerships to "groom" designated students for the Water Services sector, e.g. by job shadowing.
- Multi-skilling of staff
  - Multi-skill existing staff through learnerships and other Tertiary education.
  - Utilisation of a small Nucleus of well trained multi-skilled contract staff to supplement manpower resources.
- Examine HR policies and make changes appropriate to the Water Services Strategy.

### Business Process Improvement : ISO 9001:2000 and ISO 14001

To enhance the world class status of the water services unit, it is intended that all departments achieve ISO 9001:2000 accreditation. The Progress of each department is given below:

#### *Bulk Water Department*

In October 2003, Bulk Water were the first Bulk Water Services Provider in the country to obtain the ISO: 9001: 2000 accreditation. Continue.

#### *Wastewater Treatment Department*

Planning for the introduction of an Environmental Management System (EMS) based on ISO 14001 at Potsdam Wastewater Treatment Works commenced during 2002/03 and will be completed in xxxx when the upgrade and extensions are complete and the final effluent quality meets the license application conditions.

The plan is to roll the system out to three additional treatment works per annum until all works are included.

The implementation of ISO 9001:2000 will commence at all works during 2005/06.

#### *Reticulation Department*

The existing ISO Quality Management System certification at South Peninsula (SPA) Water Division is being maintained.

All Reticulation processes are currently being optimized by a working group who are also documenting it on the Intranet and on Sharepoint (the City's shared Document Management System).

It is planned to achieve certification by 1 July 2007.

#### *Asset Management Services*

During December 2004 the workshop was audited for ISO 9001 and at the same time pre-audited for ISO 14001 & 18001. During February 2005, ISO 9001 accreditation was achieved while 14001 & 18001 final audit took place in July 2005.

## **9.8 10 YEAR MASTER PLANS**

The 10 year master plan of capital requirements is made up of from those of the respective departments. The overall plan is shown in the Executive Summary.

For details of the following departmental financial plans as well as the overall plan [GOTO 9.3](#).

Asset replacement  
Bulk water  
Reticulation including Basic Services and Meter Management  
Support Services  
WDM  
Wastewater treatment

## **9.9 THREE-YEAR ROLLING BUSINESS PLAN AND CAPITAL BUDGET**

The three-year rolling business plan, a requirement of the Service Provision Agreement between the Water Services Authority (WSA) and the Water Services Provider (WSP), will be developed and implemented with effect from 1 July 2006 in line with the effective date for the fully functioning WSA and WSP.

This plan will contain a three-year operating and capital development plan for each of the five strategies. It will be based on this WSDP and will be updated annually, similar to the WSDP, to take into account changing circumstances.

The key indicators which indicate whether or not the service is correctly structured will be closely monitored.

The 2005/06 three-year capital budget as approved and extracted from the SAP Management Information System is shown in Table 9.4 and [GOTO 9.4](#). This will be updated during the 2006/07 budgeting cycle which forms part of this WSDP process.

### **Table 9.4 Three year capital plan**

**WATER SERVICES - CAPITAL BUDGET 2005/06 – 3-YEAR PLAN WATER SERVICES - CAPITAL BUDGET - 2005/2006 – TABLE 9.4**

DEPARTMENT	PROJECT (WBS ELEMENT) DESCRIPTION	2005/2006	2006/2007	2007/2008	Future Years	Fund Source	Geographic Location	Investment Profile
HR MANAGEMENT SERVICES	& N2 Gateway Project (Delft sewer and Zandvliet WWTW)	43,860,000	500,000	0	0	1 EFF	Multi Ward	Infrastructure Assets
HR MANAGEMENT SERVICES	& N2 Gateway Project (Delft sewer and Zandvliet WWTW)	167,783,000	3,813,000	0	0	4 MIG		Infrastructure Assets
HR MANAGEMENT SERVICES	& IT Equipment Replacement	1,500,000	1,500,000	1,750,000	6,000,000	3 AFF: Water	Multi Ward	Other Assets
BULK WATER	Atlantis - Administrative building upgrade and refurbish	800,000	160,000	0	0	1 EFF	Atlantis	Other Assets
BULK WATER	Bulk Water Infrastructure Upgrade	150,000	0	0	0	1 EFF	Multi Ward	Infrastructure Assets
BULK WATER	Servitudes – Payment for usage/property rights linked to Water Infrastructure Upgrades	100,000	100,000	100,000	200,000	1 EFF	Multi Ward	Other Assets
BULK WATER	Atlantis: Witzands & Hospital reservoir	10,000	0	0	0	1 EFF	Atlantis	Infrastructure Assets
BULK WATER	Atlantis : Rehabilitation of Silwerstroomstrand	50,000	0	0	0	1 EFF	Atlantis	Infrastructure Assets
BULK WATER	Cathodic protection equipment Faure	50,000	0	0	0	1 EFF	Multi Ward	Infrastructure Assets
BULK WATER	Bulk Water Infrastructure Replace/Refurbishment	2,000,000	3,162,155	7,000,000	0	1 EFF	Multi Ward	Infrastructure Assets
BULK WATER	Extension of Bulk Water Pipeline	650,000	735,000	240,000	0	1 EFF	Multi Ward	Infrastructure Assets
BULK WATER	Brooklands WTP: access road upgrade	100,000	0	0	0	1 EFF	Multi Ward	Other Assets
BULK WATER	Voëlvele : replace LLPS Pipeline	14,416,417	7,767,845	505,000	0	1 EFF	Multi Ward	Infrastructure Assets

BULK WATER	TMS Aquifer Deep Borehole	8,300,000	12,300,000	9,104,000	2,902,000	1 EFF	Multi Ward	Infrastructure Assets
BULK WATER	Infrastructure Replace/Refurbish BW	14,500,000	15,000,000	15,000,000	0	3 AFF: Water	Multi Ward	Infrastructure Assets
BULK WATER	Replacement of Plant & Equipment-BW	500,000	300,000	200,000	0	3 AFF: Water	Multi Ward	Other Assets
H/O: SUNDRY EMERGENCY REPAIRS	Infrastructure Replace/Refurbish – WWT	20,000,000	15,000,000	15,000,000	0	3 AFF: Sanitation	Multiward	Other Assets
ATHLONE WWTW	Athlone Wastewater Treatment Works	4,000,000	0	0	0	1 EFF	Athlone	Infrastructure Assets
BELLVILLE WWTW	Bellville Wastewater Treatment Works	1,000,000	3,500,000	10,500,000	71,750,000	1 EFF	Bellville South	Infrastructure Assets
BORCHERDS QUARRY WWTW	Borcherds Quarry Wastewater Treatment Works	1,500,000	1,700,000	0	13,000,000	1 EFF	Airport Industria	Infrastructure Assets
CAMPS BAY OUTFALL	Camps Bay Outfall	250,000	0	0	0	1 EFF	Camps Bay	Infrastructure Assets
CAPE FLATS WWTW	Cape Flats Wastewater Treatment Works	1,000,000	1,500,000	2,000,000	12,000,000	1 EFF	Zeekoevlei	Infrastructure Assets
GREEN POINT OUTFALL	Green Point Outfall	2,700,000	3,500,000	100,000	20,900,000	1 EFF	Green Point	Infrastructure Assets
KRAAIFONTEIN WWTW	Kraaifontein/Fisantekraal Wastewater Treatment Works	500,000	0	0	1,000,000	1 EFF	Kraaifontein	Infrastructure Assets
KRAAIFONTEIN WWTW	Kraaifontein/Fisantekraal Wastewater Treatment Works	3,000,000	0	0	0	4 PAWC - CMIP	Kraaifontein	Infrastructure Assets
MELKBOSSTRAND WWTW	Melkbos Wastewater Treatment Works	1,100,000	10,000,000	12,000,000	6,000,000	1 EFF	Melkbosstrand	Infrastructure Assets
MITCHELLS PLAIN WWTW	Mitchells Plain Wastewater Treatment Works	4,300,000	1,000,000	0	21,500,000	1 EFF	Mitchells Plain	Infrastructure Assets
POTSDAM WWTW	Potsdam Wastewater Treatment Works	40,000,000	45,000,000	27,000,000	6,000,000	1 EFF	Milnerton	Infrastructure Assets
POTSDAM WWTW	Potsdam Wastewater Treatment Works-MIG	10,194,400	0	0	0	4 MIG	Milnerton	Infrastructure Assets
SCOTTSDENE	Scottsdene Wastewater Treatment	1,500,000	1,300,000	3,000,000	32,000,000	1 EFF	Scottsdene	Infrastructure

WWTW	Works								Assets
WESFLEUR WWTW	Wesfleur Wastewater Treatment Works	350,000	0	0	9,000,000	1 EFF	Atlantis	Infrastructure Assets	
ZANDVLIET WWTW	Zandvliet Wastewater Treatment Works	1,500,000	0	0	52,500,000	1 EFF	Khayetlisha	Infrastructure Assets	
NEW NORTHERN WWTW	Fisantekraal Wastewater Treatment Works	3,000,000	2,000,000	0	0	1 EFF	Fisantekraal	Infrastructure Assets	
ELECTRICAL MAINTENANCE	Tools & Sundry Equipment	200,000	500,000	800,000	0	1 EFF	Multi Ward	Other Assets	
WATER FLEET SERVICES	Replacement of Vehicles	900,000	6,160,000	6,720,000	0	1 EFF	Multi Ward	Other Assets	
WATER FLEET SERVICES	Replacement of Plant & Equipment	250,000	2,500,000	4,000,000	0	1 EFF	Multi Ward	Other Assets	
WATER FLEET SERVICES	Replacement of Vehicles & Accessories	19,000,000	15,000,000	10,000,000	0	3 AFF: Water	Multi Ward	Other Assets	
MECHANICAL MAINTENANCE	Replacement of plant, tools & equipment	1,200,000	1,500,000	1,500,000	0	3 AFF: Water	Multi Ward	Other Assets	
MECHANICAL MAINTENANCE	Depot Rationalisation for transformation	3,000,000	3,500,000	4,000,000	0	3 AFF: Water	Bellville	Other Assets	
RETIC DISTRICT 3	Silvertown Bulk Water	829,638	0	0	0	4 MIG	Khayelitsha	Infrastructure Assets	
RETIC DISTRICT 4	The construction of a new reservoir midway between Somerset West and Sir Lowry's Pass village to balance water supply to the Sir Lowry's Pass Village area.	3,000,000	0	0	4,500,000	1 EFF	Somerset West/Gordon's Bay	Infrastructure Assets	
RETIC DISTRICT 4	Construction of new water main to service a new low cost housing project (200-300 erven) at the Somerset West 10Ha site.	226,900	0	0	0	4 MIG	Somerset West/Macassar	Infrastructure Assets	
RETIC DISTRICT 4	The construction of a new 300mm water main for the new High Risers under construction in the Beach Road corridor – Strand	2,500,000	3,700,000	0	0	3 BICL Water:Hel	Beach Rd - Strand	Infrastructure Assets	

RETIC DISTRICT 5	Flood Disaster Wallacedene- New water reticulation for Wallacedene development	1,960,000	1,800,000	0	0	4 MIG	Wallacedene	Infrastructure Assets
RETIC DISTRICT 5	~Protea Heights Water Sup New infrastructure to supply new development.	4,000,000	0	0	0	3 BICL Water:Oos	Protea Heights	Infrastructure Assets
RETIC DISTRICT 5	Design Aandrag Supply System	4,000,000	2,000,000	700,000	0	3 BICL Water:Oos	Multi Ward	Infrastructure Assets
RETIC DISTRICT 5	New Zevenwacht Heights Reservoir and Pumpstation	350,000	2,000,000	1,500,000	0	3 BICL Water:Oos	Multi ward	Infrastructure Assets
RETIC DISTRICT 6	Informal Settlement Proj – Standpipes	800,000	600,000	600,000	0	1 EFF	Melbosstrand/Atlantis area	Infrastructure Assets
RETIC DISTRICT 6	Informal Settlement Proj – Standpipes	50,000	300,000	200,000	0	4 STATE DEPT: DWAF	Melbosstrand/Atlantis area	Infrastructure Assets
RETIC DISTRICT 6	~Install New Infrastructure	2,000,000	2,000,000	2,000,000	0	3 BICL Water:Blg	Parklands	Infrastructure Assets
RETIC DISTRICT 6	Incremental Upgrade Areas – Standpipes	2,030,000	4,500,000	6,700,000	0	1 EFF	Melbosstrand/Atlantis area	Infrastructure Assets
RETIC DISTRICT 7	Brown's Farm Water	1,318,500	0	0	0	4 MIG	Phillippi	Other Assets
RETIC DISTRICT 9	Installation of New Infrastructure - Supply to Bellville North As per Masterplan	2,000,000	3,000,000	1,800,000	0	3 BICL Water:Tyg N	Bellville North	Infrastructure Assets
RETIC DISTRICT 9	Installation of New Infrastructure - Supply to Bellville North As per Masterplan	300,000	500,000	1,000,000	0	1 EFF	Bellville North	Infrastructure Assets
RETIC DISTRICT 10	Remove midblock water network-Bishop Lavis Phase 4	450,000	1,000,000	1,500,000	0	1 EFF	Bishop Lavis	Infrastructure Assets
RETIC PLAN & DESIGN (WATER)	Water Infrastructure - Master Planning	200,000	500,000	1,000,000	0	1 EFF	Multiward	Infrastructure Assets
RETIC PLAN & DESIGN (WATER)	Water Demand Management -	20,000,000	25,000,000	25,000,000	0	3 AFF: Water	Multiward	Infrastructure Assets
RETIC PLAN & DESIGN (WATER)	Replace & Upgrade Water Network	33,000,000	35,000,000	24,000,000	0	3 AFF: Water	Multi Ward	Infrastructure Assets
RETIC PLAN &	Upgrade & Replacement Watermeters	4,000,000	4,000,000	4,000,000	0	4 PRIVATE	Multiward	Infrastructure

DESIGN (WATER)						SECTOR FIN		Assets
RETIC PLAN & DESIGN (WATER)	Water Demand Management - Water saving devices and leak detection equipment	250,000	4,000,000	5,500,000	20,000,000	1 EFF	Multi ward	Infrastructure Assets
RETIC PLAN & DESIGN (WATER)	Informal Settlements Water (Incremental Upgrade)	540,000	300,000	200,000		0 4 MIG	Multi ward	Infrastructure Assets
RETIC DISTRICT 3	Silvertown Bulk Sewer	681,200	0	0		0 4 MIG	Khayelitsha	Infrastructure Assets
RETIC DISTRICT 3	Monwabisi Pumpstation-Sewer	1,000,000	0	0		0 1 EFF	Monwabisi	Infrastructure Assets
RETIC DISTRICT 4	Construction of new sewer pump station and sewer mains to service a new low cost housing project at the Somerset West 10Ha site.	378,350	0	0		0 4 MIG	Somerset West/Macassar	Infrastructure Assets
RETIC DISTRICT 4	The replacement of an existing sewer main along Beach Road - Strand. Existing pipe absolute due to sand infiltration and the current development of 15 High Rise Apartment blocks.	800,000	0	0		0 1 EFF	Beach Rd - Strand	Infrastructure Assets
RETIC DISTRICT 4	The rehabilitation of a concrete pipe line from Gant's to the Beach Road Corridor in Strand for the sewer outfall from Somerset Business Park, Sir Lowry's Pass, etc.	800,000	0	0		0 1 EFF	From Gant's Center to Beach Rd	Infrastructure Assets
RETIC DISTRICT 4	The construction of a new Main sewer for the Somerset West Business Park to serve developments under construction and the Sir Lowry's Pass community.	2,800,000	1,400,000	0		0 3 BICL Sewer:Hel	Between TR2 and Sir Lowry's Pass Rd	Infrastructure Assets
RETIC DISTRICT 5	Installation of New Sewer Infrastructure	1,500,000	1,000,000	1,000,000		0 3 BICL Sewer:Oos	Brackenfell/Scotts dene areas	Infrastructure Assets
RETIC DISTRICT 5	~Flood Disaster Wallacedene Sewer upgrade	500,000	476,000	0		0 4 MIG	Wallacedene	Infrastructure Assets

RETIC DISTRICT 6	~New Infrastructure:Sewage Parklands/Sunningdale Councils Share of costs	15,850,000	16,150,000	5,650,000	0	3 BICL Sewer:Blg	Parklands	Infrastructure Assets
RETIC DISTRICT 6	Melkbos Outfall - Parklands	1,000,000	1,000,000	800,000	0	1 EFF	Parklands	Infrastructure Assets
RETIC DISTRICT 6	Potsdam Outfall - Parklands	500,000	0	0	0	1 EFF	Parklands	Infrastructure Assets
RETIC DISTRICT 8	Brown's Farm Sewer	2,532,000	0	0	0	4 MIG	Brown's Farm	Infrastructure Assets
RETIC DISTRICT 9	Sewer Infrastructure - Master Planning	500,000	1,000,000	1,000,000	0	1 EFF	Multiward	Infrastructure Assets
RETIC DISTRICT 9	Installation of New Sewer Infrastructure	300,000	700,000	1,000,000	0	1 EFF	Durbanville	Infrastructure Assets
RETIC DISTRICT 10	Remove midblock sewer network- Bishop Lavis	500,000	1,500,000	2,500,000	0	1 EFF	Bishop Lavis	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	Replace & Upgrade Sewer Network	33,000,000	40,000,000	7,000,000	0	3 AFF: Sanitation	Multiward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	~Basic Sanitation: Informal Settlements	3,000,000	1,000,000	1,000,000	0	1 EFF	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	~Basic Sanitation: Informal Settlements	1,620,000	4,000,000	4,500,000	0	4 STATE DEPT: DWAF	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	New Sewer Line - Northern Area - Thornton	960,000	8,235,000	4,000,000	0	1 EFF	Athlone	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	Cape Flats Sewer System Upgrade sand and rag traps	960,000	5,000,000	4,000,000	0	1 EFF	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	D'urbanville Collectors Sewers	10,000,000	12,000,000	0	0	3 BICL SWater: Tyg N	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	Sanitation:Informal Settlements	3,140,000	6,300,000	9,500,000	0	1 EFF	Multi Ward	Other Assets
RETIC PLAN & DESIGN (SEWER)	Infomal Settlements Sanitation Project	9,144,000	5,000,000	5,500,000	0	4 MIG	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	Replace & Upgrade Sewer Pumpstations	10,000,000	10,000,000	0	0	3 AFF: Sanitation	Multi Ward	Infrastructure Assets

RETIC PLAN & DESIGN (SEWER)	Fisantekraal Main Sewer	5,000,000	24,000,000	13,000,000	0	3 BICL Sewer:Tyg N	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	Helderberg / AECI Macassar system	15,000,000	15,000,000	15,000,000	0	3 BICL Sewer:Hel	Multi Ward	Infrastructure Assets
RETIC PLAN & DESIGN (SEWER)	Bottelary Bulk Sewer System	3,000,000	20,000,000	12,000,000	250,000	3 BICL Sewer:Oos	Multi Ward	Infrastructure Assets
		583,484,405	422,959,000	293,669,000	279,502,000			

