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‘FREE BASIC WATER’

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1. Introduction and Purpose

As part of the Government's strategy to alleviate poverty in South Africa a policy for the provision of a free basic level of services has been established. In the words of President Mbeki, "the provision of free basic amounts of electricity and water to our people will alleviate the plight of the poorest among us" (Mbeki, 2001). A number of policy statements at the local level have reinforced this commitment.

The purpose of this document is to set out an implementation strategy for this policy with respect to the provision of free basic water. Much of the ultimate responsibility for delivering free basic water will rest on local government. However, they will have to operate in a context which enables them to provide subsidised services effectively. This includes appropriate national subsidy arrangements and guidance and support from other spheres of government. This document therefore focuses mainly on how government can provide the context for the detailed implementation strategies of local government.

The strategic approaches provided in this document are supported by a *Free Basic Water Initiative: Guideline for Local Authorities*. The guideline document outlines the specific steps that can be taken at a local level to implement the free basic water policy.

2. Problem Statement

Implementing a free basic water policy successfully is a complex task which requires a wide range of issues to be addressed both nationally and locally. The process of implementation will also differ across municipalities. Given the very different income and service level profiles of municipalities some will find it relatively easy to implement the policy while others will face severe constraints. In general the constraints that an implementation strategy has to overcome are:

- a) *financial*: how to finance and target the supply of free basic services in a sustainable and efficient manner;
- b) *socio-political*: how to establish successful communication and co-operation between consumers, councillors, local government officials and different spheres of government;
- c) *institutional*: how to develop the required organisational capacity and working relationships between different institutions
- d) *technical*: how to choose the appropriate technical and service level options to facilitate free basic water.

Strategic approaches to overcome these constraints are provided, with reference to international experience; technical and service level issues; and the respective roles of different actors in the water supply system.

3. Policy Objectives and Clarification

The Minister of Water Affairs and Forestry announced in February 2001 that government had decided to ensure that poor households are given a basic supply of water free of charge. He said that Cabinet has approved a policy to provide 6 000 litres of safe water per household per month (Kasriils, 2001). There are well recognised public health and well-being; equity and welfare; and gender reasons for ensuring that households have access to a basic level of water supply that is affordable to even the poorest households.

The supply of free basic water is based upon a policy decision that can only be implemented within the well developed legal framework for water services. The legal parameters in which the policy operates is discussed later in this document and specifically in section 3.5.

3.1 Continued extension of water services remains the priority

A significant number of South Africans still lack *any* access to an adequate level of water supply. Clearly if a household does not have access to a basic supply of water the provision of a *free* basic supply cannot occur. Therefore the continued extension of adequate water supplies to unserved households must remain at the core of any provision of free basic water. In fact the government has committed itself to an acceleration in the delivery of water and sanitation.

This document focuses on the provision of a free basic level of water supply to those households already having at least a basic water supply and does not deal with the continued roll-out of water services. However, it is vital that the implementation of this policy does not slow or prevent the continued extension of services to other households. The implementation of the free basic water policy should not be allowed to lead to unsustainable water service institutions at the local level because this will prevent currently unserved poor households from getting adequate formal water supplies in the future. Close monitoring of the impacts of the free water policy is required to ensure that the policy does not lead to a slowdown in the extension of basic water services.

3.2 Who are the intended recipients of free basic water?

The primary intended recipients of free basic water are poor households. Although there is a broader policy commitment to the extension of free basic services to *all* households the primary target of the policy is poor households for whom free basic services represent a significant poverty alleviation measure.

There is no commonly accepted definition of poverty in South Africa. A straightforward approach to defining poor households is one based on income. Households below a certain level of monthly income can be classified as 'poor'. There are certain problems with this approach, however, as well as with the actual identification of such households. These are discussed in section 10.3 below. At present the Equitable Share of national revenue transferred to local government is based largely on income level as an indicator of poverty (currently R800 a month but likely to increase in the near future). This definition will be the default definition of poor households unless otherwise specified.

The national policy does not define 'poor' and local governments will have an important role to play in defining local poverty indicators and identifying which households fall within the local definition. Local and international experience indicates that it is appropriate that local authorities continue to have primary responsibility for defining poverty thresholds and identifying such households. It is likely that due to cost differences across the country and due to other local issues (such as seasonal unemployment in some areas) that specific local poverty indicators will be more appropriate than national indicators. National government can provide support in selection of appropriate indicators and the Department of Provincial and Local Government has already begun to do so (see *Targeting Poor Households in the Provision of Basic Municipal Services: A Guideline for Municipalities*, DCD, 1999).

3.3 Volume of water – what is a basic amount

South African standards relating to a 'basic' level of water supply, that is, a level sufficient to promote healthy living, come from the World Health Organisation standard of 25 litres per person per day. This amounts to about 6 000 litres per household per month for a household of 8 people. This volume of 6 000 litres per month has therefore been set as the target as a 'basic' level for all households in South Africa. This quantity will also be regulated as part of the national strategy in terms of Sections 9 and 10 of the *Water Services Act of 1997* (RSA, 1997).

Again it needs to be recognised that local authorities should still have some discretion over this amount. In some areas they may choose to provide a greater amount, while in other areas only a smaller amount may be possible. For example, in some remote areas with scattered settlements, high water costs, and water stressed areas it is often not feasible to provide 6 000 litres of water. In such cases a 'basic' level could be related to the technology which is suited to serving the area (handpumps or boreholes for example). In some areas where poor households have waterborne sanitation the total amount of water seen as a 'basic' supply may need to be adjusted upwards (if financially feasible) to take into account water used for flushing. Some local authorities (for example, Volksrust), where affordable, have already defined free basic water as 9 000 litres per month to take into account waterborne sanitation.

3.4 Sanitation linkages

There is a broad policy decision to supply free basic sanitation, but neither a definition of 'free basic sanitation' nor a detailed policy framework is yet in place. In certain situations there may be difficulties in reconciling current sanitation policies with a free basic water

strategy. For example, if poor households have waterborne sanitation some proportion of their free water allocation will be used for flushing as discussed above.

Often water and sanitation are dealt with by the same departments at the local level and financial viability of one service may affect the other. The free basic water policy therefore may have negative impacts on the provision of sanitation and local authorities will have to consider the implications at the local level. This issue of integration of a free basic water policy with a possible free sanitation policy is being given urgent attention by DWAF.

3.5 Legal Framework

The legal framework for implementation of Free Basic Water is essentially that of tariff setting which is guided by the Constitution of the Republic of South Africa (Act No 108 of 1996), the Local Government: Municipal Systems Act (Act no. 32 of 2000) and the Water Services Act (Act No. 108 of 1997). The relevant clauses of these acts will be briefly outlined below:

- The Constitution says in section 152 that one of the objectives of local government is “to ensure the provision of services in a sustainable manner”
- The Municipal Systems Act in section 74 says that : “A municipal council must adopt and implement a tariff policy on the levying of fees for municipal services provided by the municipality itself or by way of service delivery agreements, and which complies with....any other applicable legislation”
- The Municipal Systems Act in section 75 says that : “A municipal council must adopt by-laws to give effect to the implementation and enforcement of its tariff policy”
- The Water Services Act determines in section 10(1) that: “The Minister may, with the concurrence of the Minister of Finance, from time to time prescribe norms and standards in respect of tariffs for water services” and following that in section 10(4) stipulates that: “No Water Services Institution may use a tariff which is substantially different from any prescribed norms and standards”
Such norms and standards for tariffs will be promulgated by the Minister of Water Affairs and Forestry before the 1st of July 2001 in the Government Gazette.

In summary:

The setting of tariffs is a local government responsibility but these tariffs are to be determined within a clear framework of norms as provided for in both the Municipal Systems Act and the Water Services Act as well as the tariff regulations which are soon to be published. It means on the one hand that tariffs must cater for poor households by means of special tariffs or a zero tariff but on the other hand financial sustainability of the service must be ensured. This is the challenge that municipal councils will face, taking into consideration its unique local circumstances.

A further fundamental and guiding legal argument for Free Basic Water is found in the Water Services Act in section 4 (3) (c) which provides sets out a provision for the poor who cannot afford basic water services : “procedures for the limitation or discontinuation of water services must not result in a person being denied access to basic water services for non-payment, where that person proves, to the satisfaction of the relevant water services authority, that he or she is unable to pay for basic services.”

3.6 Timing

The Minister of Water Affairs and Forestry has indicated that the date set for implementing the free basic water policy by local government structures is 1 July 2001. Implementation by this date will, in most areas, require appropriate adjustments to tariff regulations and to municipal budgets by the start of the 2001/2002 financial year. It is possible that some local

authorities will not yet be in a position by 1 July 2001 to be fully providing free basic water throughout their municipal area.

Implementation of the policy nevertheless should be able to begin by 1 July. By this date all local authorities should have carried out significant preparation. They should be encouraged to have collected the required information; evaluated the financial viability of possible scenarios; and established the required tariff policy, targeting approaches and other procedures discussed below and in the guidelines. This forms part of the "first order policy" in the implementation phasing recommended below.

A number of local authorities have already begun to provide free basic water. This experience is being captured in a number of case studies which will be made widely available.

4. Lessons from International Experience

Most countries have some form of social assistance or welfare programmes to provide relief to the poor. In higher income developed countries these programmes are generally within the framework of a comprehensive social security system encompassing income support, unemployment support, pensions and often access to subsidised services. The general approach is that social security is provided by central government while public service delivery assistance lies with provincial or local governments.

Most systems have some mechanism for central government to fund the local level to assist them in meeting their statutory duties, particularly where minimum standards of provision are obligatory. A common approach is the use of some form of equalisation grant which recognises that local authorities have differing capacities to raise revenue and differing expenditure needs and that there is not always a match between these. Equalisation grants operate on the principle that central government should direct assistance to where the mismatch between needs and resources is greatest (Parnell *et al*, 1998).

In middle and low income developing countries there is seldom as comprehensive a social security net as in the developed world. Therefore in these countries local level approaches to poverty alleviation, including subsidised services, are often more important than in the developed world because of the absence of broad income support measures. A wide range of such measures have been used (see Wegelin and Borgman, 1995). The experience from these countries has shown that "targeted local scale (urban or rural) interventions are most likely to succeed in eradicating poverty" (Parnell *et al*, 1998).

A number of key lessons have been identified by Parnell *et al* in the design of targeted poverty alleviation programmes:

- Targeted local scale interventions are most likely to succeed in tackling poverty;
- The careful design and delivery of a targeting mechanism is as important as the level of expenditure committed to it;
- When poverty is widespread and administrative capacity is low, broad targeting rather than narrow targeting is desirable;
- It is critical to ensure that targeting mechanisms should not be 'captured' by the recipient lobby groups;
- Administrative costs should be kept as low as possible;
- Self-targeting and geographical indicators should be used as filters to reduce the need for individual assessments of who is poor;
- Since poor local authorities are less able to mobilise additional local revenue to support services well designed intergovernmental transfers are particularly important;

- Monitoring is always required so that the subsidies do not benefit the affluent at the expense of the poor.

4.1 Water Sector Subsidy Approaches

Because of the public health and individual welfare benefits of universal access to water and sanitation services many governments have historically kept water companies within the public sector and kept tariffs artificially low through a range of subsidy measures. These subsidies have often been provided to the water companies rather than to consumers themselves (Foster *et al*, 2000). The results of these approaches have often been unsatisfactory. The main reasons for this have been the experience that under-pricing of water supplies has tended to benefit consumers with existing water connections, to the detriment of those households without services, and that general subsidies have led to highly inefficient water utilities. The large implicit subsidies that have been evident in the supply systems have tended to create unsustainable water supply systems, unable to extend their networks to the poor.

In response to these concerns there have been strong moves in the water supply sector internationally towards full costing of water services and away from generally subsidised water supplies. One result of these reforms has been an increase in household bills and the unwinding of cross subsidies. Improved credit control has also led to reduced levels of non-payment. All these effects have tended to increase the financial burden on poorer households (Goméz-Lobo and Contreras, 2000).

The growing burden on poor households in turn has led to recent moves towards more targeted subsidies that provide better guarantees of access by the poorest households. A number of countries have introduced targeted subsidies which are directed at poor consumers who cannot pay their bills rather than at water providers broadly.

The main advantage of subsidies directed at consumers are that they are transparent and explicit and that they minimise distortions in the behaviour of water providers and consumers (Foster *et al*, 2000). They are also targeted thus minimising subsidisation of wealthier households and serve well recognised public health and equity objectives. The main drawbacks are potentially high administrative costs, difficulties of designing suitable systems for targeting, and the need to raise finance somewhere else in the water or general fiscal system to cover the costs of the subsidy.

4.2 Experience with Targeting Approaches

Direct subsidies (i.e. subsidies to the household level) are an increasingly popular means of making infrastructure services more affordable to the poor. A central element of pro-poor subsidies is that they rely on the targeting of subsidies, in one form or another, towards those households deemed to be poor. International experience of direct subsidies provides useful lessons for South Africa's implementation of free basic water to the poor. The two differently designed water sector subsidy schemes in Chile and Colombia give particularly useful insights (see Box 1).

Box 1. Water service subsidies in Chile and Colombia

Chile and Colombia are amongst the few countries that have attempted to establish national scale water subsidies for poverty alleviation. The schemes in the two countries are quite different and offer useful lessons.

Chile has established an individual means tested subsidy in which households are screened using a socioeconomic classification system based on an interview in the dwelling. Although fairly costly to administer this targeting instrument is also used to administer a number of other welfare benefits. Eligible households are awarded a subsidy which covers between 25% and 85% of

water and sewerage bills for a period of up to three years. The revenue for the scheme comes from general taxation funds raised by the national government.

Colombia has a different approach. The subsidy is based on a geographical classification of households. Based on guidelines developed by central government all dwellings in the country are classified into six socioeconomic groups based largely on neighbourhood characteristics. Households in the lowest three groups receive a subsidy for water, gas and electricity services (groups 1 and 2 get a subsidy equivalent to between 40% and 50% of the average service cost) while households in the upper three groups pay a surcharge. This local cross subsidisation is supported by regional and national transfers as required.

A comparison of the targeting properties of these schemes shows that large errors of inclusion occur in both cases (i.e. consumers receiving a subsidy who are not really eligible). As regards errors of exclusion the Colombian system has much lower levels of erroneously excluded households. Overall therefore it seems that the Colombian system has better targeting in terms of the objectives of the subsidy schemes.

Errors of Inclusion and Exclusion

Targeting is never completely accurate and the general balance that has to be found is between errors of inclusion and exclusion. Inclusion errors refer to the inclusion of non-eligible households in the subsidy scheme, while exclusion errors refer to the exclusion of those households who should be receiving a subsidy. These errors are often large in practice. In both the Chilean and Colombian schemes up to 60% of beneficiaries of the scheme were not really eligible (a large inclusion error). Possibly more serious are that exclusion errors tend to be high too. In the Chilean scheme more than 80% of deserving households do not receive a subsidy. A comparison of the experience of these and other countries tends to show that there is a trade-off between errors of inclusion and exclusion. The more targeted one tries to make a scheme the more likely that deserving households will be excluded from receiving benefits.

Eligibility Criteria

To find an appropriate balance between exclusion and inclusion appropriate eligibility criteria need to be established. The criteria chosen also affect the administrative costs of the subsidy system. Income is often used as a single indicator. However it is often difficult to measure household income levels directly. Other indicators can be used which are proxies for income. These can include such variables as housing quality, level of education of head of household and others. However it has been found that it is difficult to find a suitable single variable that correlates well with income level.

Income and proxy variables for income are indicators based on individual household characteristics. An alternative approach is the use of geographical criteria which target all households in a particular area based on the areas characteristics. The main advantage is that location is easy to observe and a cheap indicator to administer. The important issue, however, is how well location correlates with underlying poverty measures. Although in some countries, such as Panama, it has been found that geographical criteria can lead to very high errors of exclusion (Foster *et al*, 2000) in other cases (such as Chile and Colombia) it has been found that there is no strong evidence to suggest that an individual means tested water subsidy is preferable to a formal geographically based subsidy scheme (Gomèz-Lobo and Contreras, 2000).

Estimating administrative costs

A targeted subsidy scheme can be very expensive. Estimates from Chile and Colombia suggest that the administrative costs of a subsidy scheme can range from 2% to 18% of the total value of the subsidies. Estimates for Panama however suggest that a subsidy scheme

using targeting which relies on household interviews can absorb as much as 40% of the total value of the subsidy. This is because the administrative costs are high while the monthly subsidies are relatively low. It must be noted that in all the cases it has been found very difficult to get good statistics on the true costs of the subsidy programme.

In general, administrative costs must be managed and have the potential to use a significant proportion of the subsidies that should go to the poor. International experience and simulations show that low value subsidies are hard to justify in administrative terms unless the selection procedures can be shared across a number of subsidy schemes (Foster et al, 2000).

The “no targeting” option

It is of course possible to avoid the targeting issue by providing a free basic service to *all* households. The advantages of this are that the administrative costs of targeting are avoided and that there is equal treatment of all consumers. The disadvantage is that a significant proportion of the subsidies will be going to wealthy households (this can be mitigated to some extent in some cases by a rising block tariff structure, discussed in section 9). Because middle and upper income households in many cities have the majority of private, metered connections they often receive the majority of water sold at the subsidised price (Boland and Whittington, 2000). A deeper concern with not targeting subsidies is that this may simply not be financially viable in areas with limited ability by consumers to cross subsidise.

4.3 Sources of Revenue

There is a broad agreement in the international literature that the economic cost of raising revenue tends to be lowest at the national level. Use of the national tax base reduces high levels of incidence on any individual region or consumer group. The use of income and value added taxes also tend to have lower distortionary effects in the economy. There are therefore strong arguments for revenue raising for a countrywide subsidy to occur through the national tax system.

At the same time there continues to be a strong reliance in the water sector internationally on local level revenue raising through cross subsidisation between consumers of a single service provider (Boland and Whittington, 2000). The reasons for this appear to be administrative ease rather than economic efficiency. Those countries with more sophisticated nationally determined subsidy schemes tend, however, to place greater reliance on transfers from national government and not solely on local level cross subsidies. The Chilean and Colombian experiences are instructive as to different subsidy design options as they rely on different levels of cross subsidisation or revenue raising.

National subsidies versus local cross subsidisation

In Chile the subsidy is financed from the national fiscus. The National Planning and Cooperation Ministry is responsible for determining the number, amount and regional distribution of subsidies, as well as the detailed parameters determining the benefits accruing to households. These parameters must also be approved by the Ministry of Finance. Once the total number of subsidies are determined they are made available to regional governors who distribute the total regional amount to the different municipalities according to national guidelines. The municipalities are responsible for all the administration related to providing the subsidies at the local level.

There is a complex financial control mechanism. The water services provider invoice the municipality for all charges discounted from eligible customers bills. The municipality then passes this to the regional governor who consolidates all invoices into a regional invoice.

This is passed to the Regional Development Department of national government which verifies the invoices and generates a national invoice that is presented to the Ministry of Finance. The transfer of funds then flows in the opposite direction.

In Colombia the six national household income categories form the basis of the revenue raising approach. Firstly, a surcharge can be applied to the upper two categories and to industrial and commercial groups (institutions such as hospitals and schools are exempt from paying surcharge or receiving subsidies). The surcharges are capped at a maximum of 20% of the water and sewerage bill. If a water services provider, after applying the surcharges and subsidies, obtains a net surplus the funds must be deposited in a 'solidarity and income distribution fund' of the relevant regional entity (such as a Municipality, District or Department). These resources are then used to fund subsidies for other providers of the same service in the same regional area (i.e. those providers that show a deficit). If, after this last transfer, there is still a surplus of funds, these can be transferred to adjacent localities, according to national criteria set by the relevant regulatory commission. Finally, if the local surcharges are insufficient to fund the required subsidies the difference can be funded by transfers from the National or Provincial budgets. These national and provincial funds may come from general tax revenues or from 10% of the land tax revenues. These funds are also deposited in the 'solidarity and income distribution fund' of the relevant municipality which must in turn pay the service provider within 30 days from the date that the service provider submits an invoice to the municipality.

There is no easy way to assess which of these approaches is more efficient. The presumption is that the Chilean approach should impose less efficiency losses on the economy because the revenue is solely raised through general taxation. Because both schemes are based on the presentation of an invoice by the water services provider to the municipality, backed by national level 'guarantees', they both provide strong protection against the service provider suffering financial loss as a result of the subsidy.

5. Current Basic Water Subsidy Arrangements in South Africa

At present in South Africa there are a number of subsidy mechanisms intended to support the operating costs of basic water services. These include national grants and local and district level cross subsidies.

5.1 National subsidy arrangements

The primary source of financing for local government remains local taxes and other revenues levied and collected by municipalities themselves, including property taxes, levies and user charges. The equitable share and other transfers that go to local government supplement these revenues and are targeted at the poorest municipalities that have a limited local tax base and who have the highest numbers of poor households.

The Minister of Finance, in his budget speech of 21 February 2001, announced significant additional allocations to local government over the next three years. Local government's total share of nationally raised revenue will rise by 11% a year, a faster increase than the allocation to other spheres of government (this increase is in real terms, i.e. it will take into account inflation). The increase in the equitable share allocation is the most direct contribution to the free basic services challenge although no specific adjustment has been made to the grant to take into account the provision of free basic services.

The equitable share at present is composed of two parts. The Igrant component is meant to ensure that every eligible municipality has sufficient funds to maintain a functioning administration. The Sgrant is the largest part of the equitable share and its purpose is to

ensure that low-income households in all municipalities receive access to basic municipal services (DPLG, 2000).

The allocation of the equitable share has risen rapidly, from R1 867 million in 2000/01 to R2 618 million in 2001/02, and is projected to increase to R3 551 million in 2003/04. The S-grant component of the formula for the horizontal distribution of the equitable is based on the number of households with an income below R800 a month and favours areas with the highest levels of poor households. Therefore the increased allocations will benefit those municipalities that have the most limited potential to cross-subsidise.

Local government will also receive additional conditional grant funding, most notably through the introduction of a transition grant, to assist municipalities with the costs of amalgamation following boundary demarcations. Total transfers to local government, including the equitable share, rise from R6,5 billion in 2001/02 to R7,8 billion in 2003/04. These funds include R2,2 billion in allocations for the extension of basic municipal infrastructure to poor households.

Additional allocations to the equitable share may also become possible over time as existing transfer programmes are consolidated and streamlined. Existing transfer programmes are shown in Table 1 below.

Table 1. National transfers to local government (Source; National Treasury, 2001)

(subsidies directly related to free basic water shaded)

R millions	2000/01	2001/02	2002/03	2003/04
Equitable share	1 867	2 618	3 002	3 551
R293 personnel ¹	463	--	--	--
Transition grant	100	250	200	--
Water & sanitation operating	746	692	644	662
Subtotal equitable share & related	3 176	3 560	3 846	4 213
Restructuring grant	300	350	450	465
Local government support grant	150	160	220	230
Financial management grant	50	60	120	125
Urban transport fund ²	22	81	40	42
Land development objectives ³	44	--	--	--
Municipal systems improvement prog.		30	30	30
Subtotal capacity building & restructuring	566	681	860	892
CMP	883	994	1 159	1 407
Water Service projects	609	822	818	835
Community based public works	374	374	374	374
Local economic development ⁴	104	76	99	127
Subtotal capital	1 970	2 266	2 450	2 743
Total transfers to local government	5 712	6 507	7 156	7 849

1. R293 municipal portion (R358 m) incorporated into equitable share from 2001/02.

2. 2001/02 allocation is R38 m plus rollovers from previous years.

3. Incorporated into equitable share and municipal systems improvement programme

4. Includes allocation for Social Plan Measures.

The implications for local authorities of the increases in the equitable share will be a general raising of the average grant per poor household. It is very difficult to determine at this stage

what this actual value will be for an individual local municipality. The changes associated with the demarcation process has meant that the equitable share calculations have had to be adjusted to take into account the relative proportion of rural and urban areas in each municipality. This proportion, as well as the population figures for the new boundaries, will determine the final share received. It is probable that the average national value of the S grant component of the equitable share received per poor household will be at approximately the original R86 per household per month level.

5.2 DWAF operating subsidies

At present substantial subsidies to the water sector are occurring through the support by national government of the operating costs of DWAF water supply schemes (see item *Water and Sanitation Operating* in Table 1). These schemes are in the process of being transferred to local government and the intention is that the current subsidies directed towards these schemes will be transferred into the equitable share grant.

In general terms a re-allocation of the current operating subsidies should support a free basic water policy. At present these subsidies are not well targeted. There are low levels of cost recovery in many of the schemes. In addition there are indications (such as from the Nkomazi case study) that cost recovery has declined since the free basic water announcement. There also appear to be high levels of illegal connections to large schemes. The implication of these factors is that many households are receiving subsidised (or free) water regardless of income level and possibly at volumes greater than 6 000 litres per month.

At the same time there are certain concerns related to the transfer of DWAF water supply schemes which should be addressed within the transfer process. It is imperative that municipalities taking over such schemes have appropriate management arrangements in place, including tariff policies to ensure financial sustainability, credit control measures and adequate technical resources.

The second concern is that due to the structure of the equitable share there is no guarantee at the local level that the increase in equitable share received due to the transfer of the DWAF operating subsidies into the equitable share grant will match the additional costs associated with a particular scheme. The transferred operating subsidy funds will contribute to the overall equitable share allocation and will therefore be spread nationally leading to a relatively small overall rise in the per household grant. An appropriate mechanism of balancing the loss in transfers to some local authorities may be required if particular transferred schemes are not independently viable.

5.3 Local level subsidy approaches

The most important means of financing services at the local level remains locally raised revenue. In 1998/99 revenues raised from water trading accounted for 14% of overall local government revenue (excluding Metropolitan areas) compared to the 2% contributed by intergovernmental grants (IGGs). In rural municipalities the proportion of IGGs was much higher, but still a minor proportion, at 21% of revenue.

Cross subsidies at the municipal level have historically been managed either through transfers from the District Council levies; from transfers between general rates accounts and other accounts; or through transfers within trading accounts.

District level cross subsidies have generally been aimed at capital expenditure. In the water sector there have generally not been any district-wide cross subsidies for operating expenditure across either municipalities or consumers. In other words cross subsidisation has typically occurred between consumers within a local authority area. There have been

some suggestions that the new local government demarcation, with its combined rural and urban district municipalities, allows for a greater degree of cross subsidies at the district level.

However, in many districts there is a relatively small urban area (in terms of population numbers) who would bear the subsidy costs of a large rural hinterland. Assuming that this relatively better off economic base can bear the costs of service provision in the entire district raises the risk of imposing cross subsidies at a level which damages the local economy. No financial analysis has yet been done which shows that cross subsidisation at the district level is more or less appropriate than local level subsidies.

At the same time the Municipal Structures Act (RSA, 1998) does impose a requirement on the district municipality to promote the distribution of resources within its area. Section 83(3) outlines those powers specific to district municipalities as:

- a) ensuring integrated development planning for the district as a whole;
- b) promoting bulk infrastructure development and services for the district as a whole;
- c) building the capacity of local municipalities in its area to perform their functions and exercise their powers where such capacity is lacking; and
- d) *promoting the equitable distribution of resources between the local municipalities in its area to ensure appropriate levels of municipal services within the area.*

Given this legal obligation and the uncertainty regarding the relative merits of district versus local level cross subsidies it is suggested that additional financial analysis is undertaken to provide guidance to district municipalities with regards to their role in assisting the provision of free basic water.

At the local level tariff policies (combined with the use of the equitable share) have been used to provide cross subsidies from wealthier consumers (higher income households and non-residential consumers) to poorer households. However with the new demarcations the ratio between wealthier and poorer consumers has changed significantly in most local municipalities. It is not clear that a cross subsidy approach remains viable at this level either. For example, the case study research indicates that while the former TLCs in the Nkomazi municipality are able to provide free basic water through cross subsidies alone within the former TLC boundaries they will not be able to provide free basic water throughout the new local municipality (which has a rural population of approximately 232 000 people) with internal subsidies alone.

Subsidy methods currently used

The case study research suggests that at the moment a combination of rising block tariffs, often with a low rate for the first block, and targeted rebates to poor households are being used to provide pro-poor subsidies. Although the approaches used may be appropriate for local conditions one drawback is that due to the mixed structure adopted in many authorities they are very opaque in terms of the source of revenue for subsidies and the level of local cross subsidisation which occurs.

In some areas, such as Durban, service level options are explicitly used as a subsidy approach. In other areas it is likely that there is also a *de facto* situation of using service levels (such as standpipes with no associated payment expected) to deliver subsidised basic water.

The range of approaches from the case studies is shown in Table 2 below.

Table 2. Subsidy approaches in free water case studies

Municipality	Tariff Structure	Subsidy Approach & Income Source
Durban (Metro)	Rising block tariff, zero block 1 (6kl) to all	Internal cross subsidies and service level options
Tshwane (Metro)	Rising block tariff	Targeted internal cross subsidies through indigents policy (in old Pretoria area)
East London/ KWT (B1)	Rising block tariff in East London and a flat charge/kl in King Williams Town	Targeted subsidies through indigents policy
Hermanus (B2)	Rising block tariff, very low block 1	Targeted internal subsidies through indigents policy
Polokwane (B2)	Urban areas rising block tariff, low block 1	Targeted cross subsidies through indigents policy and equitable share
George (B2)	Flat rate and declining basic availability charge with service level	Targeted cross subsidies via indigents policy and equitable share
Volkstrust (B3)	Fixed monthly charge	Targeted rebate to the poor (9kl free) funded from equitable share
Lichtenburg (B3)	Rising block tariff, zero block 1 to all (5kl)	Internal cross subsidies (equitable share used for bad debts)
Douglas (B3)	Two block regressive tariff	Targeted rebates to the poor (10kl free) through indigents policy from equitable share
Nkomazi (B4)	Fixed charge	No free water at present, cross subsidies to areas in old TLC boundaries with low payment rates
Ngqushwa (B4)	Flat charge/kl or fixed monthly charge	No targeted subsidies at present but high non-payment rate, equitable share used for general expenses

6. The institutional landscape

6.1 Water Supply Authority - Water Supply Provider relationships

The water services authority is the body that has the constitutional obligation to ensure that people get water and sanitation services. The Water Services Act (RSA, 1997) and the Municipal Structures Act allocate this obligation to local government for the area, either at district level or local (B) level. This arrangement allows the obligations to consumers in the area to be strengthened by the fact that the service authority is governed by councillors elected by these consumers.

The water services authority has the following functions which are separate from water services provision functions:

- a) *Governance*: to understand the interests of its constituents and ensure that these are translated into actions which will lead to services being provided.
- b) *Planning*: to prepare a water services development plan which should link to the integrated development plan and the associated tariff policy. Also to ensure that water resources are available.
- c) *Finance*: to arrange finance for the capital and operating elements of water services provision. Should either the implementation of projects or of the ongoing services provision activities be delegated to others then the WSA responsibility becomes one of allocating financial resources it has under its control, channeling grants from central and provincial government to consumers or service providers and agreeing the tariffs charged to consumers.
- d) *Contracts*: to ensure that a contract is drawn up with water services providers and other out-sourced activities, using the water services development plan as the basis.
- e) *Regulation*: to take the necessary actions to ensure that water services providers comply with the contract (and thus the water services development plan). Regulation includes the requirement for *monitoring*: to ensure that the service provider performs in terms of the contract.

Key features of a WSP

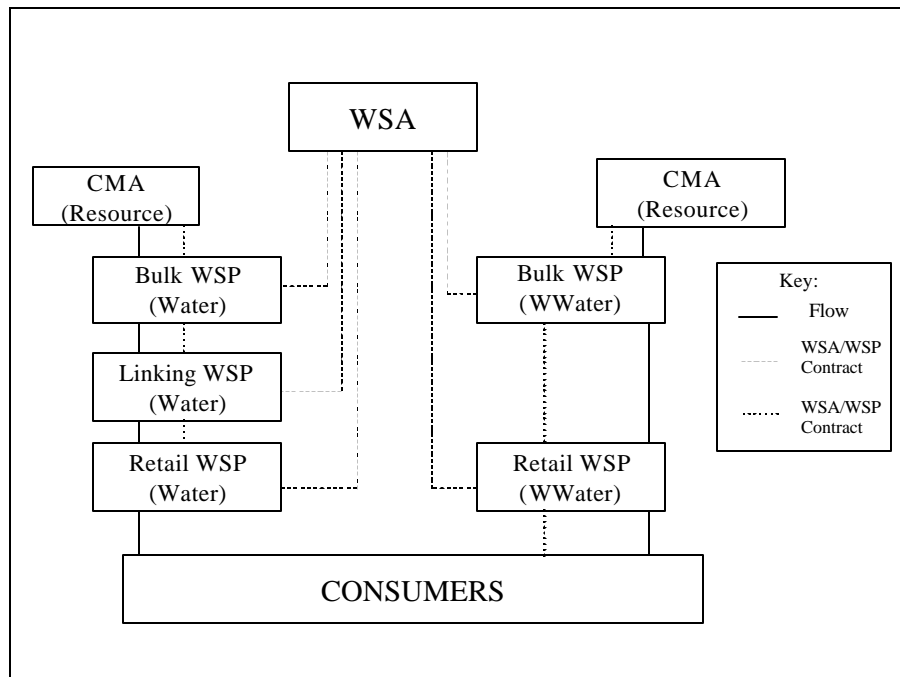
The Water Services Act defines water services providers as 'any person who provides water services to consumers or to another water services institution, but does not include a water services intermediary'. Thus the definition is directly linked to the definition of water services.

The responsibilities of WSPs can be grouped as follows:

- Governance
- Administration
- Finance
- Planning
- Projects
- Consumer relations (liaison)
- Operations

6.2 Relationships between WSA and WSPs

The diagram below shows the relationship between potential components of the WSA-WSP 'chain', linked by contractual agreements. The diagram illustrates the importance of a chain of contracts between WSPs that follows the water cycle from resource (controlled by a catchment management agency (CMA)) to consumer and back to resource via the wastewater infrastructure. Further the diagram illustrates the need for the WSA to 'orchestrate' these relationships through its own contract with each WSP.



It will seldom be the case that each part of the supply and return water chain is contracted out separately. Often water supply and wastewater services are provided by a single WSP (horizontal integration), or the water supply and/or wastewater chain, from resource to consumer, is contracted out to a single WSP (vertical integration).

6.3 Municipalities as services providers

Metro Areas

The metropolitan areas are in broad terms economically strong urban areas with adequate capacity to cross subsidise poor consumers. They also have relatively strong single administrations for water supply. Although there may be a 'rural periphery' within the new metro municipal boundary the capacity of the authority will typically be sufficient to cope with this. The metro's generally manage the complete water system, except for bulk supply where there is a water board.

Districts and Local municipality categorisation (B1-B4)

The institutional option of new municipalities as WSPs is set against the capacity of Local (B) vs. District Council (Category C) municipalities. With regard to the local (B) municipalities, there is a wide variety of circumstances in local authorities in South Africa which will mean that the free basic water policy has to be applied differently in different places.

Large town or city as core (B1)

In the situation where a Category 'B' municipality has a medium or large town as its core it is likely to be feasible for the municipality to take over the full WSP function for the whole area of the new municipal area. Although there may be a 'rural periphery' within the new 'B' municipal boundary the capacity of the authority will typically be sufficient to cope with this.

The larger former TLCs have traditionally managed the complete system, including bulk supply arrangements where there is no water board. All staff, bar operating staff at a remote treatment works, would be located within the town and the scale of the operation allows for formal employment contracts to be used. Management is within easy range of staff they have to manage.

Medium town as core (B2)

In the situation with a Category 'B' municipality having a medium sized town as core there is not an obvious way to proceed. Much will depend on the relative capacity of the former TLC water services department in relation to the extent of un- or under-served people in newly incorporated surrounding rural areas. Where capacity is low in relation to the demand for services it will typically be wise for the municipality to look at contracting other WSPs. This can be done in several ways, including:

- Contracting a private sector or parastatal WSP for the whole of the municipal area.
- Retaining WSP responsibilities for the urban core but contract other WSPs for the periphery. Here a community based organisation type of model may be suitable if there are relatively well established communities in the periphery.
- Possibly involving the Category 'C' (district) municipality to undertake at least bulk WSP responsibilities.

Small town as core (B3)

In this case the viability of the core is less certain. Existing capacity to manage water services, particularly bulk services, is probably reduced to operating activity only. A number of options need to be considered:

- No WSP role for the Category B (local) municipality, leaving the arrangement to the Category 'C' or those it contracts.
- Split responsibility between municipalities, perhaps with a district municipality providing a bulk service and support function. The retail WSP function can then be shared between Category B municipality and other service providers.

- Full WSP functions for the local municipality in some areas with other WSPs contracted by the local municipality in other areas. (This is an unlikely option as the local municipality will probably not be the WSA).

No town/ no viable core (B4)

In this case there is unlikely to be any role for the 'B' municipality other than one of representation. There is probably a strong role to be played by settlement based organizations (CBOs). But they need support with high level activities and the district municipality is probably best placed to do this with some assistance from support agents.

Capacity also needs to be considered from the point of view of category C municipalities. It is unlikely that any of the new Category 'C' municipalities will currently have the capacity to undertake retail WSP responsibilities over their entire areas of jurisdiction. However, they may be well placed to act as a bulk WSP, particularly if there is no water board established in the area. This leads to what can be called a 'split responsibility' arrangement. This is provided as the basic option in the municipal structures act but, in fact, it can not be universally applied. Much depends on the scale of bulk services required. The smaller the scale the more feasible it becomes to manage the infrastructure at local level. The 'split responsibility' institutional model is most applicable where there is a Category B with a weak core.

How split responsibility can work (small town and 'no town' options)

Category B municipality (for urban settlements) and settlement based organization (for rural settlements) manage distribution (including retail relationship with consumers) and local bulk systems:

- Operating (including minor maintenance) staff
- Meter reading and pay points
- Managing local account

Bulk system (schemes) and support services provided by category C municipalities:

Support services include:

- Management (including planning and mentoring)
- Major maintenance staff
- Schemes for bulk water supply (excluding local sources)

6.4 DWAF water supply schemes

DWAF is the *de facto* WSP on many projects around the country, primarily in former homeland areas. The Department has a clear policy to withdraw from this role and hand over responsibility to WSAs who have the statutory obligation to undertake this function (DWAF, 2000b). Where the WSA does not have the capacity to undertake the water services provider function, in addition to being the WSA, it is necessary for a newly contracted WSP to take over this responsibility from DWAF.

The financial arrangements during transfer are critically important. This requires a transition from a situation where DWAF is fully subsidizing the operating cost of the services to one where there is a mix of cost recovery from the users of the service (or 'downstream' WSPs) and funds from WSA resources such as the equitable share.

6.5 Water boards as service providers

Water boards are currently well established as bulk water supply services providers for South Africa's urban areas. Certain of them also engage with bulk water supply to rural areas and some provide bulk sanitation services. As a whole they are increasing their 'other than

primary' activities and are extending into retail water services, support services and various commercial ventures.

Water boards are facing transition and there is currently considerable debate on how to maximize the development impact of water boards on the one hand and how to improve their efficiency on the other. Over the late 1990s there has been a strong drive from DWAF for water boards to expand to rural areas. This has been feasible with high capacity water boards but it has probably stretched some with lower capacity too far. (Palmer, 2000). Water boards have an important role to play in the future but the way forward needs careful consideration with the objective being to expand their service coverage while maintaining their ability to function effectively and promoting efficiency.

6.6 Community based water services providers

This option of using CBOs as service providers offers benefits for smaller settlements or groups of settlements (typically less than 5 000 people), notably:

- Arrangements can be informal and costs can be kept low.
- CBOs are close to their consumers.

Due to the findings from research, together with practical experience in South Africa, this type of arrangement has been strongly promoted by DWAF over the last three years. It has been recognized that a key criteria for success is for a support services arrangement to be in place. CBOs need to be legally constituted as a voluntary association, trust or section 21 company. As the voluntary association is the easiest arrangement to establish this is likely to be the most widely used. Another model which has not yet been tried in South Africa is a co-operative, essentially a company with all of the individuals who are served as shareholders. A particular issue which needs attention is the statutory water committee option provided for in the Water Services Act. In the case of CBO WSPs the type of contract would typically be a lease as the WSP will not be expected to raise capital.

6.7 Private sector water services providers

The feasibility of using private sector WSPs in urban areas, and the methodology for doing this, is becoming well understood in South Africa, particularly through the experience with Queenstown, Nelspruit and Dolphin Coast. Many new ones are being conceived. In rural areas there has not yet been significant involvement of the private sector in water supply but if the constraints can be overcome private-public partnerships may become important in these areas as well.

A free basic water policy will impact directly on private WSPs, and WSAs will have to work closely with private providers in implementing the free basic water policy. In areas where private WSPs are already providing water some re-negotiation of contracts may need to occur. This will have to occur within the framework of the regulations (still in draft form) governing contracts with WSPs under section 19(5) of the Water Service Act (DWAF, 2001). In areas where WSP contracts with private providers are still to be instituted, it is evident that the following basic requirements must be in place:

- Clear local institutional arrangements.
- Capital and operating subsidy rules with sufficient operating subsidy to make the service affordable.
- Planning taken to stage where water resources are identified and feasibility of operations can be demonstrated.
- Agreed service levels and service quality.

The structuring of viable WSP areas will be crucial to success. It is probable that these will cover larger settlements with larger schemes, at least for the medium term. For smaller

settlements private sector WSP options will be less viable and CBO options with support arrangements are more appropriate.

7. Technical options

7.1 Service Level Policy

The requirement to supply a free basic level of water implies a need to either measure or control the amount of water supplied free. Certain service level options address this by their nature (such as standpipes and flow limiting options where consumers are unlikely to consume more than 6 000 litres per month). Other service levels allow unrestricted consumption and these must be metered and managed

The mix of service levels will be an important tool available to local authorities in implementing the policy. DWAF has recently produced a *Water Supply Service Levels Guide* (DWAF, 2000). The range of service levels discussed in the Guide are listed in Table 3 below, together with comments on their applicability to a free basic water implementation strategy.

Table 3. Water supply service levels and their applicability to free basic water

Description of service	Application	Suitability for 'free basic water'
<i>Rudimentary systems:</i> Hand pumps on boreholes, spring protection etc	There will always be rural areas which can not feasibly be provided with reticulated systems; rudimentary systems are inexpensive	With low capital and operating cost and inherent limitations on the amount which people can use this is well suited to a 'free basic water' policy. However, for the service to be 'free' this implies that a WSP will carry out maintenance at no cost to consumers. It is questionable whether the capacity exists to do this.
<i>Communal street tap:</i> Tap shared by a number of consumers.	While communal taps have been used in urban areas their widest application has been in rural areas where this has been the most common service level provided under water supply programmes over the last decade.	Communal taps are a low cost option well suited to providing water to poorer consumers. It is seldom that consumers would use more than 6 kl with such a service and therefore this service level is well suited to a service level targeting approach. However, for success those communal taps must be mixed with higher service levels.
<i>Prepaid communal street tap:</i> Communal tap with a prepaid meter	This option has been introduced recently in a number of areas with mixed results. Depends on community acceptance.	If up to 6 kl is to be provided free than the need for a pre-paid meter falls away as no payment is to be made.
<i>Low pressure trickle feed yard tank:</i> Tank, typically 250 litres, located in yard with flow control device in tank. Permanently connected to network.	Yard tanks have a major benefit in that they provide a restricted supply at a fixed monthly charge. They also allow for a cost effective reticulation design. This version (trickle feed) offers the benefit that bailiffs do not need to open manifolds on a daily basis. However, the tank can be easily bypassed.	In the context of a 'free basic water' policy yard tanks are an important service level as they provide a relatively high restricted flow service level (less than 6 kl/ month). Typically the tariff for the tank would be set at zero. This fits well with any of the poverty relief options (rising block tariffs, targeted credits and service level targeting).
<i>Low pressure manually operated yard tank:</i> A tank which is filled from a manifold on a daily basis.	Has the same benefits as the trickle feed tank with the following exception: the daily manifold opening is labour intensive. However, the tank can not be bypassed.	As for the trickle feed tank, there is wide application for this type of service in a 'free basic water' context.
<i>Low pressure regulated yard tank:</i> A tank with a regulator	Similar to a yard tank but does not require daily opening of a manifold.	As for other yard tank options, this is well suited to a 'free basic water' initiative.

Description of service	Application	Suitability for 'free basic water'
<p>(equity valve) at a node point on the reticulation.</p> <p><i>Medium pressure manually operated roof tank:</i> Unregulated flow to a tank on the roof directly from reticulation, with metering.</p>	<p>Bypassing of the tank brings no benefit to the consumer and therefore is not a problem.</p> <p>Has limited application as a service between normal metered supply and yard tanks. Main benefits relate to saving on reticulation costs. May be a good upgrading option.</p>	<p>No particular benefits: needs metering, billing and credit control systems.</p>
<p><i>Medium pressure regulated roof tank:</i> A roof tank version of the low pressure regulated yard tank.</p>	<p>This option is also based on having a regulator at node on the reticulation. Therefore it allows for restriction of flow without the risk of bypassing.</p>	<p>This is well suited to a 'free basic water initiative'. It allows a relatively high service level with limited flow volume.</p>
<p><i>Full pressure conventional house connection:</i> the standard system with a direct full pressure connection to the reticulation, metering and billing.</p>	<p>While named a 'house connection' system, the 'yard tap' is also included under this category. This is the highest level of service but it requires an effective metering and billing system to function properly.</p>	<p>This service level generally has to be integrated with a 'free basic water' initiative. If it is used with service level targeting then it would be assumed that those which have it can pay cost reflective tariffs. For situations where the poor have access to this service level they a rising block tariff or credit system needs to be in place.</p>
<p><i>Full pressure prepaid house connection:</i> Conventional connection but with prepaid metering.</p>	<p>The inclusion of pre-paid metering avoids the necessity of reading meters and billing. Non-payment is not an issue but tampering with meters can be a problem.</p>	<p>Most prepaid meter systems provide for rising block tariffs and the option of having a zero first block. In this case they are suited to a 'free basic water' initiative.</p>

From the analysis above some principles relating to service levels can be outlined:

- *Importance of mixed service levels:* In all but the wealthiest municipalities it is important to have a range of service levels to offer to consumers. This allows appropriate service levels to be matched to the ability of consumers to pay. Thus becomes even more important under a 'free basic water' policy, as noted in the table. A so-called 'low level' trap should be avoided i.e. one in which the water supply system is never improved because consumers are only willing to pay small amounts for their current service level. Given the option often many consumers would opt for a higher level of service and be willing to pay more for this service.
- *Importance of flow restriction:* The availability of options which restrict the flow to consumers is an important attribute of a good local 'free basic water' policy. It allows people who cannot afford to pay more to only get a basic supply (poverty relief consumption level). In cases where there is an existing system with direct connections from the reticulation to the yard, flow limiting becomes difficult. However, Durban has facilitated the development of an electronic flow restricter which allows only a fixed amount to be supplied each day.
- *Metering:* Under a free basic water policy it is essential that all unrestricted supplies are metered. The installation of meters must at all times be properly communicated to users or else resistance and even vandalism may be experienced that will destroy all such good intentions.
- *Appropriate design standards:* A key component of a local 'free basic water' policy is the provision of water at the lowest cost possible while still maintaining a good quality of service to consumers. In order to keep costs down this implies that appropriate design standards must be applied.

8. Three Possible Free Basic Water Approaches

A free basic level of water supply can be supplied to consumers in three ways and these three basic approaches are suggested as the core of the free basic water implementation strategy. The approaches are:

- A rising block tariff (with a free basic amount to all who consume within the first block)
- Targeted credits or subsidies
- Service level targeting

It is recommended that flexibility remains at the local level in the use of these options. It is also likely that a mix of these options may need to be applied in any one municipality.

The choice of approach remains a local decision but one largely dictated by local circumstances. Rising block tariffs will only be viable where there is a sufficiently large number of middle and high income water users to generate the needed cross subsidies. A targeting approach will be most needed in those areas where there are many poor people and high proportions of people just above the 'poverty line' of the equitable share. For financial viability some targeting method will need to be used to exclude (or partly exclude) these consumers from a full subsidy (i.e. free water).

Those municipalities with very low capacity and a high proportion of poor consumers may have to rely in part or full on a service level targeting approach where limited service levels are used which by their nature only supply a basic amount of water. However, even in these areas it may be necessary to recover some costs from those consumers who can afford basic services.

Table 4. Three options for free basic water supply

	Option 1 Rising block tariffs	Option 2 Targeted credits	Option 3 Service level targeting
Description	Rising block tariff is applied to all residential consumers, with the first block typically set from 0 to 6 kl with a zero tariff. No fixed monthly charge applicable to those using below poverty relief consumption limit.	Each consumer who is selected for poverty relief gets a credit on their water account which would typically be sufficient to cover the charge for the poverty relief amount (often 6kl per month) free.	Those service levels which provide a restricted flow, (below the poverty relief consumption level) are provided at no charge. Those with higher service levels pay the normal tariffs, except for poor consumers who historically have high service levels.
Targeting method	No targeting (first 6kl free to all). However, targeted fixed monthly charge may be necessary for holiday areas.	Requires a system for identifying those who require poverty relief. Typically this is based on a benchmark household income level of R800 per month.	Targeting takes place through selection of service level by the consumer (or authority in some cases).
Applicability	Mainly A, B1, B2 municipalities. Not suited to situations where there is a high proportion of holiday homes unless it is supplemented with a targeted fixed monthly charge.	Can be used in A municipalities but more typical for B1 to B3 municipalities. Requires a billing system to be in place for all consumers.	Best suited to B4 municipalities, particularly for first order strategy.

Table 5. Method of selection

	Option 1 Rising block tariffs	Option 2 Targeted credits	Option 3 Service level targeting
Advantages	Consistent with current approach to use rising block tariffs. Does not require targeting. The 'free basic water to all' message can be applied but is misleading larger consumers typically pay more.	Suited to situations where there are fewer larger consumers. Relatively simple to apply from an accounting point of view. Easy to integrate with other services where a 'free basic service' policy is being applied.	Suited to municipalities with lower capacity and large proportion of poorer consumers. Typically does not require a metering and billing system for restricted flow service levels.
Disadvantages	Only applicable where there is a relatively high proportion of larger consumers. Requires an effective metering, billing and credit control system.	Requires a system to select those who are to benefit from poverty relief measures. Requires an effective metering, billing and credit control system.	Targeting may be poor if there are a large proportion of households using restricted flow services. Will only work if metering, billing and credit control system for unrestricted flow service levels is effective.
Residential frequency distribution requirements	Typically requires 30% of residential consumers purchasing more than 20kl/month	Only dependent on frequency distribution if poverty relief is to be partly or wholly funded from water account.	Non relevant unless poverty relief is to be funded from income raised from consumers with metered connections (which is seldom possible).
Impact of non-residential consumption	Typically requires more than 20% of water sales to be to non-residential consumers	Only relevant if poverty relief is to be funded from non-residential consumers.	Generally there is only a small proportion of non-residential consumers and it is not possible to fund poverty relief from income raised from them

9. Financing the policy

The three options presented above provide a delivery framework for implementation of the free basic water policy. They do not however completely address the question of where the financial resources for the implementation strategy will come from.

It is evident that a number of local authorities will be unable to finance free basic water to all consumers (especially alongside other free basic services) solely from internal cross subsidies. Although there is not yet a clear picture of income distribution at the local level for the newly demarcated authorities it is apparent that some of them have a very small revenue base. Nearly 48% of the total population of the country live in municipalities with average 1999 per capita incomes of less than R720 per month¹ (DPLG, 2000). The central challenge of the free basic water policy is therefore addressing the financial constraints.

Addressing the financial constraints require three issues to be addressed:

- *Reducing costs*: the lower the costs the easier to subsidise services;
- *Ensuring sufficient resources are available*: assessing the costs of the subsidy programme and ensuring that sources of revenue internal and external to the local authority are adequate;
- *Delivery of the subsidy to poor households*: making sure that resources devoted to the subsidy are targeted to eligible recipients.

¹ This is based on pre-demarcation municipal boundaries

9.1 Reducing costs

The costs of supply of water services greatly affect the ability of municipalities to provide free services. Local authorities should be encouraged, through such measures as appropriate infrastructure standards and management of water losses, to reduce costs.

Bulk water is a major cost driver in water services. In those areas where bulk water is cheap it becomes relatively easy to implement a free basic water policy. See Box 2 below where the Lichtenburg case study demonstrates the importance of bulk water costs in the financial viability of free basic water provision. Case study research from Durban indicates the cost of bulk water is high as a proportion of retail prices in international terms. Although this information is case-study based and not representative it does point to the need to keep bulk water prices as low as possible (with due regard to water conservation imperatives).

Box 2. Bulk water costs – Lichtenburg case study

The Lichtenburg case study shows that if bulk water can be provided at a sufficiently low cost then a free basic water policy becomes easily implementable. The municipality sources its own bulk water from groundwater and managed to supply water to consumers at a price in 1997/1998 of R0.34 per kl. The municipality feels that it is possible to provide a free basic water supply to consumers in 2001/2002 in the areas of the municipality where they source their own bulk. In the areas of the municipality where they have to buy bulk water from a water board the greater costs of the water will probably prevent them from providing a free level of service. In these areas the municipality pays R1.10 for bulk as opposed to their own costs of R0.40. They are currently negotiating to take over the bulk supply.

9.2 Financing free basic water

The required revenue for providing free basic water (as either a targeted or universal subsidy) can come from internal or external sources. Establishing the costs of provision (in simple terms the average costs of supply multiplied by the amount of water provided for free) is the first step required of the local authority. More detailed cost analysis needs to occur which can be supported by a number of financial modeling tools available.

The next step is ensuring that adequate revenue is available to cover these costs. To do so a municipality will need to determine what resources are jointly available from cross subsidisation and the equitable share.

Internal cross subsidies

The extent of cross subsidies will be determined by the particular tariff structure adopted by a local authority. The level of such subsidies that can be sustainably incorporated into a water tariff structure will depend on a number of local factors (Eberhard, 1999):

- capital subsidies to, and capital requirements of, the local water system;
- total equitable share subsidy made available to the WSA;
- regional and local cost factors which influence the costs of supply;
- total wealth of the supply area;
- proportion of water consumed by the non-residential compared to the residential sector;
- income distribution within the supply area;
- consumption distribution within the supply area; and
- local political feasibility of introducing cross subsidies.

In particular the ratio between wealthy and poor consumers; the distribution of consumption in the supply area (i.e. the ratio of large to small consumers); and the ratio between industrial and residential consumers are likely to be central to the viability of local level cross subsidies. Local authorities should ensure that they gather adequate information on these factors to

enable proper local financial planning. These factors have been incorporated into a simple financial model that will be made available to local authorities to assess the financial impacts of the free basic water policy in their areas. More complex financial models are also readily available which allow for detailed tariff setting and long term planning.

Some suggestions as to the applicability of different tariff approaches to the provision of free basic water are given in Box 3 below.

The approaches required to develop a sustainable tariff policy are not in conflict with the current draft DWAF tariff policy guidelines. There are, however, some constraints on the raising of revenue through cross subsidies including:

- the willingness and ability of higher income water users to pay costs above the average cost of supply;
- the distribution of consumption of water in the area;
- the impacts that price changes will have on water use; and
- the need to minimise distortions to the local economy.

At present there are no legislated caps on the degree of local cross subsidisation that can occur through a local tariff structure. DWAF is currently finalising norms and standards for water services tariffs that will be published before the 1st of July 2001 as compulsory regulations. The introduction of a free basic water services policy should fit within the framework established by the tariff regulations, as well as the relevant sections of the Municipal Systems Act (section 74 and 75 in particular) dealing with a municipal tariff policy (RSA, 2000).

Local authorities should bear in mind the concerns about too high a degree of cross subsidies through water tariffs alone. As discussed above, local level revenue raising mechanisms tend to be far more distortionary than national taxation. With respect to non-residential consumers there is a national policy commitment to keeping input costs of industrial consumers as cost reflective as possible to encourage efficiency and competitiveness. For these reasons those national revenue sources available, primarily the equitable share, should as far as possible be used to support the free basic water revenue requirements to minimise the need for excessive local revenue raising.

Tariff policy has typically been established at the local municipality level. As discussed district municipalities may have some role to play in distribution of resources across the district. However it does not seem appropriate at this stage that any such distribution should occur through the development of district-wide tariff structures.

The option also exists for the use of cross subsidies at the regional level through bulk services providers. This issue is under investigation by some bulk providers and their local authority customers. The advantage of this approach would be a broader consumer base over which to cross subsidise, and also that some non-municipal consumers (such as large industries and mines) would contribute to cross subsidies. However, there are also concerns about this approach, such as the mechanism of subsidy payments that would be used, and further investigation on the pros and cons of this approach in specific areas still needs to occur.

Box 3. The applicability of different tariff approaches to the provision of free basic water

Tariff structures – residential

- *Applicability of fixed monthly charges (also called basic charges or availability charges):* Fixed monthly charges alone are not encouraged for unrestricted supplies as they do not promote equity, conservation or efficient management. However, they may be applicable for restricted supplies in some cases. While fixed monthly charges are not recommended as the only tariff they may be necessary where:
 - A rising block is selected but there is insufficient funding to cross subsidise through only using a rising block tariff.
 - The municipality has a large number of holiday homes.In both cases the fixed monthly charge may need to be levied in addition to a consumption charge. However, the fixed monthly charge needs to be excluded for those targeted for poverty relief. If a rising block tariff is being used this can be done by levying the fixed charge only on those consumers using above the poverty relief consumption level (See Durban case study). Where a credit system is being used the credit will have to be sufficient to cover the fixed monthly charge.
- *Fixed monthly charges varied for different groups:* The option of the fixed monthly charge being one amount for all except those targeted for poverty relief has been raised above. It is also possible to vary the charge for different socio-economic groups, making it zero for the poor for a free basic water policy. This creates a transitional arrangement (See Hermanus case study).
- *Rising block tariffs:* This is the required tariff for use with the poverty relief option based on rising blocks. For the tariff to be 'pro-poor' it can not be associated with a fixed monthly charge to all consumers, as stated above.
- *Flat rate tariffs (the same amount for each kl consumed irrespective of the amount used):* If the poverty relief option is based on targeted credits or service level targeting, then either rising block or flat rate tariffs can be used for the consumption related charge. However, flat rate tariffs are simpler and often more suited to B3 and B4 municipalities.

Tariffs for non-residential consumers

- *Cross subsidise from businesses?* A key decision facing municipalities is whether to cross subsidise from commercial and industrial enterprises to poor residential consumers. The argument for this is that business has a responsibility at the local level to assist the poor. The argument against is that if local economic development is to be promoted then the input costs to business should be kept low. This is a local choice but the current view of national government is that municipalities should keep tariffs to commercial and industrial consumers as cost reflective as possible, ensuring that these consumers do pay the full costs of water supply.
- *Tariff structures for non-residential consumers:* The use of rising block tariffs for non-residential consumers is not recommended unless it is used with the concept of residential unit equivalents (RUEs). This is because larger users end up paying for most of their consumption in the top block which may be highly inequitable.

Allocation of the equitable share

If the local revenue base is inadequate to meet the costs of implementation local authorities have recourse to the equitable share. Although the equitable share is an unconditional grant there are strong political requirements to direct the grant towards the provision of basic services. The Constitutional intention of the grant is clearly to support the provision of basic municipal services. As discussed above there are also economic efficiency reasons for utilising this grant in support of free basic water provision.

Because the equitable share is granted on the basis of poor households in a municipality it will generally be insufficient to cover the costs of a free basic water supply to *all* households

in an area. If the approach is one of universal provision of free basic water then the equitable share will have to be mixed with locally raised revenue. If the approach is to use the available equitable share to fund free water to poor households such households have to be identified and targeted (this is discussed in the following section).

An important element in ensuring that the equitable share is used to subsidise its intended beneficiaries is the passing on by municipalities of an appropriate proportion of the grant to local water service providers (see below) who are supplying poor households.

Although the equitable share is an unconditional grant the intention of the grant is clear and appropriate use of the equitable share would be supported by improved monitoring of its use from national level. At present national government has insufficient information on the local use of the equitable share. DPLG is intending to improve reporting by local government on the use of the grant and this information should be incorporated into a medium term evaluation of the free basic water implementation programme. Some concerns have been raised that the equitable share amount is insufficient to cover the costs of all basic services at the local level. This may be a particular concern where the costs of water supply are particularly high. Improved monitoring and evaluation of the use of this grant should provide better information as to the validity of this concern.

Notwithstanding the need for improved monitoring of the equitable share, overall it seems that a mix of revenue sources is appropriate at this stage and that local authorities should have discretion over the financing composition of the free water policy as long as it falls within current guidelines.

9.3 Targeting poor households

If financial constraints dictate that free basic water is provided solely to poor households these households must be defined and identified.

Definition of the poor

At present the default definition of the poor are those households with an average monthly income below R800. The DPLG and National Treasury have recognised that this measure is inadequate for a number of reasons:

- *It is out of date:* the same figure has been used since the inception of the equitable share grant. It has not been adjusted for inflation nor has it taken into account changes in the underlying demographics of the country, such as rural to urban migration.
- *It is income based:* there are strong arguments that expenditure is a better indicator of household standard of living than income. Income is hard to measure and income figures tend to be underestimated. Income is also a measure of a means to an end not an end in itself i.e. standard of living.
- *It does not take into account local conditions:* the cost of basic services and other items differs by locality and a defined income level therefore buys a different amount in different areas;
- *It does not take household size into account.*

The DPLG and National Treasury are addressing these concerns. They are considering increasing the income threshold to R1100 (which will allow a household with two state old age pensions to still qualify for subsidies), and DPLG and StatsSA are looking at modifying the approaches used to determine poverty in the next Census. The limitations of the current income measure mean that more nuanced approaches to who is poor will need to be taken at the local level (see Box 4). In many instances it is likely that only a local authority will be in a position to determine satisfactorily who is poor. It therefore seems appropriate that the

definition and identification of poor households is undertaken at the local level with national guidance but local flexibility.

Box 4. Local level poverty assessments and targeting - Douglas, Northern Cape

In Douglas in the Northern Cape, there is a high level of seasonal unemployment. For this reason the municipality assesses the poverty status of households every three months using a local committee. The municipality's current water subsidy is therefore targeted at those households that are poor at any particular point in time. Although the administrative costs of this approach are relatively high it does ensure that the relevant welfare subsidies are directed at those households that are actually facing income constraints. Leakage to currently 'wealthier' households is minimised which helps to keep the entire system sustainable.

Targeting

Following from the definition of poor households indicators and approaches for the identification of such households can occur. Guidelines for local authorities have been developed by the DPLG in this regard. A wide range of municipalities have already established 'indigent' or pro-poor policies which include some approach for the identification and registration of poor households. If such systems are not already in place municipalities should incorporate the costs of a targeting system into the costs of the free basic service provision.

It is important to know the administrative costs of targeting. In some municipalities the practical problems and costs associated with targeting may absorb an unacceptably high proportion of the available subsidy funds. In such cases an approach (such as a rising block or service level approach) may be preferable.

Methods of reducing administrative costs should be explored at the local level. International experience with the use of geographical (zonal) criteria have been positive. Targeting households on a zonal basis is substantially cheaper than individual assessments. It is likely that in South Africa, due to the apartheid history, that location correlates at least as closely with income as in other countries and therefore zonal criteria may be a useful approach.

International and local experience point to the high administrative costs of managing an effective subsidy scheme. This is particularly important in South Africa where both free water and electricity are being provided, as well as a range of other welfare measures targeted at the poor. Serious consideration should be given at the national and local level as to how administrative costs can be shared across subsidy and welfare schemes.

9.4 Ensuring financial viability of water service providers

Municipalities are not required to pass on the equitable share or other operating subsidies to WSPs in their area. At present there are a large number of consumers whose water is provided by a non-municipal WSP (such as DWAF, Mvula Trust schemes, Community Schemes, and the private sector). Unless cross subsidisation within the area served by the WSP is possible (probably the minority of such areas) some mechanism should be found to ensure that the relevant operating subsidy is transferred to the service provider

There are a number of ways to do this:

- *Mandatory requirements:* national government would use legislation to require local authorities to transfer the appropriate operating subsidy to the WSP contracted to provide water services in the municipality.
- *National benchmarks and guidelines:* national government would provide guidance to local authorities on the appropriate way to transfer operating subsidies to WSPs. This guidance would be based on appropriate benchmarks.

- *Case by case negotiations between service providers and authorities:* In this case the WSP and WSA would negotiate an approach to the provision of free basic water (and other subsidised water supplies) when establishing the WSA-WSP contract. The contract would include details of the subsidy approach including:
 - subsidy amounts per consumer served;
 - relevant conditions and incentives;
 - payment methods; and
 - auditing and monitoring procedures.

In some respects the contractual option is preferable because it allows for maximum local flexibility. However there are some concerns with simply using an *ad hoc* contract based approach. The Water Services Provider Regulations will regulate matters to be included between a WSA-WSP contract and provisions which must be included in such a contract (DWAF, 2001). The payment for services delivered by a WSP is one of these essential elements of such a contract. Some WSPs may have bargaining power with the WSA and will be able to negotiate suitable contracts (for example private sector providers are unlikely to agree to a contract under which they will have to supply a free basic level of water without some method of compensation for this supply). However small community based schemes have limited scope to ensure that they receive a subsidy adequate to cover the costs of free basic water provision.

There is therefore no legislated national requirement for local authorities to pass subsidies 'down' at this stage. Even without introducing such legislation there is a role for the development of benchmarks and guidelines for local authorities on the passing down subsidies to WSPs. In essence these guidelines should aim to ensure that all WSPs that are providing water to poor households should receive an appropriate proportion of the equitable share grant directed at basic services provision as well as a proportion of any local cross subsidies generated. The guidelines should include a mechanism for this transfer. Elements of the mechanism will include:

- financial controls and audits, and
- methods of assessment of scale of transfer based on costs and numbers of poor households served.

Some principles that may underlie these guidelines are listed in Box 5 below.

Box 5. Principles of providing subsidies to water service providers

Subsidising WSPs or consumers: basic principles

- *Primary principle:* Where a WSA is reliant on WSPs to provide services on their behalf, it is essential for funds to be transferred to the WSP or credited to consumers. If this is not done a 'free basic water' policy will not work, as WSPs will not have sufficient funds to run the system effectively.
- *Exception to the primary principle:* If the WSP is serving an area with a high proportion of larger users it may be possible for viability to be maintained without a transfer of funds from the WSA.
- *Transfer to WSP or subsidise consumers direct?:* Much depends on the poverty relief option selected.
- *Payments to bulk WSPs:* In general the payment of subsidies to bulk WSPs should be avoided. It is better to pay the subsidies to the retailer or direct to consumers and they can use this money to pay bulk WSPs for their service. This promotes efficiency within bulk WSPs. However, in situations where the retail WSP is a community based organisation the municipality may choose to pay bulk WSPs direct. However, this should be done based on an agreement with the retail WSP on the amount to be paid on their behalf per consumer.
- *Payment of support services agents (SSAs):* Where community based or SSME type WSPs are being used it is often appropriate for the WSA to appoint a SSA. Ideally this SSA should be paid by the retail WSP. However, the municipality may choose to pay the SSA an agreed amount on behalf of the WSP.
- *Source of funds for WSPs (and SSAs):* Typically the source of funds will be from the 'equitable share'. However, local authorities may use other funds if these are available.
- *Assessing the amount:* The amount of funds transferred must be calculated on a per consumer basis based on an understanding of the costs.
- *Relate payment to policy order:* Where the local policy is at the first or second order, the payment amounts will have to be preliminary. However, a figure must be set for 1st and 2nd order policies, with the intention of keeping it on the low side. Rules need to be set with the WSP for reviewing the amount.
- *Setting incentives:* WSPs can only be subsidised based on a clear set of conditions set into a proper contract which include incentives for them to perform. These incentives should include:
 - Maintaining or improving the quality of service to consumers according to an agreed measure.
 - Improving coverage (which will mean increased subsidy).
- *Setting controls:* Regardless of whether the WSP is being subsidised the WSA is obligated to regulate the performance of the WSA. However, if a subsidy is being applied the obligations of the WSA to monitor become more stringent. (see WSP regulation for it to be included in a WSA/WSP contract)

10. Implementation Strategy

The process to implement a local 'free basic water' policy will depend on local conditions and, particularly, on the capacities of local authorities. For this reason an implementation strategy should rest on three elements:

- *A phased approach:* a phased implementation period to allow low capacity and lower income municipalities time to 'phase' in full implementation;
- *National guidelines with local choice:* the provision of national guidance, guidelines and benchmarks but with the scope for municipalities to be able to choose the most appropriate local options; and
- *Management and institutional support:* the establishment of adequate management support for municipalities.

Although outside the direct ambit of this policy the implementation of the strategy should be co-ordinated as far as possible with implementation approaches for the provision of other free basic services.

10.1 Phased approach

All municipalities are expected to start implementing the free basic water policy from July 2001. However, it is recognized that some municipalities may not have the capacity to implement the policy to a full extent immediately. Therefore, it is recommended that policy implementation be approached by developing *orders* of strategy:

- *First order strategy* – for those municipalities which lack information but, nevertheless, need to make a start. They would use the rough base data available and then develop a programme for implementation.
- *Second order* – improvement after one or two years with better information. Or a first plan for higher capacity municipalities.
- *Final strategy* – linked to the WSDP - 5 year plan

It is proposed that phasing be set up as follows: (see section 0 for an explanation of categories of municipalities used):

Type of Municipality	A;B1	B2;B3	B4
Develop 1 st order strategy to kick-start the preliminary phase of implementation.			June '01
Develop 2 nd order strategy to start or adjust/refine implementation.	June '01	June '01	June '03
Develop final order strategy for final implementation or adjust implementation.	June '02	June '03	June '05

Interim arrangements

In addition to the phased approach interim arrangements may be needed in some municipalities. The free basic water message has already had an impact in many areas on payment levels for water services. Some consumers have understood the message to mean that they no longer need to pay for water at all, or that they no longer need to pay for basic water with immediate effect. This stoppage of payment poses a serious threat to the financial viability of many water services providers.

Local authorities need to make it clear to consumers that they must continue to pay for services until free basic water arrangements are in place and have been communicated to consumers. They should also make it clear that the free basic water policy does not prevent households from being disconnected if they do not pay for water used above the basic amount. It is important that credit control arrangements remain in place. National government should support local authorities by the provision of clear messages to consumers which support the above arrangements.

10.2 National guidelines but local flexibility

Different strategies will be appropriate in different municipalities. Based on the institutional, technical and financial issues outlined in this document a suite of options should be provided to local government. These guidelines should aim to assist local authorities in implementing the free basic water policy in a way which:

- is in accordance with current national policy in the water sector;
- supports continued financial viability of local government; and
- guards against a slowdown in the extension of basic services to those households with inadequate access to water.

At the same time the guidelines should allow for maximum local flexibility in the choice of options for implementation of the policy. The guidelines developed in parallel to this strategy document establish these options.

10.3 Management and institutional support to municipalities

The planning and implementation requirements on municipalities of a free basic water policy are substantial. These are elaborated on in detail in the accompanying guideline. It is incumbent on national government to establish the required support for local authorities in taking on this new task of providing free basic water and other services.

Six areas of support to local authorities have been identified (these are to be elaborated on following discussion at the national task team and workshop), these are:

1. *Policy and implementation strategy framework*: the establishment of a strategic framework in which municipalities can develop local implementation strategies. This document is the first step in this regard;
2. *Developing implementation guidelines*: providing a more detailed set of guidelines which municipalities can use to establish local strategies. This is being developed in parallel to the implementation strategy;
3. *Lead municipalities*: the use of pilot municipalities to test implementation approaches;
4. *Providing ongoing guidance and support*: ongoing support will be provided through existing mechanisms and the Provincial support units that are being established
5. *Information and planning tools*: providing access to financial models, international experience and best practice local examples through a CD-ROM, web-site and other mechanisms.
6. *Monitoring progress of the policy*: national government through the Water Services Development Plans and current and proposed DPLG and National Treasury financial monitoring should monitor progress of the policy and assess any impacts on financial viability of local authorities or negative impacts on infrastructure extension.

It is important that water services authorities provide regular feed back on the implementation of free basic water to the Department of Water Affairs and Forestry. This information will be submitted to Cabinet regularly and will be used to monitor and evaluate the implementation process ,which will provide a means to assess the situation at the local level.

Such information must be forwarded to :

Director : Water Services - Interventions and Operations Support
Department of Water Affairs and Forestry
Free Basic Water – Monitoring Programme
Private Bag X313
PRETORIA
0001
e-mail : muruvans@dwaf.gov.za or fax : 012- 323 3877

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