Alternative service delivery options for municipalities in the rural areas: Kamiesberg Local Municipality Case Study

Report to the
Water Research Commission

by

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EXECUTIVE SUMMARY

Background and motivation for the research

Under the new local government demarcation, the administration of water and sanitation services will have to be done differently from the past. Many local authorities will be Water Services Authorities (WSAs), which will now be responsible for delivering services and maintaining infrastructure in far-flung localities.

The main reason for the research project was to investigate the feasibility of Water Services Providers (WSPs). The Water Services Act (1997) makes provision for the creation of Water Services Providers (WSPs) in such communities. This leaves the question of the relationship between the WSAs and WSPs still to be resolved. There is no one uniform type of relationship between such institutions. A great deal would depend on local socio-economic conditions, logistical factors, administrative considerations, and the organisational capacity of local communities.

The project proposed to investigate the following aspects of WSA-WSP relationships:

- appropriate budgeting for administration and O&M in future
- appropriate water and sanitation tariffs
- appropriate use of Equitable Share subsidies
- appropriate management, administrative and O&M capacity to be built
- water demand management measures
- level of autonomy of each WSP
- contractual obligations between each WSP and the WSA
- monitoring and evaluation procedures.

Statement of objectives as specified in the contract

This project proposed to analyse the creation of WSPs in one new local authority – Kamiesberg Municipality in Southern Namaqualand. This area includes two formal towns: Garies and Kamieskroon (45 km apart), as well as 12 small rural communities: Hondeklip Bay, Soebatsfontein, Spoegrivier, Kharkams, Klipfontein, Kheis, Tweerivier, Nourivier, Paulshoek, Leliefontein, Rooifontein and Kamassies. The Municipality's head office is based in Garies.

The brief included a consideration of the following issues:

- indigency levels
- current levels of water and sanitation infrastructure

- institutional capacity: committee structure, leadership, financial management skills, and O&M skills

- appropriate budgeting for administration and O&M in future
- appropriate water and sanitation tariffs

- appropriate use of Equitable Share subsidies
- level of autonomy of each WSP
- contractual obligations between each WSP and the WSA, and
- monitoring and evaluation procedures.

The brief also included a consultative workshop, consisting of existing Councillors, community representatives and municipal staff, to work out appropriate types of WSA-WSP relationships.

During the research process, two visits to Kamiesberg were undertaken to study the current institutional capacity and dynamics of the municipality. In addition, visits were undertaken by an engineer and a financial specialist. Two consultative workshops were held.

Results and conclusions

The project proceeded quite differently from what was envisaged:

- Much of the consultative and data-gathering work was already being done by NAWASAN (consultants in Springbok), on behalf of Mvula Trust and Department of Water Affairs (DWAF). This was due to the ongoing programme of sanitation provision in the area. Consequently, very accurate data regarding income levels, water services infrastructure, and availability of water resources were obtained from NAWASAN. These are included in Appendix A.

- The amalgamation of the Municipality in terms of the new demarcation brought enormous administrative restructuring, with the result that the new Municipality could not focus sufficient attention on the relationship between the rural settlements and the core Municipal administration. In addition, the creation of Ward Committees (as provided for in the Municipal Structures Act of 1998) caused unresolved political questions as regards the future role of Water and Sanitation Committees in the rural settlements. Consequently, the issue of the creation of WSPs could not be investigated in practice. For all practical purposes, the creation of WSPs in Kamiesberg Municipality is currently "on hold".

- These factors led to a further inquiry into the compatibility and synchronization of water services legislation (including the creation of WSPs), and the municipal transformation process. It became apparent that the creation of WSPs raises difficult political and administration

questions for fledgling municipalities, and that it is unlikely that progress will be made with the creation of WSPs in the foreseeable future. In addition, the Municipal Systems Act will undermine experimentation in Alternative Service Delivery (ASD), due to the onerous processes and administrative requirements with which municipalities have to comply. These issues are explored in detail in the report.

- The investigation of the technical requirements for O&M in Kamiesberg also raises far-reaching questions of the financial resources needed for effective O&M. In the recent past, the emphasis has been virtually exclusively on new capital infrastructure; now, for the first time, a thorough calculation has been made of what it will cost to maintain that infrastructure. In sum, it will be virtually impossible for either the rural settlements or Kamiesberg Municipality to afford proper O&M in the rural areas. This is compounded by a continuing problem of non-payment by residents. If there is no increase in the equitable share, then tariffs will have to escalate dramatically (between 200 and 300%).

- The inclusion of GAMAP (General Accepted Municipal Accounting Practices) will have additional effects on tariffs, because capital costs (depreciation over specified replacement periods) will have to be included. On this basis, tariffs will have to increase between 300-400%.

- The overall picture of Kamiesberg Municipality reflects a dilemma: The rural settlements are simultaneously very poor, and have high O&M requirements; and the municipality's tariff system and revenue collection is totally insufficient to meet the financial needs for effective O&M. In Kamiesberg, the political question of distribution of municipal revenue between urban communities and rural settlements, will also have to be addressed. In this context, the issue of the creation of WSPs cannot be tackled. A resolution of the dilemma will first have to be addressed at a higher level (e.g. by means of revising the tariff system, streamlining the municipality's administration, balancing the political interests of rural and urban residents, and increasing the equitable share). Otherwise any Water Services Providers will be financially doomed from the start.

- The relationship between water services administration and administration of other municipal services has also not been addressed. The creation of effective Water and Sanitation Committees in the rural settlements has preceded the creation of multi-sectoral Ward Committees. This has created political uncertainty and tensions. This question will also have to be addressed at a higher political level within the Municipality, before any co-operative relationships between water services committees and ward committees can be institutionalized. In this context, the creation of Water Services Providers will be premature.

Contribution to debates on Alternative Service Delivery in the water sector

The report reflects on the viability and feasibility of the creation of Water Services Providers in the current municipal context. The conclusions in the report imply that the main emphasis, in the foreseeable future, will be on consolidating municipal capacity, and not on introducing flexible and innovative ASD arrangements. This approach does not mean that WSPs are inappropriate in principle; rather, it is necessary to recognize the precondition for successful WSPs (effective municipal governance), and rather address these issues sequentially. It is only when municipal capacity has been consolidated that WSPs will have a real chance of survival.

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ABBREVIATIONS

ASD	Alternative Service Delivery
IDP	Integrated Development Plan
O&M	Operations and Maintenance
PM	Performance Management
TLC	Transitional Local Council
WSA	Water Services Authority
WSDP	Water Services Development Plan
WSP	Water Services Provider

CONTENTS

1. INTRODUCTION

The purpose of this project was to work out appropriate institutional arrangements for water services delivery in the rural areas of the Kamiesberg Municipality in southern Namaqualand. The key question was the following: *How should water services in the rural communities be administered?*

This raised the question of "alternative service delivery mechanisms" – a term which has become part of the local government lexicon in South Africa. What level of autonomy should the communities' committees have with regards to their water services delivery? Most significantly, should the water and sanitation committees become "water services providers" (WSPs), with a great deal of autonomy, and with contractual relations to the Kamiesberg Municipality (the WSA)? Or should the settlements be administered as an integral part of the Municipality?

During the investigation, it became clear that the question of "alternative service delivery mechanisms" could not be addressed meaningfully by Kamiesberg Municipality at the current time (2001-2). One reason is that Kamiesberg Municipality, like the vast majority of other municipalities in post-demarcation South Africa[1] are simply not ready to contemplate an additional level of municipal restructuring so soon after their establishment. It is possible that the dramatic nature of the amalgamation process, following the re-demarcation of municipalities, had not been anticipated by policy makers. It has been a much more difficult process than many policy makers had envisaged. The process has been extremely painful, for many reasons: many of the old municipalities were financially in poor shape; because their administrations had deteriorated; because rural and urban areas were amalgamated for the first time into the same municipalities; and because the new brand of municipalities involved numerous new role definitions.[2]

A second reason for the slow start to alternative service delivery options is that the requirements in the Municipal Systems Act (Act 32 of 2000) is extremely onerous when a municipality contemplates some form of alternative service delivery.

A third reason is that the entire municipal transition process has been – inevitably, perhaps – a confused process, with numerous political players following different schedules for transformation. The water sector has suffered particularly from this topsy-turvy process. The Water Services Act (Act 108 of 1997) predates the demarcation process and the flurry of municipal legislation by at least three years. During this period, the water sector

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1 The demarcation process was completed during 2000, and the inaugural elections of the new municipalities took place in early December 2000.

2 For example, the introduction of the posts of Executive Mayors, Speakers, Mayorial Committees, and Ward Committees.

bounded ahead with huge capital programmes, which required some level of community participation in order to make water services projects sustainable. For this purpose, concepts such as "Water Services Committees" and "Water Services Providers" were introduced, to enhance community responsibility and autonomy in the management of their new infrastructure. "Alternative service delivery", or ASD, was put on the developmental map.

The Department of Water Affairs, to its credit, realised early on that municipal capacity were key to the success of its community water services programme. DWAF's policy documents constantly emphasised the importance of "building municipal capacity", for example, through the BOTT[3] and OTT[4] programmes. However, it had to work in a context of fragile municipalities whose jurisdictions had not been finalised.

When the Municipal Systems Act was passed in 2000, it contained many references to the philosophies of community participation and alternative service delivery. However, these philosophies had to be couched in terms which were applicable to numerous service sectors. They were also framed from a fundamentally different perspective – the consolidation of municipal political decision-making and administrative capacity, instead of primarily from the point of view of the delivery of infrastructure.

The result is that the institutional innovations contemplated in the Water Services Act have become a great deal more difficult to implement, partly because of the general context of municipal upheaval and uncertainty, and partly because the logic of ASD will have to be re-born from within a reconstituted municipal sphere. In future, municipalities will introduce ASD mechanisms as and when it suits them, whether politically or administratively.

This report is divided into two parts. Part One analyses the philosophical and historical context of the debate on ASD. It argues that, in the current municipal context, the introduction of ASD measures (such as Water Services Providers) is a tall order for a fledgling municipality.

Part Two reports on the investigation of water services delivery in the rural communities of Kamiesberg Municipality. Several aspects of water services delivery are explored, notably the O&M[5] requirements, the design of appropriate tariffs and municipal budgets, and the political acceptability of Water Services Committees. The report shows how demanding it will be for Kamiesberg Municipality to upgrade its level of water services management to acceptable levels. In this light, it is not surprising that the Kamiesberg Municipality is not even prepared to consider the introduction of WSPs at this stage.

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3 Build-Operate-Train-Transfer programmes.

4 Operate, Train and Transfer programmes.

5 Operations and Maintenance, or technical aspects.

The final conclusion of this report is that, although the concept of WSPs (and other forms of ASD) may be acceptable in future, the current municipal context is not a promising arena for such experiments to be undertaken.

Methodology

A. LITERATURE SURVEY

For Part A, the project included an overview of relevant DWAF legislation and materials, as well as legislation pertaining to municipal government. The legislation included the Water Services Act (1997), the Municipal Structures Act (1998), and the Municipal Systems Act (2000).

For Part B, the project was able to build on a great deal of existing work which had been done by DWAF consultants in Namaqualand. A valuable data-base has been drafted by NAWASAN, as part of the DWAF Sustainable Allocation (SA) project. This project is aimed at facilitating the hand-over of infrastructure from DWAF to the Municipality. The data-base (which is compatible with the DWAF : WSDP minimum starter requirements)contains information for each of the settlements, including:

- Demographic data
- Level of services
- Water sources, quality and balance;
- Infrastructure and network;
- Water demand management practices;
- Institutional arrangements
- Financial issues (Costs, Affordability, Viability & Indigent Policy Subsidies).

This data-base has been made available to Kamiesberg Municipality, which should greatly assist the future planning and management of infrastructure & the delivery of basic services.

B. SITE VISITS

A visit to the area was undertaken from 10-11 May 2001, to meet communities and to understand the circumstances related to water services delivery.

During our visit, we attended two community meetings: in Leliefontein and Kharkams. The meetings were attended by their respective Water and Sanitation Committees. During the meetings, the committees described their water services, their sanitation systems, the problems the operators experienced, and most importantly, the support they will need in future from the new Kamiesberg Municipality.

Both meetings were attended by the Acting Chief Technical Officer of Kamiesberg Municipality, Mr. Coenie Coetzee. The Leliefontein meeting was also attended by the Acting Chief Financial Officer, Mr. Christiaan Carstens, and the Acting Head of Operations, Mr John Witbooi.. Their participation was welcomed, as this was their first exposure to these communities, and it was a valuable opportunity for them to learn about the circumstances in the rural areas. Their attitude was very supportive and enthusiastic, which bodes well for the future.

In February 2002, a second visit was undertaken. The purpose of this visit was to test different approaches towards the institutional management of water services in the rural communities. It was attended by about 100 people, including representatives of water services committees, municipal officials, Councillors, and consultants.

C. O&M REPORT

A close study of current infrastructure and O&M practices was undertaken in August-September 2001, by Philip Ravenscroft.

Ravenscroft's study has looked at how the management of operation and maintenance of the schemes can be improved without duplicating the other activities and initiatives that currently exist and that have been undertaken in the Kamiesberg Municipality. These other initiatives include the following:

- The sustainability allocation refurbishment projects – this report does not duplicate this work but looks at how the management of the schemes can be strengthened taking cognisance of the work to be done under the sustainability allocation
- The baseline study completed by NAWASAN
- The future business planning process that is to look at the water services of the Kamiesberg Municipality – this report will identify some issues that need to be looked at in the business planning exercise.

Furthermore, the report uses the information that has been collected as part of the baseline survey as well as the following:

- Financial planning and tracking information from the Kamiesberg Municipality
- Information obtained from Toens and Partners on their operation of schemes in the area

Site visits to the following settlements including interviews with the operators:

- Kheis
- Kharkams
- Paulshoek

- Tweerivier
- Lieliefontein
- Hondeklipbaai
- Soetbatsfontein
- Spoegrivier

Originally, it was hoped that all the settlements could be visited but with the limited time available, only the eight settlements listed above were visited.

D. TARIFF STUDY

Based on the O&M requirements and costs identified by Philip Ravenscroft, Almarie Bekker calculated the most effective tariff and subsidy system.

2. POLICY AND LEGISLATIVE FRAMEWORK FOR LOCAL GOVERNMENT

2.1 'Developmental local government in the White Paper' (1988)

The White Paper on Local Government, published in 1988, laid the basis for a new era in flexible, dynamic and enterprising local government. According to the White Paper, "Developmental local government requires that municipalities become more strategic, visionary and ultimately influential in the way they operate. Municipalities have a crucial role as policymakers, as thinkers and innovators, and as institutions of local democracy. A developmental municipality should play a strategic policy-making and visionary role, and seek to mobilise a range of resources to meet basic needs and achieve developmental goals."[6]

The notion of "developmental local government" has become the cornerstone of numerous performance-oriented principles introduced into the municipal sphere. These principles include integrated planning, community participation, performance management, and alternative service delivery. These principles have been given statutory form through the Municipal Systems Act (Act 32 of 2000).

The issue of the creation of Water Services Providers should be seen in the light of these new approaches to development local government. It is an attempt to harness community involvement and innovation for the purposes of strengthening effective municipal water service delivery. It is also an attempt to ensure that communities' unique circumstances are given institutional form, through a flexible arrangement of relationships between "Water Services Providers" (community-based service delivery agencies), and "Water Services Authorities" (municipal governments, which remain the architects of local policies).

The creation of WSPs has a number of underlying normative imperatives:

- *To enhance community participation in local governance*: Municipalities can do a lot to support individual and community initiative, and to direct community energies into projects and programmes which benefit the area as a whole …" Furthermore, municipalities should "Actively seek to empower the most marginalised groups in the community and encouraging their participation".[7]

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[6] Department of Constitutional Development (2000): White Paper, White Paper, page 22.

[7] White Paper, page 22.

- This, in turn, will promote the *development of community leadership and organisational capacity*, which will promote other community development initiatives: According to the White Paper, "The powers and functions of local government should be exercised in a way that has a maximum impact on the social development of communities - in particular meeting the basic needs of the poor - and on the growth of the local economy".[8] The development of the capacity of community development organisations is a key method of "enabling" communities to take responsibility for development. "Support to community organisations in the form of finances, technical skills or training can enhance the ability of the poor to make their needs known and to take control of their own development process."[9]

- Municipalities should have a *flexible approach to institutional design*, including "responsive problem-solving and a commitment to working in open partnerships with business, trade unions and community-based organisations".[10]

- Local government retains a *key role of institutional "integrating and co-ordinating"* the activities of various national and provincial departments, parastatals, and community organisations. Local government does not have to provide all services itself; instead, it should ensure that a network of suitable services providers do so: "Developmental local government must provide a vision and leadership for all those who have a role to play in achieving local prosperity. Poor coordination between service providers could severely undermine the development effort".[11]

- Local government also retains the role of *multi-sectoral service integration*: "While strategies for building human settlements may differ between localities, it is clear that the establishment of sustainable and liveable settlements depends on the coordination of a range of services and regulations, including land-use planning, household infrastructure, environmental management, transport, health and education, safety and security and housing."[12]

2.2 Towards community-based service delivery

According to the White Paper, municipalities can become the focal point in a flexible network of service delivery agents: "The critical point here is that there are a range of creative methods through which

8 White Paper, page 18.
9 White Paper, page 21.
10 White Paper, page 19.
11 White Paper, page 19.
12 White paper, page 20.

municipalities can mobilise energy, capacity and resources outside the municipality for the development of the area."

There is a vast choice of service delivery agencies: "Municipalities can utilise partnerships to promote emerging businesses, support non-governmental organisations and community-based organisations, mobilise private sector investment, and promote developmental projects which are initiated but not necessarily financed by local government". This includes community contracting for services such as refuse collection.

Ultimately, it is the responsibility of municipalities themselves to decide on their approach to service delivery, because they will have to bear the consequences: "They need to strategically assess and plan the most appropriate forms of service delivery for their areas. Their administrations need to be geared to implement the chosen delivery options in the most effective manner and so ensure maximum benefit to their communities."[13]

In the design of organisational service delivery networks, there is a formidable array of principles which a municipality needs to take into account (see Text Box 1). Not surprisingly, the White Paper notes the important new levels of skill which municipalities should attain:

- *Strategic capacity* to assess, plan, and develop innovative programmes to meet local needs. If municipalities are to meet service demands and make a significant contribution to social and economic development, they will have to become far more strategic in orientation. Strategic capacity means developing the ability to be open and flexible to new demands (rather than simply ignoring them because they do not fit with established plans or patterns of supply), to prioritise carefully on the basis of a clear understanding of existing resources and medium to long-term objectives, and to move quickly and effectively to meet demands at the highest level of competence.

- *Integrating capacity* to coordinate and integrate inputs from inside and outside the administration to ensure developmental outcomes. Integrating capacity means directing capacity and resources from both inside and outside the municipality to common, directed programmes of action. The vertical integration of national and provincial programmes with municipal administrative systems may be a particularly effective way for rural municipalities to build their administrative capacity.

13 White Paper, page 92.

- A *community orientation* to inform a user-friendly, relevant and quality service to local communities. Municipalities need to develop mechanisms to interact with community groups to identify service needs and priorities as well as community resources that can be unlocked and channelled for development ends. Municipalities will need to develop mechanisms to ensure that their delivery systems are inclusive, and accommodate groups which tend to be marginalised or disadvantaged. Front-line workers who interact with communities on a daily basis will need to be capacitated to correctly assess, rapidly communicate and effectively respond to service needs.

Significantly, the White Paper notes that "Without the capacity to strategise, integrate and interface with non-municipal groups and interests, innovative new approaches to the traditional functions exercised by local government administrations are unlikely to be sustainable."[14] This may prove to be a salutary warning.

The rest of this report will consider whether municipalities, in the current context, have developed the necessary capacity to create new systems of service delivery (notably Water Services Providers), in ways which meet the requirements noted in Text Box 1.

[14] White Paper, page 102.

TEXT BOX 1: The following principles need to be taken into account when deciding on service delivery options (White Paper, pages 93-4)

- **Accessibility of services**: Municipalities must ensure that all citizens - regardless of race, gender or sexual orientation - have access to at least a minimum level of services. Imbalances in access to services must be addressed through the development of new infrastructure, and rehabilitation and upgrading of existing infrastructure.
- **Affordability of services**: Accessibility is closely linked to affordability. Municipalities can ensure affordability through:
    - Setting tariffs which balance the economic viability of continued service provision and the ability of the poor to access services.
    - Determining appropriate service levels. Services level which are too high may be economically unsustainable and jeopardise continued service provision. However, inadequate service levels may perpetuate stark spatial divisions between low, middle or high income users.
    - Cross-subsidisation (between high and low-income users and commercial and residential users) within and between services.
- **Quality of products and services**: The quality of services includes attributes such as suitability for purpose, timeliness, convenience, safety, continuity and responsiveness to service-users. It also includes a professional and respectful relationship between service-providers and service-users.
- **Accountability for services**: Whichever delivery mechanism is adopted, municipal Councils remain accountable for ensuring the provision of quality services which are affordable and accessible.
- **Integrated development and services**: Municipalities should adopt an integrated approach to planning and ensuring the provision of municipal services. This means taking into account the economic and social impacts of service provision in relation to municipal policy objectives such as poverty eradication, spatial integration and job creation through public works.
- **Sustainability of services**: Ongoing service provision depends on financial and organisation systems which support sustainability. Sustainability includes both financial viability and the environmentally sound and socially just use of resources.
- **Value-for-money**: Value in the public sector is both a matter of the cost of inputs, and of the quality and value of the outputs. The above principles require that the best possible use is made of public resources to ensure universal access to affordable and sustainable services.

2.3 Alternative service delivery in municipal legislation

The period 1999-2001 has heralded a rapid drafting of new legislation, which impacts on all aspects of municipal service delivery. This section will provide a brief overview of the legislative innovations which affects the creation of WSPs.

A. THE MUNICIPAL SYSTEMS ACT (ACT 32 OF 2000)

The Municipal Systems Act builds directly on the philosophies espoused in the Local Government White Paper.

Several issues in the Act impact directly on the issue of the creation of Water Services Providers. Chapter 4 concerns Community Participation in municipal government, and it provides that a municipality "must develop a culture of municipal governance that complements formal representative government with a system of participatory governance". Furthermore, a municipality *must* contribute to building the capacity of the local community to enable it to participate in the affairs of the municipality".[15]

More specifically, municipalities *must* allow for local communities to participate in the drafting of their integrated development plans[16], and municipalities *must* involve local communities "in the development, implementation and review of the municipality's performance management system, and in particular, allow the community to participate in the setting of appropriate key performance indicators and performance targets for the municipality".[17]

In the establishment of alternative service delivery mechanisms, a municipality is also obliged, before it enters into a service delivery agreement for a municipal service, to "establish a mechanism and programme for community consultation and information dissemination regarding the service delivery agreement".[18]

The Municipal Structures Act has rigorous procedures for engaging external agencies for municipal service provision. The Municipality remains ultimately responsible for the delivery of the service. Consequently, the Municipality must not only ensure "uninterrupted service delivery of the service in the best interest of the local community"[19], but it must also ensure the application of

15 Section 16(1)(b)(i).
16 Section 29(1)(b)(ii).
17 Section 42.
18 Section 80(2).
19 Section 81(1)(e).

the new principles of municipal governance , viz. performance management, integrated development planning, and the design of a local tariff policy.

The implementation of these principles is a demanding business. For example, performance management (PM) entails[20]:

- Setting key performance indicators (KPIs)
- Setting measurable performance targets with regards to development priorities set out in the IDP
- Monitor performance
- Measure and review performance at least once a year
- Take steps to improve performance where performance targets are not met, and
- Establish a process of regular reporting to the municipality, the Local or District Council, the public, and appropriate organs of state.

Similarly, the creation of an appropriate local tariff policy remains the obligation of a municipality. Drafting a tariff policy is also an onerous endeavour[21]:

- Users of municipal services should be treated equitably in the application of tariffs (which leaves the municipality to make important normative decisions on what should count as "equitable");
- The amount individual users pay for services should generally be in proportion to their use of that service (which is reflected in the DWAF principle of "stepped tariffs")
- Poor households must have access to at least basic services, for example, by means of tariffs that cover only operating and maintenance costs, or by means of life-line tariffs for low levels of use
- Tariffs must reflect the costs reasonably associated with rendering the service, including capital, operating, maintenance, administration and replacement costs, as well as interest charges
- Tariffs must be set at levels that are financially sustainable for that service
- Provision may be made for the promotion of local economic development through special tariffs for categories of commercial and industrial users
- Tariffs should encourage appropriate environmental objectives and conservation of resources.

Significantly, the creation of alternative delivery mechanisms does not absolve a municipality of its core functions. The drafting of IDPs, the creation of PM systems, and the creation of appropriate tariff policies, are huge

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20 Section 41.

21 Section 74(2).

challenges for municipalities, because these activities involve a new *style* of municipal governance.

B. THE WATER SERVICES ACT (ACT 108 OF 1997)

The WSA Act was passed three years before the Municipal Systems Act. Nevertheless, they are substantially similar in their underlying philosophies, especially with reference to community participation in local government and municipal service delivery.

The Water Services Act makes provision for the creation of Water Services Providers (WSPs) in local communities. A WSP should be distinguished from a "WSA", which remains the policy-making body, with political accountability. All WSAs are municipalities, but WSPs can range from community organisations, to NGOs, to private companies or parastatals.

According to the WSA Act, the WSA (Municipality) "has a *duty* to all consumers or potential consumers in its area of jurisdiction to progressively ensure efficient, affordable, economical and sustainable access to water services."[22] This is a tall order. It involves a great deal of municipal debate (involving communities), planning and policy-making around difficult normative issues, for example:

- Which people or organisations are likely to be "potential" consumers?
- How fast should water services be "progressively" introduced? Is there a trade-off between current and future efficiencies?
- How should efficiency be measured?
- How should "efficient" water services delivery be budgeted for?
- How should affordability criteria be traded off against the use of government subsidies to support water services?
- How should environmental criteria of sustainability be balanced against consumers' rights to at least a minimum supply of a scarce resource?

In addition, the WSA Act lists various factors which a Municipality must take into account when "ensuring access to water services".[23] These include:

- Alternative ways of providing access to water services (e.g. the creation of WSPs)
- The need for regional efficiency
- The need to achieve benefits of scale
- The need for low costs
- The requirement of equity, and

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22 WSA Act (1997), Section 11(1).

23 WSA Act (1997), Secion 11(3).

- The availability of resources form neighbouring water services authorities.

These factors introduce additional complex policy questions, for example:

- How should alternative ways of providing access be measured up?
- How should the interests of a locality and the interests of a region be measured against one another?
- How should the costs of water delivery be budgeted for?
- How can considerations of equity be introduced in complex social settings of different levels of economic disadvantage and commercial importance?
- How should relationships with neighbouring WSAs be created? Should regional advantages outweigh local priorities (e.g. as stipulated in a local IDP?)

Clearly, the WSA Act requires substantial policy-making capacity in local governments in order to address these far-reaching questions. It can be anticipated that most municipalities would need access to significant policy-making support, e.g. in the form of policy think tanks or consultants, to figure out the quantitative consequences and qualitative implications of different policy proposals.

Furthermore, the WSA Act stipulates that WSAs must draft a water services development plan (WSDP).[24] In addition to a great deal of *status quo* information to be contained in the WSDP (e.g. existing water services, population distributions), a WSD must specify the future provision of water services for household and industrial use. The WSDP must
specify which WSPs will provide water services in future, the contracts which will be signed with WSDPs, the water sources to be used, the estimated capital and operating costs, and the financial arrangements for funding those water services.

A WSDP is not a document that can be written overnight: Not only does it require substantial community participation, but it also requires an enormous degree of understanding of current problems, possible solutions to those problems, and possible consequences of the proposed solutions. Furthermore, as the Municipal Structures Act specifies, it requires integration with all the other sectors which a municipality deals with (e.g. natural resource management, local economic development, environmental health, and so on).

In the spirit of the Local Government White Paper, the WSA Act envisages the creation of flexible contractual delivery arrangements with water services providers. This is not compulsory; a municipality *may* create such

[24] WSA Act (1997), Section 13(h).

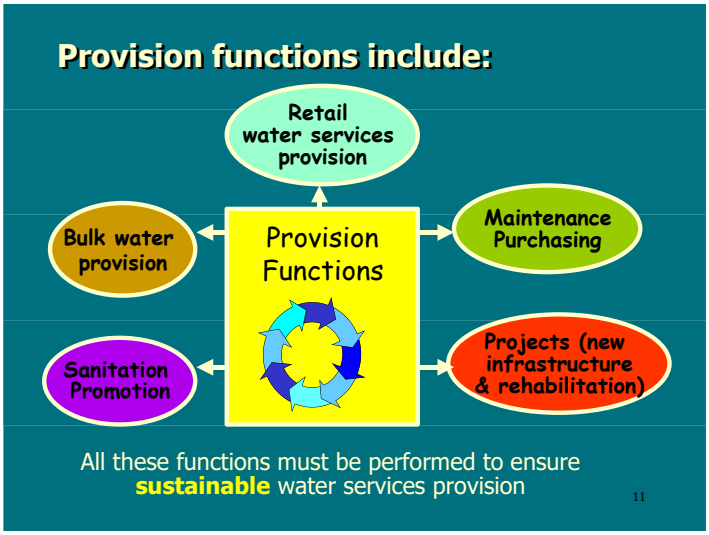
relationships, if it deems appropriate (presumably, in the light of other policy requirements, such as integrated development, performance management, community participation, and so on).

The three main functions of a WSP are:

- Customer relations – the WSP is the entity to whom the customer relates.
- Revenue management
- Day-to-day operations.

DWAF literature has provided more detail on the institutional design of WSPs.[25]

[25] DWAF Powerpoint presentation, "Institutional arrangements for Water Services Provision".



If a Municipality decides to create a WSP, this leaves the question of the relationship between the WSAs and WSPs still to be resolved. There is no one uniform type of relationship between such institutions. A great deal will depend on local socio-economic conditions, logistical factors, administrative considerations, and the organisational capacity of local communities.

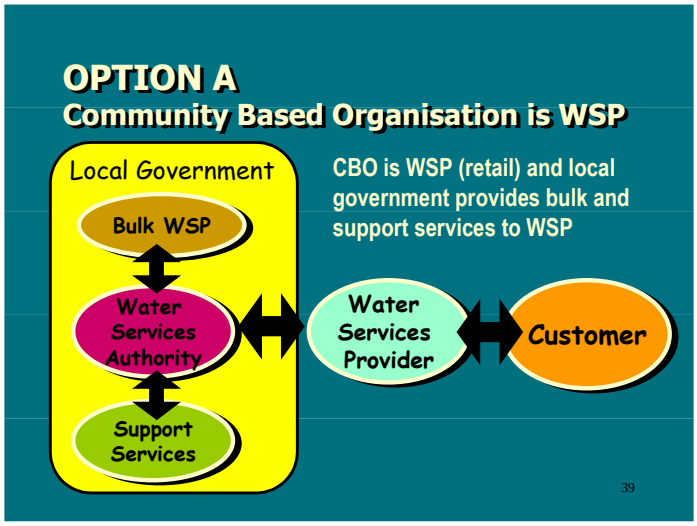
There are at least four main options of WSA-WSP relationships:

(1) Local government (WSA) is its own WSP
(2) Community-based organisation is the WSP (with local government support)
(3) A large organization (Water Board or private company) is a WSP
(4) Community-based organisation is the WSP (with a Support Services Agent, e.g. an NGO or a consultant).

Each of these options contains numerous different sub-options, with different levels of devolution of powers. For example, it is possible that the WSA retains the revenue management responsibility; in that case, the WSA is regarded as the WSP, even though specific functions (e.g. customer relations or revenue collection) are contracted out.

This report will focus primarily on community-based WSP options (i.e. option (1) and (4)), due to the nature of services delivery in the case study area (Southern Namaqualand). The two options, hereafter referred to as Option A and Option B, are:

Option A: Community-based organization is a WSP, with local government support



According to DWAF, the advantages and disadvantages of **Option A** are:

Advantages

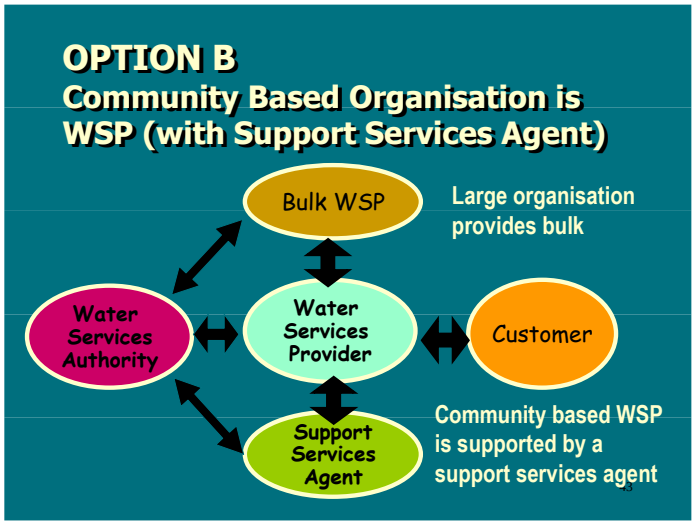
- Benefits of demand responsive approach (DRA) can be realised
- Better 'bottom-up' approach
- Cost effective
- Good track record in developing countries

Disadvantages

- Large number of WSPs to monitor
- WSA has no direct link with customers
- Large capacity needed within local authority to provide bulk supply and support services.

Option A is a viable solution, if the local government has sufficient capacity to supervise and support the community-based WSPs.

Option B: Community-based organisation is WSP, with Support Services Agent



According to DWAF, the advantages and disadvantages of **Option B** are:

Advantages:

- Makes best use of community-based providers and organisations with additional capacity
- Local government does not have to build large capacity
- Low-cost option

Disadvantages

- Depends on availability and capacity of Support Services Agent/s
- Possibility of many WSPs to monitor.

Option B is an appropriate solution, if support agents (NGOs or consultants) are available to assist the WSPs. However, this model does not stipulate how the Support Agents will be remunerated. At present, most support agents perform their institutional development functions as adjuncts to capital projects, which are funded by DWAF, CMIP or other donors. Once the infrastructure-building phase has passed, and the support becomes primarily for ongoing operations and maintenance, one can assume that the municipality will have to remunerate the Support Agent for its efforts.

2.4 Making alternative services delivery work

A. THE FUNCTIONING OF WSPS AND IMPLICATIONS FOR MUNICIPAL RESTRUCTURING

DWAF information bulletins give some guidance on the mode of selection of a WSP, as well as the procedures of establishing a WSP.[26] This section will show that Municipalities, at their current level of development, are unlikely to select a WSP, and if they were to select a WSP, they would find the procedures of establishing a WSP extremely formidable.

(a) Procedures of establishing a WSP

As the Department of Water Affairs envisaged it, the process of establishing a community-based WSP would require several steps:[27]

- The WSP must be constituted as a legal entity. A community-based option will require a voluntary association, established with a constitution.

- A Terms of Reference must be drafted to outline the scope of the services that the WSP will provide. The TORs will form part of the Contract with the WSA.

- The Municipality must assess the capacity of the proposed WSP, in relation to the responsibilities and functions that must be undertaken by the WSP, as outlined in the TORs.

- The Municipality must develop Capacity-Building and Training Plans to address any identified gaps between existing and required capacity.

- The Capacity-Building Plan must be implemented.

- A contract must be drawn up between the WSA and the WSP.

- A contract may need to be drawn up between the WSP and a Bulk Water Services Provider and/or Support Services Agent, as appropriate.

- The Municipality must identify and develop strategies to provide on-going support that may be required by the WSP to ensure it fulfills its responsibilities.

These procedures are not very difficult, in principle. However, it assumes that the WSA is extremely competent, confident and experienced in out-sourcing delivery functions. The WSA would need technical, administrative, financial

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26 DWAF powerpoint presentation:

27 DWAF, "Institutional and Social Development Package for Water Supply Projects", File 2, Section B2: "Water Services Provider", p. 5.

and legal staff who have the time and the skills to explore ASD options, to assist a community organisation to conduct a capacity building assessment, to draft TORs and appropriate contracts, and to assist the community organization in understanding its responsibilities.

(b) Selection of WSPs

DWAF's proposed criteria for judging the potential effectiveness of a WSP are shown below.

TEXT BOX 2: Criteria for judging the effectiveness of a potential WSP

Good governance:

- Does/will the WSP take customer interests into account?
- Are processes and interactions accountable and transparent?
- Is this the customers preferred choice for WSP?
- Are there good relations between the WSP and other role players?

Active community participation:

- Does the WSP option allow for customer needs to be addressed?
- Will customers be involved in running the services where appropriate?
- Will customers be involved in decision making?

Efficient management:

Will the WSP option ensure the following:

- Effective and timeous decision making?
- Efficient communication systems?
- Access to information?
- Does the WSP have the skills to perform the WSP functions?
- Are there training opportunities for increasing management/skill capacity?

A. ACCESS TO SPECIALIST SUPPORT:

- Does the WSP option allow for access to particular specialist services?
- For example, does it allow for access to maintenance and mentoring support?

Optimal employment arrangements:

Does the WSP option allow for:

- Local employment creation?
- Building of local skills and capacity?
- Maximizing informal task-based contracts?

B. LOW COST AND AFFORDABILITY:

- What are the costs of water services provision for each option?
- How will the WSP activities be funded?
- What are the implications of each option for the tariff?
- Are the costs of each option affordable to the customer?

These criteria are useful to an outsider, judging the *potential* effectiveness of a *potential* WSP. In practice, however, two additional considerations impact seriously upon decisions whether WSPs will be established, viz. political will and administrative consolidation. These factors will be examined in more detail below.

(c) Municipalities in the process of consolidation

The current operational status of municipalities, after a process of radical re-demarcation, is not a very suitable climate to investigate community-based ASD options. In addition to the criteria for judging the potential effectiveness of WSPs (see Text Box 2 above), two additional factors are much more pressing for Municipal decision-makers:

(1) *Political will*: The creation of WSPs depends fundamentally on the political standpoint of the dominant political party in a locality. Its standpoint will, in turn, be affected by issues such as the need to consolidate political power in the municipality's "capital"; the desire to create uniformity of service delivery throughout the entire municipality; and the desire to reward political supporters in outlying communities. In particular, the creation of Ward Committees (in terms of the Municipal Systems Act) has taken precedence over other forms of community representation and governance.

(2) *Administrative consolidation:* The Municipal Structures Act and the Water Services Act come at a time when the re-demarcation of local government has had severe consequences for the functioning of municipalities. In most cases, several established municipalities (erstwhile "TRCs") have been amalgamated, in addition to the amalgamation of urban and rural local government. Most municipalities face an uphill battle to continue providing existing municipal services in a context of severe administrative dislocation. Crucially, *it is not clear how long the process of consolidation will last*. This will presumably vary greatly from one municipality to another, but it will decisively affect a municipality's readiness to venture into untried and untested alternative service delivery options.

The process of administrative consolidation does not simply refer to the allocation of staff and the design of roles and functions. It also refers to a gamut of operational issues related to water services delivery, such as:

- tariff systems
- performance management and M&E systems
- integrated development planning

- revenue management, including debt collection and the allocation of indigent subsidies
- appropriate budgeting for O&M
- appropriate technical support for O&M
- water conservation and demand management practices
- environmental health management.

Most of these issues involve far-reaching policy decisions. As shown above, issues such as tariff systems and performance management are very complex. In addition, indigent policies raise complex normative and political questions (How should "indigents" be defined? How should subsidies be allocated between rural and urban residents? What level of subsidies should be allocated to indigents?, and so on).

Some of these issues have not been tackled, due to a lack of technical skills in the municipalities. Appropriate technical O&M practices have in many cases not been developed, and still need to be done. This means that appropriate levels of budgeting for O&M have also not been determined, because costings of appropriate O&M practices have not been undertaken. In the absence of fully qualified engineering staff, it is difficult to see how municipalities will manage these technical and budgetary tasks.

Given these considerations, it is possible that municipalities may be, at least in the short- and medium-term, more interested in creating a milder version of community-based water services provision. For this reason, we must turn to another provision in the Water Services Act, viz. the creation of "Water Services Committees".

2.5 The nail in the coffin: Provisions of the Municipal Systems Act

Political dynamics and administrative instability have not been the only disincentives to the creation of WSPs. An even more formidable obstacle course exists in Section 78 of the Municipal Systems Act, a section entitled "Provision of services through service delivery agreements with external mechanisms".[28]

(a) Investigation of service delivery options

The section provides that Municipalities must first investigate "internal" service delivery options, before considering "external" options. During the internal investigation, a series of factors need to be taken into account (Section 78 (a)):

- The direct and indirect costs and benefits associated with the project

[28] This section draws substantially on Mark Pickering, "Choosing a Service Provider: Section 78 of the Systems Act", Local Government Law Bulletin, vol. 3, no. 4, December 2001.

- The municipality's capacity and potential future capacity to furnish the skills, expertise and resources necessary for the provision of the service
- The extent to which the re-organisation of its administration and the development of the human resource capacity can be utilized to provide a service through an internal mechanism
- The likely impact on development, job creation and employment patterns in the municipality
- The views of organized labour.

These are formidable factors to assess in any degree of thoroughness. In fact, all these factors are likely to generate substantial debate on the Council and within the administration of a municipality. The investigation of such factors may well require bringing in organizational and financial consultants, which adds another layer of expense, supervision and debate.

As such, Section 78(a) is a serious incentive to simply drop the whole matter of a possible external service provider. "Unless the internal option clearly fails to meet the Act's criteria, it is difficult to see how a municipality could justify a decision to explore external options without first applying its mind as to what these options may be, and whether they hold any advantages over the internal options".[29] In particular, the need to "consider the views of organized labour" (i.e. municipal trade unions) means that the whole matter of ASD is unlikely to get past first base.

However, even once the Municipality has decided that internal provision of a service will not be optimal, it then has to conduct an equally thorough assessment of external service provision mechanisms (Section 78(b)). The same list of factors must be investigated, with the one difference that the "capacity and potential future capacity of prospective service providers to furnish the skills, expertise and resources necessary for the provision of the service" must also be investigated. Once again, this may well require the service of outside consultants.

(b) Public participation

In addition to these onerous provisions, the Municipality has to undertake community participation at various stages in the process. If the Municipality decides to explore an external delivery mechanism, it must give notice to the local community of its intention to do so.[30] Furthermore, before a municipality enters into a service delivery agreement with an external agency, it must "establish a mechanism and programme for community consultation and information dissemination regarding the service delivery agreement. The contents of a service delivery agreement must be communicated to the local community through the media".[31]

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29 Mark Pickering, "Ibid" (2001).

30 Section 78(3)(a).

33 Section 80(2).

Once again, a public information campaign is likely to be a disincentive for a Municipality, since it may well arouse opposition from new quarters of public opinion. It is also possible that it may generate conflict between the municipal trade unions and other sections of the public. Such a prospect is likely to further undermine the political will which is required to make a major change in municipal service delivery patterns.

(c) Competitive bidding

Should a Council decide to use an external, *non-public* mechanism, Section 80(1)(b) of the Municipal Systems Act stipulates that, if a municipality decides to provide a service through a non-state organ, it must apply Part 3 ("Service Delivery Agreements involving Competitive Bidding").[32] Such a bidding and selection process must be:

- Competitive, fair, transparent, equitable and cost-effective
- Allow all prospective service providers to have equal and simultaneous access to information relevant to the bidding process
- Minimise the possibility of fraud and corruption
- Make the municipality accountable to the local community about progress with selecting a service provider, and the reasons for any decision in this regard, and
- Take into account the need to promote the empowerment of small and emerging enterprises.

Curiously, community-based organisations (such as community water committees) are covered by the same rule, since CBOs are defined as "external mechanisms".[33]

This creates a very difficult position for rural municipalities, where – virtually by definition – rural communities only have one water services committee (unless there has been excessive internal political conflict!) There will therefore either be no competitive bidding process (since there is no competition with the water services committee), or some competition has to be generated from outside organizations (e.g. NGOs or consultants). Since such NGOs or consultants may well be the Institutional Support Agencies the Municipality will require to bolster the water committee, it seems very perverse to set them at odds with one another through a competitive bidding process.

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32 See Mark Pickering, "Choosing a Service Provider: Section 78 of the Systems Act", Local Government Law Bulletin, vol. 3, no. 4, December 2001. This also means that the Municipality is obliged to follow a competitive selection approach in accordance with the Preferential Procurement Policy Framework (Act 5 of 2000).

33 Section 76(b).

Conclusion

Municipalities currently face a fundamental tension. On the one hand, policy documents and legislation (the White Paper, the Water Services Act, and the Municipal Systems Act) endorse a high level of community participation, as well as the decentralisation of service delivery to communities. On the other, the demands of the political and administrative consolidation process – which has been much more difficult and protracted than many policy makers had anticipated – has put ASD issues on the back-burner in many municipalities. Furthermore, the Municipal Systems Act has introduced a gamut of requirements which have to be met before a community-based WSP can be established.

This leaves the water sector in an unfortunate position. A great deal of effort had been taken, since 1994, to build up community organisations to manage water and sanitation projects. This is squarely in line with all the lessons of international water services management. It is now common knowledge that sustainable rural water services requires community involvement, to take responsibility for repairs, revenue collection and integration of water services with other development initiatives.

What, then, should become of the Water Services Committees in rural areas? If they cannot be transformed into fully-fledged WSPs, can they still use their valuable leadership and technical skills to augment the municipality's water services delivery function? How can such committees be integrated with the municipality's administration, without their losing their essentially community-based and voluntary character? Will Municipal Councillors (and Ward Committees) be threatened by these established and experienced community bodies? In sum, how can the product of DWAF's years of capacity-building effort be married with the new and fragile local government order?

These are the challenges currently faced by municipalities in rural areas. Kamiesberg Municipality illustrates these dilemmas. In Part 2, the following themes emerge:

- The extraordinary degree of capacity building (regarding leadership, technical and financial skills) which DWAF organisations had achieved in the rural communities, and the positive response of the communities to these initiatives

- The high level of research which has been done by DWAF consultants about water services in the rural settlements

- The major challenges faced by Kamiesberg Municipality, to consolidate and improve the technical and financial management aspects of water services delivery in the newly demarcated municipality

- The political climate of uncertainty regarding the future of the water services committees.

3. A CASE STUDY OF KAMIESBERG LOCAL MUNICIPALITY

3.1 The context of ongoing water and sanitation projects in Kamiesberg

The project had the good fortune to be implemented in a locality with a depth of water and sanitation experience. Two key DWAF projects have been in progress since 2000: (1) The installation of dry sanitation technologies, and community health awareness; and (2) the "Sustainable Allocation" (SA) programme whereby community water and sanitation projects would be implemented and then transferred to local government.

Various aspects of these projects contributed to the investigation:

- The refurbishment of existing infrastructure in the rural communities was being constantly undertaken, as part of the SA programme. In some settlements, this include providing water meters, to reduce water wastage, and to do proper water management. This meant that the SA consultants had compiled a valuable data-base of existing infrastructure in the rural settlements.

- Due to the substantial number of water and sanitation projects in the area, several water services committees had been established and substantial institutional capacity and leadership had been built. This provides a strong foundation for potential devolution of functions to community level.

- New types of dry sanitation technologies are being implemented, that will not deplete water resources. This will require new types of management, which will be done at household level, and will be less demanding on Municipal resources.

- Due to its long-standing involvement in water and sanitation projects, NAWASAN has built up a strong and credible relationship with the communities and the Municipality. This was an indispensable factor in the implementation of this project.

During the project period, NAWASAN was employed on the SA projects and the WRC investigation into WSA-WSP relationships in the Kamiesberg Municipality. This enabled important synergies to be achieved.

To "unpack" the question of water services management in the Kamiesberg area , it was necessary to consider the issue in the following logical sequence:

- D*emographics and resources:* How many people live in the rural communities, and what is their level of income?

- *Current Levels of Service:* What is the current level and condition of infrastructure in the rural communities?

- *O&M requirements:* What level of water services maintenance do the communities require? Can it be done by local operators? What should be the role of municipal staff?

  O&M costs: What would the proposed O&M system cost, in terms of (1) staffing, (2) spares and supplies, (3) equipment?

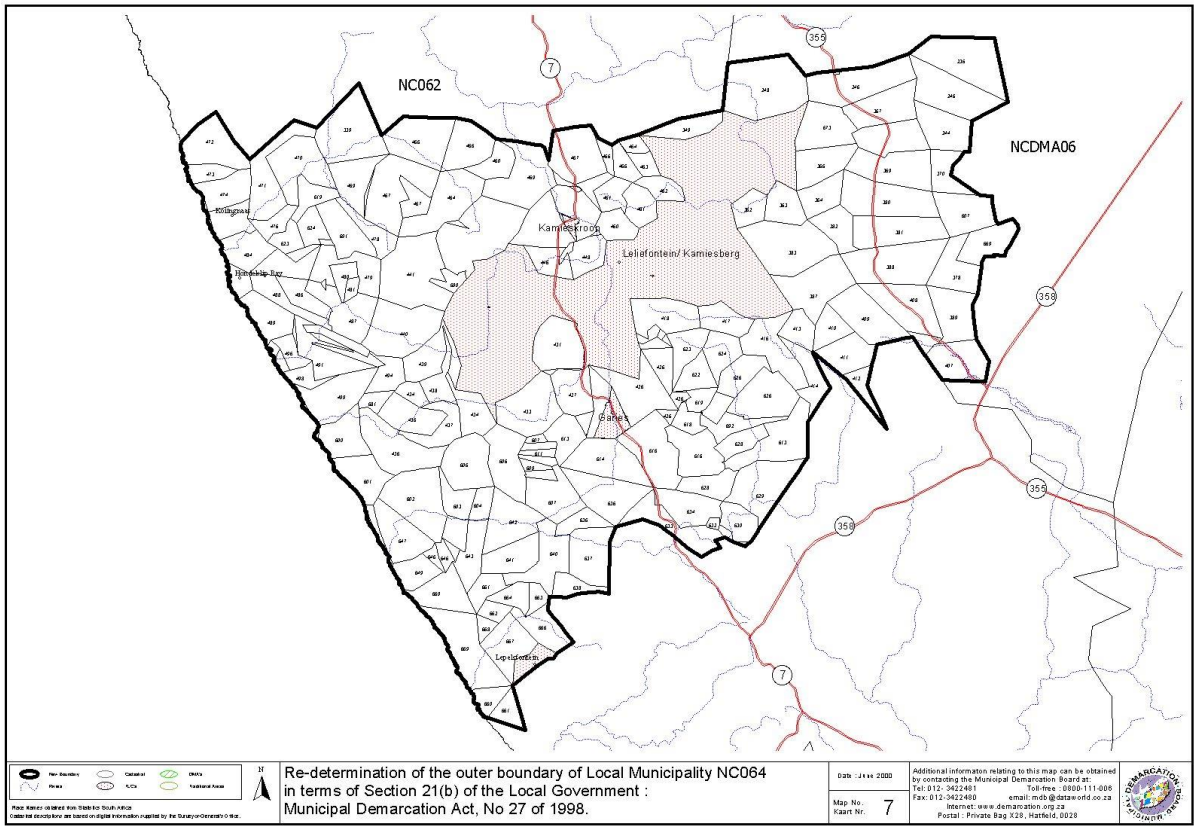
- *Budgeting:* Given the current levels of revenue (mainly municipal rates, equitable share and tariffs), what should be the level of rates and tariffs, in order to cover the O&M costs?

- *Equity and fairness:* What level of subsidies should be provided to the residents of the rural communities? Should they be cross-subsidised by the other areas in the Municipality?

3.2 Kamiesberg rural Water Services Committees in context

Kamiesberg Municipality covers a vast semi-desert area. It consists of 11 784 square km, with an average density of only 0.9 persons per square km. The larger settlements are Hondeklip Bay (a small fishing/harbour town), Kharkams (situated on the N7, and Leliefontein (situated in the Kamiesberg mountains). (Additional geographic, demographic and economic details concerning Kamiesberg are contained in Appendix A).

MAP 1: Kamiesberg Municipality



Based on the 1996 Census figures, there are 11 031 people living in Kamiesberg, of which 9 178 are "Coloured" and 1 230 are "white".[34]

The distances between the communities are formidable. The two formal towns, Garies and Kamieskroon, are 45 km apart. The twelve rural communities are situated up to 80 km from Garies, on untarred roads.

The area is extremely inhospitable. There are deserts, mountain ranges and vast distances to deal with. Underground water resources are very scarce, or unsuitable for human consumption, and have to be utilised carefully. In some settlements, desalination plants have been established, which are very costly to maintain. Effective water management will be a real challenge.

Average levels of income are low: An average of R4 885 *per capita per annum,* and an average of R22 701 per household *per annum*. The average household income is therefore less than R2 000 per month, and this figure includes the much wealthier urban communities of Kamieskroon and Garies.[35] In the rural settlements, a third of households earn less than R500 per month.

Unemployment levels in the rural communities are high, and reach 73% and 74% in Kheis and Klipfontein respectively.

The low income levels indicate that many of the households will fall into the category of "indigents" (see Chapter on Finances). In the rural settlements, about 100 households earn less than R500/month, and between 100-200 households earn R500-R1000/month. Of all the households in the rural settlements of Kamiesberg, 75% earn less than R800/month.[36]

In general, levels of water provision in the rural settlements is higher than sanitation levels.[37] About 32% of households (580 households) have water levels below RDP, while 79% have sanitation levels below RDP:

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34 Figures derived from Demarcation Board website.

35 Information is drawn from the study by NAWASAN – See Appendix A.

36 Information provided by Octagonal Consulting, Kamiesberg Water Services workshop, 7 February 2002.

37 Information drawn from NAWASAN's baseline study.

Table 1 : Infrastructure levels in Kamiesberg rural settlements:

	No. of households below RDP	No. of households above RDP
Water		
No water provision	474	
Standpipes further than 200 m	74	
Yard taps or indoor supply		854
Standpipes closer than 200m		253
Sanitation		
No sanitation	322	
Bucket toilets	865	
Unimproved pits	121	
VIPs		163
UDS[38]		31
Septic Tanks		122

3.3 Institutional Development: Municipal government and water services committees

The institutional situation in Kamiesberg is complex. There are large number of role-players in water services management in the communities. These include:

- The committees
- The operators
- Kamiesberg Municipality: Councillors & Officials
- Namakwa District Municipality
- Supportive agents e.g. CSIR, DWAF social consultants (NAWASAN)
- Department of Local Government and Housing
- Toens and Associates (until recently they had a DWAF and DLG&H contract to do maintenance, Groundwater Management & Monitoring [excluding the network] and they still do water monitoring.

This study was undertaken at a time of profound institutional changes. Until December 2000, the 13 rural settlements in southern Namaqualand fell under the Leliefontein TLC. The Kamiesberg Municipality was established in December 200, and consists of the rural settlements as well as three TLC areas: Garies, Kamieskroon and Leliefontein. The central Municipal offices

[38] Urine Diversion System.

are located in Garies. This process of amalgamation in Kamiesberg has been fairly smooth and amicable; however, it is an incremental process which will take some time to complete fully.

Kamiesberg Local Council consists of 7 Councillors, of which only 4 are ward councillors. The wards are consequently geographically large, and each ward includes several rural communities.

The municipal administrative staff in the rural settlements typically consists of a Local Water Operator, an Administrative & Payments Clerk, DWAF's Water and Sanitation Programme Facilitator, and the sanitation storeman. Water and Sanitation Committees consist of a few community representatives.

With the creation of Kamiesberg Municipality, the manifold institutional formations have become streamlined: In the past, the water operators in the rural settlements were employed by a diversity of institutions. During the last three months of 2001, Kamiesberg Local Municipality made significant progress was made in streamlining the O&M staff structure in the rural settlements. This included:

- Operators in Hondeklip Bay and Soebatsfontein, previously employed by the Namakwa District Council, have been transferred to Kamiesberg Municipality
- Operators in Lepelsfontein, Karkams, Kheis, Klipfontein, and Spoegrivier, previously employed by Department of Local Government and Housing (DLGH), in terms of the Toens contract, will be transferred to Kamiesberg Municipality by the end of March 2002.
- The operator in Tweerivier, also previously employed by DLGH, has now been transferred to Kamiesberg Municipality.
- Kamiesberg Municipality already employs the operators in Kamassies, Leliefontein, Nourivier, Paulshoek and Rooifontein.

Nevertheless, a major political question lurks in the wings: Who should be the Water Services Authority - the Kamiesberg Local Municipality or Namakwa District Municipality? (At the time of writing, this constitutional issue has not been resolved by role-players at central government level.) The answer to this question would have a major impact on the proposed WSA-WSP relationships. This matter is addressed more closely in the final chapter.

The level of knowledge and organization of several of the communities' Water and Sanitation Committees was impressive. This shows how much effective work had been done over the last two years by the DWAF social consultants (NAWASAN). The Committees have a great deal of technical knowledge of the infrastructure, as well as of their communities.

Community Water Services Committees: The case of Kharkams

Kharkams Sanitation Committee shows the depth of organizational development which has been achieved. The Sanitation Committee was established in May 2001, with the assistance of NAWASAN. Most of the members had some previous developmental experience, because they used to participate on the Local Development Forum. (The Forum has now been disbanded due to the creation of Ward Committees. These Ward Committees, however, have not actually been created – it is part of a broader political process which has not yet been finalized. This leaves an organizational void in the communities).

Before the creation of the Kharkams Committee, the members had heard about NAWASAN projects in other rural settlements. This motivated them to become organized and enthusiastic.

The Kharkams members tend to be involved in other development issues: One member is involved in housing, and another one in ABET. They were nominated by the community at a general meeting. Generally, there is constant and active participation by seven members. Meetings are held on an *ad hoc* basis, as phases of the toilet project are initiated and completed.

The Kharkams Committee keeps minutes of all meetings. One member has become a field worker for NAWASAN, and she reports on a monthly basis to NAWASAN and the Municipality. This helps the Municipality to keep track of progress, capital needs, and indigent levels in the settlement.

A relationship of trust has developed between the committee members and the community. Training was done by NAWASAN – one workshop was conducted with the community as a whole, and one with the members of the committee. The training lasted two weeks, and was very intensive. Progress regarding sanitation in Kharkams is indicated by the fact that the nurse at the clinic reports that the number of diarrhoea patients has declined.

The Committee directly supervises the building of toilets. The committee monitors builders' work attendance, and helps them to resolve practical problems. The committee handles payments (DWAF money is channeled via NAWASAN to the committee). The committee maintains the stores, and also collects dues from the households. A record-keeping system is maintained. The committee also maintains and monitors the contracts between the households and the builders. At the end of every week, a stock-take of completed toilets is done. Builders are paid on the basis of completed toilets. The use of building materials is carefully monitored. At the end of the week, physical materials and financial resources are reconciled. Activities for the next week are planned.

The committee reads and distributes the *Kleinhuis Koerant* (Northern Cape

3.4 Operations and maintenance requirements

The key issues, in this regard, are:

- The condition of infrastructure in the settlements
- O&M requirements - supplies, equipment
- O&M requirements – staffing (including skills and training needs)
- O&M requirements – financial resources
- Drafting Maintenance Plans for the settlements.

Dealing with these issues comprehensively remains a challenge, for it would require a holistic and sustainable policy regarding technical maintenance, staffing, and budgeting.

At the meeting in Leliefontein in May 2001, the Municipality stated its position regarding the management of O&M:

- A central technical unit will be established at Kharkams to provide support to the operators and to refuse removal service providers (if this function is out-sourced).
- The municipality plans to undertake a skills assessment of each operator, to determine additional training to be provided.
- Several operators reported that they needed more equipment.
- Virtually all the operators need supplies and stores to be kept in the community, to prevent delays in repairs.
- No data is kept of repairs undertaken.
- Some communities need tractors, or assistance with refuse removal.
- There is a need for infrastructure as-built maps.

These points suggested that the whole system of O&M management needed to be re-examined. For this reason, Mr. Philip Ravenscroft, an engineer with Maluti Water, was contracted to investigate the current systems of O&M, and to make proposals for a revised and streamlined system.

A. CURRENT STATUS AND CONDITION OF INFRASTRUCTURE

Each settlement has a municipal office. These offices are general community centres, used for mobile health facilities, often having a satellite post office on the same premises and have some form of community hall or meeting room. The offices have telephone facilities and some have fax facilities. All the municipal offices visited were staffed by a full time administrator except Paulshoek, which was covered by the administrator from Leliefontein, who was there for 1 day a week. The offices are in good condition and appear to be well maintained.

The condition of the water services infrastructure varies between settlements, and are shown in more detail in Appendix B. There are some general comments that can be made:

Strengths:

- **Fencing:** All the pump houses, reservoir sites and desalination plants visited are well protected from livestock in fenced enclosures.

- **Routine maintenance**: In all of the settlements visited some routine maintenance is done. This includes checking for leaks on the main lines, maintaining fences and repairing leaks

- **Groundwater monitoring:** Toens and Associates performs monthly monitoring in Lepelsfontein, Kharkams, Kheis, Klipfontein, Spoegrivier, Tweerivier, Kamassies, Leliefontein, Nourivier, Paulshoek, and Rooifontein.

Weaknesses:

- **Quality control:** Quality control during project implementation has been weak and most of the projects visited have pipelines that were not properly buried and have become exposed.

- **Construction problems:** In some instances, there has been no proper commissioning and hand over of projects. As a result, construction snags and issues of implementation have not been properly dealt with and have become O&M problems. Examples of this include the Hondeklipbaai pre-paid project, the Lieliefontein de-fluorination equipment and the leaking salt dam at Kheis.

- **Documentation:** Neither the Kamiesberg Municipality nor the operators have adequate documentation of the water systems. Of the settlements visited only Soebatsfontein and Hondeklipbaai had layouts of the schemes and at Hondeklipbaai this only covered the reticulation in the town. The KM office has no drawings of the schemes and do not have copies of completion reports and design reports. There are also very few route makers on the pipe routes.

- **Chlorination:** Some of the systems visited had chlorination facilities and the author was informed that all the systems were supposed to be chlorinated as it had been recommended by a consultant. Chlorination had not happened for approximately the last year. It is debatable if chlorination is needed unless there is a microbiological water quality problem. This needs further investigation so that a *chlorination policy* can be put in place. If it is policy to chlorinate all drinking water then it

should be implemented at all the settlements and testing procedures and controls need to be put in place.

- **Water balance:** No water balance calculations are done. I.e. there is no balancing of supply meters against consumption meters and calculation of unaccounted for water. This is partly due to the absence of meters, and partly because existing meters are faulty.

B. GENERAL WATER SERVICES MANAGEMENT

Before the restructuring of local government, the towns of Kamieskroon and Garies ran their own water supplies, Hondeklipbaai and Soetbatsfontein were run by the Namaqua DM and the other settlements were run by the Department of Local Government and Housing mostly under subcontract to Toens and Partners. With restructuring, the Kamiesberg Municipality (KM) has inherited all these different systems and has been struggling with managing this new expanded responsibility. Toens and Partners continue to run the systems at four settlements and are also responsible for ground water monitoring at all the schemes.

The responsibility for water supply falls under the department of works. The department head, Mr Coenie Coetzee, estimates that water comprises about 50% of the department's work, the other 50% being spent on sanitation, refuse removal, internal roads, electricity, storm water, stock water, fencing and transport maintenance.

At present the municipality is in the process of restructuring and all posts have been frozen. As a result, there are no job descriptions, no systems of performance appraisal and no official organogram for the Municipality. Both the staff and the head of the department expressed frustration at this situation. Time sheets are completed by all staff. The operators' time sheets are filed at the local administration office; the foreman's are submitted to the Head: Department of Works.

The current system of doing maintenance and repairs is very inefficient. Typically, this is the procedure:

- When there is a problem at a particular settlement, the operator phones the KM office in Garies and reports the problem to the head of the works department.

- The head of the works department then contacts either the Water Foreman for water infrastructure problems or the Mechanical Foreman if it is a mechanical problem.

- Taking a pipeline problem as an example, the Water Foreman would then assess the situation from his office in Kharkams, draw the needed and available spares from his store and, taking his tools, drive up to 100km to the settlement to do the repair.

- If the correct spare parts were available, the repair can be done. Frequently this is not the case and, after assessing the problem on the ground, the Water Foreman returns to Kharkams, where he either gets the correct spares or orders the parts that are needed. A second trip to the settlement is then needed to actually do the repair.

It must be noted that it is extremely difficult to communicate over the telephone the nature of a problem with a water system and to remotely assess what is required to repair the problem.

Because of this time consuming procedure combined with the scarcity of water, the operators have become experts in "tube & draad" *ad hoc* pipeline repair.

In the settlements operated by Toens and Partners a similar situation exists. Again, the operators have very little resources at their disposal and report breakdowns to a remote office but the support and repair is provided by a parallel system by employees of Toens and Partners.

Supply of diesel fuel is by bakkie, delivering a 200l drum at a time. The Mechanical Foreman normally delivers the fuel for those systems run by the KM and an employee of Toens and Partners for the settlements run by them.

As regards materials stores, there are three main places where stores are kept: At Garies, Kharkams and Kamieskroon. The Kamieskroon store only keeps stock for the town, and materials for all the settlements are drawn from Garies and Kharkams. There is a general system of stock system at the stores but materials are not booked to a particular project.

C. MONITORING OF O&M ACTIVITIES

Toens and Partners (T&P) is currently responsible for all the ground water monitoring in all the settlements except Soebatsfontein and Hondeklipbaai. In Kheis, a scheme operated by T&P, the operators keep weekly log sheets of pumping and desalination times and these are then sent to the T&P office in Springbok. Water samples and water level readings are taken once a month by an employee of T&P and taken to Springbok for analysis. None of the information is retained by the operators.

The following recommendations can be made for the monitoring of O&M activities:

1. There are two basic rules that should govern monitoring activities
    - Only collect information that will be used, either in the short term or in the long term.
    - Ensure that the operator who takes the readings keeps a copy of the records on site and wherever possible is able to do the first level of monitoring.

2. Because of the dependence of the area on groundwater and because of the marginal nature of many of the sources, it is vital that the ground water monitoring programme continues. Ground water should also be monitored in Soebatsfontein, Garies and Kamieskroon.

3. Each borehole should be supplied with a log book that contains the following:

    - An original that can be easily torn out (serrated) and a carbonised second copy that remains in the book.
    - The last page should be graph paper on which the operator can plot the water level.
    - See Appendix 4 for a sample log book format.

4. The collated log book records must form part of the maintenance foreman's monthly report. A hydrogeologist should be contracted to do analysis of the data on a regular basis and to make recommendations about how the boreholes should be managed. Specifically, with the changes in water quality and quantity available during the rainy season, some sources could be used more and some of the other sources rested. For example, at Kheis one could be pumping the fresh water from the sand abstraction system during the rains and resting the salty borehole during that time and save on the cost of desalination.

5. Water quality monitoring:

    - Each desalination plant operator should take samples of PH and EC daily and record these values in the logbook of the plant. The operator should monitor the EC levels and immediately report significant changes in the salinity of the water.

    - Monitoring of the microbiology of the water supplied should be done at the supply points. This is normally done regularly by health authorities. The KM works department should ensure that they receive regular reports on the water quality supplied from the relevant health authority. This aspect of water quality monitoring should to be linked to the chlorinating of water supplies and needs to looked at and a policy put in place.

- The monthly monitoring of individual boreholes for EC and Fluoride should continue and should be based upon recommendations from the current status reports from Toens and Partners.

D. GENERAL AND MANAGEMENT RECOMMENDATIONS

These recommendations are based on utilising the current staff and systems of the KM and propose changes that can be made to improve the efficiency of the O&M.

- *Delegation of O&M:* Delegate greater responsibility to the operators at each settlement. Specifically, supply them with the tools and basic material so that they can perform routine operation and maintenance. Clearly define the reporting requirements and communication channels for the operators.

- *Delegation of supervision:* Delegate the responsibility of supervision of the operators to a maintenance foreman and define the monthly reporting of the maintenance foreman.

- *Record keeping:* Implement the following systems record keeping:

    - A standardised maintenance schedule. A draft, proposed maintenance schedule is attached as Appendix 1. This should be thoroughly checked against manufactures specifications and the experiences of the KM before being finalised and implemented.
    - Standardised service history records for each diesel motor.
    - Standardised log books for each borehole (see 3.4 Point 3) and desalination plant.

- *Reporting procedures:* Standardise reporting procedures and formats for the operator and the maintenance foreman. It is proposed that the maintenance foreman compile monthly reports and should include log book records (borehole and desalination), time sheets and other reports clearly compiled for further analysis.

- *Water balance and water losses:* Do regular water balance and unaccounted-for- water calculations based on meter readings. This should be done monthly and is probably best done by the administrator at each settlement and a monthly summary report should be submitted to the KM office.

A maintenance schedule has been attached as Appendix C, to show the operations and maintenance tasks which need to be regularly performed.

E. TECHNICAL STAFF IN KAMIESBERG

Currently, the operators are under-utilised. While many of the recommendations in this report look aim at greater utilisation of these staff, the option of staff working part time on some of the smaller schemes also needs to be investigated.

With the planned transfer of the schemes operated by Toens and Partners, the KM should ensure that they do not lose the experience and skills of the current staff of Toens and Partners and it is recommended that these staff be employed to continue with their work. However, at the current levels of operation, only one of the two operators is required for doing the job.

The upgrading of the operators skills and training of operators in the management and reporting systems of the KM. As soon as the status of staff positions is finalised, job descriptions and performance appraisal procedures should be put into place.

3.5 Financial management in Kamiesberg

1 CURRENT BUDGETING SYSTEM IN KAMIESBERG

The KM system of budgeting is based upon direct costs allocable to a particular line item, like *water supply*, and a large allocation to *general overhead costs*. Tariff projections need to cover both the *specific water services costs* and the overhead costs.
In the current budget, Kamiesberg has to collect water tariffs that cover the direct water-related costs as well as a portion of the overhead costs. The ratio of overheads to water costs is 1:3,6. This means that for each R3.60 collected in water tariffs, only R1 is used to cover an identified direct water cost, and R2.60 is used to cover overhead costs. Therefore, in the current budget, the total tariffs that need to be collected are 3.6 times the allocated cost, i.e. the overhead costs are 2.6 times the allocated direct water costs.

Kamieskroon and Garies water supplies have been historically run at close to breaking even based on tracking of the budget and expenditure. For that reason they can be separated from the other settlements. In the table below, the relationship between direct and indirect costs is shown. In Garies, for example, direct water-related costs amount to R72 216, but a revenue of R288 205 is required to cover both the direct water-related costs and a large part of the overhead costs. In Garies, the ratio of direct water-related income to direct costs is 4, which means that every R4 of revenue from water services in Garies has to cover R1 of water costs as well as R3 of overhead costs.

Table 2: Direct and indirect water-related costs in Kamiesberg

	Garies	Kamieskroon
Budgeted Direct Costs (2001)	72,216	43,260
Budgeted Income (2001)	288,205	140,792
Overhead Ratio (Income/Direct costs)	4.0	3.3

This has significant implications for water services delivery in Garies and Kamiesberg. It runs contrary to the DWAF principle of reducing the "surplus" revenue generated by water services. This means that overhead costs should be allocated more carefully to different "cost centers" in future - including water and sanitation, electricity, or refuse removal. The actual costs of running water and sanitation have to be calculated more carefully. Ideally, the rates bill should be used to pay for overheads that cannot be allocated to any cost centre. The Municipality will have to become much more explicit and transparent about the transfers between water revenue and other municipal functions which do not generate sufficient revenue.

This also has significant implications for the rural settlements. The real cost of water and sanitation in the settlements must be calculated, so that appropriate tariffs can be designed to cover the real costs of water and sanitation – and possibly also provide some revenue to transfer to other "cost centers". It also implies that, since water tariffs in Garies and Kamieskroon are already "cross-subsidizing" other municipal functions to a large extent, there will not be much revenue available for "cross-subsidizing" water expenses in the rural settlements.

2 NEW BUDGETING PRINCIPLES

The principle of "payment for services rendered", as well as the principle of "water has an economic value", form the basis of current approaches to municipal financial management.

These principles actually consist of several policy innovations:

- Amalgamation of municipalities, and therefore amalgamation of tariff structures
- Free Basic Water policy
- Indigent policies, based on the Equitable Share system
- Step tariffs
- Covering operational and maintenance costs
- General Accepted Municipal Accounting Practice ("GAMAP").

Taken together, these innovations spell both good news and bad news for consumers. Households which are registered as indigent will not have to pay

for water services at all, or will only pay partial fees. Households – especially in rural areas - which have up till now paid excessive water tariffs, will find tariff relief. Other residents, however, will find that tariffs have to cover operations, maintenance, as well as depreciation of infrastructure (so that the municipality will be able to afford new infrastructure in future).

This chapter will show that tariffs in Kamiesberg will have to be increased dramatically. In the light of Chapter Four, which examined the real O&M costs, it will be shown that current budgeting for O&M is too low, and must be increased. This will imply tariff increases. The chapter will also show the impact of GAMAP. Finally, the issues of indigent policy and Equitable Share will be addressed.
Three key policy innovations have had a significant impact on tariffs:

- *Demarcation:* With the demarcation process, all the different local councils were incorporated into one Municipality – namely Kamiesberg. Within this newly demarcated municipality, all the small entities had their own set of tariffs, which differentiated from one local council to the next. Within the first year of demarcation it was recommended that the new municipality should try to integrate the tariff system to ensure all the communities of the newly demarcated municipality pay the same tariff for the same level of service.

- *Step tariff model:* DWAF prescribes that the step tariff model in respect of water tariffs be introduced to consumers. The basis of this model is that different categories of consumption are created, based on the level of water consumption. The higher the category of consumption, the higher the tariff. This ensures that the first (the lowest tariff) category tariff covers the direct costs, the second tariff will include direct costs and capital costs, and the third category tariff (the highest tariff) will cover direct costs, capital costs and the profit on water services. By implementing this tariff structure on water, efficient income can be generated, without charging the poor (small) consumer an extremely high tariff.

- *Free Basic Water:* Free basic water has become a debatable issue. One view is that *all consumers* should receive free basic water; the opposing view is that *only indigents* should benefit from free basic water. One thing must, however, be highlighted and that is that the so-called "free basic water" is never free for the municipality, as water still has to be purchased and distributed at certain costs. This means that all costs associated with water services eventually have to be recouped.

Four tariff structures have been calculated to generate different levels of revenue for the municipality:

- *The base tariff* : This tariff calculations were based on the current expense budget for the Kamiesberg Municipality for the 2001/2002 financial year. These tariffs were calculated with consideration of the current tariffs and to structure one tariff system for the whole municipality.

- *O & M tariff* : These tariffs were calculated by using the current expense budget of the municipality as a basis and adding on the costs for operations and maintenance.

3 OPERATIONS & MAINTENANCE IN THE RURAL SETTLEMENTS: INFLUENCE ON TARIFFS

Before the influence of operations and maintenance on tariffs could be evaluated, we had to establish a uniform tariff structure for the Kamiesberg Municipality. This is referred to as the *base tariff*. It should be noted that this tariff structure is only used as a basis to compare tariffs, which incorporated the operations and maintenance plan as proposed by the technical engineer. The Kamiesberg Council has not approved the base tariffs.

The estimated cost of the spares are shown in Appendix C. The total cost of adequate spares in the Kamiesberg Municipality will therefore be *R24 000 as a once-off expenditure*, followed by additional purchases as stock is used.

Appendix C also contains a list of basic tools that each settlement needs to acquire. This is in addition to the ongoing annual expenses on tools and equipment. *A total of R40 000* is required to purchase tools for water services.

The costs which are required for water and sanitation services specifically, amount to R90 000 per annum. This includes salaries and benefits, repairs and maintenance, fuel and electricity, tools and equipment, professional fees, and water sample analysis. In addition, two general foremen, costing a total of R213 000 p.a., have to be employed, as general municipal overheads.

These overhead costs include all kinds of expenses related to the general running of the municipality, ranging from the Mayor's salary to stationery.

4 CURRENT BUDGETARY LEVELS FOR O&M IN KAMIESBERG MUNICIPALITY

According to the 2001/2002 budget, the total amount currently budgeted by Kamiesberg Municipality for *all operation and maintenance cos*ts amounts to 9,3% of the total expenditure. The budgeted operations and maintenance costs *for water services* amounted to only R34 500 *for the whole Municipality* (3,98% of total expenses). This allocation to maintenance for water services is inadequate.

Tariffs do not always cover real costs of O&M in the rural communities. The following table illustrates O&M tariffs as a percentage of real costs:[39]

Table 3: Costs recovered by tariffs in Kamiesberg rural settlements

Settlement	Percentage
Soebatsfontein,	47%
Lepelsfontein	32%
Kharkams	27%
Kheis	10%
Klipfontein	0.2%
Spoegrivier	8%
Tweerivier	49%
Kamassies	34%
Leliefontein	79%
Nourivier	30%
Paulshoek	16%
Rooifontein	32%

According to the technical overview of the maintenance on the water services, *an amount of R897 277* is necessary for the rural areas settlements only! Given the fact that tariffs cover only a small proportion of real costs, this means that a substantial degree of urban-rural cross-subsidisation will have to be done.

E. FUTURE O&M BUDGETARY REQUIREMENTS IN KAMIESBERG, AND CONSEQUENCES FOR TARIFF LEVELS

In the table below, the tariff structures has been set out to enable the reader to see the immediate effect of the costs of operations and maintenance. Three consumers' total accounts including water, electricity, sanitation and refuse removal, which differentiate between a small, medium and big consumer, were calculated to see the effect of these increases in costs for the consumer's budget.

[39] NAWASAN's baseline study.

Table 4: Effects of O&M costs on tariffs in Kamiesberg

Tariffs		Base tariff (current uniform Kamiesberg tariff)	O & M
	Availability	R22-00	R22-00
	Communal taps	R15-00	R15-00
	Basic– Residential	R23-00	R25-50
	Basic– Business	R23-00	R27-00
	0 – 3 kl	R0-50	R1-55
	4 – 10 kl	R1-85	R2-40
	11 – 20 kl	R2-50	R4-10
	21 kl +	R3-00	R5-80

The increase from the base tariff to the O & M tariff is extreme. The reason for this is to generate sufficient income to cover the expenses for O & M. In Namakwaland, water is a scarce commodity and as a result water usage are limited. Due to the low level of water supply, and therefore low level of water sales (maximum of only 245 000 kl of water sold to the Kamiesberg community per year), the tariffs had to be increased to this extent to ensure that sufficient income is generated. If one takes into consideration that approximately only 2 600 households are consumers which are non-indigent and can be levied, it is clear that if high increases in expenses occur, the community may not be able to afford the water services, without external help.

F. THE IMPACT OF GAMAP (GENERAL ACCEPTED MUNICIPAL ACCOUNTING PRACTICES)

Capital costs have always been covered by grant finance. It is debatable whether replacement of capital items will be covered by grant finance in future. Consequently, GAMAP requires that the replacement of capital items should be budgeted for every year.

Without covering the capital costs of infrastructure (i.e. the replacement costs), water services expenditure will amount to R1 226 000 p.a. When capital costs are added,

they will amount to R2 322 000. (Appendix E shows an estimate of the capital value and the annual budget needed to cover capital replacement over 5, 10 and 20 years).

In the long term, the KM must look at implementing new projects using technologies that are cheap to maintain. Sand abstraction, artificial recharge of boreholes, the conversion of diesel to electric powered boreholes as the electricity network reaches the settlements, solar powered pumps at remote

locations, dual salt and fresh water networks, rainwater harvesting. Some of these would involve an expensive initial investment but generally this is covered by grant finance whereas the KM will reap the benefits of the more economical O&M.

Any financial and tariff plan needs to take cognisance of the "limited pie" that is the KM. Quoting broad figures from the KM, their operational budget for the whole institution is R5m. The total equitable share is R2.5m, leaving a total of R3.5m that has to be recovered locally from rates and taxes.

With the implementation of GAMAP, fixed assets must be depreciated over the expected lifetime of the asset. This means that even if a water network is subsidised, the cost of the network must still be provided for over the lifetime of the asset. As a result tariffs must increase to generate the additional income to cover the depreciation. The theory is that if the depreciation is provided for as an expense, the total amount to replace the existing asset will be available when the network reaches the end of its expected lifetime.

The implementation of GAMAP principles will imply that all assets (networks) will be depreciated in the income statement, which means that expenses will increase. Put in another way, municipalities will have to budget for replacement of infrastructure from the time when it is taken into use. Taken the above into consideration, it seems unlikely that a community like Kamiesberg will be able to afford the principle of capital depreciation in the income statement. In the above examples of tariff increases, an annual increase in expenses of only R350 000 and R570 000 were considered for new capital works (which are not large amounts for capital works). But if Kamiesberg's *existing* water networks, currently valued at R21 924 500, should be depreciated over a period of 10 years, this would amount to a depreciation of
R2 192 450 per year. If this is included in the tariffs, the community will certainly not be able to afford these services.

The following table shows the impact of budgeting for a R2 million loan and a R3.2 million loan, repayable over 20 years. The table includes the following additions:

- *O & M + R350 000*: These tariffs were based on the expense budget including the operations and maintenance cost and adding an additional

- R350 000, to see what the effect will be on the tariffs if the Municipality took up a loan to the value of approximately R2 000 000. The additional R350 000 added to expenses will represent the interest and redemption on the loan, which the Municipality will have to pay.

- *O & M + R570 000*: These tariffs were based on the expense budget including the operations and maintenance cost and adding an additional
- R570 000, to see what the effect will be on the tariffs if the Municipality took up a loan to the value of approximately R3 200 000. The additional R570 000 added to expenses will represent the interest and redemption on the loan, which the Municipality will have to pay.

The calculations below show the enormous effect that O&M and capital repayments will have on the tariff structure in Kamiesberg:

Table 5: Four possible tariff structures in Kamiesberg Municipality

Tariffs		**Base tariff (current uniform Kamiesberg tariff)**	**O & M**	**O & M + R350 000 (loan to the value of R2 million)**	**O & M + R570 000 (loan to the value of R3,2 million)**
	Availability	R22-00	R22-00	R22-00	R22-00
	Communal taps	R15-00	R15-00	R15-00	R15-00
	Basic– Residential	R23-00	R25-50	R28-00	R35-00
	Basic– Business	R23-00	R27-00	R30-00	R36-00
	0 – 3 kl	R0-50	R1-55	R1-99	R2-10
	4 – 10 kl	R1-85	R2-40	R3-65	R3-90
	11 – 20 kl	R2-50	R4-10	R5-30	R5-70
	21 kl +	R3-00	R5-80	R6-95	R7-30

In applying the step tariff model is should be noted that consumers' profiles and consumer resistance are extremely important. If a consumer decides that the higher consumption of water is too expensive, they might change their consumption accordingly and as a result historical information of usage (on which budget and tariffs are based) may be incorrect. The increase of the step between different categories should therefore be of such a nature that it does not lead to consumer resistance in respect of water consumption.

The recoverability of water debtors is very difficult, as water is regarded as a basic service and may not be withheld from the community. As a result the provision for doubtful debts should be increased, which in turn will have an increasing effect on the tariffs.

5 THE USE OF THE EQUITABLE SHARE REVENUE

Until now, the residents of the rural communities have not received the benefits of equitable share. They have been required to pay monthly tariffs, even if they were indigent. (In practice, however, the level of payment is very low). At the site visit meeting in May 2001, the following principles were discussed by the Municipality:

- The available Equitable Share amount is divided amongst the number of indigents. This is done every 3 months, so the amount of subsidy is likely to fluctuate. At present, the subsidy in Kamieskroon is about R48/month, so this may also be extended to the rural communities.

- Two of the indigent categories therefore do *not* receive a full subsidy. This also means that the payment culture must be maintained and improved. However, everyone will qualify for the 6 kl free water.

- In some places[40], the costs of water provision is higher than that of the available equitable share+likely tariffs. This will require cross-subsidisation from the municipality itself. This is particularly the case in communities with desalination plants.

- There will still have to be a decision on *who* should determine indigents' incomes. Should this be done by the Ward Committees? Or by a select committee of clerics and community leaders?

At present, Kamiesberg Municipality receives about R2.5 million p.a. in Equitable Share. There are currently 678 indigents on the indigents' list.

Table 6: Current indigent subsidies provided in Kamiesberg Municipality

Household Income category per month	Percentage of monthly bill subsidised	Amount of subsidy
R1-500	100% subsidy	R84 subsidy per month
R501-R800	50% subsidy	R42 subsidy per month
R801-1500	20% subsidy	16.80 per month

If the system of indigent subsidies were to be extended to the rural settlements, the subsidy amounts would be:[41]

40 In Soebatsfontein, for example, water is charged at R34/kl.

41 Calculated by NAWASAN. See the Baseline Study.

Table 7: Indigent subsidy requirements for rural settlements

Settlement	Subsidy required p.a.
Hondeklip Baai	R 60 782
Soebatsfontein	R 45 460
Lepelsfontein	R 37 900
Kharkams	R133 459
Kheis	R 72 878
Klipfontein	R 65 318
Spoegrivier	R 81 345
Tweerivier	R 28 123
Kamassies	R 67 939
Leliefontein	R145 857
Nourivier	R 78 321
Paulshoek	R 78 422
Rooifontein	R 61 185
TOTAL	**R956 989**

Given the calculation that O&M in the rural settlements will cost R897 277 p.a., the Equitable Share revenue of R2,5 million p.a. should be able to cover the costs of water provision in the rural settlements. The Municipality faces two problems:

(1) The Equitable Share is currently spent primarily on subsidizing urban residents in Gamies and Kamieskroon.

(2) In the past, insufficient provision was made for non-payment by residents. In the 2000/1 budget, only R168 000 is budgeted for unrecoverable debts, whereas the actual figure is likely to be much higher (say R2 million). This means that the Equitable Share revenue is used to cover unrecoverable debts, instead of covering O&M costs. This means that the municipality's operating budget remains very restructed. In sum, the Equitable Share is being "swallowed-up" by defaulters.

(3) The Equitable Share is meant for all services, and not simply water and sanitation.

In addition, as indicated above, a large proportion of revenue from water tariffs is currently needed to finance general municipal overheads. The total Municipal budget is around R6 million, whereas the Equitable Share received is only R2.5 million. This means that water and sanitation tariffs have to amount to around R3.5 million, in contrast with the current budgeted tariff income of 428 997. Clearly, there is a major need for additional revenue in Kamiesberg Municipality, and a strong argument for additional subsidies.

However, once the GAMAP requirements are incorporated (i.e. budgeting for depreciation), then the cost of water provision in the rural settlements will become a great deal more onerous:

Table 8: Depreciation costs of infrastructure in rural settlements over different time periods

Capital stock in the rural settlements	5-year period	10-year period	20-year period
R21,924,500	R4,384,900	R2,192,450	**R1,096,225**

Virtually all the Equitable Share would then be spent in the rural settlements, which would make the Municipality quite unviable.

It is also possible that the indigent policy should be reconsidered, since the levels of subsidies still need to be calibrated with the tariff proposals in this chapter, to determine what level of subsidies is really affordable by the Municipality. Perhaps the subsidy levels are set at too generous a level; or perhaps too many households qualify for the subsidy. This is an important and contentious political issue, which will have to be confronted squarely by the Local Council.

However, decisions on the indigent policy subsidies should also be integrated with decisions on municipal rates. The Municipality may well decide that it is easier to increase rates substantially, than to increase water and sanitation tariffs.

Conclusion: Impacts of financial issues on rural settlements

The rural settlements find themselves in an acute dilemma:

- *Operating costs:* In many places, the operating expenses of the water systems are high (especially those places with desalination plants). Long distances and poor untarred roads also cause high transport expenses.

- *High levels of indigency:* Nevertheless, the majority of residents qualify as "indigents" and cannot pay fees. Until now, the indigent subsidies have not been formally extended to the communities. However, residents have been enjoying *de facto* subsidies, since the operating costs are covered by the Municipality

- *Payments culture:* The payments culture is virtually non-existent, due to years of DWAF and DLGH practices of free services in these communities

- *Low tariffs:* Water tariffs are extremely low, in relation to the real costs of water. In mid-2001, most households were levied a flat rate of

R14.40/month. The Municipality acknowledged that these tariffs would need to be reviewed.
However, in some areas, tariffs are higher than those in the urban areas, and need to be reduced.

What therefore needed to be done was to synchronise the real costs of O&M with the likely levels of payment and indigent subsidies, so that revenue and expenditure can be balanced. This requires a consideration of:

- The real operating costs
- The appropriate tariffs
- The appropriate subsidy levels for the municipality, and whether the 3-tier subsidy structure is administratively feasible
- Free basic water: (1) Whether *all* residents (including non-indigents) should receive free basic water, and (2) whether the free basic water should be included or excluded from the indigent subsidy
- Whether the costs of water services in the settlements can be covered by a combination of service charges and equitable share subsidies, and whether additional subsidies need to be made available by the Municipality (e.g. to cover the costs of desalination plants)
- How the payments culture in the settlements can be improved amongst non-indigents.

These questions implicitly involve additional policy issues, which need to be discussed by the Municipality:

- *Level of subsidies:* Whether indigents should pay a small "access fee" for water and/or sanitation
- *Cost of collecting revenue:* Whether the amounts of money generated by service charges will be worth the administrative expenses entailed by metering, billing and collection of revenue
- *Importance of payments culture:* Whether the creation of a payments culture is important, in its own right, even though it does not generate substantial revenue (in the rural settlements, for example)
- *Improving payments culture:* Whether alternative types of credit control can be envisaged (e.g. payments in kind; incentive systems[42])

[42] Until recently, Garies had a very successful incentive scheme, whereby residents who paid their fees could qualify for a monthly "lucky draw". Payments rates were usually above 100%, since incentives also existed for payment of arrears.

- *Client interface:* Whether the administration of credit control can be combined with other out-reach functions by municipal staff (e.g. awareness creation, assessment of household incomes, opinion surveys on consumer needs or municipal performance)

- *Payment for different types of services:* Whether households with dry sanitation (e.g. VIPs) should also pay for sanitation services (e.g. municipal maintenance of pits which get flooded during rains).

Major policy decisions therefore still need to be taken. This may affect the Municipality's administrative and political style dramatically.

3.6 Administrative issues

A. TECHNICAL CAPACITY OF THE LOCAL MUNICIPALITY

At present, office staff are employed by the Municipality in the rural settlements. The skills of these office staff can be upgraded to include several new "front-line" customer service activities, e.g. motivating payment by residents, assessing the income of residents for the indigent policy, doing opinion surveys, doing sanitation awareness training, doing advocacy to prevent vandalism. This option will require additional training, and possibly higher salaries (depending on what they earn at present).

There is apparently no threat to the position of the operators. Their skills and experience are highly valued. However, concern was expressed at the February workshop about the operators currently employed by Toens and Partners (contract ends end February). There is also a tendency within communities to ignore the skills available on their doorstep and they always get people from outside (at great expense) to repair items that could be repaired by persons with skills within the community. There is a need to recognize the skills within the community. A skills audit and training needs assessment of current village-level operators would be essential.

As regards senior engineering expertise, both the Local Municipality and the District Municipality need access to a fully qualified engineer, even if only on a part-time basis. This can be done in one of two ways:

- An engineer appointed by the District Municipality, and "shared" with Kamiesberg Municipality
- A consultant employed on a part-time basis by Kamiesberg Municipality.

B. MANAGEMENT INFORMATION SYSTEM

A proper monitoring system for water systems delivery needs to be instituted. It is likely that the water committees would serve a useful function in collecting data, which would then be sent to the Municipality to collate.

An effective MIS needs to be created, so that appropriate tariff levels, surpluses and possible systems of cross-subsidization can be researched.

Four types of information are necessary for an effective water services MIS:

1. *Demographics:* This includes accurate tracking of the number of people and households living in the municipality, their spatial distribution, their economic activities and their levels of income.

2. *Financial management information*: This includes effective billing; the implementation of the indigent policy; effective meter reading; effective budgeting; and expenditure controls.

3. *Infrastructure information*: This includes the location of infrastructure; metering; and repairs (see proposal for a Preventive Maintenance Plan)

4. *Water resource information:* In order for a proper water balance to be conducted it is essential that reliable data from bulk water meters, zone water meters at strategic locations in the reticulation system, and water meters of consumers, are readily available for corresponding time periods. This will entail:

    - *Mapping the location of meters* by zone (typically reservoir supply areas) and the demand by each dwelling or consumer.

    - *Analysing requirements of future installation of meters,* including determining which meters should be calibrated and which should be serviced or replaced.

    - *Data collection system*: Ensuring that all meters are read and recorded properly.

    - *Data capture system:* Implementation of a basic data capture and measuring system (use of a spreadsheet or database on a desktop 'PC') to reliably measure and record water consumption figures, taking into

consideration the capabilities of the available staff forms part of this phase.

The following are issues which need to be addressed when designing a Management Information System:

- *Administration:* How will be information be processed, and how will the reporting system function? Will data be verified for quality?

- *Resources:* What staffing and financial resources will be made available?

- *Analysis*: What level and quality of data analysis will take place?

- *Dissemination*: How, and to whom, will information be distributed?

- *Utilisation*: How will information be actually utilised in Municipal decision-making? How will feedback be ensured?

C. POLICY SUPPORT

Like many other Municipalities, Kamiesberg could benefit from specialist advice on policy decisions, e.g. tariffs, equitable share, and instituting preventative maintenance plans.

For their part, Mvula Trust and NAWASAN can undertake additional actions to facilitate water services management. These include:

- Additional demographic data (especially levels of income and payments levels of specific households).
- Tracking down the as-built infrastructure plans (kept by the engineering companies).
- Promoting monitoring and data-gathering activities by operators and water committees.
- Selection of appropriate levels of service (LOS) for communities.
- Awareness programmes regarding water saving and usage.
- Assisting the Municipality in instituting more effective water quality ans water levels monitoring.
- Utilisation and development of community resources for water management (e.g. training of operators and monitoring staff).

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Future roles of the water committees: Water Services Providers in rural communities in Kamiesberg?

During the entire project period, the future role of the water and sanitation committees remained unresolved.

In the meantime, however, the committees play a hands-on role in maintaining water and sanitation infrastructure. For example, the committees do water level and quality monitoring, and records are maintained. (However, no recommendations are ever made. No measures are taken if the borehole levels have dropped.)

The Municipality can see advantages in the future existence of the committees. At the site meeting in May 2001, for example, the Kamiesberg Municipality's Head of the Technical division urged the committees to report technical problems speedily to his office. However, there is still lack of clarity on:

- The level of authority and discretion of committees
- Their functional relationship with the Water Operators
- Their functional relationship with the Municipal administrative staff
- Their political relationship with the Ward Committees.

The NAWASAN consultants attempted to take the issue forward, by organising a workshop in Rooifontein during 2001, to investigate the desirability of establishing a Water Services Provider. Rooifontein has a particularly strong water services committee, so this was seen as a pilot opportunity. The purpose of the workshop was to identify gaps, issues and problems in the process of Rooifontein becoming a WSP.

However, the meeting did not generate useful advice or insights, as the participants could not make useful suggestions to proceed. The Municipality's main concern is that the creation of WSPs should not create additional work or problems, since it has enough administrative restructuring issues to cope with at present.

It was hoped, therefore, that many of the issues related to the creation of WSPs would be resolved at the proposed WRC workshop in February 2002. The February Workshop, attended by Municipal Councillors, officials and community representatives, could also not agree on a way forward. The following issues were noted:

- If a committee were to become a WSP, it would mean that a committee within the community would act as such (on behalf of community) and would be contracted to the municipality. In terms of becoming a WSP, a legal contract (in terms of the Water Services Act) will be needed to establish who is

- responsible for what. In South Africa, very few communities have become WSPs, even though some committees do play an informal WSP role.

- A WSP arrangement is compatible with salary payments to community operators. In the Northern Province, DWAF has entered into partnerships with communities, whereby DWAF pays the officials (technicians/operators)' salaries and the community purchases the diesel.

- For a community to become a WSP, might be a case of "biting off too much" legally (the community would need an auditor, would be responsible for certain costs, etc). The financial implications would also have to be considered: who should undertake major repairs, can the community raise loans for repairs, will the committee have the capacity for financial management (sending out bills, salaries, etc). The community would have to be largely financially self-sufficient.

- Community based WSP's would need to be formed and legally registered to become a legal body that can enter into contracts and also would require registration as employees (UIF, workman's compensation, income tax). The cost of getting these structures in place and the training and mentoring for them to fulfil these obligations is significant.

- Besides the management and execution of daily operations and maintenance, the WSP has many additional obligations (that would require further training and mentoring) including the following
    - Health and hygiene promotion
    - Customer relations and communication (this would probably be the strong point of a community based WSP)
    - Provide information to the WSA, Provincial government, DWAF and their customers.
    - Financial and contract management.
    - Planning, monitoring and reporting

- The settlements are isolated and any locally based WSP would need technical, administrative and management support to fulfil their obligations, probably in the form of a support services agent. Again, the cost of this would be significant and would be the responsibility of the WSA.

At the February workshop, the general consensus was that the *committees should not become WSPs*. It would involve unnecessary legal effort for community committees to become WSPs. There is typically a good relationship between the operator, the community and the institution is vital because of the vast distances between towns/settlements. The community committees can work on building channels of communication should be open between the residents and the Municipality (especially if operator is paid by the community). The committees thus become the consumer rights group or community forum that can be a communication channel with the Municipality. The committees can oversee the work of the operator, and inform the municipality if there are any problems. In effect, the committee can act as a kind of "extension" of the Municipality.

The meeting felt that some kind of "Alternative Service Delivery" (ASD) approach should be taken, in terms of Section 34 of the Municipal Systems Act.) This does not involve the creation of autonomous WSPs. Rather, ASD makes provision for *out-sourcing specific functions* (e.g. operating and repairing water pumps) to individuals within the communities. This would save costs for the municipality, as the operator will be "on the ground" (living in the village), there would be no need to pay an engineer/municipal operator overtime when working after hours and on weekends, and no need to travel hundreds of kilometers to reach rural communities.

Nevertheless, if the committees in the rural settlements act as some kind of "extension" to the Municiaplity, then some questions still need to be clarified:

- Will they only have a communication function?
- Will they have a monitoring function?
- Will they promote relationships with the community?
- Will they undertake sanitation awareness-raising?
- Will they supervise the functioning of the operators?
- If the village operators are paid by the Municipality, and are responsible to the Municipality, then what is their relationship to the committees?
- What is the committees' responsibility to the Municipal Council and its ward committees (see below)?
- What would happen if the Committee disagrees with a Municipal decision?
- Should the committees' members receive some kind of payment?
- Should the committees' capacities be developed in some kind of systematic way – for example, by a Support Agent? (In the Eastern Cape, funding for training of committees is obtained from the Department of Labour).

4.2 Who is the Water Services Authority (WSA)?

Who will be the WSA in future: Kamiesberg Local Municipality or Namakwa District Municipality? This issue also remains unclear.

At the time of writing, the author assumed that the Kamiesberg Local Municipality would be the WSA. This assumption is made, for the following reasons:

- Leliefontein TLC (Category B municipalities) has historically had a much closer relationship with the rural communities. Leliefontein TLC is a Category B Municipality, which has now joined with Kamieskroon TLC and Garies TLC to form Kamiesberg Local Municipality. Since December 2000, water services has been treated as a Local Municipal function, and Kamiesberg has made steady progress in building its capacity to service the rural communities.

- Namakwa District Municipality has no capacity to undertake either rural or urban water services at this stage.

If the Namakwa DM becomes the WSA, it will have important implications:

- The Namakwa DM will have the responsibility of ensuring that everyone has access to water and sanitation services. In the opinion of the author, this has the following implications for the KM.

- The problem of cost recovery on the water supplies to the settlements in question is the responsibility of the Nakamkwa DMA.

- The KM needs to have a Water Services contract with the WSA for the delivery of water and sanitation services to its area. The financial aspects of this contract needs to be based upon the actual costs of supplying the services (taking the equitable share into consideration) and the responsibility for accessing additional government grants would rest with the WSA.

This issue of powers and functions is still unresolved at a national level. The provincial MECs for Local Government are likely to take a decision at the end of 2002. In the meantime, an intense debate is underway between national government departments about the most appropriate allocation of roles and functions between Category B and C municipalities.

At present, the Namakwa District Municipality regards itself as the WSA. This is in contrast with the situation in other District Municipalities in the Northern Cape, where the Category B municipalities still regard themselves as the current WSA, as well as the likely WSA in future.

4.3 Defining the future relationship between community committees and the Ward Committees

This is a delicate relationship which will need careful thinking about. At the project meetings in May 2001, the representatives of the committees were addressed by the Councillor, Mr. Cardinal Meisenheimer. He expressed strong objectives to "numerous little committees" functioning on their own. The municipality's Ward Committees are still in the process of being established. Mr. Meisenheimer suggested that the existing community committees could then function as sectoral sub-committees of the Ward Committees.

The Ward Committees will be directly elected by the communities. They will consist of 10 members (i.e. about 2 members per community. They will have the same term of office as the Council, i.e. 5 years.

There is a strong argument for encouraging members of the existing water committees to stand for election to the Ward Committees. It should be noted that these Ward Committees will not be remunerated or have their expenses paid, so this may undermine the future functioning of the Ward Committees

The community water committees can therefore continue, as "sub-units" of the Ward Committee, to serve as a communication channel with the municipality. At the February workshop, it was felt that the village committees should nominate representatives to the ward committees, since the members of the village committees have specific skills and would understand the technical issues) on the ward committee.

However, the political relationship between the two bodies will need to be clarified:

- What will happen if water services committees disagree with the Ward Committee?
- What will happen if the Ward Committee disagrees with the Councillor? Where will effective power lie?

These questions all need to be investigated further, once the Ward Committees are established.

By February 2002, Ward committees are still in the process of being formed officially, and therefore the Municipality could not suggest a definitive solution. The process of negotiation would be delayed until the Ward committees are officially established.

4.4 The way forward in Kamiesberg

At the February workshop, the issues pertaining to village-level committees was exhaustively discussed. However, there was a clear sense that not all the delegates were ready to take decisions. The Councillors needed to report back to Council and get a policy position and a mandate; and the committee members needed to discuss these issues with their own structures. Furthermore, there was a need for the practical implications of the various proposals to be analysed and explained more fully.

Consequently, it was decided that

1) The Council should meet and make proposals on these issues

2) A workshop should then be held with water services committees to discuss their functions and job descriptions. (It would important that adequate explanations of issues and possible solutions should be prepared for such a workshop).

3) One proposal concerned a possible two-year pilot approach with two strong water services committees, to test new types of relationships between the Municipality and the committees. Such pilots should be carefully monitored and evaluated.