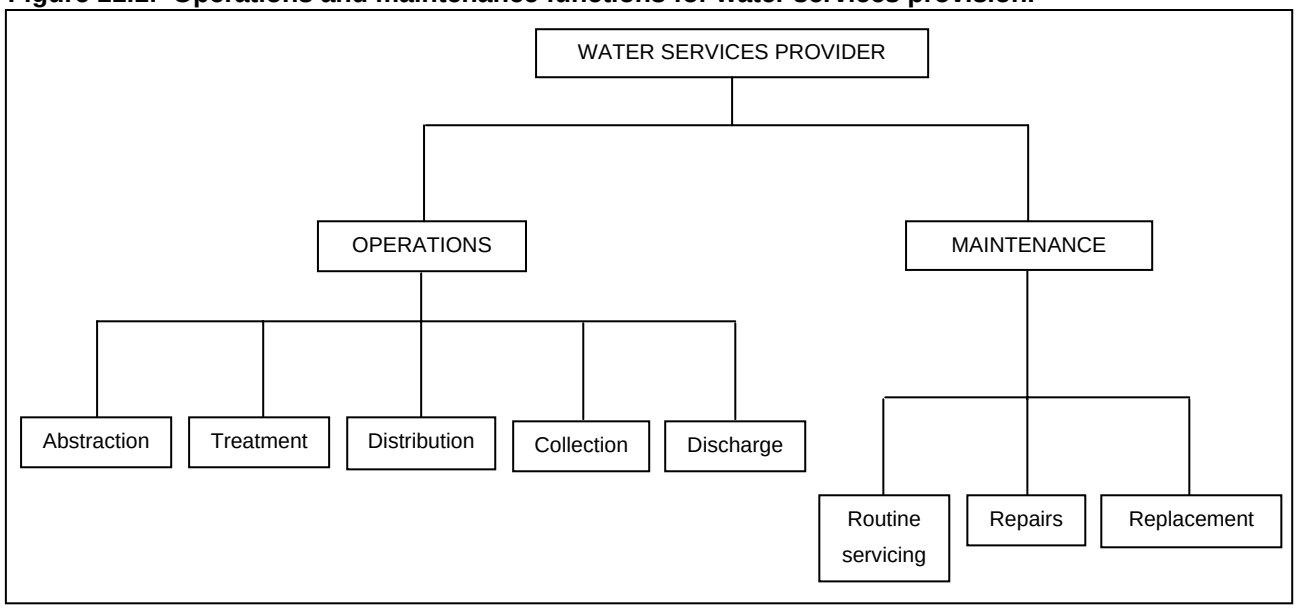
11. Financial profile

Water services finance are divided between two aspects namely, new capital projects and operations and maintenance (O&M) of existing infrastructure. The financial profile of the ZDM is divided between income and expenditure for each of these aspects, and is further separated between water and sanitation. The O&M functions are divided between operation (the actual technical aspect of abstracting, treating, distributing and discharging) and maintenance (the routine inspection and servicing, the repair and ultimate replacement) as indicted in Figure 11.1. Replacement and upgrade are a WSA function and should be budgeted for over the life expectancy of the infrastructure. Routine servicing is a WSP function and should be budgeted for through the WSP contract.

Figure 11.1: Operations and maintenance functions for water services provision.



The source of funding for the implementation of the water and sanitation projects emanating from the priorities in the Implementation Phasing Plans will primarily be grant funding from DWAF, CMIP and other sources, with necessary co-funding from the District Municipality and may include some donor funding. In terms of the strategies, projects have been packaged according to available budget allocations to the ZDM who has accordingly allocated funds to the regions as per their water services backlogs.

It is accepted that there is a national target for water services backlog eradication at five years and eight years for water and sanitation supply respectively (FY2003/2004 as year 1). However it is also noted that based on the current backlog (inadequate supply) and funding levels through land reform, DWAF and CMIP projects, and MIG, this objective will not necessarily be achieved in the requisite time frame.

11.1 Capital expenditure: water

The national objectives, as expressed by the Minister of Water Affairs and Forestry, are to alleviate the backlog in water supply by 2008/2013. The ZDM plans to alleviate the backlog in their area of jurisdiction and increase reliability of the service through the planning as provided in Section 12. The cost to implement the capital projects for water, as described in Section 12, is approximately R 1,350 Million (base year 2003). This figure is based on actual costs for the various schemes as shown in Appendix 9. However, the scheme areas outlined in Section 12 have been extended and the capital costs have not yet been revised. Nevertheless, it is not envisaged that the additional areas will increase the required capital costs that are based primarily on backlog alleviation.

The five-year implementation costs for water are given in Table 11.1.

Table 11.1: Planned capital expenditure for water supply in the short-term (0-5 years).

	Up to 2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	Total
	U & R	U & R	U & R	U & R	U & R	U & R	Urban & rural
Internal infrastructure							R 0
Connector infrastructure							R 0
Bulk infrastructure							R 0
Other	R 4,840,000	R 50,714,368	R 74,999,978	R 79,534,706	R 78,545,360	R 72,610,752	R 361,245,164
Total	**R 4,840,000**	**R 50,714,368**	**R 74,999,978**	**R 79,534,706**	**R 78,545,360**	**R 72,610,752**	**R 361,245,164**
Cost per capita*	R 855	R 503	R 1,548	R 2,283	R 1,160	R 2,594	

**Water and sanitation schemes are not budgeted for in only one financial year, and may take five or more years to complete. Therefore, this figure is not a true indication of cost per capita or connection.*

11.2 Capital expenditure: sanitation

The national objectives, as expressed by the Minister of Water Affairs and Forestry, are to alleviate the backlog in sanitation supply by 2010/2013. The DM plans to alleviate this backlog and increase reliability of the service through the provision of VIP latrines and planning as outlined in Section 12. The cost to implement the capital projects for sanitation, as described in Section 12, is approximately R 147 Million (base year 2003). This figure is based on actual costs for the various schemes as shown in Appendix 9. However, the scheme areas outlined in Section 12 have been extended and the capital costs have not yet been revised. Nevertheless, it is not envisaged that the additional areas will increase the required capital costs that are based primarily on backlog alleviation.

The five-year implementation costs for sanitation are given in Table 11.2.

Table 11.2: Planned capital expenditure for sanitation provision in the short-term (0-5 years).

	Up to 2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	Total
	U & R	U & R	U & R	U & R	U & R	U & R	Urban & rural
Internal infrastructure							R 0
Connector infrastructure							R 0
Bulk infrastructure							R 0
Other	R 0	R 10,420,503	R 4,786,130	R 5,636,910	R 7,816,832	R 8,391,166	R 37,051,541
Total	**R 0**	**R 10,420,503**	**R 4,786,130**	**R 5,636,910**	**R 7,816,832**	**R 8,391,166**	**R 37,051,541**
Cost per capita*	R 0	R 300	R 211	R 301	R 271	R 282	

**Water and sanitation schemes are not budgeted for in only one financial year, and may take five or more years to complete. Therefore, this figure is not a true indication of cost per capita or connection.*

11.3 Sources of capital income: water

The responsibility for financing current and future water services costs lies with the ZDM (as WSA), therefore they must devise policies for the allocation of grant finances and subsidies. As such, the ZDM must raise funds through grants provided by government, from consumer payments or their own resources or loans. Previously most capital water projects were funded through CMIP or DWAF. Recently, the restructuring of government funding has occurred such that a central Municipal Infrastructure Grant (MIG) allocates funding for all infrastructure needs of the DM. The overall amount of the funding under MIG however is approximately the sum of the existing allocations from the various departments.

The proposed income for water projects through MIG is given in Table 11.3.

Table 11.3: Proposed income sources for capital infrastructure – water.

Rands per year	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Subsidies						
Housing						
CMIP						
CWSS (from DWAF)						
Sub-total: subsidies	**R 4,840,000**	**R 50,714,368**	**R 74,999,978**	**R 79,534,706**	**R 78,545,360**	**R 72,610,752**
Other income						
Other ad hoc grants which may become available						
Consumer payments*	0	0	0	0	0	0
Expenditure from current income						
Sub-total: other income	**0**	**0**	**0**	**0**	**0**	**0**
Loans						
Capital development fund						
External						
Sub-total: loans	**0**	**0**	**0**	**0**	**0**	**0**
Total	**4,840,000**	**50,714,368**	**74,999,978**	**79,534,706**	**78,545,360**	**72,610,752**

**Consumer payments are not directed towards capital infrastructure, but rather to O&M and the provision of free basic water services.*

11.4 Sources of capital income: sanitation

The responsibility for financing current and future water services costs lies with the ZDM (as WSA), therefore they must devise policies for the allocation of grant finances and subsidies. As such, the ZDM must raise funds through grants provided by government, from consumer payments or their own resources or loans. Previously most capital sanitation projects were funded through the Department of Local Government and Housing (DLG&H), CMIP or DWAF. Recently, the restructuring of government funding has occurred such that a central Municipal Infrastructure Grant (MIG) allocates funding for all infrastructure needs of the DM. The overall amount of the funding under MIG however is approximately the sum of the existing allocations from the various departments.

The proposed income for sanitation projects through MIG is given in Table 11.4.

Table 11.4: Proposed income sources for capital infrastructure – sanitation.

Rands per year	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Subsidies							
Housing							
CMIP							
CWSS (from DWAF)							
Sub-total: subsidies	**R 0**	**R 10,420,503**	**R 4,786,130**	**R 5,636,910**	**R 7,816,832**	**R 8,391,166**	**R 37,051,541**
Other income							
Other ad hoc grants which may become available							
Consumer payments*	0	0	0	0	0	0	0
Expenditure from current income							
Sub-total: other income	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loans							
Capital development fund							
External							
Sub-total: loans	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**0**	**10,420,503**	**4,786,130**	**5,636,910**	**7,816,832**	**8,391,166**	**37,051,541**

11.5 Operating costs: water

Of critical importance is the funding of O&M of existing and future schemes as they are commissioned. Correct O&M of physical infrastructure is arguably more important than infrastructure construction because unless successful preventative maintenance procedures are instituted schemes will become inoperative. As a large proportion of expenditure relates to staff, competent personnel are required to ensure that the large investments in water services are not negated through dysfunction or dereliction. The ZDM is currently conducting an assessment of water services delivery mechanisms.

For illustrative purposes only, Table 11.5a indicates the anticipated O&M costs for the regional schemes once operational and Table 11.5b indicates the O&M costs for the individual WTW (base year 2003). These include all costs relating to water services supply, and necessitate ring-fencing (or isolating) the water from the sanitation functions. Table 11.5c will indicate the operating costs for water schemes once these have been costed per annum based on the backlog rollout.

Table 11.5a: The operations and maintenance costs per scheme.

Regional Scheme	Year 1	Year 10
Coronation	R 1,582,000	R 1,882,787
eMondlo/Hlahlindlela	R 3,473,468	R 3,613,456
Khambi	R 1,847,281	R 1,302,908
Mandlakazi	R 3,969,267	R 4,661,831
Nkonjeni	R 4,877,418	R 6,206,277
Simdlangentsha Central	R 2,050,876	R 1,594,703
Simdlangentsha West	R 2,073,136	R 1,708,602
Simdlangentsha East	R 3,046,466	R 4,500,017
Usuthu	R 4,678,323	R 5,344,936
Total	**R 27,598,235**	**R 30,815,517**

Table 11.5b: The operations and maintenance costs per WTW.

Treatment Works	Year 1
Frischgewaagd	R 825,783
Belgrade	R 563,643
Itsjelejuba Hospital	R 133,000
Enyokeni Palace	R 112,524
Kangela Palace	R 83,274
Kwakheta Palace	R 15,000
Nongoma (Vuna)	R 2,646,962
Ceza Hospital	R 284,000
Excelsior	R 115,612
Nkonjeni Hospital	R 149,000
Mphungamhlope	R 432,877
Silutshane	R 115,612
Thulasizwe Hospital	R 146,000
Ulundi	R 2,719,626
Witkop	R 114,125
Mondlo	R 2,321,419
Nkongolwane	R 78,976
Total	**R 10,857,433**

Table 11.5c: Operating cost for water in the ZDM.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Purchase of bulk water							
Production costs: raw water							
Production costs: treatment							
Operating costs							
Finance charges							
Total costs							
Operating costs per consumer unit							

11.6 Operating costs: sanitation

Operating costs for sanitation have not been separated from the water supply costs. However, these costs will be restricted to the urban areas as the rural areas are predominantly VIP latrines. Costs in these areas will be from the emptying of pits on request. However, the consumer pays a nominal fee for this service.

For illustrative purposes only, Table 11.5a indicates the O&M costs for the individual WWTW (base year 2003). Table 11.6b will indicate the operating costs for rural and urban schemes once these have been costed per annum.

Table 11.6a: The operations and maintenance costs per WWTW.

Treatment Works	Year 1
Frischgewaagd	R 86,513
Itsjelejuba Hospital	R 104,728
Ceza Hospital	R 94,728
James Nxumalo	R 104,000
Nkonjeni Hospital	R 45,000
St. Francis Hospital	R 96,000
Thulasizwe Hospital	R 64,000
Ulundi	R 1,334,356
Mondlo	R 2,078,922
Total	**R 4,008,247**

Table 11.6b: Operating cost for sanitation in the ZDM.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Treatment costs							
Operating costs							
Finance charges							
Other							
Total costs (1 + 2 + 3 + 4)							
Operating costs per consumer unit							

**Operating costs includes: overheads, salaries and wages, monitoring, maintenance and depreciation*

11.7 Operating income: subsidies

The only subsidy that the ZDM obtains for the provision of water services is from the annual equitable share allocations. The equitable share allocations and division between the various sectors still needs to be assessed in terms of Table 11.7. This is linked to the O&M projections that still require determination in terms of the backlog rollout. This data is currently being compiled and will be introduced in a subsequent review.

Table 11.7: Equitable share allocations and division for the ZDM.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Equitable share allocation							
% Equitable Share allocated to basic water supply							
% Equitable Share allocated to basic sanitation provided							
% of other subsidies allocated to basic water supply							
% of other subsidies allocated to basic sanitation provision							

11.8 Operating income: tariffs

The ZDM needs to fund the operation costs through tariffs and the equitable share from national government. The national commitment is to provide free basic water services to all, with poor households being the primary benefiting targets. Although every person has a Constitutional right to access to water, this right has been developed further as a national government policy to free basic water and sanitation. However, this does not mean that consumers are not required to pay for basic water services, but that they should pay for the service provided rather than the water provided. Payment should be based on water services policies related to quality, quantity and assurance of supply (see Section 9 and Appendix 3). One of the problems with generating income therefore is that the majority of water and sanitation within the ZDM may be supplied as free basic services through either an indigent or free basic water policy.

Most of the urban consumers have metered connections, and although they mostly do pay their accounts, there is a growing trend of non-payment in certain areas that needs to be addressed if these schemes are to operate sustainably. In addition, there is currently little monitoring to determine water consumption in the rural areas. The ZDM is in the process of drafting and implementing a metering strategy to improve the knowledge of water consumption in these areas. It is understood that the intention is to work towards a standardised bulk tariff to regulate the consumer tariff structure across the entire functional area to create efficiencies through economies of scale.

The tariff structure will be determined in more detail once the O&M costs have been projected.

11.9 Fixed charges: residential (per month) for water

The projected fixed charges for residential water supply over the five-year implementation period still needs to be assessed in terms of Table 11.9. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.9: Fixed charges in Rands for water supply for residential areas per month.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Communal water supply	0	0	0	0	0	0	0
Controlled volume supply							
Uncontrolled volume supply							

11.10 Fixed charges: residential (per month) for sanitation

Fixed charges for residential consumers are a basic charge levied on accessibility or connection to a sewerage system that is generally unmetered. This charge is levied regardless of whether the consumer utilises the service and ensures some income to the DM to subsidise the O&M costs of the water services systems. Within the DM the majority of rural communities have a VIP latrine sanitation service. There is no fixed charge for this service, as this constitutes free basic sanitation provision. However, a basic charge is levied on the servicing of conservancy tanks or pits.

The projected fixed charges for residential sanitation provision over the five-year implementation period still need to be assessed in terms of Table 11.10. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.10: Fixed charges in Rands for sanitation services for residential areas per month.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Consumer installations: VIP or equivalent	0	0	0	0	0	0	0
Consumer installations: Wet (septic tanks etc.)	0	0	0	0	0	0	0
Discharge to WWTW: Intermediate/full waterborne							

11.11 Volume charges or other charge mechanisms: residential sanitation

The DM does not charge residential consumers a volume charge for the discharge of wastewater to the WWTW. Instead the costs involved in sanitation provision are recouped from the fixed charge, as described in Section 11.9 and 11.10. Table 11.11 does not need to be completed.

Table 11.11: Volume charges in Rands for sanitation services for residential areas per month.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Consumer installations: VIP or equivalent	NA	NA	NA	NA	NA	NA	NA
Consumer installations: Wet (septic tanks etc.)	NA	NA	NA	NA	NA	NA	NA
Discharge to WTW: Intermediate/full waterborne	NA	NA		0	0	0	0

11.12 Block tariffs: residential (cents/kl) for water

The projected block tariffs for residential water supply over the five-year implementation period still needs to be assessed in terms of Table 11.12. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.12: Residential water services block tariffs

Service Level	Block	Block definition	2002/2003	2003/2004	2004/ 2005	2005/ 2006	2006/2007	2007/2008
Communal Water Supply	(a) FBW	0-4 kl	Free	Free	Free	Free	Free	Free
	(b) Not FBW *	>4 kl	NA					
Controlled Volume Supply	(a) FBW	0-4 kl						
	(b) Not FBW *	NA						
Uncontrolled Volume Supply	(a) FBW	0-4 kl						
		>4 kl						
	(b) Not FBW *	0-4 kl						
		> 4 kl						

* Not relevant if free basic water (FBW) is provided to all

11.13 Subsidy targeting approach for free basic water

The demographics of the ZDM indicate that the level of poverty in the ZDM is high (Section 3). Therefore, in terms of financing free basic water (FBW) and sanitation consumer cross-subsidization will be impossible and the will have to be recovered from national government in the form of grants/subsidies. To effectively implement a FBW policy the funding needs to be targeted at ring-fenced water services areas so that WSPs are adequately compensated for the costs of providing free basic services. Failure to do this may lead to the unsustainable provision of free basic water services. The challenge of implementing free basic water is the monitoring of the volume of water consumed. Failure to properly monitor the amount of free water provided to consumers will make this policy unsustainable in the long term. This is one of the primary objectives of the ZDM developing a metering strategy.

The required revenue for providing FBW and free basic sanitation (as either a targeted or universal subsidy) can come from internal or external sources. The cost of provision (essentially the average cost of supply multiplied by the amount of water provided free) needs to be compared with the available revenue to ensure sustainability. The ZDM will need to determine what resources are jointly available from internal cross-subsidization and the equitable share.

The implementation of FBW and free basic sanitation within the ZDM is likely to be based on service level targeting supplemented by a stepped tariff structure.

Subsidy targeting approach	Percentage of households targeted
Rising block tariff	0%
Service level targeting	100%
Credits to water account	0%
Other	

11.14 Fixed charges and block tariffs: industrial for water

The projected fixed charges for industrial water supply provision over the five-year implementation period still need to be assessed in terms of Table 11.14. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.14: Charges in Rands for industrial water supply per month.

	Block definition	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Fixed monthly charge								
Volume charge								

11.15 Fixed charges and block tariffs: industrial for wastewater

The projected fixed charges and tariff structure for industrial wastewater provision over the five-year implementation period still need to be assessed in terms of Table 11.15. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.15: Charges in Rands for industrial wastewater per month.

	Block definition	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Fixed monthly charge								
Volume charge								

11.16 Fixed charges and block tariffs: commercial for water

The projected fixed charges and tariff structure for commercial water supply over the five-year implementation period still need to be assessed in terms of Table 11.16. However, in general the commercial consumers are charged on the same or similar base to the residential consumers. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.16: Charges in Rands for water supply for commercial consumers per month

	Block definition	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Fixed monthly charge								
Volume charge								

11.17 Fixed charges and block tariffs: commercial for wastewater

The projected fixed charges and tariff structure for commercial wastewater over the five-year implementation period still need to be assessed in terms of Table 11.17. The ZDM is in the process of projecting the O&M costs, as well as the potential costs of the various water services delivery mechanisms, that will impact on the tariffs charged to remain sustainable. This will be completed in a subsequent review of the WSDP.

Table 11.17: Charges in Rands for commercial wastewater per month.

	Block definition	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Fixed monthly charge								
Volume charge								

11.18 Fixed charges and block tariffs: other for water

No further charges are evident for water supply in the ZDM; therefore Table 11.18 does not require completion.

Table 11.18: Charges for water.

	Block definition	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Fixed monthly charge								
Volume charge								

11.19 Fixed charges and block tariffs: other for sanitation

No further charges are evident for sanitation provision in the ZDM therefore Table 11.19 does not require completion.

Table 11.19: Charges for sanitation.

	Block definition	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Fixed monthly charge								
Volume charge								

11.20 Total income (and non-payment) and expenditure: water

Very little information regarding consumer payment is currently available. The ZDM is in the process of formulating strategies to improve the consumer database. However, the recovery of debt from the provision of water services will require extensive negotiations between all role-players including the DM, LMs, the WSP/s and consumers, to ensure that there is a thorough understanding and a firm commitment from all role-players to actively work towards addressing cost recovery. The high percentage of non-payment by consumers, especially those that have the ability to pay, poses a serious challenge, placing increasing financial pressure on the ZDM that will hamper water services delivery improvements to the wider consumer population. Under recovery due to under-utilization of services also impacts negatively on the ability to render services, and in turn impacts the type and level of new service that can be provided, as well as existing service reliability.

Consumers who cannot afford to pay for services will typically be covered by the free basic water policy. However, a strategy for those consumers who can afford to pay for services but do not, needs to be devised, taking account of the reasons behind the unwillingness to pay. Typical questions include:

- Are they provided with service levels commensurate with the tariff structures that they are charged?
- Have there been, or are there, problems with routine maintenance of the water or sewerage systems in these areas where they reside. For example is effluent from blocked sewers left to run on streets for days before the sewer blockages are cleared? Are there frequent prolonged water cuts without prior warning? Such occurrences result in people thinking that they are not being provided with adequate services, and hence are not willing to pay.
- Are pay points located at convenient positions for account payments? If people have to travel some distance to settle their municipal accounts they may be inclined not to do so at all.
- Incorrect interpretation of Government policy? Is the policy of free basic services being taken to mean that consumers do not have to pay for any service provided to them at all?

The overall effect of non-payment (Table 11.20) still needs to be assessed for the ZDM.

Table 11.20: Total income and expenditure for water.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Total income (billed income and subsidies)							
Actual income received							
% non-payment							
Non-payment by residential consumers							
Non-payment by commercial consumers							
Non-payment by industrial consumers							
Non-payment by other consumers							
Total non-payment (4+5+6+7)							
Operating expenditure							
Capital expenditure							
Total expenditure (9+10)							
Equitable share allocated to water supply							
Surplus (deficit) (2 minus 11)							

11.21 Total income (and non-payment) and expenditure: sanitation

The question of under recovery on sanitation costs is unknown at this stage, but it is likely to exacerbate the water supply situation. The overall effect of non-payment (Table 11.21) still needs to be assessed for the ZDM.

Table 11.21: Total income and expenditure for sanitation.

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
Total income (billed income and subsidies)							
Actual income received							
% non-payment							
Non-payment by residential consumers							
Non-payment by commercial consumers							
Non-payment by industrial consumers							
Non-payment by other consumers							
Total non-payment (4+5+6+7)							
Operating expenditure							
Capital expenditure							
Total expenditure (9+10)							
Equitable share allocated to sanitation							
Surplus (deficit) (2 minus 11)							

11.22 Sales arrangements

Information still needs to be obtained on this section, once the institutional arrangements have been finalised.

Sales arrangements will be assessed once the long-term WSPs are appointed. However, the DM's policy should be as follows:

- Free basic services to be provided to all consumers, especially indigent consumers, and the equitable share should be used to pay for this supply.
- Address the service level expectations of consumers primarily through a public relations exercise where residents are informed of the make-up and reasoning behind the tariff structures, and the implications of non-payment on services provision and improvement.
- Account defaulters should be given a grace period to settle all outstanding accounts, with interest charged on any outstanding amount at the end of this period. Failure to make arrangements to settle debt could lead to prosecution. If this policy is adopted it needs to be effectively communicated to all consumers through advertising in the popular electronic and print media within the DM, as well as attaching the policy to accounts.
- Contracts should be entered into with all consumers where each party's role and responsibilities are set out. These contracts can state, for example, that the WSP will repair all blocked sewers within 24hrs of being notified of the problem. Similarly the consumers will have the responsibility to pay their accounts on time. Non-compliance by either party to the terms and conditions of the contracts will result in the aggrieved party having claim to certain measures. To follow the example given of the blocked sewer system it can be determined the number of houses directly affected by the blockage. These houses could then qualify for a pro-rata reduction in their billed monthly account for the number of days that they were inconvenienced by the blockage. Thus a Geographical Information Systems is required, where consumer details as well as the service infrastructure provided can be recorded. On the other hand non-compliance by consumers in paying for services will result in these consumers being liable to pay interest on these outstanding accounts. Continuous non-payment for services will result in these services being suspended or severely limited to basic standards through flow regulators or tanks limiting water volume.

11.23 Metering and billing: urban

This still needs to be assessed in terms of the ZDM.

Table 11.23: Metering and billing for urban consumers.

	Prior 1	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Communal supply							
% communal standpipes metered							
% communal standpipes metered (prepaid)							
Controlled volume supply							
% consumers billed monthly							
Uncontrolled volume supply							
% consumers billed monthly							
% consumers meters read monthly							
% consumers consumption estimated							
Paypoints							
No. billed consumer units/paypoint							
No. prepaid consumer units/outlet							
General							
Number of new meters installations							
% meters tested							
% meters replaced							

11.24 Metering and billing: rural dense

This still needs to be assessed in terms of the ZDM

Table 11.24: Metering and billing for dense settlement consumers.

	Prior 1	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Communal supply							
% communal standpipes metered							
% communal standpipes metered (prepaid)							
Controlled volume supply							
% consumers billed monthly							
Uncontrolled volume supply							
% consumers billed monthly							
% consumers meters read monthly							
% consumers consumption estimated							
Paypoints							
No. billed consumer units/paypoint							
No. prepaid consumer units/outlet							
General							
Number of new meters installations							
% meters tested							
% meters replaced							

11.25 Metering and billing: rural villages

This still needs to be assessed in terms of the ZDM.

Table 11.25: Metering and billing for village settlement consumers.

	Prior 1	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Communal supply							
% communal standpipes metered							
% communal standpipes metered (prepaid)							
Controlled volume supply							
% consumers billed monthly							
Uncontrolled volume supply							
% consumers billed monthly							
% consumers meters read monthly							
% consumers consumption estimated							
Paypoints							
No. billed consumer units/paypoint							
No. prepaid consumer units/outlet							
General							
Number of new meters installations							
% meters tested							
% meters replaced							

11.26 Metering and billing: rural scattered

This still needs to be assessed in terms of the ZDM.

Table 11.26: Metering and billing for scattered settlement consumers.

	Prior 1	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Communal supply							
% communal standpipes metered							
% communal standpipes metered (prepaid)							
Controlled volume supply							
% consumers billed monthly							
Uncontrolled volume supply							
% consumers billed monthly							
% consumers meters read monthly							
% consumers consumption estimated							
Paypoints							
No. billed consumer units/paypoint							
No. prepaid consumer units/outlet							
General							
Number of new meters installations							
% meters tested							
% meters replaced							

11.27 Metering and billing: rural farmland

This still needs to be assessed in terms of the ZDM.

Table 11.27: Metering and billing for farmland consumers.

	Prior 1	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Communal supply							
% communal standpipes metered							
% communal standpipes metered (prepaid)							
Controlled volume supply							
% consumers billed monthly							
Uncontrolled volume supply							
% consumers billed monthly							
% consumers meters read monthly							
% consumers consumption estimated							
Paypoints							
No. billed consumer units/paypoint							
No. prepaid consumer units/outlet							
General							
Number of new meters installations							
% meters tested							
% meters replaced							