



Water Services Development Plan

Chapter 8

Financial and Institutional Aspects of

City of Cape Town

Status: Comprehensive WSDP

www.capetown.gov.za/water/wsdp

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List of Abbreviations

AADD	Annual Average daily demand
AFU	Automatic Flushing Urinal
CCT	City of Cape Town
CFA	Cape Flats Aquifer
CMA	Cape Metropolitan Area
CMC	Cape Metropolitan Council
DM	Demand Management
DWAF	Department of Water Affairs and Forestry
EIA	Environmental Impact Assessment
GLS	Geustyn Loubser Streicher Inc
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
IMEP	Integrated Metropolitan Environmental Policy
IWRP	Integrated Water Resource Planning
MCDA	Multi-Criteria Decision Analysis
MNF	Minimum Night Flow
MLC	Metropolitan Local Council
PNE	Protected Natural Environment
PDG	Palmer Development Group
UAW	Unaccounted For Water
URV	Unit Reference Value
WC	Water Conservation
VIP	Ventilated Improved Pit Latrine
WDM	Water Demand Management
WSDP	Water Services Development Plan
WTW	Water Treatment Works
WWTW	Wastewater Treatment Works

Chapter 8

Financial and Institutional Aspects

8 Financial and Institutional Aspects

Refer to strategic financial analysis section for discussion of issues

8.1 Introduction

The City of Cape Town faces significant challenges to transform water and sanitation services into a world class water services provider which is customer friendly, efficient and sustainable. These challenges include:

- Formation of a single operational entity from seven different administrations
- Providing services to households living in informal settlements
- Undertaking a very significant capital investment programme
- Improving operational efficiencies
- Improving customer relations
- Improving revenue management
- Improving asset management

In a short space of time significant progress has been made, including:

- Successful implementation of free basic water for all
- Establishment of a customer charter
- A decision to form a ring-fenced business unit

Nevertheless much remains to be done. Progress to date and the challenges lying ahead are reported on in more detail below. In view of this context, the institutional and financial plan should be viewed more as a strategic document mapping the way ahead rather than a detailed plan with specific financial and tariff commitments. Until certain strategic decisions have been made and the accounting foundation for a new water services entity has been laid, it is not possible to make commitments in this plan to specific financial targets.

8.2 Institutional reform

Vision:

The vision of the City's Water Services Unit is to become a world class provider of quality and affordable water services whilst ensuring that water resources are conserved and managed for future generations.

Separation of service authority and service provider:

It is the intention of the city to separate the roles and responsibilities of the service authority and service provider more clearly as provided for in the Water Services Act (Act 108 of 1997). The details of this relationship still need to be worked out. This will form part of the organisational restructuring process reported on below.

It is likely that the service provider will have contract or "service delivery agreement" (SDA) with the Water Service Authority (WSA). The Water Service Development Plan (WSDP) will form a key basis for the development of this contract. The SDA will outline the level and quality of service to be provided to the community, the program for upgrading and extending the level of service to cater for growth, as well as plans to deal with key strategic issues that have been identified.

Section 78(1) assessment:

The City of Cape Town is in the process of restructuring as a result of the amalgamation of the previously separate administrations into one metropolitan council after the local government elections in December 2000. This restructuring provided the trigger to review service delivery arrangements for water in terms of Section 78 of the Municipal Systems Act (Act 32 of 2000).

An assessment carried out in terms of section 78 of the Municipal Systems Act indicated that "the best internal mechanism to achieve this vision is for the provider to be structured into an Autonomous Ring-fenced Business Unit." Consequently, the Executive Committee made a decision in November 2001 to establish an autonomous ring-fenced business unit by November 2002.

The Section 78(1) assessment further recommended that the water and sanitation services unit:

- increase its control over its inputs, including staffing and remuneration
- make itself more accountable for its outputs
- implement a performance management framework, including best-practice benchmarking
- develop a set of water and sanitation policies and strategies
- link the service strategies to the performance management framework
- become more customer focussed
- improve its business practices
- assume greater responsibility for billing and debt collection

Meaning of a ring-fenced business unit:

In the context of the proposed restructuring of water services, the concept in financial terms of a ring-fenced business unit is understood to mean the following:

- a separate chart of accounts
- clearly defined and separate cost and income centres
- clearly defined and substantiated cost allocations
- full operating income statement in compliance with GAMAP
- full asset register in compliance with GAMAP
- full responsibility for long term asset management
- full responsibility for income
- full responsibility for customer management

Allocation of support functions and shared service centres:

At present, support services (such as finance, billing, information technology and human resources) are rendered by other departments in the city administration. Although ring-fencing as defined above would seem to imply that all of these support services should now be housed within the ring-fenced unit, this is not necessarily the case. The water services unit will need to embark on a process of negotiation with the "corporate centre" as to the best arrangements for the city as a whole for the allocation of these support functions. One option which will be explored is that of a "shared service centre" which would provide core support functions to a number of trading services. In this scenario, service level agreements can be struck between the water service unit and the shared service centre (or any other agency - whether internal or external - providing a service to the unit). The motivation for a shared service centre is that this can achieve economies of scale and avoid possible duplication. The policies, strategies and details of these arrangements are being investigated by the city and it is too soon to report on likely outcomes from this process.

Area delivery model:

An area delivery model is being developed for the city as a whole. The relationship between this and a ring-fenced water services unit is still in the process of being defined.

Customer interface:

The respective roles of the ring-fenced water business unit vis-à-vis other trading services, a "shared service centre" and the "corporate centre" for the interface between the Council and citizens/customers are still in the process of being defined.

Current institutional arrangements:

At present, and until the institutional reforms are implemented, the structure of the water and wastewater department is as follows:

- A member of the Executive Committee is responsible for trading services (another member is responsible for finance).
- The Council has a portfolio committee for trading services and a separate portfolio committee for finance.
- An executive director for trading services has been appointed.
- There is an acting director for water services (a permanent appointment is to be made shortly).
- There are permanent, acting or interim managers for the following main functional area: bulk water, bulk wastewater, water and wastewater reticulation. The staff are operating within the previous administrations and the final organisational design and staff placements will be completed by 1 January 2003.

Current performance:

The Section 78(1) investigation included an assessment of current performance. For details of this assessment, refer to the report "Assessment of Internal Mechanisms for the Provision of Solid Waste, Water and Sanitation, and Electricity Services" (City of Cape Town, November 2001).

Principles of organisational design:

The intention is to have a 'flat' structure with a maximum of five reporting levels, with full delegation of authority and accountability to each cost centre manager who will be accountable for their outputs based on the resources allocated to them. In order to hold managers accountable for outputs, adequate management information is required. Progressive and considered implementation of the Enterprise Resource Planning (ERP) system and the setting up of a Water Information Bureau will support this initiative. Crucial to the success of the ERP system is the implementation of a maintenance management module which will, inter alia, enable managers to manage assets optimally, track expenditure against assets, compare the productivity of work teams, plan and balance resource allocation. The control over inputs and the measurement of outputs will lay the foundation for a solid performance management framework and system. It is anticipated that the balanced scorecard will be adopted by the Council and Water Services.

ISO 9002:

To enhance the world class status of the water services unit, it is the plan that bulk water and reticulation will achieve ISO 9002 accreditation by 30 June 2002 with the wastewater treatment plants following by 30 June 2003. As part of achieving accreditation, a Customer Charter has been developed and will be updated on an annual basis with input from the customers. Compliance with the Charter will be tracked through monitoring key outputs as well as by undertaking regular customer satisfaction surveys. The process to achieve accreditation involves business process mapping and re-engineering which is being linked to the ERP implementation. Extensive staff training in Competency Based Performance Management (CPM) and other training is being embarked upon and change interventions undertaken to ensure business processes are optimised. ISO audits will be done annually.

8.3 Financial planning in the context of uncertainty

The water services development plan has identified the capital expenditure requirements over the next five to ten years. Detailed financial modelling has been undertaken to ascertain the implications of this capital expenditure for the sustainability and viability of the service. Before reporting on the outcomes of this modelling, it is important to understand that any financing forecasts in the present context are subject to significant levels of uncertainty for the following reasons:

Data uncertainty:

There is considerable uncertainty related to the data requirements for financial modelling and forecasting in the following areas:

- The value of the assets. No comprehensive asset register exists and estimates of the condition and value of current assets are highly uncertain. This uncertainty affects the depreciation charge required with the introduction of *GAMAP*.
- True operating costs. The real costs of operating water and wastewater services are not known at this point in time. This situation exists because water services costs, particularly those of support services, are recorded in seven different accounting systems with different recharge systems in place. The true operating costs will only be known once the business has been ring-fenced and audited.
- Water sales for the base year. The volume of water sales for the base year (the current year) is uncertain as a result of the impact of water restrictions during the previous year (now lifted) and the complications arising from need to assemble billing data from seven municipal billing systems, making real time analysis of comprehensive city wide billing data difficult.

Policy uncertainty:

There is uncertainty in the policy arena in the following key areas:

- Sanitation tariff policy. There is uncertainty related to the way in which sanitation will be charged for in the future. At present, different charging methods are used in different areas in the city, the two methods being a combination of volumetric and fixed charges on the one hand and rates based charges on the other. A draft sanitation policy has been prepared which favours fixed charges combined with volumetric-based charges (in rather than rates funding and in accordance with national guidelines), however, a final policy decision on this must still be made.
- *GAMAP*. Generally Acceptable Municipal Accounting Practice (*GAMAP*) is due to be implemented in July 2003. At this stage there is uncertainty with respect to many of the detailed implications of the introduction of *GAMAP* as well as the practical issues of moving from the present system of municipal accounting to *GAMAP*. This uncertainty affects both the format and content of financial forecasting.

Institutional uncertainty:

The water services is in the process of fundamental transformation. Many of the broad issues related to this reform still need to be defined and strategies chosen. Key uncertainties relate to the future of support services and the management of the customer interface, including revenue collection and debt management.

8.4 Financial modelling – approach and outcomes

8.4.1 Approach to financial modelling

In view of the uncertainty identified above, a dual approach to financial modelling was adopted. The first approach was based on a “business as usual” approach, in which current practices are projected into the future. The second approach was based on a strategic approach to modelling, the key intention being for the modelling to help identify key strategic issues and choices faced by water services and to provide a tool to explore the financial implications of different choices. The base data and technical assumptions (such as the growth in water sales, for example) used in each model is the same and the models give similar results when converged to the same overall set of assumptions.

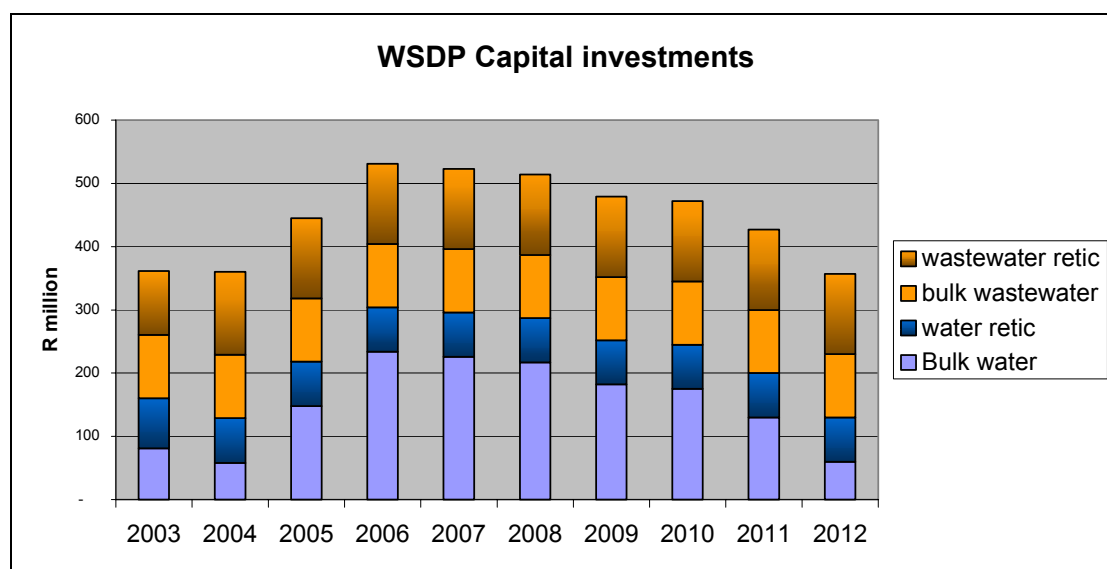
8.4.2 Capital expenditure

The capital expenditure current forecast is presented in Figure 8.1 below.

This compares to historical capital expenditure in the region of R250 million per annum. Hence a significant increase in capital commitments is expected in the future.

GOTO 2001/2002 Capital Budget for Water Services

Figure 8.1 Forecast capital expenditure (2001 Rands)



The strategic financial model highlighted the following issues:

Services to formal low-income housing:

The provision for formal low-income housing is modest, about 13 000 units per annum compared to a backlog of 240 000 units. The costs of the internal (neighbourhood) reticulation related to this housing provision is not provided for in the capital estimates shown at it is assumed that these costs will be financed through housing related subsidies. It is assumed that all households living in formal housing units have access to an adequate level of water and sanitation services.

Services to informal housing:

The Council is committed to providing services to all households within its municipal area subject to any relevant legal constraints. It is difficult to accurately estimate the cost of providing basic services to households living in informal settlements due to the fact that settlements are dynamic - some may not be permanent, some may move and the number of households living in informal settlements is likely to grow in future given the relatively low rate of provision of formal housing opportunities. At present it is estimated that there are 18 100 households without adequate water services and 53 100 households without adequate sanitation services. The cost of providing a very basic (RDP) standard of service to these households could be as little as R30 per household for water and R110 per household for sanitation. This would provide for a communal standpipe within 200m and communal waterborne sanitation facilities.

A three year programme to provide all existing households in informal settlements with a very basic RDP standard services would thus cost about R7 million. The City intends to put aside R5 million per annum to provide services to households living in informal settlements and aim to supply all existing households living in legalised informal settlements with adequate water services by the end of 2002 and with adequate sanitation services by the end of 2004. A more detailed programme is in the process of being developed. At this stage informal settlements situated on private land (unauthorised settlements) are precluded from being supplied with basic services.

Provision for renewals:

In order for the water and sanitation service to be sustainable over time it is necessary to implement an ongoing asset renewal programme. Available evidence suggests that the current asset renewal programme is inadequate. For example, it is estimated that at the current rate, it would take more than 300 years to replace the water pipe network. Clearly this is not sustainable given the assumption that the life of the water network is estimated to be about 50 years. The WSDP capital estimates do not include an asset renewal programme which would result in a sustainable service over time. This is an area that needs further investigation.

Bulk wastewater estimates:

The bulk wastewater capital estimates are largely based on a 1997 strategic review of the bulk wastewater network. A number of strategic issues have arisen subsequently and this work is in the process of being revised. One important area of investigation is the extent of stormwater infiltration and mechanisms to reduce this. Another important area of investigation is the estimated growth in treatment capacity required. This investigation is still in its early stages (it commenced in November 2001) and its outcomes may have important implications for future capital cost estimates for bulk wastewater.

8.4.3 Financing

Current cost of capital:

The current average cost of existing capital debt is estimated to be 15.5% per annum. This is a rough estimate as a consolidated portfolio of water and sanitation loans is not available for the city as a whole. Clearly this cost is very high relative to the market interest rates. One could expect the cost of borrowing for a well run and financially viable metropolitan water utility to be in the region of prime to prime less 2, that is, in the region of about 11% to 13%.

Gearing:

Total outstanding debt is estimated to be R1.2 billion. Assuming an asset value of R10 billion (revalued), then the debt to equity ratio is about 0.14. This indicates that the water services operation is considerably under-g geared at present and significant scope exists to raise loans to finance future capital spending.

Sources and cost of finance:

The ring-fencing of the water service operations creates an opportunity for the business to develop a new financing strategy. This strategy should comprise the following:

- Re-negotiation of outstanding loan conditions with the city to realise a more market-related interest rate.
- Raising loans from banks at competitive interest rates.
- Consideration of the placement of bond for the raising of finance.
- Consideration of private financing arrangements through, for example, build-operate-transfer contracts for lumpy investments such as new wastewater treatment plants. For first such an opportunity is being explored for the Zandvliet Wastewater Treatment Works.

8.4.4 Customer Debt

The outstanding customer debt for water is estimated to be about R460 million at present. This is equivalent to eight months of water sales. An estimate of the customer debt for wastewater is not available. Arguably, it is likely to be of a similar magnitude to the water debt. The water customer debt balance is increasing at a rate of about R50 million per annum.

If the rate of collection of wastewater rates and service charges is the same as that for water, then the average revenue collection rate is estimated to be about 90%. This is low compared to international best practise of 98% and African best-practice of 95%.

Improving revenue collection is of critical importance to the sustainability of water services. This will require a multi-pronged strategy comprising:

- Improved customer interface
- Customer education
- Improved billing (both simpler and more informative)
- Improved accessibility to payment facilities
- Affordable tariffs incorporating a pro-poor element (as currently provided for through free basic water)
- Improved credit control and debt collection

These strategies are integral to the restructuring process reported on above.

8.4.5 Provision for depreciation

GAMAP will require that assets are depreciated over their useful life and that the cost is included on the income statement. This could have a significant impact on the income statement. Assuming an asset value of R10 billion (the WSDP estimates a replacement cost of R16 billion) and a depreciation rate of 2% straight-line (in other words, the assets are "used up", on average, over 50 years), then the annual depreciation charge will be of the order of R200 million per annum.

8.4.6 Operating costs

The strategic financial model investigated future operating costs for water services (water and wastewater) in some detail. The following cost drivers were identified: staff, maintenance, bulk water purchases from DWAF, electricity, chemicals and "other expenses" (a grouping of the remaining expenses). One possible scenario for future costs is presented below. The costs are expressed as c/kl of water sold (in 2001 Rands) as well as in percentage terms. The results of the analysis should be regarded as indicative only given the uncertainty of the base data as already discussed above.

On the basis of this analysis the following comments may be made:

Overall operating costs (expressed as c/kl of water sold) are expected to increase in real terms in future, though not very significantly (the indicative scenario shows an increase of 14% over 5 years). The primary reasons for this are the increase in maintenance costs and bulk purchase costs.

Staff costs (expressed as c/kl of water sold) are forecast as staying constant in future. This means that as proportion of total costs, they will decline. Given that staff costs account for 30% of operating costs at present, it seems reasonable to expect that this ratio should drop over time, down to 25% or lower in the medium term. Until a detailed organisational design exercise has been undertaken and a more detailed business plan for the ring-fenced business developed, it is not possible to accurately forecast staff costs.

Maintenance costs currently account for about 10% of operating costs. These costs are forecast to rise in real terms in future as it is believed that expenditure on maintenance at present is not adequate to maintain the assets in good working order.

Bulk water purchase costs from DWAF will increase in real terms in future. This is primarily as a result of Skuifraam Dam.

Electricity and chemicals together make up about 15% of operating costs. Chemical costs are forecast to increase in real terms as a result of a depreciating Rand. In this scenario, electricity costs were forecast to remain constant in real terms.

Other costs make up 38% of total costs. This is very high by international best practice standards. In this scenario, these costs are forecast to decrease by 3% per annum (in real terms). This would result in the "other costs" accounting for 18% of operating costs in year 10. This forecast is highly speculative and is contingent on the outcomes of the restructuring and business reengineering processes.

Figure 8.2 Operating costs - indicative scenario

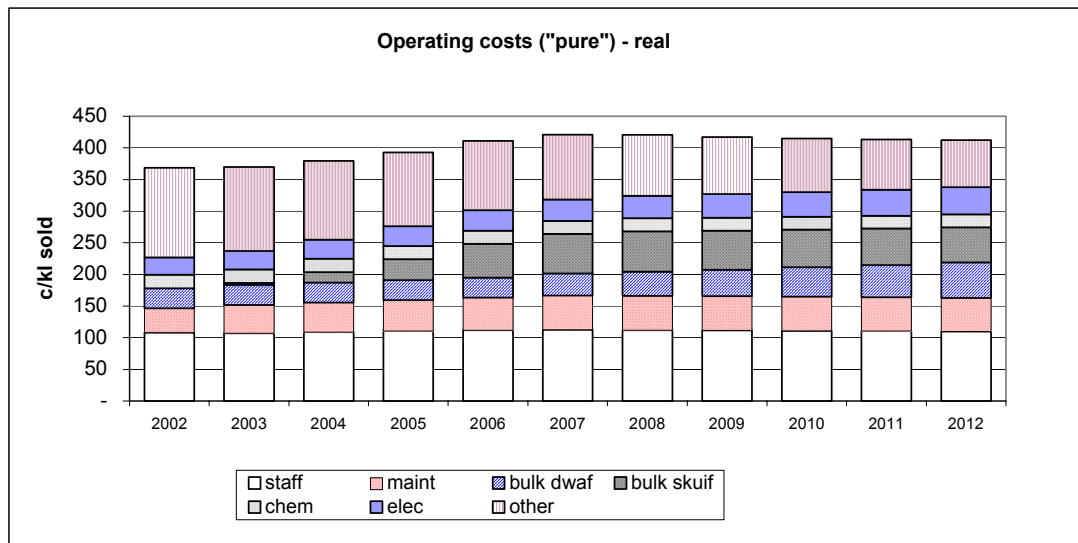
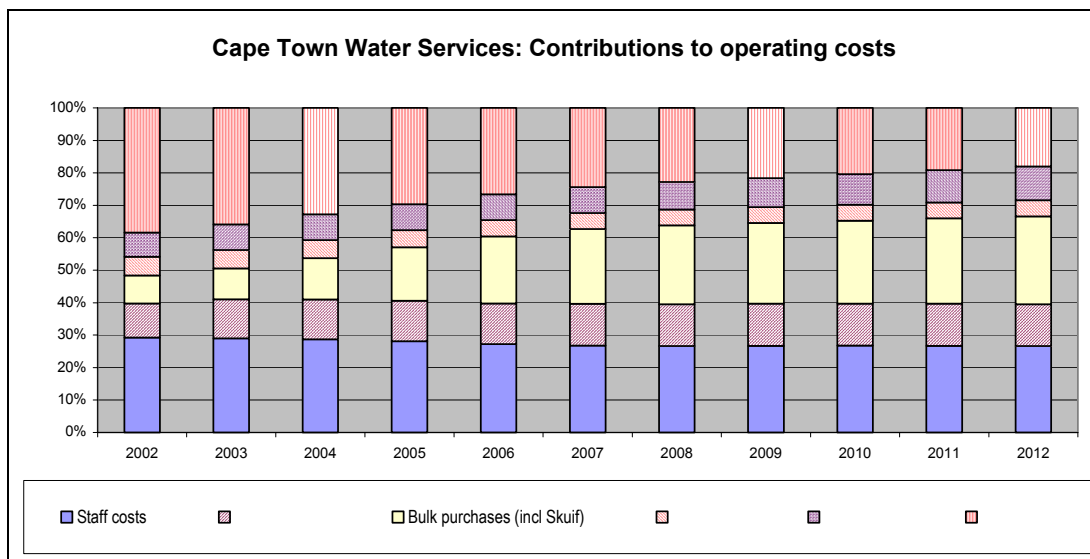


Figure 8.3 Operating costs expressed as %



8.4.7 Tariffs

For details on the current tariffs and policies refer to the following documentation:

- [GO TO Sanitation Tariffs](#)
- [GO TO Bulk Water and Reticulation Tariffs](#)
- [GO TO Bulk Water Tariff Policy](#)
- [GO TO Consumptive Water Tariff Policy](#)
- [GO TO Sanitation Tariff Policy](#)

Future water and wastewater tariffs are dependent on a number of factors, including:

- Sanitation tariff policy
- Level of capital expenditure
- Sources of finance and cost of capital
- Value of assets and depreciation policy
- Rate of collections and provision for bad debts
- Actual water sales

For the reasons already identified and discussed above, a significant degree of uncertainty is attached to all of these factors. Therefore, it would be unwise to predict future water and wastewater tariffs into the future at this stage. Nevertheless, based on the detailed financial analysis undertaken to date using both the "business as usual" and "strategic" financial models, and subject to the limitations already expressed, it may be concluded that it is highly likely that tariffs will need to increase in real terms significantly during the next three to five years in order to ensure that the water services unit is financially viable and sustainable.

8.5 Affordability

8.5.1 Introduction

The broad issue of affordability of basic services including water services is key to the development of any successful and sustainable Water Services Development Plan (WSDP). A number of key strategic issues are imbedded in this broad area including:

- The realistic establishment of sustainable tariffs,
- Determining appropriate service levels across different consumer types,
- The nature and scope of any indigent policy,
- The development of a customer care/management facility to improve the interface with customers,
- The implementation of an affective credit control policy,
- The development of an effective metering and billing system to span all categories of customers,
- Without an accurate understanding of the affordability of services, the strategic interventions required in the areas outlined above will be severely undermined.

8.5.2 Package of services and affordability

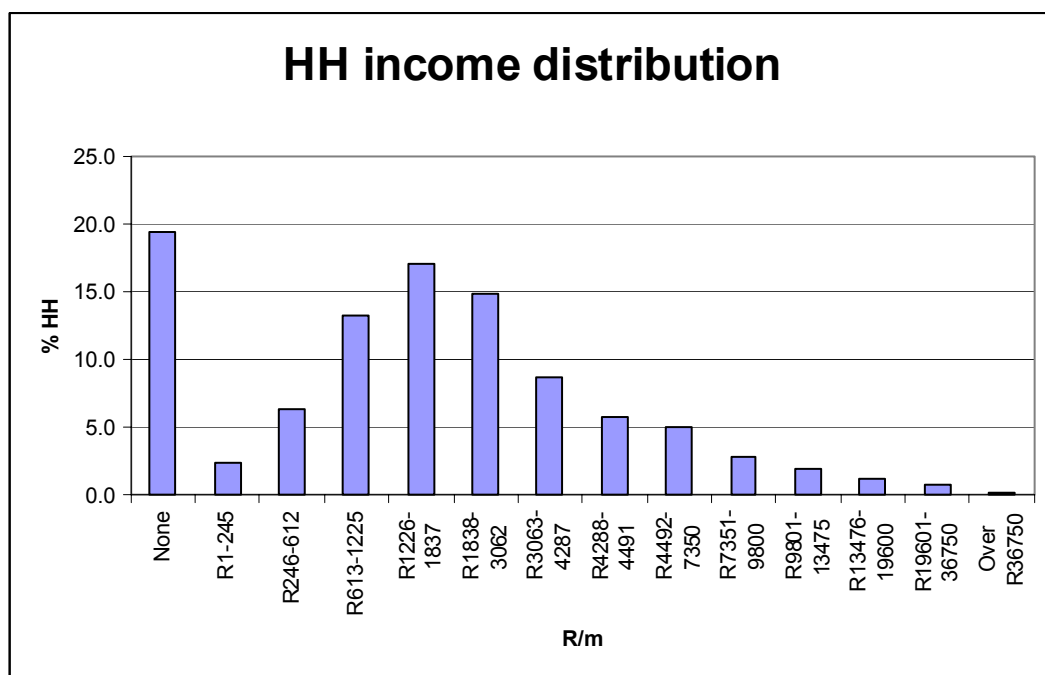
Affordability of services and housing is directly linked to what people are willing to pay for the services they receive. Willingness to pay depends largely on the value each household attaches to a particular service. This is highly dependent on local conditions and there are not universally applicable figures which can be applied.

Ideally willingness to pay studies should be carried out before a service is provided. However, this is often not possible and reliance needs to be made on 'rules of thumb' in order to take planning decisions. The following represents a 'rule of thumb' approach based on work which Palmer Development Group has done nationally. It illustrates households' willingness to pay for various services. It is notable that, in most instances, 10% of the income is regarded as the maximum amount a household would be prepared to allocate to service payments. The assumption is made that households are willing to pay more, in relative terms, for water and electricity than the other services.

8.5.3 Household income profile

An analysis of household incomes in the metro indicates that there is a significant portion of the population that currently are at risk of not being able to afford the services they are currently receiving. The graph below illustrates that approximately one third of the households in the metro earn less than R1100 per month (this is presently the poverty threshold used to calculate equitable share allocations). Using established and accepted norms, this suggests that this group of households will be able to afford to pay no more than R110 per month in total for services they receive (10% of gross income), and R33 per month for water (3% of gross income).

Figure 8.4 Household Income distribution (2001 rands)



This picture is exacerbated when one considers that over 25% of the households earn less than R612 per month, implying that these households would be able to pay no more than R61.20 per month for their total package of services and no more than R18.36 for water. Most of these households however report no income at all and would not be able to afford any level of service.

8.5.4 Water bills and affordability

The following graphs indicate the extent to which water bills match the affordability profile of households in the metro. The solid line in the graph below illustrates actual water bills generated using current tariffs and consumption profiles. The dotted line illustrates that amount that households are able to pay for water. The area where the dotted line falls below the solid line represents the affordability gap, i.e. where households are not able to afford their water bills.

Figure 8.5 Affordability of water services (current tariff)

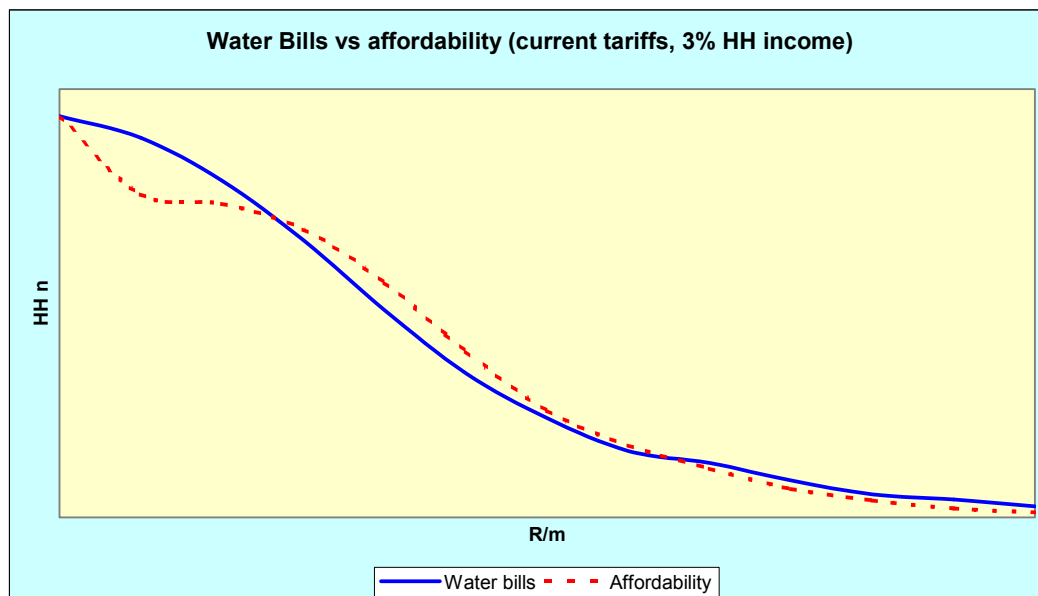
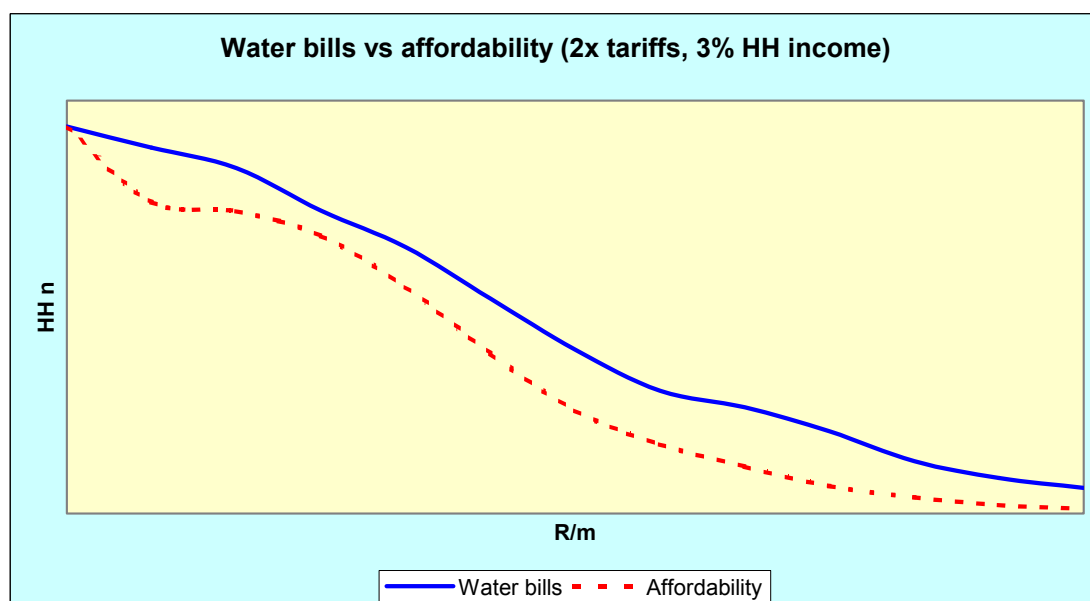


Figure 8.6 Affordability of water services (tariff doubled)



The affordability gap in the first scenario (based on current tariffs and consumption levels) represents approximately 25 of households in the metro. The second graph is based on a scenario where current tariffs are doubled and water consumption is held constant. In this scenario, the affordability gap extends to all customers in the metro indicating that these tariffs would be completely unsustainable from an affordability point of view.

8.5.5 The view from the ground - insights from case studies and focus groups

In late 2000 and early 2001, Palmer Development Group, in association with Markinor conducted a number of focus group discussions with household heads from a number of communities across the metro. The anecdotal responses adds texture to other quantitative analyses of affordability of services in the metro. Some of these responses are sketched out below.

On payment for services:

- *It is the "right thing to do",*
- *"I feel that we should not be paying for water because it is natural and it is for free anyway",*
- *"Nobody manufactures water, they can make us pay for electricity, but not for water",*
- *"We are getting water free of charge from God and he does not make us pay".*
- *Unemployment was sited as a key reason for non-payment, although a range of other contributory factors were identified.*

Irregular and Inadequate Services:

Residents also expressed their unwillingness to pay for irregular and inadequate services. They expressed particular concern about inadequate sanitation and refuse removal services. For example, in Brown Farm eight toilets were serving seven hundred people. Many residents also complained of blocked toilets. In Wesbank residents complained about the inadequate garbage removal services.

- *"I have raw sewage in my backyard. Why should I pay (for services) when I clean the mess myself and it is not even my mess but I have to clean it. To pay just does not make sense to me."*

Inadequate Billing and Revenue Collection

Residents stated that non-billing, inaccurate and incomprehensible statements made payment difficult. Payment offices were seen as inaccessible and residents did not want to pay for transport to get there.

Unresponsive Service Provision

Residents complained about a lack of response from municipal servants.

- *"When I moved in there, I wrote the council a letter saying that they must send me a bill for the rates and sewerage, because I was getting worried, and I waited 5 years for an answer. Then I went to someone from the council, Mr Meysenheymer, and I had to go to him 4 times to get a response about my rates and taxes" (Markinor, 2000:28)*
- *"The one day my toilet was blocked, so I phoned them and asked them to repair it. They told me they would be there shortly. Late that night when my husband got home, I had to ask him to do it." (Markinor, 2000:26)*
- *"What makes me cross is that we are always the ones bringing these problems to the council's attention. Why don't they send someone out to see to all these things and see what's going on and what's wrong in the areas." (Markinor, 2000:40)*

8.5.6 Conclusions

From the quantitative and qualitative analyses outlined above, a number of conclusions can be made regarding affordability and the non-payment for services, including:

- **Communication.** Clearly there is a need to communicate with customers on a variety of issues including; explaining what drives services charges, responding to customer queries, etc.
- **Billing systems.** From anecdotal observations raised in the focus groups, it is clear that the current billing system needs to be improved to cover households currently not billed.
- **Improved service quality.** A significant contribution to non-payment appears to be dissatisfaction with the current quality of services.
- **Indigents policy.** With almost 20 % of households in the metro reporting no monthly income, an indigent policy is key to avoiding a social and economic disaster in certain areas.
- **Water Demand Management.** An effective way of reducing household bills for services is to reduce consumer demand on a sustainable basis. This, if effective, will essentially reduce the affordability gap.
- **Access to equitable share.** The affordability analysis shows that the potential extent of cross-subsidisation within the water sector is limited. Therefore it is important that water services motivate for an appropriate share of the equitable share subsidy received by the City of Cape Town in order to provide adequate services to all.

8.6 Summary of strategic issues

The institutional and financial analysis undertaken for the water services development plan has highlighted the following strategic issues:

Organisation transformation:

The water services are currently in the process of being restructured into an autonomous ring-fenced business unit. The following strategies are being pursued:

- Organisational design
- Establishing a ring-fenced accounting entity
- Resolve the question of shared service centres and role of support services
- Separate the roles of the service authority and service provider and develop a contractual relationship between the two.
- Implement performance management and get ISO accreditation
- Implement ERP
- Resolve area delivery model and implications for business unit

Customer and Revenue Management:

Current water customer debt is about R460 million, representing 8 months of sales. Revenue collection needs to be improved and non-payment reduced. The following strategies have been identified:

- implementation of credit control policy,
- implementation of indigent policy,
- resolution of customer management responsibilities within Council,
- implement universal metering and billing,
- implement informative billing.
- Customer education
- Improved accessibility of payment facilities

Future infrastructure requirements:

The capital expenditure needs is in excess of R2 billion over the next 5 years. This is likely to require significant increases in tariffs in real terms in order to ensure the financial viability and sustainability of the service. The following strategic issues have been identified:

- Planned provision of formal houses is inadequate to reduce the housing backlog
- Provision of basic services to households living in informal housing is expected to require an expenditure of R114 million. Actual investments are subject to legal constraints as many informal settlements are situated on private land.

- A realist programme for the renewal of existing assets needs to be investigated and developed.
- The bulk wastewater capital expenditure estimated are subject to a strategic review which is currently in progress. This addresses the impact of the DWAF 2010 standards, stormwater ingress and growth in wastewater effluent requiring treatment.

Financing:

The current average cost of capital is high. The following strategies need to be pursued:

- Re-negotiate loan portfolio with the city
- Investigate alternative financing options including bank finance, bonds and private financing.

Financial modelling and tariffs:

Given the uncertainty in the base data, the policy uncertainty and institutional uncertainty, the financial modelling undertaken cannot be used to make commitments to financial and tariff targets. The financial analysis has revealed the following strategic issues:

- Operating costs are likely to increase in future in real terms, though not significantly
- The practical implications of GAMAP still need to be investigated in more detail.
- The sanitation tariff policy needs to be finalised and implemented.
- Tariffs will need to increase in real terms in the next few years though it is not possible to say by how much until many of the significant uncertainties identified above have been resolved.

Affordability:

The affordability analysis shows that overall household affordability is constrained, that there are limits to the extent to which cross-subsidies are sustainable, and that it is not possible to increase tariffs significantly without addressing the issue of affordability, indigent policy and subsidies (including the equitable share) in a systematic and considered manner.

Management Issues:

Apart from the bulk system model compiled for this study, detailed network models exist for most areas which links to the CMC bulk system models. Existing modelling technology allows the following:

- Easy updating of computer models from "as-built" plans.
- Linking of models to bulk meter and revenue meter data for:
- Updating of model demands
- Calculation of UAW
- Merging of bulk system and secondary models.

Against this background, there is a good opportunity for the City of Cape Town to establish a water services information "bureau", which will be assigned to continuously update all models and their demands/UAW's. With the information and technology at hand, such a bureau can also do integrated system planning, and handle ad-hoc queries regarding the individual systems.

The bureau function could be outsourced to and managed by a consultant, with seconded staff from the various local authorities. This will ensure a concentration of expertise, and continuity, which is difficult to achieve in a typical local authority structure. Another option would be to form some sort of public-private partnership to run the bureau function. The bureau could "post" the information to a GIS based viewer, in the form of graphs, reports and maps, which are accessible by all management levels in the various local authorities, without the need for computer literacy.