

## 12. LIST OF PROJECTS

Planning in the ZDM is based overall on an improved quality of life, with water services planning targeting the alleviation of the water and sanitation backlogs whilst sustainably maintaining the existing water services infrastructure. The planning methodology to alleviate the water and sanitation backlogs is phased into five-year implementation plans, based on regional schemes.

The district was originally divided into seven regional schemes based on engineering principles, such as topography, water resources and catchments boundaries. However, in order to ensure that all settlements and consumers were included in the water services planning, the number of regional schemes increased to 10 and the boundaries were changed such that the regions defined back-to-back service areas (Figure 12.1). Each region was assigned to a consultant to prepare a regional master plan that identifies all the available options, scheme viability and associated costs in providing safe and reliable water services. Based on the recommendations from each of these master plans (only the seven origin regions were assessed) the ZDM decided on the most appropriate planning option to adopt, considering not only the capital cost but also the long-term O&M costs (Table 12). The costs for the three additional regions are included in within the costs of Table 12. The consultants were then commissioned by the ZDM to prepare a strategy of implementation for water services delivery based on priorities, technical considerations and available budget for capital expenditure, to ensure that sustainable solutions are presented (Appendix 10).

**Table 12: Regional schemes within the ZDM.**

Regional scheme name	Water cost (incl. of VAT)	Sanitation cost (incl. of VAT)	Total cost (incl. of VAT)	People to be served	Roll-out period
Coronation	R 36,160,966	R 4,888,010	R 41,048,976	20,809	26
Hlahlindlela (eMondlo)	R 172,816,000	R 9,730,000	R 182,546,000	142,162	9
Khambi	R 54,164,000	R 4,494,000	R 58,658,000	19,097	9
Mandhlakazi	R 291,254,965	R 31,476,900	R 322,731,865	160,074	22
Mkuze	Unknown	Unknown	Unknown	Unknown	-
Nkonjeni	R 232,303,861	R 47,292,880	R 279,596,741	279,856	14
Simdlangentsha	R 99,352,000	R 5,632,000	R 104,984,000	91,744	12
Simdlangentsha P2 Central	Unknown	Unknown	Unknown	Unknown	-
Simdlangentsha P2 West	Unknown	Unknown	Unknown	Unknown	-
Usuthu	R 463,500,000	R 43,400,000	R 506,900,000	204,941	33
<b>Total</b>	<b>R 1,349,551,792</b>	<b>R 146,913,790</b>	<b>R 1,496,465,582</b>	<b>918,683</b>	

The core objectives of the master plans and strategies are to:

- Investigate alternative ways of providing access to water services.
- Address the need for regional efficiency.
- Address the need to achieve benefit of scale.
- Address the need for low capital costs.
- Address the requirement of equity.
- Investigate the availability of resources from neighbouring WSAs.
- Address the sustainability of existing and planned schemes.
- Use best practice methods to ensure cost effective operations.
- Meet national standards of water supply as a minimum requirement.

**Figure 12.1: The seven regional water services schemes planned within the Zululand District Municipality.**

In designing the water schemes, standards will be adopted to accommodate future developments and upgrades to each scheme. Without house connections for water supply, the short-term planning for sanitation projects is, through necessity, VIP latrines. These will be installed in conjunction with a health and hygiene awareness programme. The planned phases of sanitation projects will try to be aligned with the planned water schemes to ensure holistic improved health and hygiene to each community.

The hydrocensus data (see Section 5) is used to identify areas of need and target these areas with appropriate and effective solutions for the short-term in terms of the Zululand Rudimentary Water Supply Programme. An investigation into the water supply of 5ℓ/person/day within 800m, 1000m and 1200m to all communities within the tribal areas of the ZDM was completed. This programme utilises boreholes equipped with handpumps and protected springs.

By far the biggest hindrance in providing water services is the consumer's inability and/or unwillingness to pay for the services provided. Therefore, planning is based on communal water supply in the rural areas where consumers cannot afford to pay for higher levels of service, with the option of installing different service levels for different consumers in the same community, based on their individual ability to pay, over the long-term.

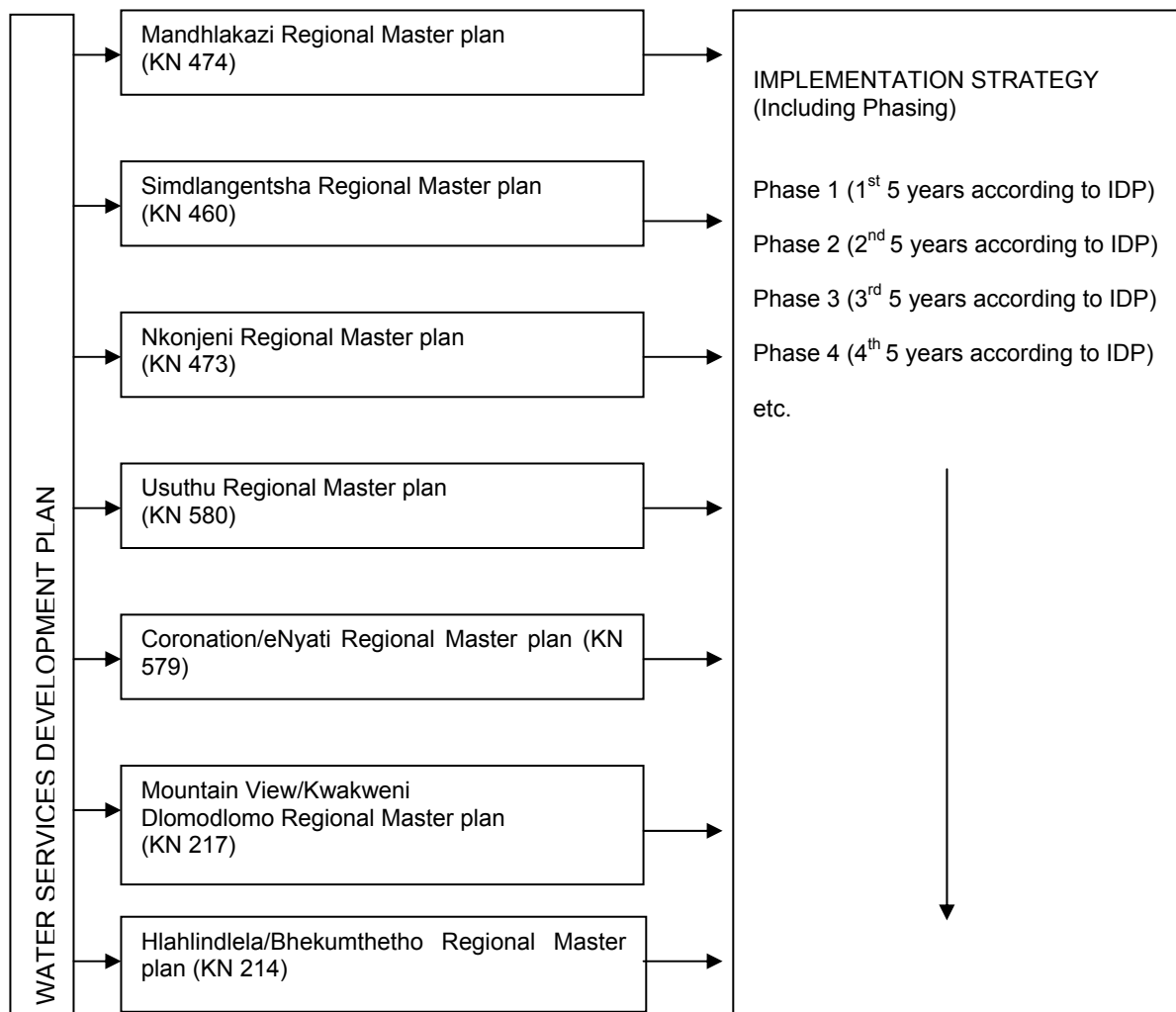
Although in the past water and sanitation provision have been dealt with separately, often leading to health and hygiene problems associated with waterborne diseases, the ZDM recognises the importance of aligning the supply of water and sanitation projects. The Sanitation Task Group (SANTAG), a subcommittee of the KwaZulu-Natal Water and Sanitation Task Team (WATSAN) has developed a District Support programme by establishing the Zululand District Sanitation Task Group. This has helped facilitate focused discussion around local sanitation issues, improving the flow of information and enabling effective planning for sanitation.

Activities include:

- Sanitation needs identification and planning.
- Support to the WSA.
- Promotion of the Sanitation Programme policy and approach among local role-players.
- Promotion of interdepartmental planning and action for sanitation.
- Lesson sharing and support.
- Role-player networking and liaison.

Figure 12.2 indicates the relationship between the WSDP, the regional master plans and the implementation strategies. Details of the regional schemes are set out in Appendix 10. Once funding is available, business plans will be compiled for the prioritised phase in accordance with the implementation strategies. Implementation and management of these regional schemes falls under the HOD: Technical Services and the Director: Water Services Authority, who have ensured that the strategies conform to the ZDM's goals and the objectives and its adopted IDP and WSDP.

**Figure 12.2: The relationship between the WSDP, master plans and implementation strategies.**



## 12.1 Annual water and sanitation project list

The five-year implementation of services is highlighted in Table 12.1a. This is based on the five-year implementation project list for water services on the projected funding from CMIP and DWAF (now MIG). In addition, the latest MIG cash flows are given in Table 12.1b. These projects however will not adequately address the backlog in water services.

**Table 12.1a: Annual water and sanitation planned project list.**

Scheme	Funder	2003/2004		2004/2005		2005/2006		2006/2007		2007/2008	
Coronation	CMIP	R 1,100,000	R 1,600,000	R 2,700,000	R 3,600,000	R 700,000	R 1,400,000	R 700,000	R 1,400,000	R 700,000	R 1,400,000
	DWAF	R 500,000		R 900,000		R 700,000		R 700,000			
eMondlo/Hlahlindlela	CMIP	R 7,000,000	R 7,500,000	R 10,800,000	R 11,100,000	R 8,100,000	R 13,100,000	R 8,100,000	R 13,100,000	R 8,100,000	R 13,100,000
	DWAF	R 500,000		R 300,000		R 5,000,000		R 5,000,000			
Khambi	CMIP	R 2,500,000	R 3,000,000	R 3,000,000	R 3,900,000	R 1,100,000	R 1,800,000	R 1,100,000	R 1,800,000	R 1,100,000	R 1,800,000
	DWAF	R 500,000		R 900,000		R 700,000		R 700,000			
Mandlakhazi	CMIP	R 6,900,000	R 10,900,000	R 0	R 14,300,000	R 9,700,000	R 15,600,000	R 9,700,000	R 15,600,000	R 9,700,000	R 15,600,000
	DWAF	R 4,000,000		R 14,300,000		R 5,900,000		R 5,900,000			
Nkonjeni	CMIP	R 14,000,000	R 16,500,000	R 13,600,000	R 21,700,000	R 14,600,000	R 23,500,000	R 14,600,000	R 23,500,000	R 14,600,000	R 23,500,000
	DWAF	R 2,500,000		R 8,100,000		R 8,900,000		R 8,900,000			
Ntinini	CMIP	R 0	R 0	R 0	R 0	R 0	R 0	R 0	R 0	R 0	R 0
	DWAF	R 0		R 0		R 0		R 0			
Simdelenghsha Central	CMIP	R 0	R 500,000	R 3,800,000	R 5,000,000	R 6,000,000	R 7,900,000	R 4,600,000	R 6,300,000	R 0	R 600,000
	DWAF	R 500,000		R 1,200,000		R 1,900,000		R 1,700,000			
Simdlangentsha East	CMIP	R 0	R 0	R 0	R 0	R 0	R 0	R 0	R 0	R 0	R 0
	DWAF	R 0		R 0		R 0		R 0			
Simdlangentsha West	CMIP	R 0	R 2,300,000	R 2,500,000	R 4,200,000	R 0	R 1,700,000	R 3,400,000	R 5,300,000	R 6,000,000	R 9,000,000
	DWAF	R 2,300,000		R 1,700,000		R 1,700,000		R 1,900,000			
Usuthu	CMIP	R 0	R 3,900,000	R 13,800,000	R 16,000,000	R 13,500,000	R 21,800,000	R 13,500,000	R 21,800,000	R 13,500,000	R 21,800,000
	DWAF	R 3,900,000		R 2,200,000		R 8,300,000		R 8,300,000			
<b>Total</b>		<b>R 34,100,000</b>		<b>R 61,200,000</b>		<b>R 70,500,000</b>		<b>R 72,500,000</b>		<b>R 70,500,000</b>	

Table 12.1b: MIG cash flows.

2004/2005 Financial Year										
CMIP										
Agent	Project Title	Project #	Environ	Project Type	Savings	Act. Proj Cost	CMIP MOA	Prev.Years Exp	annual value	Allocation
KZ 266 Ulundi	Mbilane Water Supply	2002 C26 025	R	Water			2,587,500.00	1,522,649.00	1,064,851.00	End: 28/02/2005
KZ 266 Ulundi	Ulundi Water loss System Phase 2	2003 C26 081	U	Water			2,350,788.00	2,245,294.32	105,493.68	28/02/2005
KZ 261 eDumbe	Paulpietersburg / Dumbe Bulk Sewer Works	2002 C26 022	U	San			1,480,000.00	1,446,636.25	33,363.75	30/12/2004
DC 26 Zululand	Nongoma: Rehabilitation of Water Supply	2001 C26 008	U	Water			3,000,000.00	2,264,860.07	735,139.93	30/12/2004
DC 26 Zululand	Belgrade: Bulk Water Supply	2001 C26 020	R	Water			1,285,000.00	1,124,953.79	160,046.21	15/12/2004
DC 26 Zululand	Nkonjeni Regional Water Supply	2002 C26 028	R	Water			12,008,000.00	10,473,138.42	1,534,861.58	30/01/2005
KZ 262 uPhongolo	Phongolo: VIP'S for Wards 1, 3 to 9 and 11	2002 C26 029	R	San			2,962,606.00	2,568,170.64	394,435.36	30/12/2004
DC 26 Zululand	Rural Sanitation: Abaqulusi Area	2002 C26 034	R	San			1,715,000.00	1,611,340.53	103,659.47	30/01/2005
DC 26 Zululand	Rural Sanitation: uPhongola Area	2002 C26 036	R	San			1,340,000.00	836,705.99	503,294.01	30/03/2005
DC 26 Zululand	Frischgewaagt Flood Damage	2002 C26 038	R	Water			1,117,200.00	1,049,208.65	67,991.35	30/03/2005
DC 26 Zululand	Enyathi Bulk Sanitation and Water Services	2002 C26 039	R	Water			1,078,000.00	0.00	136,875.00	28/02/2006
DC 26 Zululand	Vrede Bulk Water Supply	2002 C26 042	R	Water			653,600.00	602,801.36	50,798.64	30/12/2004
DC 26 Zululand	eDumbe: Sanitation	2002 C26 043	R	San			7,536,825.00	2,964,639.24	1,561,550.00	30/03/2006
DC 26 Zululand	Water: Mtwathube (ward 4)	2002 C26 044	R	Water			1,000,000.00	126,408.90	873,591.10	28/02/2005
DC 26 Zululand	Nkongolwane Bulk Sewer Works	2002 C26 045	R	San			2,172,400.00	2,080,616.38	91,783.62	30/01/2005
DC 26 Zululand	Rural Sanitation: Ulundi Area Phase 2	2003 C26 078	R	San			13,552,632.00	8,297,839.48	4,502,352.52	30/06/2005
DC 26 Zululand	Rural Sanitation: Abaqulusi Area Phase 2	2003 C26 079	R	San			1,798,246.00	1,251,591.24	546,654.76	28/02/2005
DC 26 Zululand	eMondlo Regional Water Scheme	2003 C26 083	R	Water			15,614,035.00	767,005.23	6,363,000.00	30/01/2006
DC 26 Zululand	Usuthu Regional Water Scheme	2003 C26 085	R	Water			30,004,428.90	1,056,104.22	9,546,520.00	30/03/2006
DC 26 Zululand	Mandlakazi Regional Water Scheme Phase 2	2003 C26 087	R	Water			9,890,300.00	0.00	4,900,000.00	30/11/2006
DC 26 Zululand	Simdlangentsha Reg. Water Scheme-West	2003 C26 088	R	Water			3,168,382.00	155,639.79	3,012,742.21	31/03/2005
DC 26 Zululand	Simdlangentsha Reg. Water Scheme-Central	2003 C26 089	R	Water			11,668,919.00	0.00	1,500,000.00	30/03/2006
DC 26 Zululand	Nkonjeni Regional Water Scheme Phase 2	2003 C26 090	R	Water			7,005,720.00	0.00	5,092,401.10	30/10/2006
DC 26 Zululand	Water Vuna (ward 14)	2003 C26 093	R	Water			500,000.00	0.00	500,000.00	30/03/2005
KZ 263 Abaqulusi	Louwsburg: Upgrade Roads	2003 C26 094	R	Roads			2,453,000.00	193,135.00	750,613.00	31/07/2005
DC 26 Zululand	Environmental Management Plan	2003 C26 095	R	Soft			438,000.00	0.00	438,000.00	30/03/2005
DC 26 Zululand	Nkongolwane Sanitation phase 1	2003 C26 096	R	San			1,000,000.00	0.00	500,000.00	30/03/2006
DC 26 Zululand	Ulundi: Upgrading of Bulk Supply	2003 C26 097	U	Water			2,807,370.00	0.00	2,724,686.76	30/03/2005
DC 26 Zululand	Coronation Regional water Scheme Phase 1	2003 C26 098	R	Water			3,498,229.00	0.00	1,500,000.00	30/11/2005
DC 26 Zululand	Nongoma Water Upgrade Phase 2	2003 C26 099	R	Water			1,879,486.00	0.00	1,879,486.00	30/03/2005
KZ 262 uPhongolo	Belgrade: VIP'S and Water Reticulation	2002 C26 047	R	San			5,795,000.00	1,306,226.29	4,488,773.71	30/03/2005
KZ 262 uPhongolo	Nicolshane: Collector sewers Phase 1	2003 C26 082	R	San			5,800,000.00	2,214,236.69	3,585,763.31	30/01/2005
KZ 263 Abaqulusi	Upgrade: Vryheid Sewage Works	2001 C26 001	U	San			12,740,000.00	7,889,509.42	4,850,490.58	30/09/2004
KZ 263 Abaqulusi	eMondlo Upgrade of Water Network	2003 C26 091	R	Water			10,694,144.00	747,225.00	5,000,000.50	30/09/2006
							182,594,810.90	54,795,935.90	69,099,219.15	62,768,000.00
<b>DWAF</b>										
Agent	Project Title	Project #	Environ	Project Type	Savings	Act. Proj Cost	DWAF	Prev.Years Exp	annual value	Allocation
DC 26 Zululand	Ishulabasha	KN007	U	Water			656,555.00	567,892.00	31,217.35	
DC 26 Zululand	Hlungulwane	KN032					2,160,494.00	2,098,547.00	51,431.21	
DC 26 Zululand	Mabedlane	KN033					5,501,363.00	4,340,777.00	286,990.85	
DC 26 Zululand	Mvula	KN034					2,389,420.00	1,883,080.00	92,075.47	
DC 26 Zululand	Ezembeni	KN035					2,517,600.00	2,329,344.00	47,552.95	
DC 26 Zululand	Bhekumthetho	KN124	R	Water			3,100,000.00	3,087,921.00	57,974.24	
DC 26 Zululand	Siyakhula San	KN494	R	San			5,556,247.00	1,107,727.00	657,088.95	
DC 26 Zululand	Ndema San	KN498					1,141,181.00	998,168.00	143,012.00	
DC 26 Zululand	Osuthu San	KN558	R	San			2,213,920.60	1,221,111.00	956,215.00	
DC 26 Zululand	Ekubungazeleni San	KN559					929,627.00	252,590.00	149,208.00	
DC 26 Zululand	Mjeni San	KN563					1,089,152.00		679,826.07	
DC 26 Zululand	Zondo	KN614	R	Water			1,920,000.00	1,507,857.00	962,615.62	
DC 26 Zululand	Zululand LG Support	KN222	R	Water	0.00		5,230,711.00	4,115,792.00	0.00	
DC 26 Zululand	Bott Emergency - Zululand (San)	KN472(s)	R	Water					0.00	
DC 26 Zululand	Bott Emergency - Zululand (Water)	KN472(w)	R	San			25,696,483.00	12,012,321.00	2,153,037.00	
DC 26 Zululand	Hlahlindlela	KN360					16,436,985.00	10,229,850.00	1,309,064.00	
DC 26 Zululand	Kombuzi	KN363					14,031,807.00	10,543,819.00	1,487,983.00	
DC 26 Zululand	Mangosuthu San	KN496	R	San			6,327,513.00	1,711,229.00	1,271,690.00	
DC 26 Zululand	Osingsingini	KN180	R	Water			2,158,968.00	1,044,501.00	1,205,023.05	
DC 26 Zululand	Thandokhule	KN182	R	Water			1,181,406.00	728,969.00	466,087.00	
DC 26 Zululand	Manhlanhle San	KN573	R	Water			852,804.00	454,950.00	275,776.83	
DC 26 Zululand	Mandlakazi Phase 1b	KN591	R	Water			16,097,608.00	5,414,639.00	9,212,411.00	
DC 26 Zululand	Nkonjeni Phase 1	KN616	R	San			29,834,467.45	4,065,097.00	6,277,463.41	
								69,716,181.00	27,773,743.00	25,248,143.00
<b>MIG Top-Up</b>										
Agent	Project Title	Project #	Environ	Project Type	Savings	Act. Proj Cost	MOA Value	Prev.Years Exp	annual value	Allocation
DC 26 Zululand	PMU	PMU - DC26					2,464,000.00	0.00	2,464,000.00	
								0.00	2,464,000.00	7,269,444.64

## 12.2 WSA sustainability project list

DWAF currently offer funding for “Sustainability Allocation within Community Water Supply & Sanitation Capital Programme” (CWSSCP). However, in KwaZulu-Natal this funding is combined with all other available funds and forms part of the projected DM allocations listed in Table 12.1. The ZDM has recognised the need to improve operation and maintenance budget allocations to ensure sustainability of supply. The projects listed in Table 12.2 form the sustainability projects for the ZDM.

**Table 12.2: WSA sustainability project list.**

Project Type	Water Sanitation	Settlement Type	Project Names	Key Issues to be addressed	Amount	Funding source	Relevant Year
Retrofit Projects	Water		Hlungulwane (KN032)			DWAF	Current
Retrofit Projects	Water		Mvula (KN034)			DWAF	Current
Retrofit Projects	Water		Nodwengu (KN036)			DWAF	Prior 1
Retrofit Projects	Water		Njomelawane (KN037)			DWAF	Prior 1
Retrofit Projects	Water		Buxedeni (KN045)			DWAF	Prior 1
Retrofit Projects	Water		Sidinsi (KN046)			DWAF	Current
Retrofit Projects	Water					DWAF	Current
Retrofit Projects	Water					DWAF	Prior 1
Retrofit Projects	Water		Ntshangase (KN079)			DWAF	Prior 1
Retrofit Projects	Water		Esigodihpola (KN093)			DWAF	Current
Retrofit Projects	Water					DWAF	Current
Retrofit Projects	Water					DWAF	Prior 1
Retrofit Projects	Water		Thuthukani (KN173)			DWAF	Current
Rehabilitation projects	Water		Belgrade WPP (KN269)		R 3,549,372	DWAF	Current
Rehabilitation projects	Water				R 5,103,076	DWAF	Current
Rehabilitation projects	Sanitation				R 848,034	DWAF	Current
Rehabilitation projects	Water		Mondlo WPP (KN292)		R 904,179	DWAF	Current
Rehabilitation projects	Sanitation		Mondlo STP (KN293)		R 322,322	DWAF	Current
Rehabilitation projects	Water				R 4,416,004	DWAF	Current
Rehabilitation projects	Water				R 785,751	DWAF	Current
Rehabilitation projects	Water		Nongoma WPP (KN304)		R 13,577,192	DWAF	Current
Rehabilitation projects	Water		Ulundi WPP (KN309)		R 11,900,991	DWAF	Current
Rehabilitation projects	Sanitation		Ulundi STP (KN310)		R 6,769,727	DWAF	Current