The physical and financial infrastructure to allow a system of cost recovery has been absent resulting in little cost recovery taking place at present. A major concern for local government is the inability of the poor and disadvantaged community to pay for water and sanitation. This a problem since local government have the role of acting as retailers of water purchased in bulk from water boards and sold to individual consumers. There are no clear policy guidelines on tariffs and the extent to which replacement capital and operation and maintenance costs should be borne by consumers.

Other issues such as insufficient staff and capacity has made DWAF approach BODA for additional assistance. The demand for ODO services far outstrips their capacity because of their heavy workload with current RDP and other projects. This has serious long-term consequences for sustainability because the time necessary to develop community involvement in the design and management of projects of often not available. It has been agreed in principle that existing ODOs be absorbed into DWAF at the earliest opportunity so that BODA funds can be released for employment of additional contract ODO Staff. Another problem is that local government's responsibility for water supply and sanitation may not fit well with statutory local water committees which further complicates the activities of ODOs.

11.3 Existing Water Supply & Sanitation Schemes, Water Tariffs and Cost Recovery

11.3.1 Introduction

The objective of this study is to establish accurate information on existing water supply volumes, tariffs and payment histories prevalent within the Study Area. The terms of reference give guidelines as to the specific financial and technical information (quantitative and qualitative) required and provides an initial list of schemes which are to be included in the study. Our documentation begins with identifying all the water supply and sanitation schemes currently operating within the Study Area by 1st, 2nd and 3rd Tier institutions as well as all 3rd Tier organizations currently operating water supply and sanitation services in the Study Area. We next investigate and examine each of the schemes and 3rd Tier organizations identified in regard to the magnitude of operation, water tariffs and cost recovery.

Our investigation and examination includes the structure of the organizations; the water billing and collection system currently in place; the total annual volume of clear water produced, distributed and billed; the total annual operation and maintenance costs; water tariffs for the purchases of clear bulk water and the sale of potable water; total annual amount of water sales for which payment was received; and the level, nature and total annual amount of subsidies received. The structure of this paper is as follows. Section A describes our data and methodology. In section B we present the major results and findings and offer some interpretation of the financial and technical data. Finally, in section C we provide a summary of key issues and implications. We also include an appendix providing supporting data.

11.3.2 Data and Methodology

Results reported herein are derived from a listing of 15 water supply schemes and 22 sanitation schemes operated by first, second and third tier institutions in the Study Area. The schemes identified in the Study Area were far more than what was originally prescribed in the terms of reference. The Study had several limitations which affects the quality and validity of the data. Many of the schemes examined have poor accounting systems which made data collection extremely difficult. In many cases comprehensive financial and technical data was either not available or was sketchy and incomplete. Another limitation was the level of cooperation from certain individuals responsible for providing the data. This hindered and impacted negatively on the process of data collection. In cases where information was just not available, we consulted the Yearbook of Municipal Statistics for details on all municipalities in the Study Area buying bulk water for delivery to end users, but even this information was sketchy and not available for the most recent years.

We began our examination by first investigating each scheme in regard to organization structure, operation, water tariffs and cost recovery. The major scheme managed by the 1st Tier was the KwaNdebele Regional Water Supply Scheme which employed a staff of 686 employees. The 2nd Tier institutions were Magalies Water which managed four water supply schemes, NWWA and Rand Water. We also identified and examined about 8-10 Third Tier organizations (TLCs and TRCs) in the Study Area and examined the water billing and collection system and organizational structure of each organization. This was accomplished by reviewing annual reports and financial statements as well as personal interviews with relevant personnel at the scheme sites and at 3rd Tier organizations. The implications of our findings extend beyond just gathering data. The existing evidence in the study indicates that targeted 3rd tier institutions particularly in the rural areas experience great difficulty in producing information. These difficulties are quite large and stem mainly from lack of technical and human resources.

As a final perspective on the data, the analytical approach which produced the results summarized below focuses on the geographic areas served by one or more water supply or sanitation schemes which fall under a certain jurisdiction rather than focusing on individual treatment works that may be part of a greater scheme.

11.3.3 Results/Findings

The results of our study provide some notable trends particularly with respect to volumes of water distributed, water tariffs and cost recovery. The volume of clear water distributed in the Study Area in 1995 was 119 million kl based on 15 water supply schemes and institutions for which information was available. Of this amount, 99 million kl was sold/billed generating income of R110 million. Actual water payments received amounted to approximately R89.5 million representing a cost recovery ratio of 82%. The schemes and institutions incurred about R152 million in operations and maintenance expenditures of which R70 million is estimated to have been incurred by NWWA and R24.8 million by KwaNdebele. These expenses do not include charges for interest and redemption for new capital expenditures and general and administrative expenses. Subsidies totalling some R77 million is estimated to have been received by KwaNdebele, NWWA, and Koster TLC. Although tariffs for water sales vary from as low

as R0.68 per kl at Bronkhorstpruit TLC to as high as R1.70 per kl at Rayton Municipality, the averaged tariff based on the 15 schemes was approximately R1.11 per kl. From the standpoint of staffing, a total of 2,461 people were employed by schemes during 1995 of which 1,348 (55%) were employed by NWWA and 686 (28%) from KwaNdebele Water Scheme.

An analysis of supply volumes, tariffs, and payments histories in 1995 (see table 11-1) shows that 17% of total water in the Study Area was distributed by the 1st Tier (KwaNdebele Regional Water Supply Scheme), but the 1st Tier only contributed 2% (R2.1 million) of total water sales. The KwaNdebele Scheme also incurred operations and maintenance cost of R24.7 million, representing 22% of total O&M expenditures. It would appear that DWAF is providing subsidies totalling some R28.4 million including the cost of water purchases which is obviously a major burden on the central government. The data shows that the 2nd Tier (Magalies Water, NWWA and Rand Water) distributed 64% of total water which once again underscores the critical role of the 2nd Tier in the provision of water supply and sanitation in the Study Area. The 2nd Tier also achieved 76% cost recovery on sales of R66 million and contributed 57% of total O&M costs attributable to the high O&M costs of NWWA. The cost recovery ratio would have been much higher were it not for the 50% cost recovery on sales of R31.5 million by NWWA. As can be seen from the data, Magalies Water is an efficiently managed organization. The 3rd Tier distributed 29% of total water distribution and 34% of total water billed in the Study Area. Although the 3rd Tier contributed 38% of total water sales and achieved 89% cost recovery, operations and maintenance costs (R41 million) amounted to 37% of total O&M costs which provides evidence of poor operation efficiency levels. Koster TLC for example, incurred O&M expenditures of R10.7 million which was fully subsidized compared with revenues of only R18,359. Several 3rd Tier institutions such as Bronkhorstpruit have also inherited debts incurred by local authorities in the former black townships as a result of integration. The integration process will undoubtedly have negative financial impacts on many municipalities in the former white towns. The full impact of these effects will be only be felt in fiscal 1997 because full integration only commenced after the local elections November 1995.

	1st Tier	2nd Tier	3rd Tier	Total
Water Distributed				
million kl	20	77	23	120
%	17	64	19	100
Water sold				
million kl	2	66	33	99
%	2	66	32	100
R million	2	66	42	110
Water paid				
million kl	2	45	33	80
%	3	56	41	100
R million	2	50	37	89
Water paid as % water distributed	10	58	160	
Ops & Maint				
R million	25	86	40	151
%	16	57	27	100
Water paid as % Ops and maint	40	58	92	
Subsidies				
R million	28	38	11	77
%	36	49	15	100
Subsidies as % of water paid	1400	76	29	

Based on data from some selected schemes, there is evidence of rapid increases in water sales and tariffs. For example, the volume of clear water produced and the volume of water distributed by Vaalkop Water Treatment Works grew by 83% from 1991 to 1995. At the same time water sales increased by over 200% while operations and maintenance costs increased by 110%. This suggests that tariff revenues have been increasing much faster than the volume of clear water production and distribution. It could also indicate that water works are being managed more efficiently by lower operation and maintenance costs or that tariffs probably include a levy for continuous capital expansion of water works at some schemes. Our findings also suggests that the rapid increases in tariffs may indicate the water scarcity factor as well. An exception are the tariffs from schemes managed by Magalies Water which have been rising at or lower than the rate of inflation. We were only able to obtain information on 4 sanitation schemes (KwaNdebele, Bronkhorstpruit, Cullinan and Thabazimbi). During 1995 two of the four schemes generated

income of R1.8 million and operations and maintenance expenditures of R1.5 million resulting in a gross margin ratio of 0.16.

Our analysis uncovers several areas of discrepancies in the design capacities of some water treatment works which vary between 50 kl/d to 5,000 kl/d. The data does not establish concrete outcomes or lends itself to thorough interpretation because of the high degree unreliability and inaccuracy. Note, however, that these results are not surprising given the quality of the data. We find little evidence of well established billing systems or cost recovery mechanisms particularly in the rural areas. At NWWA for example, hardly any historical financial and technical information was available. One of the reasons why no records were kept was because almost all the water supply and sanitation services were subsidized to the community by the former homeland government. At some schemes billing systems were non-existent resulting in no cost recovery while at the same time operations and maintenance costs have almost doubled over the same period. The situation with sanitation schemes is no better. In fact, cost recovery at some schemes have been less than 10% over the last five years because of non-billing policies. Cost recovery has also deteriorated because of the culture of non-payment which is pervasive across communities. This is also a reflection of the weak organizational structures at many of the institutions. Staff levels at schemes varied from as low as 7 at Cullinan Water Treatment Works to as high as 1,348 at NWWA. Most of the major organizational changes have occurred at the third tier level as a result of the local government elections in November 1995. In contrast, the results show that schemes managed by institutions such as Magalies Water are achieving full cost recovery with some of the more profitable schemes subsidizing the less financially viable ones.

Finally, there is evidence of the dependence of many schemes and 3rd tier organizations on government grants and subsidies. In our view it seems implausible that tariffs have not been the dominant issue in many 3rd Tier structures because of the huge subsidy factor. Nevertheless it seems possible - and worthy of closer examination - that such issues may partially explain the heavy losses by tier institutions in the rural areas. In sum, our observations highlights the immensity of the capacity problem particularly in the rural areas.

11.3.4 Descriptive Analysis

(1) KwaNdebele Regional Water Supply and Sanitation Scheme

Supply Volumes: The KwaNdebele region receives approximately 60% of its potable water from the Weltevreden Water Treatment Works, 35% from the Bronkhorstspruit TLC and 5% from boreholes. The volume of water distributed over the last five years has more than doubled, increasing steadily each year. The projected distribution for the year ending 31 March 1996 is approximately 22 million kilolitres. There are five Sanitation treatment works that operate in the KwaNdebele area: Siyabuswa, Tweefontein, KwaMhlanga, Vaalbank and Ekangala. Design capacities vary between 50 kl/d and 5,000 kl/d, but actual flows recorded in the current year sometimes vastly exceed this capacity with the explanation given that it is probably due to wet weather.

Water Tariffs and Cost Recovery: Up until 1994/95, the Moutse area was the only area being billed for water. As far as can be established for all other areas in KwaNdebele, no billing systems existed, therefore no billing was done. The tariffs charged for water that was billed rose from 90c/kl to 113c/kl between 1991 and 1994. There is no sales information for sanitation services as there is no billing system and no levies are charged. Operational costs for water supply more than doubled in the last five years. This is largely due to the huge increase in salaries and wages that has occurred. Cost recovery has been less than 10% over the last five years due to the policy of not billing. Management of the scheme believe that the current workforce of approximately 686 employees represents gross overstaffing and that levels of efficiency are extremely low. Operational costs for the sanitation scheme are not available by individual treatment plant, but for the region as a whole they have increased from R1.8 m in 1993 to R2.1 m in 1995. None of these costs are recovered.

(2) Bronkhorstspruit Water and Wastewater Treatment Schemes (including Ekondustria)

Supply Volumes: Water distribution has increased from 3.5 m kl to 8.9 m kl between 1991 and 1995. A significant percentage of the potable water produced by Bronkhorstspruit is sold in bulk to the DWAF for distribution in the KwaNdebele area. Potable water is also sold in bulk to Ekondustria who then distribute it to industrial end users. Although data on the volumes of water treated by the STW were not available, the revenue derived from this service has almost doubled over the last five years which is consistent with the increase in potable water supplied.

Water Tariffs and Cost Recovery: The tariffs charged to private consumers have increased from 59c/kl in 1991 to 94c/kl in 1996. A municipal billing system is in operation in both Bronkhorstspruit and Ekondustria. The retail tariffs charged by Ekondustria have increased from 75c/kl to 130c/kl during the same period. Charges for sanitation services are calculated based on the quantity of water consumed by each household. Operational costs of water treatment in Bronkhorstspruit have increased from R1.5 m per annum to R3.5 m per annum between 1991 and 1995 while costs of sanitation have risen from R331k to R633k over the same period. Operation costs incurred for water distribution in Ekondustria are currently approximately R100 k per annum while the cost of operating the sanitation treatment plant is approximately R350k per annum. There is a major problem in Bronkhorstspruit in the area of cost recovery and the 1995 audit report highlights that 44% of the debtors book is more than 120 days old and is most probably unrecoverable. Many of these debts were inherited from local authorities during the political transition but the culture of non-payment appears to pervasive amongst both white and black communities. Ekondustria does not have a problem with cost recovery as their customers are largely industrial entities and strict credit control is followed.

(3) Schemes in the Mabopane, GaRankuwa and Temba areas Managed from the

Mabopane and Temba offices of the North West Water Supply Authority

Klipgat STW and Temba WTW and STW are the main works in the area. Makapanstad WTW and STW, Bosplaas WTW and Marapyane STW are all small package plants in the area serving small communities. Klipgat is the only plant managed from Mabopane, the others are managed from Temba.

Supply Volumes: Water for Mabopane and GaRankuwa is bought from Rand Water in bulk and delivered to end users in these areas. The Temba (Kudube) WTW which is managed by NWWA is expected to supply the Temba area with approximately 3.9 m kl for the year ended March 31, 1996. No historical information was available. The Klipgat STW treated approximately 13 m kl of sewage during the year ended March 31, 1996 while the equivalent figure for the Temba STW is approximately 1.8 m kl.

Water Tariffs and Cost Recovery: Water tariffs over the last four years have varied depending upon consumption as follows:

Year	Consumption	Tariff
1995/1996	0-10 kl/month 10-45 kl/month >45 kl/month	100c/kl 165c/kl 225c/kl
1993/94	0 - 15 kl/month >15 kl/month	70c/kl 130c/kl
1992/93	0 - 18 kl/month >18 kl/month	59c/kl 115c/kl

NWWA employs the electricity company to collect payments on their behalf. Historically, cost recovery has not been good and although there is currently a big drive to get consumers to pay for services, it remains a problem. Year to date collection figures for the ten months ended January 1996 are presented in the table 11-2:

Period	Area	Amount Billed	Payment Received	% Recovery
YTD Jan 1996	Ga-Rankuwa	R3.6 m	R2.0 m	55.6%
YTD Jan 1996	Ga-Rankuwa / industrial	R1.9 m	R1.6 m	84.2%
YTD Jan 1996	Mabopane / Winterveld	R6.5 m	R2.5 m	38.5%
Total		**R12.0 m**	**R6.1 m**	**50.8%**

(4) Schemes Managed by Magalies Water

Magalies Water presently operates and manages the Vaalkop, Temba, Cullinan and Wallmannsthal water purification schemes. Although they are geographically dispersed, for the purposes of this analysis it is appropriate to treat them as a single 2nd tier entity.

Supply Volumes: With the exception of the Temba plant which has remained fairly stable, water distribution from all three other schemes have increased dramatically over the last five years as is evident from the table 11-3.

Water Tariffs and Cost Recovery: Water tariffs have varied quite significantly between the four schemes (Temba 94/95 - 54.5 c/kl compared to Vaalkop 94/95 - 106 c/kl) and the more profitable schemes (eg. Vaalkop) cross subsidize those that are less financially viable (especially Temba). The financial policy of Magalies Water is to operate and finance all the schemes as one business unit. Because Magalies Water Schemes are largely wholesalers of bulk water, this reduces the risk of bad debts and the figures presented in the spreadsheets indicate that costs are fully recovered.

Plant	% Increase in Water Distribution since 1991	Volume Distributed 1994/95 in kl	Projected Future Demand 2000 (kl/d)	Projected Future Demand 2005 (kl/d)
Vaalkop	83%	23,189,779	77,000	105,000
Wallmannsthal	271%	2,637,230	12,000	17,500
Cullinan	1,066%	3,512,205	11,000	14,000
Temba	15%	3,403,656	14,000	18,000

(5) North West Water Supply Area

Supply volumes: The only information we were able to obtain from NWWA acting as a second tier institution was total volume of water distributed and total water sales for the years 1993 to 1995. Based on this data the volume of water distributed increased by 8% in 1994 and 7% in 1995 while total water sales increased by 8% and declined by 21% over the period. Tariffs remained flat in 1994 but increased by 37% in 1995. NWWA supplies water to three classes of consumers: industrial/commercial (21 consumers), domestic consumers (7,250 households) and about 72 government institutions. The sum total of all the consumers supplied by the NWWA is 7,343. Average monthly statistics show that the government consumes the most (952,230 kl) followed by domestic consumers (838,237 kl) and the industrial sector (217,514 kl). The average monthly consumption per region is: Mogwase and Tlhabane (32 kl), Odi and Moretele (22 kl), and Molopo, Taung and Pampierstad (18 kl).

Tariffs and cost recovery : Tariffs charged to various areas of supply (see table 11-4) are administered by NWWA regional offices who perform their own billing and revenue collection services. Although the cost to NWWA of producing water fell from R1.37/kl in 1994/95 to R1.09/kl in 1995/96, the total for bad debts increased from R2.1 m to R2.6 m over the same period. Profit also fell sharply from the R23.7 m in 1994/95 to R13.7 m in 1995/96.

Area	Tariff cents/kl	Penalty Tariff cents/kl
Molopo	70	165
Kudube	33	165
Bafokeng RWB	108	225
Bafokeng - Other	100	225
La Petrie/Doornhoek	139	225
Non-specified areas	100	165

NB : Tariffs include VAT at 14%. Penalty tariff is applicable to consumption in excess of allocation.

(6) Rustenberg TLC (Kloof, Bospoort, and Boitekong)

Supply volumes: The Rustenburg region gets 90% of its water supply from RWB and the remaining 10% is drawn from a nearby river and purified at two water purification plants operated by the TLC. Based on the data, there has been a steady increase (28%) in supply volumes from 11 million kl in 1991 to 14 million kl in 1995 while the number of consumers declined from 11,573 in 1994 to 11,503 in 1995. More units were bought (15.7 m kl) and sold (14.3 m kl) in 1995 than in 1994. The water loss as a percentage of water purchases increased from 1.84 % in 1994 to 8.71 % in 1995 which shows a dramatic increase in water losses.

Tariffs and cost recovery: Rustenberg TLC administers a two tariff system: one for consumption up to 750 kl and the other in excess of 750 kl. Tariffs for consumption up to 750 kl increased from 112c/kl in 1991 to 168c/kl in 1995 while the tariff for consumption in excess of 750 kl increased from 116c/kl to 168/ckl over the same period. The data also indicates that Rustenberg TLC has an efficient billing and collection system and costs are fully recovered particularly from their traditional consumers. In fact, total income increased by 116% from R10.7 m in 1991 to R23.3 m in 1995 while operation and maintenance costs increased by 82% from R9.4 m to R17.2 m in 1994 and 1995 respectively. Rustenburg TLC's excellent financial health will affected by the integration of the former black townships resulting in the TLC writing off a substantial amount of bad debts caused by the culture of non-payment. In addition, the possible flat rate which

black consumers are expected to pay for water supplied and sanitation to the TLC will also result in Rustenberg's more affluent consumers subsidizing the less advantaged ones.

Rustenburg Traditional Local Council (Ktoof, Bospoort, Boltekong)	
Decription	**Percentage Increase (1991-1995)**
Volume of Clear Water Produced (kl)	34.4%
Volume of Water Distributed / Billed (kl)	28.7%
Tariff 1 (1-750 kl)	49.7%
Tariff 2 (>750 kl)	44.0%
O & M Costs	82.3%
Total Sales	**115.9%**

(7) Brits TLC.

Supply volumes: Information was only available for 1994 and 1995. The volume of water distributed by Brits TLC increased by 24% from 6.6 m kl in 1994 to 8.2 m kl in 1995 while the tariffs for raw water purchases declined by 54% over the same period.

Water tariffs and cost recovery: Water sales increased by 10.6% from R7.7 m in 1994 to R8.5 m in 1995 while total operation costs increased by 11.9% from R2.9 m to R3.3 m over the same period. The data shows a 10.3% decline in water tariffs from 116c/kl in 1994 to 104c/kl in 1995. Although Brits TLC's schemes are still profitable, a substantial amount of bad debts from the former black townships are being written off as a result of integration with the formerly white town councils.

Brits Transitional Local Council	
Description	**Percentage Increase (1994-1995)**
Volume of Raw Water Purchased (kl)	23.7%
Tariff	-54.43%
Volume of Water Distributed / Billed (kl)	23.7%
Tariff	-10.3%
O & M Costs	11.9%
Total Sales	**10.6%**

(8) Koster/Swartruggens

Supply volumes: Data was only available for 1993 and 1994. Raw water production increased by 98% at Koster and 27% at Swartruggens while the volume of water billed/distributed increased by 98% and 21% respectively. Water purchases at Swartruggens increased by 18%, but the tariff for water purchases declined by 24%.

Water tariffs and cost recovery: Water sales at Koster and Swartruggens and Koster increased by 150% and 4.1% respectively while operational costs for Koster declined by 11% over the same period. The data also shows an increase of 20% in water tariffs at Koster. No O&M and tariff data were available for Swartruggens.

Koster/Swartruggens **Percentage Increase (1993-1994**		
Description	**Koster**	**Swartruggens**
Volume of Raw Water Produced (kl)	97.9%	27.0%
Volume of Clear Water Purchased (kl)	n/a	18.6%
Tariff	n/a	-23.5%
Volume of Water Distributed / Billed	97.9%	21.1%
Tariff	20.0%	n/a
O & M Costs	-10.7%	n/a
Total Water Sales	**149.7%**	**4.1%**

(9) Implications

Several implications and conclusions follow from this study. First, the results highlight the immensity of the capacity problem, finance, tariff policy and the importance of cost recovery. Second, the high degree of unreliability and inaccuracy does not establish credible efficiency ratios. For example, the volume of water distributed versus water billed showed an efficiency ratio of 83% indicating a water loss factor of 17%, but data from NWWA which represents 31% of total water distributed in the Study Area is extremely unreliable. In a similar vein, the 82% cost recovery ratio is based primarily on water billed, utilized and paid by industry and the more affluent consumers in the

predominantly white neighborhoods. It does not include the KwaNdebele Scheme where 19.6 million kl were distributed, but only 1.9 kl million billed. The enormous subsidies received by NWWA, KwaNdebele, and Koster are a major drain on the resources of the central government and will have major implications for establishing cost recovery principles.

The bloated staff complement, particularly at NWWA and KwaNdebele, need to be addressed and staffing levels brought into line with required levels of efficiency. Another factor which has implications for water supply and sanitation in the Study Area is the newly absorbed black areas which are now the responsibility of previously white towns or municipalities and where non-payment is pervasive. In view of a number of previous studies which have shown the complete absence of cost recovery structures and mechanisms, a reasonable question to ask is why does DWAF continue to build community water supply schemes when the managerial capacity to adequately manage and maintain the schemes are still largely absent. Given the lack of economic activity in areas where schemes are being built, will the community find it affordable to pay for a good, reliable and quality service once they know the real cost of the scheme? Finally, perhaps the primary contribution to this study is that the results of the data is a useful complement to future research and analysis. It seems prudent therefore to consider strategies that may improve further investigation and research. We therefore see justification for continuing efforts by those at the local level to reform the tariff policy system and believe that public policy should be directed toward facilitating the provision of water and sanitation services, cost recovery and sustainability.

Systematic analysis of these issues would not only clarify how schemes are operated, but would also provide evidence on the difficulties in monitoring and evaluating schemes. Such evidence would provide a valuable assessment of the extent to which schemes should be managed and further research might be needed to identify various options for management including handing over the schemes to private companies to manage and sustain. While our analysis is a useful start to explaining many of the weaknesses of the data, there remains a number of questions and practical guidelines which can be posed within the conceptual framework below:

(a) First, given that many TRCs, LWCs, and PSCs have insufficient information and expertise to manage their structures, what practical guidelines do they apply to assess whether the decisions they make in regard to tariffs and cost recovery are best served?

(b) What common elements in the data provides important linkages between schemes?

(c) What common attributes underlie the validity of the data evident in various schemes?

(d) What is the informational impact of data on water supply and sanitation?

CHAPTER 12 : ISSUE SCOPING WITH STAKEHOLDERS

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12.1 General

The objective of this task was to understand the diversity and range of issues to be considered in extending the existing Magalies Water functions. This was necessary in order to :

(1) identify and understand the full spectrum of issues, circumstances and conditions which might have a bearing on the operationalisation of an effective Second Tier structure in the Study Area; and

(2) understand the expectations and concerns of key stakeholders in the Study Area.

All stakeholders who will be affected by the extension of service of Magalies Water in the Study Area were identified. These were considered to include Magalies Water management and staff, North West Water Authority management and staff, current and potential customers of these two Water Boards, DWAF and provincial governments, and Third Tier organisations currently operaing water supply services or having the potential to do so. From each of these stakeholders was obtained their views on issues to be addressed in extending the Magalies Water functions to the ESA, as well as expectations and concerns associated with this. These would include capacity within and external to the Second Tier, relationships within the Second Tier and with and between the other Tiers, physical resources, and expectations and needs at all levels. A combination of group discussions, questionnaires and structured interviews was used.

12.2 First Tier

12.2.1 MWB business interest

Representatives of the First Tier organisations in the Study Area, DWAF and CWSS, are generally concerned that the expansion of the supply area will expose Magalies Water Board, an organisation whose current business interest rests mainly on bulk supply, to retail functions at the community level, for which it does not have interest.

Having based its past business operations on a limited number of bulk consumers, which provided reliable income without posing costly organisational and management demands, Magalies Water is seen to be reticent to the idea of entering a market full of uncertainties and which might stretch its resources beyond the limits of the company control.

In general there is a perception that Magalies Water Board will have to adjust its core business interests to serve communities and some degree of doubt prevails on whether it is actually interested in doing so.

12.2.2 MWB's Role and Responsibility at the Community level.

Magalies Water Board is further perceived as facing challenges that demands considerable change of its current attitude. It is stressed that it needs to be more proactive with regards to the new policies of serving communities, if cost recovery at the community level is to be achieved, as opposed to only see difficulties: *"MWB has not done much to promote or advertise itself* [to the communities]. *I know, you know about efforts made by Umgeni Water Board and Rand Water to get involved ...",* Mr. Muller, from Mpumalanga DWAF, stressed.

Magalies Water recently responded to this comment, pointing out that MW was legally not permtted to work in the communities which all fall in the previous Bophuthatswana prior to April 1996 when the new areas were gazetted. MW also noted that the complexities of the various tribal authorities in this area of North West must also be taken into consideration - these complex problems have existed for many years and were not solved by the previous authorities, so it is unreasonable to expect MW to solve this in a matter of months.

12.2.3 Community Involvement

Organisational and Development Officers, from the Community Water Supply and Sanitation in North West, believe that the complexity of the community problems are not well appreciated and understood. Situations of conflict amongst different community organisations, lack of clarity concerning the limits of power and authority amongst the various role players at the community level and often poor functioning of elected water committees requires sensitivity that seems absent in Water Boards, they stressed.

ODOs insist that MW is likely to face problems at the community level that requires considerable social skills: *"There are many problems which MW is bound to encounter, especially in certain areas like Mankwe, where there are a lot of illegal connections, which make the revenue from water services almost non-existent. It will be some time before issues like that are resolved. In some cases you also have vandalism - people break pipes to make water available to the animals. It is not an illegal connection as such, but they use water for something it is not meant for. It is very common in Madukwe area",* Lawrence Yiga, an ODO in North West stressed.

It is noted that many of these issues will need to be dealt with by local authorities rather than MW.

Issues related to the legality of land tenure were also mentioned as likely to lead to conflict or political tensions. In some places the land belongs to the tribal authority and in other it belongs to an individual chief. There is always a risk of operating in settlements illegally established in an individual property.

12.3 Second Tier

12.3.1 General

The key role players in the Second Tier, namely Magalies Water Board and North West Water Supply Authority, perceive the expansion of the supply area as imposing major changes in the Magalies Water Board current structure:

(1) From an organisation of about 100 employees to an organisation that has to integrate about 600 employees.

(2) To integrate employees from a wide variety of cultural and racial background.

(3) From an organisation whose client basis is limited to a number of reliable bulk consumers to an organisation with a client basis that includes a significant number of communities.

(4) From an organisation with a payment collection system geared to cover a small group of regular and good payers to an organisation that has to build a payment collection system that is able to cover a large area of a myriad of small communities with non payment problems which are characteristic of South Africa in general.

(5) To an organisation that has to build an operation and maintenance structure for a much larger area.

These changes are to take place against the background of uncertainties amongst employees concerning their future and tensions around which work methodologies and practices will prevail. Both role players recognise that there will be a period when a major re-organisation exercise will take place, the excess staff will have to be dealt with and the salary discrepancy addressed.

The North West Water Supply Authority is particularly emphatic in describing the challenge involved in making Magalies Water an organisation able to design and implement a meaningful community involvement process and provide capacity building to the 3rd tier organisations, while Magalies Water see cost recovery, efficient financial and staff management as threatened by a sudden increase of staff and company's involvement in the retail supply at the community level.

12.3.2 Third Tier Readiness

There is a general recognition amongst the Second Tier role players that Third Tier organisations are not yet ready to take over the responsibility for provision, management and operation and maintenance of water supply at the community level. In some communities there are no community structures in place while in other the existing structure lack the financial and technical capacity to manage the water supply.

12.3.3 Community Involvement and Capacity Building

Community involvement and capacity building are seen as areas of considerable ambiguity and tremendous challenge for Magalies Water Board. Whilst the perceived magnitude of the required work is overwhelming, the notions of how it should be carried out are varied and often conflicting. There is in particular a fear that an oversimplification of its practical implications might lead to failure.

12.3.4 Financial implications

A major financial issue related to the performance Magalies Water Board once the supply area is extended is tariff structure, salary packages and subsidies. Managlies Water and North West Water Supply Authority have been applying different tariff as well as salary structure.

"We will have to come up with a plan to reduce the subsidy or phase it out after 4 or 5 years. That period is not determined. Together with that goes the salaries you can pay for the personnel, and also the water tariffs and things like that. Tariff is another big issue. MWB at the moment is trying to equalise the tariffs for the whole of MWB. The tariff of four of our plants are completely different".

12.3.5 Technical implications

Magalies Water Board is going to inherit a complex technical structure with limited trained staff: *"There are quite a few plants which will be integrated into MWB. Some of the plants [NW plants] are not operating well, people are not trained well to operate them. We recently had a case in a water treatment plan where during the rains the operators did not know what to do with the water coming into the pump station. Maintenance is another issue. The pipe line which goes to Sun City, for instance. NWW did not have the key for the valve chambers and the pipe line was installed three or four years ago. So no maintenance has taken place in the past few years".*

A recent comment by MW in regard to the above is that the technical implications of the restructuring can be handled with confidence. They are more concerned about the institutional implications, taking over staff from NWWA on salaries higher than those offered by the State and in excess of the market.

12.4 Third Tier

12.4.1 Tribal Authorities feel neglected

Third Tier role players comprise mainly current MWB customers, chiefly mining houses, local town and district councils and tribal authorities. The latter have so far played a minimum role as they have little or no connections with Magalies Water Board.

The Bakatha Tribal Authority, which comprises of 28 villages, is currently being supplied by the North West Water Authority Supply and has had little contacts with Magalies Water Board although it is aware of the project. This stakeholder is particularly concerned with the fact that

being governed by 2 bodies, MW and NWWA, for water might bring confusion. They also stressed that they would like to see the participative culture of NWWA carried over to MW.

The Mabeskraal Tribal Authority, Bapong Tribal Authority and Batlhalerwa Tribal Authorities have had no contacts with Magalies Water Board and were not aware of the expansion project. They have not been involved very much in water issues and they expressed the concern that they tend to be neglected.

12.4.2 Town Councils

The town councils share the view that the extension of the Magalies Water Board will positively contribute to the increase of supply in the area. *"At present our water resources are two dams... But since those dams were built there has been an extension in the amount of users in this area. The pipeline from MWB would help very much for additional water supplies".*

Winterveldt Local Council, which current supplied by Rand Water, believes that getting water from Magalies Water will be more cost effective and will easy supply of pipes.

12.4.3 Mining Houses

Mining houses are currently the major clients of Magalies Water Board. They have established agreement with MWB according a monthly quota of water to be supplied against a fixed payment.

"We are the largest payers, not the largest consumers. We, Northern Platinum, are part of the GFSA group. The original agreement with MWB was negotiated through the head office. What the actual negotiation entailed, I am not too certain. I do know that infrastructure was expanded and develop to allow us 8 mega-litres of water per day. Magalies took a loan to be paid in 20 years", explained Mr. Dave Betton, from Northern Platinum, adding: *"It still concerns me that if, for some reason or other, the water dries up underground, MWB can still supply us with 8 ML".*

CHAPTER 13 : THIRD TIER AUDIT

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13.1 Approach

13.1.1 Introduction

The Third Tier Audit forms the component of the Situational Analysis which specifically examines institutions at community and local government level. In a traditional Three Tier model of government, these Third Tier institutions are responsible for the provision of water and sanitation services. The institutions examined in this study are both statutory and non-statutory. Only the statutory institutions are responsible for the provision of services, planning and cost recovery. However, difficulties with the establishment and performance of local government have led a number of non-statutory institutions into the arena of water and sanitation service provision at local level. Both statutory and non-statutory institutions have been examined in this study. The development of a coherent methodology capable of analysing data from diverse and distinct institutions was a relatively complex task which is outlined below.

Of crucial importance to this enterprise was setting up the results of research and analysis to examination by the various stakeholders and role players associated with the seven categories and 21 of statutory and non-statutory institutions examined.

(1) Statutory institutions

(a) 6 District Councils
(b) 4 Transitional Local Councils
(c) 2 Tribal Authorities

(2) Non-statutory institutions

(d) 2 Reconstruction and Development Committees (RDP Committees)
(e) 2 Local Water Committees (LWCs)
(f) 2 Non-Governmental Organisations (NGOs)
(g) 2 Capacity Building Organisations

These institutions are spread in the Study Area and fall into four (4) different Provinces now incorporating two (2) of the former homelands.

Provinces covered in the field work:

(1) Gauteng
(2) Mpumalanga
(3) North West Province
(4) Northern Province

Former homelands covered in the field work:

(1) KwaNdebele

(2) Bophuthatswana

13.1.2 Methodology Development

This study involved a careful analysis of the terms of reference and discussion with Project Working Group members overseeing the Third Tier concerning what was required. It emerged that a strategic analysis was more appropriate than an empirical enquiry. The range of institutions involved meant that a single undifferentiated approach could not be adopted.

The research approach adopted was one which adopted a variety of research tools in order to examine a diverse range of institutions broadly in the service of socio-economic development. The tools used were those of detailed document research and analysis, structured questionnaire administration and open ended interviewing. Techniques in the fields of financial analysis, economic analysis, institutional performance analysis, socio-economic analysis were also brought to bear.

13.1.3 Field Work

Field work consisted of two main components:

(1) Structured interviews with institutional role players in 21 third tier institutions

(2) Open-ended in-depth interviews with key institutional role players in third tier institutions

It was often difficult to identify the appropriate role players in institutions in rural areas. In addition, complex and sometimes sensitive political dynamics had to be recognised, assimilated and dealt with by the field researchers in a way which still enabled them to conduct interviews and gain access to information.

After having undertaken initial field work and analysed the results the outcome of the investigstion was submitted for discussion at a workshop that took plase at Rusutemburg District Council offices on 22 April. This workshop was attended by most of the groups that wew surveyed and their input allowd the results to be refined and further interpreted by the Third Tier auditors.

13.1.4 Analytical framework

A wide range of institutions is considered in this study. There are seven categories of institutions all said to belong in the third tier of. These institutions fall naturally into two categories: statutory bodies and non-statutory bodies. The range in size, complexity, funding, and primary activities are extremely diverse. It is difficult to consider a multi-million rand organisation with a professional staff of hundreds in the same way as a tiny voluntary association of rural dwellers interested in improving the local water quality. However, all have a role to play in the delivery of water and sanitation services.

The survey of institutions here is the product of a rapid appraisal and is in general impressionistic rather than comprehensive. Apart from the District Councils, the surveyed institutions are not necessarily representative samples. Nonetheless, comment has been made on the kind of difficulties these various institutions face on how best they might plan their way towards more equitable and effective water and sanitation service delivery.

The model of local government as currently structured represents a rational arrangement for the provision of services. This model is a three tier model with central government departments at the first tier, Provincial government and the second tier, and local government at the third tier. Water Boards can be said to reside at the second tier, although geographically they do not operate on a provincial basis. Effectively there are actually four tiers. The fourth tier is effectively the domain of civil society where pressure groups and community organisations lobby and facilitate the delivery of water and sanitation services.

The level of activity here demonstrates that politics is thriving at community level. This in itself indicates the health of civil society. The cut and thrust of local politics is ultimately reduced to the ability of the elected authority to provide services (in this case water and sanitation services) to the community. This is the level of individuals and non-statutory bodies. It is here that the fundamental purpose of local government is moist clearly demonstrated as individuals strive to gain access to services.

An attempt to depict this has been made in the diagram in figure 13-1. The bottleneck is almost without exception at the nexus between individual consumer and the statutory third tier institution whose prescribed task it is to delivery water and sanitation services to the consumer.

The nexus is at the point of delivery. This is the nexus between local authority and individual consumer

13.2 Present Condition

13.2.1 General

There are seven categories of institutions all said to belong in the third tier. These institutions fall naturally into two categories: statutory bodies and non-statutory bodies. The range in size, complexity, funding, and primary activities are extremely diverse. All have a role to play in the delivery of water and sanitation services.

The model of local government is a three tier model with central government departments at the First Tier, Provincial government and the Second Tier, and local government at the Third Tier. The primary purpose of local authorities is to provide services such as those of water and sanitation.

The impediment to delivery is frequently at the nexus between individual consumer and the statutory third tier institution.

Managerial support at local level has been identified in this study as being a primary requirement for effective service delivery. Sound management skills will enable the drawing of budgets, the

seeking of assistance in support from the appropriate sources and the provision of effective services and the installation of effective systems. Effective management within the institution is a starting in the empowerment and the development of capacity at local level. This is a key principle.

Comment on the role and potential of each category of institution has been made under the institutional assessments which follow. Briefly, shown in Table 13-1.

Summaries of the key findings with reference to the seven categories of institution follow. Comment is made under the following headings for each categories:

(1) General
(2) Political and organisational dynamics
(3) Legal and institutional aspects
(4) Management
(5) Technical competence/capacity
(6) Training competence/capacity
(7) Community acceptability
(8) Transitional issues
(9) Capacity
(10) Role
(11) Potential
(12) Support required

13.2.2 District Councils

(1) General

District Councils are the successor bodies to the Regional Services Councils. These were formed in 1985. Their purpose was to raise finances in their defined areas through levies, and to redistribute these finances in order to provide services to areas of need.[1]

There are six (6) District Councils in the proposed extended supply area of Magalies Water. These are:

District Council	Headquarters	Province
Rustenburg District Council	Rustenburg	North West Province
Eastern District Council	Brits	North West Province
Highveld District Council	Middelburg	Mpumalanga
Bushveld District Council	Nylstroom	Northern Province
Eastern Gauteng District Council	Germiston	Gauteng
Pretoria Metropolitan Council	Pretoria	Gauteng

They are thus answerable to four different Provincial Departments of Local Government

These take the place of the old Regional Services Councils. At present (March 1996) they continue to operate in terms of national legislation in the form of the Regional ServicesAct (No. 109 of 1985). The previous Regional Services Councils have been abolished by various Provincial Proclamations. New District Councils have replaced them and enabled by the Local Government Transition Act, No 209 of 1993. The new District Councils are still in most cases in the process of redefining their areas of operations in order to incorporate previously unserviced areas. These are predominantly rural areas and rural towns and villages. The most significant areas are the inheritance of the previous homelands of Bophuthatswana and KwaNdebele.

The District Councils are being defined by Proclamation in individual Provincial Government Gazettes. The national legislation governing the operation of the District Councils (the Regional Services Act, No. 109 of 1985) may be repealed or amended in order to make way for Provincial Legislation which will the govern the operation of District Councils under the jurisdiction of the various provincial government departments of Local Government and Housing. At present national legislation governs the functioning of what are effectively the agents of provincial government. Such a move will represent a rationalisation of central government functioning and a devolution of influence and political control to the provincial level.

(2) Political and organisational dynamics

New political dynamics affecting the District Councils were defined by democratic elections meant political influence over the new Councils via their newly elected Boards shifted decisively towards support for the ANC within most of the Councils in the Magalies Extended Supply Area.

(3) Legal and institutional aspects

The District Councils were set up as Regional Services Councils. The absorption of the former Bophuthatswana and KwaNdebele homelands and democratic local government elections and changed the physical size of the Councils and the composition of the politically elected Boards. This process of change and democratisation has been facilitated by the Local Government Transition Act. The successor institutions to the RSCs are therefore the District Councils.

(4) Management

Management of the District Councils appears to be sound, although there have been several cases of financial mismanagement in within the last year. The Council professional staff are usually small and a core team of about 5 managers is common.

The Councils staff are answerable to their politically elected Boards, and are also directly responsible to the various provincial Departments of Local Government.

(5) Technical competence/capacity

Technical capacity within the Councils is limited. Necessary skills are contracted in when required. In areas where the District Councils have become active in reticulation and supply they have also tended to acquire staff resources technical capacity. This is a danger in specifying that where local capacity is lacking, that other institutions should assist. Assistance requires capacity. It is therefore appropriate that capacity be developed at local level.

(6) Training competence/capacity

District Councils tend to maintain very little by way of training capacity. There are some indications that the growing need to provide training to new TLCs will stretch the capacity of the Councils and will therefore push them towards establishing formal training programmes. Engagement with training is at present ad hoc.

(7) Community acceptability

There does not generally appear to be a problem of representativity or of acceptability with reference to the District Councils. The stakeholders interviewed in this survey tended to be Transitional Local Council members and officials. Neither those from large TLCs, nor from very small and under resourced TLCs had any fundamental problem with the purpose, structure or functioning of their District Council. More questions were raised by small TLC members in relation to the pace of transition and their sometimes distant relation with Provincial government than were expressed about the District Councils

(8) Transitional issues

The new District Councils are beginning to define themselves and engage with their new, more broadly defined role implied in serving a larger area usually containing large areas and populations inherited from the former homelands of Bophuthatswana and KwaNdebele. New political leadership on the District Councils is something the professional staff of the Councils seems to have been able to accept.

The issue now facing Councils is how they should engage with planning and funding development, particularly in the former homeland areas. Simple requests to central and Provincial government for additional funds may be legitimate, but not necessarily reflect a meaningful engagement by the Council with pressing issues relating to how to fund social development.

(9) Capacity

The capacity of District Councils varies considerably. The relevance of each of the six Councils in the proposed extended supply areas also varies considerably.

The Councils have the mandate and the flexibility to generate significant capacity. This will require flexibility and creativity, particularly with reference to the raising of finance, and to engagement with a wider range of role players at all levels (central government, through to small community organisations in rural areas).

(a) Staff capacity

In general the District Councils operation the same principles as the former Regional Services Councils. A minimum core managerial and administrative staff is maintained. When required capacity is brought by hiring contractors.

(b) Financial capacity

District Councils work on a 'Robin Hood' principle of distributing funds where they are most needed. They in this way the conduits or and agents for development. Revenues are generated in three ways:

1) Levy on business turnover in the area of the District Council.
2) Levy on the salaries earned in the area of the District Council
3) Revenues raised by the District Council for development projects (e.g. RDP funds)

The amount of revenue raised by any District Council will therefore depend fundamentally on the area and the population. A District Council with a large urban population will generate greater revenues from business turnover and salaries than a heavily populated rural area dependent on migrant remittances and subsistence agriculture. Some areas are endowed with greater natural resources

The amounts owing to a District Council is calculated according to a formula. The budgets and actual funds are allocated by the individual department of Local Government and Housing in each province.

(10) Role of District Councils

The role of the District Councils is a strategic one at sub-regional level. They are (or should be) involved in identifying areas of need, and in planning, and financing.

(11) Potential of District Councils

Councils possess great potential to act as the broad church accommodating all other organs and institutions of local government including Tribal Authorities, Rural Councils, TLCs and civic bodies such as SANCO. The mandate of District Councils is to act as agents for development. Their success in doing this will depend on their ability to engage with non statutory institutions such as civic bodies and community organisations, and with institutions such as Tribal Authorities with which the Councils have had limited dealings in the past. Their engagement with rural development has also been limited.

(12) Support required

Financial support is always a request. For major infrastructural projects this will be necessary. Some District Councils have been creative in seeking out alternative funds

from sources such as the RDP. Bi-lateral and multi-lateral funding for development projects should be explored with a requirement that the District Council raises a certain amount of the required capital. This kind of requirement will encourage Councils to adopt an active and pro-active approach to development projects. It will also assist them in developing a clear view of some aspects of their role n development work.

13.2.3 Transitional Local Councils (TLCs)

(1) General

TLCs in the supply area vary significantly in size and capacity. Four TLCs were surveyed in this study although there are over 50 in the Study Area.

It is therefore appropriate to divide the TLCs into two groups
Large TLCs
Small TLCs

TLC	Headquarters	Province
Rustenburg	Rustenburg	North West
Bronkhorstspruit	Bronkhorstspruit	Gauteng
KwaMhlanga	KwaMhlanga	Mpumalanga
Siyabuswa	Siyabuswa	Mpumalanga

(2) Political and organisational dynamics

(a) Large TLCs

Local government elections saw the introduction of a black political leadership tasking leadership of previously white Council structures staffed by white conservative professional staff and appointees.

The professional staff and management of the former white TLCs have to adapt to this new leadership. This is taking place with varying degrees of success. In Bronkhorstspruit there appears to be a sound working relationship between Council and staff.

In one small TLC an attempt was made by councillors to control our researchers' access to community members.

(b) Small TLCs

The small TLCs of the former Bophutatswana and KwaNdebele offer a different scenario. Elected to deliver services such as water and sanitation, the new political leadership finds itself having influence over institutions with no resources and no capacity. The political imperative on delivery of services at local level will within a very short time undermine these democratically elected councillors unless the

institutions they service are assisted with capacity at all levels (primarily financial and managerial).

(3) Legal and institutional aspects

TLCs are municipal institutions varying in size. They are statutory autonomous bodies empowered to exact taxes and levies and to administer their own affairs. They have both elected office bearers and appointed professional personnel. They are ultimately answerable to the provincial Department of Local Government.

(4) Management

Management of TLCs is by a professional management team. The size of this team varies depending on the size and resources of the TLC. Rustenburg has a management team of about 8 people. In contrast, Siyabuswa has only one professional full-time manager in the Town Clerk. TLCs run entire towns. It is therefore necessary for them to have significant in house management capacity.

(5) Technical competence/capacity

Since TLCs have the tasks of providing water and sanitation services, and of maintaining them, it is necessary for them to have the capacity to undertake repairs and conduct maintenance. Both Rustenburg and Bronkhorstspruit have some technical capacity, they also use external resources for specialised tasks such as meter repair. In contrast, Siyabuswa and KwaMhlanga have virtually no technical capacity. Technical requirements are filled by the Department of Water Affairs and Forestry.

(6) Training competence/capacity

The larger TLCs have some training capacity. This is generally not very significant. Most training takes place outside the institution. The provincial training boards are often used for technical, artisan training and skills development. Smaller TLCs incorporated from the former homelands have not previously had access to these training boards.

(7) Community acceptability

In our study this was larger an assessment into self-perception moderated by informal interviews with community members. In general in the large TLCs which had previously serviced mainly white areas the TLCs were regarded reasonably highly and were assessed on the effectiveness of service provision. Judgements on the TLCs by black by residents in newly acquired areas were not readily available.

(8) Transitional issues

New style of politics means that old regime professionals will have to adapt. The needs of communities are development needs and the need for basic services.

Two significant transitional were evident:

(a) Small TLCs lacked capacity to deliver any water and sanitation services

(b) Large TLCs are being required to extend services to service new areas on still limited funds.

(9) Capacity

TLCs are required to have capacity to deliver services, to recover costs, and to conduct maintenance. The capacity of TLCs varies considerably. The larger urban TLCs have a reasonable fiscal base are have greater capacity. Smaller rural TLCs have virtually no capacity in any of these fields.

(10) Role

The role of TLCs is clearly and specifically to deliver services including those of water and sanitation to the communities they serve. Given the manifest lack of capacity, it would seem appropriate for TLCs to play a more proactive role in acquiring development finance, but also in training individuals and capacity building at community level.

(11) Potential

Potential always exists for TLCs to develop greater capacity. This will depend on their developing significant management capacity, followed by the acquisition of development finance.

(12) Support required

The kind of support required by TLCs varies tremendously from TLC to TLC. Small TLCs require sound managerial support to assist with all elements of running an institution. This starting point will lead to the ability to raise finance, to recruit appropriate staff, to install effective systems for operations, cost recovery and maintenance, to plan for success. While the call for financial support is a frequent plea, this should not always be the first priority.

13.2.4 Tribal Authorities

(1) General

Two Tribal Authorities were surveyed - Bafokeng Tribal Authority in ex-Bophuthatswana and Nzundza Tribal Authority in ex-Kwandebele.

Tribal Authorities were apartheid creations designed as instruments of patronage. Nearly all are without financial or skills resources. By contrast, the Bafokeng Tribal Authority has a budget of estimated in excess of R40 million per annum. The Nzundza Tribal Authority is relatively large. The two do not represent the majority of Tribal Authorities.

Bafokeng Tribal Authority
Ndzundza Tribal Authority

Legislation in the 1950s established the bureaucratic and administrative infrastructure by which all black people would be governed and through which socio-economic development was to be conducted. These Acts provided for the establishment of the homelands and the setting up of administrations for the "gradual development of self-governing national units". In addition, the legislation provided for the transfer of land to the jurisdiction of the planned territorial authorities and defined the powers and duties of these territorial authorities.

The system was to be a hierarchy of individual tribal councils headed by the local chief and including local headmen and tribal elders nominated by the chief. The Tribal Authorities in an area (essentially the local magisterial district) would in turn elect a Regional Authority from within their ranks. Members of the Regional Authority would in turn elect representatives to sit on the Territorial Authority.

Thus for rural dwellers in each homeland between the 1950s and 1980s, a new administrative system was established and developed. While this system had some appearance of a democratic hierarchy of local and regional authority, it was never so. Chiefs usually came directly under the authority of the homeland's Chief Minister who exerted control through patronage and coercoin. The existence of the local magistrate tended to undermine the authority of the chief. In addition homeland government activity at local level very often by-passed both Regional and Tribal Authority structures. As representative political structures Regional and Tribal Authorities had very limited impact within homeland legislatures.

Thus, while for the majority of rural homeland dwellers Tribal Authorities were official representatives structures, they consistently failed to deliver either effective political representation or development. Some Tribal Authorities lacked accountability to the community they were serving, transparency and were unregulated by legislative checks and balances. They also lacked moral legitimacy and led to institutional instability. Patronage usurped moral and political legitimacy and political and personal loyalty were rewarded more than merit. Tribal Authorities were alienated from the local culture, generally failed to command society's loyalty or to trigger ownership, both of which are important catalysts for sustainability and enforceability. They were at odds with societal behaviour and expectations and faced a crisis of legitimacy.

The emergence of mass based organisation in the 1980s was partly influenced by the lack of effective political representation and lack of meeting basic needs and services at community level by those in power including Tribal Authorities. Hence the legitimacy and authority of Tribal Authorities to govern was dented and new institutions emerged in the form of NGOs, civic association and other structures of civil society to meet basic needs and services at local level. These institutions were reflected in local culture and values and counted on the sound pillars of legitimacy, accountability and self-enforcement. They had a strong hold on people's commitment, dedication and sense of identity.

However, some civic associations and structures of civil society have not yet evolved in response to changes brought in by the Government of National Unity to engage institutions that were previously opposed in the apartheid era. And if they do not renovate by shedding these dysfunctional practices and hearkening to new challenges and changes in all tiers of governance, they may cease to be viable and dynamic. Without internally initiated renovations, civic association and other structures of civil society using old methods of resistance will find their possibilities of growth frustrated and their capacity to deal with increasingly complex and competitive choices stunted.

Thus neither traditional authorities no civil society structures can have sole responsibility of delivering basic needs and services to communities. What is essential is a convergent synergy of both: not getting rid of traditional authorities nor civil society structures but reconciling and encouraging convergence between them. To perform effectively institutions have to be both rooted in the local context and culture and open to outside challenges and influences. Therefore a paradigm shift based on institutional reconciliation and convergence is of essence.

(2) Political and organisational dynamics

The dynamics revolve around the organisation of the tribe. The Bafokeng Tribal Authority has a formal structure with 72 members and an executive of 43. Support is strongest in the Phokeng area. The Ndzundza Tribal Authority incorporates about 50 chiefs and is affiliated to CONTRALESA. Tensions between the Tribal Authority and politically active youth have characterised politics in the area since the 1980s. The Ndzundza tribal area was characterised by the activities of armed vigilantes (Mbokodo) associated with traditional authorities during this time. There appear to be very few links between these Tribal Authorities and other local government structures such as District Councils and TLCs.

(3) Legal and institutional aspects

Tribal Authorities are statutory bodies. They were defined in terms of homeland legislation of the 1950s. This was supported by legislation specific to Bophuthatswana and KwaNdebele. The role and legal position of the Tribal Authorities in terms of the new constitution is unclear and will require interpretation.

(4) Management

Management strengths of Tribal Authorities are not generally considered to be in any way significant. However, those of the Bafokeng Tribal Authority are notable. This is primarily a function of the fact that it has been able to afford advisors and management capacity.

(5) Technical competence/capacity

In the case of Bafokeng Tribal Authority all technical capacity comes through VKE, a company of consulting engineers. The Tribal Authority simply provides finance. In the case of the Ndzundza Tribal Authority there is no 'in house' technical capacity.

(6) Training competence/capacity

Neither the Bafokeng Tribal Authority nor the Ndzundza Tribal Authority is not involved in training.

This is significant. If these bodies intend to act as local authorities then it will be essential for them to develop community level training in basic management and in basic system maintenance.

(7) Community acceptability

The role of Tribal Authorities is controversial and ambiguous. They are at the same time creations of apartheid, and representative of 'traditional' society. Their role under apartheid meant that they were contested as representatives of community. In addition, the growth of political and civic organisations also generated political conflict and polarisation. Tribal Authorities are not elected. It is not possible to easily assess their acceptability in the eyes of the broader community.

(8) Transitional issues

There is little integration or established link between Tribal Authorities and other organs of local government at the third tier. In addition, the link between the Tribal Authorities and the provincial departments of Local Government is unclear. Furthermore, the taint of previous association with the former homeland regimes has undermined their credibility. How unelected bodies should function as representative local government structures is a conundrum. It may be possible to develop capacity leading to more representative status and functioning over time.

(9) Capacity

The capacity of most Tribal Authorities is extremely limited. The Bafokeng Tribal Authority derives all its capacity through royalties from the Impala Platinum mine.

(10) Role

Tribal Authorities were specifically attached to the former homelands. Their role in the new regime is uncertain and undefined. In absence of resources and capacity, the Chief sees the role of the Tribal Authority as facilitating development

(11) Potential

The potential of Tribal Authorities is inextricably linked to their future role. At present they occupy an undefined position between civil society and a feudal aristocracy. With

the benefit of significant financial resources the Bafokeng Tribal Authority has been able to chose to try and become an local authority. However, it is unelected and is therefore unaccountable. It is not seem possible that a Tribal Authority can be both symbolic traditional institution and democratic local authority.

13.2.5 RDP Commitees

(1) General

Four RDP Committees were surveyed.

RDP Committee	**Province**
Moretele an Siyabuswa	Mpumalanga
Greater Saulspoort Village	North West
Phatsima	North West
Shakung	North West

(2) Political and organisational dynamics

RDP Committees tend to be made up of a diverse array of community-based committees ranging from the local taxi association to the electricity forum. Political party interest are also represented. Political dynamics are thus complex and have a direct bearing on the functioning of the RDP committee. Where resources are scarce, the intensity of political competition obstruct the development process.

(3) Legal and institutional aspects

RDP Committees are non-statutory bodies. However, they exist in terms of the RDP Act. They thus exist within the statutory and institutional framework of the RDP. This involves a hierarchy of RDP Committees and Councils from local level mounting a pyramid to District, Provincial and ultimately to national level. Line functions and communications thus flow through an alternative institutional framework and not through the existing local government framework. Or through central government department structures. The abolition of the RDP Department now means that RDP functions will flow through central government departments, and will not be co-ordinated through local government structures.

(4) Management

Management structures and procedures for RDP Committees are complex. Local RDP Committees have a Chairman, a deputy, a secretary and treasurer. In addition, four other members sit on an executive committee made up of representatives from health, electricity housing and water sub-committees.

(5) Technical competence/capacity

This is limited. However, basic competence for water schemes has been acquired in some cases through capacity building organisations associated with engineering companies.

(6) Training competence/capacity

The RDP Committees themselves do not have sufficient resources or capacity to conduct or sustain training at community level. All training is conducted externally. However, it is clear that RDP Committee members view technical and managerial skills transfer to community members as being of crucial importance if schemes are going to be built and maintained. RDP Committee members view themselves as local government members.

(7) Community acceptability

Generally RDP Committees seem to be well accepted in their communities. Their inclusive nature means that there is little room for criticism on the basis of democratic process.

(8) Transitional issues

The RDP Committees are themselves in a transitional phase following the abolition of the RDP Ministry. The RDP Committees in this study liaised directly with the local TLCs. Thus they associated themselves with local government. However, the new direction for RDP functions is that they should be carried out through the line functions of central government departments. This may result in a tension as provincial government structures responsible for local government may be by-passed. Local government structures could be by-passed if the Department of Water Affairs operated projects at community level through RDP structures ignoring local government structures.

(9) Capacity

RDP Committees very little technical capacity. Managerial functions draw on the capacity of the community which when mobilised can be very significant. This may be put to constructive use in for example community labour on water projects.

(10) Role

RDP Committees represent the community level manifestation of what has effectively been a new government department bureaucracy. While the role they play is generally very positive, especially in identifying and prioritising community development needs and in mobilising the community, particular sensitivity must be given to the possible conflicting role RDP structures can play vis a vis traditional local government structures.

(11) Potential

Effectively functioning RDP Committees liaising with TLCs in rural areas are de facto extensions of local government. In time it is logical that elements of them should be

absorbed into local government. It is not rational to build them up as alternative bureaucracies competing for resources and patronage at a local level.

(12) Support required

Support required should come from all levels of government for the development of management capacity and for basic training for technical monitoring in relation to water schemes. The ultimate aim could be for the integration of elements of effective RDP Committees into statutory local government bodies. This may not always be an appropriate or desirable option given local conditions and dynamics. However, support for the activity of capacity building should come from DWAF at central level, from Magalies Water, from the local TLC. However, all efforts will need to be co-ordinated. This function is easily filled by the District Council where provision is made for community representation and where district-wide co-ordination can take place.

13.2.6 Local Water Committees

(1) General

The Minister of Water Affairs and Forestry is empowered in terms of the Water Act to act establish statutory Local Water Committees (LWCs) to undertake the task of local water and sanitation services. According to the White Paper on Water Supply and Sanitation, the LWC are temporary and will be integrated into local government structures when these are established and are competent to perform the function of service provision.

The LWCs have been formed in areas where services already exist to assume responsibility for such services at local level in the absence of effective, credible local governement. Once they have established competence, the LWCs take over the ownership and management of existing supply infrastructure. The Department of Water Affairs and Forestry and its agents support the LWCs to carry out this function. The DWAF through the Community Water Supply and Sanitation structures or its agents concentrate on the provision of training, capacity building, planning advice, technical assistance and construction supervision. Therefore it is in this light that LWCs should be understood.

Water Committees exist in most rural communities where access to water is a community need. Local Water Committees as formally constituted bodies are often initiatives of the Department of Water Affairs and Forestry. The Local Water Committees considered here are those encouraged by the Department with the (now abandoned?) intention of forming them into statutory bodies

Two Local Water Committees were surveyed.

Shakung LWC
Phatsima LWC

(2) Political and organisational dynamics

Local Water Committees have been drawn into the complex politics thriving at community level. They supposed to exist as autonomous bodies dealing with water rather than politics. The reality is that valuable resources such as water cannot be separated from politics at community level. In some communities the Local Water Committee reports directly to SANCO, in other it is working sub-committee of the RDP Committee. In other communities it is both. The role and political position of the Local Water Committee depends on the local political dynamics.

(3) Legal and institutional aspects

An original intention was apparently to promulgate Local Water Committees as statutory bodies. Regulations were published. The Department has since apparently decided that this is not the most appropriate institutional format. Presumably this was because this competes directly with local government bodies whilst at the same time introducing the opportunity for the proliferation of statutory service bodies at community level

(4) Management

The Water Committees have a complete management structure including Chairman, Secretary, Treasurer and additional members. In general Water Committees are voluntary and are not funded. In some instances however, funding for administrative functions comes from SANCO.

(5) Technical competence/capacity

Technical competence varies from committee to committee. The most impressive LWC displayed a desire and certain competencies in basic scheme maintenance and in cost recovery. This was not characteristic of the LWCs in this study.

(6) Training competence/capacity

It would appear that few LWCs have a training capacity. One notable example displayed a basic training capacity with reference to basic water scheme maintenance. This however, was mediated through an external capacity building organisation.

(7) Community acceptability

The LWCs tend to be elected or nominated from within the community. An active communication an liaison function ensures community accountability and acceptability.

(8) Transitional issues

Water is an central issue in unserviced communities or where services are primitive. The role of water is central to community life and politics. Because of this all LWCs in this study wished to be formalised as local government or service delivery structures.

In realistic terms, it is conceivable that LWCs could eventually become important component parts of local government. The anticipation clearly exists at this point that LWCs will be formally constituted. It is clear that DWAF has already created an expectation in this regard which it appears will not be fulfilled. Further delays or lack of decisiveness on the part of the Department will almost certainly undermine its credibility.

(9) Capacity

Capacity must always be developed. It does not currently exist. Prior commitment from the Department is positive first engagement which should be sustained. Capacity should be developed in terms local managerial and basic technical skills. Liaison with District Councils and local TLCs is of utmost importance.

(10) Role

The present role of the LWCs revolves around water issues awareness in communities, around prioritising water development issues, and around basic scheme maintenance. In this sense LWCs are already rudimentary local government structures.

(11) Potential

The technical competence and aspirations of certain LWCs to operate as local government indicates the potential of LWC as active agents for operation and cost recovery.

The role of LWCs in the short and medium term will most probably be as active bodies in civil society. Their development can only enhance the development of local government. In the medium to longer term it is a reasonable expectation that LWCs should provide a technical input to rural local government.

13.2.7 Non-Government Organisations (NGOs)

(1) General

Two NGOs were surveyed.

The Independent Development Trust (IDT)
The Mvula Trust

Both are NGOs broadly involved in development. Both are active in the area of water project development. They have struggle origins in anti-apartheid activities.

(2) Political and organisational dynamics

Both IDT and Mvula Trust can be characterised, along with many NGOs, as being anti-apartheid organisations. Both draw on overseas funding and both are national structures

with a broad base of accountability and a large number of stakeholders nationally and internationally rather than at community level.

(3) Legal and institutional aspects

Both NGOs are legally registered as Trusts. They are both not for profit organisations which are managed by Trustees represented by Boards of Directors drawn from the broad South African community .

(4) Management

Both NGOs have a large asset base which is managed a professional staff. The IDT focuses on partnership with other organisations, particularly NGOs, while the Mvula Trust implements projects itself.

(5) Technical competence/capacity

Technical competence differs. The IDT is largely a financial and funding body. Its expertise would appear to lie in the area of financial management with a focus development and management of development finances in the non-profit sector.

The technical competence of the Mvula Trust is highly focused on the water sector. There is a high level of professional and technical skills within the organisation.

(6) Training competence/capacity

The IDT is somewhat distant from community training issues as a funding agency. The Mvula Trust however is actively involved in community training in the course of project implementation. It frequently uses consultants.

(7) Community acceptability

Despite its relative distance from communities the IDT regards itself as a legitimate popular structure. Community awareness and acceptability flows directly from community awareness of the projects it funds. The Mvula Trust has community support and endorses the principle of user accountability which encourages the communities to take ownership and control over projects. This generates trust and support amongst beneficiary communities.

(8) Transitional issues

For the IDT transitional issues might revolve around how best to structure its development portfolio in a post-apartheid context. Challenges it faces with regard to water might revolve around integrating water development issues with the various aspects of urban and rural development planning.

The Mvula Trust can play an important role in providing technical and training support at community level. It views the expanded role of Magalies Water as a positive development which it could actively support.

(9) Capacity

As national bodies the capacity of both IDT and Mvula Trust is significant, financially and in technical areas. Budgets run to hundreds of millions. Technical expertise defines the profiles of these NGOs.

(10) Role

The role of IDT and Mvula Trust is broadly developmental. In the case of the IDT this role is a facilitative role in providing sponsorship. The Mvula Trust is a practical implementer. Both have a positive role to play in developing and empowering community water organisations

(11) Potential

Both organisations have a definite long-term role to play in facilitating and encouraging the development and emergence of strong civic bodies involved in water and sanitation service delivery. This relates directly to the development of local government bodies in rural areas.

(12) Support required

The humanitarian and development approach of these NGOs means that they play a supporting role, rather than require support.

However, they should be supported in their role through funding for specific projects, or to be entrusted with the channelling of development funds from government. In addition, they should be party to broad strategic planning activities or plans relating to water development in the extended supply are. This would contribute to the development of an integrated planning process.

13.2.8 Capacity Building Organisations

(1) General

Two Capacity Building Organisations were surveyed.

Karabo Projects
Care Community Services

Both are private sector, for profit bodies. They tend to be subsidiaries of consulting engineering companies.

(2) Political and organisational dynamics

These are private sector bodies fundamentally motivated by profit, but with an active interest in community development. Their function revolves around providing communities with a service. The most important political dynamics relate to relationships with the parent companies.

(3) Legal and institutional aspects

Formed in terms of the Companies Act. Operate on business principles. No requirement aside from business reasons to be accountable to communities.

(4) Management

Management principle are business principles. The structure invariably has a Managing Director, Financial Director, a strong Public Relations function, and a field workers.

(5) Technical competence/capacity

Technical competence tends to be strong and capacity is drawn from the parent company which is usually an engineering company. Technical support is always available. This includes:

Training community committees
Project management
Construction methods and skills
Financial management of water committees

(6) Training competence/capacity

This is often one of the primary functions of the organisation. Training revolves around basic operation and maintenance procedures and b Basic book keeping and accountancy.

(7) Community acceptability

As brokers of work for their parent companies, and as agents in their own right, community acceptance its a prerequisite. Training and community empowerment engender acceptance. More specifically these organisations act as brokers of development projects and finance. This virtually ensures acceptance and popularity.

(8) Transitional issues

Capacity building organisations can act as the voice of rural community needs, and are capable of making this heard at government level. This is a valuable transitional role for private sector bodies. In the longer term questions are raised as to whether they are playing a role in sustainable skills transfer to communities.

(9) Capacity

Capacity was not measured. In terms of training and technical skills of the parent company, capacity is very great. How this is applied has not been determined. They also have a very clear role in ensuring that projects implemented by the parent company are successful, at least in the medium term.

(10) Role

The primary role of these organisations is to broker work for the parent company

(11) Potential

Capacity building organisations have the potential to contribute to the development of the capacity community organisations with respect to water. There is a synergy between community needs and certain opportunities which can be exploited by the private sector.

(12) Support required

No particular support is recommended for these organisations.

13.3 Major Findings

13.3.1 Necessity of Support

Managerial support at local level is a primary requirement. This needs to be developed within the relevant institutions. It cannot be temporarily imported or seconded. The development of effective management is the kind of empowerment which will enable a local government institution to begin to establish its own administrative and technical capacity. Sound management skills will enable the drawing of budgets, the seeking of assistance in support from the appropriate sources and the provision of effective services and the installation of effective systems. Effective management within the institution is a starting in the empowerment and the development of capacity at local level. This must be a key principle.

Support from the First Tier (the Department of Water Affairs and Forestry and other central government departments), and from the Second Tier (Water Boards, Provincial government) for Third Tier institutions will need to come in the form of financial, technical and managerial skills. The mix of support and its exact nature will vary from institution to institution. In addition, support from Third Tier institutions such as District Councils will be required for other third tier institutions, notable small Transitional Local Councils and various of the Section 10 type bodies under the RSC previous legislation.

This preliminary assessment has suggested that the institutions most in need of support are small Transitional Local Councils from the former homeland areas. The weakness of these institutions is in managerial capacity. These institutions are the nexus point between institutional water and sanitation service provider and consumers. It is at this point where delivery breaks down.

In response to this lack of delivery a variety of institutions have emerged. These include Local Water Committees, NGOs, RDP Committees. Tribal Authorities too, have become involved in attempts to provide services in response to growing ground swell of popular demand. The activity of the many non-statutory civic bodies does indicate the health of civil society. The success of democracy will be born out by the ability of elected local government to deliver services. At present newly elected local government officials are frequently distressed by their inability to do this.

A small TLC is required to draw up a budget for the year before funds can be drawn down from Provincial Government. The ability to perform this task is in itself a demonstration of some capacity to run local affairs. However, consultants are frequently drawn in by the TLC to perform this basic function as capacity is lacking. Thus, from the outset basic managerial skills and capacity are lacking. This is followed by difficulties experienced by the TLCs in seeking out where support and assistance can be found in government and outside.

Central government, Provincial government and District Councils at the third tier frequently express their willingness and commitment to supporting the effective functioning of local government if they are approached. The point is that many Third Tier institutions do not know their way around the labyrinth of government and have difficulties identifying exactly what is available by way of support, and in identifying the exact nature of the problems they are experiencing.

This requires a proactive engagement from within First, Second and Third Tiers of government. This engagement cannot be a simple intervention which seeks either to take over the running of a scheme or a department (as has been the case in some areas with the Department of Water Affairs), or in the belief that capacity can somehow be delivered. The engagement that is required is with the institutions over time, and a commitment to developing institutional capacity. This can best be achieved through the development of effective management capacity at local level. It is through effective management capacity that an institution can implement systems, can begin to employ professional staff, can think creatively about raising finances, and can begin to deliver services in a professional manner. It is therefore towards achieving a high calibre of management at local level that support from the first and second tiers should be aimed.

The District Councils lend themselves to acting as the kind of forum through which needs can be identified at local level. Indeed, this is part of their function. This however presupposes that the District Councils themselves are in a position to engage effectively with local institutions and communities. This is not always the case. Therefore, the Department of Water Affairs and Magalies Water will need to develop relationships with the District Councils around key issues such as their methods, engagement with and support for rural communities. They should also be able to support the District Councils in community outreach, training and capacity building programmes and activities with reference to water and sanitation.

Broadly what has been identified is that:

(1) The bottleneck with regard to water and sanitation service delivery is most frequently at the TLC level.

(2) The lack of capacity is within small TLCs which lack managerial and technical capacity

(3) The development of managerial capacity is a primary requirement for effective local government.

(4) Recognition that local government is about the provision of a broad basket of services, not only water and sanitation.

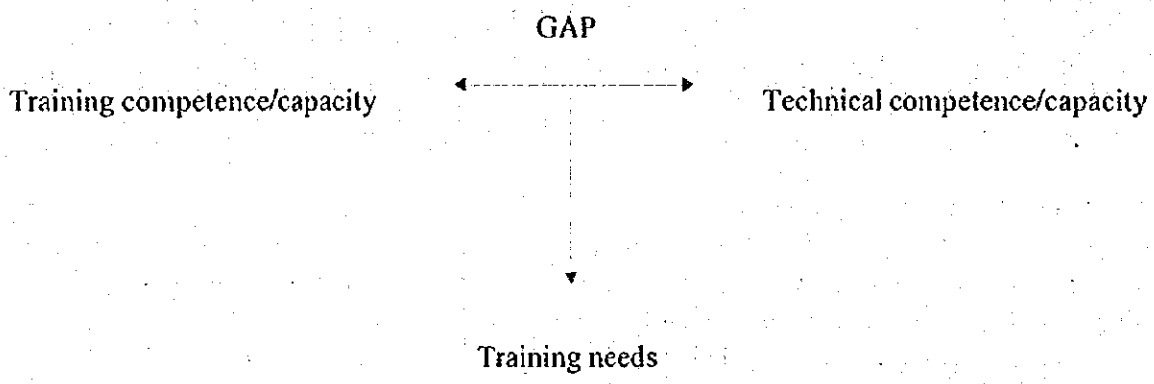
(5) District Councils are ideal forums for identification of community needs and for the co-ordination of development needs

(6) First and second tier institutions should engage directly and proactively with District Councils, identify what support is broadly required for the development of effective local government

13.3.2 Training capacity vs. Training Needs in the Third Tier

There is a significant difference between training needs and training capacity. Training needs are the requirements for training personnel to perform certain specified tasks. Training capacity indicates the ability of the institution to perform that training. The terms of reference specified consideration of *Training competence/capacity* and T*echnical competence/capacity*. Both of these categories were specifically considered for each of the twenty-one institutions examined. An assessment of training needs was not specified as a requirement.

The training needs emerge from consideration of the gap between an institution's capacity or competence to engage in training and the measurable technical competence or capacity of that institution.



Note: This difference between the ability and capacity to train people, and the existence of suitably qualified staff is a gap which will be the subject of exploration in the gap analysis.

13.3.3 Defining Training Needs

The individual training needs of each institution will have to be specifically considered. Meaningful patterns in training capacity do not emerge from consideration of all institutions said to belong in the third tier. The range and diversity of issues is simply too great. Even within

single categories of institution there is a great range of training capacity and technical competence.

The vast differences in both training and technical *needs* within and between requirements of the various institutions means that the neither training capacity, nor technical competence can be meaningfully measured on a scale which is common to all institutions. For example, how does one quantify the difference for the need for a qualified engineer in a District Council against the need for a person with basic literacy and numeracy skills in an informal community-based water committee? The scales of values by which such capacity and competence are not on the same continuum.

Even within the same broad skills categories, the technical skills needs of a large TLC are fundamentally different to those of a local water committee. Broadly technical skills are required. In the TLC professionally trained, degreed engineers may be required. The local water committee will require basic maintenance skills in order to ensure that the diesel pump pumping water from a borehole continues to run.

In some institutions such as the larger TLCs and the District Councils it is possible to identify skills needs. Recruitment can usually be conducted and these skills can be bought in. Enumeration of these kind of shortages is not a meaningful exercise since capacity can nearly always be filled for essential services.

Where possible and where appropriate key personnel within the various institutions were asked to identify present staff needs. The results have been recorded in the reports on each institution. However, there are significant inconsistencies in the report which arise from several factors:

The time of interviews in February and March 1995 followed very shortly after local government elections. As a result there many institutions which had yet to fill key positions. While the report may have indicated significant staff gaps in certain institutions, these may have been temporary gaps caused by the transition to democracy. In other cases, these staff and skills shortages may be caused by much deeper and inherent structural problems related to apartheid, or related to rural location.

13.3.4 Training Activities and Roles

Key to the outlining of the training needs below is the principle that the institutions must provide training to other institutional personnel within the third tier. For example, it is incumbent upon District Councils to identify needs and provide training to institutions within its broad structure.

1. District Councils

   To be trained in:

   (a) Rural development issues
   (b) Rural development planning.

   To provide training in:

(c) Basic financial management
(d) Maintenance
(e) Institutional procedures

2. Local Councils

To be trained in

(a) Broad rural development issues
(b) Rural development planning

To provide training in:

(c) Basic financial management
(d) Maintenance

3. Tribal Authorities

To be trained in/acquire professional skills in:

(a) Financial management
(b) Institutional management
(c) Financial systems management
(d) Cost recovery systems
(e) Operations and maintenance
(f) Local authority management

4. Local Water Committees

To be trained in:

(a) Basic maintenance
(b) Administration
(c) Cost recovery

To provide training to:

(d) Community members
(e) Ensure continuous skills transfer
(f) Linkages with statutory institutions

5. RDP Committees

To be trained in:

(a) Basic maintenance
(b) Administration

(c) Cost recovery

To provide training to:

(d) Community members
(e) Ensure continuous skills transfer

6. Capacity Building Consultants

To provide training in:

(a) All aspects of scheme and system operations and maintenance
(b) Financial management
(c) Cost recovery
(d) Administration

7. NGOs

To provide training in:

(a) All aspects of scheme and system operations and maintenance
(b) Financial management
(c) Cost recovery
(d) Administration
(e) Access to financial and managerial resources

Staff and skills shortages are structural problems. While identifying training needs may enable specific training to be conducted and short-terms skills needs to be filled, these structural problems will have to addressed in order to generate capacity in the longer term. Skilled people very seldom remain in rural areas.

Consideration of training capacity immediately opens up to consideration of the broader issues of developing capacity at the local level. While it is possible to invest heavily in training programmes, it is well established that it is difficult to retain skills in rural areas. The problem is not so much of identifying and filling present needs (which because of skills migration out of rural areas will remain a constant need), but engage in a more structural or systems intervention aimed at ensuring that requisite skills are available to the communities served.

This returns us to consideration of institutional arrangements and inter-relationships. The moot issue is not so much defining and trying to fill immediately obvious skills and capacity shortages, but in ensuring that institutional arrangements are such that resources and support in a range of areas from engineering to financial to general management is available to institutions at the third tier, and directly to communities.

13.3.5 The way ahead

A more accurate assessment of institutional functioning, particularly at TLC level is required. There are a great number of TLCs is the extended supply area. Only four were surveyed in this study. Some TLCs are large and highly developed. Some are very small and without any capacity. If indeed, the problem of delivery lies at the local level, then a clear and quantified assessment of the problem will be required.

Direct support and engagement from the first and second tier has been proposed for District Councils. The nature of this support, and indeed, the nature of the engagement will have to be determined.

Other institutions such as RDP committees and local water committees should be the subject of a more detailed evaluation.

This assessment has provided an indication of the functioning and potential of the various third tier institutions. However, there are gaps in our information which will need to be filled in order to develop a comprehensive strategy.

CHAPTER 14 : COMMUNITY CASE STUDY

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14.1 General

Information on a selected number of communities that have either no formal water supply, or very low levels of water and sanitation service, was gathered by a field exercise referred to as the Community Case Studies. The objectives of the Community Case Studies were to:

(1) determine the readiness of selected communities to participate in activities leading to the provision, management and maintenance of formal water supply and sanitation services; and

(2) determine the nature and possible source of inputs which will improve readiness. The role of 2nd Tier organisations in providing such support was a particular emphasis.

Thirty communities were selected for detailed case study investigation. These 30 communities were drawn from the Community Database Survey and a number of criteria for selection were used - range of tenure circumstances, different levels of labour migrancy and local employment, location in all four provinces in which the Study Area falls, variety of local organisation, and including urban, rural and peri-urban communities. Research was then conducted in these 30 communities to determine:

(1) Current water supply and sanitation status;

(2) views on service levels and tariffs;

(3) willingness to pay and affordability;

(4) organisational and political dynamics;

(5) presence, role and effectiveness of local committees, particularly those related to water supply and sanitation;

(6) water awareness; and

(7) local human resource capacity relevant to the installation, management and maintenance of local water supply and sanitation systems.

A mix of focus group discussions and structured interviews was used, including a household survey looking at economic veariables, organisations, demographics, infrastructure and water and sanitation.

14.2 Research Process

14.2.1 Literature Survey

Whilst the fieldwork process progressed from planning to full-scale implementation of the survey, an extensive literature survey was also initiated. This survey focused on key policy documents relating to water supply and sanitation, such as the "White Paper on Water Supply and Sanitation" and the "Reconstruction and Development Programme" and discussed them in relation to other relevant contemporary national and international comments on the subject.

Once data was collected from the field, this literature was re-evaluated by field workers in the light of recent fieldwork experiences and the analysis and presentation of data was framed within current concerns around water supply and sanitation.

The planning, fieldwork process and analysis of data collected for this study was shaped significantly by issues and perspectives raised in recent literature. The publications considered in this literature review were selected primarily for the extent to which they addressed the notion of *readiness* in community water supply and management.

The 1980's were proclaimed as International Drinking Water Supply and Sanitation Decade. As shown above, this has generated a important debates around ways of realising the ideals of developing sustainable systems of water supply and sanitation. Some of these debates are confronted in the literature considered above and have important consequences for the research presented below.

A common aspect of much of the literature considered is that community involvement is essential to the success of any intervention relating to water supply and sanitation. There are, however, some differences relating to the appropriate extent and nature of that involvement. Some advocate a more centralised approach whilst others highlight the weakness of this approach. There has been a particularly strong emphasis placed on the importance of women's participation in water supply and sanitation programmes.

Our research suggests that people (of either sex) participate actively in systems of water supply and sanitation regardless of the presence or absence of formal attention to community participation. An assessment of present strategies and systems suggests that new programmes of intervention should take shape around the practices that people are currently employing and not seek to incorporate people into socially alien and inappropriate modes of "participation".

A second important point to emerge from the literature relates to levels of technology and its appropriateness to particular social contexts. Some of the literature invokes the notion of "inappropriate technology" to explain failures in water supply and sanitation programmes. Other writers suggest that such failures are not caused by highly sophisticated technologies, but rather through an inability of the technology to take local realities into account.

The results from the present study endorse the latter perspective and take the argument even further. Technologies that fail to take local realities into account are frequently manipulated to serve those realities. To repeat the point made above, this study suggests that people who live in environments characterised by poor service provision do not passively accept these conditions and constantly strive to improve their predicaments, regardless of the presence or absence of official. Some case studies considered below demonstrate how people themselves were often

able to promote their own interests (in this case defined as gaining access to a reliable source of water), most effectively.

The problem of cost recovery has also received considerable attention in the literature. Costs involved in water supply and sanitation programmes are generally seen as more potentially recoverable if programmes are demand driven. Improving the capacity of local government and institutional capacity within communities is sometimes seen as a means of enhancing the potential for cost recovery. The results below note that considerations of cost recovery need to take the complexity of local-level economic activities into account in order to identify appropriate social mechanisms through which to recover costs.

14.2.2 Qualitative Research

The qualitative research methods included in-depth interviewing, the collection of life histories, participant observation and focus group discussions.

(1) In-depth interviewing:

Most of the qualitative data collected was through the method of in-depth interviewing. Initial field interviews were based on a structured open-ended standardised questionnaire. This was designed to assist in provoking discussion on issues around water and sanitation that were currently pertinent in the social contexts investigated. As the qualitative research proceeded, researchers and field workers became more familiar with the issues that were emerging in the context of the study and relied less and less on the standardised questionnaire for guidance. This was regarded as an extremely positive development as it promoted a discussion which was more informant-led than the rigidly framed interactions suggested by a heavy reliance on the questionnaire.

(2) Life histories

In some cases, the recording of individual life histories comprised an appropriate method of collecting data pertinent to the study. A focus on individual development over time is also a useful tool for understanding and contextualising local practices and understandings that emerge around the idea of community water supply and management. The adoption of this method was only possible in a few cases as its success as a research methodology often depends on an ongoing interaction between the researcher and informant over a long period of time - a luxury that the research team did not have at their disposal.

(3) Participant observation

Data collected through this technique was centred on the nature of social interactions between members of the research team and the communities that constitute the focus of this study. A record and analysis of these interaction can reveal important information

pertaining to the effectiveness of local authority structures, as well as provide a useful indication of the nature of associated political processes.

Where possible, researchers and field workers also put down their notebooks and became involved in activities such as pumping water from hand pumps, carrying water and engaging in debates and discussion over the management of water. these gestures were important, as they allowed for the development of relationships between the research team and the affected communities that were based on openness and mutual assistance. They therefore made a direct contribution towards increasing the quality of information collected.

(4) Focus group discussions

Focus groups provide an important forum for the observing and detailed recording of interactions between representatives of different community interest groups. Where possible and appropriate, researchers and field workers facilitated organized focus group discussions. The themes of these discussions were confined to relevant issues such as water awareness, local government, community management of resources and perceptions of management capacity and training needs. The composition of groups that were subjected to focus group discussion included village water committees, tribal authorities, civic organizations and organizations representing the interests of women and youth.

14.2.3 Quantitative Research

The data gathering component of the quantitative research process involved the collection of basic household information, based on a standardised questionnaire.

14.2.4 Sampling

The thirty communities which comprised the focus of the present study were selected through an intensive process of consultation. As the study area could be divided into three broad areas, 10 communities were selected from each area, ensuring an adequate broad geographical dispersal of selected settlements. The areas selected comprised the following districts:

Area 1: Mankwe, Bafokeng, Koster
Area 2: ODI1; ODI2; Moretele 1
Area 3: Moutse 1; Moutse 3; Moretele 2

Once these areas had been identified, personnel from the Department of Water Affairs and Forestry (DWAF) and North West Water Supply Authority (NWWS) who had extensive hands-on knowledge of the communities in these areas were contacted to assist with identifying an initial pool of appropriate potential communities. The settlements were then visited by the researchers and assessed for their potential to be included in the study. These initial planning visits involved significant interaction with local community authorities, including tribal authorities, RDP forums, water communities, community authorities, civic organizations and

local government officials. The researchers discussed the aims and objectives of the proposed study openly with as many stakeholders and interest groups as possible, in order to promote significant input from local-level, community-based organizations in selecting appropriate communities for the study. Once appropriate communities had been selected, preliminary research was conducted by researchers in order to identify dominant issues for further investigation.

14.2.5 Measurement and validity

The quantitative research component of this study was intended to provide a means for measuring some of the issues identified as relevant in the qualitative process.

A questionnaire was developed in the field during the qualitative phase of the research. Input into the development of the questionnaire was made team, through workshops, meetings and also informally. Experiences of the qualitative fieldwork therefore directly informed the development of the questionnaire on which the quantitative survey was based. The information collected in quantitative was therefore directly relevant to the issues that emerged strongly in the qualitative phase.

14.2.6 Reliability

An important limitation of the research related to the design and approach adopted is the factual content of the information presented. Due the short amount of time spent conducting research in any particular village, the factual accuracy of much of the information collected from informants in the field could not be verified. Although this creates the potential for some of the information presented to be regarded as factually inaccurate, it should be noted that what we are not seeking to present a factual narrative of any particular but rather a broadly comparative range of perspectives on community water supply and management in the defined study.

14.3 Major Findings

14.3.1 Overall community readiness

Local communities have still a long way to go before they are ready to take full responsibility over the management of water supply at the community level. The enabling environment is still constraining and the operational capacity still to be develop.

(1) About 61% per cent of the respondents representing consumers in North West and 78% representing consumers in Mpumalanga access water through unpaid forms. This includes standpipes, yard connections with no meter, government boreholes and relief tanks. An obvious implication of this is that an increase in number of consumers might mean inclusion into the network of clients people not accustomed to pay for water and who will obviously be reluctant to do so.

(1) The proportion of 'Unaccounted-for water' (consumed water which is not financially accounted for) within the existing system is already considerable: 22% in global terms and 9% for North West and 35% for Mpumalanga. These figures refer to unmetered yard connections. But an unknown number of people with house connections and yard connections with meters are not paying for water.

(2) The willingness to pay is still low: 46% of respondents in Mpumalanga and 37% in North West stated that water should not be paid for.

(3) Water committees are still covering a small number of communities, 27% and 36% for Mpumalanga and North West, respectively. Where water committees do not exist, the Community Reconstruction and Development Committees plays a major role, 28% and 23% for Mpumalanga and North West, respectively.

(4) There still is considerable lack of clarity concerning role and legitimacy of the various organisations at the community level. This often lead to poor co-operation amongst them.

(5) Local water committees, and other local institutions are facing an acute shortage of human and financial resources and capacity.

(6) Community participation is often limited to attendance of meetings, group pressure activities and in very limited cases collection of contributions to finance capital costs. For other functions like regular money collection, operation and maintenance and daily management of the stand posts the capacity and experience is very limited.

(7) Although women play a key role in household water supply management they are facing a lot more domestic constraints than men. Their full participation in the community water supply management is sometimes limited by their domestic responsibilities.

14.3.2 Access to Water

This chapter examines how the various options available to households for accessing water, impact on the potential for effective and efficient community-based management of this important resource. By considering both formal as well as informal options available to households, the data presented below examines how they contribute towards shaping the readiness of communities.

Access to water is examined from the perspective of the household for the following reasons:

(1) Historical experiences of forced relocation, "betterment" and other villageization schemes as well as entrenched labour migrancy have resulting in the household emerging as primary sites of social and cultural organization. Consequently, an assessment of community readiness needs to pay particular attention to what is going on at the level of the household.

(2) Related to the above, in the context under discussion the household emerges strongly as the most basic social unit for organizing the consumption of water.

(3) Over the entire study area, stand pipes constitute the most widely utilised source of water for households (26% of respondents). Stand pipes were also the most widely used source in the North West.

(4) In Mpumulanga, yard connections with no meter constitute the most widely used source of water (35%). This was significantly higher than the case for the North West Province (9%).

(5) There was a significantly higher usage of Government boreholes amongst households in the North West Province (17%) as opposed to Mpumulanga (2%).

(6) A higher percentage of households in Mpumalanga relied on water provided through relief tanks (17%, as opposed to 7% in North West).

To explain these trends and assess their potential effect on community readiness, each recognised source of water will be considered separately. The reader should, however, always bear in mind that settlements are typically characterised by a range of options for accessing water - with each impacting on the other to produce unique features that characterise each settlement as distinct.

(1) Stand pipes

Historical experiences of stand pipes, their spatial locality in public places and the household labour required to collect water from them, raise important issues affecting the viability of this form of supply as an effective and efficient means of providing water to rural and peri-urban settlements. This section explores cultural interpretations and understandings of stand pipes from the level of the household and examines the possible effects that these may have on community readiness.

Stand pipes refer to water supplied and made accessible to settlements through communal taps. These taps are located in a public space, to make them accessible to residents of the settlements in which they have been constructed. Stand pipes constitute a well established government practice of providing water to rural settlements. In the past, the policy of the apartheid government was to construct stand pipes at 500m intervals. The post-apartheid government has continued to promote this practice, although the maximum acceptable distance between households and stand pipes has been reduced to 200m (White Paper on Water Supply and Sanitation, DWAF, 1994).

The extent and nature of the infrastructure that characterised stand pipes varied from settlement to settlement. In some cases the reticulation network was bulk-fed whist in other cases, it was fed with water pumped into storage tanks, from boreholes. The extent of development of the reticulation network on which stand pipes were based, also varied considerably. Some settlements (eg. Ga-Rasai) were served by a single stand pipe, whilst others (eg. Sekampaneng) had a more extensive network of stand pipes. In some

settlements (eg. Kameelpoortnek) stand pipes were only constructed in parts of the settlement, and residents in other sections sometimes made use of other available options to access water.

Stand Pipes and household labour:

The official practice of providing water to rural settlements through stand pipes has prompted the development of characteristic forms of social organization in the household. These impact significantly on the management of water at the level of the community as well on the potential for cost recovery from the household.

From the perspective of the household, labour and effort required to collect water constitutes a highly prominent feature of stand pipes. The collection of water from stand pipes was often an arduous task for the residents of households. Water was most generally collected in 25l containers and transported in wheelbarrows. Heavy loads and poorly maintained road surfaces inevitably resulted in the deterioration of wheel barrows over time, increasing the physical energy required to transport water to the household.

As the collection of water for the household fell within the ambits of the domestic domain, women and children were usually primarily responsible this task. Men however, also assisted, often when they were unemployed, or on leave from work. The primary responsibility for collecting water was usually extended to children and women, men also collected water on occasion. After returning home from school, children often had the daily responsibility of ensuring that there was an adequate amount of water in the household. Children felt that this task imposed on their leisure time and also sometimes disrupted their schooling. In some cases women had to arise especially early in the mornings, to collect water before starting their day and before the line of people waiting became too long.

The collection of water from stand pipes did therefore not only involve extensive physical labour, but was also time consuming. The time taken to collect water was closely related to the distance of the household from the stand pipe. The busiest time for collecting water was early in the morning and late in the evening,

People who were unable to cope with the physical demands of collecting water at stand pipes, such as the aged or disabled, often had to rely on relatives or neighbours to collect water for their households. In the case of pensioner, these often took the form of relationships of reciprocity, whereby they would pay in which pensioners would pay (either in cash or in kind) for water that was brought to their households. In the economically sterile environments of many of the settlements researched, pensions constituted the major or only source of household income for many households. Pensions were therefore sometimes partly dispersed amongst various members of the households, through various forms of assistance, or "favours".

Household labour and the potential for cost recovery:

Perceptions of the labour associated with stand pipes will limit the effectiveness of organised attempts to recover costs of water supplied through stand pipes because of a strong and widespread association between effort required and poor service. This correlation was evident in the narratives of informants as well as in structured social relationships such as the case of pensioners, mentioned above. The labour that relatives or neighbours offered to bring water to the households of pensioners, was interpreted as a service that could be given a cash value.

For many residents, the provision of water through stand pipes represents an unacceptably low level of service that is characteristic of the apartheid experience. The household labour involved in collecting water was essentially regarded as filling a void left by poor service provision. For this reason, it will be difficult to implement successful programmes of cost recovery for water provided through stand pipes.

This difficulty is compounded by the relative distances of households from stand pipes. In many interviews and discussions with residents, they clearly associated distance from the stand point with levels of service received. Households situated close to stand pipes were regarded as having a better level of service than households that were situated further away. Any attempt to implement systems of cost recovery from households for water from stand pipes, would have to take this perception into account.

Households situated relatively closely to standpipes are able to collect more water, more frequently, with less effort. The limited and inadequate service that stand pipes represent to many people is also not perceived of as uniform within settlements. Households situated relatively further away from stand pipes

Standpipe localities and the problem of responsibility

The physical locality in public spaces results in people generally not feeling a sense of responsibility for stand pipes. Their vulnerability to misuse, vandalism and accidental damage effectively means that responsibility for standpipes usually dissolves into a vague notion of the community in general. Consequently, it is difficult for any individual or organization to accept responsibility for a resource that is structured in such a way as to prevent effective control over it.

From the perspective of the household, responsibility for the maintenance of stand-pipes has always been deemed to fall on the "the government". Stand pipes in need of maintenance are generally either reported to the relevant authorities by community representatives, or simply left until the authorities notice them and repair them.

Although standpipes currently appear to be the most utilised source of water for households in the study area, their spatial and social location renders them beyond the domain of household responsibility. The potential for developing effective systems of water management in settlements serviced with standpipes is therefore highly limited since, as public resources, it difficult to define and enforce clear roles and responsibilities for their maintenance and security.

The future of stand pipes

In spite of these difficulties, stand pipes will continue to be a prominent feature of rural water provision in South Africa. In order to find ways of accommodating the difficulties and challenges that stand pipes represent, it is worth taking note of some local-level initiatives to enhance community-based management of stand pipes and assess the significance of the contribution that these could make towards improvement of the management of stand-pipes. Community decisions such as that taken in Sekampaneng to locate newly constructed standpipes *within* household properties provide important insight into problems experienced with stand-pipes, as well as appropriate ways of confronting them. Stand pipes within yards renders them less vulnerable to damage. It also contributes towards a widely held ideal of investing community resources in yard connections. Perhaps the most dramatic comment on the management potential of stand pipes has come from the villages of Disake and Mokgalwaneng. In these neighbouring villages, the highly organised water committee is responding to a popular decision divert financial resources provided for stand pipes, to the development of authorised yard connections.

(2) Government boreholes

Government boreholes supplied water for 17% of households surveyed in the North West, but for only 2% of households in Mpumulanga. In Mpumulanga between 0 and 1% of households used government boreholes in all settlements except Sehoko, where 21% of residents relaid on government boreholes. One distinguishing feature of Sehoko was that unlike the other settlements examined in Mpumulanga which , it was previously under the administration of the Bophutatswana homeland authority and not KwaNdebele. This suggests that the promotion of boreholes as a means of community water supply was not only related to the potential of ground water supply or accessibility but also to official policies of past "homeland" authorities.

As government boreholes were also located in public places and demanded substantially greater effort to collect water, they were subject to similar perceptions of responsibility and service that stand pipes were subject to. The public locality of government boreholes also resulted in households not being able to take responsibility for management of this resource. Where water was drawn by hand pumps, the extent of labour required increased dramatically, reinforcing perceptions of an association between household labour and service, discussed above. During the time of the research period, the water yield from hand pumps was mostly fairly consistently strong. However, informants reported that during times of drought, when the water table fell, it took much longer and a lot more effort to pump up enough water to satisfy household demand.

(3) Yard connections with meters

Although a yard connection with a meter was commonly stated as an ideal, only 8% of households surveyed in the study area (10% in the North West and 6% on Mpumulanga) accessed water through this option. The extent of yard connections with meters was limited by the following factors:

(a) Only households that were located in settlements where a reticulation system was in place could potentially exercise this option.

(b) Household connections with meters were relatively costly, when compared to other options

(c) Yard connections with meters often took a long time to be implemented by the relevant authorities.

Yard connections with meters usually co-existed with other forms of household water supply. The following table illustrates the extent to which yard connections were used by households, in settlements where they featured prominently:

Settlement	Percentage of metered yard connections
Ledig	24% of yard connections metered
Sandfontein	46% of yard connections metered
Klipgat	10% of yard connections metered
Bapong	26% of yard connections metered
Luka	99% of yard connections metered
Pieterskraal B	11% of yard connections metered
Elandsdoorn	92% of yard connections metered

The table above suggests that in all except two settlements, yard connections affected a minority of residents. They often existed alongside other means of accessing water such as stand pipes and yard connections with no meters. They therefore cannot be examined in isolation from other sources and typically exist alongside other options.

Although the implementation of yard connections with meters was the officially sanctioned means of extending a water source to the household, they represented the following difficulties to households:

(a) An official Yard connections with a meter cost approximately 4 times as much as a yard connection with no meter.

(b) In order to secure a yard connection with a meter, people had to make an official application to the relevant authorities. Many people, especially those who were illiterate were intimidated by this complicated process and were therefore reluctant to accept this option for a yard connection.

(c) One community representative reported that once an application had been made, people were subjected to a waiting period of up to 40 months. These long waiting periods further contributed towards discouraging people from establishing yard connections with meters.

(4) Metered yard connections and cost recovery:

Because metered yard connections provide a clear indication of the amount of water consumed by the household, they place a strong obligation on the household to pay for water. Of the 383 households that indicated that they had a yard connection with a meter, 30 (8%) stated that they did not pay for the water that they collected through it. Because of the sensitive nature of enquiry into this practice, we can reasonably expect that this figure is considerably higher than the one stated above. Qualitative interactions with residents of the villages support this suspicion on the basis of the following:

(a) Residents may have feared negative repercussions to an admission to not paying for water.
(b) Residents may have conceptualised the notion of "payment" as extending beyond simply paying for water and have taken other payments into account, such as the collections by tribal authorities and maintenance costs.

This current failure to recover costs from households with metered yard connections has led to the perception by outside observers and water officials alike, that a widespread culture of non-payment for water persists. It is possible that a continued failure to recover costs from metered yard connections may be a remnant of a previously widespread practice of resisting apartheid governance. In the present post-apartheid context however, it appears more plausible that this failure to recover costs is more closely related to an uncomfortable co-existence between metered yard connections and non-metered yard connections.

The table above shows the extent to which metered yard connections existed alongside non-metered connections. This situation adversely affects the potential for cost recovery. Households with authorised connections resent having to pay for water whilst neighbouring households with unauthorised are not placed under any obligation to do so. This resentment is increased by the fact that the households that opted for metered yard connections generally had to make a substantially higher initial outlay for their yard connection.

The failure to recover costs from households with authorised connections (or their apparent resistance to pay for water) is closely related to their co-existence with households with unmetered yard connections. The design and implementation of a

successful system of cost recovery would have to take this into account and endeavour to ensure payments for water are equitable within settlements.

Of the settlements selected for this study, the only "success story" appears to be found in the village of Luka in the district of Bafokeng. where methods of cost recovery are operating successfully. This success in recovering cost in Bafokeng can be correlated with the high levels of service that households have received.

(5) Relief tanks

Households in a number of settlements, or sections of settlements, were dependent on relief tanks for their water supply. Relief tanks are differentiated from water storage tanks because, unlike conventional storage tanks, the source of their replenishment lay outside the settlement. Households therefore depended on the regular delivery of water to the tanks, via truck. Households in the following settlements were dependent on relief tanks for their water supply.

(6) Informal household water supply

In almost all of the settlements considered in this study, formal sources of water supply were inadequate to satisfy the demands of many households. Households were therefore forced to make use of alternative available sources of water, depending on the particular financial and political circumstances that they found themselves in. This section examines the strategies that were employed at a household level to secure a more appropriate supply of water to the household. These strategies include the following and are discussed further in this chapter:

(a) Yard connections with no meter

(b) Private boreholes

(c) Private vendors

(d) Natural water sources

Informal means of ensuring a household water supply are important to take into account when considering the question of appropriate interventions to be adopted to promote effective community water management. As the full range of strategies adopted at the household level could potentially impact dramatically (either positively or negatively) on future community water management initiatives, they need to be seriously considered and their potential for enhancing effective community water management assessed .

(7) Yard connections with no meter

As suggested in the above discussion of metered yard connections, yard connections with no meter were a characteristic feature of settlements in the study area that had an

established water reticulation network in place. This practice, of unofficially extending a water pipe into a yard characterised 35% of households examined in Mpumalanga yet only 9% in the north West. The reasons for this significant difference do not simply lie in differences in infrastructural development, but also relate to different historical experiences in the respective homelands of KwaNdebele and Bophutatswana. It is important to consider different experiences of essentially the same observable phenomenon, as this may suggest different implications for future interventions.

(8) Unmetered yard connections in former Bophutatswana

In settlements located within the former Bophutswana, the practice of connecting households to water reticulation networks appears to have become widespread in some settlements since the South African elections of 1994 and the reincorporation of the homeland into South Africa. This section describes the phenomenon as it has developed, from the perspective of the household.

Prior to the elections of 1994, the organization responsible for the provision of water to settlements in Bophutswana was the "Bophutswana Water Supply Authority". This organization was responsible for providing a formal water supply at a community level. In many cases, the organization operated through the various local tribal authorities.

A characteristic feature of the practice of unmetered yard connections in former Bophutatswana, was their level of organization. Professional contractors offered their services to households in settlements where yard connections were possible. These contractors were often highly mobile and operated in a range of settlements.

In some settlements (eg. Bapong, Ledig), civic organizations, or persons claiming to represent such organizations, openly supported the practice of unoffocial yard connections. They justified this position on the grounds that official yard connections were not viable options for households in that:

(a) They were too expensive (approximately four to five times the cost of an unofficial connection)

(b) They took too long to be connected (one informant referred to a 40 month waiting list).

(c) The quality of materials and workmanship of authorised yard connections was not always better than unauthorised connection and it was often easier to get after-sales service from unauthorised contractors.

Although unmetered yard connections in the North West were often highly organised and centred around local-level political conflicts, they are a fairly recent phenomenon and not as widespread as in Mpumulanga.

(9) Unmetered yard connections in the former KwaNdebele

In settlements located within the former KwaNdebele area, unmetered yard connections appear to have been tolerated or at least tacitly supported by the homeland government in the past. Where bulk water was provided to settlements, to feed government sponsored stand pipes, a high proportion of residents tapped into the water reticulation network and brought the water supply into their household stands.

Table 14-2 lists the settlements affected by this practice that were examined in the present study as well as the percentage of respondents to the qualitative study who received water from unmetered yard connections:

Unlike cases of affected settlements in former Bophutatswana, the practice of unofficial yard connections does not appear to be as overtly politicised at the village level, as it does in areas in former KwaNdebele. This difference is probably due to differences in experiences of homeland governance in the two areas.

From the perspective of the household, the widespread phenomenon of unauthorised yard connections does not appear to simply suggest a "culture of non-payment" for services, or a reluctance to pay for water. A comparison between rather different experiences in former Bophutswana and KwaNdebele suggests that unauthorised yard connections represents a strategy that may be pursiued by the household, when effective community management of water resources fails.

(10) Implications for future intervention

In looking at the effect of unauthorised yard connections on future endeavour to promote community based water management, the information presented above has shown that it is vital to distinguish settlements where this practice is a prominent political local issue, form those where it is not.

In affected settlements in North West province, unauthorised water connections constitute a prominent local political issue precisely because they co-exist with authorised connections. Households with unauthorised yard connections justify the adoption of this strategy by referring to poor or inappropriate levels of service. Many do not object to the principle of payment for water *per se*, but opted for unofficial yard connections because they were not satisfied with the nature or level of official service offered. In order to effectively confront the problem of unauthorised water connections, household objections and resistance to the official option need to be taken into account and not simply written off as social deviance.

In areas in Mpumulanga that previously fell under the homeland of KwaNdebele, households appear to be under the impression that they were responsible for ensuring their own yard connections, at their own cost. These rather different perceptions of unauthorised yard connections suggests different implications for the development of effective systems of management and cost recovery.

(11) Purchases from private vendors

Some settlements had either no reliable source of water within the settlement, or available sources were controlled by a few households or individuals. These social environments, often characterised by chronic shortages of water, prompted the development of active markets around the sale and purchase of water. Although this phenomenon could potentially characterise household water supply in any settlement during times of acute or chronic water shortage, it featured strongly in the following settlements during our research period:

Privately purchased water was either acquired from neighbouring households with private boreholes (see below), or from mobile vendors selling water from the backs of tractors, pick-up trucks and donkey carts. Water purchased from privately owned boreholes was usually done so on an *ad hoc* basis. Residents of households in need of water would usually approach households with functional boreholes and draw water from their boreholes, after a price for the water had been agreed upon.

Owners of private boreholes often expressed a reluctance to sell water, arguing that excessive use of the borehole increased the potential for breakages of the pump. Charges for water drawn from private boreholes was often justified as necessary to maintain the pump, and not necessarily for the water *per se*.

In some cases the owners of private boreholes would actively endeavoured to market the water that they could draw from their boreholes. Observed cases of this practice were limited to boreholes where water was drawn by a diesel pump and stored in a raised tank. The ease of access to water, created by this system, along with a desperate demand for water, promoted the development of this activity. Water vendors prospered in settlements that were poorly serviced (if at all) and consequently experienced chronic shortages of water. These shortages raised the price of water sufficiently, to make water vending economically viable

Implications for intervention:

Because of the high cost of water that is provided by private water vendors, households generally only make use of this option in the most extreme of circumstances. Water vendors (either households that sell water, or more professionalised vendors) do however represent a community initiative that could potentially be harnessed to support community-based water management structures. In contexts where it is appropriate, water vendors could be drawn into the system of official water supply, to promote a community based system of water supply and management. In addition, the persistence of water vendors will foster a culture of payment for water, if water vendors are able to maintain a sense of legitimacy.

In order for water vendors to attain a legitimate status, the price of the water that they sell would have to be drastically reduced. In addition, they would have to be able to assure the quality of the water that they sell.

(12) Private boreholes/wells

The potential for the use of privately owned boreholes to generate some form of household income has been considered above. For the majority of households, private boreholes make an important contribution toward household water consumption. Apart from direct consumption through cooking, drinking and washing, easy access to borehole water also determines the potential for the development of a garden. In some settlements, water from private boreholes would only be used for consumption when other sources failed.

(13) Natural sources

Depending on the resources available in particular environments, water was also drawn from rivers, springs and wells in some settlements. The securing of household water from these sources was almost always seen as a "last resort" and only made use of when all other means of securing water for the household had failed.

The research on which this report is based was conducted just after a period of extensive and widespread rainfall, over the entire study area. Many households had responded to the unusually high rainfall by rigging up tanks and other large containers, to contain and store as much water as they could. Some households had tanks which were set up permanently to catch as much runoff from rainfall as possible.

(14) Sanitation

The overwhelming majority of households considered in this study used pit latrines. In our survey of 4731 households, conducted in 30 settlements, 95% (4482) of respondents indicated that they use a pit latrine as a toilet. Only 60 respondents (1,3%) had access to flushing toilets.

In most settlements, pit latrines were constructed on the household stand, by the residents of the household, primarily for use by residents of the households. Newly established households that did not have their own pit latrines generally reached some form of informal arrangement with neighbours, to use their latrine.

It appears that the responsibility for constructing and maintaining pit latrines has largely remained at the level of the household.

In some villages development projects have been initiated to improve the sanitation situation. An interesting feature of these projects is that they reinforce the responsibility of sanitation management at the household level. For example, a sanitation project implemented by Mvula Trust

The potential for pit latrines to contaminate ground water supply was raised as a critical by residents from settlements where there was a heavy reliance on ground water for household consumption.

(15) Conclusion

Throughout the Extended Supply Area of Magalies Water, households have adopted a range of formal and informal methods of accessing water and ensuring an adequate supply. Although some of these ways of accessing water may be informal and possibly illegal, they should be viewed as orchestrated deviance, but rather as innovative ways of coping under extremely difficult circumstances. The adoption of this perspective allows one to examine this chapter has looked at how investments in variety of strategies and options for securing an adequate water supply (the "readiness" of households to receive and manage water), can be incorporated into future.

14.3.3 Affordability and willingness to pay

(1) Willingness to pay for water

Affordability to pay for water does not necessarily indicate a willingness to pay for water supplied to the household. The potential for cost recovery is complex and various issues historical, social and economic factors need to be taken into account. This Table 14-3 illustrates willingness to pay and amounts households are willing to pay in Mpumalanga and North West Province.

38% of respondents in Mpumalanga said they were prepared to pay for water, whilst in the North West 54% of the respondents said they were prepared to pay for water. A combination of reasons exist for this difference: existing cultures of payment; historical payment mechanisms; awareness of costs associated with the supply of water; type of water supply.

Why people will pay for water:

North West: Of the 54% of the respondents who said they would pay for water, the majority of respondents (30%) said it is because it costs money to provide water. A possible reason for this is due to the culture of payment awareness of costs associated with water.

Mpumalanga: Of the 38% of the respondents who said they would pay for water, 14% said it because it costs money to provide water. A possible reason for the smaller percentage of these response in Mpumlanaga than in the North West is that few people are paying for water creating a possible lack of awareness of costs associated with water provision. Also, if people have not, in the past, allocated a proportion of the household budget to water provision, the possibility of a change in budget allocation might be a difficult notion, preventing the readiness of households to pay for water provision.

Why people will not pay for water:

North West: Of the 37% of respondents who said they would not pay for water no answer stood out as a reason for not paying for water, although the majority of responses were "no answer".

Mpumalanga: Of the 46% of the respondents who said they would not pay for water two reasons stood out, namely "it is a gift from God" and "we have never paid". The second reason is in line with the overall argument that awareness of costs associated with water is low in Mpumlanga. Further, the lack of enforcement from government officials in former Kwandebele in order to maintain popular support could have prompted perceptions that water is a "gift from God".

Table 14-4 shows the relation between current payment systems, access to water and willingness to pay for water.

In the North West there is greater culture of payment than in Mpumalanga. A possible reason for this is that although people have not been paying for water in the formal payment system, they have been paying for water in the informal delivery system. These payments have been made to private vendors selling water from donkey carts or their back yards and to unauthorised contractors for unauthorised connections. In Mpumalanga people have not been exposed to paying for water. Government officials in the former Kwandebele promoted the installation of yard connections and did not enforce any payment system. Buying water from private vendors has also not been a way of accessing water as it has in the North West.

The average amount that respondents were prepared to pay for water in Mpumalanga is zero and in North West between R5.00 and R20.00. This is most likely the case because in Mpumalanga people have not been faced with the same challenge to pay for the water as people in the North West. A reason for this is that in Mpumalanga all the connections were not authorised and the authorities supported the practice of unauthorised connections. In North West the Bophutatswana authorities were hostile to unauthorised connections and they only became apparent after the fall of the Mangope regime when the local political environment was highly chaotic and unauthorised contractors were able to operate effectively.

Equally as significant as the above point is the amount of respondents that chose not to answer the question at all. In both the North West and Mpumalanga this represents the majority of respondents. A possible reason for this is that people might have been wary of the consequences of such a question. This point presents a major challenge to Magalies Water cost recovery strategy.

Willingness to pay for water can also be seen from a community perspective, rather than the individual perspective. The following example from research conducted in Molote City shows that in some cases water is not necessarily on the list of top priority in a

community. Willingness, therefore includes communities acceptance of projects in terms of their needs and development strategy.

(2) Housing versus water in Molote City

In the 1960's people From the Bakubung tribal authority, living near Boons were forcibly removed from their land and taken to Ledig, near Sun City. In 1994, following the South African elections, some of the previous residents were successfully able to reclaim land that had been taken from them. In March 1994, about 80 households moved together, creating the settlement of Molote City.

The residents of Molote City have been faced with a number of hardships since reclaiming their ancestral land. When they returned they had to have police protection after being threatened by local white right-wing organizations. From the time of their arrival, residents were living in informal shacks which were inadequate for protecting residents from the exceptionally cold winters experienced in the area. This was especially difficult for older people, who comprised the majority of residents, wanting to return to their former homes.

Through the support of organizations like Mvula Trust, sufficient ground water has been made available to residents, in the form of two large storage tanks, which feed a simple network of stand pipes in the settlement. The tanks are replenished with water from a borehole, which is pumped into the tanks using a diesel tanks. Residents pay a small amount every month to maintain the system.

Unlike most of the other settlements that formed part of this study, residents of Motlhabe seemed remarkably unconcerned over water issues. An enquiry into this revealed that the present site of the settlement was not the original locality of the settlement, which was approximately one kilometre away. Collectively, residents were struggling to accumulate sufficient resources to reconstruct their homes, as they were in the past. Most residents appeared to regard the settlement as temporary and were reluctant to invest too much in their present locality. For them, adequate housing was their primary concern. This was heightened by the destruction that heavy rain just prior to the research had brought to the settlement. Many residents suffered huge losses after their homes were flooded. Some residents questioned our research into community water management and suggested that in the face of the grave housing crisis that they were faced with, our pre-occupation with water was inappropriate in the context of Molote City.

(3) Affordability

Table 14-5 illustrates aspects of Affordability:

This average monthly household income figure represents the total income the household is able to generate and includes absent members of the household sending money back on a monthly or yearly basis.

It must be noted that at times it was difficult to calculate the total household income and some respondents were suspicious of this question and could have answered according to their perceptions of the research agenda.

The average amount that respondents were prepared to pay for water in Mpumalanga is zero and in North West between R5.00 and R20.00. This is most likely the case because in Mpumalanga people have not been faced with the same challenge to pay for the water as people in the North West. A reason for this is that in Mpumalanga all the connections were not authorised and the authorities supported the practice of unauthorised connections. In North West the Bophutatswana authorities were hostile to unauthorised connections and they only became apparent after the fall of the Mangope regime when the local political environment was highly chaotic and unauthorised contractors were able to operate effectively.

Equally as significant as the above point is the amount of respondents that chose not to answer the question at all. In both the North West and Mpumalanga this represents the majority of respondents. A possible reason for this is that people might have been wary of the consequences of such a question. This point presents a major challenge to Magalies Water cost recovery strategy.

As shown in Table 14-6. The majority of respondents in the North West spend between R1 and R5 on water on a monthly basis. The majority of respondents in Mpumalanga spend no money on water.

Money spent on water in the North West is predominantly for payment to private vendors and costs associated with community boreholes, whereby households contribute money to sustain the operation and maintenance of a borehole. Although the majority of respondents in Mpumalanga said they did not pay for water, 38% said they paid between R1 and R5 for water. These payments, like North West are to private vendors and for community boreholes.

The type of supply will also influence the amount of time and energy a household will use in order to ensure a continuous supply of water to the household. The Table 14-7 illustrates the allocations of time and money associated with types of water supply system.

Households expenditure on water not obtained through a formal water supply mechanisms is often higher than expenditure in formal supply mechanisms. This is especially the case for households that buy water on a daily basis from private vendors, whereby a household can spend as much as R35 per month on water with an average consumption of 100*l* per day per household. Unauthorised connections cost the household and initial amount of approximately R350 to R750 and there are no further payments associated with the provision of water.

Although in many cases household expenditure in informal water provision is lower than in formal water provision there is still a level of awareness associated with the costs of

water. The challenge to second and third tier structures is to understand consumer behaviour in the informal water market in order to transfer the level of awareness established through the informal sector to the formal sector.

Table 14-8 provides information about costs associated with formal and informal water delivery mechanisms.

(4) Average household income:

As depicted in the graph below, the average monthly household income for both the North West Province and Mpumalanga is between R300 and R600. Household income is usually made up of more than one persons earnings. A possible reason why this is the majority response is that pensions often make up the major portion of the household income. The average pension amount per month is R360. Results from the household survey concerning pensioners is the following:

North West	-	23%
Mpumalanga	-	17%

Note: The interviews took place during the day, when the majority of employed residents were absent from the household.

The household survey however, has limitations for understanding household income and the reliability of household income. For example it does not recognise the households ability to borrow from and lend to other family members and neighbours can be seen as a socially acceptable means of transferring resources between households or other domestic units at different times.

(5) Size of the family

The survey results suggest that households in the North West have fewer members living in the household than in Mpumalanga. The majority of respondents in the North West indicated that there are between 2 and 5 members in the family, whilst in Mpumalanga the majority of respondents indicated they have between 6 and 10 members in the family.

The size of the family has implications for the household economy from a financial perspective. The more family members living and/or contributing to a household with a household income between R300 and R600 per month the greater the pressure on the financial resources of the household. It is important to also recognise that the family size and family structure affects far more than the household economy. The size of the family affects the level of support mechanism available to the family to adopt alternative strategies for survival based on household labour.

The household survey also tended to focus on household income from a cash perspective, i.e. cash entering the household and did not focus on *wealth* of the household from a resource perspective, eg cattle.