

Status of the Water Sector in Mpumalanga

Achievements & Challenges

Mpumalanga Water Summit 2006
16 - 17 January 2006



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA

Purpose of Summit:

- To provide an opportunity for all stakeholders to deliberate and formulate strategies and resolutions to address the problem of water and sanitation backlogs that frustrates government's objective to provide clean, safe, potable water for all citizens by 2008 and 2010 respectively.
- To seek practical and realistic solutions that would assist in the transformation of the Water Resources Management for Economic Growth and Development in Mpumalanga Province.

Purpose of the document:

- To highlight the status quo and challenges of Water Services and Water Resources for the Province

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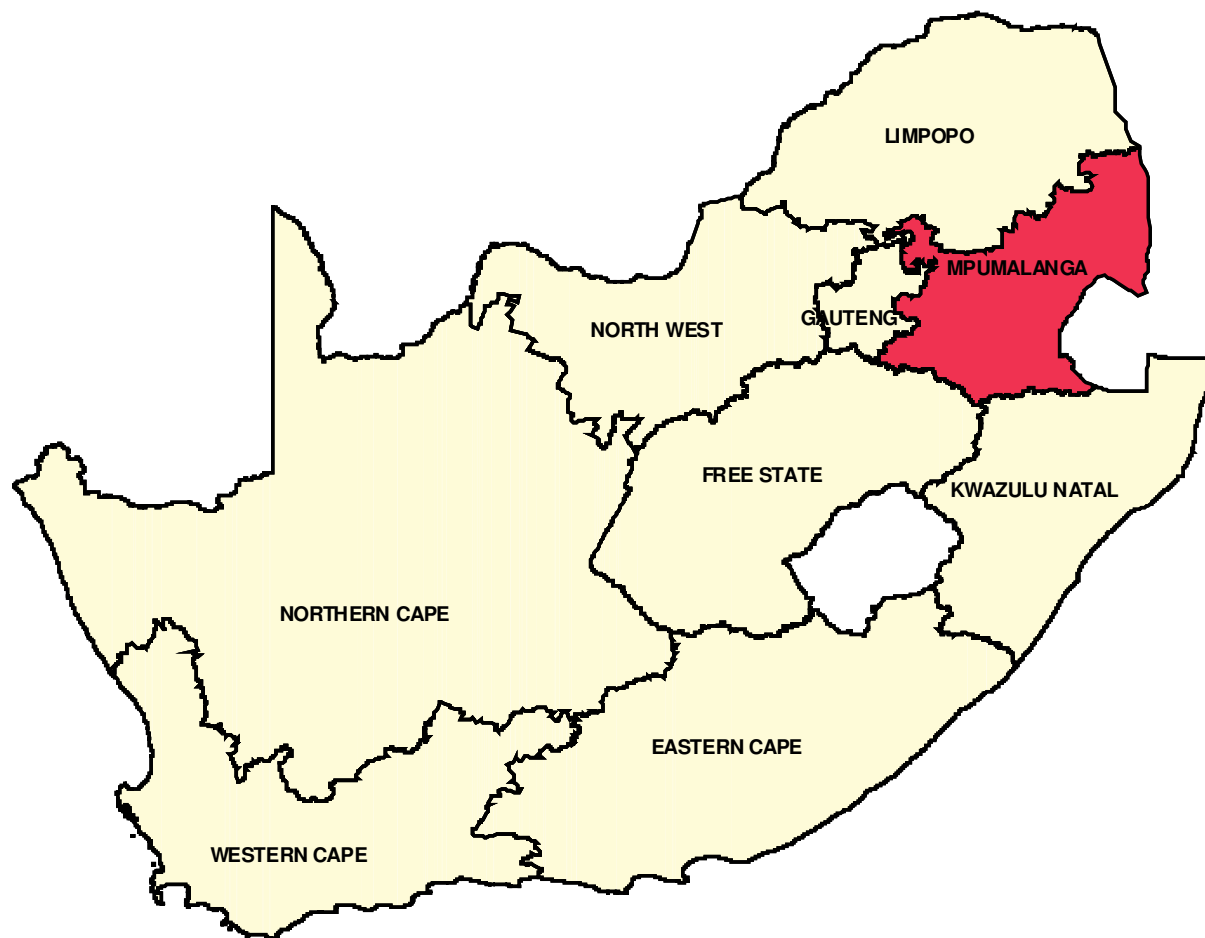
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1. GENERAL

Key Driving Forces

- **Ehlanzeni DM** - Industries (Sugar, paper mill, etc), Mining, crop farming, commercial forestry eco tourism, game farming.
- **Nkangala DM** - Mining, power generation, industries (metallurgic, etc) dry land agriculture, eco tourism, irrigated cultivation, cattle feed lots.
- **Gert Sibande DM** - Industries (e.g. petrochemicals), Power Stations, Wet Industries, commercial forestry, dry agriculture, Mining.

Main Characteristics

Rainfall

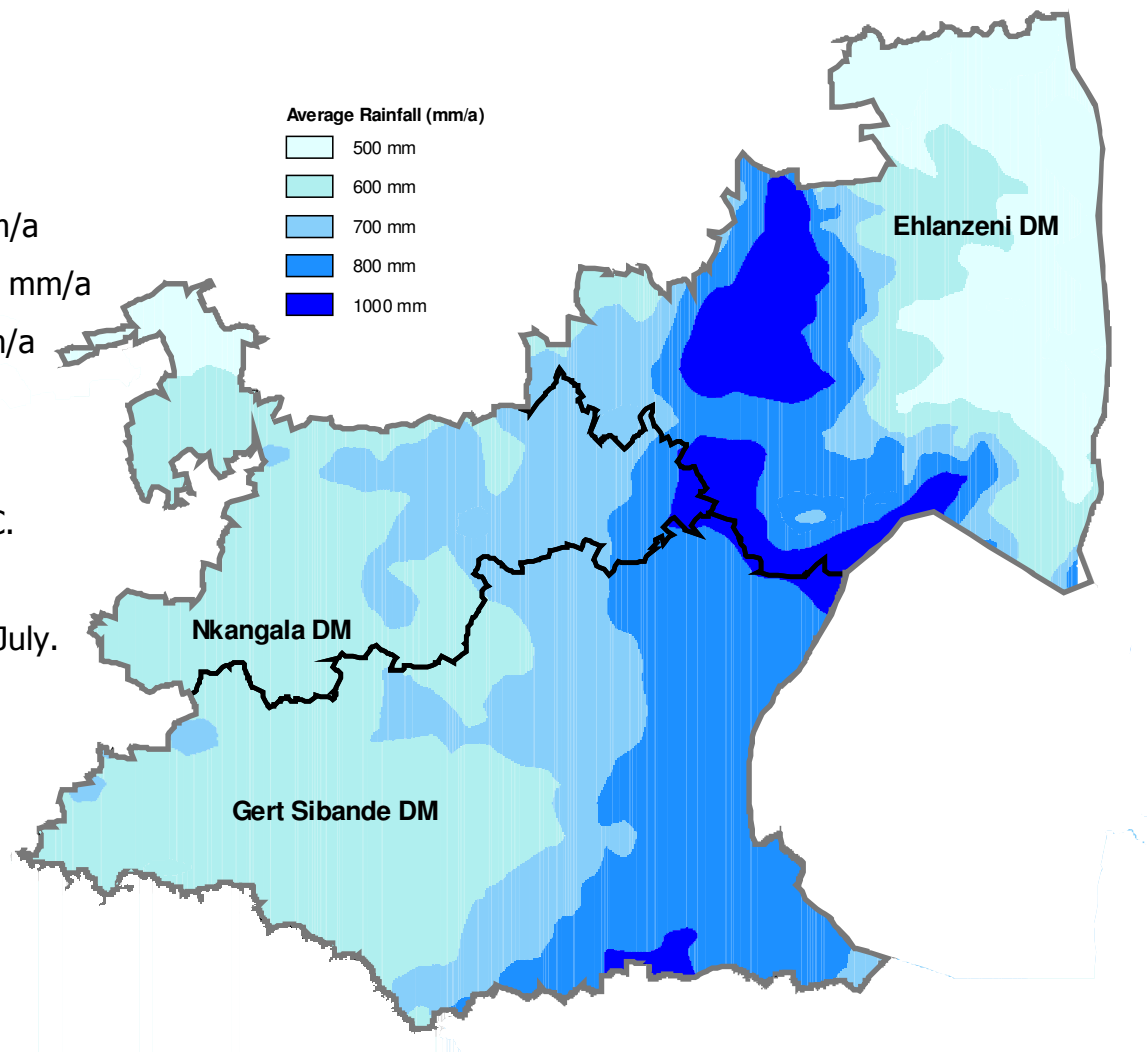
- **Ehlanzeni DM** - Ranges between 500 and 1000 mm/a
- **Gert Sibande DM** - Ranges between 600 and 1000 mm/a
- **Nkangala DM** - Ranges between 500 and 1000 mm/a

Climate

- Mean Temperatures varies between 12 °C and 21 °C.
- Maximum temperatures are experienced in January.
- Minimums temperatures are experienced in June to July.

Land Use

Land use ranges between commercial dryland, commercial irrigation, forestry and mining.



Topography

The Nkangala DM area is high lying with altitudes at 1700 m.a.s.l in the south and at Middelburg it drops to 1500 m.a.s.l. These areas are characterized by gently rolling hills. The Olifants Water Management Area drains to the north with the southern and western areas forming the water shed at altitudes around 1700 m.a.s.l. The areas below the Loskop Dam are below 1200 m.a.s.l. In the Delmas LM the topography is relative flat, and the average height is $\pm 1\ 580\text{m}$ above sea level.

The topography within Ehlanzeni DM varies drastically, from high lying mountainous areas in the west (Thaba Chweu LM) to low lying flats in the east (Nkomazi LM).

In Thaba Chweu LM the altitude vary from around 800m to over 2200m. Mbombela LM has elevations ranging from 400m in the east to over 1700m in the west. The lowest areas, in the eastern side of Umjindi, are just over 400m with the highest areas in the south being over 1700m high. The Nkomazi LM area, which comprises mainly of low lying flats have altitudes between 200m and 1200m.

The topography of the Gert Sibande DM's area consists of rolling to relatively flat areas in the west, changing to a more mountainous landscape in the eastern parts. Most of the District area drains to the south towards the Vaal River catchment area, while the northern strip drains northwards towards the Olifants catchment and the eastern topography is shaped towards Swaziland with international rivers draining in an easterly direction.

Settlement Types

- **Ehlanzeni DM** - Apart from the major urban towns, dense settlements and villages are grouped fairly close together on the eastern side in the former homeland areas (Nkomazi and Nsikazi). Very little farming communities exist.
- **Gert Sibande DM** - Apart from the major urban towns, dense settlements and villages are grouped fairly close together on the eastern side in the former homeland area in the Albert Luthuli LM area. Farming communities exist.
- **Nkangala DM** - Apart from the major urban towns, dense settlements are grouped fairly close together on the Northern side (Former Kwandebele area). Farming communities exist.

Water Resources

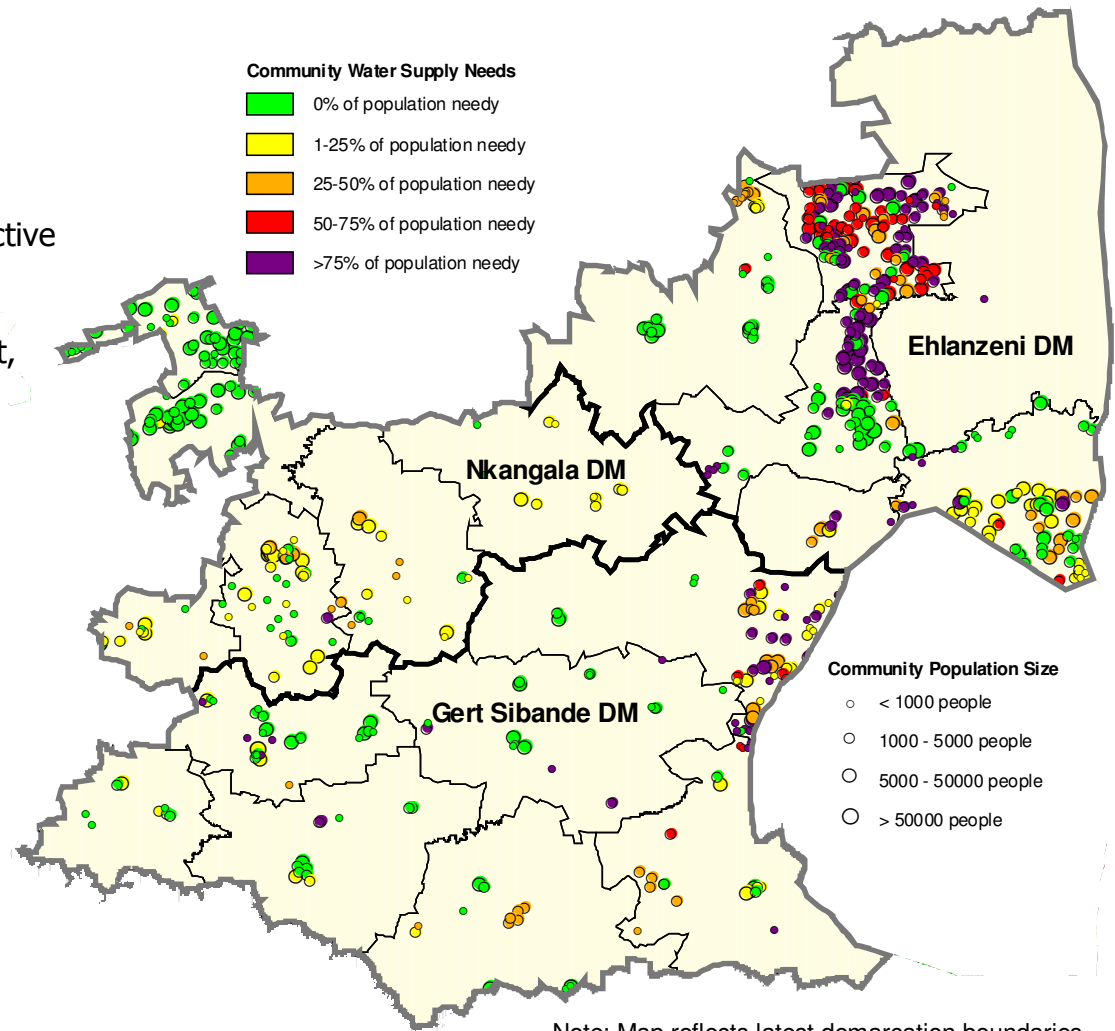
Water management areas situated in the Mpumalanga province are the Olifants, Inkomati, Upper Vaal and Usutu/ Mhlathuze. Although groundwater development has taken place, surface water plays the most prominent role in the province, mainly due to the geology underlying certain areas and the ease of developing surface water schemes. The greatest use for Groundwater occurs in the Middle Olifants sub area. High potential for groundwater development exist in this area as well as in the Usutu water management area.

2. WATER SERVICES

Basic Water Supply Backlogs

Key Challenges

- Lack of integrated planning (WSDP's, IDP linkage)
- Updated WSDP's – Develop & utilize WSDP's as effective management tools
- Sector collaboration
- Institutional capacity (Planning, O&M, Refurbishment, MIG Implementation, Revenue Management, Customer Care)
- Free Basic Water to all in Mpumalanga
- Eradication of backlog with current funding streams
- Transfer of infrastructure
- Setting up of CMA's and water user associations
- Olifants & Inkomati catchment management areas are stressed
- Redistribution of water to emerging farmers
- Water quality (Ensuring & monitoring)
- Drought
- Ad Hoc settlement patterns
- Demand management
- Informal connections/tampering with infrastructure
- Traditional leaders
- Influx of immigrants
- Western Highveld – Bulk water service provider
- Section 78 assessments



District Municipality	Population (Blueprint 2005)	Population Below RDP for Water (Blueprint 2005)	Cost to Eradicate Backlog (R1200/person)
Ehlanzeni DM	1,144,784	386,688	R464,025,885.60
Gert Sibande DM	1,080,914	191,156	R229,386,600.00
Nkangala DM	1,030,000	207,550	R249,060,000.00
Total	3,255,698	785,394	R942,472,485.60

- * Figures based on Local Government input & consultation (Blueprint Document 2005 initiated by Premier's office).
- * Figures within 10% of StatsSa information.
- * Cost/person to eradicate backlog estimated at R1200/person.
- * Figures do not reflect latest demarcation changes.
- * The netto change in water needs due to demarcation changes is estimated at 98 000.

Basic Sanitation Infrastructure Backlogs

District Municipality	Population (Blueprint 2005)	Population Below RDP for Sanitation (Blueprint 2005)	Cost to Eradicate Backlog (R3500/HH)
Ehlanzeni DM	1,144,784	728,179	R566,361,293.56
Gert Sibande DM	1,080,914	371,687	R289,089,500.00
Nkangala DM	1,030,000	533,700	R446,877,990.43
Total	3,255,698	1,633,565	R1,302,328,783.99

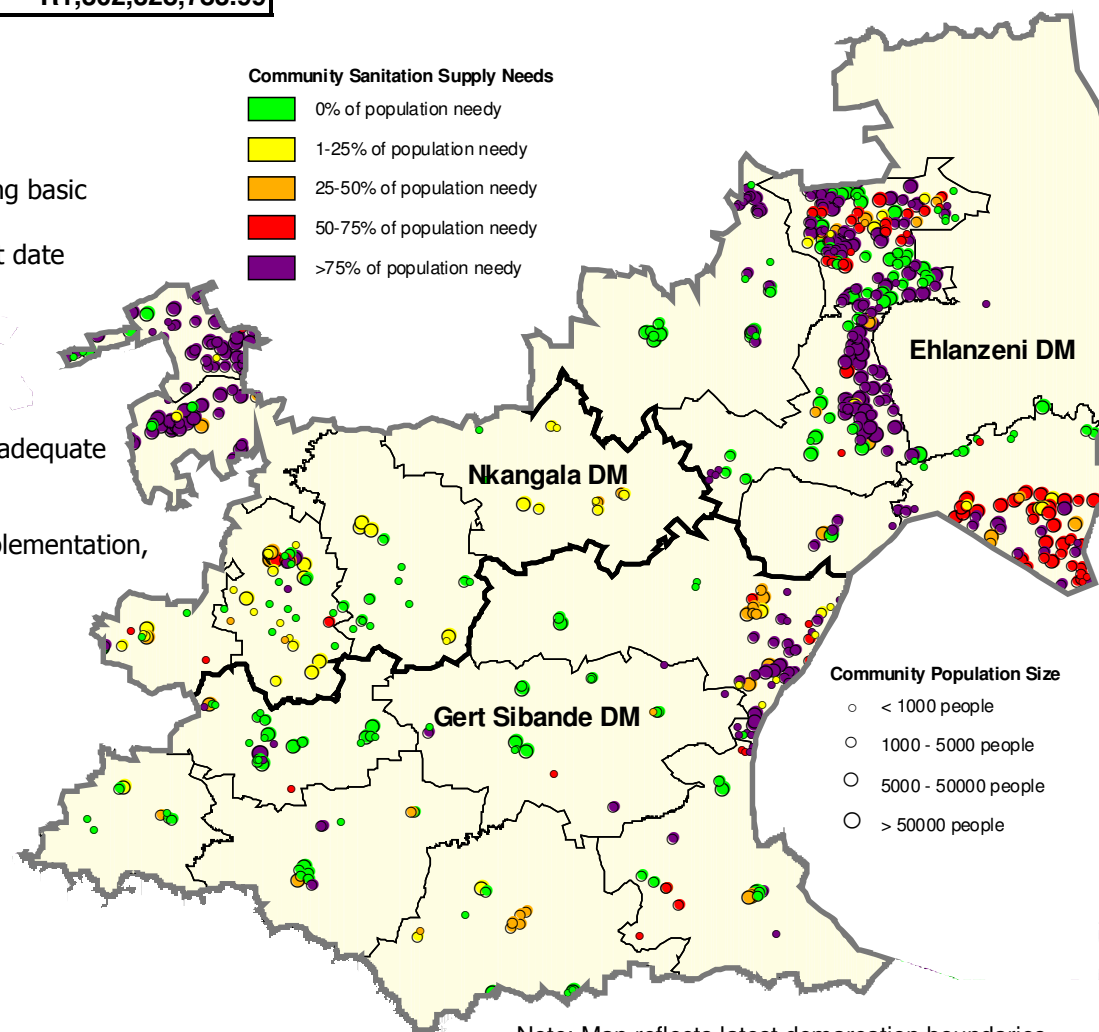
- * Figures based on Local Government input & consultation (Blueprint Document 2005 initiated by Premier's office).
- * Figures within 10% of StatsSa information.
- * Cost/HH to eradicate backlog estimated at R3500/HH.
- * Figures based on dry sanitation solutions as well as limited water borne solutions.
- * Figures do not reflect latest demarcation changes.
- * The netto change in sanitation needs due to demarcation changes is estimated at 220 000.

Key Challenges

- Lack of planning (WSDP's contain limited info)
- MIG BP's – poor quality
- Lack of knowledge by service providers of principles of supplying basic sanitation services
- MIG funding streams inadequate to eradicate backlog by target date
- Sector collaboration
- Ad Hoc settlement patterns
- Traditional leaders
- Influx of immigrants
- Bucket eradication
- Higher levels not adequately planned – Bulk infrastructure not adequate to cope with additional load or water availability not addressed
- Maintenance of VIP's not provided for in LM budgets
- Institutional capacity (Planning, O&M, Refurbishment, MIG Implementation, Revenue Management, Customer Care)

Bucket Sanitation Infrastructure Backlogs for Gert Sibande DM

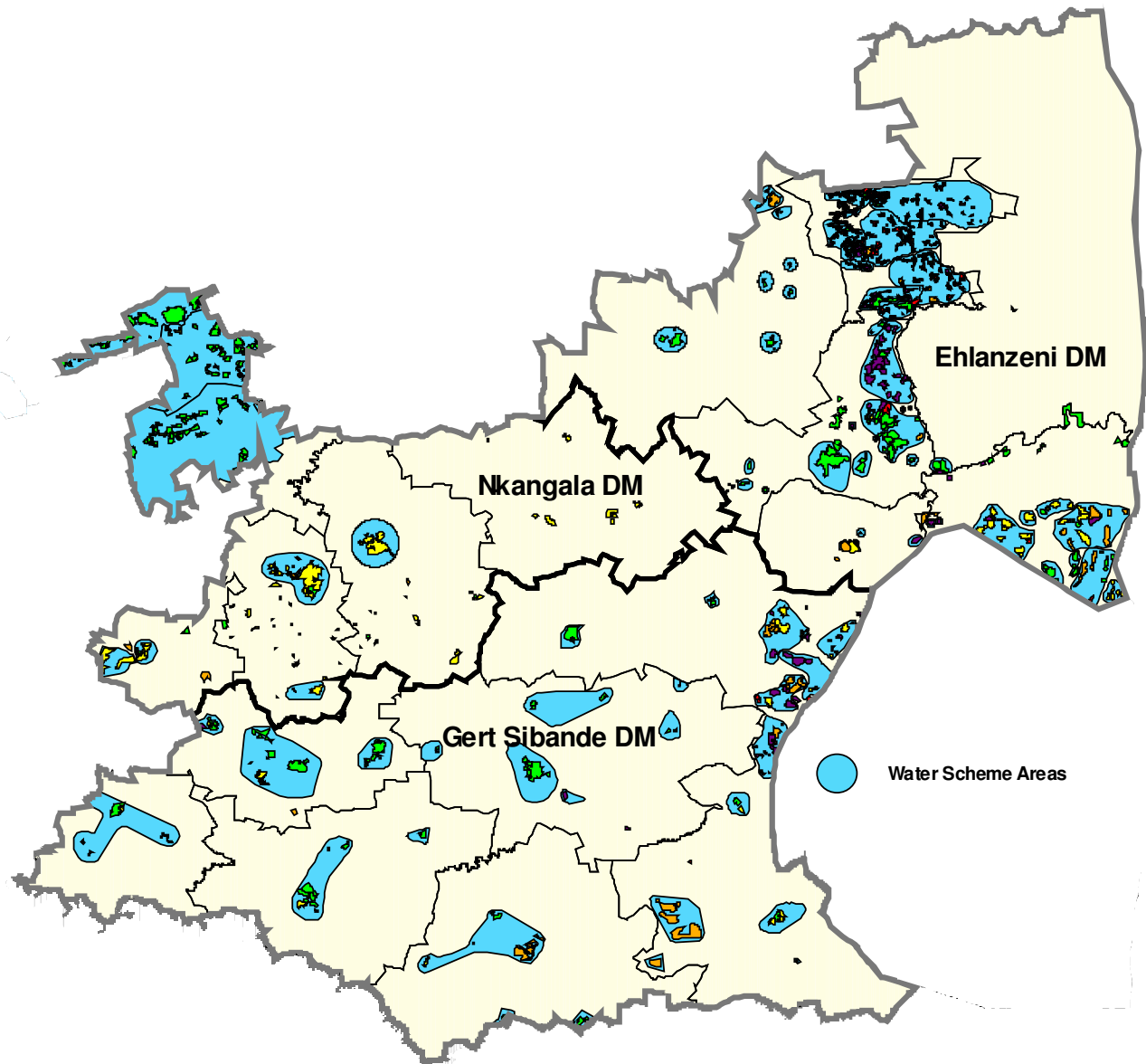
Local Municipality	Number of Households	Bucket System before 2004	Buckets Eradicated
Albert Luthuli	44,237	1,425	1,371
Msukaligwa	34,020	1,110	890
Mkhondo	33,085	1,991	1,915
Pixley ka Seme	20,522	0	0
Lekwa	28,700	5,710	1,572
Dipaleseng	10,472	1,146	1,027
Govan Mbeki	69,167	7,865	1,173
Total	240,203	19,247	7,948



Note: Map reflects latest demarcation boundaries.

Water Scheme Areas

- There are 84 schemes in the province
- Continuous O&M needed

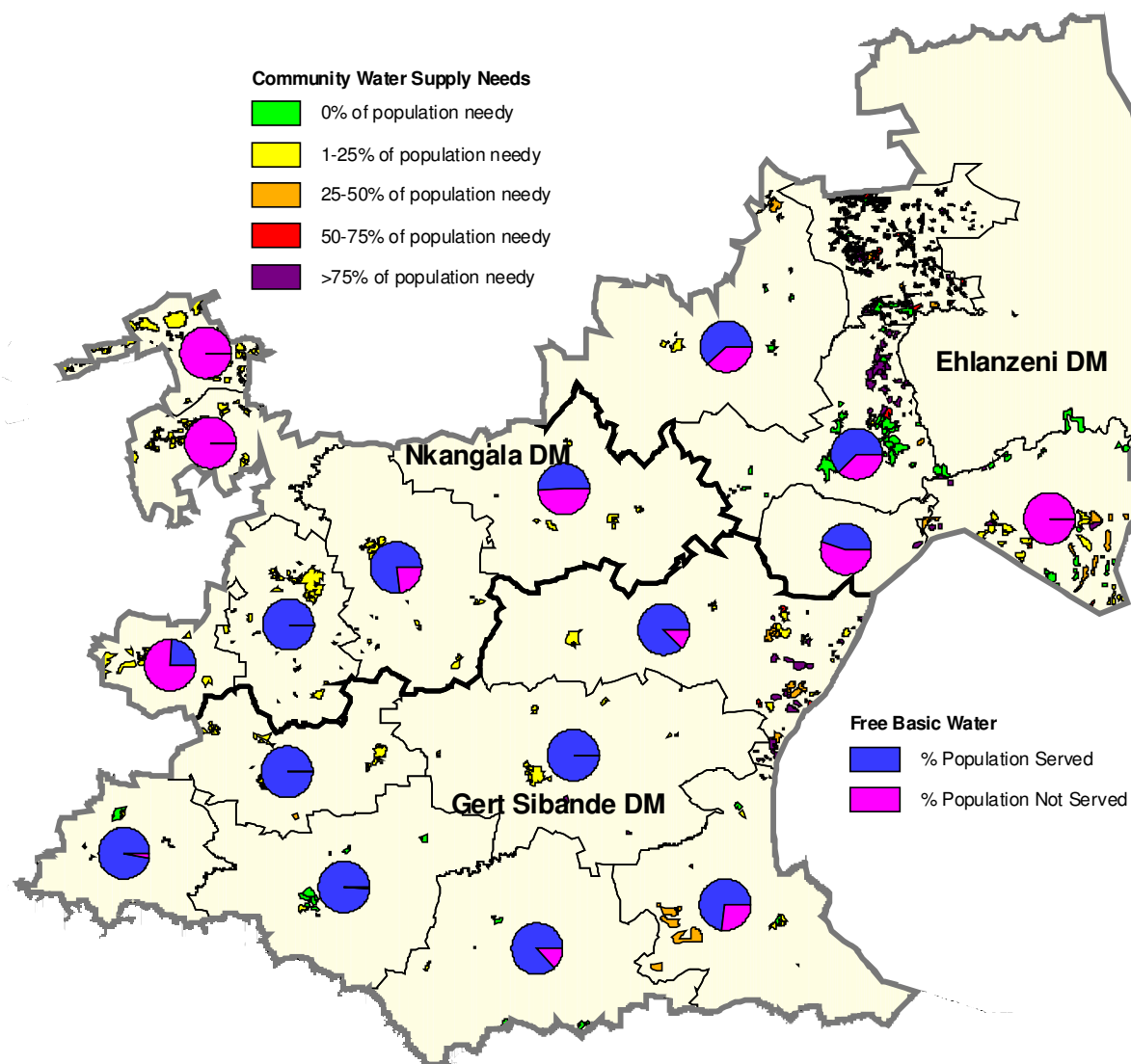


Free Basic Water

Total Population Served					
Service Level	No Infrastructure	Below RDP	At RDP	Above RDP	Total
Total	200948	444192	434088	2013289	3092517
Served	10148	256399	299125	1254473	1750145
%	5.05	57.72	68.91	62.31	56.59

Population	Total	Poor
Total	3,092,517	1,699,412
Served	1,750,145	850,686
%	56.59	50.06

Data Definitions : Water	
Service Levels :	
No Infrastructure	Household have no access to any infrastructure i.e. those people that still drink unsafe water from a dam, spring, river or stream.
Below RDP	Household have access to infrastructure but at a BELOW RDP standard e.g. Standpipe > 200m
at RDP	The infrastructure necessary to supply 25 litres of potable water per person per day supplied within 200 metres of a household and with a minimum flow of 10 litres per minute (in the case of communal water points) or 6 000 litres of potable water supplied per formal connection per month (in the case of yard or house connections).
Above RDP	Household have access to 'in-house' or 'in-yard' water supply connections.
Poor Classification :	
Poor household	A household who has a total income of less than R800 p/m
Poor population	Total number of people that live in poor households
Data :	
Datstamp	Census 2001 with a growth factor to 2005 is used



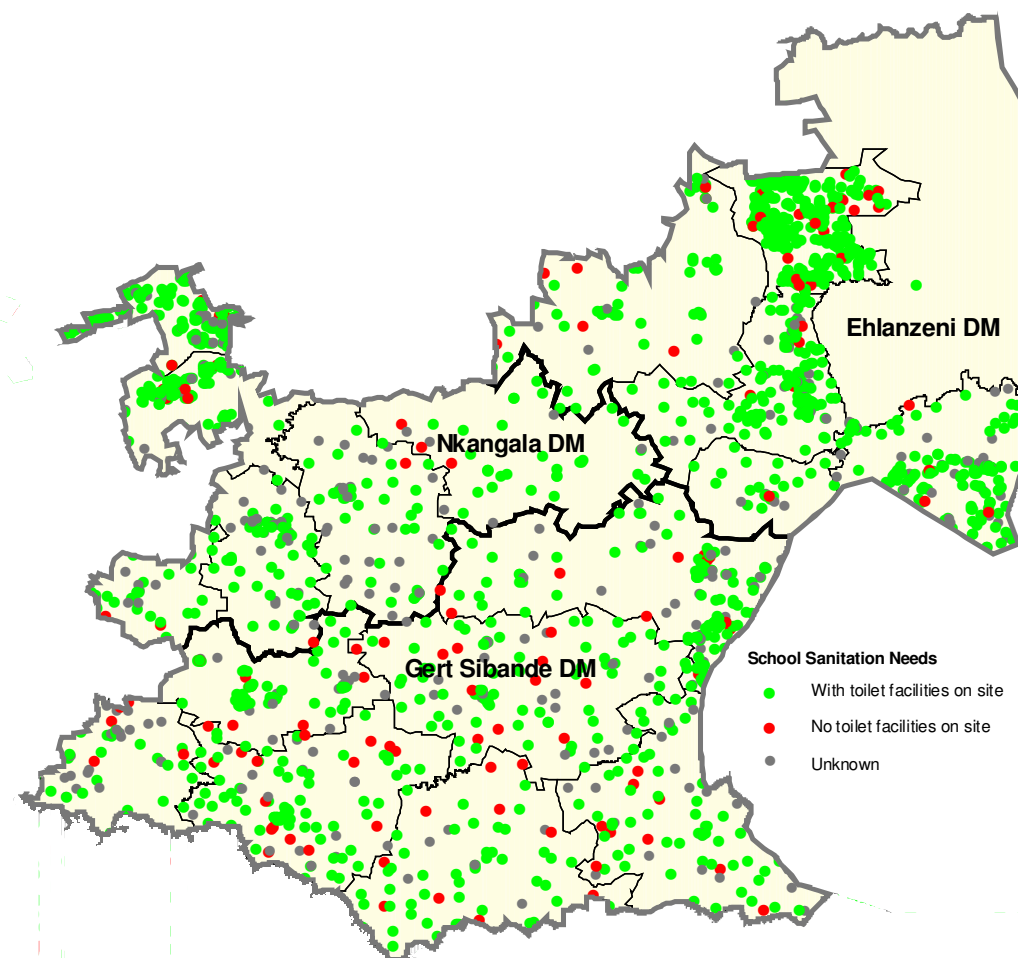
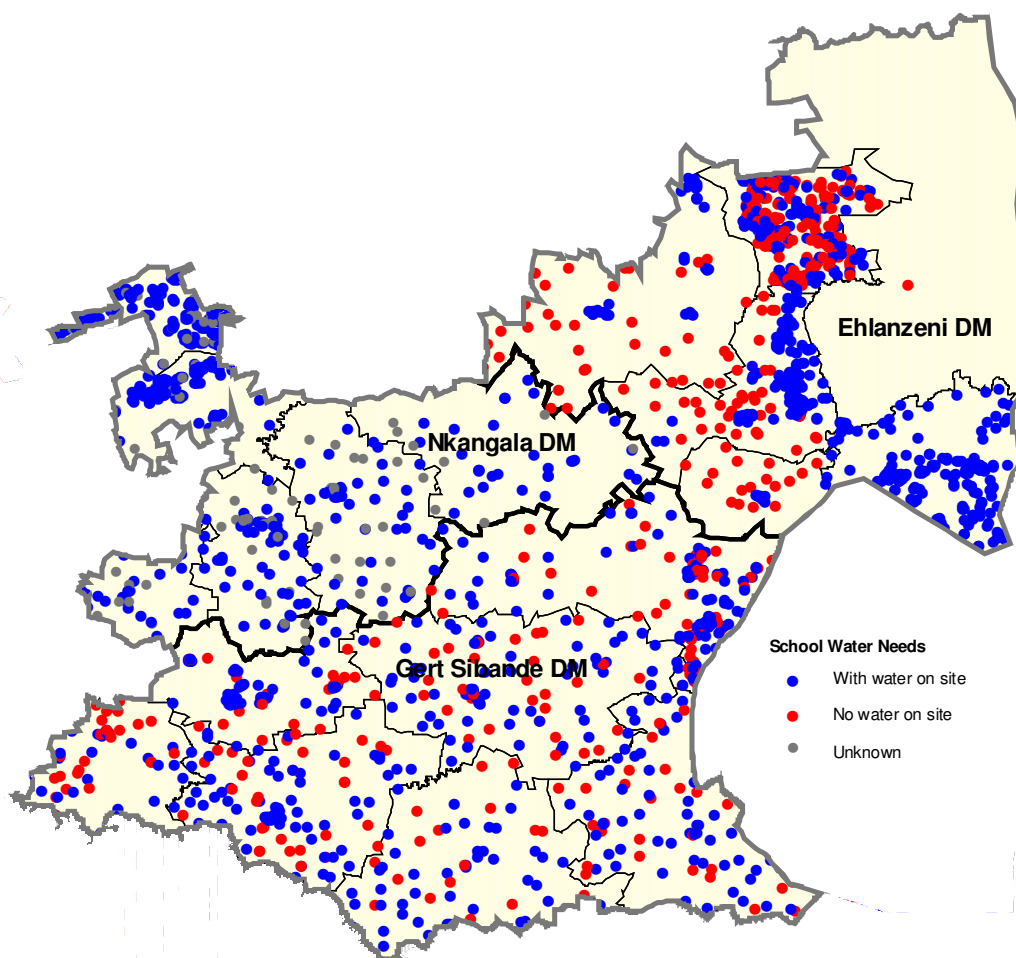
Schools Water & Sanitation Backlogs

Infrastructure Priority Needs	
Current School Infrastructure that needs to be addressed	Current total identified September 2004
Total schools without water	520
No type of water available	
Total schools without sanitation	308
No type of sanitation	

* Figures derived from Infrastructure Monthly Information Review (31 October 2005)

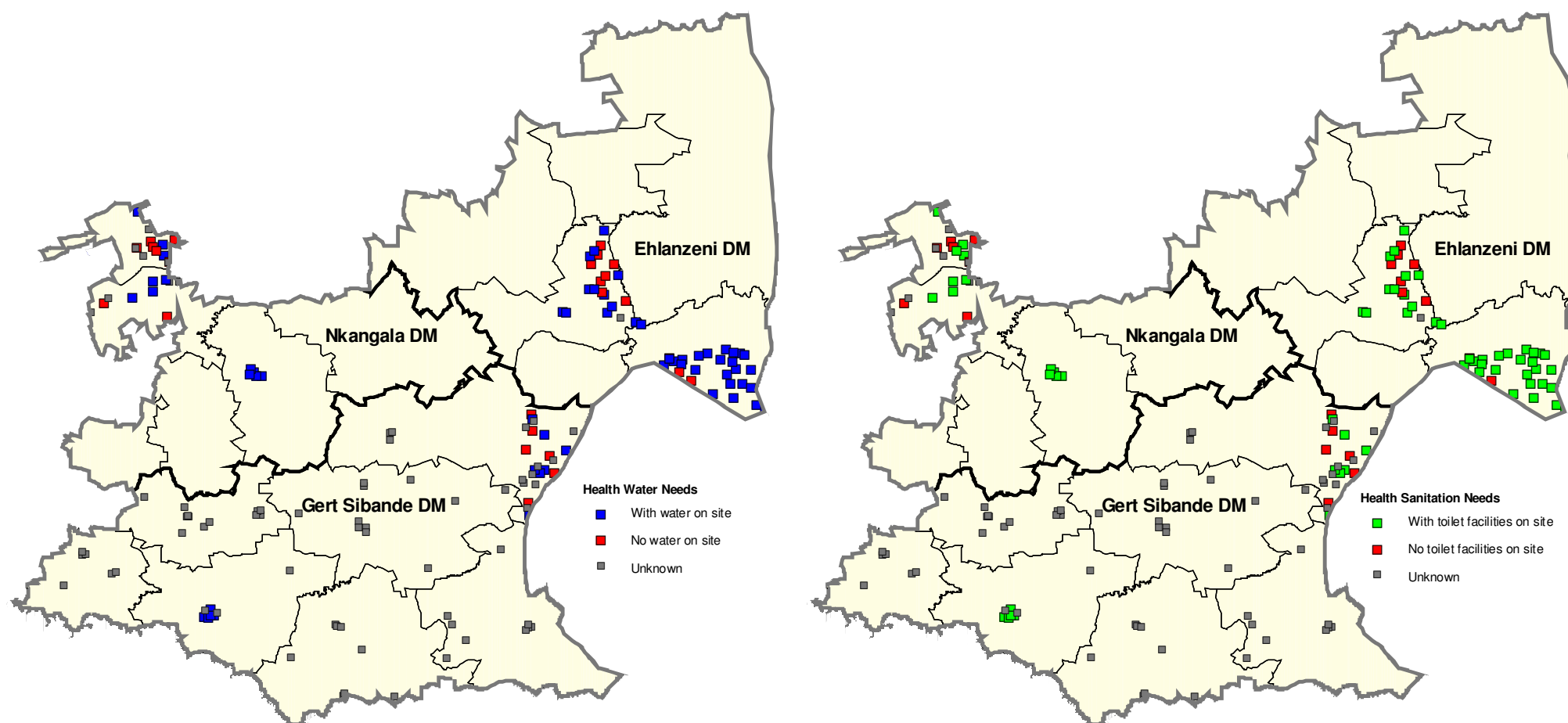
Produced by the Department of Education.

Infrastructure First Delivery			
Category	Financial Year Targets 2005/006	Total year to date	% Progress to data based on target for 2005/06
Water Provision Projects			
Schools provided with portable water (all types)	37	30	81%
Sanitation Provision Projects			
Schools provided with sanitation system (all types)	1269	307	24%



Health Water & Sanitation Backlogs

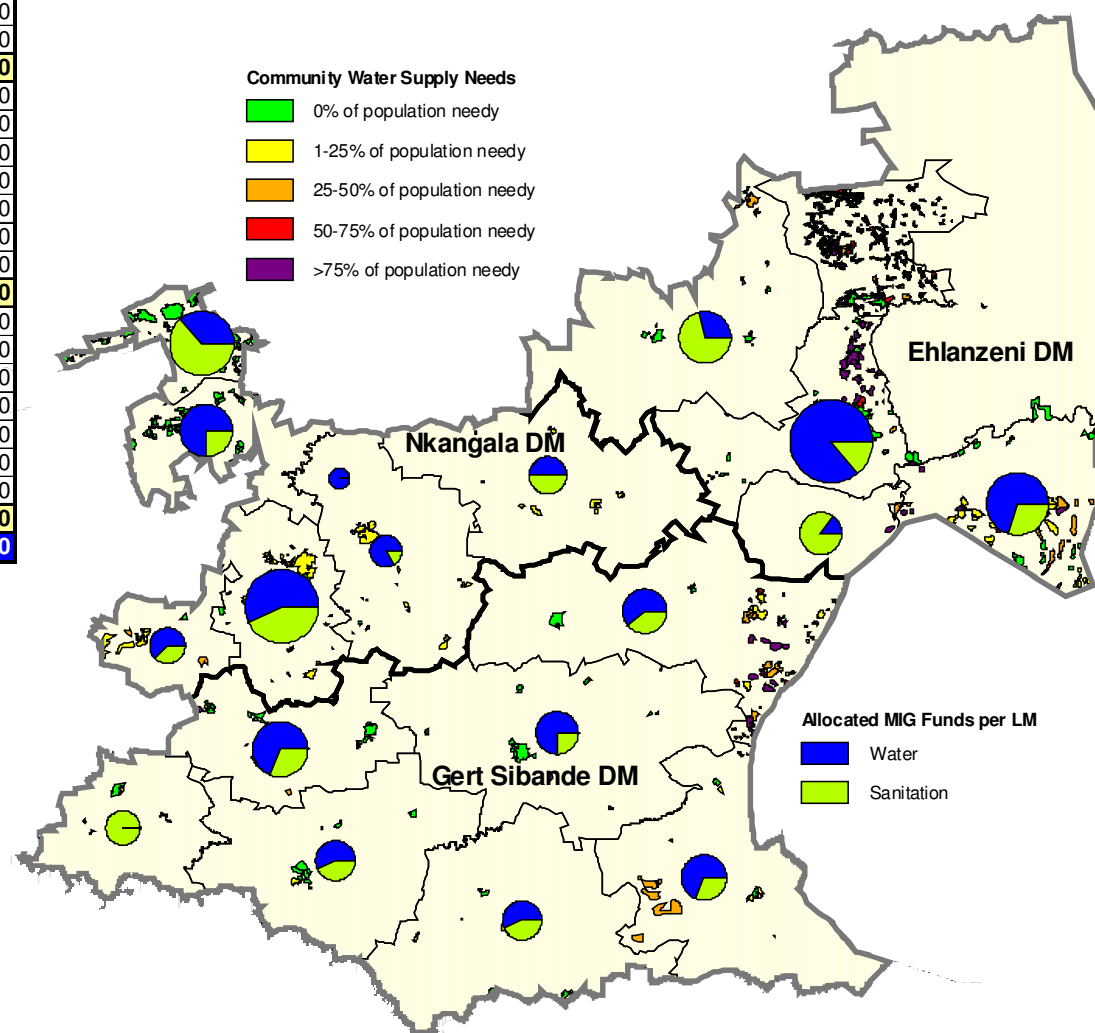
District Municipality	Number of Facilities	Health Water Needs			Health Sanitation Needs		
		Adequate	Inadequate	Unknown	Adequate	Inadequate	Unknown
Ehlanzeni DM	49	37	11	1	39	9	1
Gert Sibande DM	83	13	6	64	13	6	64
Nkangala DM	30	12	8	10	13	7	10
Total	162	62	25	75	65	22	75



MIG Allocations 2005 / 2006

Local Municipality	MIG Allocation Water	MIG Allocation Sanitation	MIG Allocation Water & Sanitation
Mbombela	R64,337,867.00	R10,881,972.00	R75,219,839.00
Nkomazi	R27,414,200.00	R11,968,934.00	R39,383,134.00
Thaba Chweu	R7,408,336.00	R17,707,445.00	R25,115,781.00
Umjindi	R2,140,000.00	R12,080,020.00	R14,220,020.00
Ehlanzeni Total	R101,300,403.00	R52,638,371.00	R153,938,774.00
Albert Luthuli	R9,987,536.00	R6,352,000.00	R16,339,536.00
Dipaleseng	R0.00	R7,651,158.00	R7,651,158.00
Govan Mbeki	R20,276,220.00	R9,253,213.00	R29,529,433.00
Lekwa	R6,900,000.00	R5,195,000.00	R12,095,000.00
Mkhondo	R12,129,912.00	R5,516,390.00	R17,646,302.00
Msukaligwa	R11,005,086.00	R3,752,700.00	R14,757,786.00
Pixley ka Seme	R6,430,000.00	R5,000,000.00	R11,430,000.00
Gert Sibande Total	R66,728,754.00	R42,720,461.00	R109,449,215.00
Delmas	R5,440,600.00	R3,155,000.00	R8,595,600.00
Dr JS Moroka	R15,713,288.00	R26,774,293.00	R42,487,581.00
Emakhazeni	R5,041,400.00	R5,040,000.00	R10,081,400.00
Emalahleni	R33,082,750.00	R24,758,406.00	R57,841,156.00
Steve Tswete	R4,867,566.00	R900,000.00	R5,767,566.00
Thembisile	R19,405,393.00	R6,351,684.00	R25,757,077.00
Nkangala DM	R595,000.00	R0.00	R595,000.00
Nkangala Total	R84,145,997.00	R66,979,383.00	R151,125,380.00
Total	R252,175,154.00	R162,338,215.00	R414,513,369.00

Local Municipality	Number of Water Projects	Number of Sanitation Projects
Mbombela	16	5
Nkomazi	18	5
Thaba Chweu	5	4
Umjindi	2	3
Ehlanzeni Total	41	17
Albert Luthuli	7	5
Dipaleseng	0	4
Govan Mbeki	7	3
Lekwa	4	4
Mkhondo	4	1
Msukaligwa	6	4
Pixley ka Seme	2	1
Gert Sibande Total	30	22
Delmas	9	2
Dr JS Moroka	10	6
Emakhazeni	6	2
Emalahleni	12	8
Steve Tswete	3	1
Thembisile	14	2
Nkangala DM	1	0
Nkangala Total	55	21
Total	126	60



* Figures derived from National Financial Report 2005 / 2006 produced by DPLG