Households have the following general financial commitments to varying degrees based on the size of the household:

Water costs (private vendors, boreholes, etc)
Food - agriculture
Education (fees, materials)
Housing (materials, maintenance)
Transport
Energy costs (electricity, coal, wood, paraffin)
Sanitation (cleaning materials)

(6) Household Type

The majority of respondents in both North West and Mpumalanga live in cement brick and zinc houses. However, the percentage for Mpumalanga is higher than North West and furthermore, the percentage of respondents living in zinc houses is higher in North West than Mpumalanga.

Possible reasons for this difference could be access to materials, socio-economic or cultural factors. It possibly suggests however, that a greater proportion of disposable income is allocated to building materials in Mpumalanga than in the North West.

14.3.4 Water structures in place

(1) Introduction

The most significant effects that local-level organizational and political dynamics have on community based water supply and management relate to struggles over the authority and legitimacy to represent community interests. This chapter traces the processes that characterised these struggles and assesses some of their implications for community water supply and management.

It is necessary to clearly define two concepts related to the exercising of power, that are used frequently in the discussion below. *Authority*, as used in this sense, refers to a formal right to office. *Legitimacy* on the other hand refers to the extent of acceptance of that formally granted right. Organizations and individuals may therefore have authority to manage water, without legitimacy. Alternatively they may have a high degree of legitimacy, but no authority.

The chapter is structured as follows. The next section examines the extent and nature of involvement of a number of community-based organizations recognised as playing a role in community water supply and management. After exploring the history, structure and future potential of specific organizations that emerged prominently in the research process, the chapter moves on to a section on local-level conflict and interaction. This section is more processual and looks at how particular forms of social interaction between and in relation to the various organizations discussed, impact on community water supply and management.

(2) Community based organisations

The following forms of local-level organization featured prominently in the organizational and political dynamics of the settlements selected for this study:

Local Water Committees
Local Government
Tribal Authorities
Civic organisations
Community Authorities

With respect to the above organizations, the quantitative survey revealed the following trends and information pertaining to present water structures in place and perceptions of who should be responsible for water as shown in Table 14-9 and Table 14-10.

Although the data from the two tables above is not directly comparable, the following broad trends the following broad trends can be interpreted from them.

(a) There is substantial community support for the role of water committees in both Mpumalanga and North West (25% overall).

(b) There is a strong perception community involvement in the management of water as appropriate.

(c) Although tribal authorities are recognised as currently playing a significant role in community water provision and management (24%), support for this involvement is substantially less overall (12%).

(d) There is considerably higher support for "government" as the appropriate organization responsible for community water supply and management in Mpumulanga (29%) as opposed to North West (16%).

(3) Local water committees

Results from the household survey suggest that overall, water committees have received popular recognition as appropriate organizations to be responsible for water (25%). A consideration of their history and organizational structure suggests that it is largely through their existence as a recent phenomenon, not involved in the struggles and conflicts of the past, that they are able to claim popular legitimacy. In addition, their existence as formal entities allows them to claim the authority of the popular post-apartheid government.

Historical development

Local water committees have been established to deal with the planning, implementation, operation and maintenance of local water supply systems. The major thrust for the emergence of water committees lies in the White Paper on Water Supply and Sanitation, whereby "the Ministry of Water Affairs and Forestry will be empowered to establish statutory Local Water Committees (LWCs) to undertake the task of local water and sanitation provision" (Department of Water Affairs and Forestry, 1984).

In many settlements, community structures organised for the purpose of confronting problems related to water, pre-dated the White Paper. After the release of the White Paper, these organizations have been boosted with substantial official authority to manage water at a community level. Consequently, high expectations that have been created around water committees and many members feel under pressure to take on responsibilities that they are not or experienced enough to do properly (See chapter on "Human Resources and Community participation").

Organizational structure

As organizations explicitly from the post-apartheid South African government, much of the authority and legitimacy claimed by local water committees is based on their constitution through democratic processes.

Water committees are generally formed through members being elected, often at community meetings held for this purpose. As other organizations are often the driving force behind the establishment of local water committees, their establishment and functioning cannot be regarded as politically neutral, even though it may be democratic. As a result, local water committees are often prompted and then dominated by specific political interest groups within settlements. This often leads to other groups not participating in the committees.

(4) *Potential for enhancing effective community water supply and management*

Strong popular support for water committees obviously increases their potential for enhancing community-based water supply and management. An additional observation that 19% of respondents supported the idea of the "community" being responsible for water supply and management probably suggests an even greater degree of popularity for organizations such as local water committees.

(5) Local government

The significantly higher support for "government" as the appropriate organization responsible for community water supply in Mpumulanga (29% as opposed to 16% in North West) is the result of vastly different historical experiences of local governance in the past. These diverse experiences suggest different challenges to the new local government structures and different implications for the potential contribution that they can make towards enhancing community water supply and management.

Historical development

The local government election which took place in November 1995 ushered in a new system of local resource management. Local government councillors have been assigned the task of managing water at the local level. However, at the time of the research the councillors still had not been sworn into office and many were unaware of their specific tasks as councillors and agreed that they needed to be trained in order to deal with their functions.

The local government structures that are developing presently, are doing so in different historical and social contexts of Mpumalanga and North West respectively. These arise mainly out of the different experiences that people had of the respective "homelands" of Bophutatswana and KwaNdebele.

Unlike Bophutatswana, KwaNdebele did not have "independent" status. In the mid 1980's, there was widespread resistance to attempts to transform the status of KwaNdebele from "self-governing" to "independent". This led to bitter conflicts and extensive violence between those who wanted to proceed with independence from South Africa, and those who resisted it. Organizations who opposed the move towards independence, were generally aligned to the liberation struggle. Their objections were framed as resistance to the implementation of apartheid practices. The homeland authorities promoting framed their efforts within an attempt to establish an separate political entity for Ndebele-speaking people (see discussion section "tribal authorities" below, for a discussion of associations between tribal authorities and the apartheid government). Eventually efforts to resist the independence of KwaNdebele were successful, and the old homeland order was overthrown and replaced by a popular regime, aligned to the liberation movement.

The implications of these dramatic events in KwaNdebele in the mid-1980's for water supply and management are important. Firstly, they led to a situation in which there appears to have little or no attempt to limit or control household strategies for accessing water or to recover costs. Given the way that the post-1986 KwaNdebele authority came into power in this relatively deprived "homeland" context, attempts to limit household access to water or recover costs from households would probably have contributed towards undermining the legitimacy of this homeland government.

The situation in Bophutatswana was somewhat different from that in KwaNdebele. As an "independent state" under the government of Mangope, there was a strong commitment towards ensuring the success or viability of this homeland. Settlements that fell under this administration appear to be subjected to stronger attempts to manage water supply and recover costs. These attempts were generally channelled through the local representatives of various tribal authorities. These attempts were not always successful and often met with strong resistance from those who were opposed to Mangope and the Bophutatswana administration. The collapse of the Mangope regime in the final days of

apartheid rule suggests that he and the ideals that he represented were faced with a serious crisis of legitimacy, in spite of the official authority that they weilded.

The respective recent histories of Bophutatswana and KwaNdebele represent different challenges to the new local governments structures that are emerging. In settlements that were previously part of KwaNdebele, the challenge to local government lies in promoting a culture of community responsibility for water provision ad management. In settlements that previously fell under Bophutatswana, the challenge lies in promoting the legitimacy of efforts to promote community-based water supply and management.

Organizational structure

Local government refers to districts within provincial boundaries. Districts are divided into wards. Each ward is represented by a councillor, who was elected in the November 1995 local government elections.

Potential for enhancing community water supply and management

When focusing on the organizational and political dynamics, the new local government structures promise a significant potential for contributing towards enhancing community water supply and management. A major threat to their legitimacy could be a failure to adequately address the high expectations that communities exhibit in relation to local government. This, however, is discussed in more detail in the chapter on "Human Resources and Community participation".

(6) Tribal authorities

Over the entire study area, 24% of households surveyed recognised the present role that tribal authorities are playing in community water supply and management. However, only 12% of households suggested that tribal authorities should take care of water issues. This suggests that there is declining support for the role of tribal authorities in community water supply and management. It is however also important to recognise perceived differences between the various tribal authorities. Table 14-11 below draws out the extent of support for the various tribal authorities identified in the study.

The figure in Table 14-11 is higher than the one quoted above because only those households in recognised tribal areas were considered for this table.

From the table, it can be noted that support for tribal authorities as appropriate organizations to look after community water issues ranges from 3% to 57% within the various tribal authorities. The information presented below suggests that the support that tribal authorities enjoy in relation to water, can be correlated with the ability of the authority to provide sufficient water and manage it effectively at a community level.

Historical development

As suggested in the discussion on "local government" above, in broad terms the history of tribal authorities has resulted in these organizations occupying the ambiguous role of authoritative body facing a serious crisis of legitimacy.

With the rise of the apartheid government in South Africa, the roles and responsibilities of tribal authorities were largely codified and incorporated into the official state structure, through various legislation, such as the Bantu Authorities Act of 1951. The development of "homelands" such as Bophutatswana and KwaNdebele were essentially projects based on the assumption that people of a common tribal or ethnic identity should reside in designated areas. In order to promote this idea, tribal authorities were incorporated into homeland governance to varying degrees.

The rise of the civic movement, the end of homeland governments and the election of local government councillors has posed a fundamental challenge on the formal right claimed by many tribal authorities, to represent community interests. Although the formal roles of tribal authorities in community resource management and specifically water management have drastically curtailed, tribal authorities continue to play a significant role in the daily management of resources.

This generalized model tends, however, to override the fact that support for tribal authorities varies extensively in different contexts. For example within the jurisdiction of the Bafokeng Tribal Authority, 57% of the respondents viewed the Bafokeng Tribal Authority as the appropriate water management structure.

Organizational structure

The histories of tribal authorities in the study area has led to forms of organization that vary according to the size and status of the authority. A common feature of tribal authorities is their assertion of legitimate authority people presumed to share a common tribal identity. This is usually accompanied by claims over land as well.

Some tribal authorities, such as Bafokeng, Bakgatla and Ndzundza are substantially larger than others. Some of the smaller tribal authorities are also effectively subsidiaries of larger tribal authorities and form part of larger entities. The details of the status of different tribal authorities and their relationships to one another is complex and highly contested.

In the village context, tribal authorities are either represented by chiefs or headmen (appointed to represent the chief in his absence)

Potential for enhancing community water supply and management

The table above suggests that the potential for tribal authorities to participate positively in community water supply and management varies significantly. In the case of the

Bafokeng, their recognition by 57% of households surveyed in Bafokeng as the appropriate authority to look after water is clearly related to their success in providing residents with adequate service.

(7) Civic organizations

The civic organisations in the study area generally enjoy popular support. This support has been established over many years of resistance to homeland governments and tribal authorities acting as agents to the homeland government. Within local government transformation, civics are faced with a battle to maintain their identity as "community watchdogs" and support from their followers. Against this backdrop it is possible to understand the strategies that civics in the communities have adopted with regard to water management and the development of water supply mechanisms.

In the context of the power struggles that are characteristic of many communities, over the right to represent community interests and gain access to resources, many civic organisations have been associated with the establishment of unauthorised yard connections. In some cases, however, the civics have started to voice their objections to the prolific development of unauthorised connections, claiming that it is not in the spirit of the Masakhane Campaign to promote payment for services.

Probably the most important reason given by informants in this research is that after the national elections the civics took it upon themselves to "implement the Reconstruction and Development Programme" (for example, in Bapong village). In many cases the civics would approach or be approached by unauthorised contractors, either from within the community or from Mabopane and Soshanguve, to implement a programme of installing unauthorised yard connections in the community. The contractors, through promoting the rhetoric of popular development, would have their actions "endorsed" by the civic movement, thus strengthening their marketing strategy.

Civic perceptions of the type of service that the unauthorised contractors provide, stand in stark contrast to the type of service provided by a water authority, such as North West Water Supply.

(8) Community authorities

Community authorities constitute local initiatives for confronting a management void, suggesting low level of social organization around water as well as a low level of conflict around water. From the perspective of organizational and political dynamics, they represent a strong potential because they are not engaged in open conflict.

In three of villages covered in this survey, issues relating to water are dealt with by community authorities. These were structures established in communities where there is no suitable alternative authority or where the community had rejected existing authority structures. The presence of a community authority had been necessary in order to link the community into broader administration. For example, in Kameelboom the

community authority attends the tribal authority meetings in Mogwase. Unlike civic organizations however, they were not constructed as an oppositional form of social organization.

(9) Conclusion

The recent dramatic national political changes have filtered down to the local level, forcing organizations claiming to represent community interests to negotiate new identities in this post-apartheid context. These processes have promoted intense struggles and conflict within settlements considered in the study, over access to community resources and the right to represent community interests.

It is unlikely that these conflicts will simply be "solved" in the foreseeable future. It is more likely they will come to develop as characteristic features of these settlements. Because the authority and legitimacy to represent community interests is in such a state of fluidity at the local level, it will be impossible to develop a general model that will comprehensively take political and organizational dynamics into account. These dynamics vary from settlement and can change drastically over short periods of time.

In spite of this difficulty, the discussion above has highlighted a number of characteristic features of the organizations considered, that need to be taken into account when planning further intervention. These include the following:

(a) Local water committees currently enjoy popularity within communities. This popularity is related to their association with a legitimate government as well as with the fact that they are new and do not carry any negative historical "baggage" with them. As demonstrated, they have the potential to become dominated by persons representing other organizations, and adopt the character of that organization. This may affect the legitimacy of local water committees positively or negatively and subsequently their capacity to manage water effectively at a community level.

(b) In Mpumalanga and the North West respectively, the newly elected forms of local government are emerging from vastly different historical experiences of local government. These different experiences will affect the potential for local government to contribute to towards enhancing community water supply and management.

(c) From the recent changes in the rural political environment, tribal authority are

14.3.5 Organisational and political dynamics

(1) Case Study 1 : Luka

Luka is a success story with regard to water management. The majority of people have yard connections and cost recovery is high. Luka is under the administration of the Bafokeng Tribal Authority, able to maintain and finance many of their own development

schemes from finances obtained through platinum rights. In Luka there are 17 sections, each with a headman who reports to the administration office.

The previous water system consisted of boreholes, but after much complaining to the headmen about the state of water quality - which was adversely affected by a nearby mine - a reticulation system was installed.

Although numerous political organizations are active in Luka, the residents claim that politics is put aside when dealing with administration matters and in consultation with the chief of the Bafokeng Tribal Authority. However, the opinion of ANC leaders in Luka is that a RDP structure will never be established in Luka because it is believed that they will undermine the authority of the Bafokeng Tribal Authority.

The Bafokeng Tribal Authority has recently undergone a period of transition which has important implications for relations between communities and the administration. The return of the Chief, Edward Molotlega from exile started a process of establishing a more transparent style of management. His subsequent death and replacement by Mollwane Molotlega has further boosted this management approach. The current leadership of the tribal authority acknowledge the strategy adopted by the previous leadership claim that the new strategy is to promote participation in decision making from the community and also would like to interact more closely with water authorities such as NWWS. Furthermore, they claim they are opening up tenders for contractors dealing with water supply, thus stopping the monopoly over operations and maintenance by one outfit.

This new style of management has positive implications for non-Bafokeng residents in Luka who are mainly migrant workers on Impala Platinum Mines LTD. Claims are that in the old leadership they were never accepted as residents of the area and the chief would not allow them to attend community meetings. Recently, however, meetings have been held to discuss their inclusion in the meetings because they are now seen as "part of the family".

Robega

Robega village is located within Bafokeng tribal area yet it presently has the peculiar status of being Trust land (i.e. state owned). Many resident report that at the beginning of 1996, they were informed by representatives of the Bafokeng tribal authority that Robega now fell under the administration of the Bafokeng. Some residents were highly critical of these events and felt that they were part of an ongoing attempt on the part of the Bafokeng tribal authority, to include Robega under Bafokeng in order to gain access to the platinum reserves believed to be under Robega. Other residents were less critical of these assertions and regarded them as representing a possible improvement of conditions in Robega.

Robega is flanked by two villages; Chaneng and Rasimoni. Chaneng is supplied by piped water and most of the stands have yard connections. Rasimoni has a diesel pump which is able to store ground water in large tank, for ease of access. Robega, on the other

hand, has only 3 (some reports indicate 4) government boreholes (with hand pumps), to cater for approximately 800 residents. According to a member of the village water committee, the pumps often break and take between 3 and 4 months to be mended. These situations prompt the development of a thriving market for water vending, either sold from the neighbouring villages, or from private boreholes in Robega itself.

Residents who expressed support for this Bafokeng initiative justified their stance by referring to the possible material benefit that came out of being "part of the Bafokeng". They compared levels of service in neighbouring Chaneng village and felt that if Robega was also formally part of the Bafokeng tribal authority, residents would benefit through improved levels of service.

Those more critical feel that the residents of Robega were not consulted about these proposed changes and that the whole process of including Robega into Bafokeng was regarded as undemocratic. One resident, , who was also a member of the RDP forum, expressed suspicion toward the Bafokeng. He argued that in the past, under the Boputhatswana government, surrounding trust areas were regarded by the Bafokeng as inhabited by outsiders. Now, representatives of the authority were telling people in Robega that they were Bafokeng. This resident summed up his understanding of these events by stating that:

> "the Bafokeng are more interested in the land than in the people".

This resident continued by stating that many of the residents of Robega were not Bafokeng, or even Tswana-speaking. For this reason, he felt traditional leadership, in whatever form they might take, would be inappropriate to the particular cultural and social characteristics of Robega.

These two case studies illustrates the challenges that tribal authorities are faced with in a transformed environment, and how they are responding to them. These challenges are clearly centred around the legitimacy that tribal authorities struggling to maintain. The legitimacy of tribal authorities is strongly related to their capacity to affect people's lives positively. In short, the potential for tribal authorities to enhance community water supply and management is directly related to their independent capacity to do so.

(2) Case Study 2: Ledig

Ledig, situated in Mankwe under the jurisdiction of the Bakubung Tribal Authority, is faced with an array of administrative, institutional and community structure problems. The most prominent of water related problems is that of unauthorised connections in the village.

The relation between the tribal authority and the civic organisation is tenuous. On the one hand the David Monakgotla, the chief criticises the civic for promoting illegal connections, however, on the other hand a focus group was held with both the tribal

authority and the civic. At the focus group they both claimed to have a good working relationship.

A common problem facing Ledig is their historical current status. Residents of Ledig originated from Boons, moving to Ledig as part of the forced removals campaign in 1966. The tribal authority argues that they "are like an island" as their land is under threat from the Bafokeng and Bakgatla Tribal Authority, both claiming a part of Ledig.

After the national elections the civic organisation acquired the services of an unauthorised contractor from Mabopane to promote and install unauthorised connections. The civic argues that they wanted to implement the RDP and deliver water to the residents of the community. They claim R1850 for an authorised connection is too expensive and the residents requested the chairman of the civic to call the contractor. The community agreed to R700 for their connections. The civic claims that they informed the chief, the councillor and DWAF from Mmabatho. Further, the civic claims they have negotiated with DWAF that the unauthorised connections will be supplied with meters in order for the residents to pay for their water.

Both the tribal authority and the civic argue that if the government installed yard connections the community could maintain the system. One reason is that the unauthorised contractors have involved a team from Ledig which they trained in order to undertake maintenance once they had left. They further insist that "until there is assistance from the government the contractor will be in Ledig"

(3) Case Study 3 : Klipgat

In Klipgat, the civic association is the most prominent community organisation. The tribal authority was prevented from operating in the village resulting in the magistrate acting as the community representative in administrative matters.

Klipgat has applied to be granted the status of a township, although this has yet to be granted.

Unauthorised connections are the dominant form of water supply to the household, although there are private boreholes and state boreholes. Unlike other villages with unauthorised connections, Klipgat has differing scenarios. In some cases one household in the street will fund a pipe from the main pipe to be laid along the street. In turn he will supply a yard connection to anyone along the street for a cost of R100. In one case the man requested an additional R50 for a maintenance fund. This resulted in a tense situation where the civic association had to intervene and solve the situation.

Part of Klipgat is an informal settlement (Ekageng). One tenant connected a 1000m underground pipe from Klipat into his yard as well as to the street corner. He charges anyone using the water R120 per month. He also charges people to connect off his pipe (approximately R800) - approximately 60 people are connected. In one instance a man defaulted on his payments and the contractor tore out his pipe from underground.

The water committee estimates that 75% of the connections are unauthorised, 10% are authorised (without monthly payments) and 15% have no water and have to rely on boreholes or private vendors. . The civic claimed they became involved with the unauthorised connections in order to try and control them and give them space to work freely. The reason for this was that most contractors would work at night for fear of being caught, resulting in poor quality work and many leakages occurring.

13.3.6. Human Resources and Community Participation

(1) Introduction

A fundamental requirement of the White Paper on Water Supply and Sanitation is that communities participate in securing water for settlements and households. A necessary intervention outlined in the document to ensure effective participation is capacity building for human resources in communities to equip community structures, especially water committees.

Important issues arising from this research relating to human resource capacity and community participation are the following:

(a) The participation of men and women takes place in a complex social environment in which roles, responsibilities and perceptions of development are important factors to consider.

(b) Common knowledge that women bear the burden of securing water for the household does not automatically secure their participation at community level.

(c) Incentives strategies for participation in community activities are different for men and women

(d) Unemployment is an important variable affecting the role that men play in household water management

(e) Although women contribute significantly to household water management, they are often excluded from formal roles in community water management

(f) It is necessary to recognise current participatory activities, in both the formal and informal water deliver mechanisms and to develop their management potential.

(g) Capacity building takes place in a environment where there is a dire need for skills to secure employment and price labour potential in the market, thus often undermining the community participation strategy of capacity building.

(h) Participation at the level of the household and the community is sometimes blurred. Strategies for community participation, therefore, need to acknowledge the role of the potential role of household activities in community participation.

(i) An appreciation and understanding of informal modes of acquiring water is essential to informing appropriate ways of enhancing formal systems

Participation in water activities takes place at two levels: Firstly participation at the household level, as part and parcel of daily household management, such as collecting water, making payments for water, storing water and hiring an unauthorised contractor to establish a yard connection. Secondly, participation at community level, such as planning, distribution, operation, maintenance and cost recovery. This chapter discusses both levels of participation and provides examples to show the ways in which participation in the two levels works in communities.

Although a distinction between household and community is made in a discussion of participation, it is however, blurred. Many of the activities that take place at the level of the household is due to the fact that there are no structures in place at the community level. Strategies have been developed in response to poor service delivery and lack of structures to initiate the provision of water. A potential consequence of this is that once community structures are in place they might have to rely heavily on the household for support.

Community participation in water supply systems develop fundamentally in relation to the levels of water supply that characterise particular communities. A community which has a high level of supply (eg. majority house connections and yard connections) will have a different participatory strategy in place from a community with a relatively lower level of supply (eg. relief aid). The roles and responsibilities of individuals, households, political organisations and community structures will also vary according to the level of supply experienced.

The development of strategies to ensure participation at the community level need to take into account both technical and non-technical issues regarding water management. Technical issues refer to the skills that residents might have to carry out particular tasks. If the skills are not established within a community decisions need to be taken on the types and methods of training needed to develop the water management skills. The non-technical issues refer to issues such as the level of interest in water, the awareness of water, incentives to participate in water provision and hidden agendas in the political and social environment that might to might not lead to conflict or tension within a community.

There is a strong link between the technical and non-technical aspects of water management, particularly when training and development is seen as a priority, as it is throughout the Extended Supply Area of Magalies Study Area Water. The function of training and development encompasses a range of social activities - exchanging ideas, listening, group discussions, planning, mobilising, team building and a host of other activities. These activities might be carried out in different ways in different villages and communities depending on historical "habits" of the community and individuals in the community. Training and development programmes, to ensure participation at the

community level, need to be aware of the factors that could manipulate community participation strategies as well as training programmes

(2) Participation at the level of the household

The previous chapter has demonstrated that strategies employed by households - the primary units of consumption of water supplied to communities - can impact significantly on the types and success of systems of water management which may be in place. This observation demands that a consideration of systems of management looks at the dynamic interactions between households, community structures within villages and their interactions with local government at the level of the community.

Chapter 1 has highlighted some of the strategies that households, in a context of poor service provision, employ to ensure access to water. This section looks at how these strategies relate to complex management practices, focusing specifically on modes of collection, payment and maintenance and how these affect the roles and responsibilities of women, men, children and pensioners respectively. The levels of responsibility that individuals in the household have, are to some extent reflective of the particular social structures of the households that they live.

Responsibilities associated with participation at the household level are influenced by the types of water supply systems in place. Table 14-12 illustrates the kinds of participatory activities associated with different systems of water supply - according to whether they were formal or informal methods of supply. It is evident that many of the activities associated with formal management are being performed at the informal level. This gives rise to management potentials at the community level.

(3) Community Management Structures

In all settlements in which research was undertaken, there were highly active local organizations and structures operating within the community. The local organisational and institutional environment in which the research was conducted is currently undergoing a massive social transformation. The essence of this transformation lies in the transfer of management responsibilities to the emerging local government structures. It is these structures which essentially comprise the third tier of water management. This task however, especially with regards to water management is faced with difficulties. As water is a scarce and valuable resource which individuals and structures would like to access, relations within and between third tier structures are fraught with tension. Both historical and current political, economic and cultural factors play a significant role in influencing the dynamics and outcomes of this tension. Considering this, the challenge of the water sector is to understand the nature of the tension in each context where improvements in community water managements are intended.

Table 14-3 illustrates participation of community structures. Some of these responsibilities are performed at the level of formal supply whilst other can be located at the informal level of supply. In some cases community structures have assumed

responsibilities normally assigned to the 2nd Tier when the 2nd Tier has failed to provide adequate service.

(4) Participation of women

Household level:

At the level of the household, women participate actively in securing water for the household. It is well understood that women bear the burden of household work, and in the case of securing water for the household in the study area, it most often demands a significant proportion of available time. The level of involvement of women is due to a number of factors, some of which are the following:

(a) The nature of domestic work, such as washing, cleaning, cooking and necessitates a continuous supply of water to the household.

(b) Many women live away from their husbands perpetuating forms of entrenched migrant labour. This creates a situation where the only help with domestic activities comes from children and extended family. By adopting a role as the *de facto* head of the household, women in this situation perform the majority of household management functions, even though this is not formally recognised, from within their own communities and from an outsider perspective.

(c) There is a high incidence of female headed households in rural and peri-urban South African villages, further emphasising the point noted above.

The failure to recognise the extent to which women participate in water related activities can have serious implications on initiatives to enhance household water management. In addition women often constitute a significant untapped potential for enhancing household as well as community water management, as the following case study illustrates:

(5) Case Study: Women in Ramakokastad:

Women in Ramakokastad participate in daily water activities in the village, largely through their roles in the household. Approximately 20 of the 100 women who attended a focus group discussion on water issues were heads of their households. The women said that in female headed households there is not enough household labour to complete necessary tasks. Also, children do not contribute to the household economy and pensions do not secure adequate income for the household. The women, however, all agreed that if necessary they could contribute to a more effective water management system. This is possible as their role in the present system, which forces them to engage in highly inefficient activities, also puts them in a position to reflect critically on ways of improving the system.

The case study above demonstrates the extent to which domestic activities, which are largely the responsibility of women, depend on an adequate access to water. Although women often played a critical role in accessing water at the household level, their efforts were often silenced and their contribution to household management understated. This, however was not always the case. In Pylkop, a sub-village of Ramakokastad, women were employed to work on a water maintenance programme, funded by the Independent Development Trust (IDT). Women were active in a number of important roles including those usually reserved for men, such as digging and mixing cement.

Participation of women at the community level

The degree to which women's' involvement in household water management can extend to community management, can also be more overt than suggested above, as demonstrated in the following example:

Women's participation in Norokie

In Norokie women established themselves to manage the water scheme put in place by the water authority in Hammanskraal in January 1995. The water scheme consists of a borehole with a diesel pump feeding a tank a the top of a slope. Theoretically once the tank is full the borehole is switched off. However, there is no valve in the system preventing the water from flowing backwards, resulting in the diesel machine constantly flooding, leading to a shortage of water for the people at the top of the slope. This is a constant source of tension in the community and the assistants who safeguard the taps have to resolve the conflicts that emerge between people in different parts of the village.

Once the engineer finished the project, he suggested that the women who owned the property next to the tank should manage the water supply to the village. All the women in the village were called together to design a management system. The village was divided into four sections, each managed by a women which operates on a roster system - each women having the responsibility for one year at a time. The role of the women is to collect money to buy diesel and pay a salary to the machine operator. When the pipes break the women go to Hammanskraal to inform the maintenance team. Collecting money differs between sections. In the western sections money is collected monthly and in the eastern sections it is collected when the funds run out. Every time money is collected the persons name and stand number is entered into a book as a record. On the day of collecting the money, the people have to bring it with them when they collect water from the tap. If they do not have the money they are prohibited from taking water from the system.

Each section is allocated a different day to draw water from the system in order to ensure a constant water supply. Tuesdays, Thursdays and Saturdays is reserved for the eastern section and Mondays, Wednesdays and Fridays for the western section.

This case illustrates how women can come to dominate and control a formal system of community water domain. It serves to emphasise the important point that women are not

inevitably confined to the domestic domain, even in cultural contexts where this may be expected. It also shows how externally inspired initiatives provide the opportunity for the realization of a local management potential that has previously been masked and unrecognised.

Another example of women's participation is in Zamenkomst where the women actively engaged in securing water for the community.

Zamenkomst constitutes one of the 16 villages that form part of the district of Moutse 1. Part of the village is serviced with standpipes and many residents aspire to extending those to yard connections. The following description by a female resident of Zamenkomst is of events relating to the organization of unauthorised yard connections:

"Water is a problem in our community. We took steps through the water committee and mass meetings until we got the pipes for communal taps. We got Mvula Trust to help us and they said that we must have some money before they can fund us. We collected R28-00 from each household, during which time heard that Mvula Trust had disbanded. We then asked the water committee to do the yard connections because communal taps were not enough. The community later felt that the water committee was not doing anything about our request, so we just connected illegally.

A group of six of us [all women] decided that we would push ahead and negotiate for water with the water supply authority. We collected R1-00 from each household and asked the water board how much it would be to plan and implement water ...

... The water board never helped us so we took our picks and dug 700 metres from the main pipe, through our street. Each household paid R70-00 for the material... [and] we hired skilled people from the community to connect...

.. We did this illegally. We have said that when the new system comes we'll allow them to remove ours but what makes us happy is that we have water now and we have implemented it ourselves."

(6) Implications of women's participation at household and community level

Although participation at the household level has potential for participation at the community level various complexities exist which can influence strategies for community participation and capacity building. The crucial period for success of failure of the planning and implementation of a water project is the lead time in which it takes to finally provide water to the community. In this period women face a potential dilemma about participation. Women have commented that they are overburdened with the task to collect water and that an improved supply of water would relieve the burden to different degrees. Participation, however, requires the allocation of time away from household management to community work. Until a satisfactory level of service is in place, the time is not available, and many women understand development as increasing

her burden. If women do not participate in the planning of a water project the potential for the project to fail or at least not take seriously the needs of women is increased.

(7) Participation of men in water provision

Household level

Observation in the research suggests that although men contribute to ensuring the household has access to water, they do not spend as much time in water activities as women and children. Men spend some time collecting water and repairing equipment.

Participation of men at the community level

When men do partake in water activities this usually occurs when men are unemployed and even then, their participation tends to be pitched at the community level. Men generally assume the majority in water structures and decision making bodies, such as civic organisations, tribal authorities and water committees. Another area of participation at the community level for men is that of unauthorised connections. Whether the unauthorised contractor is from the community or brought in from the outside, men in the community take the decisions to implement unauthorised connections and often participate in the digging and connecting yard connections.

Incentives for men and women to participate in water activities

It cannot be assumed that people will automatically participate in community water affairs. Some reasons for these have been addressed in the discussion above, for example a lack of available time. Other reasons why certain levels of community participation cannot be assumed are employment patterns in the community and the "resource" associated with capacity building.

Employment patterns in communities have an affect on the nature of participation. Men generally work outside the community and are considered the breadwinners of the household. A combination of their perception of self-development and historical employment practices is that men go outside the settlement to find employment rather than remain in the village. The sphere of influence for men, therefore is beyond the community, and at community decision making level. Men generally have more sophisticated methods of pricing their labour than women, thus increasing their demand for salaries for work. The incentive for men to stay and work in community structures, therefore is weak. One real incentive at the moment in many communities is the prospect to participate in capacity building programmes where their skills are increased. In many cases the men who are available to participate in community activities are unemployed and capacity building provide men with the opportunity to have a greater chance of securing employment. An example of this is Makapanstad.

The sphere of influence for women generally remains within the bounds of the household, even though migrant labour is a significant feature in rural communities. Due

labour practices, whereby the exclusion of women from economic opportunities where a greater array of skills is required such as mine and factory labour, and inclusion in farm labour and domestic labour, the sophistication of women in putting a price to their labour is not as sophisticated as men. The potential, therefore of women participating in community structures is greater.

(8) Participation of children in water provision

Children generally have diverse and important responsibilities with respect to water. In every village where water needed to be collected children payed an active role in this activity. In Kameelboom teachers complained that in order for children to obtain water during the school day, they had to allow the children to fetch water which could consume up to 30 minutes of their school day. Similar sentiments were expressed in the village of Motlhabe, where school children were also faced with the prospect of having nor readily accessible drinking water available.

Research also revealed that children suffered from associated illnesses with regard to water collection, and the most common being back trouble and skew spinal chords.

(9) Participation of pensioners in water provision

Pensioners, who are often unable to collect water themselves, often have to rely on private water vendors to deliver water to their household, if they cannot secure assistance from relatives or neighbours. This common practice of paying for favours (pensions often provide an important contribution to household income) leads to large proportions of the pension is spent on water provision. On the one hand, this depletes what is in many cases the only source of income for the household, but on the other hand it can also redistribute resources to other households that do not have the security of this form of income.

Table 14-1 : Percentage of responses of source of water supply

Source of water supply	North West	Mpumalanga	Average
Stand pipes	30%	21%	26%
Government boreholes	17%	2%	10%
House connections	3%	8%	6%
Yard connections with meter	10%	6%	8%
Relief tanks	7%	17%	12%
Yard Connections with no meter	9%	35%	22%
Private vendors	8%	4%	6%
Private boreholes	8%	1%	5%
River	5%	3%	4%
Missing answers	3%	3%	3%

Table 14-2 : Percentages of households with non-metred and metred yard connections with metres and no metres, in affacted villages in former KwaNdebele (source: quantitative survey data)

Settlement	No Meter	Meter
Boekenhouthoek	48	0
Tweefontein E	49	2
Zamenkomst	43	5
Elandsdoorn	4	48
Vlaklaagte no 1	84	1
Pieterskraal B	55	7

Table 14-3 : Reasons for willingness to pay for water

Province	It costs money	It comes from the ground	It is a gift from God	It belongs to the community	We have never paid	We do not get good service	No answer
North West	38%	5%	7%	9%	8%	8%	26%
Yes	30%	-	-	3%	1%	2%	3%
No	8%	4%	7%	6%	4%	6%	11%
Not Sure/N/A		1%	-	-	3%	-	12%
Mpumalanga	20%	5%	12%	5%	13%	14%	31%
Yes	14%	-	-	1%	1%	6%	3%
No	6%	5%	10%	3%	10%	7%	15%
Not Sure/N/A	-	-	2%	1%	2%	1%	13%

Table 14-4 : Relationship between current payment systems, access to water and willingness to pay

Province	Current Payment	Access to Water	Willingness to pay
North West	Culture of payment to private vendors and unauthorised contractors	Primarily ground water and no bulk supply (25% boreholes)	54% of respondents are willing to pay
Mpumalanga	Weak culture of payment	Primarily surface water (3% boreholes)	38% of respondents are willing to pay

Table 14-5 : Aspects of Affordability

Province	Amount willing to pay	Average Household income*	House Type	Size of Family
North West	R5 - R20	R300 - R600	51% - cement brick/zinc 8% -mud bricks/zinc 32% - zinc 5% - clay brick/roof tiles	48% - 2 - 5 members 36% - 6 - 10 members 8% - +10 members
Mpumalanga	zero	R300 - R600	58% - cement brick/zinc 17% - mud bricks/zinc 15% - zinc 5% - clay brick/roof tiles	41% - 2 - 5 members 40% - 6-10 members 13% - +10 members

Table 14-6 : Monthly Household Expenditure on Water

Province	R0	R1 - R5	R5 - R10	> R10
North West	19%	48%	10%	23%
Mpumalanga	46%	38%	3%	16%

Table 14-7 : Relation between type of water system and household time and budget allocation*

Type of system	Time and budget allocation
Connection to the yard and/or house - metered and unmetered	Low time; high budget (varies according to monthly water usage) and costs associated with installation of connection
200m standpipes	Time depends on the distance from the house to the standpipe; no costs to the household
500m standpipes	High time; no cost to the household
Tanks (relief aid)	High time; no cost to the household
Borehole - diesel	Time depends on distance from house to borehole or closest outlet; low budget (contribution to diesel)
Rivers/springs	High time; no cost to the household
Private vendors	Time allocation depends on location of vendor and consistency of supply; high budget

* Budget allocation refers to the proportion of the household budget allocated to the purchase of water

Table 14-8 : Costs Associated with Water Supply Systems for the Household

Type of Water Supply	Costs
Yard Connection (authorised and unauthorised)	Authorised - R1800 Unauthorised - R350 - R750 depending on the contractor and the distance from the tap location to the main pipe Monthly costs for authorised connections depend on cosumption. High percentage of no payments with authorised connections.
200m standpipe	No cost to the household except for equipment to carry water - eg wheelbarrows and 25*l* containers
500m standpipe	No cost to the household except for equipment to carry water - eg wheelbarrows and 25*l* containers
Government borehole (diesel)	Diesel - ±R10 per month depending on the population size and whether the contribution is also for payment to the operator.
Government borehole (handpump)	No costs for operation and maintanence; costs for equipment to carry water.
Private Borehole	±R3000.00 (handpump)
Private Vendors	±R0.30c - R0.50c for 25*l* (±R35.00 per month)
Natural Water: rain; run-off; river; spring	No costs except for carrying and storage equipment

Table 14-9 : Extent of recognition of current water structures in place

Organization	North West	Mpumalanga	TOTAL
Water Committee	1068 (36%)	473 (27%)	1541 (33%)
CRDC*	374 (13%)	236 (14%)	610 (13%)
Tribal Authority	667 (22%)	496 (28%)	1163 (24%)
other (non specified)	877 (29%)	540 (31%)	1417 (30%)
TOTAL	2986 (100%)	1745 (100%)	4731 (100%

*Community Reconstruction and Development Committees

Table 14-10 : Perceptions of appropriate organization/entity to be responsible for water.

Organization	North West	Mpumulanga	TOTAL
Water Committee	788 (26%)	380 (22%)	1168 (25%)
All Community	659 (22%)	254 (15%)	913 (19%)
Tribal Authority	367 (12%)	182 (10%)	549 (12%)
Government	475 (16%)	505 (29%)	980 (21%)
Civics/NGOs	372 (12%)	222 (13%)	594 (13%)
other*	278 (9%)	147 (8%)	425 (9%)
N/A	47 (3%)	55 (3%)	102 (2%)
TOTAL	2986 (99%)	1745 (100%)	4731 (101%)

* including the categories "men", "women", families" and "consultants"

Table 14-11 : Tribal Authorities, localities, and their extent of support as organizations responsible for community water supply and management.

Tribal Authority	District	Respondents	Support
Bakgatla	Mankwe, Odi 1, Moretele 1, Moretele 2	1251	101 (8%)
Bapong	Odi 2	203	57 (28%)
Bafokeng	Bafokeng	177	101 (57%)
Bakubung	Koster, Mankwe	274	56 (20%)
Bakwena	Mankwe	102	17 (17%)
Bamogopa	Odi 2	185	5 (3%)
Majaneng	Moretele 1	175	6 (3%)
Manala	Kwa Mhlanga	217	30 (14%)
Ndzundza	Kwa Mhlanga, Mdutjana, Mkobola	1141	130 (11%)
Makepvlei	Moutse 1	120	9 (8%)
TOTAL		3845	512 (13%)*

Table 14-12 Participation of the household in the formal and informal water supply system

Formal Water Supply System		Informal Water Supply System	
Type of system	Formal Participation	Type of system	Informal Participation
House connections with meter	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments	House Connection - No meter	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments Employing unauthorised contractor
Yard Connections	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments	Yard Connection - No meter	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments Employing unauthorised contractor
Stand Pipes	Installation Operation Maintanence Water Collection Initial payment Monthly payments		
Government Boreholes	Installation Operation Maintanence Initial payment Monthly payments (diesel)	Private Boreholes - Diesel and handpump	Installation Operation Maintanence Initial payment Monthly payments (diesel)
		Private Vendors	Water Collection Payments
		Natural sources Rivers Run-off Springs	Collection Payment

Table 14-13 : Participation of Community Structures in Water Provision

Formal Water Supply System		Informal Water Supply System	
Type of system	Formal Responsibilities	Type of system	Informal Responsibilities
Bulk Supply	Installation Operation Maintanence Sourcing finance	Bulk Supply	Installation Operation Maintanence
House connections with meter	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments Sourcing finance	House Connection - No meter or when the formal system has failed to operate	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments
Yard Connections	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments Sourcing finance	Yard Connection - No meter or when formal system has failed to operate	Installation Operation Maintanence of tap Maintanence of pipe Initial payment Monthly payments Employing unauthorised contractor
Stand Pipes	Installation Operation Maintanence Water Collection Initial payment Monthly payments Submission of Business Plan	Stand pipes - informal management occurs when the formal system has failed to operate	Installation Operation Maintanence Water Collection Initial payment Monthly payments
Government Boreholes	Installation Operation Maintanence Initial payment Monthly payments (diesel)	Government Boreholes - Diesel and handpump - Informal management occurs when the formal system fails	Installation Operation Maintanence Initial payment Monthly payments (diesel)

APPENDIX

APPENDIX 1

TO SUPPORTING REPORT B

POPULATION AND WATER DEMAND SPREADSHEETS

POPULATION AND WATER DEMAND SPREADSHEETS

WESTERN ZONE

AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	TARGET	CURRENT	AREA (gross ha)	M³/day	l/s/ha	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
VAALKOP NORTH SUPPLY AREA																		
Thabazimbi Block	Amandelbult: Elandsfontein		1995		1,116	RM	RM	103.0	308	0.112	186	1.8	7,500.00	1,395,000	13,950	1,395,000	0	0%
	Zwartkop Chrome		2002	2.8	1,354	UH		103.0	368	0.134	226	2.2	7,200.00	1,624,790	16,248	1,624,790	229,790	16%
			2015	2.8	1,939	UH		103.0	513	0.187	323	3.1	7,200.00	2,326,525	23,265	2,326,525	931,525	67%
	Amandelbult Platinum		1995			AC			8,986	3.280								
			2002	0					10,040	3.665								
			2015	0					12,000	4.380								
	Zondereinde Mine incl		1995		2,000	UH	UH	59.0	552	0.201	333	5.6	4,800.00	1,600,000	16,000	1,600,000	0	0%
	Middelshift residential		2002	0	2,000	UH		59.0	544	0.199	333	5.6	4,800.00	1,600,000	16,000	1,600,000	0	0%
			2015	0	2,000	UH		59.0	529	0.193	333	5.6	4,800.00	1,600,000	16,000	1,600,000	0	0%
	Thabazimbi Iron Mine		1995			AC			30,400	11.096								
			2002	0					30,400	11.096								
			2015	0					30,400	11.096								
	Northam Platinum		1995			AC			7,713	2.815								
			2002	0					11,313	4.129								
			2015	0					18,000	6.570								
	Northam		1995		673	UH	UH	166.0	532	0.194	112	0.7	9,000.00	1,010,086	10,101	1,010,086	0	0%
			2002	2.8	817	UH		166.0	1,045	0.381	136	0.8	9,000.00	1,225,491	12,255	1,225,491	215,405	21%
			2015	2.8	1,170	UH		166.0	2,000	0.730	195	1.2	9,000.00	1,754,771	17,548	1,754,771	744,686	74%
	Thabazimbi	Domestic	1995		7,682	UH	UH	200.0	4,609	1.682	1,280	6.4	3,550.00	4,545,183	45,452	4,545,183	0	0%
			2002	1	8,236	UH		200.0	4,870	1.777	1,373	6.9	3,550.00	4,873,052	48,731	4,873,052	327,868	7%
			2015	1	9,373	UH		200.0	5,390	1.967	1,562	7.8	3,550.00	5,545,987	55,460	5,545,987	1,000,804	22%
		Industrial	1995						945	0.345								
			2002	1					1,013	0.370								
			2015	1					1,153	0.421								
		Commercial	1995						691	0.252								
			2002	1					741	0.271								
			2015	1					844	0.308								
		Institutional	1995						461	0.168								
			2002	1					494	0.180								
			2015	1					562	0.205								
	Thabazimbi Township		1995		1,807	RM	RM	111.0	156	0.057	301	2.7	4,300.00	1,294,818	12,948	1,294,818	0	0%
			2002	2	2,075	RM		111.0	177	0.064	346	3.1	4,300.00	1,487,339	14,873	1,487,339	192,521	15%
			2015	2	2,685	RM		111.0	222	0.081	447	4.0	3,100.00	1,387,093	13,871	1,387,093	92,274	7%

W-1

AREA/SUBAREA	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth	No	TARGET	CURRENT	AREA	Ml/day	Mm³/a	(@ 6 PER/ERF)	GROSS HECTARE	COST PER/ERF	RETICUL COST	COST +RETICUL	CAPITAL COST	COST INCREASE	COST INCREASE
				%/year				(gross ha)			No	(@ 6 PER/ERF)	(R)	(R)	(R)	(R)	(R)	(%)
	Rhino Andalusite		1995			AC			3.344	1.221								
			2002	0					3.924	1.432								
			2015	0					5.000	1.825								
	Rural		1995		37,523	RL			1.824	0.666								
			2002	1	40,230	RL			1.927	0.703								
			2015	1	45.785	RL			2.132	0.778								
		BLOCK TOTAL	1995		50.801				60,521	22.090	2,213			9,845,088	98,451	9,845,088	0	
			2002		54,712				66,856	24.402	2,414			10,810,672	108,107	10,810,672	965,584	
			2015		62.952				78,745	28.742	2.861			12,614,377	126,144	12,614,377	2,769,289	
Mokgalwaneng Block	Maßamerßung		1995		382	RL	RL/3	65.0	19	0.007	64	1.0	3,500.00	222,833	2,228	222,833	148,556	200%
			2002	0	382	RL		65.0	18	0.007	64	1.0	3,500.00	222,833	2,228	222,833	148,556	200%
			2015	0	382	RL		65.0	18	0.006	64	1.0	3,500.00	222,833	2,228	222,833	148,556	200%
	Mogamong North		1995		0	RL	RL/3	214.0	0	0.000	0	0.0	3,500.00	0	0	0	0	
			2002	0	0	RL		214.0	0	0.000	0	0.0	3,500.00	0	0	0	0	
			2015	0	0	RL		214.0	0	0.000	0	0.0	3,500.00	0	0	0	0	
	Mokgalwaneng	Mokgalwana	1995		3,587	RL	RL/3	922.0	174	0.064	598	0.6	3,500.00	2,092,417	20,924	2,092,417	1,394,944	200%
			2002	0	3,587	RL		922.0	172	0.063	598	0.6	3,500.00	2,092,417	20,924	2,092,417	1,394,944	200%
			2015	0	3,587	RL		922.0	167	0.061	598	0.6	3,500.00	2,092,417	20,924	2,092,417	1,394,944	200%
	PPC		1995			AC			616	0.225								
			2002	0					925	0.338								
			2015	0					1,500	0.548								
		BLOCK TOTAL	1995		3,969				809	0.295	662			2,315,250	23,153	2,315,250	1,543,500	
			2002		3,969				1,115	0.407	662			2,315,250	23,153	2,315,250	1,543,500	
			2015		3.969				1.685	0.615	662			2,315,250	23,153	2,315,250	1,543,500	
Setlokite	Elandsfontein	Mmopyane	1995		1,510	RL	0	351.0	73	0.027	252	0.7	3,500.00	880,833	8,808	880,833	880,833	
			2002	0	1,510	RL		351.0	72	0.026	252	0.7	3,500.00	880,833	8,808	880,833	880,833	
			2015	0	1,510	RL		351.0	70	0.026	252	0.7	3,500.00	880,833	8,808	880,833	880,833	
	Kgomotha		1995		431	RL	0	17.0	21	0.008	72	4.2	1,250.00	89,792	898	89,792	89,792	
			2002	0	431	RL		17.0	21	0.008	72	4.2	1,250.00	89,792	898	89,792	89,792	
			2015	0	431	RL		17.0	20	0.007	72	4.2	1,250.00	89,792	898	89,792	89,792	
	Lesobeng		1995		1,510	RL	0	66.0	73	0.027	252	3.8	1,900.00	478,167	4,782	478,167	478,167	
			2002	0	1,510	RL		66.0	72	0.026	252	3.8	1,900.00	478,167	4,782	478,167	478,167	
			2015	0	1,510	RL		66.0	70	0.026	252	3.8	1,900.00	478,167	4,782	478,167	478,167	
	Mononono		1995		3,016	RL	0	169.0	147	0.054	503	3.0	1,900.00	955,067	9,551	955,067	955,067	
			2002	0	3,016	RL		169.0	144	0.053	503	3.0	1,900.00	955,067	9,551	955,067	955,067	
			2015	0	3,016	RL		169.0	140	0.051	503	3.0	1,900.00	955,067	9,551	955,067	955,067	
	Mmantsene	Varkensvlei	1995		1,246	RL	0	190.0	61	0.022	208	1.1	3,500.00	726,833	7,268	726,833	726,833	
		Mahobestad	2002	0	1,246	RL		190.0	60	0.022	208	1.1	3,500.00	726,833	7,268	726,833	726,833	

W-2

AREA/MAGISTERIAL	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	Mm³/a	(@ 6 PEOPLE/) No	GROSS HECTARE (@ 6 PEOPLE/ha)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	0	1,246	RL		190.0	58	0.021	208	1.1	3,500.00	726,633	7,266	726,633	726,633	
	RPM Swartklip	Mining	1995						13,628	4.974								
			2002						15,158	5.533								
			2015						18,000	6.570								
	Rustenburg Platinum Mine	Domestic	1995		2,399	UH	UH	50.0	662	0.242	400	8.0	3,550.00	1,419,633	14,196	1,419,633	0	0%
			2002	2.8	2,911	UH		50.0	792	0.289	485	9.7	2,800.00	1,358,494	13,585	1,358,494	0	0%
			2015	2.8	4,168	UH		50.0	1,103	0.402	695	13.9	1,750.00	1,215,761	12,158	1,215,761	0	0%
	Swartklip		1995		3,061	RM	RM	61.0	264	0.097	510	8.4	1,750.00	892,688	8,927	892,688	0	0%
			2002	2.8	3,713	RM		61.0	316	0.115	619	10.1	1,400.00	866,446	8,664	866,446	0	0%
			2015	2.8	5,317	RM		61.0	440	0.161	886	14.5	1,050.00	930,493	9,305	930,493	37,805	4%
	Union Mine		1995			AC			274	0.100								
			2002	0					274	0.100								
			2015	0					274	0.100								
	Setlulle	Diphale	1995		3,210	RL	0	239.0	156	0.057	535	2.2	1,900.00	1,016,583	10,166	1,016,583	1,016,583	
			2002	1	3,442	RM		239.0	293	0.107	574	2.4	4,300.00	2,466,650	24,666	2,466,650	2,466,650	
			2015	1	3,917	RM		239.0	324	0.118	653	2.7	4,300.00	2,807,277	28,073	2,807,277	2,807,277	
		BLOCK TOTAL	1995		16,383				15,360	5.606	2,731			6,459,596	64,596	6,459,596	4,147,275	
			2002		17,779				17,202	6.279	2,963			7,822,281	78,223	7,822,281	5,597,341	
			2015		21,116				20,500	7.483	3,519			8,084,223	80,842	8,084,223	5,975,775	
Ramokokstad	Boyeng		1995		1,540	RL	0	166.0	75	0.027	257	1.5	3,500.00	898,388	8,984	898,388	898,388	
			2002	1	1,651	RL		166.0	79	0.029	275	1.7	3,500.00	963,194	9,632	963,194	963,194	
			2015	1	1,879	RL		166.0	88	0.032	313	1.9	3,500.00	1,096,204	10,962	1,096,204	1,096,204	
	Mmorogong		1995		597	RL	0	79.0	29	0.011	100	1.3	3,500.00	348,250	3,483	348,250	348,250	
			2002	1	640	RL		79.0	31	0.011	107	1.4	3,500.00	373,371	3,734	373,371	373,371	
			2015	1	728	RL		79.0	34	0.012	121	1.5	3,500.00	424,931	4,249	424,931	424,931	
	Letoaneng		1995		597	RL	0	76.0	29	0.011	100	1.3	3,500.00	348,250	3,483	348,250	348,250	
			2002	1	640	RL		76.0	31	0.011	107	1.4	3,500.00	373,371	3,734	373,371	373,371	
			2015	1	728	RL		76.0	34	0.012	121	1.6	3,500.00	424,931	4,249	424,931	424,931	
	Thabeng		1995		1,759	RL	0	109.0	85	0.031	293	2.7	1,900.00	557,017	5,570	557,017	557,017	
			2002	1	1,886	RL		109.0	90	0.033	314	2.9	1,900.00	597,197	5,972	597,197	597,197	
			2015	1	2,146	RL		109.0	100	0.036	358	3.3	1,900.00	679,666	6,797	679,666	679,666	
	Ramokokstadt	Ga-Ramokoka	1995		5,277	RL	0	414.0	256	0.094	880	2.1	1,900.00	1,671,050	16,711	1,671,050	1,671,050	
			2002	1	5,656	RL		414.0	271	0.099	943	2.3	1,900.00	1,791,592	17,916	1,791,592	1,791,592	
			2015	1	6,439	RL		414.0	300	0.109	1,073	2.6	1,900.00	2,038,999	20,390	2,038,999	2,038,999	
		BLOCK TOTAL	1995		9,770				475	0.173	1,628			3,822,955	38,230	3,822,955	3,822,955	
			2002		10,475				502	0.183	1,746			4,098,725	40,987	4,098,725	4,098,725	
			2015		11,921				555	0.203	1,987			4,664,731	46,647	4,664,731	4,664,731	

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AREA/MUNICIPALITY	SETTLEMENT	ALTERNATIVE NAME	POPULATION MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	TARGET	CURRENT	AREA (gross ha)	m³/a	l/s/ha	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
Seutlepoort	Bapong	Buffontein	1995		3,951	RL	RL/3	314.0	192	0.070	659	2.1	1,900.00	1,251,205	12,512	1,251,205	834,137	200%
			2002	1	4,236	RL		314.0	203	0.074	706	2.2	1,900.00	1,341,461	13,415	1,341,461	924,393	222%
			2015	1	4,821	RL		314.0	225	0.082	804	2.6	1,900.00	1,526,706	15,267	1,526,708	1,109,639	266%
	Bothaleriwe	Welgeval	1995		1,339	RL	RL/3	66.0	65	0.024	223	2.6	1,900.00	424,098	4,241	424,098	282,732	200%
			2002	1	1,436	RL		66.0	69	0.025	239	2.8	1,900.00	454,691	4,547	454,691	313,325	222%
			2015	1	1,634	RL		66.0	76	0.028	272	3.2	1,900.00	517,460	5,175	517,460	376,114	266%
	Modimong South	Onsake	1995		1,835	RL	0	222.0	69	0.033	306	1.4	3,500.00	1,070,417	10,704	1,070,417	1,070,417	
			2002	0	1,835	RL		222.0	68	0.032	306	1.4	3,500.00	1,070,417	10,704	1,070,417	1,070,417	
			2015	0	1,835	RL		222.0	65	0.031	306	1.4	3,500.00	1,070,417	10,704	1,070,417	1,070,417	
	Ga-Masiela		1995		197	RL	RL	164.0	10	0.003	33	0.2	3,500.00	114,727	1,147	114,727	0	0%
			2002	1	211	RM		164.0	18	0.007	35	0.2	7,500.00	263,577	2,636	263,577	148,850	130%
			2015	1	240	RM		164.0	20	0.007	40	0.2	7,500.00	299,975	3,000	299,975	185,248	161%
	Ga-Raponi	Rughoek	1995		176	RL	0	5.0	9	0.003	29	5.9	1,250.00	36,667	367	36,667	36,667	
			2002	1	189	RM		5.0	16	0.006	31	6.3	2,300.00	72,333	723	72,333	72,333	
			2015	1	215	RM		5.0	18	0.006	36	7.2	2,300.00	82,322	823	82,322	82,322	
	Ga-Raphiri		1995		234	RL	RL	118.0	11	0.004	39	0.3	3,500.00	136,579	1,366	136,579	0	0%
			2002	1	251	RM		118.0	21	0.008	42	0.4	7,500.00	313,782	3,138	313,782	177,202	130%
			2015	1	286	RM		118.0	24	0.009	48	0.4	7,500.00	357,113	3,571	357,113	220,534	161%
	Kameeltoom	Mphomyoke AH	1995		830	RL			40	0.015	138							
			2002	0	830	RL			40	0.015	138							
			2015	0	830	RL			39	0.014	138							
	Lesethong		1995		991	RL	RL	135.0	48	0.018	165	1.2	3,500.00	578,083	5,781	578,083	0	0%
			2002	1	1,062	RM		135.0	90	0.033	177	1.3	7,500.00	1,326,108	13,261	1,326,108	750,024	130%
			2015	1	1,209	RM		135.0	100	0.037	202	1.5	7,500.00	1,511,510	15,115	1,511,510	933,427	161%
	Lekutung		1995		1,081	RL	RL	96.0	53	0.019	180	1.9	3,500.00	630,583	6,306	630,583	0	0%
			2002	1	1,159	RM		96.0	99	0.036	193	2.0	4,300.00	830,601	8,306	830,601	200,018	32%
			2015	1	1,319	RM		96.0	109	0.040	220	2.3	4,300.00	945,302	9,453	945,302	314,718	50%
	Balfhaka Chrome		1995			AC			3,000	1.095								
			2002	0					3,000	1.095								
			2015	0					3,000	1.095								
	Rughoek Chrome		1995			AC			550	0.201								
			2002	0					550	0.201								
			2015	0					550	0.201								
	Mabeleleng		1995		173	RL	RL	21.0	8	0.003	29	1.4	3,500.00	100,917	1,009	206,802	0	0%
			2002	1	185	RM		21.0	16	0.006	31	1.5	7,500.00	231,549	2,318	342,903	136,101	66%
			2015	1	211	RM		21.0	17	0.006	35	1.7	7,500.00	263,866	2,639	376,101	169,299	82%

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AREA/LOCALITY	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	TARGET	CURRENT	AREA (gross ha)	l/s/day	l/s/h	(@ 6 PERSON/) No	GROSS HECTARE (@ 6 PERSON/)	COST PER ERF (R)	RETICUL-COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
	Makgope Chrome		1995			AC			2,740	1.000								
			2002						3,000	1.095								
			2015						3,000	1.095								
	Rooderand Ferrochrome		1995			AC			550	0.201								
			2002	0					550	0.201								
			2015	0					550	0.201								
	Mabeskraal		1995		11,757	RL	RL	1,763.0	571	0.209	1,960	1.1	3,500.00	6,858,296	68,583	6,858,296	0	0%
			2002	2.5	13,975	RM		1,763.0	1,190	0.434	2,329	1.3	7,500.00	17,469,340	174,693	17,469,340	10,611,044	155%
			2015	2.5	19,265	RM		1,763.0	1,595	0.582	3,211	1.8	7,500.00	24,081,678	240,817	24,081,678	17,223,382	251%
	Magong	Rhenosterkraal	1995		2,927	RL	RL/3	449.0	142	0.052	488	1.1	3,500.00	1,707,417	17,074	1,707,417	1,138,278	200%
			2002	0	2,927	RL		449.0	140	0.051	488	1.1	3,500.00	1,707,417	17,074	1,707,417	1,138,278	200%
			2015	0	2,927	RL		449.0	136	0.050	488	1.1	3,500.00	1,707,417	17,074	1,707,417	1,138,278	200%
	Makgope	Groenfontein	1995		1,171	RL	0	78.0	57	0.021	195	2.5	1,900.00	370,817	3,708	370,817	370,817	
			2002	0	1,171	RL		78.0	56	0.020	195	2.5	1,900.00	370,817	3,708	370,817	370,817	
			2015	0	1,171	RL		78.0	55	0.020	195	2.5	1,900.00	370,817	3,708	370,817	370,817	
	Makoshong	Kwa-Makoshong	1995		917	RL	0	52.0	45	0.016	153	2.9	1,900.00	290,311	2,903	290,311	290,311	
			2002	1	983	RL		52.0	47	0.017	164	3.2	1,900.00	311,253	3,113	311,253	311,253	
			2015	1	1,119	RL		52.0	52	0.019	186	3.6	1,900.00	354,235	3,542	354,235	354,235	
	Makweteng	Tamboterand	1995		835	RM	0	401.0	72	0.026	139	0.3	7,500.00	1,043,206	10,432	1,043,206	1,043,206	
			2002	1	895	RM		401.0	76	0.028	149	0.4	7,500.00	1,118,458	11,185	1,118,458	1,118,458	
			2015	1	1,018	RM		401.0	84	0.031	170	0.4	7,500.00	1,272,909	12,729	1,272,909	1,272,909	
	Manamakgotsing		1995		6,255	RM	RL	955.0	540	0.197	1,043	1.1	7,500.00	7,818,750	78,188	7,818,750	4,170,000	114%
			2002	2.8	7,589	RM		955.0	646	0.236	1,265	1.3	7,500.00	9,486,131	94,861	9,486,131	6,837,381	160%
			2015	2.8	10,866	RM		955.0	900	0.328	1,811	1.9	7,500.00	13,583,123	135,831	13,583,123	9,934,373	272%
	Legogotwe		1995		445	RM	RL	68.0	38	0.014	74	1.1	7,500.00	556,250	5,563	556,250	296,667	114%
			2002	2.8	540	RM		68.0	46	0.017	90	1.3	7,500.00	674,873	6,749	674,873	415,289	160%
			2015	2.8	773	RM		68.0	64	0.023	129	1.9	7,500.00	966,345	9,663	966,345	706,762	272%
	Mantsho	Mosloetdoorns	1995		752	RL	0	98.0	37	0.013	125	1.3	3,500.00	438,667	4,387	438,667	438,667	
			2002	0	752	RL		98.0	36	0.013	125	1.3	3,500.00	438,667	4,387	438,667	438,667	
			2015	0	752	RL		98.0	35	0.013	125	1.3	3,500.00	438,667	4,387	438,667	438,667	
	Maplogene		1995		1,283	RL	0	104.0	62	0.023	214	2.1	1,900.00	406,304	4,063	406,304	406,304	
			2002	1	1,376	RL		104.0	66	0.024	229	2.2	1,900.00	435,613	4,356	435,613	435,613	
			2015	1	1,566	RL		104.0	73	0.027	261	2.5	1,900.00	495,768	4,958	495,768	495,768	
	Mapeputle	Schoongezicht	1995		333	RL	0	63.0	16	0.006	56	0.9	3,500.00	194,250	1,943	194,250	194,250	
			2002	0	333	RL		63.0	16	0.006	56	0.9	3,500.00	194,250	1,943	194,250	194,250	

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	TARGET	CURRENT	AREA (gross ha)	l/s/ev	l/s/ha	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	0	333	RL		63.0	16	0.006	56	0.9	3,500.00	194,250	1,943	194,250	194,250	
	Marapalalo	Dekamerskuil	1995		663	RL	0	94.0	32	0.012	111	1.2	3,500.00	386,750	3,868	386,750	386,750	
			2002	0	663	RL		94.0	32	0.012	111	1.2	3,500.00	386,750	3,868	386,750	386,750	
			2015	0	663	RL		94.0	31	0.011	111	1.2	3,500.00	386,750	3,868	386,750	386,750	
	Mogodishane	Vlakspleats	1995		651	RL	0	143.0	32	0.012	109	0.8	3,500.00	379,750	3,798	379,750	379,750	
			2002	0	651	RL		143.0	31	0.011	109	0.8	3,500.00	379,750	3,798	379,750	379,750	
			2015	0	651	RL		143.0	30	0.011	109	0.8	3,500.00	379,750	3,798	379,750	379,750	
	Malorwe	Brenkraal	1995		1,492	RL	0	49.0	73	0.026	249	5.1	1,250.00	310,833	3,108	310,833	310,833	
			2002	0	1,492	RL		49.0	71	0.026	249	5.1	1,250.00	310,833	3,108	310,833	310,833	
			2015	0	1,492	RL		49.0	69	0.025	249	5.1	1,250.00	310,833	3,108	310,833	310,833	
	Mothabe		1995		2,112	RL	0	365.0	103	0.037	352	1.0	3,500.00	1,232,000	12,320	1,232,000	1,232,000	
			2002	0	2,112	RL		365.0	101	0.037	352	1.0	3,500.00	1,232,000	12,320	1,232,000	1,232,000	
			2015	0	2,112	RL		365.0	98	0.036	352	1.0	3,500.00	1,232,000	12,320	1,232,000	1,232,000	
	Ngweding		1995		509	RL	0	45.0	25	0.009	85	1.9	3,500.00	296,917	2,969	296,917	296,917	
			2002	0	509	RL		45.0	24	0.009	85	1.9	3,500.00	296,917	2,969	296,917	296,917	
			2015	0	509	RL		45.0	24	0.009	85	1.9	3,500.00	296,917	2,969	296,917	296,917	
	Nkogolwe	Krugerskop	1995		457	RL	0	45.0	22	0.008	76	1.7	3,500.00	266,583	2,666	266,583	266,583	
			2002	0	457	RL		45.0	22	0.008	76	1.7	3,500.00	266,583	2,666	266,583	266,583	
			2015	0	457	RL		45.0	21	0.008	76	1.7	3,500.00	266,583	2,666	266,583	266,583	
	Ntsanalemetsing	Welgewaagd	1995		135	RL	0	57.0	7	0.002	23	0.4	3,500.00	78,750	788	78,750	78,750	
			2002	0	135	RL		57.0	6	0.002	23	0.4	3,500.00	78,750	788	78,750	78,750	
			2015	0	135	RL		57.0	6	0.002	23	0.4	3,500.00	78,750	788	78,750	78,750	
	Ramosotswana		1995		62	RL	0	46.0	3	0.001	10	0.2	3,500.00	36,167	362	36,167	36,167	
			2002	0	62	RL		46.0	3	0.001	10	0.2	3,500.00	36,167	362	36,167	36,167	
			2015	0	62	RL		46.0	3	0.001	10	0.2	3,500.00	36,167	362	36,167	36,167	
	Sandfontein		1995		3,146	RL	RL	774.0	153	0.056	524	0.7	3,500.00	1,835,167	18,352	1,835,167	0	0%
			2002	0	3,146	RM		774.0	268	0.098	524	0.7	7,500.00	3,932,500	39,325	3,932,500	2,097,333	114%
			2015	0	3,146	RM		774.0	260	0.095	524	0.7	7,500.00	3,932,500	39,325	3,932,500	2,097,333	114%
	Saulspoort Incl Phuleng		1995		9,353	RL	RL	1,827.0	455	0.166	1,559	0.9	3,500.00	5,455,928	54,559	5,455,928	0	0%
	Koedoesprut, Donngpoort-		2002	2.6	11,348	RM		1,827.0	966	0.353	1,891	1.0	7,500.00	14,184,467	141,845	14,184,467	8,728,559	160%
	North, Maruleng		2015	2.6	16,249	RM		1,827.0	1,345	0.491	2,708	1.5	7,500.00	20,310,664	203,107	20,310,664	14,854,737	272%
	Seolong	Leeuwkop	1995		618	RL	RL	60.0	30	0.011	103	1.7	3,500.00	360,569	3,606	360,569	0	0%
			2002	1	663	RL		60.0	32	0.012	110	1.8	3,500.00	386,579	3,866	386,579	26,010	7%
			2015	1	754	RL		60.0	35	0.013	126	2.1	1,900.00	238,837	2,388	238,837	0	0%
	Tweelaagte		1995		5,015	RM	RL	319.0	433	0.158	836	2.6	4,300.00	3,594,083	35,941	3,594,083	2,006,000	126%

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AREA/LOCALITY	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	Ml/day	l/s	(@ 4 PEOPLE/) No	GROSS HECTARE (@ 4 PEOPLE/ER)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2002	0	5,015	RM		319.0	427	0.156	836	2.6	4,300.00	3,594,083	35,941	3,594,083	2,006,000	126%
			2015	0	5,015	RM		319.0	415	0.152	836	2.6	4,300.00	3,594,083	35,941	3,594,083	2,006,000	126%
	Thethegemyene	Rughoek	1995		2,544	RL	RL	282.0	124	0.045	424	1.5	3,500.00	1,484,161	14,842	1,484,161	0	0%
			2002	1	2,728	RL		282.0	131	0.048	455	1.6	3,500.00	1,591,222	15,912	1,591,222	107,061	7%
			2015	1	3,105	RL		282.0	145	0.053	517	1.8	3,500.00	1,810,959	18,110	1,810,959	326,798	22%
	Vogelstruisnek	Witrandjies	1995		1,661	RL	RL	74.0	81	0.029	277	3.7	1,900.00	525,921	5,259	525,921	0	0%
			2002	1	1,781	RL		74.0	85	0.031	297	4.0	1,250.00	370,960	3,710	370,960	0	0%
			2015	1	2,026	RL		74.0	94	0.034	338	4.6	1,250.00	422,187	4,222	422,187	0	0%
		BLOCK TOTAL	1995		65,900				10,517	3.839	10,983			40,271,122	402,711	40,377,007	15,566,200	
			2002		72,696				12,279	4.482	12,116			65,161,216	651,612	65,272,270	40,616,425	
			2015		88,706				13,401	4.891	14,794			83,336,881	833,369	83,449,116	58,863,775	
Mogwase/Sun City	Mogwase		1995		5,753	RM	RM	212.0	497	0.181	959	4.5	3,100.00	2,972,200	29,722	2,972,200	0	0%
			2002	2.4	6,792	RM		212.0	578	0.211	1,132	5.3	3,100.00	3,508,954	35,090	3,508,954	536,754	18%
			2015	2.4	9,244	RM		212.0	765	0.279	1,541	7.3	2,300.00	3,543,588	35,436	3,543,588	571,389	19%
	Mogwase Industrial	Boarelo	1995			AC			10,188	3.719								
			2002	1					10,923	3.987								
			2015	1					12,431	4.537								
	Mahotieskraal		1995		418	RL	0	25.0	20	0.007	70	2.8	1,900.00	132,367	1,324	132,367	132,367	
			2002	0	418	RM		25.0	36	0.013	70	2.8	4,300.00	299,567	2,996	299,567	299,567	
			2015	0	418	RM		25.0	35	0.013	70	2.8	4,300.00	299,567	2,996	299,567	299,567	
	Mogwase Prison	Mogwase	1995		508	UL			112	0.041								
			2002	0	508	UL			111	0.040								
			2015	0	508	UL			108	0.039								
	Bop Police Station	Mogwase	1995		141	UL			31	0.011								
			2002	0	141	UL			31	0.011								
			2015	0	141	UL			30	0.011								
	Fnschgewaagd	Ledig	1995		523	RL	RL	18.0	25	0.009	87	4.8	1,250.00	108,943	1,089	108,943	0	0%
			2002	2.8	634	RM		18.0	54	0.020	106	5.9	3,100.00	327,796	3,278	327,796	218,853	201%
			2015	2.8	908	RM		18.0	75	0.027	151	8.4	1,750.00	264,966	2,650	264,966	156,023	143%
	Ledig incl. Baratheo	Lekwa, Baratheo,	1995		11,220	RL	RL	408.0	545	0.199	1,870	4.6	1,250.00	2,337,524	23,375	2,337,524	0	0%
		Koedoesfontein	2002	2.8	13,613	RM		408.0	1,159	0.423	2,269	5.6	3,100.00	7,033,306	70,333	7,033,306	4,695,782	201%
			2015	2.8	19,492	RM		408.0	1,614	0.589	3,249	8.0	2,300.00	7,471,987	74,720	7,471,987	5,134,464	220%
	Mabele A Podi	Mogwase	1995		992	RL	RL	37.0	48	0.018	165	4.5	1,250.00	206,617	2,066	206,617	0	0%
			2002	2.4	1,171	RM		37.0	100	0.036	195	5.3	3,100.00	604,946	6,049	604,946	398,329	193%
			2015	2.4	1,594	RM		37.0	132	0.048	266	7.2	2,300.00	610,917	6,109	610,917	404,300	196%
	Sun City excl. resort		1995		779	RL	RL	18.0	38	0.014	130	7.2	910.00	118,148	1,181	118,148	0	0%

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AREA/PROCLAIMANT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	FAIRLY	CURRENT	AREA (gross ha)	ML/day	ML/a	(@ 9 PER/ERF) No	GROSS HECTARE (@ 9 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2002	0	779	RM		18.0	66	0.024	130	7.2	2,300.00	298,617	2,986	298,617	180,468	153%
			2015	0	779	RM		18.0	65	0.024	130	7.2	2,300.00	298,617	2,986	298,617	180,468	153%
	Sun City Resort		1995			AC			8,000	2,920								
			2002	1.6					8,940	3,263								
			2015	1.6					10,989	4,011								
	Bela	Resimone	1995		1,842	RL	RL	103.0	90	0.033	307	3.0	1,900.00	583,199	5,832	583,199	0	0%
			2002	2.4	2,174	RM		103.0	165	0.068	362	3.5	4,300.00	1,556,230	15,562	1,558,230	975,031	167%
			2015	2.4	2,959	RM		103.0	245	0.089	493	4.8	3,100.00	1,529,059	15,291	1,529,059	945,860	162%
	Chaneng		1995		4,194	RL	RL	382.0	204	0.074	699	1.8	3,500.00	2,446,230	24,462	2,446,230	0	0%
			2002	2.4	4,951	RM		382.0	422	0.154	825	2.2	4,300.00	3,548,113	35,481	3,548,113	1,101,883	45%
			2015	2.4	6,739	RM		382.0	558	0.204	1,123	2.9	4,300.00	4,829,441	48,294	4,829,441	2,383,211	97%
	Mase 2	Dinokwi	1995		1,414	RL	RL	64.0	69	0.025	236	3.7	1,900.00	447,756	4,478	447,756	0	0%
			2002	2.4	1,669	RM		64.0	142	0.052	278	4.3	3,100.00	862,484	8,625	862,484	414,726	93%
			2015	2.4	2,272	RM		64.0	188	0.069	379	5.9	3,100.00	1,173,952	11,740	1,173,952	726,194	162%
	Monnakato		1995		6,899	RM	RM	199.0	590	0.216	1,150	5.8	3,100.00	3,564,708	35,647	3,564,708	0	0%
			2002	2.4	8,145	RM		199.0	694	0.253	1,358	6.8	2,300.00	3,122,409	31,224	3,122,409	0	0%
			2015	2.4	11,087	RM		199.0	918	0.335	1,846	9.3	1,750.00	3,233,698	32,337	3,233,698	0	0%
	Phetsane		1995		8,300	RM	RM	139.0	717	0.262	1,383	10.0	1,750.00	2,420,833	24,208	2,420,833	0	0%
			2002	2.8	10,070	RM		139.0	857	0.313	1,678	12.1	1,200.00	2,014,002	20,140	2,014,002	0	0%
			2015	2.8	14,419	RM		139.0	1,194	0.436	2,403	17.3	1,000.00	2,403,196	24,032	2,403,196	0	0%
		BLOCK TOTAL	1995		42,982				21,161	7.731	7,056			15,336,527	153,365	15,336,527	132,367	
			2002		51,066				24,297	8.868	8,403			23,178,423	231,784	23,178,423	8,621,393	
			2015		70,561				29,347	10.712	11,652			25,658,988	256,590	25,658,988	10,801,475	
VAALKOP SOUTH SUPPLY AREA																		
Bethanie Supply Block																		
Modikwe Supply Unit		Unit Total	1995		5,849				284	0.104	974.900			2,173,368	21,734	2,173,368	1,448,912	
			2002		6,906				588	0.215	1,150.959			5,707,200	57,072	5,707,200	4,982,744	
			2015		9,400				778	0.284	1,566.604			6,275,252	62,753	6,275,252	5,550,796	
	Modikwe		1995		4,645	RL	RL/3	301.0	226	0.082	774	2.6	1,900.00	1,471,055	14,711	1,471,055	980,703	200%
			2002	2.4	5,484	RM		301.0	467	0.170	914	3.0	4,300.00	3,930,461	39,305	3,930,461	3,440,109	702%
			2015	2.4	7,465	RM		301.0	618	0.226	1,244	4.1	3,100.00	3,856,880	38,569	3,856,880	3,366,528	687%
	Berseba	Ramoge	1995		1,204	RL	RL/3	178.0	59	0.021	201	1.1	3,500.00	702,313	7,023	702,313	468,209	200%
			2002	2.4	1,421	RM		178.0	121	0.044	237	1.3	7,500.00	1,776,739	17,767	1,776,739	1,542,635	659%
			2015	2.4	1,935	RM		178.0	160	0.058	322	1.8	7,500.00	2,416,372	24,164	2,416,372	2,184,268	933%
Bethanie Supply Unit	Bethanie		1995		9,389	RL	RL/3	182.0	456	0.167	1,565	8.6	750.00	1,173,625	11,736	1,173,625	782,417	200%

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth	No	TARGET	CURRENT	AREA			(@ 6 PER/ERF)	GROSS HECTARE	COST PER ERF	RETICUL COST	COST - RETICUL	CAPITAL COST	COST INCREASE	COST INCREASE
				% p/a				(gross ha)	kl/day	l/s	No	(@ 6 PER/ERF)	(R)	(R)	(R)	(R)	(R)	(%)
			2002	2.4	11,084	RM		182.0	944	0.344	1,847	10.2	1,400.00	2,586,267	25,863	2,586,267	2,195,058	561%
			2015	2.4	15,088	RM		182.0	1,249	0.456	2,515	13.8	1,200.00	3,017,600	30,176	3,017,600	2,626,392	671%
Hartebeestfontein	Hartebeestfontein		1995		22,205	RH	RM	182.0	2,756	1.007	3,701	20.3	950.00	3,515,792	35,158	3,515,792	2,035,456	138%
Supply Unit			2002	2.4	26,215	RH		182.0	3,208	1.171	4,369	24.0	950.00	4,150,714	41,507	4,150,714	2,670,381	180%
			2015	2.4	35,682	RH		182.0	4,247	1.550	5,947	32.7	950.00	5,649,659	56,497	5,649,659	4,169,326	282%
		BLOCK TOTAL	1995		37,443				3,498	1.277	6,241			6,862,785	68,628	6,862,785	4,266,787	
			2002		44,205				4,740	1.730	7,367			12,444,180	124,442	12,444,180	9,848,163	
			2015		60,170				6,275	2.290	10,028			14,942,511	149,425	14,942,511	12,346,514	
Vaalkop Southern And																		
Bospoort Supply Block																		
Tlaseng Supply Unit		Unit Total	1995		6,537				1,459	0.533	1,089			7,722,369	77,224	7,722,369	6,294,884	
			2002		7,717				1,697	0.620	1,286			8,026,443	80,264	8,026,443	6,598,958	
			2015		10,504				2,247	0.820	1,751			10,554,719	105,547	10,554,719	9,127,234	
	Ga-Mogajane		1995		1,218	UL	RU2	89.0	272	0.099	203	2.3	6,150.00	1,248,715	12,487	1,248,715	1,055,824	547%
			2002	2.4	1,438	UL		89.0	316	0.115	240	2.7	6,150.00	1,474,223	14,742	1,474,223	1,281,332	664%
			2015	2.4	1,958	UL		89.0	419	0.153	326	3.7	6,150.00	2,006,608	20,066	2,006,608	1,813,717	940%
	Servitude	Kwa-Servitude	1995		398	UL	RU2	43.0	89	0.032	66	1.5	8,500.00	563,833	5,638	563,833	447,750	386%
			2002	2.4	470	UL		43.0	103	0.038	78	1.8	8,500.00	665,657	6,657	665,657	549,574	473%
			2015	2.4	640	UL		43.0	137	0.050	107	2.5	8,500.00	655,550	6,556	655,550	539,467	465%
	Made 3	Kopman	1995		716	UL	RU2	21.0	160	0.058	119	5.7	4,100.00	489,118	4,891	489,118	414,557	556%
			2002	2.4	845	UL		21.0	186	0.068	141	6.7	3,010.00	423,932	4,239	423,932	349,371	469%
			2015	2.4	1,150	UL		21.0	240	0.090	192	9.1	2,385.00	457,211	4,572	457,211	382,651	513%
	Tantanana		1995		1,368	UL	RU2	104.0	305	0.111	228	2.2	6,150.00	1,401,987	14,020	1,401,987	1,185,420	547%
			2002	2.4	1,615	UL		104.0	355	0.130	269	2.6	6,150.00	1,655,174	16,552	1,655,174	1,438,607	664%
			2015	2.4	2,198	UL		104.0	470	0.172	366	3.5	6,150.00	2,252,907	22,529	2,252,907	2,036,340	940%
	Tlaseng		1995		810	UL	RU2	173.0	181	0.066	135	0.8	8,500.00	1,147,982	11,480	1,147,982	911,633	386%
			2002	2.4	957	UL		173.0	210	0.077	159	0.9	8,500.00	1,355,296	13,553	1,355,296	1,118,948	473%
			2015	2.4	1,302	UL		173.0	279	0.102	217	1.3	8,500.00	1,844,736	18,447	1,844,736	1,608,386	681%
	Tarsung		1995		2,026	UL	RU2	182.0	452	0.165	338	1.9	8,500.00	2,870,733	28,707	2,870,733	2,279,700	386%
			2002	2.4	2,392	UL		182.0	526	0.192	399	2.2	6,150.00	2,452,160	24,522	2,452,160	1,861,126	315%
			2015	2.4	3,256	UL		182.0	697	0.254	543	3.0	6,150.00	3,337,707	33,377	3,337,707	2,746,673	465%
Mankaiana Supply Unit		Unit Total	1995		2,091				467	0.170	348			2,325,000	23,250	2,325,000	1,932,060	
			2002		2,175				478	0.175	362			2,229,157	22,292	2,229,157	1,836,217	
			2015		2,373				508	0.185	395			2,431,925	24,319	2,431,925	2,038,985	

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth % p.a.	No	TARGET	CURRENT	AREA (gross ha)	M³/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
	Lesung		1995		464	UL	RL/2	44.0	104	0.038	77	1.8	8,500.00	657,325	6,573	657,325	521,993	386%
			2002	2.4	548	UL		44.0	120	0.044	91	2.1	6,150.00	561,482	5,615	561,482	426,150	315%
			2015	2.4	746	UL		44.0	159	0.058	124	2.8	6,150.00	764,250	7,642	764,250	628,918	465%
	Maraksna	Mosonthene	1995		1,627	UL	RL/2	103.0	363	0.133	271	2.6	6,150.00	1,667,675	16,677	1,667,675	1,410,067	547%
			2002	0	1,627	UL		103.0	358	0.131	271	2.6	6,150.00	1,667,675	16,677	1,667,675	1,410,067	547%
			2015	0	1,627	UL		103.0	348	0.127	271	2.6	6,150.00	1,667,675	16,677	1,667,675	1,410,067	547%
Matrise Supply Unit	Moumong	Noordgedacht	1995		1,913	RH	RL/2	130.0	238	0.087	319	2.5	5,600.00	1,785,607	17,856	1,785,607	1,482,691	489%
			2002	2.4	2,259	RH		130.0	276	0.101	376	2.9	5,600.00	2,108,073	21,081	2,108,073	1,805,157	596%
			2015	2.4	3,074	RH		130.0	366	0.134	512	3.9	5,600.00	2,869,360	28,694	2,869,360	2,566,444	847%
Kana Supply Unit		Unit Total	1995		7,605				1,697	0.620	1,267			10,773,092	107,731	10,773,092	7,815,772	
			2002		10,007				2,201	0.803	1,668			10,434,559	104,346	10,434,559	7,477,239	
			2015		16,662				3,564	1.301	2,777			17,374,307	173,743	17,374,307	14,416,986	
	Kana incl Setla etc	Kanana	1995		7,260	UL	2xRL/3	718.0	1,621	0.591	1,210	1.7	8,500.00	10,285,669	102,857	10,285,669	7,462,152	264%
			2002	4	9,554	UL		718.0	2,101	0.767	1,592	2.2	6,150.00	9,793,143	97,931	9,793,143	6,969,626	247%
			2015	4	15,909	UL		718.0	3,403	1.242	2,651	3.7	6,150.00	16,306,393	163,063	16,306,393	13,482,786	478%
	Radintshe		1995		344	UL	2xRL/3	123.0	77	0.028	57	0.5	8,500.00	487,423	4,874	487,423	353,621	264%
			2002	4	453	UL		123.0	100	0.036	75	0.6	8,500.00	641,416	6,414	641,416	507,613	379%
			2015	4	754	UL		123.0	161	0.059	126	1.0	8,500.00	1,068,004	10,680	1,068,004	934,202	698%
Bortekong Supply Unit		Unit total	1995		28,700				3,565	1.301	4,783			4,544,167	45,442	4,544,167	2,630,833	
			2002		44,511				11,097	4.050	7,419			7,047,575	70,476	7,047,575	5,134,242	
			2015		55,165				14,800	5.402	9,194			8,734,456	87,345	8,734,456	6,821,125	
	Bortekong		1995		28,700	RH	RM	157.0	3,565	1.301	4,783	30.5	950.00	4,544,167	45,442	4,544,167	2,630,833	138%
			2002		44,511	UL		157.0	9,790	3.573	7,419	47.3	950.00	7,047,575	70,476	7,047,575	5,134,242	268%
			2015		55,165	UL		157.0	11,600	4.307	9,194	58.6	950.00	8,734,456	87,345	8,734,456	6,821,125	357%
	Rustenburg	New Industrial	1995			PC			0	0.000								
			2002						1,307	0.477								
			2015						3,000	1.095								
Mentang Supply Unit	Mentang		1995		10,185	RH	RH	78.0	1,265	0.462	1,696	21.8	950.00	1,612,625	16,126	1,612,625	933,625	138%
			2002		13,935	UL		78.0	3,065	1.119	2,323	29.8	950.00	2,206,375	22,064	2,206,375	1,527,375	225%
			2015		22,020	UL		78.0	4,710	1.719	3,670	47.1	950.00	3,486,500	34,865	3,486,500	2,807,500	413%
Impala Supply Unit (1 of 2)	Mmpro		1995			AC			5,000	1.825								
			2002						5,000	1.825								
			2015						5,000	1.825								
Ga-Luka Supply Unit	Ga-Luka		1995		5,621	UL	2xRL/3	701.0	1,255	0.458	937	1.3	8,500.00	7,962,630	79,626	7,962,630	5,776,810	264%
			2002	4	7,396	UL		701.0	1,627	0.594	1,233	1.8	8,500.00	10,478,278	104,783	10,478,278	8,292,458	379%

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AREA/LOCALITY	SETTLEMENT	ALTERNATIVE NAME	POPULATION MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	TARGET	CURRENT	AREA (gross ha)	Ml/day	Mm³/a	(@ 6 PERS/ERF) No	GROSS HECTARE (@ 6 PERS/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	4	12,316	UL		701.0	2,634	0.962	2,053	2.9	6,150.00	12,623,492	126,235	12,623,492	10,437,672	478%
Phokeng Supply Unit		Unit Total	1995		17,557				3,919	1.430	2,907			21,694,973	216,950	21,694,973	15,860,224	
			2002		23,068				5,074	1.852	3,826			28,096,942	280,969	28,096,942	22,262,193	
			2015		38,335				8,200	2.993	6,371			33,390,723	333,907	33,390,723	27,555,974	
	Lefatlagatlhe		1995		3,299	UL	2xRL/3	80.0	736	0.269	550	6.9	3,010.00	1,654,806	16,548	1,654,806	1,321,279	396%
			2002	4	4,341	UL		80.0	955	0.348	723	9.0	2,385.00	1,725,450	17,255	1,725,450	1,391,923	417%
			2015	4	7,228	UL		80.0	1,546	0.564	1,205	15.1	1,345.00	1,620,204	16,202	1,620,204	1,286,677	386%
	Phokeng incl. Windsa, Tswana,		1995		14,146	UL	2xRL/3	1,634.0	3,157	1.152	2,356	1.4	8,500.00	20,040,167	200,402	20,040,167	14,538,944	264%
	Saron, Masobowe,		2002	4	18,615	UL		1,634.0	4,094	1.494	3,103	1.9	8,500.00	26,371,492	263,715	26,371,492	20,870,270	379%
	Dithabaneng, Motsusiwe		2015	4	30,996	UL		1,634.0	6,630	2.420	5,166	3.2	6,150.00	31,770,519	317,705	31,770,519	26,269,296	478%
	Phokeng Palace		1995		112	UL			25	0.009								
			2002	0	112	UL			25	0.009								
			2015	0	112	UL			24	0.009								
Thabane Supply Unit		Unit Total	1995		47,172				5,659	2.138	7,826			7,434,797	74,348	7,434,797	4,304,356	
			2002		47,172				5,773	2.107	7,826			7,434,797	74,348	7,434,797	4,304,356	
			2015		47,172				5,615	2.049	7,826			7,434,797	74,348	7,434,797	4,304,356	
	Thabane		1995		46,957	RH	RH	100.0	5,632	2.129	7,826	78.3	950.00	7,434,797	74,348	7,434,797	4,304,356	138%
			2002	0	46,957	RH		100.0	5,747	2.098	7,826	78.3	950.00	7,434,797	74,348	7,434,797	4,304,356	138%
			2015	0	46,957	RH		100.0	5,589	2.040	7,826	78.3	950.00	7,434,797	74,348	7,434,797	4,304,356	138%
	Thabane College		1995		180	RH			22	0.008								
			2002	0	180	RH			22	0.008								
			2015	0	180	RH			21	0.008								
	Thabane Hostel		1995		35	RH			4	0.002								
			2002	0	35	RH			4	0.002								
			2015	0	35	RH			4	0.002								
Rustenburg North		Unit Total	1995		21,629				10,656	3.889	0			0	0	0	0	
Savvy Unit			2002		27,518				12,852	4.691	0			0	0	0	0	
			2015		37,456				16,365	5.973	0			0	0	0	0	
	Rustenburg North		1995		21,629	UH	UH	100.0	5,970	2.179								
			2002	3.5	27,518	UH		100.0	7,484	2.732								
			2015	2.4	37,456	UH		100.0	9,907	3.616								
		Industrial	1995						1,194	0.436								
			2002						1,497	0.546								
			2015						1,981	0.723								
		Commercial	1995						895	0.327								

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AREA ALLOCHART	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN (@ 6 PER/ERF)	No OF ERVEN PER GROSS HECTARE (@ 6 PER/ERF)	CAPITAL RETIC COST PER ERF (R)	TOTAL CAPITAL RETICUL COST (R)	ANNUAL MAINTNCE COST - RETICUL (R)	GRAND TOTAL CAPITAL COST (R)	ACTUAL CAPITAL COST INCREASE (R)	% CAPITAL COST INCREASE (%)
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	l/s/ha	No							
			2002						1,123	0.410								
			2015						1,486	0.542								
		Institutional	1995						597	0.218								
			2002						748	0.273								
			2015						991	0.362								
	Bospoort supply to Rustenbg	North	1995			AC			2,000	0.730								
			2002						2,000	0.730								
			2015						2,000	0.730								
RPM Supply Unit	RPM		1995			AC			2,933	1.071								
(1 of 2)			2002						2,933	1.071								
			2015						2,933	1.071								
		BLOCK TOTAL	1995		149,008				38,311	13.984	21,175			65,855,259	658,553	65,855,259	47,031,256	
			2002		185,758				52,074	19.007	26,319			78,062,199	780,622	78,062,199	59,238,196	
			2015		245,077				66,942	24.434	34,549			98,900,281	989,003	98,900,281	80,076,278	
Barnardsvlei Western																		
Supply Block																		
Rustenburg South		Unit Total	1995		36,828				14,939	5.453	0			0	0	0	0	
Supply Unit			2002		39,485				15,771	5.757	0			0	0	0	0	
			2015		44,937				17,434	6.364	0			0	0	0	0	
	Rustenburg South		1995		36,828	UH	UH	100.0	10,165	3.710								
			2002	1	39,485	UH		100.0	10,739	3.920								
			2015	1	44,937	UH		100.0	11,886	4.338								
		Industrial	1995						2,033	0.742								
			2002						2,148	0.784								
			2015						2,377	0.868								
		Commercial	1995						1,525	0.557								
			2002						1,611	0.588								
			2015						1,783	0.651								
		Institutional	1995						1,016	0.371								
			2002						1,074	0.392								
			2015						1,189	0.434								
	Bospoort supply to Rustenbg	South	1995			AC			200	0.073								
			2002						200	0.073								
			2015						200	0.073								
Impala Supply Unit		Unit Total	1995		73,841				21,919	8.000	0			0	0	0	0	

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AREA/MUNICIPALITY	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %p/year	No	TARGET	CURRENT	AREA (gross ha)	M³/day	M³/a	(@ 4 PEAK/ERF) No	GROSS HECTARE (@ 4 PEAK/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
(2 of 2)			2002		97,159				24,639	8.993	0			0	0	0	0	
			2015		161,746				32,000	11.680	0			0	0	0	0	
	Kutwanang Old Age	Part of Wildebees	1995		531	RH			66	0.024								
		North mine	2002	4	699	RH			86	0.031								
			2015	4	1,166	RH			139	0.051								
	Wildebees North Mine		1995		19,104	RH			2,373	0.866								
			2002	4	25,139	RH			3,077	1.123								
			2015	4	41,858	RH			4,982	1.818								
	Wildebees South Mine		1995		19,370	RH			2,406	0.878								
			2002	4	25,490	RH			3,120	1.139								
			2015	4	42,442	RH			5,052	1.844								
	Bafokeng North Mine		1995		12,372	RH			1,537	0.561								
			2002	4	16,280	RH			1,993	0.727								
			2015	4	27,108	RH			3,227	1.178								
	Impala Platinum Mine		1995			AC			11,926	4.353								
			2002	0					11,926	4.353								
			2015	0					11,926	4.353								
	Vogelstruisnek Platinum		1995			AC			822	0.300								
			2002	0					822	0.300								
			2015	0					822	0.300								
	Bafokeng South Mine		1995		22,308	RH			2,771	1.011								
			2002	4	29,356	RH			3,593	1.311								
			2015	4	48,861	RH			5,818	2.124								
	Impala Hospital		1995		156	RH			19	0.007								
			2002	3.2	194	RH			24	0.009								
			2015	3.2	293	RH			35	0.013								
RPM Supply Unit		Unit Total	1995		103,153				10,640	3.884	16,225			16,096,684	160,967	16,096,684	9,213,207	
(2 of 2)			2002		111,675				15,034	5.488	17,470			19,453,359	194,534	19,453,359	12,569,882	
			2015		129,720				16,350	5.968	20,065			22,330,922	223,309	22,330,922	15,447,445	
	Kwa-Potbaneng		1995		2,891	RL	RL/2	99.0	140	0.051	482	4.9	1,250.00	602,212	6,022	602,212	301,106	100%
			2002	2.4	3,413	RM		99.0	291	0.106	569	5.7	3,100.00	1,763,196	17,632	1,763,196	1,462,090	486%
			2015	2.4	4,645	RM		99.0	385	0.140	774	7.8	2,300.00	1,780,599	17,806	1,780,599	1,479,493	491%
	Rustenburg Platinum	Vergenoeg	1995		2,191	RM			189	0.069								
			2002	2.4	2,567	RM			317	0.116								
			2015	2.4	3,521	RM			419	0.153								

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN (@ 6 PERS/ERF)	No OF ERVEN PER GROSS HECTARE (@ 6 PERS/ERF)	CAPITAL RETIC COST PER ERF	TOTAL CAPITAL RETICUL COST	ANNUAL MAINTNCE COST - RETICUL	GRAND TOTAL CAPITAL COST	ACTUAL CAPITAL COST INCREASE	% CAPITAL COST INCREASE
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	ave/day	max/hr	No	(@ 6 PERS/ERF)	(R)	(R)	(R)	(R)	(R)	(%)
	RPM	Rustenburg P Mine	1995			AC			5,271	1,924								
			2002	0					5,271	1,924								
			2015	0					5,271	1,924								
	Thekwane		1995		1,268	RL	RU2	237.0	62	0.022	211	0.9	3,500.00	739,513	7,395	739,513	369,757	100%
			2002	2.4	1,497	RM		237.0	127	0.047	249	1.1	7,500.00	1,870,849	18,708	1,870,849	1,501,093	406%
			2015	2.4	2,037	RM		237.0	169	0.062	340	1.4	7,500.00	2,546,468	25,465	2,546,468	2,176,712	589%
	Rural incl Waterval, Frank Flat Mine, Kroondal		1995		93,189	RL	RU2	371.0	4,529	1.653	15,532	41.9	950.00	14,754,959	147,550	14,754,959	8,542,345	138%
	Paardekraal, Townends Mine		2002	1	99,911	RM		371.0	8,506	3.105	16,652	44.9	950.00	15,819,314	158,193	15,819,314	9,606,699	155%
			2015	1	113,709	RM		371.0	9,415	3.436	18,951	51.1	950.00	18,003,855	180,039	18,003,855	11,791,240	190%
	Eastern Platinum		1995		3,614	RH			449	0.164								
			2002	2.4	4,267	RH			522	0.191								
			2015	2.4	5,808	RH			691	0.252								
Karee Supply Unit		Unit Total	1995		600				4,789	1.748	100			350,194	3,502	350,194	0	
			2002		709				6,871	2.508	118			885,936	8,859	885,936	535,741	
			2015		965				6,890	2.515	161			691,367	6,914	691,367	341,173	
	Mankana incl Braksprut		1995		600	RL	RL	67.0	29	0.011	100	1.5	3,500.00	350,194	3,502	350,194	0	0%
			2002	2.4	709	RM		67.0	60	0.022	118	1.8	7,500.00	885,936	8,859	885,936	535,741	153%
			2015	2.4	965	RM		67.0	80	0.029	161	2.4	4,300.00	691,367	6,914	691,367	341,173	97%
	Karee Mine		1995			AC			4,760	1.737								
			2002	5.25					6,810	2.486								
			2015	0					6,810	2.486								
Diverse consumers	Diverse consumers	Rainbow Chickens	1995			AC			2,560	0.934								
Supply Unit			2002	5					3,602	1.315								
			2015	5					6,792	2.479								
		BLOCK TOTAL	1995		214,422				54,647	20.019	16,325			16,446,879	164,469	16,446,879	9,213,207	0
			2002		249,027				65,917	24.060	17,588			20,339,295	203,393	20,339,295	13,105,623	0
			2015		337,366				79,467	29.005	20,226			23,022,289	230,223	23,022,289	15,788,618	0
Barnardsviel Eastern Supply Block																		
Bapong Supply Unit		Unit Total	1995		22,463				2,919	1.065	3,744			12,544,795	125,448	12,544,795	2,779,128	
			2002		29,014				4,253	1.552	4,836			13,641,039	136,410	13,641,039	4,605,761	
			2015		46,714				6,545	2.389	7,786			14,626,756	146,268	14,626,756	4,861,088	
	Bapong	Oudstad	1995		10,463	UL	RH	536.9	2,335	0.852	1,744	3.2	6,150.00	10,724,795	107,248	10,724,795	959,128	10%
		incl Moddersprut	2002	3.4	13,222	UL		536.9	2,908	1.061	2,204	4.1	4,100.00	9,035,278	90,353	9,035,278	0	0%
			2015	3.4	20,421	UL		536.9	4,368	1.594	3,403	6.3	3,010.00	10,244,509	102,445	10,244,509	478,842	5%

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No	TARGET	CURRENT	AREA (gross ha)	kl/day	l/min/s	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
	Majakaneng	Noodkamp	1995		12,000	RL	0	268.1	583	0.213	2,000	7.5	910.00	1,820,000	18,200	1,820,000	1,820,000	
			2002	4	15,791	RM		268.1	1,344	0.491	2,632	9.8	1,750.00	4,605,761	46,058	4,605,761	4,605,761	
			2015	4	26,293	RM		268.1	2,177	0.795	4,382	16.3	1,000.00	4,382,246	43,822	4,382,246	4,382,246	
Segwaelane Supply Unit		Unit Total	1995		6,577				817	0.298	1,096			6,136,793	61,368	6,136,793	1,425,077	
			2002		7,765				950	0.347	1,294			7,247,408	72,474	7,247,408	2,533,692	
			2015		10,569				1,256	0.459	1,762			7,724,773	77,248	7,724,773	3,011,057	
	Mekolokwe	Ga-Rampa	1995		2,258	RH	RM	184.0	280	0.102	376	2.0	5,600.00	2,107,837	21,078	2,107,837	489,319	30%
			2002	2.4	2,666	RH		184.0	326	0.119	444	2.4	5,600.00	2,488,495	24,885	2,488,495	869,977	54%
			2015	2.4	3,629	RH		184.0	432	0.158	605	3.3	5,600.00	3,387,164	33,872	3,387,164	1,768,646	109%
	Segwaelane		1995		4,319	RH	RM	271.0	536	0.196	720	2.7	5,600.00	4,030,956	40,310	4,030,956	935,758	30%
			2002	2.4	5,099	RH		271.0	624	0.228	850	3.1	5,600.00	4,758,913	47,589	4,758,913	1,663,715	54%
			2015	2.4	6,940	RH		271.0	826	0.302	1,157	4.3	3,750.00	4,337,610	43,376	4,337,610	1,242,411	40%
Wonderkoppies	Wonderkoppies		1995		4,065	RH	RH	164.0	505	0.184	677	4.1	3,750.00	2,540,559	25,406	2,540,559	0	0%
Supply unit			2002	2.4	4,799	RH		164.0	587	0.214	800	4.9	3,750.00	2,999,363	29,994	2,999,363	458,804	18%
			2015	2.4	6,532	RH		164.0	777	0.284	1,089	6.6	2,820.00	3,070,056	30,701	3,070,056	529,497	21%
Moolmoi Supply Unit	Moolmoi		1995		3,515	RH	RH	166.0	437	0.159	586	3.5	5,600.00	3,280,796	32,808	3,280,796	0	0%
			2002	2.4	4,150	RH		166.0	508	0.185	692	4.2	3,750.00	2,593,715	25,937	2,593,715	0	0%
			2015	2.4	5,649	RH		166.0	672	0.245	941	5.7	3,750.00	3,530,361	35,304	3,530,361	249,585	8%
Western Platts	Western Platts Mine		1995			AC			22,754	8.305								
Supply unit			2002						24,650	8.997								
			2015						26,782	9.775								
		BLOCK TOTAL	1995		36,621				27,431	10.012	6,103			24,504,944	245,049	24,504,944	4,204,205	
			2002		45,728				30,948	11.296	7,621			26,481,525	264,815	26,481,525	7,598,257	
			2015		69,464				36,035	13.153	11,577			28,951,966	289,520	28,951,966	8,651,227	
KOSTER SUPPLY AREA																		
Koster	Koster	Domestic	1995		1,738	UH	UH	200.0	480	0.175	290	1.4	9,000.00	2,607,000	26,070	2,607,000	0	0%
			2002	0	1,738	UH		200.0	473	0.173	290	1.4	9,000.00	2,607,000	26,070	2,607,000	0	0%
			2015	0	1,738	UH		200.0	460	0.168	290	1.4	9,000.00	2,607,000	26,070	2,607,000	0	0%
		Commercial	1995						120	0.04								
			2002	0					116	0.04								
			2015	0					115	0.04								
		Institutional	1995						48	0.02								
			2002	0					47	0.02								
			2015	0					46	0.02								
	Reagile		1995		9,581	RH	RL	146.0	1,190	0.434	1,597	10.9	1,730.00	2,762,522	27,625	2,762,522	1,644,738	147%
			2002	2	11,006	RH		146.0	1,347	0.492	1,834	12.6	1,400.00	2,567,963	25,680	2,567,963	1,450,180	130%

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No. OF ERVEN	No. OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	l/s/ha	(@ 6 PER/HH) No	GROSS HECTARE (@ 6 PER/HH)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	2	14,237	RH		140.0	1,695	0.619	2,373	16.3	1,150.00	2,728,732	27,287	2,728,732	1,610,949	144%
	Rural		1995		22,905	RL			1,113	0.41								
			2002	1	24,557	RL			1,176	0.43								
			2015	1	27,948	RL			1,302	0.48								
	KOSTER	BLOCK TOTAL	1995		34,224				2,951	1.077	1,887			5,369,522	53,695	5,369,522	1,644,738	
			2002		37,301				3,161	1.154	2,124			5,174,963	51,750	5,174,963	1,450,180	
			2015		43,923				3,617	1.320	2,662			5,335,732	53,357	5,335,732	1,610,949	
Swartruggens	Borolelo		1995		3,060	RH	RL	97.0	383	0.140	513	5.3	3,750.00	1,925,000	19,250	1,925,000	1,283,333	200%
			2002	2	3,538	RH		97.0	433	0.158	590	6.1	2,820.00	1,662,837	16,628	1,662,837	1,021,171	159%
			2015	2	4,577	RH		97.0	545	0.199	763	7.9	2,820.00	2,151,057	21,511	2,151,057	1,509,391	235%
	Swartruggens		1995		1,006	UH	UH	200.0	278	0.101	168	0.8	9,000.00	1,509,000	15,090	1,509,000	0	0%
			2002	0	1,006	UH		200.0	274	0.100	168	0.8	9,000.00	1,509,000	15,090	1,509,000	0	0%
			2015	0	1,006	UH		200.0	266	0.097	168	0.8	9,000.00	1,509,000	15,090	1,509,000	0	0%
		Commercial	1995						69	0.03								
			2002	0					68	0.02								
			2015	0					67	0.02								
		Institutional	1995						28	0.01								
			2002	0					27	0.01								
			2015	0					27	0.01								
	Rural		1995		10,241	RL			494	0.18								
			2002	1	10,980	RL			526	0.19								
			2015	1	12,496	RL			599	0.21								
	SWARTRUGGENS	BLOCK TOTAL	1995		14,327				1,255	0.458	681			3,434,000	34,340	3,434,000	1,283,333	
			2002		15,524				1,328	0.485	757			3,171,837	31,718	3,171,837	1,021,171	
			2015		18,079				1,486	0.542	930			3,660,057	36,601	3,660,057	1,509,391	

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WESTERN SUPPLY ZONE SUMMARY																	
	ZONE TOTAL	1995		675,851				237,156	86.562	77,684			200,525,925	2,005,259	200,631,811	92,855,824	
		2002		788,239				280,420	102.353	90,080			259,060,566	2,590,606	259,171,620	153,904,578	
		2015		1,033,366				338,054	123.390	115,449			311,487,286	3,114,873	311,599,521	204,601,577	

POPULATION AND WATER DEMAND SPREADSHEETS

CENTRAL ZONE

AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION- MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
TEMBA SUPPLY AREA																		
Kudube	Babelegi Industria		1995		0	AC			10,140	3.701								
North			2002	3.5	0				12,901	4.709								
Supply Block			2015	3.5	0				16,414	5.991								
	Bosplaas East		1995		6,865	RM	RM	2,217	593	0.216	1,144	0.5	7,500.00	8,581,250	85,813	8,581,250	0	0%
			2002	2.6	8,216	RM		2,217	700	0.255	1,369	0.6	7,500.00	10,270,275	102,703	10,270,275	1,689,025	20%
			2015	2.6	11,471	RM		2,217	950	0.347	1,912	0.9	7,500.00	14,338,304	143,383	14,338,304	5,757,054	67%
	Bosplaas West		1995		3,581	RM	RM	2,637	309	0.113	597	0.2	7,500.00	4,476,250	44,763	4,476,250	0	0%
			2002	2.6	4,286	RM		2,637	365	0.133	714	0.3	7,500.00	5,357,299	53,573	5,357,299	881,049	20%
			2015	2.6	5,983	RM		2,637	495	0.181	997	0.4	7,500.00	7,479,310	74,793	7,479,310	3,003,060	67%
	Botlolo Technical & Commercial		1995		28	UL			6	0.002								
			2002	0	28	UL			6	0.002								
			2015	0	28	UL			6	0.002								
	Hammanskraal		1995		887	RL			43	0.016								
			2002	2.4	1,048	UL			229	0.083								
			2015	2.4	1,426	UL			303	0.110								
	Carousel		1995			AC			1,370	0.500								
			2002	0					1,370	0.500								
			2015	0					1,370	0.500								
	Danhouse		1995		2,721	RM			235	0.086								
			2002	0	2,721	RM			232	0.085								
			2015	0	2,721	RM			225	0.082								
	Dertig		1995		2,520	RM	RM	349	218	0.079	420	1.2	7,500.00	3,149,645	31,496	3,149,645	0	0%
			2002	2.6	3,016	RM		349	257	0.094	503	1.4	7,500.00	3,769,582	37,696	3,769,582	619,936	20%
			2015	2.6	4,210	RM		349	349	0.127	702	2.0	4,300.00	3,017,283	30,173	3,017,283	0	0%
	Greenside	Maubane 2	1995		7,259	RM	RM	217	627	0.229	1,210	5.6	3,100.00	3,750,487	37,505	3,750,487	0	0%
			2002	2.6	8,688	RM		217	740	0.270	1,448	6.7	2,300.00	3,330,315	33,303	3,330,315	0	0%
			2015	2.6	12,129	RM		217	1,004	0.367	2,021	9.3	1,750.00	3,537,621	35,376	3,537,621	0	0%
	Hans Kekana High School		1995		126	UL			36	0.013								
			2002	0	126	UL			35	0.013								
			2015	0	126	UL			34	0.013								
	Ithuteng Commercial		1995		245	UL			70	0.025								
			2002	0	245	UL			69	0.025								
			2015	0	245	UL			67	0.024								
	Jubilee C Hospital		1995		732	UL			208	0.076								
			2002	0	732	UL			205	0.075								

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	0	732	UL			200	0.073								
	Kgomo-Kgomo incl. Leeukraal		1995		2,589	RM	RM	401	224	0.082	432	1.1	7,500.00	3,236,250	32,363	3,236,250	0	0%
			2002	0	2,589	RM		401	220	0.080	432	1.1	7,500.00	3,236,250	32,363	3,236,250	0	0%
			2015	0	2,589	RM		401	214	0.078	432	1.1	7,500.00	3,236,250	32,363	3,236,250	0	0%
	Khamane High School		1995		99	UL			28	0.010								
			2002	0	99	UL			28	0.010								
			2015	0	99	UL			27	0.010								
	Kontante		1995		751	RM	RM	167	65	0.024	125	0.7	7,500.00	938,750	9,388	938,750	0	0%
			2002	0	751	RM		167	64	0.023	125	0.7	7,500.00	938,750	9,388	938,750	0	0%
			2015	0	751	RM		167	62	0.023	125	0.7	7,500.00	938,750	9,388	938,750	0	0%
	Kudube Manpower		1995		704	UL	RM	192	200	0.073	117	0.6	8,500.00	997,333	9,973	997,333	117,333	13%
			2002	0	704	UL		192	197	0.072	117	0.6	8,500.00	997,333	9,973	997,333	117,333	13%
			2015	0	704	UL		192	192	0.070	117	0.6	8,500.00	997,333	9,973	997,333	117,333	13%
	Majaneng		1995		15,877	RM	RM	49	1,372	0.501	2,646	54.0	950.00	2,513,811	25,138	2,513,811	1,455,364	138%
			2002	2.6	19,002	RM		49	1,618	0.590	3,167	64.6	950.00	3,008,598	30,086	3,008,598	1,950,151	184%
			2015	2.6	26,528	RM		49	2,197	0.802	4,421	90.2	950.00	4,200,295	42,003	4,200,295	3,141,849	297%
	Makapanstad		1995		26,418	RM	RM	118	2,283	0.833	4,403	37.3	950.00	4,182,885	41,829	4,182,885	2,421,670	138%
			2002	2.6	31,618	RM		118	2,692	0.983	5,270	44.7	950.00	5,006,191	50,062	5,006,191	3,244,977	184%
			2015	2.6	44,142	RM		118	3,655	1.334	7,357	62.3	950.00	6,989,130	69,891	6,989,130	5,227,915	297%
	Marokolong		1995		8,632	RM	RM	1,422	746	0.272	1,439	1.0	7,500.00	10,790,496	107,905	10,790,496	0	0%
			2002	3.5	10,983	RM		1,422	935	0.341	1,830	1.3	7,500.00	13,728,524	137,285	13,728,524	2,938,028	27%
			2015	3.5	17,177	RM		1,422	1,422	0.519	2,863	2.0	4,300.00	12,309,930	123,099	12,309,930	1,519,434	14%
	Mathibistad incl. Swartboomstad		1995		21,654	RM	RM	2,468	1,871	0.683	3,609	1.5	7,500.00	27,067,549	270,675	27,067,549	0	0%
			2002	2.6	25,916	RM		2,468	2,207	0.805	4,319	1.8	7,500.00	32,395,184	323,952	32,395,184	5,327,635	20%
			2015	2.6	36,181	RM		2,468	2,996	1.093	6,030	2.4	4,300.00	25,930,049	259,300	25,930,049	0	0%
	Moratele	Moretele	1995		1,256	RM	RM	54	109	0.040	209	3.9	4,300.00	900,275	9,003	900,275	0	0%
			2002	2.6	1,503	RM		54	128	0.047	251	4.6	3,100.00	776,784	7,768	776,784	0	0%
			2015	2.6	2,099	RM		54	174	0.063	350	6.5	2,300.00	804,603	8,046	804,603	0	0%
	Moratele College of Education		1995		60	UL			17	0.006								
			2002	0	60	UL			17	0.006								
			2015	0	60	UL			16	0.006								
	Nokaneng		1995		887	RM			77	0.028								
			2002	0	887	RM			76	0.028								
			2015	0	887	RM			73	0.027								
	Old Ramotse		1995		1,068	RM	RM	176	92	0.034	178	1.0	7,500.00	1,334,880	13,349	1,334,880	0	0%
			2002	3.5	1,359	RM		176	116	0.042	226	1.3	7,500.00	1,698,340	16,983	1,698,340	363,460	27%

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	M³/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTAARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	3.5	2,125	RM		176	176	0.064	354	2.0	4,300.00	1,522,847	15,228	1,522,847	187,967	14%
	One &Ten	Maubane 1	1995		2,047	RM	RM	120	177	0.065	341	2.8	4,300.00	1,466,882	14,669	1,466,882	0	0%
			2002	2.6	2,450	RM		120	209	0.076	408	3.4	4,300.00	1,755,604	17,556	1,755,604	288,723	20%
			2015	2.6	3,420	RM		120	283	0.103	570	4.7	3,100.00	1,766,996	17,670	1,766,996	300,114	20%
	Opperman	Witgatboom	1995		1,652	RM	RM	277	143	0.052	275	1.0	7,500.00	2,064,381	20,644	2,064,381	0	0%
			2002	2.6	1,977	RM		277	168	0.061	329	1.2	7,500.00	2,470,708	24,707	2,470,708	406,327	20%
			2015	2.6	2,759	RM		277	228	0.083	460	1.7	7,500.00	3,449,348	34,493	3,449,348	1,384,967	67%
	Potwane	Goedgewaagd 1	1995		555	RM	RM	47	48	0.017	92	2.0	7,500.00	693,617	6,936	693,617	0	0%
			2002	2.6	664	RM		47	57	0.021	111	2.4	4,300.00	475,947	4,759	475,947	0	0%
			2015	2.6	927	RM		47	77	0.028	155	3.3	4,300.00	664,468	6,645	664,468	0	0%
	Prieska	Goedgewaagd 2	1995		1,114	RM	RM	86	96	0.035	186	2.2	4,300.00	798,496	7,985	798,496	0	0%
			2002	2.6	1,333	RM		86	114	0.041	222	2.6	4,300.00	955,662	9,557	955,662	157,166	20%
			2015	2.6	1,862	RM		86	154	0.056	310	3.6	4,300.00	1,334,197	13,342	1,334,197	535,701	67%
	Ramotse		1995		14,088	RM	RM	2,321	1,217	0.444	2,348	1.0	7,500.00	17,610,048	176,100	17,610,048	0	0%
			2002	3.5	17,924	RM		2,321	1,526	0.557	2,987	1.3	7,500.00	22,404,899	224,049	22,404,899	4,794,851	27%
			2015	3.5	28,032	RM		2,321	2,321	0.847	4,672	2.0	4,300.00	20,089,759	200,898	20,089,759	2,479,711	14%
	Ratlhagane High School	In Phake A	1995		269	UL			77	0.028								
			2002	0	269	UL			75	0.028								
			2015	0	269	UL			73	0.027								
	Temba incl. Lebonang		1995		57,916	UL			13,726	5.010								
			2002	3.5	73,685	UL			17,463	6.374								
			2015	3.5	115,240	UL			27,312	9.969								
	Thutare High School		1995		82	UL			23	0.009								
			2002	0	82	UL			23	0.008								
			2015	0	82	UL			22	0.008								
	Thulwe AH		1995		823	RM			71	0.026								
			2002	2.6	985	RM			84	0.031								
			2015	2.6	1,375	RM			114	0.042								
	Tladistad		1995		3,388	RM	RM	189	293	0.107	565	3.0	4,300.00	2,428,067	24,281	2,428,067	0	0%
			2002	0	3,388	RM		189	288	0.105	565	3.0	4,300.00	2,428,067	24,281	2,428,067	0	0%
			2015	0	3,388	RM		189	281	0.102	565	3.0	4,300.00	2,428,067	24,281	2,428,067	0	0%
	Tshenolo Holy Church		1995		116	UL			33	0.012								
			2002	0	116	UL			33	0.012								
			2015	0	116	UL			32	0.012								
	Voyanteen		1995		2,517	RM			217	0.079								
			2002	0	2,517	RM			214	0.078								

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	0	2,517	RM			208	0.076								
	Vuma		1995		2,777	RM			240	0.088								
			2002	0	2,777	RM			236	0.086								
			2015	0	2,777	RM			230	0.084								
	Vyeboschlaagte AH	Vyebostaagte	1995		2,931	RM			253	0.092								
			2002	2.6	3,508	RM			299	0.109								
			2015	2.6	4,898	RM			406	0.148								
	Waiman		1995		668	RM			58	0.021								
			2002	0	668	RM			57	0.021								
			2015	0	668	RM			55	0.020								
	Wynandskraal	Dihibiding, Maubane 3	1995		4,732	RM	RM	68	409	0.149	789	11.6	1,400.00	1,104,127	11,041	1,104,127	0	0%
			2002	2.6	5,663	RM		68	482	0.176	944	13.9	1,200.00	1,132,671	11,327	1,132,671	28,544	3%
			2015	2.6	7,907	RM		68	655	0.239	1,318	19.4	950.00	1,251,877	12,519	1,251,877	147,750	13%
		BLOCK TOTAL	1995		200,633				38,019	13.877	21,125			98,085,479	980,855	98,085,479	3,994,368	
			2002		242,582				46,732	17.057	25,338			116,136,982	1,161,370	116,136,982	22,807,205	
			2015		348,650				65,071	23.751	35,731			116,786,419	1,162,864	116,786,419	23,802,857	
Kudube South Supply Block	Mmakaunyane West		1995		2,461	RL	RL	496	120	0.044	410	0.8	3,500.00	1,435,583	14,356	1,435,583	0	0%
			2002	0	2,461	RL		496	118	0.043	410	0.8	3,500.00	1,435,583	14,356	1,435,583	0	0%
			2015	0	2,461	RL		496	115	0.042	410	0.8	3,500.00	1,435,583	14,356	1,435,583	0	0%
	Dilopye		1995		7,235	RM	RM	295	625	0.228	1,206	4.1	3,100.00	3,737,975	37,380	3,737,975	0	0%
			2002	3.5	9,205	RM		295	784	0.286	1,534	5.2	3,100.00	4,755,748	47,557	4,755,748	1,017,773	27%
			2015	3.5	14,396	RM		295	1,192	0.435	2,399	8.1	1,750.00	4,198,747	41,987	4,198,747	460,772	12%
	Nuwe Eersterus	Eersterus	1995		36,989	RM	RM	569	3,196	1.166	6,165	10.8	1,400.00	8,630,738	86,307	8,630,738	0	0%
			2002	3.5	47,060	RM		569	4,007	1.462	7,843	13.8	1,200.00	9,412,036	94,120	9,412,036	781,298	9%
			2015	3.5	73,600	RM		569	6,094	2.224	12,267	21.6	950.00	11,653,342	116,533	11,653,342	3,022,604	35%
	Ga Motlhe	Mmotla	1995		11,998	RM	RM	370	1,037	0.378	2,000	5.4	3,100.00	6,199,121	61,991	6,199,121	0	0%
			2002	2.6	14,360	RM		370	1,223	0.446	2,393	6.5	2,300.00	5,504,626	55,046	5,504,626	0	0%
			2015	2.6	20,048	RM		370	1,660	0.606	3,341	9.0	1,750.00	5,847,278	58,473	5,847,278	0	0%
	Gamoeka		1995		10,297	RM			890	0.325								
			2002	2.6	12,324	RM			1,049	0.383								
			2015	2.6	17,205	RM			1,425	0.520								
	Gamokone	Matenteng	1995		62,061	RM			5,362	1.957								
			2002	3.5	78,959	RM			6,723	2.454								
			2015	3.5	123,488	RM			10,225	3.732								
	Legkraal	Noroki	1995		1,285	RM			111	0.041								
			2002	0	1,285	RM			109	0.040								

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth	No.	TARGET	CURRENT	AREA	kl/day	Mm³/a	(@ 6 PER/ERF)	GROSS HECTARE	COST PER ERF	RETICUL COST	COST - RETICUL	CAPITAL COST	COST INCREASE	COST INCREASE
				%/year				(gross ha)			No	(@ 6 PER/ERF)	(R)	(R)	(R)	(R)	(R)	(%)
			2015	0	1,285	RM			106	0.039								
	Mogogelo	Bezuidenhouds-	1995		21,112	RM	RM	277	1,824	0.666	3,519	12.7	1,200.00	4,222,464	42,225	4,222,464	0	0%
		kraal	2002	2.6	25,268	RM		277	2,151	0.785	4,211	15.2	1,050.00	4,421,866	44,219	4,421,866	199,402	5%
			2015	2.6	35,276	RM		277	2,921	1.066	5,879	21.2	950.00	5,585,417	55,854	5,585,417	1,362,952	32%
	Ratsiepane		1995		12,322	RM	RM	512	1,065	0.389	2,054	4.0	3,100.00	6,366,297	63,663	6,366,297	0	0%
			2002	2.6	14,747	RM		512	1,256	0.458	2,458	4.8	3,100.00	7,619,359	76,194	7,619,359	1,253,062	20%
			2015	2.6	20,588	RM		512	1,705	0.622	3,431	6.7	2,300.00	7,892,240	78,922	7,892,240	1,525,943	24%
	Rungtesloot AH		1995		1,923	RM			166	0.061								
			2002	0	1,923	RM			164	0.060								
			2015	0	1,923	RM			159	0.058								
	Sekampaneng		1995		2,853	RM			247	0.090								
			2002	3.5	3,630	RM			309	0.113								
			2015	3.5	5,677	RM			470	0.172								
	Sekitla High School		1995		137	UL			39	0.014								
			2002	0	137	UL			38	0.014								
			2015	0	137	UL			37	0.014								
	Stinkwater		1995		5,744	RM	RM	1,150	496	0.181	957	0.8	7,500.00	7,179,840	71,798	7,179,840	0	0%
			2002	3.5	7,308	RM		1,150	622	0.227	1,218	1.1	7,500.00	9,134,762	91,348	9,134,762	1,954,922	27%
			2015	3.5	11,429	RM		1,150	946	0.345	1,905	1.7	7,500.00	14,286,366	142,864	14,286,366	7,106,526	99%
	Suurman		1995		15,664	RM			1,353	0.494								
			2002	3.5	19,929	RM			1,697	0.619								
			2015	3.5	31,168	RM			2,581	0.942								
	Swartdamstad North	Swartdam	1995		8,394	RM			725	0.265								
			2002	2.6	10,046	RM			855	0.312								
			2015	2.6	14,025	RM			1,161	0.424								
	Kromkuil		1995		10,875	RM	RM	259	940	0.343	1,813	7.0	2,300.00	4,168,878	41,689	4,168,878	0	0%
			2002	2.6	13,016	RM		259	1,108	0.404	2,169	8.4	1,750.00	3,796,304	37,963	3,796,304	0	0%
			2015	2.6	18,171	RM		259	1,505	0.549	3,029	11.7	1,400.00	4,240,008	42,400	4,240,008	71,179	2%
		BLOCK TOTAL	***1995***		211,350				18,195	6.641	18,123			41,940,898	419,409	41,940,898	0	
			2002		261,657				22,213	8.108	22,237			46,080,264	460,803	46,080,264	5,206,456	
			2015		390,878				32,302	11.790	32,662			55,138,980	551,390	55,138,980	13,549,926	

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	l/day	l/s/ha	(Q & PEAK/ERF) No	GROSS HECTARE (Q & PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
Wallmannsthal -	Army camp, priso	BLOCK TOTAL	1995		6,000	AC			6,751	2.464								
Supply Block	smallholdings		2002	2.4	7,084	UL			7,970	2.909								
	Institutional		2015	2.4	9,642	UL			9,410	3.434								
Warmbad /	Bela-Bela		1995		23,505	RM	RM		2,031	0.741								
Nylstroom			2002	1.5	26,087	RM			2,221	0.811								
Supply Block			2015	1.5	31,658	RM			2,621	0.957								
	Pienaarsrivier		1995		148	UL	UL		34	0.012								
			2002	0	148	UL			34	0.012								
			2015	0	148	UL			33	0.012								
	Warmbad	Domestic	1995		4,818	AC			2,891	1.055								
			2002	0	4,818	UH			2,849	1.040								
			2015	0	4,818	UH			2,770	1.011								
		Industrial	1995						578	0.211								
			2002	1					611	0.223								
			2015	1					631	0.230								
		Commercial	1995						2,458	0.897								
			2002	1					2,635	0.962								
			2015	1					2,999	1.095								
		Institutional	1995						289	0.106								
			2002	0					285	0.104								
			2015	0					277	0.101								
	Rural		1995		24,717	RL			1,201	0.438								
			2002	1	26,500	RL			1,269	0.463								
			2015	1	30,159	RL			1,405	0.513								
	Nylstroom	Domestic	1995		7,469	AC			2,725	0.995								
			2002	0	7,469	UH			2,685	0.980								
			2015	0	7,469	UH			2,611	0.953								
		Industrial	1995						545	0.199								
			2002	1					576	0.210								
			2015	1					594	0.217								
		Commercial	1995						409	0.149								
			2002	1					432	0.158								
			2015	1					611	0.223								

AREA/BLOCK/ARMY	SETTLEMENT	ALTERNATIVE NAME	POPULATION - MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	l/m²/a	(@ 6 PER ERF) No	GROSS HECTARE (@ 6 PER ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
		Institutional	1995						272	0.099								
			2002	0					258	0.098								
			2015	0					261	0.095								
	Phagameng		1995		10,429	RM	RM		901	0.329								
			2002	1.5	11,575	RM			985	0.360								
			2015	1.5	14,047	RM			1,163	0.425								
	Rural		1995		37,278	RL			1,812	0.661								
			2002	1	39,967	RL			1,914	0.699								
			2015	1	45,487	RL			2,119	0.773								
		BLOCK TOTAL	1995		108,365				16,146	5.893	0			0	0	0	0	
			2002		116,564				16,764	6.119	0			0	0	0	0	
			2015		133,786				18,095	6.605	0			0	0	0	0	

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION: MEDIUM GROWTH Year	Growth %/year	No.	LEVEL OF SERVICE TARGET	CURRENT	SETTLEMENT AREA (gross ha)	WATER DEMAND kl/day	Mm³/a	No OF ERVEN (@ 6 PER/ERF) No	No OF ERVEN PER GROSS HECTARE (@ 6 PER/ERF)	CAPITAL RETIC COST PER ERF (R)	TOTAL CAPITAL RETICUL COST (R)	ANNUAL MAINTNCE COST - RETICUL (R)	GRAND TOTAL CAPITAL COST (R)	ACTUAL CAPITAL COST INCREASE (R)	%CAPITAL COST INCREASE (%)
KLIPVOOR SUPPLY AREA																		
Klipvoor	Ga-Tsogwe	Waterval	1995		499	UL	0	39	110	0.040	83	2.1	6,150.00	511,475	5,115	511,475	511,475	
West			2002	0	499	UL		39	109	0.040	83	2.1	6,150.00	511,475	5,115	511,475	511,475	
Supply Block			2015	0	499	UL		39	106	0.039	83	2.1	6,150.00	511,475	5,115	511,475	511,475	
	Fafung	Buffontein	1995		2,316	RL	0	880	113	0.041	386	0.4	3,500.00	1,351,000	13,510	1,351,000	1,351,000	
			2002	0	2,316	RL		880	111	0.040	386	0.4	3,500.00	1,351,000	13,510	1,351,000	1,351,000	
			2015	0	2,316	RL		880	108	0.039	386	0.4	3,500.00	1,351,000	13,510	1,351,000	1,351,000	
	Ga-Rasai		1995		567	RL	0	91	28	0.010	95	1.0	3,500.00	330,750	3,308	330,750	330,750	
			2002	0	567	RL		91	27	0.010	95	1.0	3,500.00	330,750	3,308	330,750	330,750	
			2015	0	567	RL		91	26	0.010	95	1.0	3,500.00	330,750	3,308	330,750	330,750	
	Ga-Tselogo	Tswee	1995		1,208	RL	0	53	59	0.021	201	3.8	1,900.00	382,533	3,825	382,533	382,533	
			2002	0	1,208	RL		53	58	0.021	201	3.8	1,900.00	382,533	3,825	382,533	382,533	
			2015	0	1,208	RL		53	56	0.021	201	3.8	1,900.00	382,533	3,825	382,533	382,533	
	Kgomo-Kgomo	Dinaletsane	1995		507	RL	0	2	25	0.009	85	42.3	950.00	80,275	803	80,275	46,475	
			2002	0	507	RL		2	24	0.009	85	42.3	950.00	80,275	803	80,275	46,475	
			2015	0	507	RL		2	24	0.009	85	42.3	950.00	80,275	803	80,275	46,475	
	Klipvoor AH		1995		1,010	RL	0		49	0.018								
			2002	0	1,010	RL			48	0.018								
			2015	0	1,010	RL			47	0.017								
	Legonyane		1995		2,789	RL	0	464	136	0.049	465	1.0	3,500.00	1,626,917	16,269	1,626,917	1,626,917	
			2002	0	2,789	RL		464	134	0.049	465	1.0	3,500.00	1,626,917	16,269	1,626,917	1,626,917	
			2015	0	2,789	RL		464	130	0.047	465	1.0	3,500.00	1,626,917	16,269	1,626,917	1,626,917	
	Seiphin		1995		801	RL	0	140	39	0.014	134	1.0	3,500.00	467,250	4,673	467,250	467,250	
			2002	0	801	RL		140	38	0.014	134	1.0	3,500.00	467,250	4,673	467,250	467,250	
			2015	0	801	RL		140	37	0.014	134	1.0	3,500.00	467,250	4,673	467,250	467,250	
		BLOCK TOTAL	1995		9,697				558	0.203	1,448			4,750,200	47,502	4,750,200	4,716,400	
			2002		9,697				549	0.201	1,448			4,750,200	47,502	4,750,200	4,716,400	
			2015		9,697				534	0.195	1,448			4,750,200	47,502	4,750,200	4,716,400	
Klipvoor	Bollantlokwe		1995		645	RL	0	114	31	0.011	108	0.9	3,500.00	376,250	3,763	376,250	376,250	
East			2002	0	645	RL		114	31	0.011	108	0.9	3,500.00	376,250	3,763	376,250	376,250	
Supply Block			2015	0	645	RL		114	30	0.011	108	0.9	3,500.00	376,250	3,763	376,250	376,250	
	Degrens AH		1995		350	RL	0		17	0.006								
			2002	0	350	RL			17	0.006								
			2015	0	350	RL			16	0.006								
	Dikebu incl. Ranteberg		1995		4,711	RL	0	301	229	0.084	785	2.6	1,900.00	1,491,817	14,918	1,491,817	1,491,817	

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION- MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	l/s/ha	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2002	0	4,711	RL		301	226	0.082	785	2.6	1,900.00	1,491,817	14,918	1,491,817	1,491,817	
			2015	0	4,711	RL		301	219	0.060	785	2.6	1,900.00	1,491,817	14,918	1,491,817	1,491,817	
	Lebotwane North		1995		6,456	RL	0	292	314	0.115	1,076	3.7	1,900.00	2,044,400	20,444	2,044,400	2,044,400	
			2002	0	6,456	RL		292	309	0.113	1,076	3.7	1,900.00	2,044,400	20,444	2,044,400	2,044,400	
			2015	0	6,456	RL		292	301	0.110	1,076	3.7	1,900.00	2,044,400	20,444	2,044,400	2,044,400	
	Little	Lebotwane South	1995		1,291	RL	0	62	63	0.023	215	3.5	1,900.00	408,817	4,088	408,817	408,817	
			2002	0	1,291	RL		62	62	0.023	215	3.5	1,900.00	408,817	4,088	408,817	408,817	
			2015	0	1,291	RL		62	60	0.022	215	3.5	1,900.00	408,817	4,088	408,817	408,817	
	Mokobyane	Mmukubyane	1995		1,118	RL	0	272	54	0.020	186	0.7	3,500.00	652,167	6,522	652,167	652,167	
			2002	0	1,118	RL		272	54	0.020	186	0.7	3,500.00	652,167	6,522	652,167	652,167	
			2015	0	1,118	RL		272	52	0.019	186	0.7	3,500.00	652,167	6,522	652,167	652,167	
	Rabosula		1995		442	RL	0	139	21	0.008	74	0.5	3,500.00	257,833	2,578	257,833	257,833	
			2002	0	442	RL		139	21	0.008	74	0.5	3,500.00	257,833	2,578	257,833	257,833	
			2015	0	442	RL		139	21	0.008	74	0.5	3,500.00	257,833	2,578	257,833	257,833	
	Sutelong Agricultural		1995		4,382	RL	0	291	213	0.078	730	2.5	1,900.00	1,387,633	13,876	1,387,633	1,387,633	
			2002	0	4,382	RL		291	210	0.077	730	2.5	1,900.00	1,387,633	13,876	1,387,633	1,387,633	
			2015	0	4,382	RL		291	204	0.074	730	2.5	1,900.00	1,387,633	13,876	1,387,633	1,387,633	
	Tlholwe	Flink	1995		936	RL	0	20	45	0.017	156	7.8	910.00	141,960	1,420	141,960	141,960	
			2002	0	936	RL		20	45	0.016	156	7.8	910.00	141,960	1,420	141,960	141,960	
			2015	0	936	RL		20	44	0.016	156	7.8	910.00	141,960	1,420	141,960	141,960	
	Dikgophaneng		1995		293	RL	0	124	14	0.005	49	0.4	3,500.00	170,917	1,709	170,917	170,917	
			2002	0	293	RM		124	25	0.009	49	0.4	7,500.00	366,250	3,663	366,250	366,250	
			2015	0	293	RM		124	24	0.009	49	0.4	7,500.00	366,250	3,663	366,250	366,250	
	Makgabeltwane		1995		2,340	RL	0	587	114	0.042	390	0.7	3,500.00	1,365,000	13,650	1,365,000	1,365,000	
			2002	0	2,340	RL		587	112	0.041	390	0.7	3,500.00	1,365,000	13,650	1,365,000	1,365,000	
			2015	0	2,340	RL		587	109	0.040	390	0.7	3,500.00	1,365,000	13,650	1,365,000	1,365,000	
	Mankgekgetha	Jonathan AH	1995		1,922	RL	0		93	0.034								
			2002	0	1,922	RL			92	0.034								
			2015	0	1,922	RL			90	0.033								
	Molletswane		1995		1,067	RL	0	171	52	0.019	178	1.0	3,500.00	622,417	6,224	622,417	622,417	
			2002	0	1,067	RL		171	51	0.019	178	1.0	3,500.00	622,417	6,224	622,417	622,417	
			2015	0	1,067	RL		171	50	0.018	178	1.0	3,500.00	622,417	6,224	622,417	622,417	
	Slagboom		1995		902	RL	0	22	44	0.016	150	6.8	910.00	136,803	1,368	136,803	136,803	
			2002	0	902	RL		22	43	0.016	150	6.8	910.00	136,803	1,368	136,803	136,803	

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AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION- MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN:	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth %/year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
			2015	0	902	RL		22	42	0.015	150	6.8	910.00	136,803	1,368	136,803	136,803	
	Shakung		1995		1,934	RL	0	549	94	0.034	322	0.6	3,500.00	1,126,167	11,262	1,126,167	1,126,167	
			2002	0	1,934	RL		549	93	0.034	322	0.6	3,500.00	1,126,167	11,262	1,126,167	1,126,167	
			2015	0	1,934	RL		549	90	0.033	322	0.6	3,500.00	1,126,167	11,262	1,126,167	1,126,167	
		BLOCK TOTAL	*1995*		28,789				1,399	0.511	4,420			10,184,180	101,842	10,184,180	10,184,180	
			2002		28,789				1,390	0.507	4,420			10,379,513	103,795	10,379,513	10,379,513	
			2015		28,789				1,351	0.493	4,420			10,379,513	103,795	10,379,513	10,379,513	
Moretele North	Dipetloana		1995		0	RL	0	127	0	0.000								
Supply Block			2002	0	0	RL		127	0	0.000								
			2015	0	0	RL		127	0	0.000								
	Mahokeng		1995		3610	RL	0	114	175	0.064	602	5.3	1,250.00	752,083	7,521	752,083	752,083	
			2002	0	3,610	RL		114	173	0.063	602	5.3	1,250.00	752,083	7,521	752,083	752,083	
			2015	0	3,610	RL		114	168	0.061	602	5.3	1,250.00	752,083	7,521	752,083	752,083	
	Makgapha		1995		0	RL	0	55	0	0.000	0	0.0	3,500.00	0	0	0	0	
			2002	0	0	RL		55	0	0.000	0	0.0	3,500.00	0	0	0	0	
			2015	0	0	RL		55	0	0.000	0	0.0	3,500.00	0	0	0	0	
	Mogohlwaneng incl	Olverton	1995		1784	RL	0	81	87	0.032	297	3.7	1,900.00	564,933	5,649	564,933	564,933	
			2002	0	1,784	RL		81	85	0.031	297	3.7	1,900.00	564,933	5,649	564,933	564,933	
			2015	0	1,784	RL		81	83	0.030	297	3.7	1,900.00	564,933	5,649	564,933	564,933	
	Renosterviei	Tloonane	1995		410	RL	0	69	20	0.007	68	1.0	3,500.00	239,167	2,392	239,167	239,167	
			2002	0	410	RL		69	20	0.007	68	1.0	3,500.00	239,167	2,392	239,167	239,167	
			2015	0	410	RL		69	19	0.007	68	1.0	3,500.00	239,167	2,392	239,167	239,167	
	Selepe	Deputten	1995		410	RL	0	48	20	0.007	68	1.4	3,500.00	239,167	2,392	239,167	239,167	
			2002	0	410	RL		48	20	0.007	68	1.4	3,500.00	239,167	2,392	239,167	239,167	
			2015	0	410	RL		48	19	0.007	68	1.4	3,500.00	239,167	2,392	239,167	239,167	
	Sespond		1995		808	RL			39	0.014	135							
			2002	0	808	RL			39	0.014	135							
			2015	0	808	RL			38	0.014	135							
	Swaartboom	Swartboom	1995		1,897	RL	0	62	92	0.034	316	5.1	1,250.00	395,208	3,952	395,208	395,208	
			2002	0	1,897	RL		62	91	0.033	316	5.1	1,250.00	395,208	3,952	395,208	395,208	
			2015	0	1,897	RL		62	88	0.032	316	5.1	1,250.00	395,208	3,952	395,208	395,208	
	Transaksie	Ngobi	1995		6,911	RL	0	385	336	0.123	1,152	3.0	1,900.00	2,188,483	21,885	2,188,483	2,188,483	
			2002	0	6,911	RL		385	331	0.121	1,152	3.0	1,900.00	2,188,483	21,885	2,188,483	2,188,483	
			2015	0	6,911	RL		385	322	0.117	1,152	3.0	1,900.00	2,188,483	21,885	2,188,483	2,188,483	

AREA/BLOCK/UNIT	SETTLEMENT	ALTERNATIVE NAME	POPULATION- MEDIUM GROWTH			LEVEL OF SERVICE		SETTLEMENT	WATER DEMAND		No OF ERVEN	No OF ERVEN PER	CAPITAL RETIC	TOTAL CAPITAL	ANNUAL MAINTNCE	GRAND TOTAL	ACTUAL CAPITAL	% CAPITAL
			Year	Growth /Year	No.	TARGET	CURRENT	AREA (gross ha)	kl/day	Mm³/a	(@ 6 PER/ERF) No	GROSS HECTARE (@ 6 PER/ERF)	COST PER ERF (R)	RETICUL COST (R)	COST - RETICUL (R)	CAPITAL COST (R)	COST INCREASE (R)	COST INCREASE (%)
		BLOCK TOTAL	1995		15,830				769	0.281	2,638			4,379,042	43,790	4,379,042	4,379,042	
			2002		15,830				758	0.277	2,638			4,379,042	43,790	4,379,042	4,379,042	
			2015		15,830				737	0.269	2,638			4,379,042	43,790	4,379,042	4,379,042	

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