Zululand
District Municipality

WATER SERVICES DEVELOPMENT PLAN

2022 - 2026
5-year Cycle

REVISION 4: 2025/2026
MAY 2025

DOCUMENT:	ZDM WSDP 2025/2026		REVISION NO:	02 (May 2025)
DRAFTED BY:	W Richter	DATE DRAFTED:	2025-05-19	
REVIEWED BY:	L. Fourie	SIGNATURE:		DATE: 19 May 2025
APPROVED BY:	Ms N Mosiea (WSA Manager)	SIGNATURE:		DATE:…
	Mr TG Soko (HOD: Planning)	SIGNATURE:		DATE:
	Mr RN Hlongwa (Municipal Manager)	SIGNATURE:		DATE:…

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A. EXECUTIVE SUMMARY

A.1 Introduction

ZDM as the Water Service Authority has a duty to all customers or potential customers in its area of jurisdiction to progressively ensure efficient, affordable, economical and sustainable access to Water Services [Water Services Act of 1997 Section 11]. ZDM therefore has a legislative responsibility to prepare a Water Services Development Plan (WSDP) for its area of jurisdiction [Water Service Act of 1997 Section 12]. Planning work related to various aspects of water services are being dealt with on a continuous basis through the year and the results of such work are then systematically fed into the WSDP.

Name of WSA

Name	Zululand District Municipality	
Address	Private Bag X76 ULUNDI 3838	Lot B400, Gagane Street ULUNDI 3838

Status of WSDP

The planned completion dates for the revision of the WSDP are as follows:

- WSDP Steering Committee approval (Draft version) – March 2024
- EXCO approval – May 2024
- Expected Council approval – June 2024
- Submission of final WSDP with amended comments & input - August 2024

WSDP drafting team

The contact persons within the municipality who are responsible for the functioning, planning and implementation of the WSDP are shown in Table A1.1 below:

Table A1.1: Drafting team

Name	Position	Tel Number	Email
Mr RN Hlongwa	Municipal Manager	035 874 5500	nhlongwa@zululand.org.za
Ms N Mosiea	WSA Manager	035 874 5542	nmncube@zululand.org.za
Mr T M Jele	Chief O&M Specialist	035 874 5500	tmjele@zululand.org.za
Mr TG Soko	HOD: Planning	035 874 5617	tgsoko@zululand.org.za
Mr W Richter	WSDP Consultant	034 980 2227	willem@zulmap.co.za
Mr L Fourie	WSDP Project Leader	034 983 2945	louis@ecaconsult.co.za

Process followed

ZDM annually prepares a revised WSDP in time for the approval of the annual municipal budget. Planning work related to various aspects of water services are being dealt with on a continuous basis through the year and the results of such work are then systematically fed into the WSDP.

The WSDP Steering Committee has been established and meets at least twice a year. The steering committee comprises of the ZDM management team, councillors and consultants involved with the technical work. The aim is to have a first draft of each year's revision ready by end of February. The following approvals are done:

Table A1.2: WSDP Approval Process

Item	Date
WSDP Steering Committee Meetings	Quarterly
Submission of draft WSDP document to WSA for comments	End February
WSDP & IDP Steering Committee Approval	End March
Representative Forum approval – This forum comprises all Government Departments involved with the IDP process, all Councillors and role players from the private sector.	End April
EXCO approval	May
Advertise for public comment	End May
Council approval	June
Submit to DWA for final approval	August

Public comments

The WSDP will be advertised during May 2025 for public comment.

Adoption record

The 2024/2025 revision of the WSDP has been approved by the ZDM Council during June 2024.

WSDP Co-ordinators

The WSDP process is managed by the Deputy General Manager: Water Services Authority in association with the General Manager: Planning and the Deputy General Manager: PMU and their staff.

The WSA unit is situated in the Planning Department and reports to the General Manager: Planning.

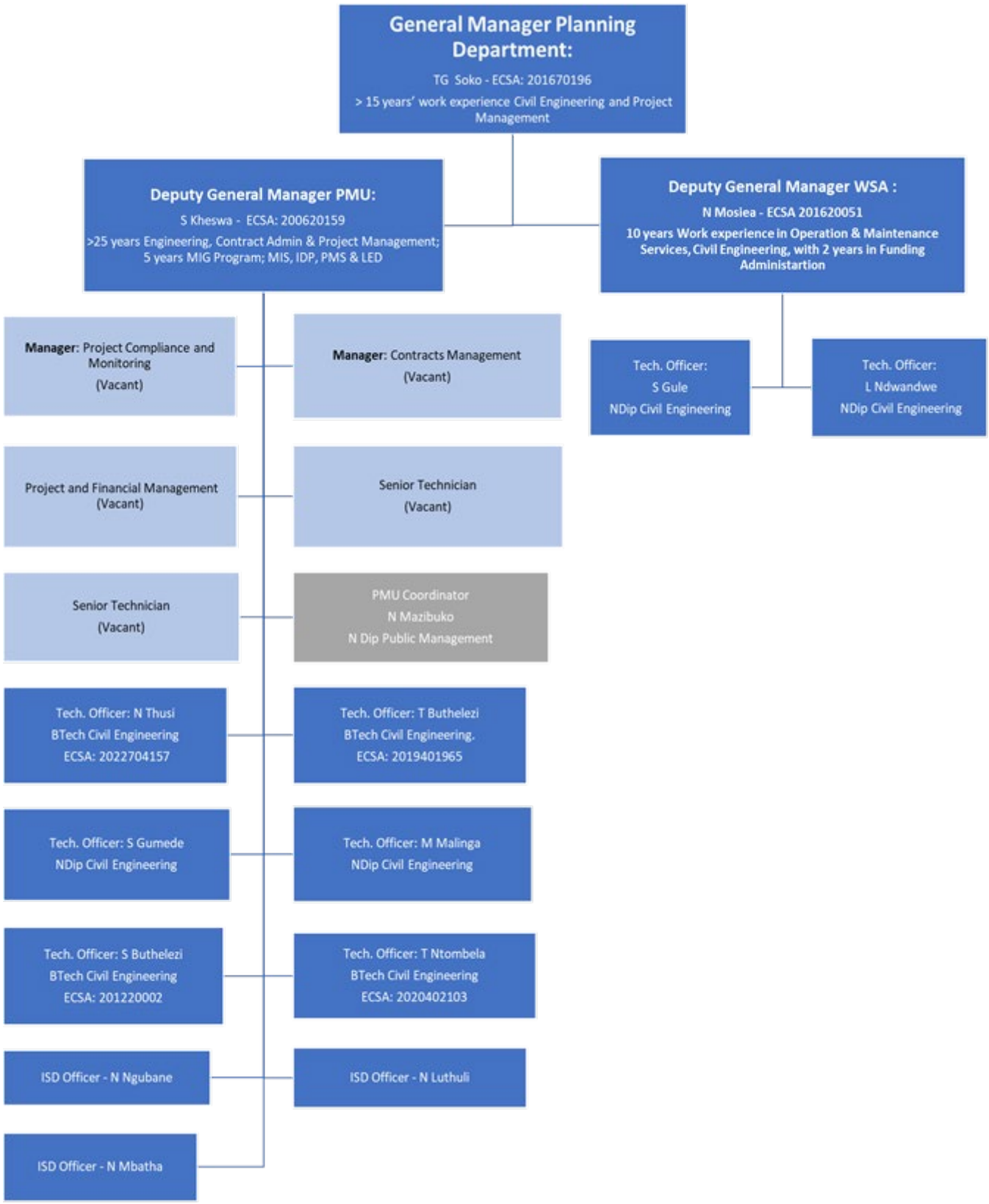
PMU

The ZDM PMU has been established and is functioning well. The PMU unit comprises of a Deputy General Manager, two project managers, project coordinator, two senior technicians, PMU Coordinator, six Technical Officers and three ISD Officers.

The PMU Manager reports to the General Manager: Planning and is responsible for the implementation of all projects scheduled by the WSA.

The organograms below indicate the split in functions related to water services.

Table A1.3: Organogram



Water services level policy

ZDM has compiled a Water Services Policy and this is available from the ZDM website at www.zululand.org.za. The following levels of service for water and sanitation are available from the municipality:

Table A1.4: Service Levels

Domestic Water Supply				
Service Level Number	**Level of Service**	**Definition**	**Applicable Tariff Structure**	**Norms and Standards**
DW1	Full pressure conventional house connection	Full pressure unrestricted individual erf/yard connection	Stepped block tariff	Design specifications
DW2	Yard tank (RDP standard)	Restricted (to 200l per day) individual erf connection with tank in yard	No charge	Design specifications
DW3	Communal street taps (RDP standards)	Unrestricted full pressure standpipe not further than 200m from dwellings (shared by a number of consumers)	No charge	Design specifications
DW4	Rudimentary	Formalised supply: • Borehole equipped with hand pump • Protected spring • Communal standpipe within 800m from dwellings	No charge	Design specifications

Domestic Sanitation				
Service Level Number	**Level of Service**	**Definition**	**Applicable Tariff Structure**	**Norms and Standards**
DS1	Water borne	Unrestricted connection to municipal sewerage system	Water consumption based tariff structure included in water tariff	Design specifications
DS2	Conservancy tank	Localised temporary sewage storage facility	Rate per load disposed by municipality	Design specifications
DS3	Septic tanks	On-site disposal (self treatment)	No charge	Design specifications
DS4	Ventilated improved pit (VIP)	Dry pit with sufficient capacity on-site disposal based on set standards	No charge	Design specifications

A.2 IDP and WSDP Goals

The Integrated Development Plan (IDP) for the ZDM has the following vision and mission statement for the region:

IDP vision and mission statement for the municipality
Vision "*We, the people of Zululand are proud communities that are committed to the development of Zululand through hard work, integrity and a common purpose."* **Mission** • **To develop an affluent district by:** o *Optimal delivery of essential services* o *Supporting sustainable local economic development* o *Community participation in service delivery*

Part of the development objectives for Zululand is facilitating the delivery of basic services that include water services (i.e. water and sanitation provision), strengthening the local economy with particular emphasis on tourism, agriculture and small business sectors, and the sustainable use of land and the natural environment. The importance of the vision and objectives in terms of the WSDP is the development of Zululand through the

provision of equitable and sustainable water services leading to an improvement in the quality of life. It therefore follows that planning in respect of water services must increase the current level of service throughout the region with an improvement experienced by all. Planning must therefore be sustainable in terms of water resources, material resources, contractor capacity, management capacity, as well as funding and maintenance cost.

The IDP has a number of key development strategies, namely:

- Delivery and coordination of basic services.
- Social issues of communities.
- Sustainability and environment.
- Economic development.
- Build capacity to lead and manage development in Zululand.

All these development strategies will ultimately link to the need and spatial requirement for water services provision. **Spatial development within the ZDM is directly related to the provision and availability of water services, therefore development tends to follow sustainable planning in the WSDP and not force water services provision into areas that are currently not economically viable or sustainable to supply.**

This support the water and sanitation infrastructure development focus of the KZN Provincial Growth and Development Strategy (PGDS) for 2035, which will be discussed in the next section.

A.3 Strategic Objectives & Development Goals

The ZDM WSDP supports the KZN PGDS Strategic Framework. WSDP goals, objectives, interventions and projects are aligned to place ZDM in a position to fulfil its role as WSA in achieving the provincial PGDS for 2035.

While the focus has been predominantly on providing each person with sustainable infrastructure and eradicating backlogs, the status of existing and aging infrastructure, as well as the availability and sustainability of water resources has been neglected. An extract of the KZN PGDS can be reviewed below.

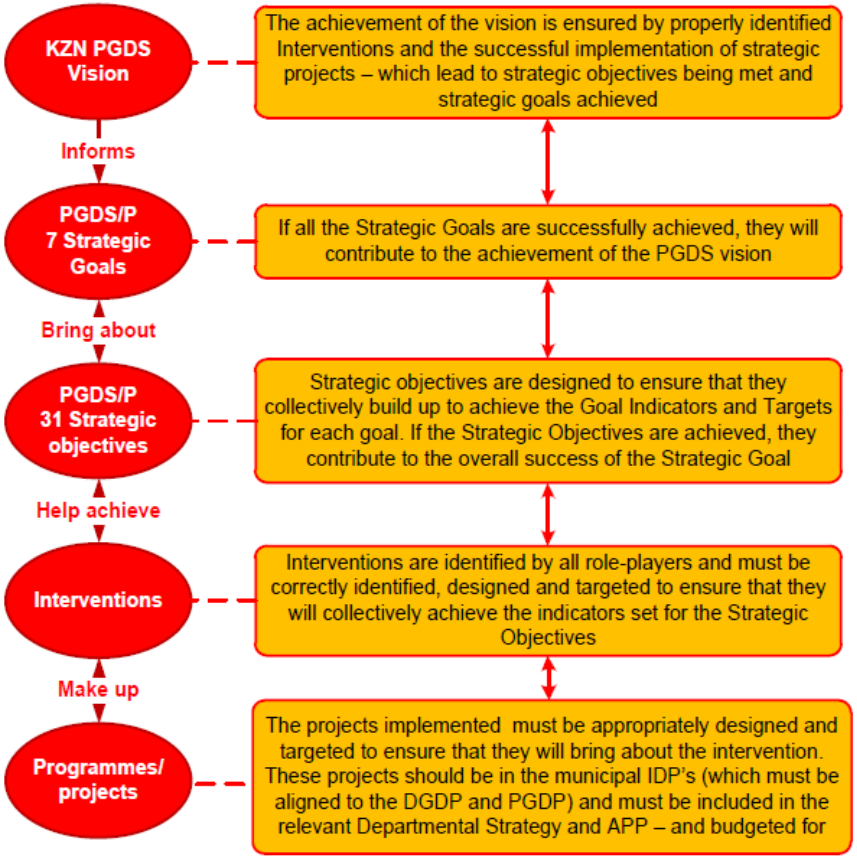
> *"The 2015/2016 drought experienced in the country and more so in the Province has had a severe impact on the citizens of the Province and their livelihoods. The most severe impact has been felt by the rural communities of KZN whose livelihoods depend on agriculture, including livestock. The Province, through various initiatives and programs, has attempted to ensure a reliable supply of water to its citizens. The continued low rainfall has made this task increasingly challenging. National and Provincial government have spent millions of rand to ensure citizens have access to water.*
>
> ***The discourse on reliable and affordable water supply has forced the water sector to re-look at several aspects of the water source management and water supply**. In terms of water source it is being argued that the Province requires a better understanding of groundwater and its catchment areas. This strategy argues that water planning and resource management should be done at a quaternary catchment level - the focus should not only be at regional level. Alternative water sources, like grey water and desalination must become viable options as sources of supply.*
>
> ***There is also a school of thought that the severity of the drought is a direct correlation to the poor maintenance programs of water services authorities**. These related to poor borehole upgrades and spring protection, high water losses due to leakages not been attended to urgently, water theft and lack of bulk and reticulation planning.*
>
> *Skills development and capacity building, in the water sector continues to be an area of investigation in this review. There is a school of thought that argues that the skills required are more at an artisan level rather than at engineering level. This relates to the **maintenance issue around boreholes and spring protection and attendance of water leaks**. There is, however, another school of thought that water services authorities have focused more on **water demand** rather than water source management and that shift must be emphasised. Further, there is increasing pressure being put on the water sector institution to begin to develop a **sustainable water sector capacity building model**. The water services boards, the water services departments and the water services authorities all have various levels and type of expertise within their institutions. Therefore, these institutions along with engineering councils and the private sector must begin to provide a holistic sustainable **capacity building model** that contributes to a new water sector investment strategy. In addition, there is a growing demand for **localized water skills** at all levels as well as employment and business*

*opportunities. The water sector through the vast capital spend have the potential to improve **employment opportunities and create entrepreneurs in decentralized local spaces**.*
***The financial cost of water supply cannot be underestimated and the Province needs to have a funding model to address this**. Like energy, water costs will increase and become increasingly expensive for consumers and business, thus the importance of having a **reliable and affordable water supply**. The Department of Water and Sanitation in the Province have several key capital water projects that will ensure a relative supply of water in the province. The growing concerns will be the pace at which our province is urbanizing and the greater demand this will have on water provision in these urbanized areas as well as to ensure reliable access to water, in rural areas.*
*Given the above, the Province in the next five years must engage in the development of a new water sector investment strategy. This strategy must include **elements of water loss and maintenance, water availability, cost of water supply**. In addition, the strategy should include water source plans that consider ground water, desalination, grey-water. Further a discussion on localized skills and local business development. Greater emphasis on improving rural access to water and increasing mitigating measures to this section of our population."*

As water provision will increase, so will water resources needs, operation and maintenance of existing infrastructure, efficient institutional and financial capacity to manage infrastructure and revenue etc. The KZN PGDS Framework aims to achieve at least 90% reliable services by 2035.

An overview of the KZN PGDS framework with associated goals and objectives for water and sanitation services can be reviewed in the next figure.

Figure A.3.1: KZN PGDS Framework



The 2016 Revised PGDS Strategic Framework

Figure 10: PGDS Strategic Framework

2016 PGDS STRATEGIC GOALS and OBJECTIVES

STRATEGIC GOAL	No	STRATEGIC OBJECTIVE 2016
1 INCLUSIVE ECONOMIC GROWTH	1.1	Develop and promote the agricultural potential of KZN
	1.2	Enhance sectoral development through trade investment and business retention
	1.3	Enhance spatial economic development
	1.4	Improve the efficiency, innovation and variety of government-led job creation programmes
	1.5	Promote SMME and entrepreneurial development
	1.6	Enhance the Knowledge Economy
2 HUMAN RESOURCE DEVELOPMENT	2.1	Improve early childhood development, primary and secondary education
	2.2	Support skills development to economic growth
	2.3	Enhance youth and adult skills development and life-long learning
3 HUMAN AND COMMUNITY DEVELOPMENT	3.1	Eradicate poverty and improve social welfare services
	3.2	Enhance health of communities and citizens
	3.3	Safeguard and enhance sustainable livelihoods and food security
	3.4	Promote sustainable human settlements
	3.5	Enhance safety and security
	3.6	Advance social cohesion and social capital
	3.7	Promote youth, gender and disability advocacy and the advancement of women
4 INFRASTRUCTURE DEVELOPMENT	4.1	Development of seaports and airports
	4.2	Develop road and rail networks
	4.3	Develop ICT infrastructure
	4.4	Ensure availability and sustainable management of water and sanitation for all
	4.5	Ensure access to affordable, reliable, sustainable and modern energy for all
	4.6	Enhance KZN waste management capacity
5 ENVIRONMENTAL SUSTAINABILITY	5.1	Enhance resilience of ecosystem services
	5.2	Expand the application of green technologies
	5.3	Adapt and respond climate change
6 GOVERNANCE AND POLICY	6.1	Strengthen policy, strategy coordination and IGR
	6.2	Build government capacity
	6.3	Eradicate fraud and corruption
	6.4	Promote participative, facilitative and accountable governance
7 SPATIAL EQUITY	7.1	Enhance the resilience of new and existing cities, towns and rural nodes, ensuring equitable access to resources, social and economic opportunities
	7.2	Ensure integrated land management use across the Province, ensuring equitable access to goods and services, attracting social and financial investment

Strategic Objectives and Interventions for the KZN PGDS can be reviewed below.

Figure A.3.2: KZN PGDS Strategic Objectives and Interventions

Strategic Objective 4.4 Indicators:

4.4.1 Percentage mean annual runoff water stored in each district.
4.4.2 Quantity of water abstracted per annum in each district.
4.4.3 Number of households receiving minimum standards of sanitation.
4.4.4 Percentage households with access to safe drinking water
4.4.5 Cubic meters of water available.
4.4.6 Surface Water storage as a percentage of surface mean annual runoff per district.
4.4.7 Non-Revenue Water loss – (physical and non-physical water loss).
4.4.8 Number of projects not approved due to bulk Water and Sanitation Infrastructure constraint.
4.4.9 Number of MIG and WSIG projects meeting 75 litres of water per person per day.

Strategic Objective 4.4 Interventions:

4.4(a) Review and implement the Provincial Water Sector Investment Strategy.
4.4(b) Policy and guidelines on the inclusion of quaternary catchment for groundwater, grey water and desalination.
4.4(c) Develop and implement water sector capacity building programme with all water institutions.
4.4(d) Develop new water and sanitation tariff policy.
4.4(e) Expedite the approval of Water Use Licences.
4.4(f) Programme for development of water sources (desalination, rainwater, recycling, groundwater).
4.4(g) Expedite the planning and implementation of sub-transmission networks in the Province.

The ZDM WSDP supports the above framework, and will elaborate on each aspect in more details throughout the document under each relevant chapter. The following provides a framework for these topics under 11 categories as depicted in the KZN PGDS document.

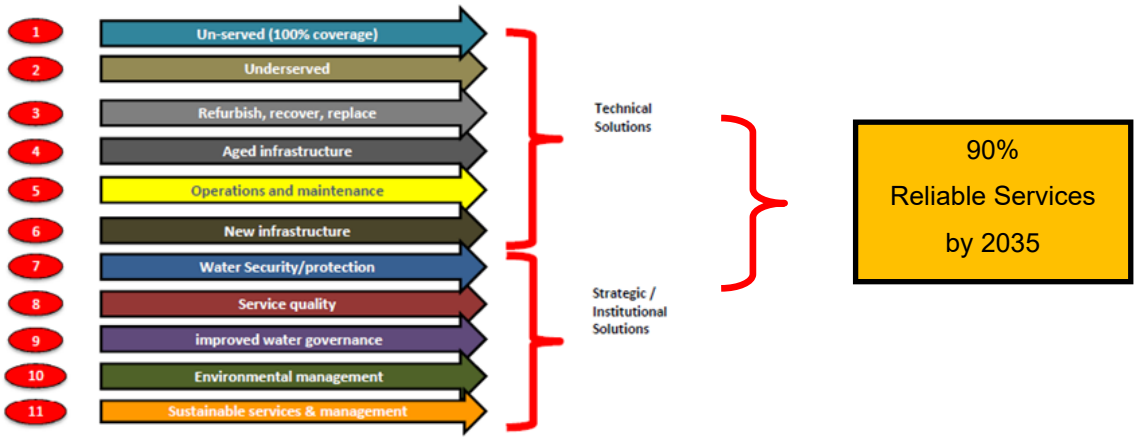


Figure A.3.3: KZN PGDS Strategic Framework

These 11 categories are consolidated in the WSDP under the following chapters as required by the web-based WSDP template of DWS:

- CHAPTER 1: Socio-Economic Profile
- CHAPTER 2: Service Level Profiles
- CHAPTER 3: Water Resources Profile
- CHAPTER 4: Operation and Maintenance
- CHAPTER 5: Water Conservation & Demand Management
- CHAPTER 6: Water & Sanitation Services Profile
- CHAPTER 7: Water Balance
- CHAPTER 8: Institutional Profile
- CHAPTER 9: Customer Service
- CHAPTER 10: Financial Profile
- CHAPTER 11: Project Rollouts
- CHAPTER 12: Strategic Goals

Items related to the Strategic Objectives and Development Framework will be discussed throughout this WSDP and reference will be made to the 2035 targets.

A.4 Background to the area

The ZDM is situated in northern KwaZulu-Natal (KZN). It covers an area of 14,808 km^2 and is divided into five local municipalities (LMs), namely eDumbe (KZ261), uPhongolo (KZ262), Abaqulusi (KZ263), Nongoma (KZ265), and Ulundi (KZ266) (Figure A4.1, pg. 19). There is only one change in the local municipal boundaries from 2011 to 2016. This area is located west of Louwsburg, where a portion of uPhongolo LM has been incorporated into AbaQulusi LM. This change can be reviewed under Figure A 4.1, pg. 19.

The district is predominantly rural with commercial farmland interspersed by protected areas, towns, and dense to scattered rural settlements within traditional authority areas. The majority of these rural settlements are small, making service delivery to these remote areas extremely costly. Settlements are located as follows:

Table A 4.1: Settlement location

Settlement Location	Nr of Settlements
Urban Towns	35
Communal Property	26
Land Reform Areas	207
State-owned	44
Tribal Areas	880
Private Land	92
TOTAL	**1 284**

Settlements have been periodically verified and updated since 2006. Numerous new land reform areas were included as settlements during the 2016 update. Household clusters on private farms have also been identified, and will be addressed based on ZDM's policy regarding rural residents on privately owned farm lands. The latest update was done during 2022. A total of 180 new settlements were added to the settlement database. The major changes and updates can be seen in AbaQulusi and eDumbe LM's, with minor updates and additions in the uPhongolo LM. New settlement areas are included in the WSDP for water and sanitation services.

A comparison table showing the new revised settlement types can be reviewed in Table A4.2 below.

New imagery has been obtained from Google Earth and a new household count for 2023 has been done. The settlements were also revised and aligned with these new household points and counts.

The Census 2022 municipal statistics have also been released during October 2023. A comparison between ZDM household count and the Census 2022 can be reviewed further on in this report.

Table A 4.2: Settlement Types

Class	Settlement Type	Nr of Settlements	Total households
URBAN	Urban - Formal Town	4	6 986
	Urban - Former Township	6	19 654
	Urban - Ex Homeland Town	13	12 388
	Urban - Working Town	6	2 011
	Urban - Service Centre	3	442
	Urban - Squatter Camp	1	145
RURAL	Rural - Service Centre	4	757
	Urban Fringe - Informal Settlement	23	11 465
	Peri-Urban - Squatter Camp	1	343
	Rural - Formal Dense >5000	2	3 885
	Rural - Formal Dense <5000	36	16 378
	Rural - Scattered Dense	4	3 038
	Rural - Scattered Medium Density	8	691
	Rural - Scattered Low Density	64	14 637
	Rural - Scattered Very Low Density	1 109	144 951
	Rural -Scattered households	N/A	3 629
	TOTAL	**1 284**	**241 400**

The following provides details of the areas within ZDM defined under urban:

LM	CLASSIFICATION	Z-NR	AREA
AbaQulusi	Urban - Formal Town	Town9	Louwsburg
		Town27a	Vryheid Town
	Urban - Former Township	Town27b	Bhekuzulu
		Town16a	Emondlo town
		Town27c	Lakeside
	Urban - Service Centre	ZNew180	Kandaspunt
		Z846	Mountain view
		ZPM12	Rietvlei
	Urban - Squatter Camp	ZMAP122	Vryheid Dump Site
	Urban - Working Town	ZHC5	Boomlaer
		Z932	Coronation
		Z934	Enyathi
		Z938	Hlobane
		ZHC4	Thutukani
		ZHC8	Vaalbank
eDumbe	Urban - Ex Homeland Town	Z937	Frischgewaagd
	Urban - Formal Town	Town8a	Paulpietersburg Town
	Urban - Former Township	Town8b	Edumbe Township
	Urban - Service Centre	Z928	Luneburg
Nongoma	Urban - Ex Homeland Town	Town22	Nongoma Town
		ZMAP26	White City
Ulundi	Urban - Ex Homeland Town	Z741	Kwazondela
		Z931	Mahlabathini
		Town18-A	Ulundi Unit A
		Town18-B	Ulundi Unit B
		Town18	Ulundi Unit B1
		Town18-BA	Ulundi Unit BA
		Town18-C	Ulundi Unit C
		Town18-D	Ulundi Unit D
		Town18-L	Ulundi Unit L
	Urban - Service Centre	Z940	Babanango
uPhongolo	Urban - Ex Homeland Town	Z459	Belgrade
	Urban - Formal Town	Town15a	Pongola Town
	Urban - Former Township	Town15b	Ncotshane Township
	Urban - Service Centre	ZMAP124	Golela Border Post
		Z936	Magudu
		Town15c	Pongola Town (Sugar Refinery)

Land use in the ZDM is linked primarily to tenure and the land with the highest agricultural potential is in private ownership and is mostly used for commercial farming or conservation, with low settlement densities. Private farmlands constitute a large portion of the ZDM's land area. The land use potential varies throughout the district, but are predominantly varieties of grassveld and thornveld. Agricultural activities are mainly forestry (eDumbe, Abaqulusi and around Babanango), sugar cane (uPhongolo), livestock (throughout the district), maize, soya beans, wheat, groundnuts, sorghum, vegetables and sub-tropical fruit. These commercial farms mostly have well developed infrastructure and farming systems. The difficulties they experience relate more to broader economic factors than spatial factors and linkages in the ZDM. In recent years, a number of cattle farms throughout the ZDM have been converted into game farms. These may be linked to tourism and conservation in the district.

In contrast, the non-arable land and land with severe limitations to agriculture, fall into the traditional authority areas and are densely settled. These Ingonyama Trust areas support settlement and subsistence agriculture (there is moderate to restricted agricultural potential), with the Traditional Authorities (TAs) for each LM being divided as follows:

- eDumbe LM: Dlamini TA and Mtetwa TA.
- uPhongolo LM: Masidla TA, Msibi TA, Ntshangase TA and Simelane TA.
- Abaqulusi LM: Hlahlindhlela TA and Kambi TA.
- Nongoma LM: Mandhlakazi TA, Matheni TA and Usuthu TA.
- Ulundi LM: Empetempithini TA, Mbata TA, Mpungose TA, Ndebele TA, Nobamba TA, Ximba TA and Zungu TA.

A map showing land distribution can be reviewed under Figure A4.3. Tribal Authority areas, Land Reform Areas, privately owned farms and urban areas can be seen.

Figure A 4.1: Locality map of Zululand District Municipality.

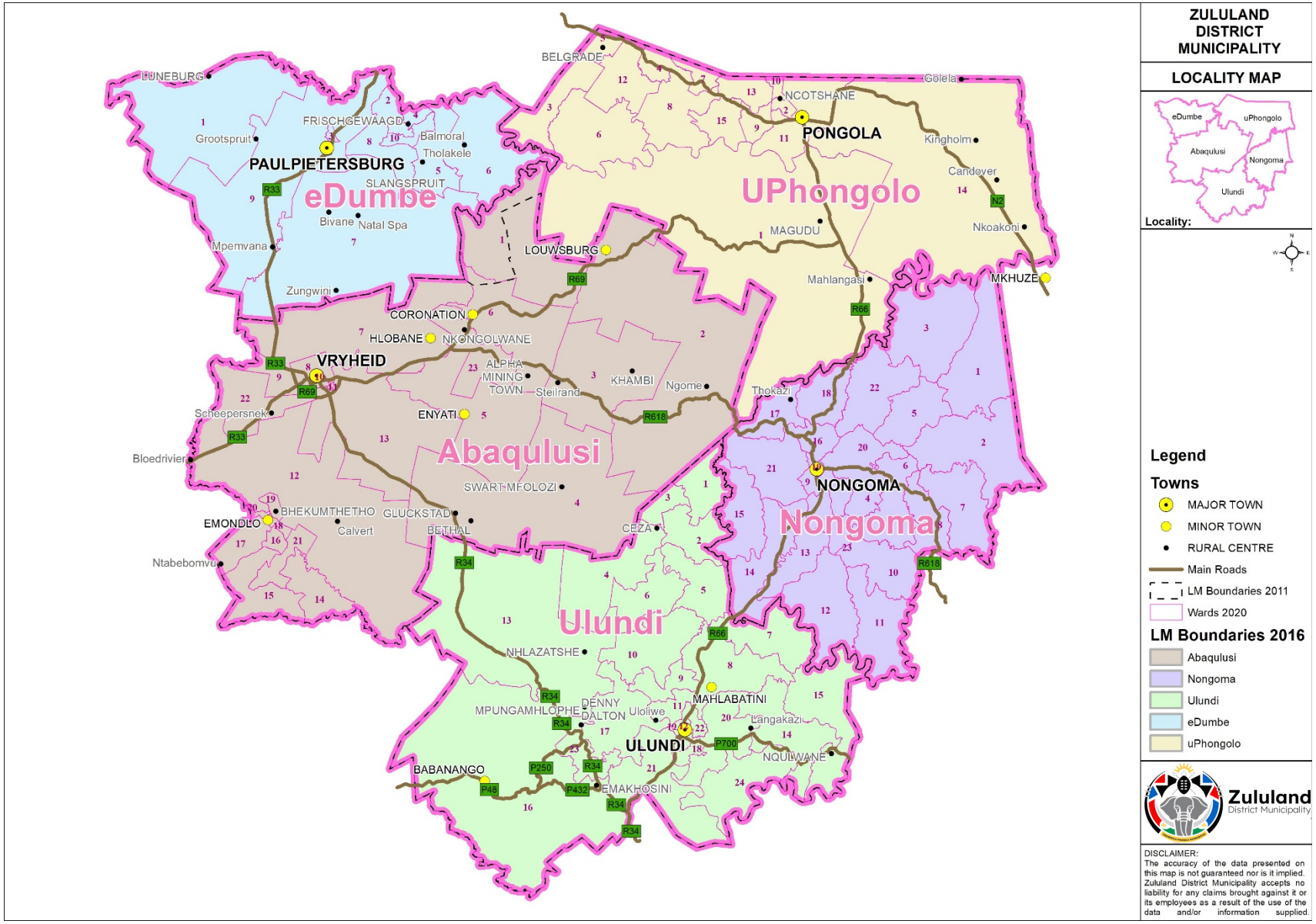


Figure A 4.2: Demographics of Zululand District Municipality.

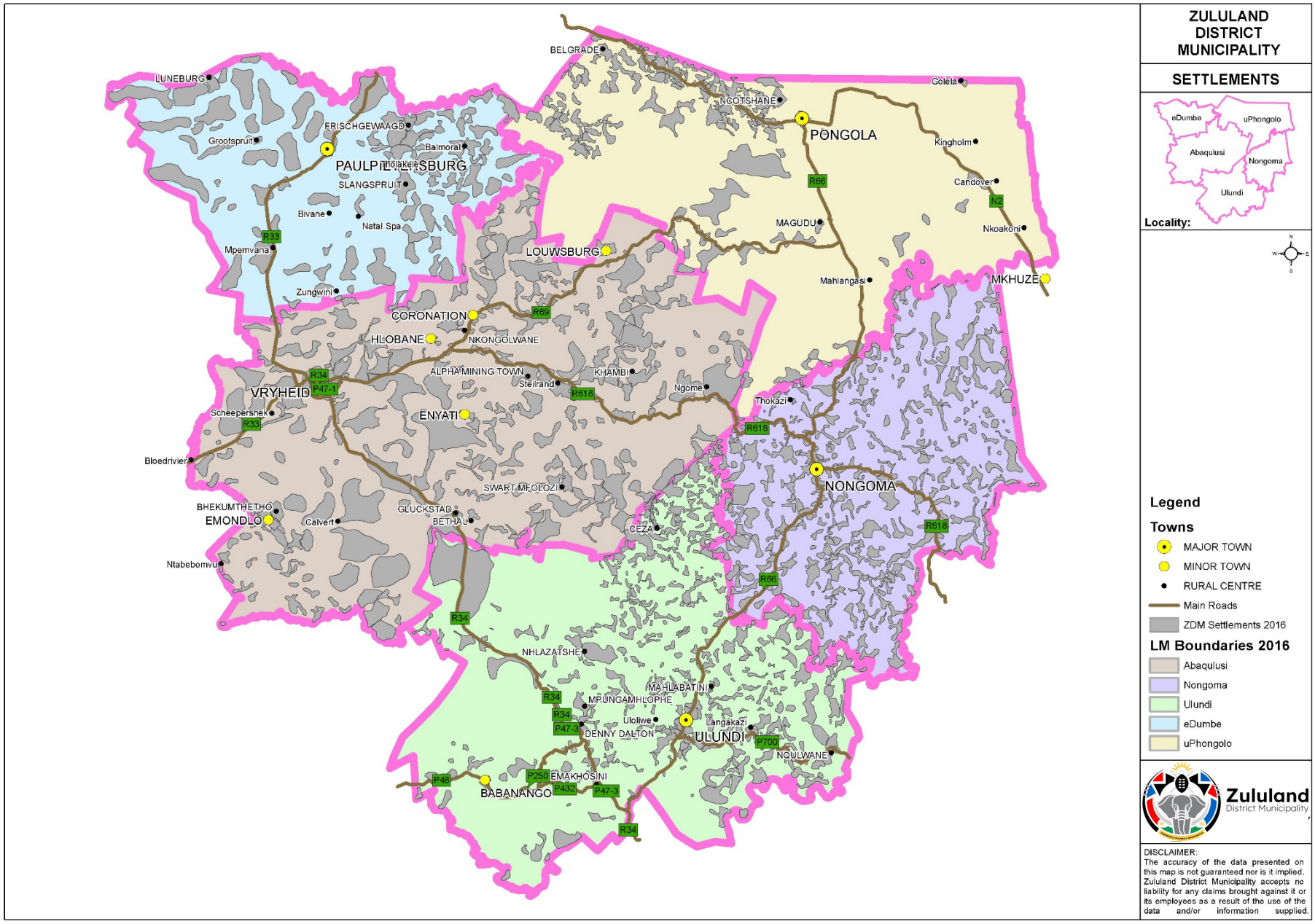
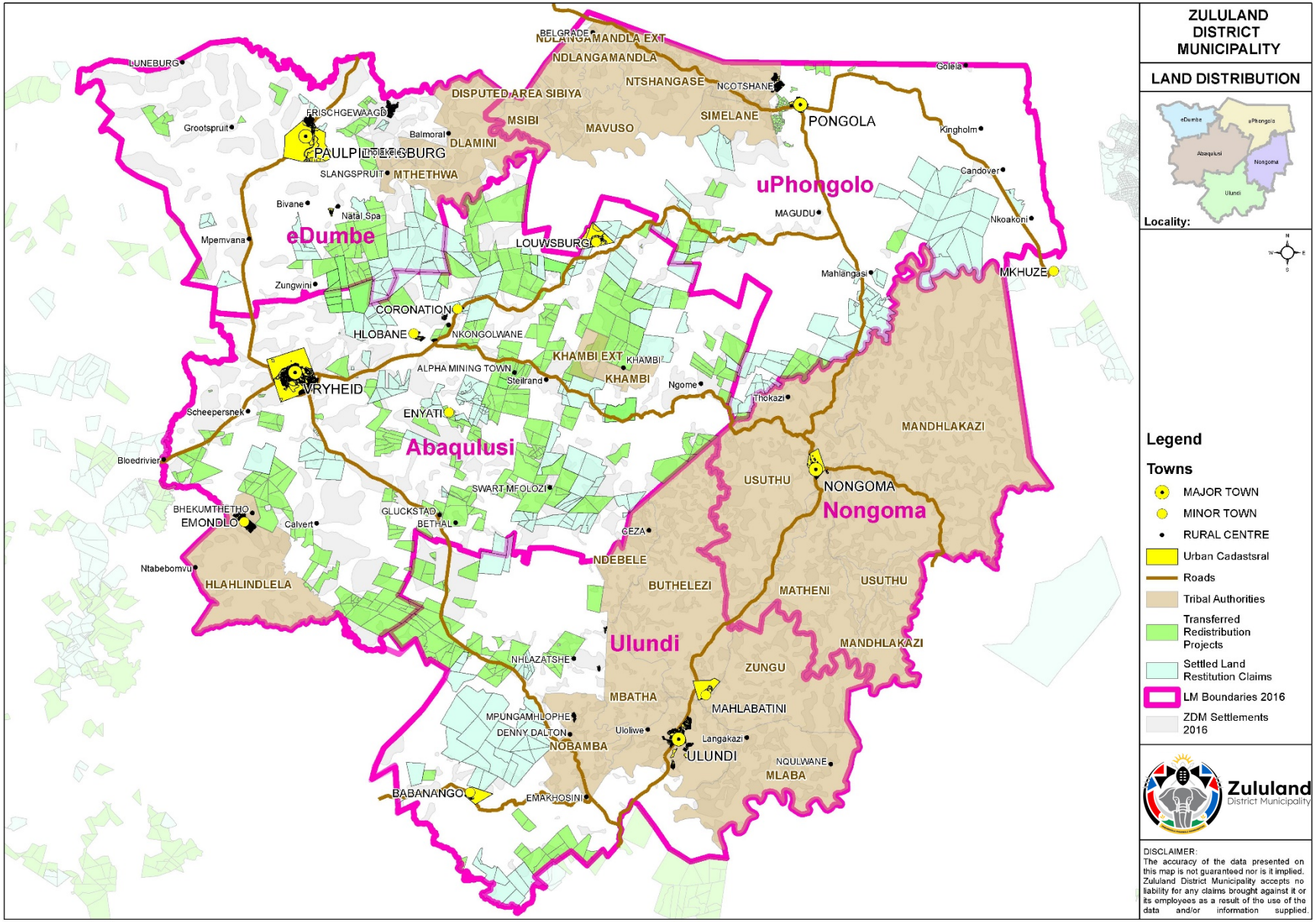


Figure A 4.3: Land distribution in Zululand District Municipality.



The area forms part of the Pongola, Mkuze and Mfolozi River Catchments of the Usuthu/Mhlathuze Water Management Area that extends from the high lying areas in the north and west to the Indian Ocean in the east. The northern and western edges of the ZDM are characterised by steep terrain. The Skurweberg and Elandsberg Mountains on the Western side of the ZDM are approximately 1,700 m above sea level. In the northeast there are the Lebombo Mountains. In general the topography slopes and gets less steep from west to east, as well as from north to south, consequently all the main rivers flow in this direction. There are some large relatively flat areas between 200 m and 300 m around the town of Pongola, as well as on the lower reaches of the Mfolozi River (Figure A4.4).

Climatic conditions vary significantly from the northern highlands to the eastern low-lying areas around the town of Pongola. Rainfall is strongly seasonal with more than 80% occurring as thunderstorms between October and March, with the peak months being December to February in the inland areas. Rainfall varies from over 1,000 mm in the north and west, dropping to below 600 mm in the central area around Pongola. The resultant Mean Annual Runoff (MAR) ranges from above 200 mm in the north and west, to below 100 mm in the central areas. Overall the Mean Annual Precipitation (MAP) is 840 mm, and the corresponding MAR 102 mm (12 % of MAP) (Figure A4.5). Annual variability of rainfall is indicated by the historic coefficient of variation of the rainfall record, which ranges from (20 % to 25 %) in the west to greater than 35 % in the Pongola area. In accordance with the rainfall pattern the relative humidity is higher in summer than in winter. Potential mean annual gross evaporation ranges from 1400mm in the west to 1600 mm in the lowveld. The highest mean monthly evaporation is in December and the lowest mean monthly evaporation in June. One strategic dam, namely Pongolapoort/Jozini, has been developed. There is a vast amount of water in the area with both surface resources, as well as good ground water potential.

Topography type	**Percentage of total municipal area**
Mountainous	30%
Rolling	70%
Flat	0%
Coastal	0%

Figure A 4.4: Terrain map of Zululand District Municipality.

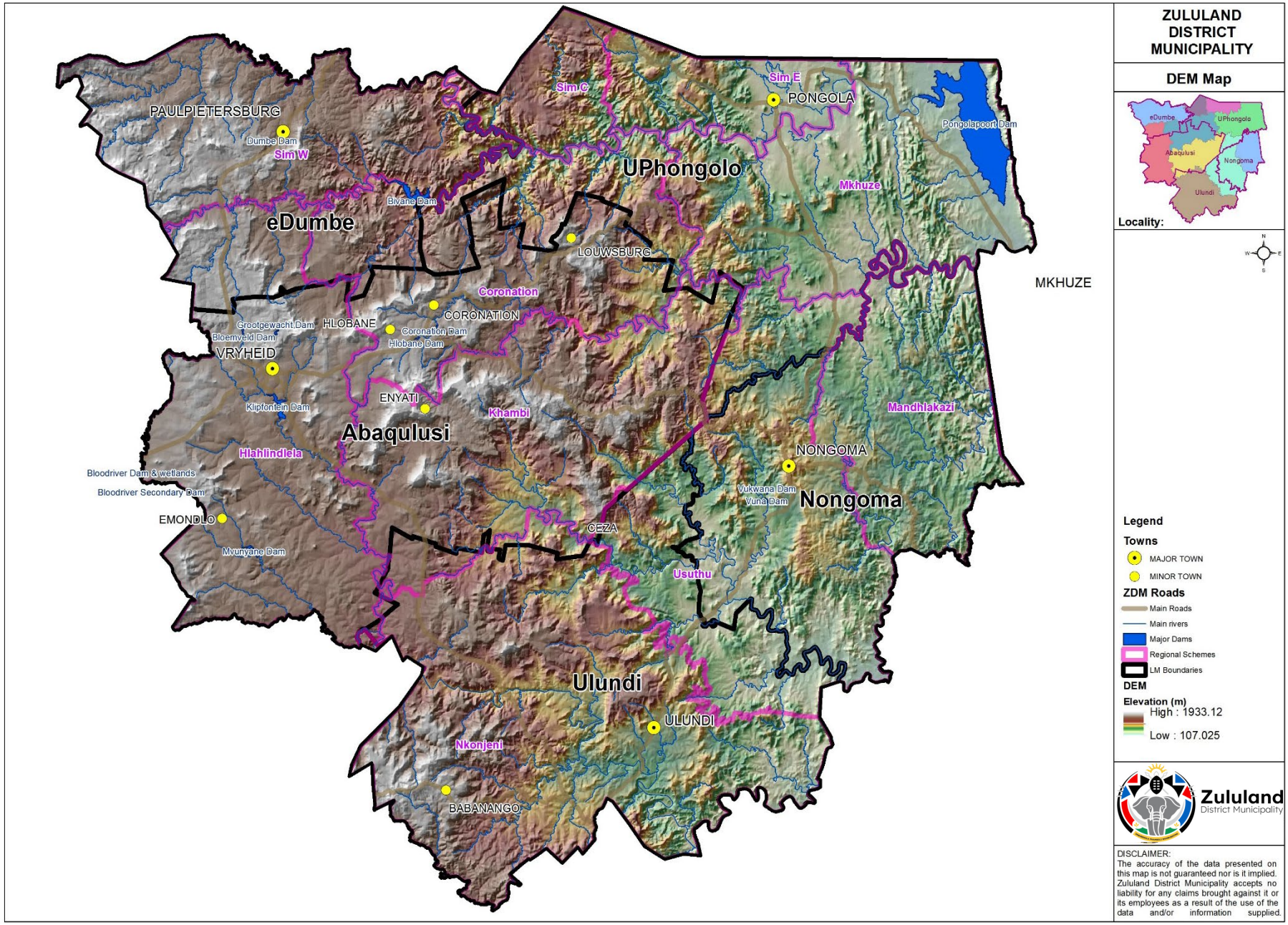
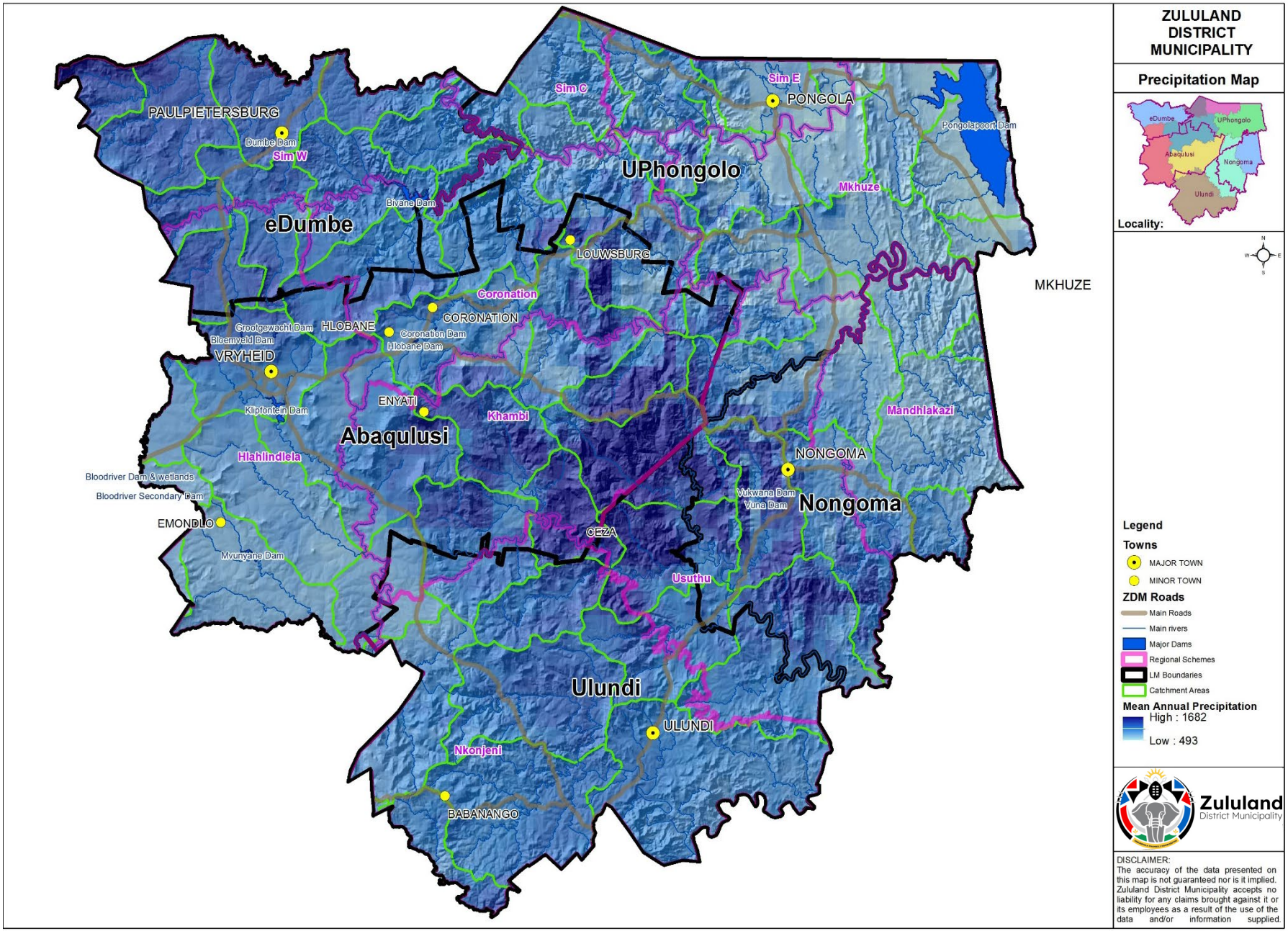


Figure A 4.5: Precipitation map of Zululand District Municipality.



A.5 Backlogs

Tables A.5.1 and A.5.2 below indicate the status in ZDM with regards to water services backlogs in the district. Backlogs, progress and funding allocations are to be finalised during the final review of the WSDP in May.

Table A.5.1: Access to water (households)

Water	NOT SERVED	Rudimentary	Communal standpipes	Yard/House connections	House Connections	TOTALS
		<RDP	RDP			
AbaQulusi LM	0	145	0	578	19 011	19 734
eDumbe LM	0	0	0		7 282	7 282
Nongoma LM	0	0	0		1049	1 049
Ulundi LM	0	0	0	522	5 672	6 194
uPhongolo LM	0	0	0	1 457	5 910	7 367
Total (urban)	**0**	**145**	**0**	**2 557**	**38 924**	**41 626**
AbaQulusi LM	6 928	10 047	13136	10 837	2 647	43 595
eDumbe LM	3 146	1754	2301	9 134		16 335
Nongoma LM	6 542	13 905	14 564	21 980		56 991
Ulundi LM	2 937	3 151	19 877	24 885	578	51 428
uPhongolo LM	3 468	1734	3515	22 535	173	31 425
Total (rural)	**23 021**	**30 591**	**53 393**	**89 371**	**3 398**	**199 774**
Total (households)	**23 021**	**30 736**	**53 393**	**91 928**	**42 322**	**241 400**

The following figure depicts the estimated time it will take to eradicate all water backlogs below RDP standard if current MIG funding allocations remains constant. RBIG and WSIG funding allocations fluctuate based on approved funding applications, and future projections have been based on the current financial year's allocations.

Most of the regional scheme business plans and technical reports have been updated to allow for price escalations, amendments and upgrades. At a total remaining cost of R10.2b with only an annual funding allocation of approximately R649m, ZDM will only be able to complete all remaining water infrastructure by 2037. The 2035 target will therefore not be met. ZDM will require at least **R700m** annual funding allocation for water alone to reach the 2035 provincial goals.

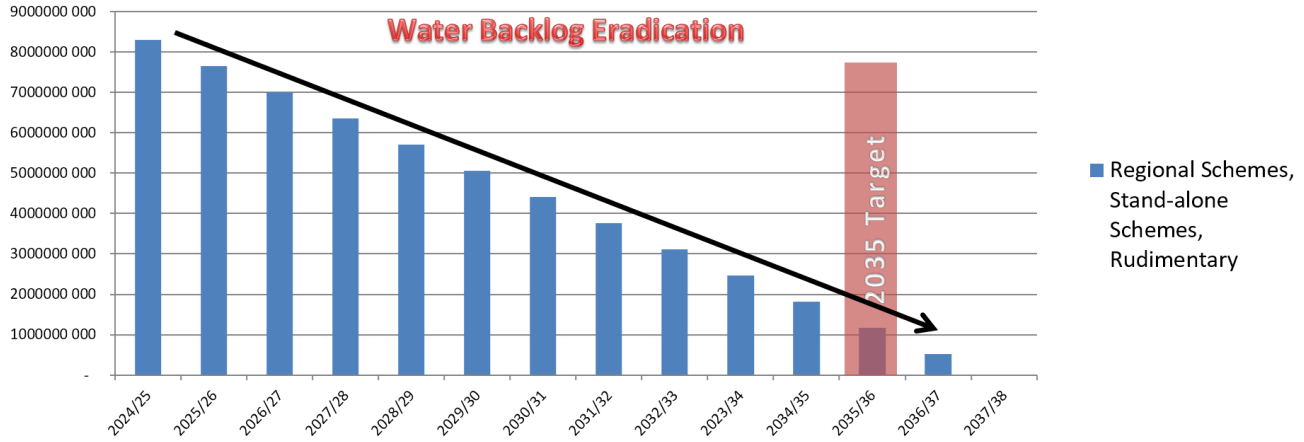


Figure A 5.1: Water Backlog eradication at current funding allocation of R649m/annum

Table A.5.2: Access to sanitation

	NOT SERVED	VIP	Septic tank	Waterborne	TOTALS
		RDP	>RDP		
AbaQulusi LM	145	0	1071	18 518	19 734
eDumbe LM	0	6632	650	0	7 282
Nongoma LM	0	0	0	1049	1 049
Ulundi LM	0	856	110	5 228	6 194
uPhongolo LM	0	1457	0	5 910	7 367
Total (urban)	**145**	**8 945**	**1 831**	**30 705**	**41 626**
AbaQulusi LM	11 423	32 139	0	33	43 595
eDumbe LM	1 922	14 347	0	66	16 335
Nongoma LM	7 940	49 051	0	0	56 991
Ulundi LM	1 533	49 317	0	578	51 428
uPhongolo LM	5 811	25 441	0	173	31 425
Total (rural)	**28 629**	**170 295**	**0**	**850**	**199 774**
Total (households)	**28 774**	**179 240**	**1 831**	**31 555**	**241 400**

The following figure depicts the estimated time it will take to eradicate all sanitation backlogs below RDP standard if current MIG funding allocations remains constant.

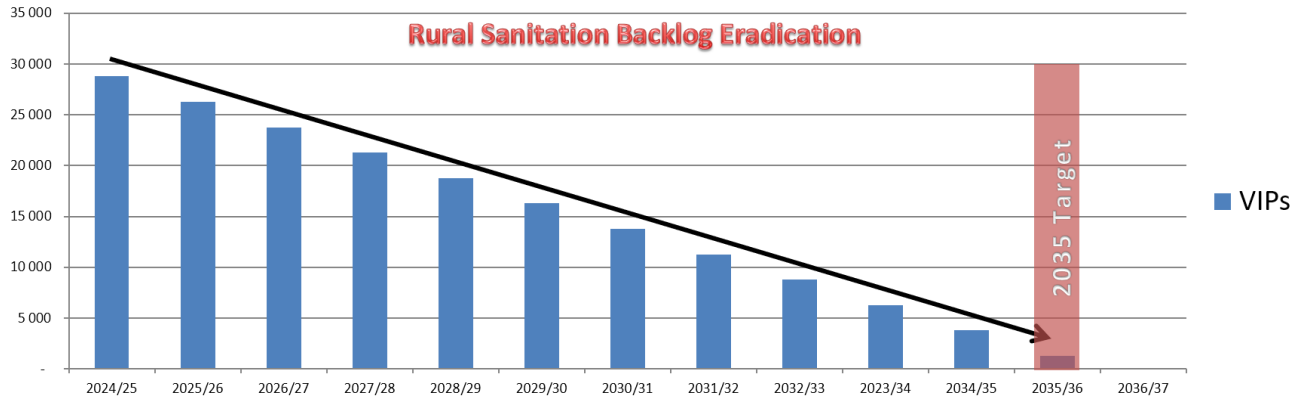


Figure A 5.2: Sanitation Backlog eradication at current funding allocation of R50m/annum

With the 2035 goals in mind, the backlogs in rural sanitation should be eradicated by 2035. However, settlements are continuously expanding, and household growth will maintain an increase in the future.

Table A.5.3: Percentage backlogs (water & sanitation)

WATER	TOTAL HOUSEHOLDS	BACKLOGS	% BACKLOGS	% OF TOTAL BACKLOGS
AbaQulusi LM	63 329	17 120	27.03%	31.85%
eDumbe LM	23 617	4 900	20.75%	9.12%
Nongoma LM	58 040	20 447	35.23%	38.04%
Ulundi LM	57 622	6 088	10.57%	11.33%
uPhongolo LM	38 792	5 202	13.41%	9.68%
Total	**241 400**	**53 757**	**22.27%**	**100.00%**

SANITATION	TOTAL HOUSEHOLDS	BACKLOGS	% BACKLOGS in LM	% OF TOTAL BACKLOGS
AbaQulusi LM	63 329	11 568	18.27%	40.20%
eDumbe LM	23 617	1 922	8.14%	6.68%
Nongoma LM	58 040	7 940	13.68%	27.59%
Ulundi LM	57 622	1 533	2.66%	5.33%
uPhongolo LM	38 792	5 811	14.98%	20.20%
Total	**241 400**	**28 774**	**11.92%**	**100.00%**

Table A.5.4: Existing backlogs against funding allocations

YEAR	BACKLOGS (Households)		ALLOCATIONS		Household count
	Water	Sanitation	Water	Sanitation	
2019-2020	42 711	30 586	383 328 220	51 310 825	**2016 Households**
2020-2021	39 145	28 586	394 165 250	59 721 750	
2020-2021	37 497	26 848	596 157 000	61 127 500	
2022/2023	36 196	22 538	549 102 401	36 334 200	
2023/2024	34 930	20 733	741 007 860	62 495 140	
2024/2025`	54 561	28 774	550 315 000	-	**2023 Households**
2025/2026	**53 757**	**28 774**	**633 375 207**	**15 843 793**	

YEAR	BACKLOGS REMAINING (%)		Household count
	Water	Sanitation	
2019-2020	23.26	16.66	**2016 Households**
2020-2021	21.32	15.57	
2021/2022	20.42	14.62	
2022/2023	19.70	12.30	
2023/2024	19.02	11.29	
2024/2025	22.60	11.92	**2023 Households**
2025/2026	**22.27%**	**11.92%**	

PLEASE NOTE THAT BACKLOGS ARE ESTIMATES BASED ON PROJECTED COMPLETION DATES OF PROJECTS AT THE END OF JUNE, AND MAY VARY ON FINAL FINANCIAL YEAR END.

ACTUAL FIGURES WILL BE UPDATED AFTER FINANCIAL YEAR END.

A.6 Summary of content

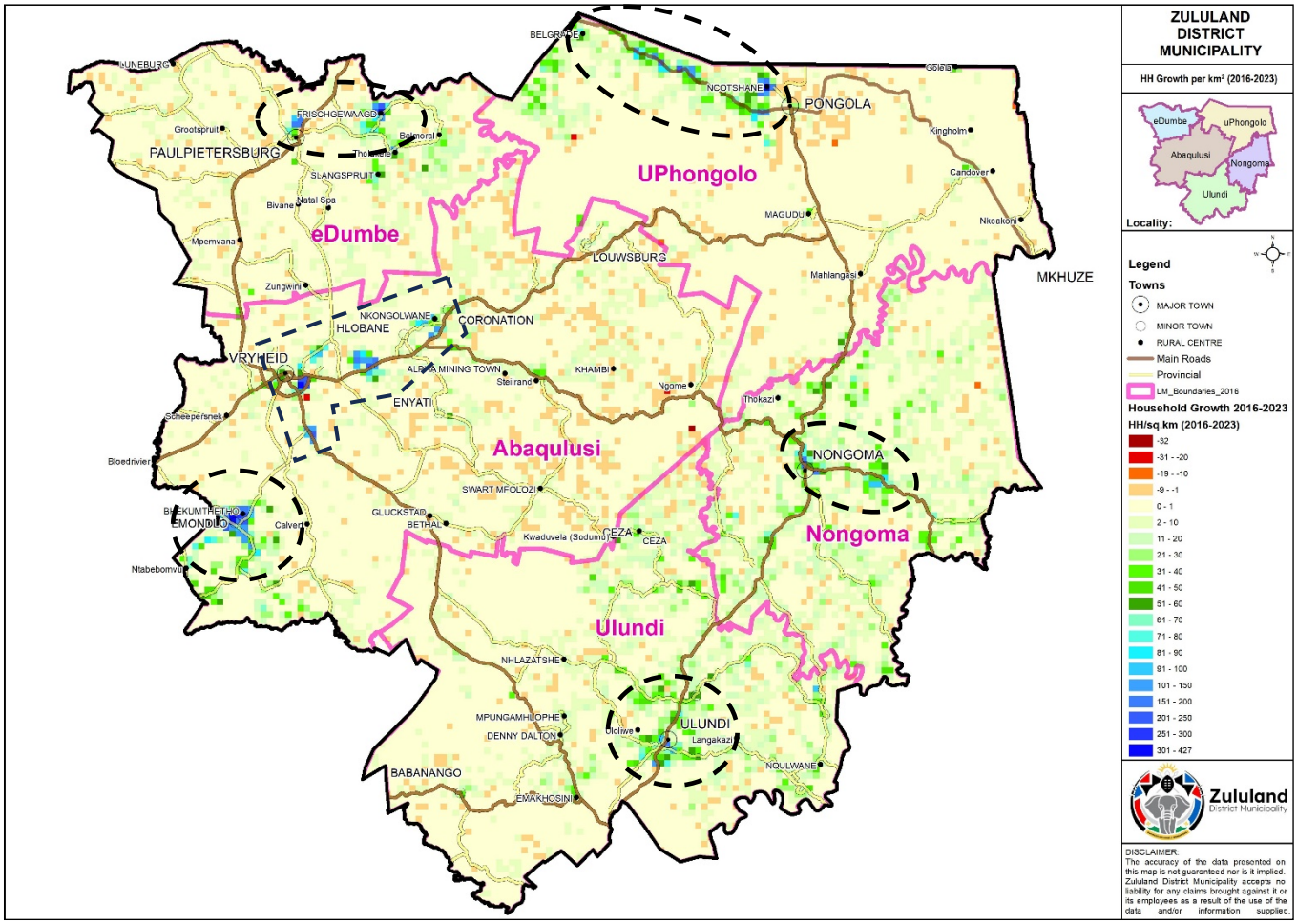
The key information contained in the WSDP is listed below for ease of reference. More detail can be obtained by referring to the respective chapters in the document:

Chapter 1: Socio Economic Profile

The current consumer profile of the district reflect an updated household count which was done by ZDM from Google Earth aerial photography date 2023. A total of **241 400 households** were updated. The previous count was done in 2016, and showed a total household count of 183 642.

From a spatial perspective, the following map indicates the number of households per square kilometer for 2023 compared with the number of households from 2016. The light orange areas show a decline in dwellings, whereas blue indicates a strong increase in households.

Figure A.6.1: Dwelling Growth Pattern per Square Kilometre (2016-2023)



Growth trends per local municipality can be summarised as follows:

- **AbaQulusi**
  High growth in the surrounding eMondlo town areas, Tinta's Drift, KwaShoba and Nkongolwane. A decrease in rural households is evident in the farming areas.
- **eDumbe**
  Strong positive growth in eDumbe, Frischgewaagd & Bilanyoni, with minor decrease in rural farming households.
- **uPhongolo**
  High growth in Ncotshane as well as settlements all along the N2 going west towards Belgrade. Steady growth can be observed in all the traditional authority areas.
- **Nongoma**
  Positive growth along the Nongoma/Hlabisa road, with an overall minor growth in most of the rural traditional authority areas.
- **Ulundi**
  Strong growth surrounding Ulundi town areas, with an overall minor growth in most of the rural areas between Ulundi and Nongoma. A slight negative growth is evident in the farming areas surrounding Babanango.

Due to the spatial analysis requirements for water and sanitation provision at household level, ZDM uses its own household data set which contains actual household positions as opposed to numerical values provided by STATSSA per enumeration area. Households are defined by and projects are implemented per local settlement areas as defined by the ward councillors, and these settlements areas don't always coincide with the enumeration area boundaries of STATSSA. It is therefore impossible to correlate the enumeration areas with settlement areas and derive household statistics between the two data sets.

STATSSA has released the 2022 Census statistics per local municipality. A comparison table between the 2011 Census data and the latest 2022 Census data can be seen in Table A.6.1. There is much debate as to how accurate the Census 2022 figures are. In a post-release STATSSA noted a 31% undercount, which was adjusted. However, when the household counts of 2022 are compared with the household counts of 2011, a total growth of only 7 419 households over 11 years for the entire DM is unrealistic. This is also observed with numerous other district municipalities. A comparison table between the 2011 Census data and the latest 2022 Census data can be seen in table A.6.3.

The Census 2022 statistics will also not be released per EA, and is currently only available on a Local Municipal level. This makes it impossible to correlate discrepancies between the Census 2022 household count, and that of the HGDM household count done from aerial photography.

Since the basis of the WSDP demographics and project implementation relies on settlement areas and each settlement's household count, the ZDM 2023 household count is therefore used to perform spatial analysis on demographics and project planning. However, the Census 2022 does provide population per household, which is therefore used to derive population figures by multiplying it with the ZDM 2023 household count.

Table A.6.1: STATSSA Census data (2011 – 2022)

	HOUSEHOLDS		POPULATION		Ave Households Size	
Local Municipality	**2011**	**2022**	**2011**	**2022**	**2011**	**2022**
AbaQulusi	43 299	51 472	224 998	241 196	4.90	4.70
eDumbe	16 138	17 415	85 022	89 614	5.10	5.10
Nongoma	34 341	36 409	200 948	211 892	5.70	5.80
Ulundi	35 198	38 553	264 765	205 762	5.40	5.30
uPongolo	28 772	34 667	153 727	143 845	4.40	4.10
Total	**157 748**	**178 516**	**929 461**	**892 310**	**5.10**	**5.00**

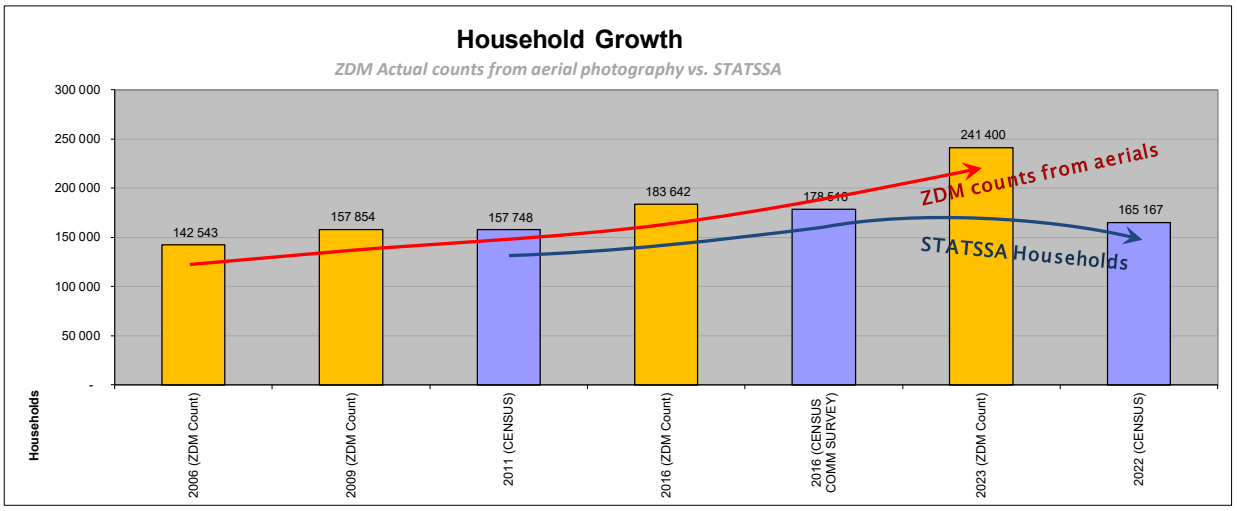
For population analysis, the 2022 Census figures will be applied to the 2023 ZDM household count as per local municipality. A comparison table can be reviewed under Table A.6.3. below, showing current and historical household growth and population figures per local municipality.

Table A.6.2: ZDM and STATSSA Census comparison

	Actual Household Statistics (Captured from aerial photography over 4 consequtive periods) vs CENSUS Data										
Local Municipality	**2006 (ZDM Count)**	**2009 (ZDM Count)**	**2011 (CENSUS)**	**2016 (ZDM Count)**	**2016 (CENSUS COMM SURVEY)**	**2023 (ZDM Count)**	**2022 (CENSUS)**	**Annual household growth rate**	**Average Population per household (CENSUS 2022)**	**Total Population (ZDM Count)**	**Total Population (Census 2022)**
AbaQulusi	36 069	40 302	43 784	47 119	51 472	63 575	50 633	0.9%	4.9	311 518	247 263
eDumbe	15 011	16 880	16 138	17 641	17 415	23 592	17 922	1.9%	5.4	127 397	96 735
Nongoma	34 056	38 171	34 341	44 376	36 409	58 030	32 266	-0.9%	7.0	406 210	225 278
Ulundi	35 309	37 365	35 198	44 987	38 553	57 350	36 178	-1.1%	6.1	349 835	221 977
uPongolo	22 098	25 136	28 287	29 519	34 667	38 853	28 168	1.2%	4.4	170 953	151 541
TOTAL (ZDM)	**142 543**	**157 854**	**157 748**	**183 642**	**178 516**	**241 400**	**165 167**	**0.41%**	**5.6**	**1 365 913**	**942 794**

To summarise the above outcomes, the current household count for ZDM taken from the 2023 household count, is 241 400, with a total population of 1 365 913 when STATSSA population per household is applied *(statssa.gov.za)*

Figure A.6.2: ZDM and Census household growth analysis (2011 - 2023)

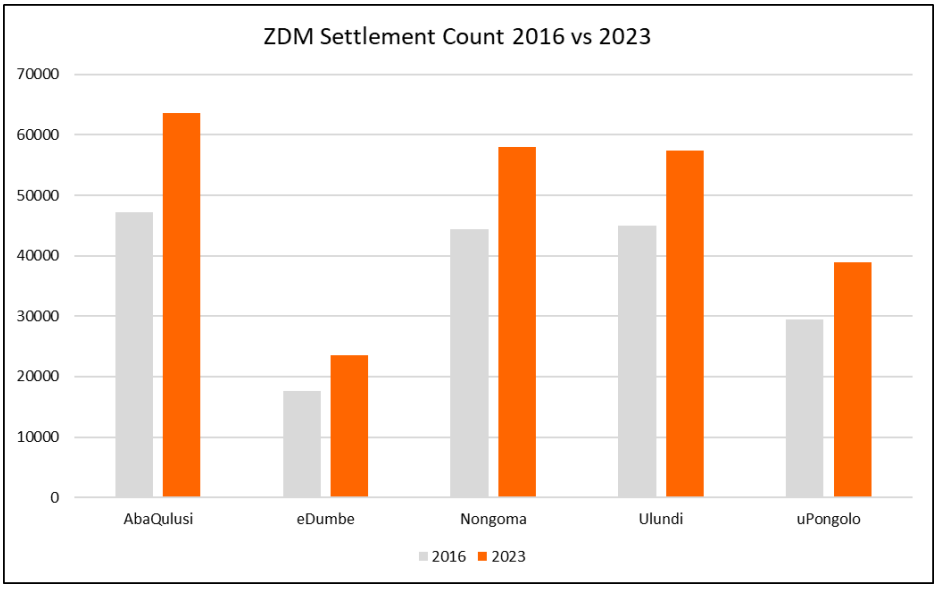


In the following graph the household growth per local municipality can be reviewed since the last household count in 2016. An annual average growth rate of 4-5% is evident in all 5 LM's.

Table A.6.3: 2016 vs 2023 Household Growth

	Totals of Rural HH & Urban HH			
Local Municipality	**2016**	**2023**	**Household Growth (2016-2023)**	**Annual household growth rate (%)**
AbaQulusi	47 119	63 575	16 456	4.99%
eDumbe	17 641	23 592	5 951	4.82%
Nongoma	44 376	58 030	13 654	4.40%
Ulundi	44 987	57 350	12 363	3.93%
uPongolo	29 519	38 853	9 334	4.52%
	183 642	**241 400**		

Figure A.6.3: Annual Growth per Local Municipality



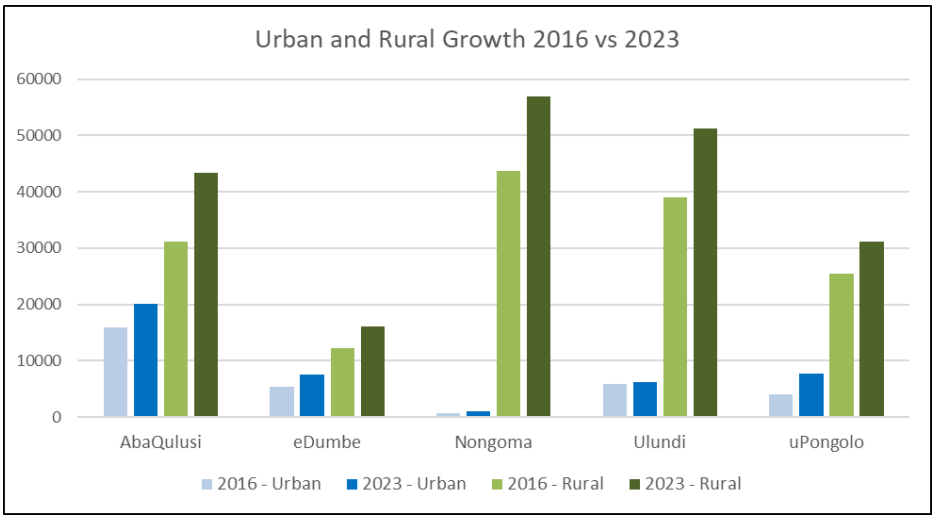
Data derived from 2016 and 2023 Aerial Photography

When urban growth is compared versus rural growth, uPhongolo has experienced the highest urban growth over the 7-year period, with Ulundi the lowest. In the rural areas AbaQulusi has experienced the highest growth, with uPhongolo LM the lowest.

Table A.6.4: Urban and Rural Household Growth (2013-2023)

	Urban			Rural		
Local Municipality	**2016**	**2023**	**Annual growth rate**	**2016**	**2023**	**Annual growth rate**
AbaQulusi	16 000	20 175	3.73%	31 119	43 400	5.64%
eDumbe	5 458	7 530	5.42%	12 183	16 062	4.55%
Nongoma	632	1 049	9.43%	43 744	56 981	4.32%
Ulundi	5 912	6 190	0.67%	39 075	51 160	4.42%
uPongolo	4 009	7 776	13.42%	25 510	31 077	3.12%

Figure A.6.4: Annual Urban and Rural Household Growth per Local Municipality



Data derived from 2016 and 2023 Aerial Photography

In Table A.3(d) the domestic dwellings and farm houses per local municipality can be reviewed. Industrial and business properties were only captured in urban areas since it is not always possible to distinguish businesses and commercial buildings in rural areas from aerial photography.

Table A.6.5: Current consumer profile (units)

LOCAL MUNICIPALITIES	DOMESTIC	INDUSTRIAL / BUSINESSES	FARM HOUSES / SCATTERED HOUSEHOLDS	TOTAL
AbaQulusi	20 175	1 794	-	21 969
eDumbe	7 530	218	-	7 748
Nongoma	1 048	321	-	1 369
Ulundi	6 190	533	-	6 723
uPhongolo	7 776	456	-	8 232
Total (urban)	**42 719**	**3 322**	**-**	**46 041**
AbaQulusi	42 880	390	520	43 790
eDumbe	15 736	113	326	16 175
Nongoma	56 966	79	16	57 061
Ulundi	50 855	209	305	51 369
uPhongolo	28 615	333	2 462	31 410
Total (rural)	**195 052**	**1 124**	**3 629**	**199 805**
Total	**237 771**	**4 446**	**3 629**	**245 846**

Chapter 2: Service Level & Associated Services Profile

The current levels of access to water services in the district are indicated below:

Table A.6.6: Residential consumers: access to water

Water	NOT SERVED	Rudimentary	Communal standpipes	Yard/House connections	House Connections	TOTALS
		<RDP	RDP			
AbaQulusi LM	0	145	0	578	19 011	19 734
eDumbe LM	0	0	0		7 282	7 282
Nongoma LM	0	0	0		1049	1 049
Ulundi LM	0	0	0	522	5 672	6 194
uPhongolo LM	0	0	0	1 457	5 910	7 367
Total (urban)	**0**	**145**	**0**	**2 557**	**38 924**	**41 626**
AbaQulusi LM	6 928	10 047	13136	10 837	2 647	43 595
eDumbe LM	3 146	1754	2301	9 134		16 335
Nongoma LM	6 542	13 905	14 564	21 980		56 991
Ulundi LM	2 937	3 151	19 877	24 885	578	51 428
uPhongolo LM	3 468	1734	3515	22 535	173	31 425
Total (rural)	**23 021**	**30 591**	**53 393**	**89 371**	**3 398**	**199 774**
Total (households)	**23 021**	**30 736**	**53 393**	**91 928**	**42 322**	**241 400**

Table A.6.7: Residential consumers: access to sanitation

	NOT SERVED	VIP	Septic tank	Waterborne	TOTALS
		RDP	>RDP		
AbaQulusi LM	145	0	1071	18 518	19 734
eDumbe LM	0	6632	650	0	7 282
Nongoma LM	0	0	0	1049	1 049
Ulundi LM	0	856	110	5 228	6 194
uPhongolo LM	0	1457	0	5 910	7 367
Total (urban)	**145**	**8 945**	**1 831**	**30 705**	**41 626**
AbaQulusi LM	11 423	32 139	0	33	43 595
eDumbe LM	1 922	14 347	0	66	16 335
Nongoma LM	7 940	49 051	0	0	56 991
Ulundi LM	1 533	49 317	0	578	51 428
uPhongolo LM	5 811	25 441	0	173	31 425
Total (rural)	**28 629**	**170 295**	**0**	**850**	**199 774**
Total (households)	**28 774**	**179 240**	**1 831**	**31 555**	**241 400**

Table A.6.8: Backlog Figures

YEAR	BACKLOGS (Households)		ALLOCATIONS		Household count
	Water	Sanitation	Water	Sanitation	
2019-2020	42 711	30 586	383 328 220	51 310 825	
2020-2021	39 145	28 586	394 165 250	59 721 750	**2016 Households**
2020-2021	37 497	26 848	596 157 000	61 127 500	
2022/2023	36 196	22 538	549 102 401	36 334 200	
2023/2024	34 930	20 733	741 007 860	62 495 140	
2024/2025`	54 561	28 774	550 315 000	-	**2023 Households**
2025/2026	**53 757**	**28 774**	**633 375 207**	**15 843 793**	

Table A.6.9: Backlog Eradication Progress

YEAR	BACKLOGS REMAINING (%)		Household count
	Water	Sanitation	
2019-2020	23.26	16.66	2016 Households
2020-2021	21.32	15.57	
2021/2022	20.42	14.62	
2022/2023	19.70	12.30	
2023/2024	19.02	11.29	
2024/2025	22.60	11.92	2023 Households
2025/2026	**22.27%**	**11.92%**	

Table A.6.10: Public institutions and 'dry' industries: access to water

Institution	No off	WATER		
		None or inadequate	Communal standpipe	Yard connection
Businesses	3 980			958
Clinics	68	5	48	15
Creches	7	2		5
"Dry" Industries				
Hospitals	13			13
Magistrate offices	7			7
Police Stations	15	4		11
Prisons	3			3
Schools	789	360	329	100
Community Halls	39	27		12
Total	**4 921**	**398**	**377**	**1 124**

Table A.6.11: Public institutions and 'dry' industries: access to sanitation

Institution	No off	SANITATION		
		None or inadequate	Dry pit / Septic tanks	Waterborne
Businesses	3 980			3 980
Clinics	68		1	67
Creches	7	2		5
"Dry" Industries				
Hospitals	13			13
Magistrate offices	7			7
Police Stations	15	4		11
Prisons	3			3
Schools	789	24	637	128
Community Halls	39	27		12
Total	**4 921**	**57**	**638**	**4 226**

Chapter 3: Water Resource Profile

The ZDM falls within the Mfolozi (W2), Mkuze (W3) and Pongola (W4) secondary catchments of the Usuthu/Mhlathuze Water Management Area (WMA)[1]. The aerial extent of the ZDM occupies approximately 22% of this WMA. . The total available water and requirements as at year 2000, based on a 98% assurance of supply within these sub-areas, is summarised in Table A.6.6. It is evident that apart from the Pongola catchments, water from these sub-areas is currently over-utilised and a deficit is created. However, according to Basson and Rossouw[2], this deficit is a result of the provision made for future implementation of the Reserve. The Reserve is a legislated requirement of the amount of water required to satisfy the ecological needs of a river system (provisionally estimated at 20%) as well as the basic human needs (that have been established as 25 litres per person per day).

Table A.6.12: Water balance - summary of the water available and required within Zululand District Municipality for the year 2000 (Million m^3 (kℓ) per annum).

			Mfolozi	Mkuze	Pongola	Total
Available water	Natural resource	surface water	36	15	616	667
		groundwater	5	12	8	25
	Usable return flow	Irrigation	5	6	21	32
		Urban	4	0	0	4
		Mining & bulk	1	0	0	1
	Total local yield*		**51**	**33**	**645**	**729**
	Transfers in		0	30	0	30
	Total available		**51**	**63**	**645**	**759**
Water requirements	Consumer groups	Irrigation	51	61	213	325
		Urban**	12	1	1	14
		Rural**	11	10	6	27
		Mining & bulk industrial***	4	0	1	5
		Afforestation****	2	6	34	42
	Total local requirements		**80**	**78**	**255**	**413**
	Transfers out		18	0	30	**48**
	Total used		**98**	**78**	**285**	**461**
Balance			**-47**	**-15**	**360**	**298**

Source: Basson and Rossouw (2003).
**Includes allowance for impacts of the ecological component of the Reserve, river losses, alien vegetation, rain-fed agriculture and urban run-off on yield.*
***Includes allowance for basic human needs component of the Reserve (25 ℓ/c/d).*
****Mining and bulk industrial water uses that are not part of the urban system.*
*****Afforestation quantities refer to the impact on yield only.*

[1] *The Usuthu/Mhlathuze WMA is one of 19 areas defined across South Africa in terms of the National Water Act, 1998 (Act 36 of 1998). These WMAs have been defined to improve water resource management within South Africa. With time, each of the WMAs will establish a catchment management agency (CMA) for the regulation and control of water use in the WMA.*

[2] *Op cit 2 at 23.*

White Umfolozi Catchment (Hlahlindlela Regional Water Supply and Nkonjeni Regional Water supply Area)

A detailed catchment study for the Mfolozi River has not been undertaken before. The catchment has however been included in national water resource studies such as the Surface Water Resources of South Africa 1990 (WR90) and the Water Resources of South Africa 2005 (WR2005) studies of the Water Research Commission. Although the Usuthu to Mhlathuze Water Management Area (WMA6) is not considered by the Department of Water Affairs (DWA) to be a water stressed area as a whole, the Mfolozi River catchment is considered to have a net deficit in the water balance for the catchment according to the National Water Resource Strategy (September 2004 edition). The National Water Resource Strategy also indicates that there will be no net increase in water requirements within the catchment from 2000 to 2025. However there has been growing water demand over the past decade mainly due to an increase in the provision of water services to the large rural population within the catchment.

A reconnaissance level water resource catchment study for the White Mfolozi River was undertaken in 2009/2010. The yield analyses indicate that there is **insufficient** water to currently meet the requirements of eMondlo at 98% assurance and by 2030 there will be significant shortfalls in the water availability to meet the requirements of all the main towns, especially if the Reserve are released from the main dams. One of the recommendations of the study was that the Water Resource Planning Model (WRPM) be used to determine the scheduling requirements for new infrastructure and to recommend operating rules for the system.

ZDM undertook a Water Resource Modelling of **the upper White uMfolozi River System** during 2011/2012. Areas served by this System are Vryheid Town and surrounding suburbs, Bhekuzulu, Lakeside, eMondlo Town and surrounding areas (Hlahlindlela Regional Water Supply Scheme), Mpumanhlope, Ulundi, Babanango (Nkonjeni Regional Water supply Scheme) and Nondweni (Umzimyathi District Municipality).

The following recommendations were proposed:

- Take immediate action to augment the water supply to eMondlo.
- Start the necessary pre-feasibility and /or feasibility studies to be prepared for the next Water Resource Augmentation project.
- Implement the proposed operating rules for Mvunyane, Bloemveld and Grootgewacht Dams
- Make a decision on a restriction strategy for eMondlo. Implement restrictions to eMondlo based on the short-term yield curves and the water requirement projections.
- Continue to track the actual water usage in the system and update the water demand projections regularly.
- Monitor all dam levels on a daily basis, including the rainfall and evaporation.
- Monitor water abstractions and return flows on a daily basis.
- Rerun the WRPM every year in May with the updated system storage information and the updated water projections to revise the projected implementation date for the next water resource augmentation project.

- Review the recommendations made in the First Order Reconciliation strategies done during Small Town Studies, particular attention should be paid to Water Conservation and Demand Management Strategies in the ZDM supply areas.
- Review the option of raising Klipfontein dam as proposed in the First Order Reconciliation strategies with other water resource development alternatives to improve the system yield. The raising of Klipfontein Dam is likely to be expensive due to the potential impact on the road and railway line.

Subsequent to the water modelling study, DWA is currently in Phase 1 to raise the Klipfontein Dam wall. This will provide enough storage capacity to proceed with the Hlahlindlela Regional Water Supply Scheme, and augment the water release capacity for Mpungamhlope and Ulundi weirs.

Black Umfolozi Catchment (Usuthu Regional Water Supply)

ZDM investigated the available water resources in the upper Black Mfolozi River during 2011.

The purpose of the investigation was twofold:

- An assessment was undertaken to determine the available water resources of the upper Black Mfolozi River which involved quantifying the divertible flows at the existing weir on the river near Nongoma upstream of the Kwa Nkweme River confluence. This represents the situation prior to construction of the off-channel storage dam on the Kwa Nkweme River. Analyses were performed for 18.6 Ml/day (2025 demand) and 25 Ml/day (2035 demand).

- Detailed yield analyses were undertaken to determine the water resources capability of a proposed system on the upper Black Mfolozi River, which consists of a new off-channel storage dam on the Kwa Nkweme River. Water for this off-channel storage dam will be supplied by diverting available flows from the existing weir on the Black Mfolozi River. The performance of the system was evaluated for a variety of possible configurations including a range of dam (storage) sizes, flow diversion capacities and downstream environmental flow requirements (EFR's).

Based on the results of the water resource assessment it is concluded that:

Prior to the construction of the proposed off-channel storage dam on the Kwa Nkweme River, a run-of-river scheme on the upper Black Mfolozi River could supply a target abstraction of 18.6Ml/day (or 6.8 million m³/a, the projected water requirement for the proposed scheme in 2025) with an annual risk of failure of 64% (recurrence interval of 1:1.6 years). This risk is well above accepted levels for schemes of this increase the supply capability (assurance of supply) of the system.

ZDM is currently in the process of reviewing the Usuthu Technical Report with updated cost estimates. The off-storage dam for the Usuthu Regional Scheme will be proposed to provide sustainable water to

the Usuthu Regional Scheme. The Regional Scheme Implementation Is currently on hold pending construction of the off-storage dam.

Pongola Catchment (Simdlangentsha Central/East, Mandlakazi, and Gumbi Regional Water Supply Areas)

The Pongola catchment is currently under-utilised and the catchment area is not under stress.

A new WTW at the Belgrade abstraction works is proposed to replace the ageing package plants at Belgrade. This WTW will supply sustainable water for the Simdlangentsha Central, as well as the northern portion of Simdlangentsha East.

New upstream bulks for the Mandlakazi Regional Scheme are in progress that will replace the water supply from Senekal Boerdery. A new abstraction works and upgraded WTW will supply Mandlakazi as well as the Hlabisa Regional Water Supply Scheme.

CHAPTER 4: Operation & Maintenance

Operation and Maintenance management is split up as follows:

- **Bulk Water and Wastewater Management:**
  The core function for Water Services Provision Bulk is to ensure that water and wastewater infrastructure is managed properly in order to produce a cost effective and SANS 241 acquiescent quality of water. It is also to Operate and Maintain the Bulk Infrastructure in order to minimize down time).
- **Rural and Urban Reticulation:**
  The main function of the "Urban and Rural Reticulation Section" division is to operate and maintain the water and sanitation networks in both urban and rural areas within the Local Municipalities.

Of critical importance is the funding of Operations and Maintenance of existing and future schemes as they are being commissioned. Correct O&M of physical infrastructure is arguably more important than infrastructure construction because unless successful preventative maintenance procedures are instituted schemes will become inoperative. As a large proportion of expenditure relates to staff, competent personnel are required to ensure that the large investments in water services are not negated through dysfunction or dereliction.

This section looks at existing infrastructure which have reached its end of lifespan, and whether refurbishment, O&M or replacement is necessary for sustainable service delivery. This is applicable for water and sanitation components such as WTW's or Pump Stations, but also for scheme networks where infrastructure has deteriorated or reached the end of its lifespan. It furthermore entails O&M for all borehole and spring protection services where O&M plays a significant role.

Other factors influencing proper O&M include Staff capacity, external resources, equipment and budget requirements.

The DWS 5-Year Water and Sanitation Reliability Service Delivery Implementation Plan has been completed during 2024. This Implementation Plan takes all the above aspects into account and provides a pipeline of projects for the next 5 years to enable the municipality in providing a 90% reliable service delivery for water and sanitation. This forms part of the KZN PGDS Framework. Projects related to this 5-year Plan will be addressed under the WCWDM Strategic approach.

Table A.6.13 below shows the operational costs associated with the provision of water services in the district against the total income. At present a significant decline exists for O&M, and ZDM is addressing these issues through various means.

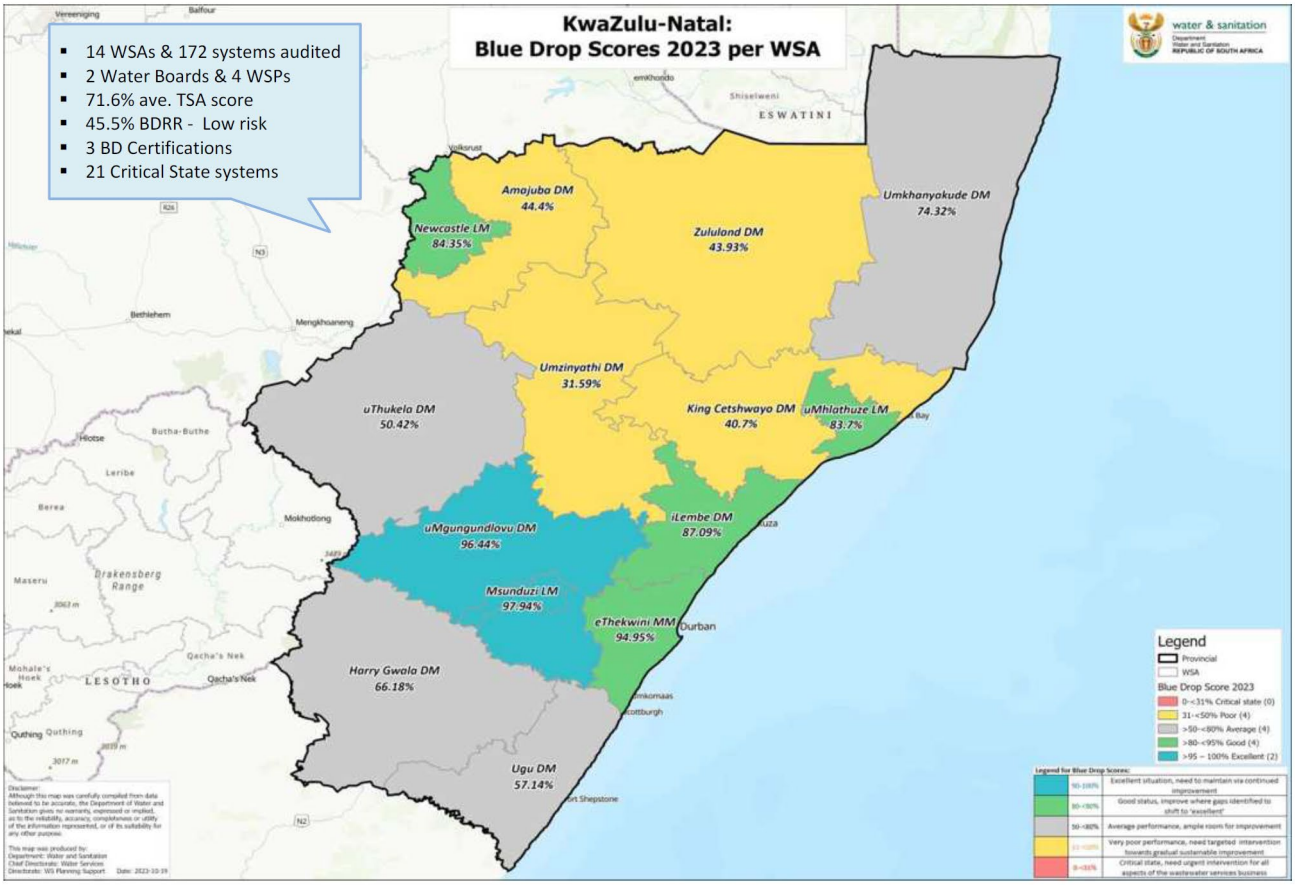
Table A.6.13: Operational costs and income

Operating costs and income	Total 5yr projected	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Operational costs	R 2 135 402 037	R 344 986 742	R 317 975 886	R 349 773 474	R 384 750 822	R 423 225 904	TBC	TBC
Personnel costs	R 903 187 212	R 134 235 055	R 134 490 718	R 147 939 790	R 162 733 769	R 179 007 146	TBC	TBC
Total O&M costs	**R 3 038 589 249**	**R 479 221 796**	**R 452 466 604**	**R 497 713 264**	**R 547 484 591**	**R 602 233 050**	**R -**	**R -**
MIG Alalocation (1%)							R 27 258 600	TBC
Equitable share: FBS	R 2 892 813 490	R 564 272 000	R 524 645 000	R 559 056 000	R 566 225 000	R 577 549 500	TBC	TBC
Income: sales (actual payment)	R 290 114 352	R 25 410 596	R 43 200 000	R 47 520 000	R 52 272 000	R 57 499 200	TBC	TBC
Total income	**R 3 182 927 842**	**R 589 682 596**	**R 567 845 000**	**R 606 576 000**	**R 618 497 000**	**R 635 048 700**	**R -**	**R -**
Deficit/surplus	**R 144 338 593**	**R 110 460 800**	**R 115 378 396**	**R 108 862 736**	**R 71 012 409**	**R 32 815 650**	**R -**	**R -**

The O&M financial information is still being processed and will be included as soon as it is available. KPI's include maintaining proper O&M on relevant assets, as well as keeping staff and budget requirements in place.

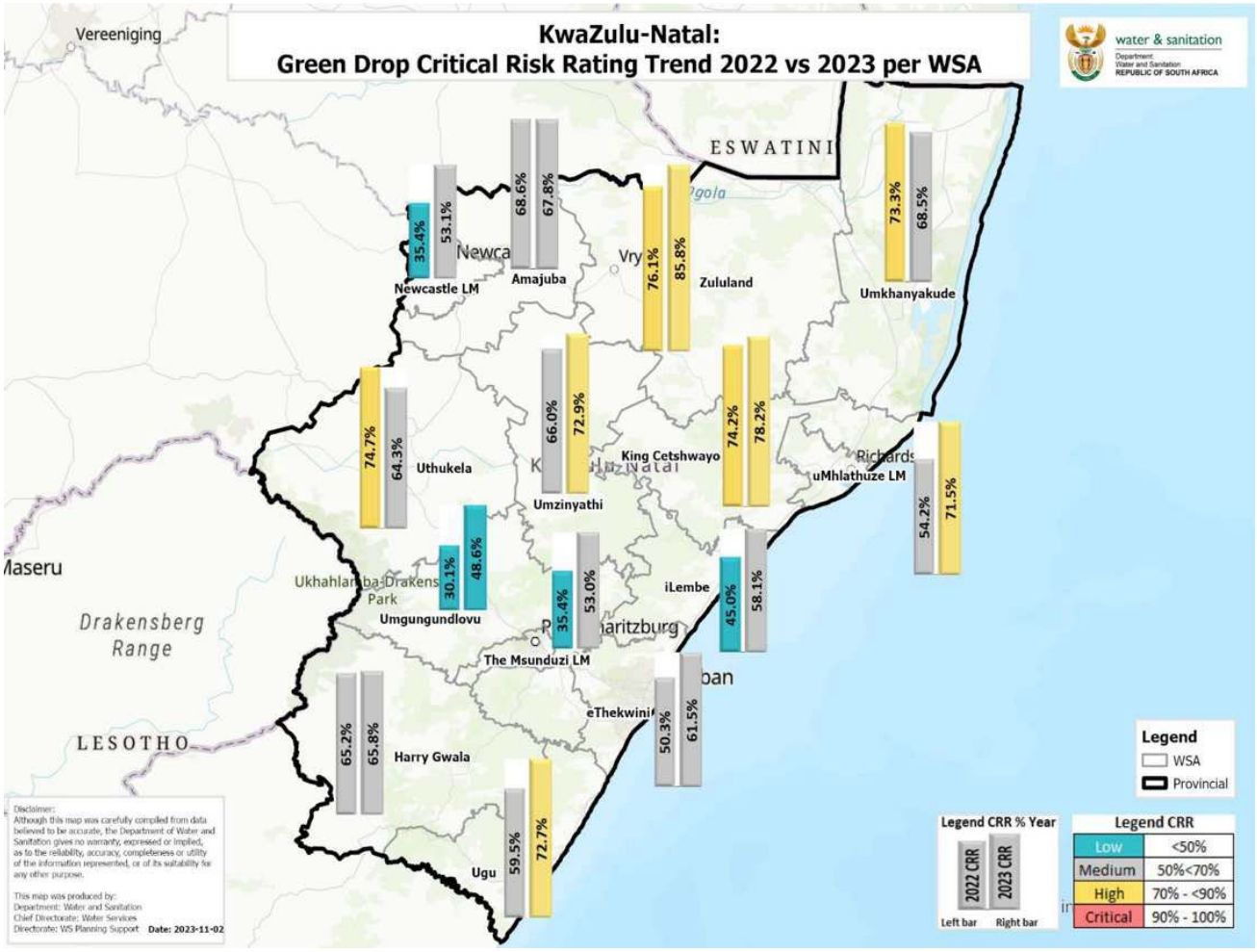
The following figure provides an overview on the KZN Blue Drop Assessments. ZDM has a yellow status, and will require interventions in the operation and maintenance of its water treatment plants.

Figure A.6.5: ZDM Blue Drop Assessment Outcome (2023)



The following figure provides an overview on the KZN Green Drop Assessments. ZDM has a high risk rating status, and will require interventions in the operation and maintenance of its wastewater treatment plants.

Figure A.6.6: ZDM Green Drop Assessment Outcome (2023)



Chapter 5: Water Conservation/ Demand Management

ZDM has embarked on an extensive Unaccounted for Water programme (UAW), aimed at understanding the usage of water in the district and to provide guidance to future demand management and waterloss interventions. Specific interventions will be launched at individual schemes to address water losses through:

- Pressure management
- Leak repair programmes
- Meter repair & replacement programmes
- Internal plumbing leaks
- Consumer end-use demand management initiatives

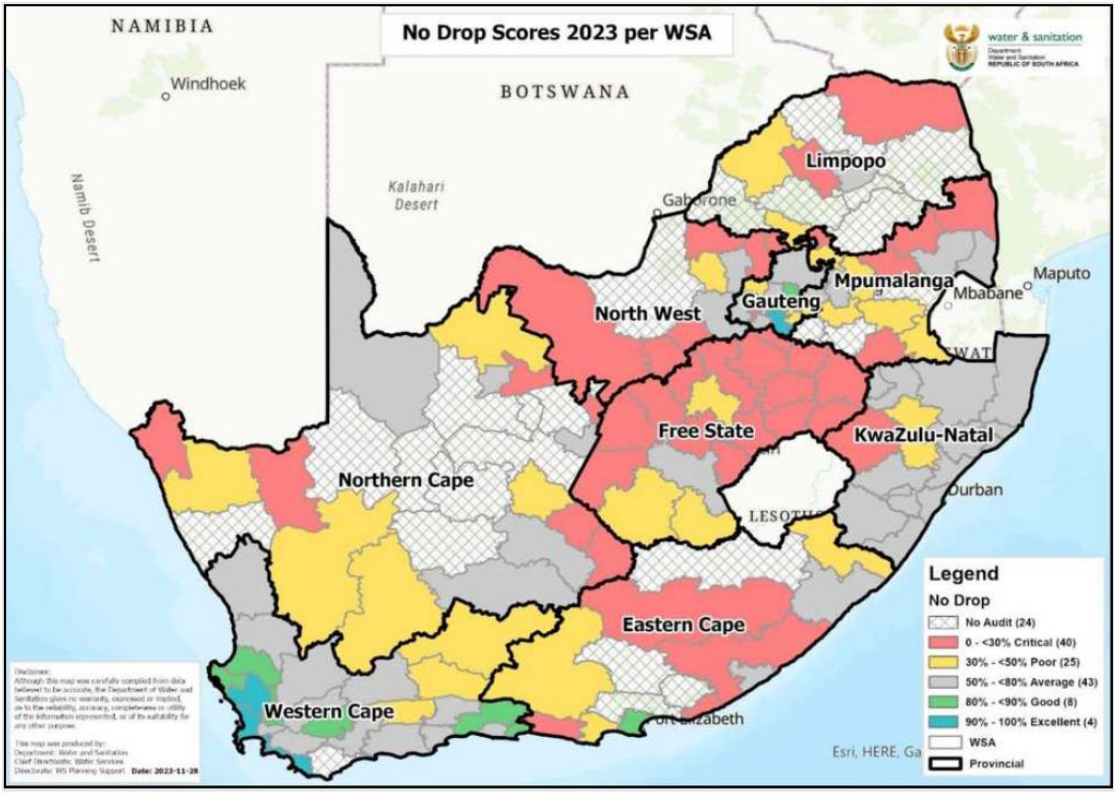
The water demand strategy will focus on a number of ways to ensure the reduction of water demand by consumers, for example:

- Influencing the behaviour of consumers
    - School and public educational and awareness programmes aimed at promoting effective usage of water (brochures, advertising, newsletters, demonstrations, exhibits, informative billing, etc)
    - Water services tariff that promotes efficient water usage
    - Any other “win-win” initiatives that could influence consumers positively
- Specific targeted projects like;
    - Repair plumbing leaks inside properties
    - Installation of water flow control devices, etc.

ZDM has made considerable efforts to improve the WCWDM function in the district. An updated WCWDM Plan was compiled in 2024 to provide a holistic approach to water conservation and demand management. A 10% allocation from the annual MIG funding has been approved to facilitate and implement WCWDM for all regional schemes.

The following figure provides an overview on the KZN No Drop Assessments. ZDM has an average status, and this score should improve considerably with the interventions undertaken by ZDM since 2024.

Figure A.6.7: ZDM No Drop Assessment Outcome (2023)



2023 No Drop Criteria

The 2023 No Drop assessments were performed using a reduced set of No Drop Criteria. These criteria were selected to assess a WSA's understanding of their WC/WDM status, the plans, strategies, budgets, and implementation of remedial projects. Below is a brief description of the Criteria.

Criteria 1	WC/WDM status quo, plans and strategies, budgets, and implementation of projects (Water Resource Diagram, Water Balance, Council approved WC/WDM strategies and budgets)
Criteria 2	Asset management as it relates to meter replacement. Monitoring, analysis, and action of high loss District Metered Areas (DMAs) in metropolitan municipalities
Criteria 3	Technical skills of WC/WDM team
Criteria 5	Compliance and Performance based on the water loss and efficiency Key Performance Indicators (KPI) and year on year improvement there-of

Chapter 6: Water and Sanitation Services Infrastructure Profile

ZDM has done extensive work on the development of a database that will serve as an asset register, but also to be used as the basis for the development of an asset management system and to capture asset related information electronically for ongoing use. The system has been named 'MANZI' and access can be gained on the ZDM website at www.zululand.org.za once the user has been issued with a username and password. Table A.6.8 below provides a brief overview of the schemes in the district that have been captured on the MANZI system and a summary of the infrastructure under consideration, as well as a rough estimate of the value of assets. These figures will be refined over time once the asset management system has been rolled out.

Table A.6.14: Summary of water schemes in the district

Summary Data	LOS	Total
Number of Schemes	Above RDP - Urban	14
	Above RDP - Rural	67
	RDP	122
	Rudimentary	145
	To be confirmed on GIS	7
	TOTAL SCHEMES	**355**

The following figures and proceeding table shows examples of water infrastructure data that is currently available on the GIS. New infrastructure details are captured and updated from as-builts on an annual basis.

Figure A.6.8: Existing Water Infrastructure

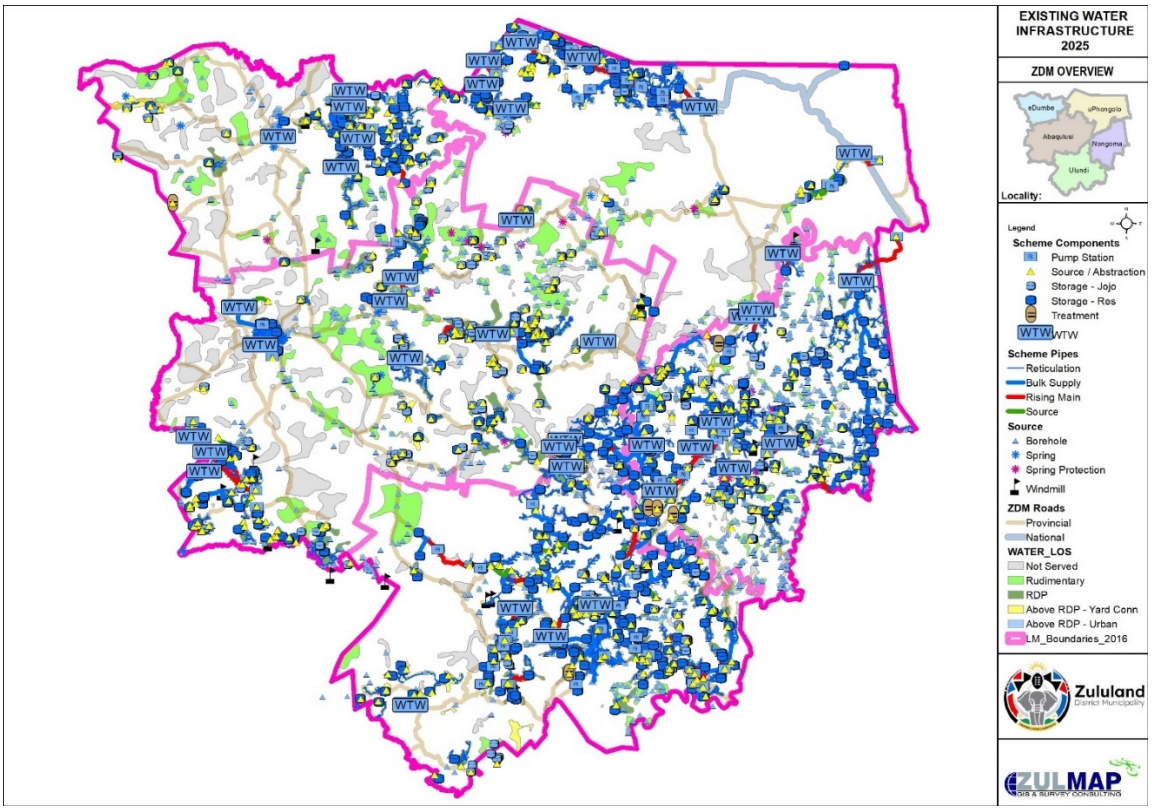
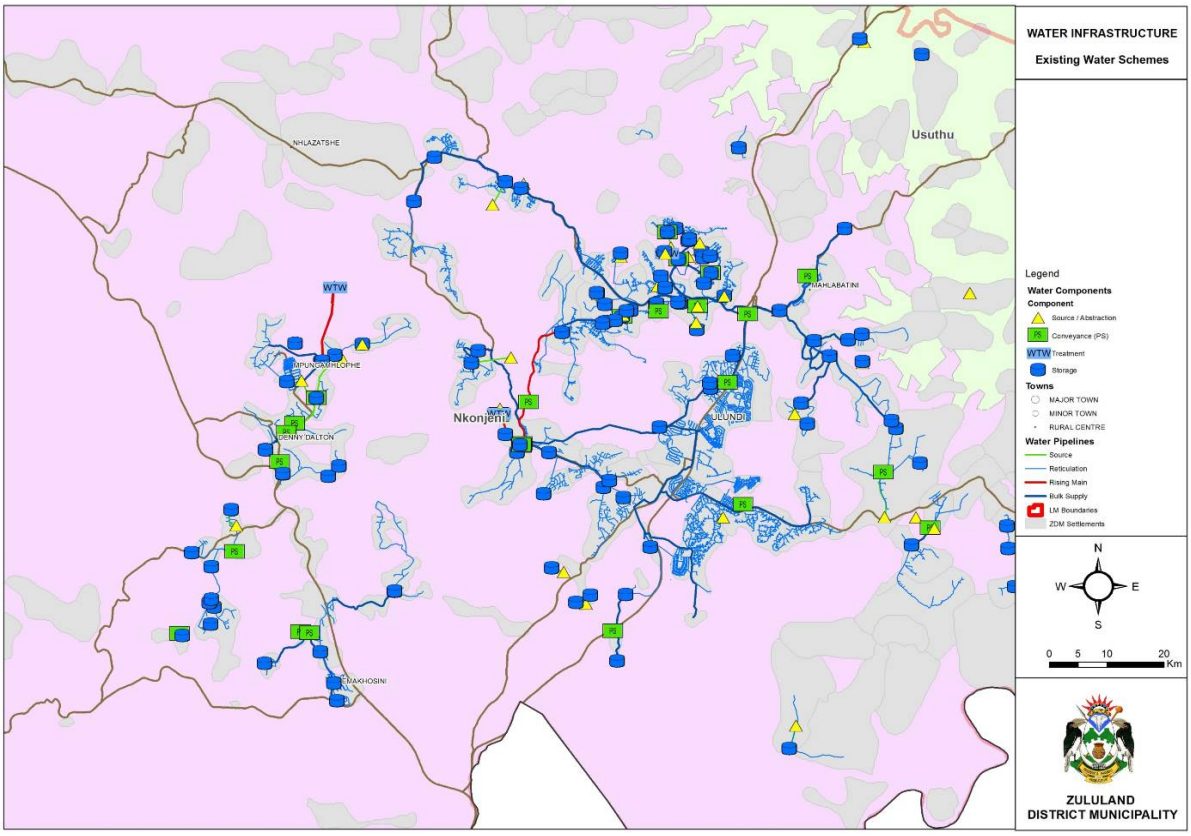


Figure A.6.9: Typical pipeline and component details per scheme



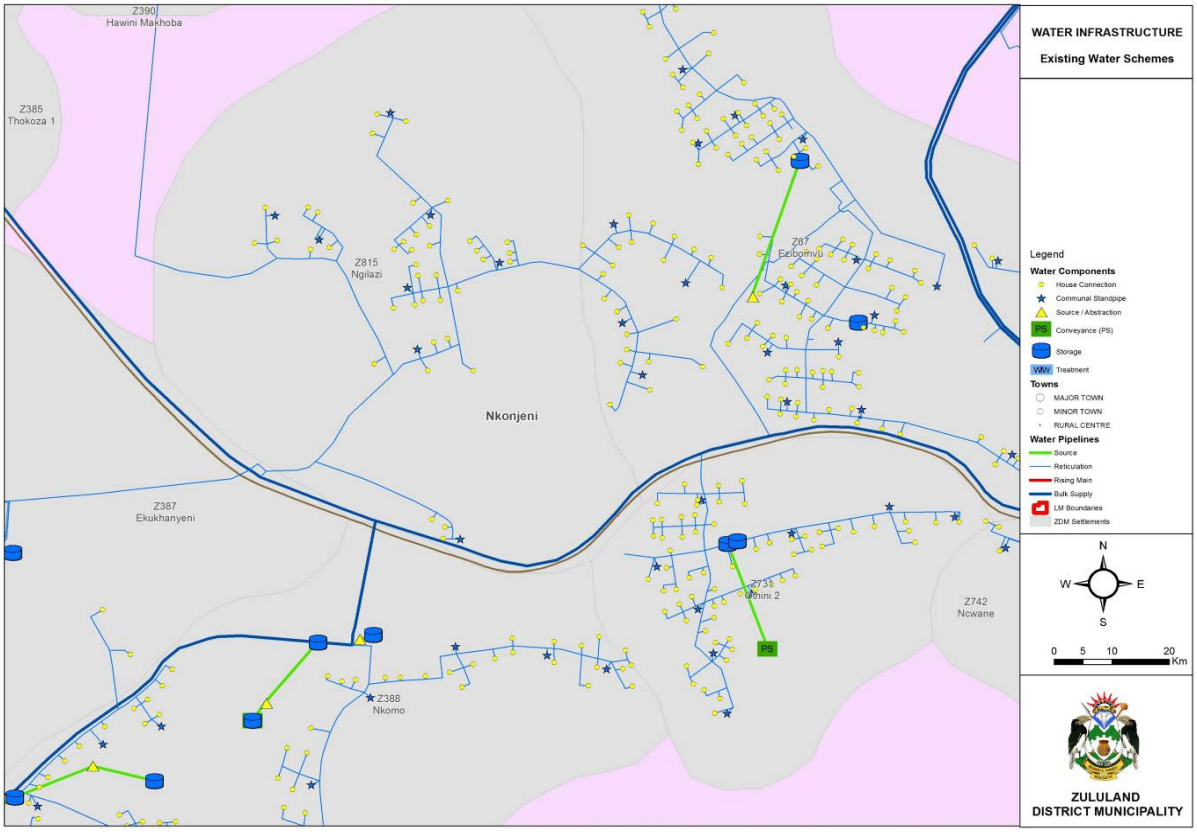


Table A.6.15: Summary of water infrastructure components available the ZDM GIS

Summary Data	Description	Total
Pipelines	Bulk	1586 km
	Reticulation	6601 km
Installations	Yard Connection	33 355
	StandPipe - Barrel	305
	StandPipe - Communal	6 659
	Electrical Point	72
	Valve	16 992
	Meter	1 431
	Bulk Metering Points	234
	Handpump	886
	Playpump	32
	Electrical Pump	101
	Diesel Pumps	26
	Equipped BH pumps (Type unverified)	2057
	Pump Station	114
	Scheme Source / Abstraction	574
	Break-pressure Tank	618
	Storage - Jojo	249
	Storage - Reservoir	795
	Weir	30
	Treatment (Sand filters etc)	8
	Water Treatment Works	40
	Boreholes	2690
	Spring Protections	73
	Windmills	49
Replacement Value	Civil	R 2 187 465 532.77
	Mechanical	R 638 857 590.23
	Electrical	R 252 906 251.28
	Telemetry	R 13 480 747.91

Sanitation services are divided up between formal waterborne sewer services, as well as basic RDP-level services in the form of VIP-type sanitation facilities for households.

There are 19 formal waterborne sewer treatment plants in ZDM. Louwsburg and Paulpietersburg towns only have soak-away drain pits, while Frischgewaagd only has VIP-type sanitation. These details can be seen in the following figure and table.

Figure A.6.10: Existing Sanitation Infrastructure

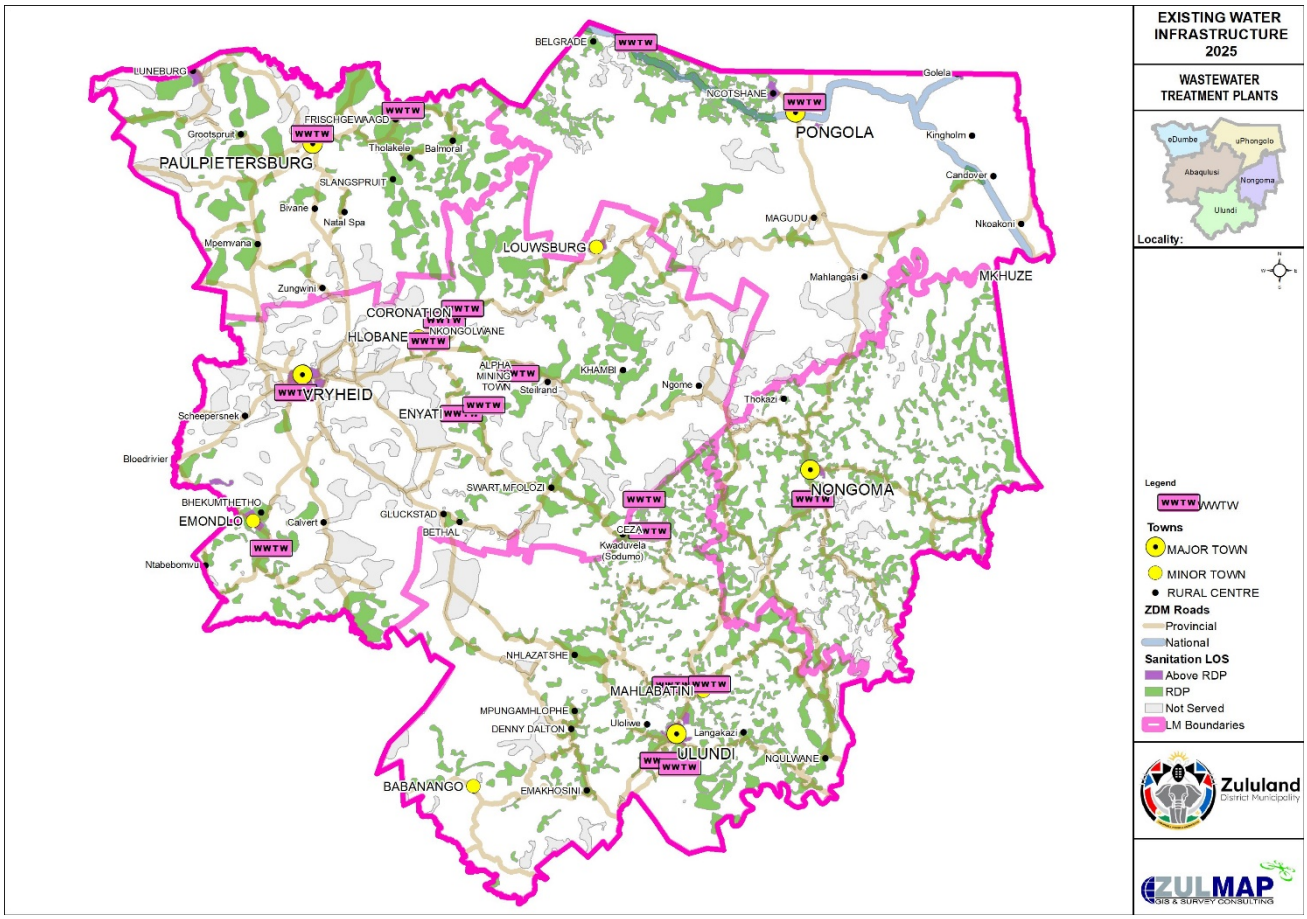


Table A.6.16: Summary of waterborne infrastructure details available the ZDM GIS

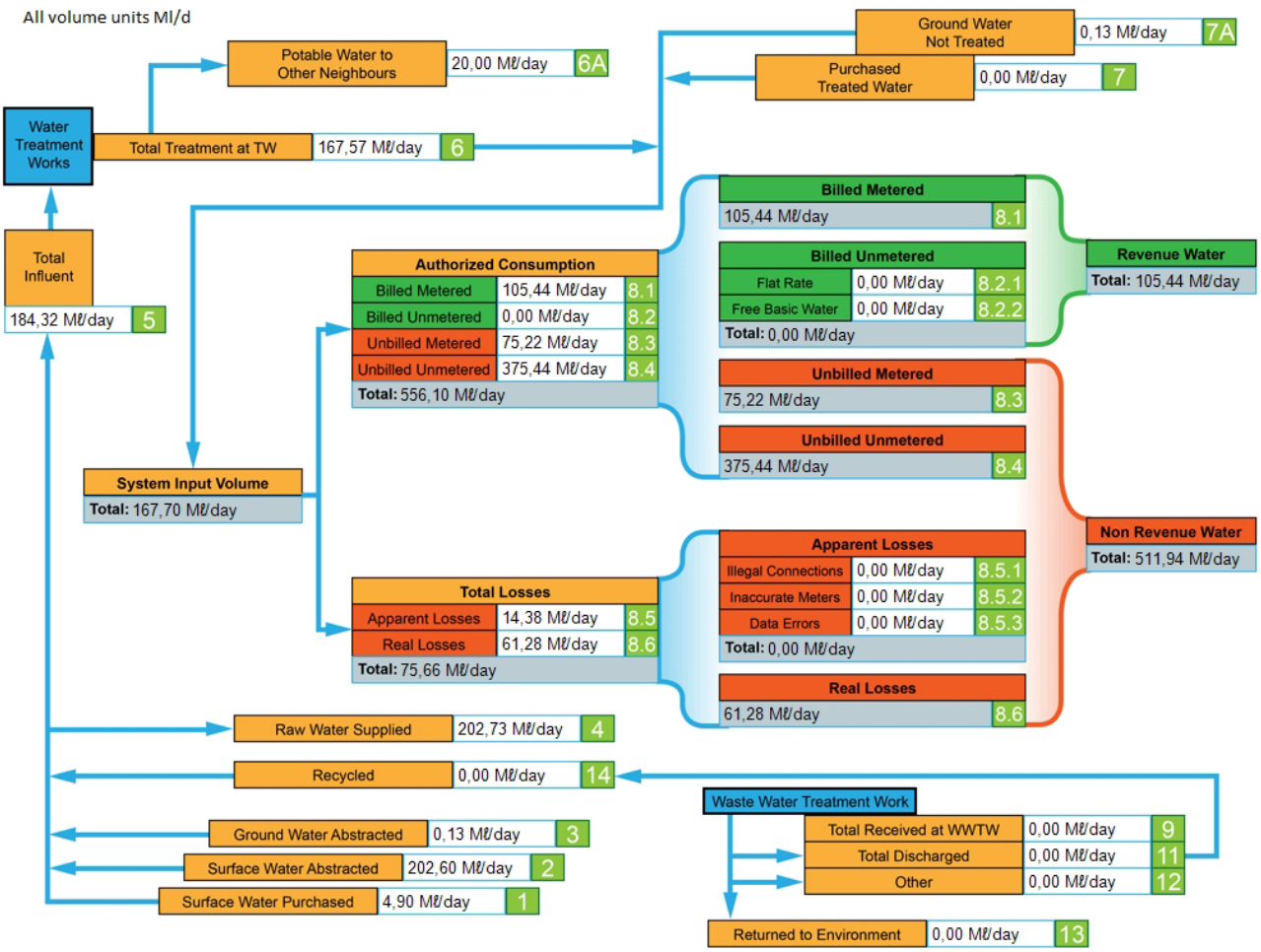
Summary Data	LOS	Total
Number of Schemes	Waterborne Schemes	20

Summary Data	Description	Total
Pipelines	Bulk	62.4 km
	Reticulation	561.2 km
Installations	Pump Station	7
	Wastewater Treatment Works	19
Replacement Value	Civil	TBC
	Mechanical	TBC
	Electrical	TBC
	Telemetry	TBC

Chapter 7: Water Balance

A first order water balance is presented in Chapter 7 from available data at the time.

Figure A.6.11: ZDM Water Balance



As part of the Water Conservation and Water Demand Management Plan, in-depth details will be obtained regarding Apparent Losses to provide a more complete water balance chart.

Chapter 8: Water Services Institutional Arrangements

ZDM has taken over the function of WSA and WSP for the entire district in 2003. An interim agreement was however signed between ZDM and AbaQulusi LM, whereby AbaQulusi LM will act as the WSP for the urban areas in the municipality until such time that ZDM can take over the responsibility. This agreement has however been extended up to now.

At present AbaQulusi Local Municipality is still functioning as the Water Services Provider for the urban areas within AbaQulusi. ZDM has undertaken a revised Section 78 Assessment on the WSP function for AbaQulusi LM, and was concluded in May 2024. An extended agreement was signed between ZDM and AbaQulusi LM whereby AbaQulusi LM will continue with the WSP function on the urban areas.

Chapter 9: Customer Services Profile

The provision of high quality water services to consumers involves good water quality and the reliability of water services. This chapter covers interventions implemented or planned by ZDM to address the above mentioned issues. A customer care charter is being drafted that will be the “contract” with the consumer and will also list the consumer’s responsibilities in this regard. Work has been done on the drafting of a customer care strategy and the following key focus areas have been identified:

- To know your customers (complete customer database)
- To develop proper mechanisms for effective two way communication with customers
- To provide affordable, high quality services that are accessible to all
- To empower your consumers through education
- To develop a customer focused organisation
- To develop a customer charter and honour the agreement with the customer
- To accelerate the implementation of appropriate service provision structures

ZDM has developed a system for the capturing and tracking of customer complaints, from the point where the complaint is recorded by the Customer Care centre, referred to specific individuals to deal with and closed out when finally dealt with. The system is called SIZA and records the time from when the complaint was lodged until the issue has been successfully completed. Response time to consumer complaints and the time it takes to deal with issues are therefore measured and can be reported on.

Chapter 10: Financial Profile

This chapter deals with two financial issues related to water services infrastructure, namely:

- New capital projects
- Operations and maintenance (O&M) of existing infrastructure

The details are contained in Chapter 9 but can be summarised in the tables below:

Table A.6.17: Capital requirements: water

WATER	Capital requirements	2022/2023	2023-2024	2024-2025	2025-2026	2026-2027
Regional bulk	R 7 231 592 510	R 346 335 383	R 519 827 030	R 494 047 695	R 564 212 716	R 534 572 203
Reticulation	R 2 591 418 512	R 282 150 148	R 221 180 830	R 159 813 619	R 69 162 491	R 135 089 108
Total capital (new)	**R 9 823 011 022**	**R 628 485 531**	**R 741 007 860**	**R 653 861 314**	**R 633 375 207**	**R 669 661 311**
Regional bulk (WTW)	R 378 401 219	TBA	TBA	TBA	TBA	TBA
Reticulation	TBA	TBA	TBA	TBA	TBA	TBA
Total capital (refurbishment)	**R 378 401 219**					
Total capital	**R 10 201 412 241**	**R 628 485 531**	**R 741 007 860**	**R 653 861 314**	**R 633 375 207**	**R 669 661 311**

Table A.6.18: Capital requirements: sanitation

SANITATION	Capital requirements	2022/2023	2023-2024	2024-2025	2025-2026	2026-2027
Bulk infrastructure	TBA	TBA	TBA	TBA	TBA	TBA
Reticulation	TBA	TBA	TBA	TBA	TBA	TBA
VIP toilets	R 575 480 000	36 334 200	R 62 495 140	R 11 388 135	15 843 793	50 000 000
Total capital (new)	**R 575 480 000**	**R 36 334 200**	**R 62 495 140**	**R 11 388 135**	**R 15 843 793**	**R 50 000 000**
Bulk infrastructure (WWTW)	777 305 526	TBA	TBA	TBA	TBA	TBA
Reticulation	TBA	TBA	TBA	TBA	TBA	TBA
VIP toilets (Replacement Prgrm)	817 760 000	TBA	TBA	TBA	TBA	TBA
Total capital (refurbishment)	**R 1 595 065 526**	**R -**	**R -**	**R -**	**R -**	**R -**
Total capital	**R 2 170 545 526**	**R 36 334 200**	**R 62 495 140**	**R 11 388 135**	**R 15 843 793**	**R 50 000 000**

Table A.6.19: Sources of Capital Income: Water

WATER	Expected Funding	2022/2023	2023-2024	2024-2025	2025-2026	2026-2027
MIG	R 223 195 800	R 223 195 800	R 209 222 860	R 273 226 865	R 257 012 207	R 257 012 207
DWA (RBIG)	R 217 883 101	R 217 883 101	R 430 905 000	R 165 700 000	R 276 363 000	R 276 363 000
Housing	R -	R -	R -	R -	R -	R -
WSIG	R 121 000 000	R 121 000 000	R 100 880 000	R 100 000 000	R 100 000 000	R 100 000 000
Loans	R -	R -	R -	R -	R -	R -
TOTAL	**R 562 078 901**	**R 562 078 901**	**R 741 007 860**	**R 538 926 865**	**R 633 375 207**	**R 633 375 207**
Capital requirements	R 10 201 412 241					
Shortfall up to 2027	**R -9 639 333 340**					

Table A.6.13: Sources of Capital Income: Sanitation

SANITATION	Expected Funding	2022/2023	2023-2024	2024-2025	2025-2026	2026-2027
MIG	R 176 061 268.00	R 36 334 200.00	R 62 495 140	R 11 388 135	R 15 843 793.00	R 50 000 000.00
DWA						
Housing	R -	R -	R -	R -	R -	R -
Other grant funding						
Loans						
TOTAL	**R 176 061 268**	**R 36 334 200**	**R 62 495 140**	**R 11 388 135**	**R 15 843 793**	**R 50 000 000**
Capital requirements	R 2 170 545 526					
Shortfall up to 2027	**R -1 994 484 258**					

Table A.6.20: Operational costs and income

Operating costs and income	Total 5yr projected	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
Operational costs	R 2 135 402 037	R 344 986 742	R 317 975 886	R 349 773 474	R 384 750 822	R 423 225 904	TBC	TBC
Personnel costs	R 903 187 212	R 134 235 055	R 134 490 718	R 147 939 790	R 162 733 769	R 179 007 146	TBC	TBC
Total O&M costs	**R 3 038 589 249**	**R 479 221 796**	**R 452 466 604**	**R 497 713 264**	**R 547 484 591**	**R 602 233 050**	**R -**	**R -**
MIG Alalocation (1%)							R 27 258 600	TBC
Equitable share: FBS	R 2 892 813 490	R 564 272 000	R 524 645 000	R 559 056 000	R 566 225 000	R 577 549 500	TBC	TBC
Income: sales (actual payment)	R 290 114 352	R 25 410 596	R 43 200 000	R 47 520 000	R 52 272 000	R 57 499 200	TBC	TBC
Total income	**R 3 182 927 842**	**R 589 682 596**	**R 567 845 000**	**R 606 576 000**	**R 618 497 000**	**R 635 048 700**	**R -**	**R -**
Deficit/surplus	**R 144 338 593**	**R 110 460 800**	**R 115 378 396**	**R 108 862 736**	**R 71 012 409**	**R 32 815 650**	**R -**	**R -**

The O&M financial information is still being processed and will be included in future reviews. KPI's include maintaining proper O&M on relevant assets, as well as keeping staff and budget requirements in place.

Chapter 11: List of Projects

The ZDM Water Master Plan comprises of ten back-to-back regional water schemes. The detailed project list included under Chapter 10 herewith lists sub-projects or phases associated with each regional scheme according to the approved progressive roll-out of the scheme.

The WSDP further allows for intermediate stand-alone schemes for areas falling within the regional scheme context which will take a long time to be implemented due to costly bulks. These intermediate stand-alone schemes are designed with a sustainable intermediate source which will all be integrated into the regional scheme once the regional scheme bulks reach the area.

For remote communities where no bulk services are feasible or possible, a rudimentary water level of service is implemented in the form of boreholes with handpumps, or spring protections. In some areas a small reticulation scheme with RDP level of services will be constructed where possible.

Sanitation is being rolled out progressively based on prioritised zones or clusters to make implementation more cost-effective and practical. There is also a future sanitation rollout planned to replace the old Archloo, Zinc and block-type VIP's.

The water and sanitation projects to be implemented over the next 5 years and beyond are listed in detail in Chapter 10 of the document. Rollout maps can be reviewed under Figure A.6.6 – A.6.10, and include the following rollouts:

- Regional Water Supply Schemes
- Intermediate Stand-alone Water Supply Schemes
- Rudimentary Water Supply
- Rural Sanitation
    - New infrastructure
    - Future Rural Sanitation Replacement Programme
- 5-year Water & Sanitation Reliability Service Delivery Implementation Plan

Figure A.6.12: Regional Water Supply Schemes

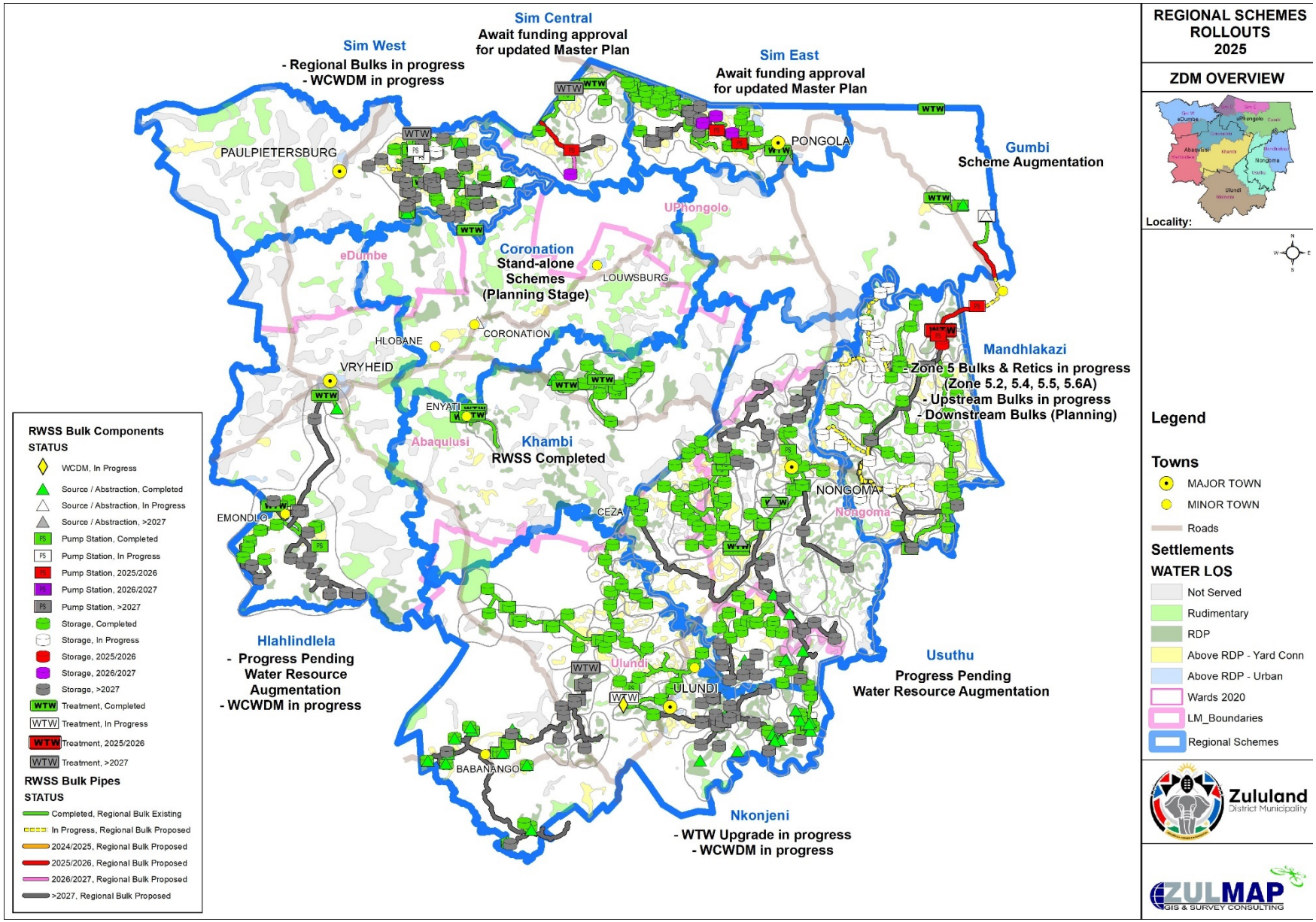


Figure A.6.13: Intermediate Stand-alone Water Supply Schemes

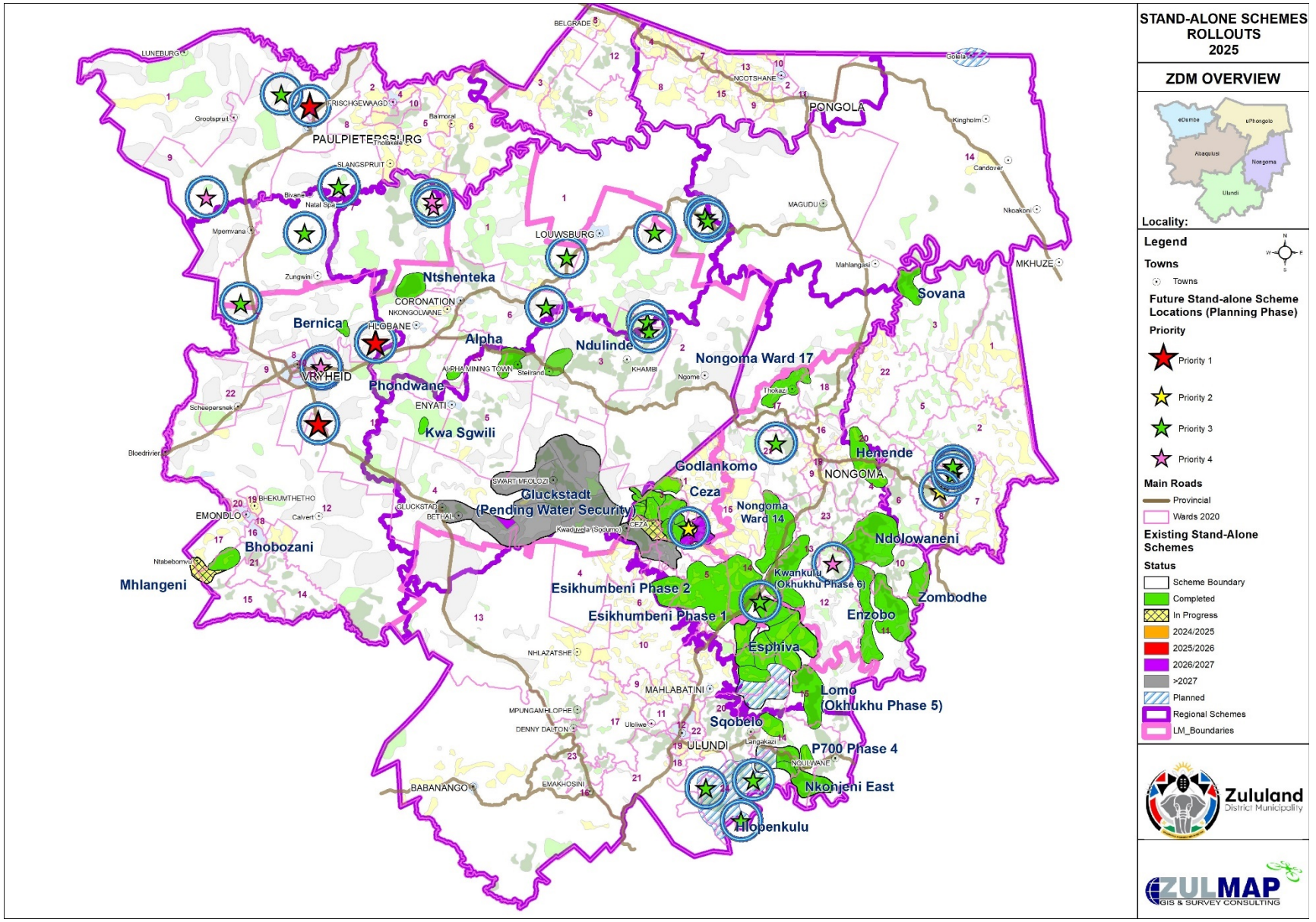


Figure A.6.14: Rudimentary Water Supply

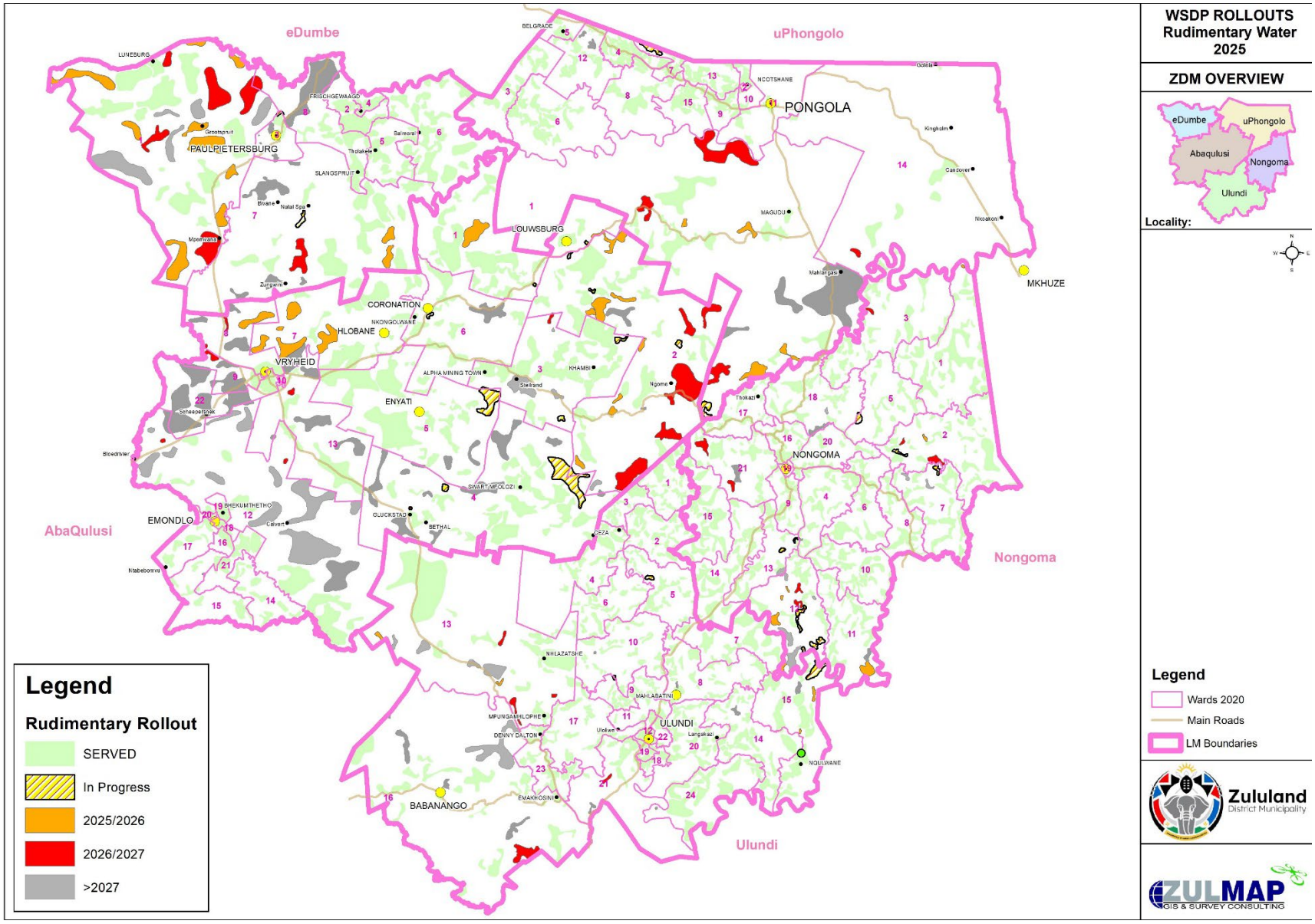


Figure A.6.15: Rural Sanitation (New infrastructure)

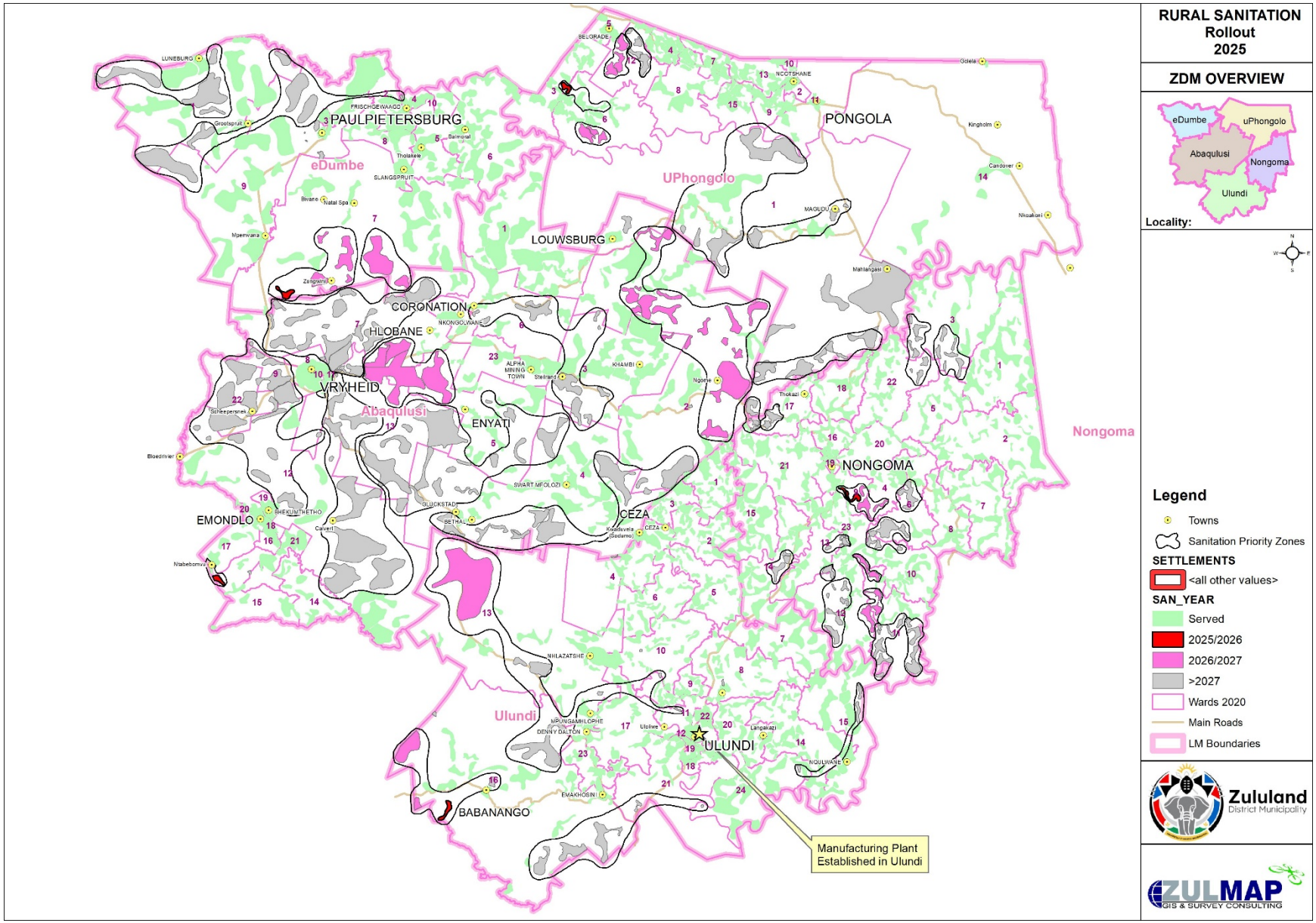
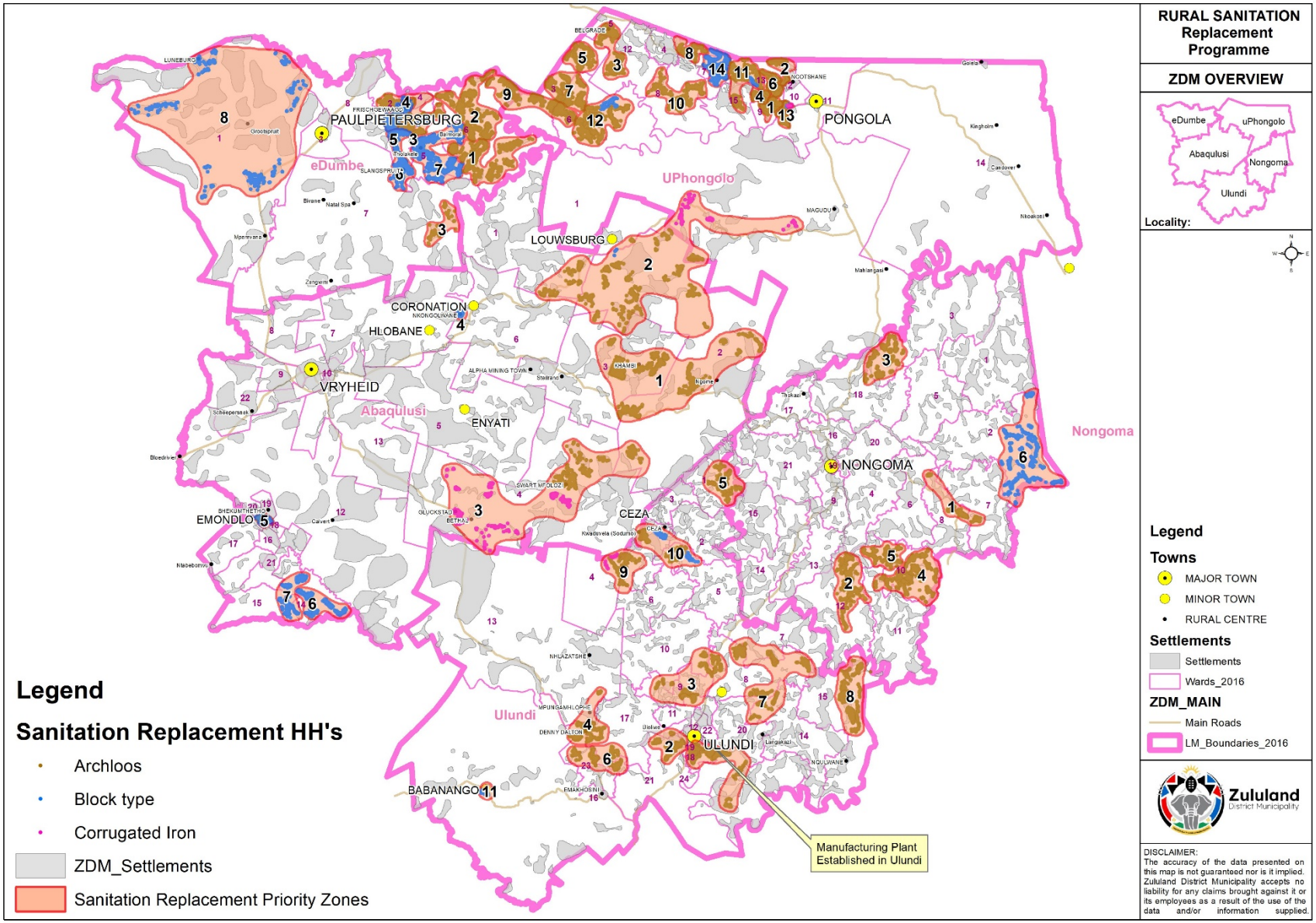


Figure A.6.16: Future Rural Sanitation (Replacement Programme)



Chapter 12: Strategic Objectives & Development Strategies

The ZDM WSDP supports the KZN PGDS Strategic Framework. WSDP goals, objectives, interventions and projects are aligned to place ZDM in a position to fulfil its role as WSA in achieving the provincial PGDS for 2035.

While the focus has been predominantly on providing each person with sustainable infrastructure and eradicating backlogs, the status of existing and aging infrastructure, as well as the availability and sustainability of water resources has been neglected.

As water provision will increase, so will water resources needs, operation and maintenance of existing infrastructure, efficient institutional and financial capacity to manage infrastructure and revenue etc. The KZN PGDS Framework aims to achieve at least 90% reliable services by 2035.

An overview of the KZN PGDS framework with associated goals and objectives for water and sanitation services can be reviewed in the next figure.

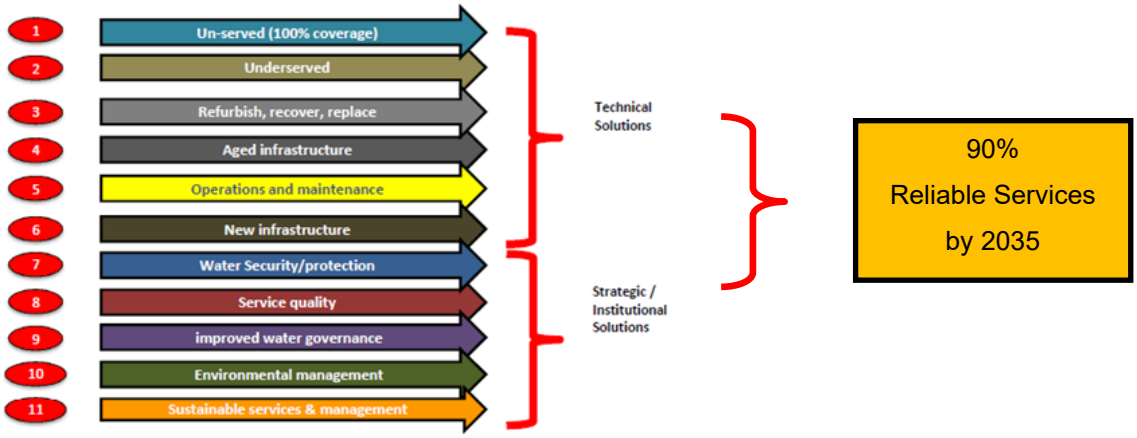


Figure A.6.17: KZN PGDS Strategic Framework

The Department of Water and Sanitation has overseen the annual use of the MuSSA to survey and assess the overall "business health" of a Municipality when fulfilling its water services function. The MuSSA asks senior municipal financial and technical managers 5 clear and relatively simple "essence" questions that cover 18 key business health attributes, and thereby generates key strategic flags (as opposed to deep technical detail, which is captured elsewhere). Responses to the questions are reflected in the MuSSA Spider Diagram which illustrates the vulnerability levels across key service areas/business attributes.

The latest MuSSA report dated 2024 for ZDM indicates a Vulnerability Score of 0.61, as opposed to the MuSSA report of 2023 which had a score of 0.52. This is 0.09% higher than the review of 2023.

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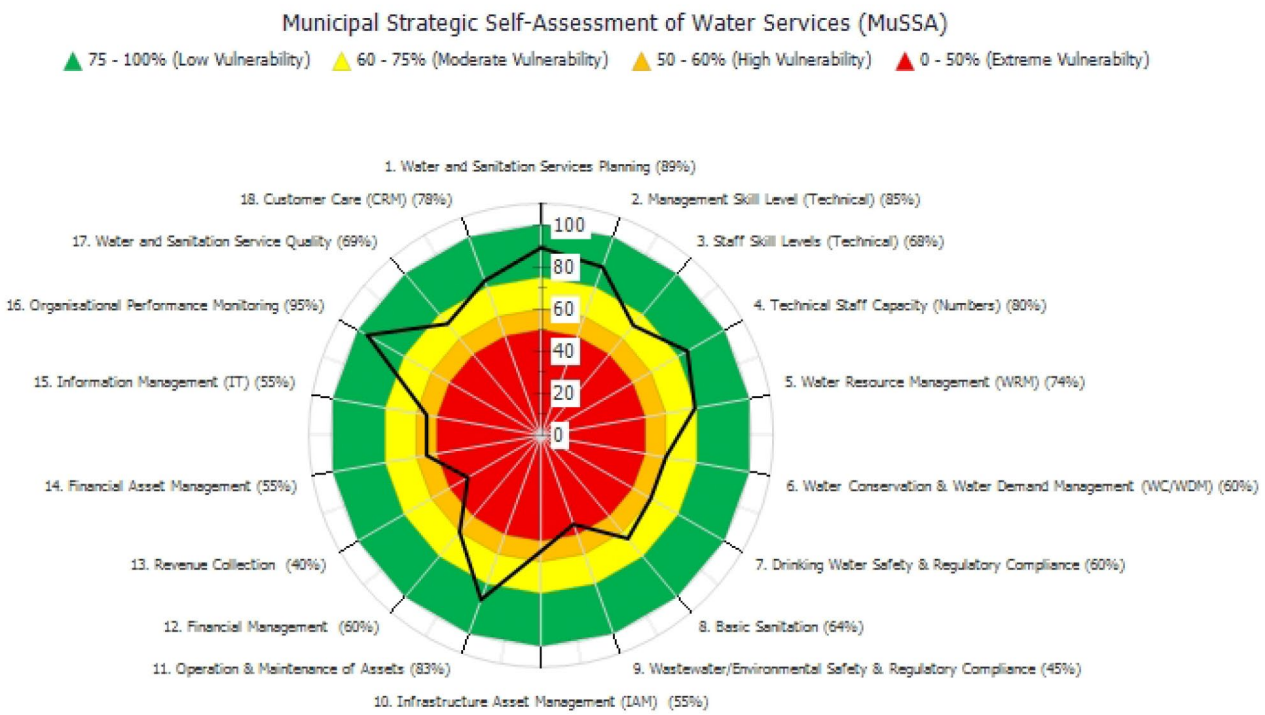
Figure A.6.18: MuSSA Results (2024)

Vulnerability Index: 0.61



According to DWA, a WSA is required to provide an Action Plan for items in the MuSSA scoring that are below 50%. For the 2024 review, these include:

- Revenue Collection (40%)
- Wastewater/Environmental Safety & Regularity Compliance (45%)
- Infrastructure Asset Management (IAM) (55.0%)
- Information Management (IT) (55.0%)
- Financial Asset Management (55.0%)

The outcome for the 2024 self-assessment can be reviewed in the next two graphs. KPI's can be reviewed in the next table to track progress on each topic in the above graph.

TOPIC	2021	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
1. Water and Sanitation Services Planning	100.0%	94.0%	89.0%	92.0%	95.0%	98.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2. Management Skill Level (Technical)	84.0%	90.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
3. Staff Skill Level (Technical)	89.0%	90.0%	68.0%	73.0%	78.0%	83.0%	88.0%	93.0%	98.0%	100.0%	100.0%	100.0%	100.0%	100.0%
4. Technical Staff Capacity (Numbers)	99.0%	89.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
5. Water Resource Management (WRM)	55.0%	60.0%	74.0%	79.0%	84.0%	89.0%	94.0%	99.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
6. Water Conservation & Water Demand Management (WC/WDM)	65.0%	63.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%	100.0%
7. Drinking Water Safety & Regulatory Complience	70.0%	70.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%	100.0%
8. Basic Sanitation	82.0%	64.0%	64.0%	69.0%	74.0%	79.0%	84.0%	89.0%	94.0%	99.0%	100.0%	100.0%	100.0%	100.0%
9. Wastewater / Environmental Safety & Regulatory Complience	75.0%	50.0%	45.0%	50.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%
10. Infrastructure Asset Management (AIM)	90.0%	94.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%
11. Operation & Maintanence of Assets	80.0%	90.0%	83.0%	88.0%	93.0%	98.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
12. Financial Management	60.0%	70.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%	100.0%
13. Revenue Collection	40.0%	65.0%	40.0%	45.0%	50.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%
14. Financial Asset Management	45.0%	55.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%
15. Information Management (IT)	94.0%	70.0%	55.0%	60.0%	65.0%	70.0%	75.0%	80.0%	85.0%	90.0%	95.0%	100.0%	100.0%	100.0%
16. Organisation Preformance Monitoring	100.0%	95.0%	95.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
17. Water and Sanitation Service Quality	89.0%	59.0%	69.0%	74.0%	79.0%	84.0%	89.0%	94.0%	99.0%	100.0%	100.0%	100.0%	100.0%	100.0%
18. Customer Care (CRM)	80.0%	64.0%	78.0%	83.0%	88.0%	93.0%	98.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vulnerability Index	0.36	0.52	0.61											

Table A.6.21: Self-assessment improvement scores for 2025

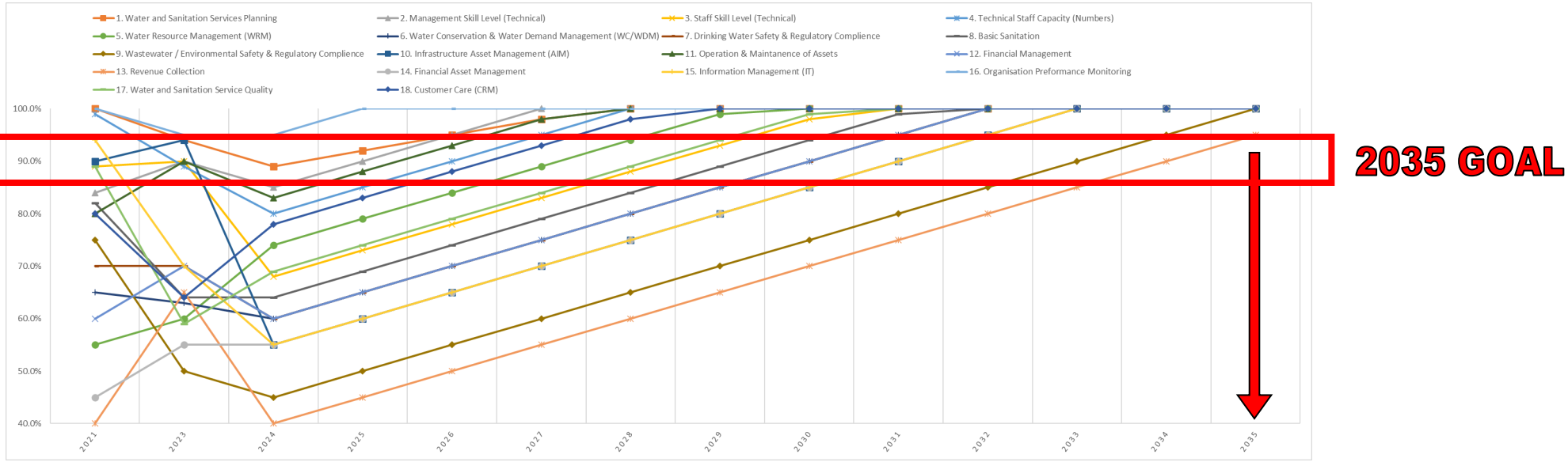


Table A.6.22: Self-assessment improvement goals for 2035

11. List of projects

11.1 Introduction

ZDM has the following implementation programmes in terms of water and sanitation provision:

- **WATER**
  - **Regional Water Supply Schemes**

    There were originally 10 back to back Regional Water Supply Schemes. Coronation is however currenlty under review to rather implement stand-alone schemes:

NAME	STATUS QUO
Coronation	Masterplan under review to implement stand-alone schemes instead of regional scheme
Khambi	Scheme augmentation
Hlahlindlela	Pending water source security
Mandlakazi	In progress
Gumbi	Scheme upgrading and augmentation planned
Nkonjeni	In progress
Simdlangentsha East	Planning (New Business Plan for remainder of work)
Simdlangentsha Central	Planning (New Business Plan for remainder of work)
Simdlangentsha West	In progress
Usuthu	In progress, pending water source security

    Each regional scheme footprint has a sustainable water source from where infrastructure is progressively being rolled out to all households within the supply area. The supply footprints have been identified in such a way that water can be provided to all households within the area in a sustainable manner and at the lowest possible cost (R/kl).

  - **Intermediate Stand-alone Schemes**

    Due to time and budget constraints with implementation of costly bulk infrastructure, ZDM has initiated an intervention to alleviate the severe water shortage in areas where a sustainable local source can be developed. These water sources will supply several settlements in the surrounding area, and will become part of the Regional Scheme infrastructure in future. Implementation will be done according to the ZDM Prioritisation Model for water services within each Regional Scheme.

  - **Rudimentary Water Supply**

    In areas where settlements cannot be served in the near future by the Regional Schemes or Intermediate Schemes, local water sources will be used to provide a survival level of water on

a rudimentary level. Implementation is done according to the ZDM Prioritisation Model for water services.

- **RURAL SANITATION**

  Sanitation in the rural areas is being provided in the form of dry-pit VIP toilets. Implementation is done according to the ZDM Prioritisation Model for rural sanitation services.

  A Rural Sanitation Replacement Programme has also been deemed neccessary in 2013 to replace the old Archloo-, Block- and Zink-type VIP's. This programme's implementation will be included in the next 5-year review of the WSDP.

- **SPECIAL PROJECTS**

  Special projects are individual infrastructure requirements on a Local Municipal level which are addressed and budgetted for on a needs basis.

- **EMERGENCY INTERVENTION PROJECTS**

  Emergency Intervention Projects are projects which require immediate intervention, such as during disaster management. Two such projects have been implemented over the past few years in ZDM, namely:

  - **Drought Relief**

    Emergency drought relief funding was provided to ZDM in 2016. An amount of R37 493 000 was made available in 2016 for drought relief interventions, and a planned 7 880 households were to benefit from this funding allocation.

  - **COVID-19**

    Emergency interventions were immendiately put in place in ZDM during the COVID pandemic. Two task teams were deployed to plan, manage and oversee emergency interventions. More details can be reviewed at the end of this section.

- **5-YEAR WATER & SANITATION RELIABILITY SERVICE DELIVERY IMPLEMENTATION PLAN PROJECTS**

  These projects are assisting the municipality in providing a 5-year pipeline of projects that will ensure a 90% reliable water and sanitation service through the following 5 workstreams:

  - **Infrastructure**
  - **Reliability**
  - **Water Security**
  - **Water Governance**
  - **Finances**

  Rollout programmes for each of the above can be reviewed at the end of this section.

11.2 ZDM Prioritisation Models

11.2.1 Introduction to Prioritisation Models in Service Delivery

The first Water Supply and Sanitation Policy White Paper was published in 1994 and enacted as the Water Services Act, Act 108 of 1997 (dwa.gov.za, 1994). The Department of Water Affairs (DWA) had the responsibility of providing these services. A few guidelines were provided on how to implement these services, and **the primary principle is that development should be demand-driven.** The Apartheid era has left a legacy of prejudice, and it is important that the new water supply policies ensure that their implementation does not become subjective to political influence. The Water for Growth and Development Framework, published by DWA, stipulates that proper planning and resources need to be used to supply water through various programmes, such as bulk water schemes, intermediate stand-alone schemes, and survival-level of water where water scarcity is prevalent (dwa.gov.za, 2011). The water policies, however, provide little guidance about how these services should be prioritised.

The Water and Sanitation White Paper was revised in 2002 and adopted by Parliament on 17 September 2003 as the Strategic Framework for Water Services (dwa.gov.za, 2003). Some major amendments were made to the roles of the DWA and local government. DWA's function changed from being a direct delivery function to being a sector leader, supporter and regulator. The responsibility of service delivery was handed over to the local government, and each district and local municipality have to implement their own policies to manage service delivery. This includes their approach to prioritise service delivery. The prioritisation of these service deliveries has created an immense challenge to local government. The most basic of these services is water and sanitation supply. Due to the vastness and remote characteristics of the rural areas, it is one of the most difficult aspects of service delivery that local government faces. Additional to the spatial characteristics of these areas, political influence often dictates the outcomes of service delivery planning instead of focusing on the actual water needs of rural communities.

Most District Municipalities, in the more rural areas, are the WSP's for their respective area of jurisdiction. This includes the Local Municipal areas within the District Municipal area. In the Water Services Act of 1997, it stipulates that an Integrated Development Plan (IDP) for each District Municipality should provide details on all Sector Plans required on a National level (Government Gazette, 1997). The purpose of Sector Plans is to provide details on certain aspects or roles that the District Municipalities have to adhere to, explaining their plan of action for each aspect. The Water Services Development Plan (WSDP) is the Sector Plan detailing the approach that the municipality follows for water services, and how they intend to provide water services to its users. This is part of

the planning purposes of the Municipality; therefore, the responsibility for compiling the WSDP usually lies with the Planning Department.

The WSDP should, therefore, detail the approach that the municipality follows for water services delivery, and the process followed to prioritise and implement these services. It is this process that should include the consultative process with all relevant stakeholders to take their views into consideration (dwa.gov.za, 2004).

This consultative process is, in many cases driven by political influence, and is prone to result in argumentative situations between ward councillors to motivate projects within their own wards.

The ward councillors fulfil the role of acting on behalf of the local people in their respective wards with their focus on a consultative and participatory process for service delivery needs. A ward councillor, therefore, has the responsibility of being a spokesperson for the ward, which entails the successful voicing of community needs to the entities providing service delivery. Due to this responsibility, it is important that the councillor ensures that community needs are being addressed. Councillors for these wards may affiliate to different political parties.

Ward councillors are, therefore, in a predicament because they compete with the other ward councillors for budget allocations. The Water Services Provider (WSA), in return, faces the following challenges:

- If ten communities from different wards do not have water services, how should the budget allocations be done and which settlement will get water services first?
- Whose viewpoint acts as the decisive when deciding where water services should be implemented?

The community with the lowest level of services in one ward may, for example, be in a better position compared to communities in other wards because it is close to a perennial river. The question remains what objective measurement can determine which community is worse-off?
Figure 1 represents a typical workflow process to approve a WSDP review:

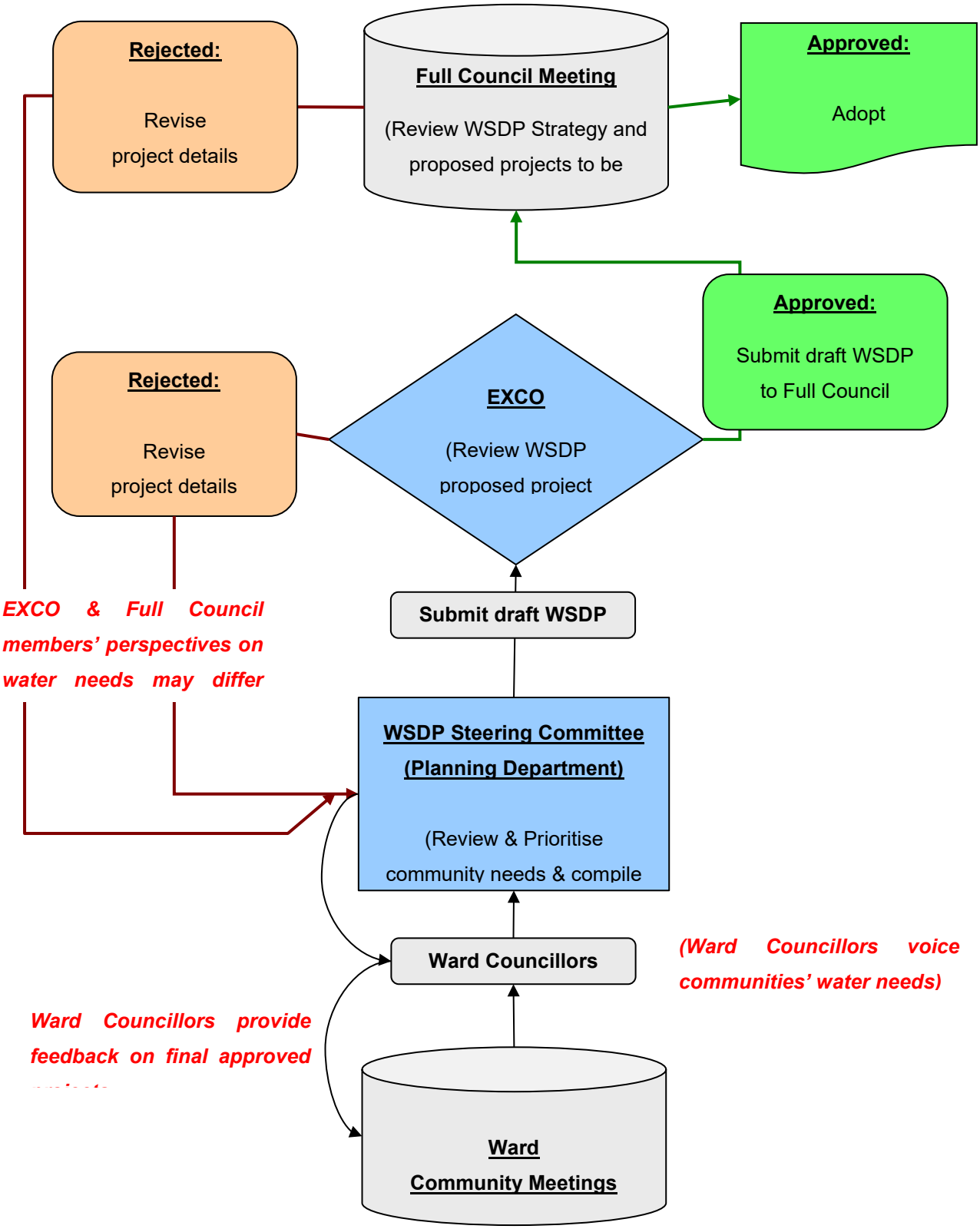


Figure 11.2.1: Typical WSDP Approval Process of a District Municipality

Figure 1 clearly demonstrates that an endless cycle of resubmissions may occur if the perspectives of the Executive Council (EXCO) and the councillors on water needs differ from what the WSDP Steering Committee view as priorities for water services implementation. Three factors play a dominant role in the above situation:

- **Individual perceptions of their own needs**
  People in one location may feel that they have an urgent need for water services since they have to walk down to the river to fetch water, but another community may not even have surface water within walking distance.

- **Community expectations of ward councillors**
  Ward councillors are voted for mainly on the expectation from the ward communities about what the councillor can do for them. This includes service delivery on various levels. Councillors, therefore, need to ensure that service delivery is taking place in their respective wards else they will lose their position as ward councillor.

- **Political pressure**
  Since multiple political parties are presented in a given municipality, it may become a tug-of-war to see which political party can do the most for their wards. This mainly consists of provision for basic services in the rural areas. Prioritisation for service delivery may, therefore, become biased to maintain favour with the ward communities.

A Prioritisation Model for water and sanitation needs resolves the above conflict situations where projects are prioritised in an objective, unbiased approach based on their most urgent need for water and sanitation services.

11.2.2 Prioritisation Methods

Several prioritisation methods exist that can be used, depending on the scenario and what the desired outcomes should be. A few of these typical methods are discussed in this section.

The National Association of County and City Health Officials (NACCHO), Washington DC, has developed the Assessment Protocol for Excellence in Public Health (APEX*PH*) planning tool (NACCHO, 2012). This is a flexible planning tool for health officials to address health-related issues in communities. A critical component of the Part I and Part II APEX*PH* processes occurs at the point where the identified issues are prioritised. Prioritising issues allows the health department and community to direct resources, time, and energy to those issues that are deemed most critical and practical to address.

The APEX*PH* workbook briefly mentions some of the most popular prioritisation methods, which are further described in the NACCHO document (cdc.gov, 2012). A brief summary of these methods is described next:

1 Simplex Method

The Simplex Method obtains group perceptions by the use of questionnaires. The answers to the questionnaires are scored and ranked and the issues with the highest scores are given the highest priority.

2 Nominal Group Planning Method

Nominal Group Planning was developed for situations where individual judgments must be obtained and combined to arrive at decisions which cannot be determined by one person. This strategy is best for problem exploration, knowledge exploration, priority development, program development, and program evaluation.

3 Criteria Weighting Method

The criteria weighting method is a mathematical process whereby participants establish a relevant set of criteria and assign a priority ranking to issues based on how they measure against the criteria. **The calculated values do not necessarily dictate the final policy decision, but offer a means by which choices can be ordered.**

4 A "Quick and Colorful" Method

This technique uses a means whereby individual group members vote to prioritise each health problem. A ballot or open method can be used.

The document further provides a summary of the positive and negative aspects of each method in Table 11.2.1.

Table 11.2.1: Prioritisation Methods

PRIORITIZATION TECHNIQUES	Strengths	Weaknesses	Optimal size of group
Simplex	Efficient and quick to use, once questionnaire is constructed. Can be used with any size group. Allows for weighting of problems.	Requires the development of a questionnaire. Relies heavily on how questions are asked.	Any size.
Nominal Group Planning	Motivates and gets all participants involved. Can be used to identify areas for further discussion and can be used as part of other techniques (e.g., to help develop a Simplex questionnaire.) Allows for many ideas in a short period of time Stimulates creative thinking and dialogue. Uses a democratic process.	Vocal and persuasive group members can affect others. A biased or strong-minded facilitator can affect the process. Can be difficult with larger groups (more than 20-25) May be overlap of ideas due to unclear wording or inadequate discussion.	10-15 (larger groups can be broken down into subgroups.) Not <6.
Criteria Weighting	Offers numerical criteria with which to prioritize. Mathematical process (this is a weakness for some.) Objective; may be best in situations where this is competition among the issues. Allows group to weight criteria differently.	Can become complicated. Requires predetermining criteria.	Any size.
Hanlon (described in the APEX*PH* Workbook, pp 23 24 and Appendix E)	PEARL component can be a useful feature. Offers relatively quantitative answers that are appealing for many. Baseline data for issues can be used for parts; this can be appealing due to the objectivity of the data.	The process offers the lowest priorities for those issues where solution requires additional resources or legal changes which may be problematic. Very complicated.	Any size.
A "Quick and Colorful" Approach	Simple. Well-suited to customizing. Blinded responses prevent individuals influencing others. Less time intensive.	Less sophisticated (may be a benefit for some groups). Doesn't offer the ability to eliminate options that may be difficult to address given current laws and resources. If open voting is used, participants may be influenced by others' votes.	Any size.

The document concludes with the following statement:

> *"By using formalized techniques, such as those described here, groups have a structured mechanism that can facilitate an orderly process. Such a process also offers a common starting point that groups can alter to suit their own specific needs. Whatever technique is used, it is important to keep in mind that the reason prioritization is undertaken is to include input from all interest groups. Therefore, it is vitally important to include the community when defining criteria."*

The theoretical foundation of the expected outcomes and results of a prioritisation model is that the level of urgency or the need for water ans sanitation supply to rural communities can be determined by establishing the existing form of water access.

It should be possible to assign a "water and sanitation needs" value to the various aspects and characteristics of each settlement related to water and sanitation access. A total score can then be

assigned to each settlement, which represents their urgency or need for water and sanitation services. **The higher the score, the higher the priority of the project for implementation.**

The most appropriate prioritisation technique for water and sanitation services in the South African rural context proves to be the Criteria Weighting method, and has been used successfully in various local government institutions to prioritise service delivery.

11.2.3 ZDM Prioritisation Models for Service Delivery

ZDM has initiated prioritisation models for water and sanitation implementation since 2002. The purpose of the prioritisation models are to priortise settlements and project implementation in an un-biased, objective way. Current Prioritisation Models include:

1 Regional Scheme Rollouts
2 Intermediate Stand-Alone Schemes
3 Rudimentary Water Supply Rollouts
4 Rural Sanitation Rollouts
  4.1 New Infrastructure
  4.2 Phase 3 Replacement Programme (TBA)
5 Budget Allocation Model

The Prioritisation Models are based on a weighted criteria method, whereby criteria for each model is given a weight, which counts up to a total score of 100. The highest score implies the highest priority for implementation.

11.2.4 Water Implementation Model

For water implementation on a rudimentary as well as regional level, the weighted criteria is based on specific characteristics of each settlement within ZDM. Where water needs to be provided to individual settlements, the settlements' individual prioritisation score is used to prioritise implementation.

Where larger areas are involved with several settlements grouped together, eg. within regional bulk reservoir zones, the average score of all settlements within each zone is calculated. This is then used as a zoning score to prioritise zones. The scoring criteria can be seen below:

Table 11.2.2: Scoring criteria for water implementation

FACTOR	CRITERION	VALUE	WGHT
Existing Primary Water Source	Urban & RWSS (with Bulk, Secondary Bulk, Retic) RWSS (with Bulk, Secondary Bulk) RWSS (only Retic) CWSS/Stand alone Potable BH/Spring/H.Pump Unprotected Surface Water (River/Dam etc)	0 0.25 0.5 0.5 0.75 1	30
Project Cost / Capita Project Cost / HH	> R 40,000 R30,000 - R40,000 R20,000 - R30,000 R10,000 - R20,000 < R10,000	0.2 0.4 0.6 0.8 1	15
Walking Distance to Water	< 1 km 1 – 3 km > 3 km	0 0.7 1	20
Within 4 km of a Dev. Corridor/RSC	Primary / Service Centre Secondary Tertiary None	1 0.75 0.5 0	5
Existing Sanitation	Less than 5% 25% 75% More than 95%	1 0.75 0.25 0	5
Existing Use / Level of Service	Nothing (> 3km walking) Survival (< 3km walking) Rudimentary ≥ RDP	1 0.75 0.5 0	15
Linkages to other projects< (supplyable) All settlements within 5km of existing Regional Scheme Layouts	Yes No	1 0	5
History of Water Borne Disease	Yes No	1 0	5
		Total	**100**

11.2.5 Rural Sanitation Implementation Model

Rural sanitation implementation is based on the same principle as with water, however different criteria and weights are used to address specific rural sanitation needs. Two prioritisation models are used for sanitation implementation:

- **Phase 1, 2 and 3 (New projects)**
  These phases provide sanitation to settlements having not received any form of sanitation from previous sanitation projects.

- **Phase 4 (Replacement Programme)**
  Phase 4 will be initiated after completion of the current remaining settlements without sanitation services have been completed. This project will replace old VIP-type structures, especially the Archloo-type structures which have proofed to have a very short lifespan. Old VIP-types such as block- and zink-type where pits are full and the top structure cannot be moved to a new location will also be replaced.

The scoring criteria for both these two programmes can be seen below:

Table 11.2.3: Phase 1 and 2 scoring criteria for rural sanitation implementation

FACTOR	CRITERION	VALUE	WEIGHT
Water Implementation	Catch-up Current Water Implementation (2008-2014) Future Water Projects	1 0.5 0	40
Distance to downstream open groundwater (Pollution potential)	<50m 100m 250m 500m >500m	1 0.6 0.4 0.2 0	25
Settlement density in relation to HH count. (Susceptability to diseases)	> 10 5 - 9.99 2 - 4.99 1 - 1.99 <1	1 0.6 0.4 0.2 0.1	15
Settlement type (Susceptability for diseases to surrounding urbanised area)	Urban Fringe Peri-urban Rural	1 0.5 0.1	10
Rural Development Nodes Development Corridors Service Centres	Yes No	1 0	10
		Total	**100**

Table 11.2.4: Phase 3 scoring criteria for rural sanitation implementation

FACTOR	CRITERION	VALUE	WEIGHT
Existing households not covered by previous project	76-100% 51-75% 26-50% 0-25%	1 0.67 0.33 0.01	35
Sanitation Top Structure Type	Archloo Zink Block Pre-cast	1 0.67 0.33 0.01	25
Condition	Need replacement Need repairs New	1 0.5 0.01	20
Year built	<2000 2001-2006 >2007	1 0.5 0.01	5
Settlement density	High Medium Low Very low	1 0.6 0.3 0.01	15
		Total	**100**

11.2.6 Budget Allocation Model

The annual funding allocations are split proportionally between the various implementation programmes for ZDM. Each implementation programme area is allocated a percentage in proportion to the overall budget requirement for eradicating the total backlog in that particular category of infrastructure projects.

Due to backlogs being eradicated continuously, these percentages are revised on an annual basis to ensure that the allocations reflect the revised backlogs for a particular programme and area.

11.3 Project Details

11.3.1 Regional Schemes

The ten Regional Water Supply Schemes require the largest portion of external funding due to costly bulk infrastructure. Due to this, ZDM augment the bulk reservoir zones with intermediate stand-alone schemes as well as survivial-level rudimentary water supply. Each rollout is prioritised as described above.
Since the master planning was done for the regional schemes, ZDM has experienced some unique challenges concerning the sustainability of the water sources to be used for the regional schemes. Land reform areas have seen an unexpected high household growth in certain areas, which increased the water demand for regional schemes drastically. Critical issues related to the above have been identified for each regional scheme, and project progress and interventions to these issues are discussed in more detail below.

11.3.1.1 Nkonjeni

- **Background**
  The Nkonjeni regional scheme is in the privileged position of having a well-developed and sustainable water source. Therefore the bulk of the available funding can be applied towards the progressive roll-out of water services to the respective communities.

- **Key Issues and Interventions**
  The sustainability of the scheme is threatened by water losses in existing networks and excessive water usage from unmetered consumers. A water audit was done in 2006 (Ulundi Water Audit – October 2006) that indicated the inefficiency of water usage in Ulundi town to be 68% of the volume of water put into the system. ZDM has initiated a waterloss management programme where these waterlosses are systematically been addressed.
  Due to limited spatial information that was available for planning purposes at the start of the Regional Schemes, the area around Babanango was not covered initially under Nkonjeni Regional Scheme. During 2008 a demographic verification process was done which allowed ZDM to identify existing settlements footprints in the Babanango area. A business plan was submitted to DWA and MIG in 2009 which included these settlements under MIG funding, and implementation of water supply is completed. In the long-term planning it is proposed to provide Babanango and surrounding areas with sustainable water supply from Mpungamhlope WTW.

- **External Support**
  Funding for Nkonjeni Regional Scheme is provided through MIG.

11.3.1.2 Usuthu

- **Background**

  The Usuthu Regional Scheme is the largest water supply scheme in the district and also represents the biggest portion of the total backlogs. The scheme required the development of a new water source from the Black Mfolozi river and expensive bulk infrastructure to be rolled out over vast distances to scattered rural communities.

- **Key Issues and Interventions**

  The biggest challenge with this scheme is the funding of the enormous capital investment for bulk services that is required. ZDM has aquired additional DWA funding to fast-track the implementation of bulk services for this scheme via RBIG funding.

  The huge capital investment required eradicating the backlogs through the regional scheme infrastructure and the resulting slow progress with the roll-out of services requires an intermediate solution to be developed to alleviate immediate water supply needs. The existing rudimentary supply programme, whereby local groundwater sources are developed within 800m walking distance from households, was hampered in Usuthu area due to difficulty in finding reliable and good quality water sources close to communities. ZDM has initiated intermediate, stand-alone water schemes to address the delay in providing reticulation to communities. These intermediate schemes are developed from production boreholes where available, and are designed in such a way that they can easily be integrated into the bulk services network in future.

  The sustainability of the main water source of Nongoma town is under severe strain and not sustainable during drought periods. The installation of a bulk pipeline from the Black Mfolozi river to Nongoma has been completed to address this issue. The internal bulks for Nongoma town have also been upgraded to augment the existing water supply. An off-storage dam near the Usuthu WTW is planned that will provide sustainable water during periods of drought.

  Nongoma town frequently experiences intermittent water supply to consumers and businesses, even outside of drought periods. Excessive water usage by unmetered consumers and high water losses contribute to the problem. A water loss study conducted in 2003 indicated that unaccounted water supply in Nongoma was in excess of 41%. A waterloss and water demand strategy is in progress as part of the Usuthu Regional Scheme planning.

- **External Support**

  Funding is provided by MIG as well as RBIG (Bulks).

11.3.1.3 Mandlakazi

- **Background**

  The Mandlakhazi Regional Scheme represents the second largest supply area in the district and also the second biggest portion of the total backlogs of the municipality. There are no towns in the supply area and the communities are sparsely scattered and vast distances apart. The provision of water services to all communities are therefore extremely expensive and will take a long time to conclude.

  Water supply problems in the neighbouring Hlabisa area has resulted in a change of priorities and the construction of a bulk supply pipeline to supply the eastern side of Mandlakazi and eventually reach the Hlabisa communities.

  The scheme is supplied with raw water from a privately-owned dam outside of the Zululand municipal area. The dam is supplied by the owner from the Pongolapoort Dam, which is a very reliable water source. Bulk water supply agreements are in place with the owner and the supply is secured. ZDM has however obtained an individual allocation and raw water abstraction permit from DWA for abstraction from the Pongolapoort Dam for long-term sustainability. Funding from RBIG was obtained to fast-track the implementation, and implementation of this is in progress.

- **Key Issues and Interventions**

  The Mandlakazi area is also in need of an intermediate solution to accelerate the provision of services to households until the regional scheme bulk infrastructure can eventually reach all the communities. Drought problems are frequent in the area and the rudimentary programme has limited success in finding sustainable and potable local sources. However, success has been achieved in some areas for good production boreholes and this will be developed as intermediate stand-alone schemes which will be integrated into the regional scheme in future.

- **External Support**

  The regional scheme is funded by MIG as well as an allocation from RBIG to accellerate the implementation of the bulk services.

11.3.1.4 Gumbi

- **Background**
  The Gumbi Regional Scheme (formerly referred to as Mkhuze) comprises of mostly formal farm areas and a small number of sparsely scattered rural communities. The construction of a single regional scheme to supply the entire footprint is not feasible, but rather individual schemes from local sources.

- **Key Issues and Interventions**
  An existing land reform project at the Gumbi settlement has resulted in a dramatic influx of families that settled without any water or sanitation infrastructure being in place. This resulted in the construction of an emergency supply from the neighbouring Pongolapoort Dam. This project is completed. The abstraction point at the dam is however not ideal and in future a second abstraction point from a more ideal position is planned.

  There is huge potential for economic development on the western side of the Pongolapoort Dam but abstraction on that side of the dam is unfortunately very difficult. Groundwater sources in the area are also of poor quality and insufficient yield to sustain large scale development.

- **External Support**
  Funding is provided by MIG.

11.3.1.5 Simdlangentsha East

- **Background**
  The Simdlangentsha East Regional Scheme is a well-served area and consists of the lowest backlogs in the district. The scheme supplies Pongola town as well as a vast rural area. Water is abstracted from irrigation channels next to the Pongola river and with an emergency supply that is available further down at the Pongola river. The irrigation channels are managed by DWS and the supply is mostly reliable, except when the channels are closed for maintenance. ZDM also pays DWS a raw water charge for water abstracted from the channels.

- **Key Issues and Interventions**
  Water supply in the rural areas is under severe pressure with frequent interruptions to the supply. Excessive water usage and high waterlosses due to illegal and unmetered connections are the main contributors to the problem. Apart from the above problems the bulk infrastructure is also in need of upgrade as a result of population growth since the inception of the scheme. The challenges on the scheme therefore require a combination of water demand management interventions and the upgrade of bulk infrastructure to address the long-term sustainability of the scheme. The waterloss

managagement programme initiated by ZDM is addressing this at present, and the upgrading of the existing bulk infrastructure for the southern part of the scheme is in progress.

Pongola town has experienced significant development over the recent years and this was hampered by especially the absence of waterborne sanitation throughout the town. There is a need to compile a sewerage master plan for the area and plan upgrade requirements systematically.

- **External Support**
  Funding is provided by MIG.

11.3.1.6 Simdlangentsha Central

- **Background**
  The planning of the Simdlangentsha Central scheme is complete and the first phases of the bulk infrastructure have been completed. The project also requires a substantial investment in bulk infrastructure before communities will be reached with water supply. The area is however quite well served with localised schemes from local sources. The challenge is to keep these schemes operational until the bulk scheme can reach all the areas.

- **Key Issues and Interventions**
  The Simdhlangentsha East Regional Scheme experienced water pressure problems, and the Simdhlangentsha Central Regional Scheme is used to augment water supply to these settlements.

  The Simdlangentsha Central scheme contributes a small portion to the total backlogs of the ZDM and therefore also receives a small portion of the available capital funds, although a substantial capital investment is still required to provide the necessary infrastructure.

  Although the area is generally well-served, all schemes are old and the regional scheme planning will include infills to provide water to additional households. A new WTW is planned that will eventually replace the package plants at Belgrade.

- **External Support**
  Funding is provided by MIG.

11.3.1.7 Simdlangentsha West

- **Background**

  Simdhlangentsha West Regional Scheme mainly consists of rural areas to the east of Paulpietersburg town. The area is generally well-served although existing networks are old and infills and waterloss management is required.

  The current capacity of the rising main line from the existing weir in the Pongola River to the existing Water Treatment Works at Frischgewaagd Township is 2ML/day (Supplies Frischgewaagd and Mangosuthu with raw water), and the current capacity of the existing Water Treatment Works at Frischgewaagd town is 3Ml/day. New networks were installed at Frischgewaagd during 2007/2008. and the water demand was reduced from the maximum possible supply of 2ML/day to 0.7Ml/day. The balance of the water (1.3ML/day) is consumed by Mangosuthu (with only 20% of the population of Frischgewaagd). A new Water Treatment Works and rising main line from the Pongola river to Frischgewaagd have been constructed. Bulk infrastructure will be constructed to link up all the existing stand-alone schemes to provide sustainable water throughout the regional scheme.

- **Key Issues and Interventions**

  High waterlosses are evident, especially in the Mangosuthu area. ZDM has addressed this issue and the construction of new networks at Mangosuthu is completed. Construction includes metered yard connections and consumers are restricted to 200 litres per household. Consumers will be able to register for a higher level of service, but will be billed for the balance. A Water Demand study is also planned to assess the entire regional scheme area.

  In the near future Frischgewaagd will also be restricted to 200 litres per day, with the option to register and pay for a higher level of service.

  The biggest challenge is to obtain funding for the proposed bulk infrastructure, and other funding sources will be required to fast-track the construction of bulk infrastructure. Construction of bulk services are in progress from Frischgewaagd WTW to Tholakela WTW.

- **External Support**

  Existing funding is provided by MIG.

11.3.1.8 Khambi

- **Background**

  The Khambi Tribal Authority area is well-served with several small stand alone schemes. (Esihlengeni, Kwamakweshe, Ngenetsheni, Cibilili and Ntumbane Community Water Supply schemes). Not all of these schemes however have had a sustainable water source. The clinic at Ntumbane is often without water during the dry winter periods.

  A weir was constructed in the KwaMthazi River and a new water treatment works was constructed. This supplies water to the Khambi Tribal Authority and the integration of all the stand-alone schemes to this bulk service is completed.

- **Key Issues and Interventions**

  The long-term planning was to supply water from the Coronation Dam to the Khambi area, but an in-depth study by ZDM concluded that the Coronation Dam will not be a sustainable solution for the long-term additional demand, and the cost per capita would be too high. A new sustainable local source with a new rising main was recently completed that will provide more sustainable water to the WTW.

- **External Support**

  Funding is provided by MIG.

11.3.1.9 eMondlo/Hlahlindlela

- **Background**

  The eMondlo area is well-served with existing stand-alone schemes. eMondlo town receives water from the Mvunyane dam. These existing sources are however not sustainable for future use, and will receive water in future from the Klipfontein dam situated next to Vryheid town. Mvunyane dam is silted up to such an extent that it is no longer a sustainable source for eMondlo town.

- **Key Issues and Interventions**

  During 2000 a new water reticulation network at eMondlo A and B was installed in order to lessen the water losses from 12 Ml/day to 4 Ml/day. The eMondlo water treatment works can supply 8 Ml/day. This meant that 4 Ml/day would have been available towards the settlements surrounding eMondlo A and B after the installation of the new networks. Networks were installed at these settlements and connected to eMondlo A and B. The old network at Emondlo A and B was never decommissioned and expected savings of 4Ml/day never realised. The residents of eMondlo also connected the new network to the old network with pipes in their yards.

  The eMondlo water treatment works has been refurbished and upgraded to supply 12Ml/day, but the water demand has grown from 8Ml/day in 2000 to 16 Ml/day currently. With the refurbishment completed

there is still a shortfall of 4 Ml/day. The existing rising main line from Mvunyane Dam to eMondlo Water Treatment works can furthermore only supply 12 Ml/day.

The above issues will all be addressed with the bulk services implementation through the Hlahlindlela Regional Scheme. In future water will be supplied from Klipfontein Dam to Vryheid Water Treatment works. Water will then be pumped from the Vryheid Water Treatment works to Hlahlindlela (including eMondlo Township). A regional water supply assessment was done during 2015 providing several recommendations to cater for the Hlahlindlela water demand. The most feasible option was to raise the Klipfontein Dam wall to provide more storage during the dry winter months. This is in progress by DWA.

AbaQulusi as the WSP for urban areas has initiated a waterloss programme at eMondlo B. This is crucial towards the sustainability of water supply to the area. In addition to this, ZDM has allocated funding for the remaining Emondlo B as well as eMondlo A to resolve excessive waterlosses experienced in these two areas. The implementation of the remaining scope of works for the regional scheme is pending on water security from Klipfontein dam.

- **External Support**
  Funding is provided by MIG.

11.3.1.10 Coronation

- **Background**
  The Coronation Regional Scheme consists of a few small and isolated towns and a number of scattered and very isolated rural settlements within formalised farm areas.

- **Key Issues and Interventions**
  The towns have a high level of service but the infrastructure is very old and urgent refurbishment is required in most cases. The Coronation scheme however is a small contributor to the total backlogs of the district and receives a small portion of the total capital funds. Refurbishment needs are competing with new infrastructure requirements for limited available funds. There is a need for refurbishment funding over and above funding for the eradication of backlogs.

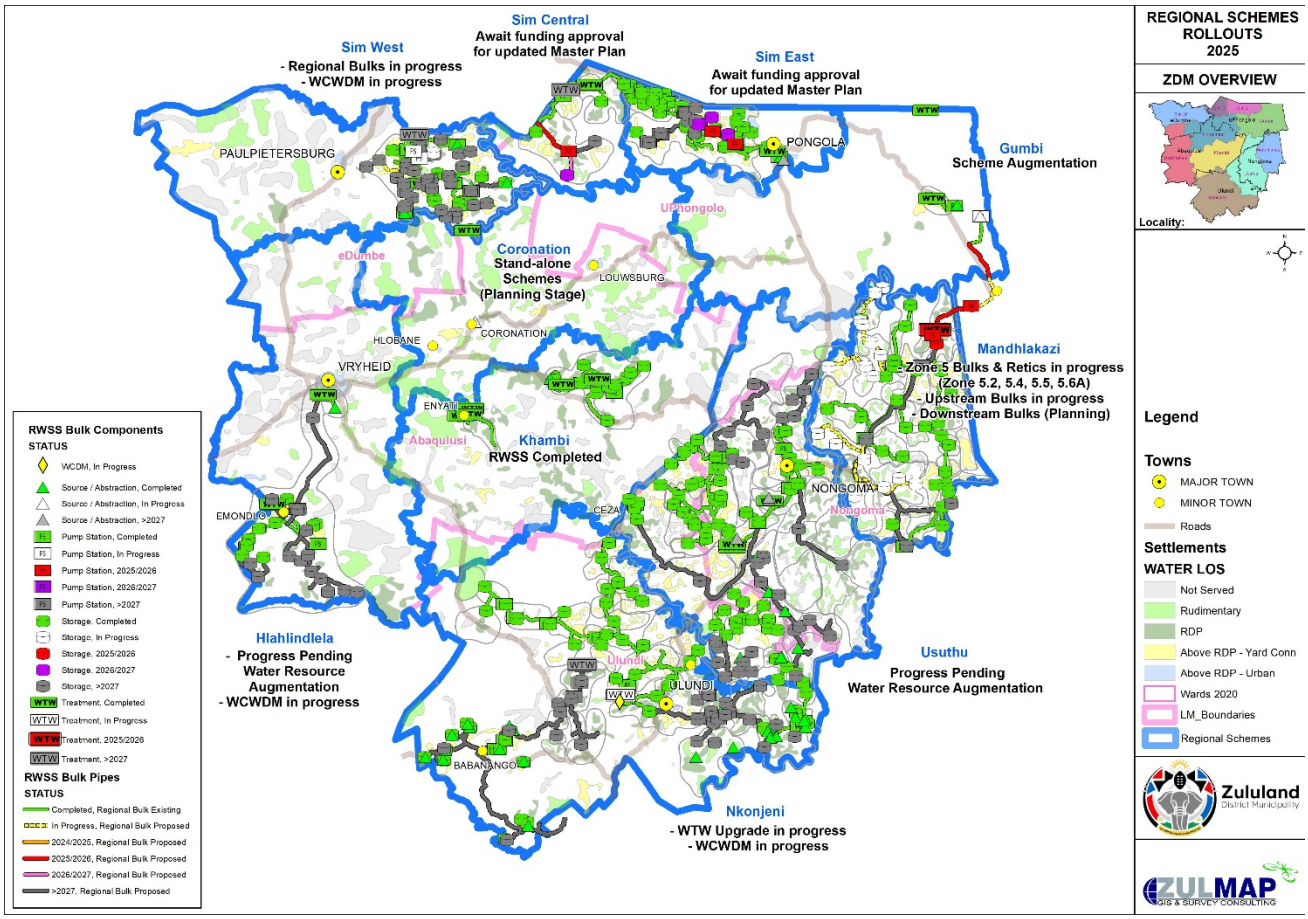
  The original planned regional scheme is currently under revision. The Coronation dam is not sustainable to supply Khambi Regional Scheme with additional water, and bulk services to the rural scattered settlements of Coronation area will be too costly to supply from a bulk infrastructure network. A revised Master Plan is currently in progress whereby stand-alone schemes from local sustainable sources will be developed to cover as many settlements as possible. Khambi Regional Scheme will also receive additional water needed from local sustainable sources.

The town of Louwsburg within the Coronation regional scheme area have a water resource challenge that will not be easy to solve. The existing dam has a limited catchment and groundwater is difficult to find due to the locality of the town. Any possible solutions will be very costly and there is insufficient funding at this stage to address the issue. The town is also in need of waterborne sewage, but the water problems receive a higher priority at present.

A revised Master Plan for Coronation is in progress to assess local water sources for stand-alone schemes in areas where no sustainable water is present.

- **External Support**
  Funding is provided by MIG.

The following map depicts the rollouts of the regional schemes:



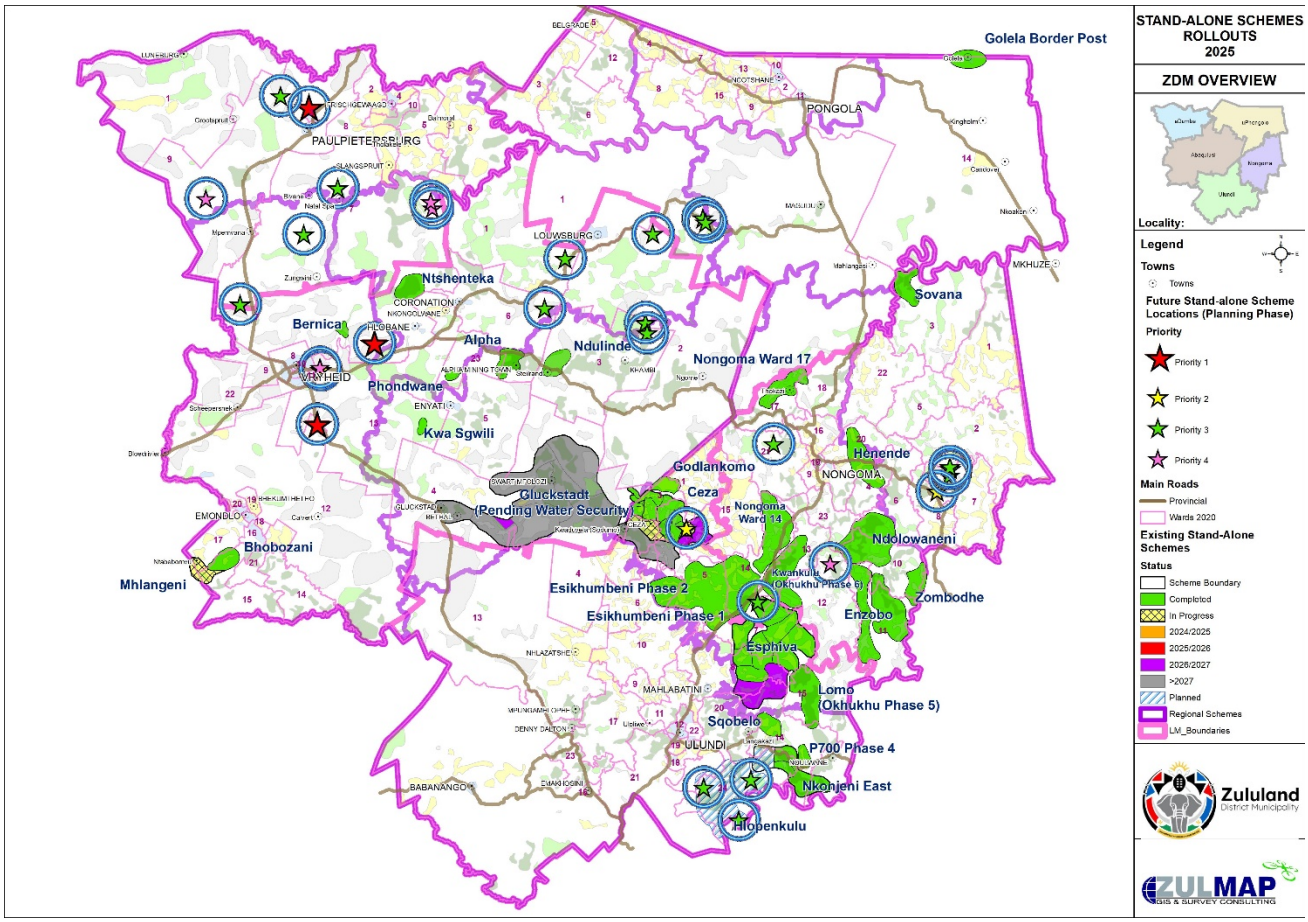
11.3.2 Intermediate Stand-alone Schemes

Due to time and budget constraints with implementation of costly bulk infrastructure, ZDM has initiated an intervention to alleviate the severe water shortage in areas where a sustainable local source can be developed. These water sources will supply several settlements in the surrounding area, and will become part of the Regional Scheme infrastructure in future.

New production boreholes are continuously been identified under the Rudimentary Programme, and if suitable, an intermediate stand-alone scheme will be designed around these production boreholes.

Implementation are done according to the ZDM Prioritisation Model for water services within each Regional Scheme.

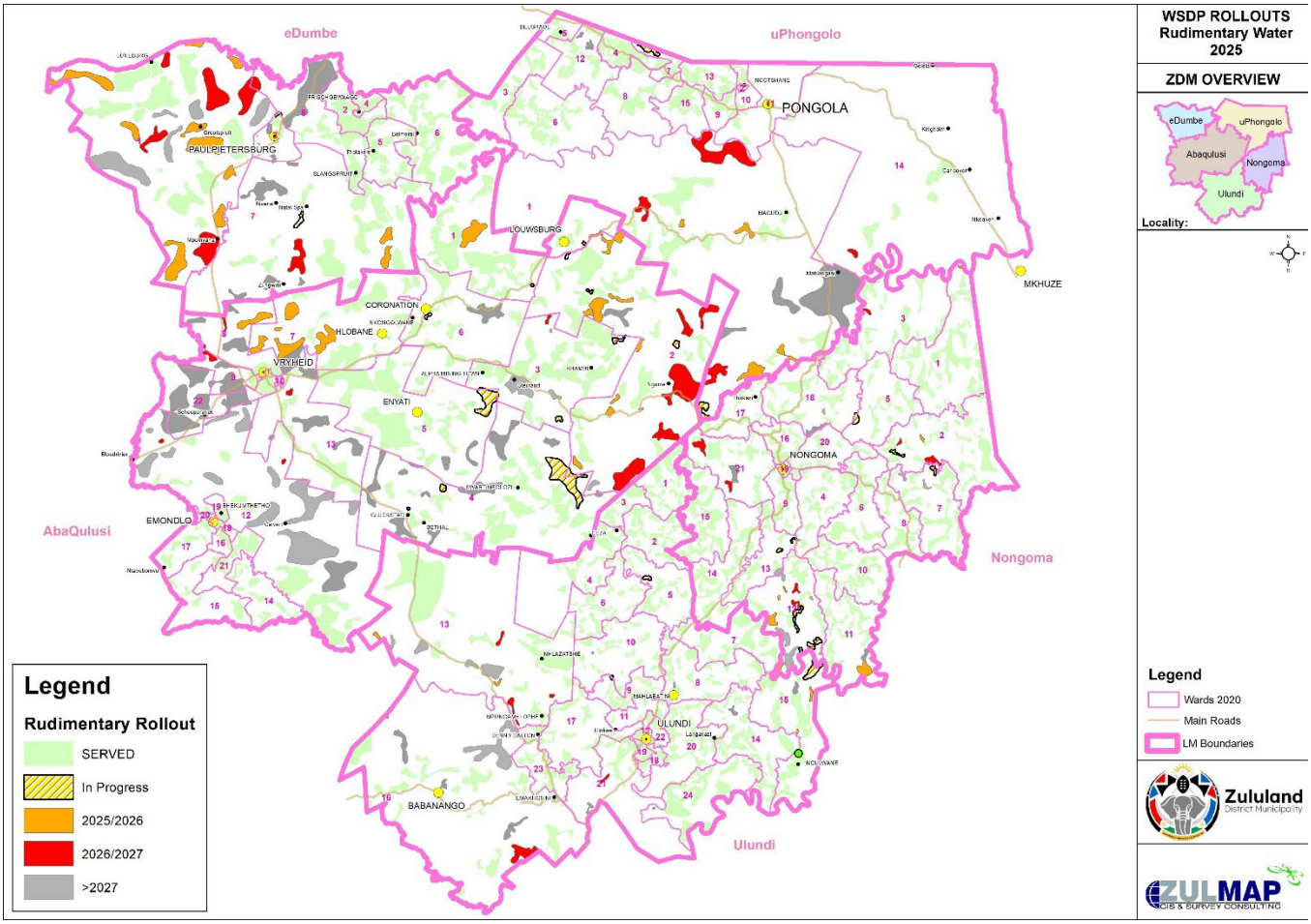
The following map depicts the rollouts of the current intermediate stand-alone schemes:



11.3.3 Rudimentary Water Supply

In areas where settlements cannot be served in the near future by the Regional Schemes or Intermediate Schemes, local water sources will be used to provide a survival level of water on a rudimentary level. Implementation is done according to the ZDM Prioritisation Model for water services. Through the rudimentary programme production boreholes are also identified for possible implementation of stand-alone schemes.

The following map depicts the rollouts of the rudimentary programme:

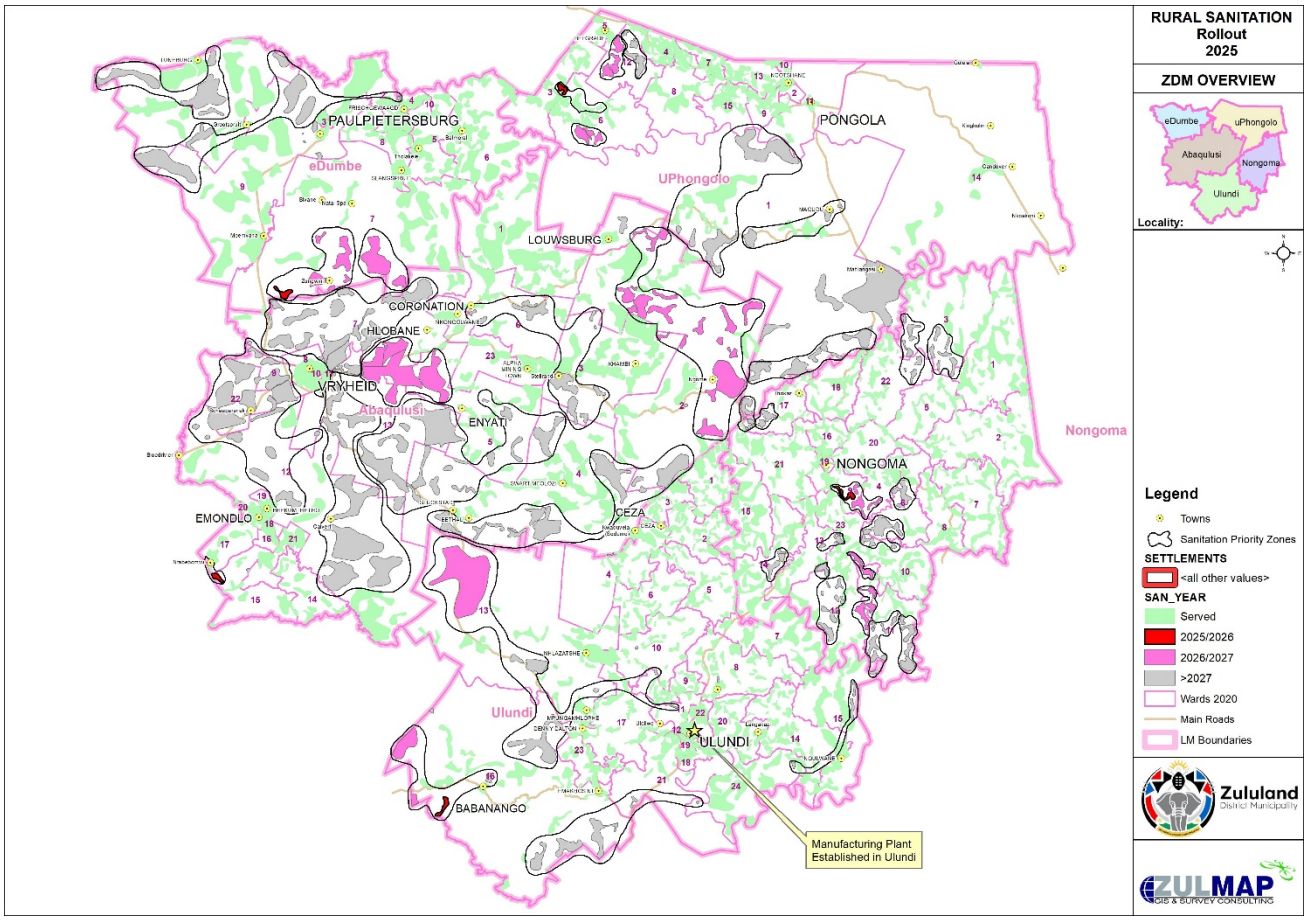


11.3.4 Sanitation Services

Sanitation in the rural areas is being provided in the form of dry-pit VIP toilets. Implementation is done according to the ZDM Prioritisation Model for rural sanitation services.

A Rural Sanitation Replacement Programme has also been deemed neccessary in 2013 to replace the old Archloo-, Block- and Zink-type VIP's. This programme's implementation will commense after the current outstanding settlements have been served.

The following map depicts the rollouts of the sanitation programme:



11.3.5 Emergency Intervention Projects

Emergency Intervention Projects are projects which require immediate intervention, such as during disaster management. Two such projects have been implemented over the past few years in ZDM, namely:

- **Drought Relief**

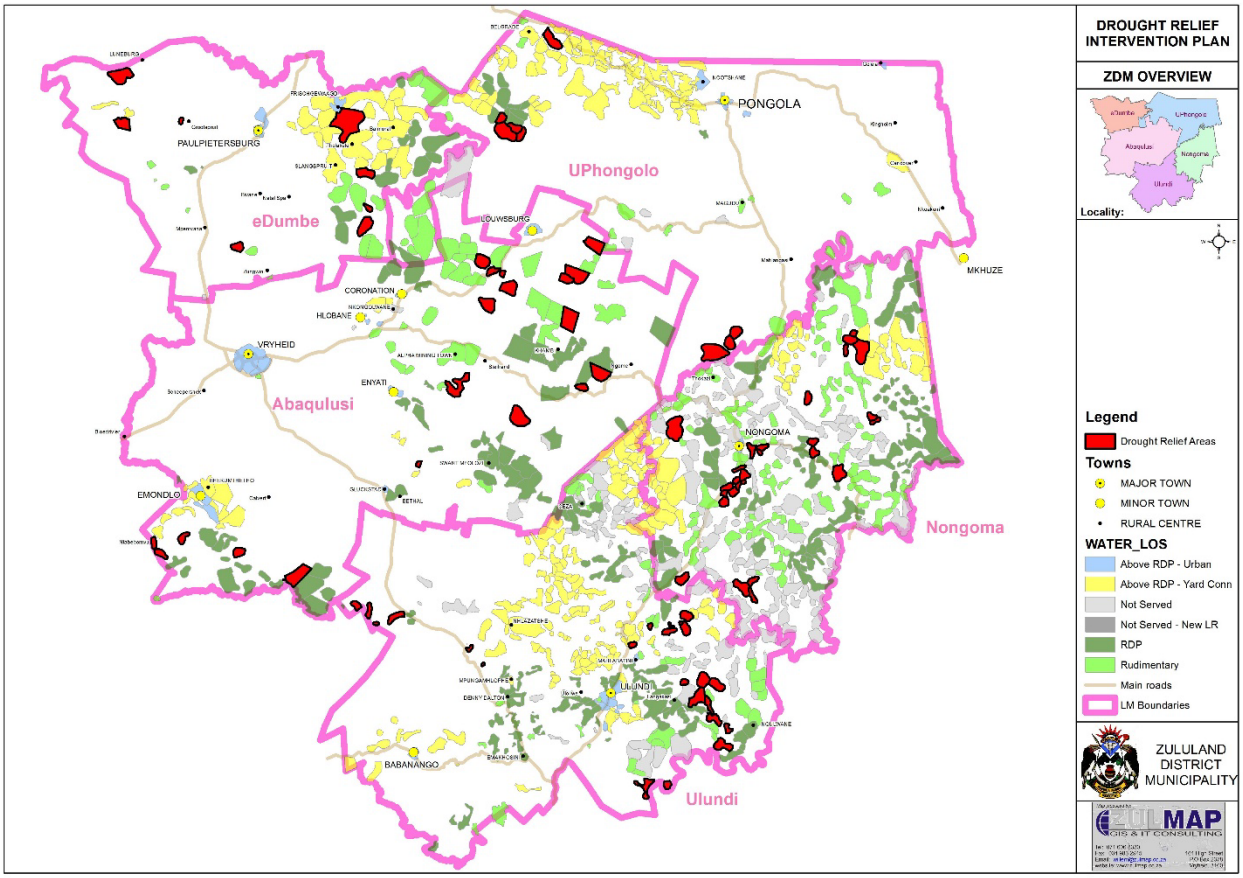
  Emergency drought relief funding was provided to ZDM in 2016. An amount of R37 493 000 was made available in 2016 for drought relief interventions, and a planned 7 880 households were to benefit from this funding allocation.

  A summary of the interventions can be seen in the next table.

Municipal Name	Spring Protection	Water Tankers rental (6 months' period)	Boreholes Drilling and equipping	Refurbish Non-functioning Schemes
	Qty	Qty	Qty	Qty
Abaqulusi LM	4			
		1		
			14	
				1
Nongoma LM	2			
		2		
			27	
				3
uLundi LM	2			
		2		
			18	
				2
eDumbe LM	6			
		1		
			8	
uPhongolo LM	4			
		1		
			10	

The town of Vryheid was forced to rely on water tankers and water points at designated borehole and water tank points. Since then dam levels have normalised again but it is clear that the greater Vryheid region is in urgent need for major interventions in terms of sustainable water during dry winter months. From the regional water demand study that was conducted in 2015, the most effective recommendation was to increase the Klipfontein dam level with approximately 1 meter to increase capacity. Implementation of this is however unclear.

The present status of ZDM is satisfactory, but water use and dam levels are closely monitored.



❖ **COVID-19**

South Africa is currently in lock-down due to the COVID-19 epidemic. Emergency interventions were immendiately put in place in ZDM, with 2 task teams deployed to plan, manage and oversee emergency interventions.

Two task teams, namely the ZDM Techincal Task Team and the ZDM Command Council was established, which are represented by ZDM and it's local municipalities' management delegates, MEC, the SADF, SAPS and Dept. of Health. These task teams meet bi-weekly where feedback and planning are discussed.

The COVID-19 pandemic accelerated the need for emergency interventions and as a result the municipality was required to expand the programme to include additional vulnerable communities.

The emergency water supply interventions include water provision through static tanks and water tankers. These interventions are implemented throughout the district, in each of the five Local Municipalities. Water tankers operate on fixed routes and pre-approved water supply rosters, which determine when each community will receive water. The aim is to supply each community at least once a week.

The table below shows the full contingent of water tankers operating in the district and the distribution per LM's:

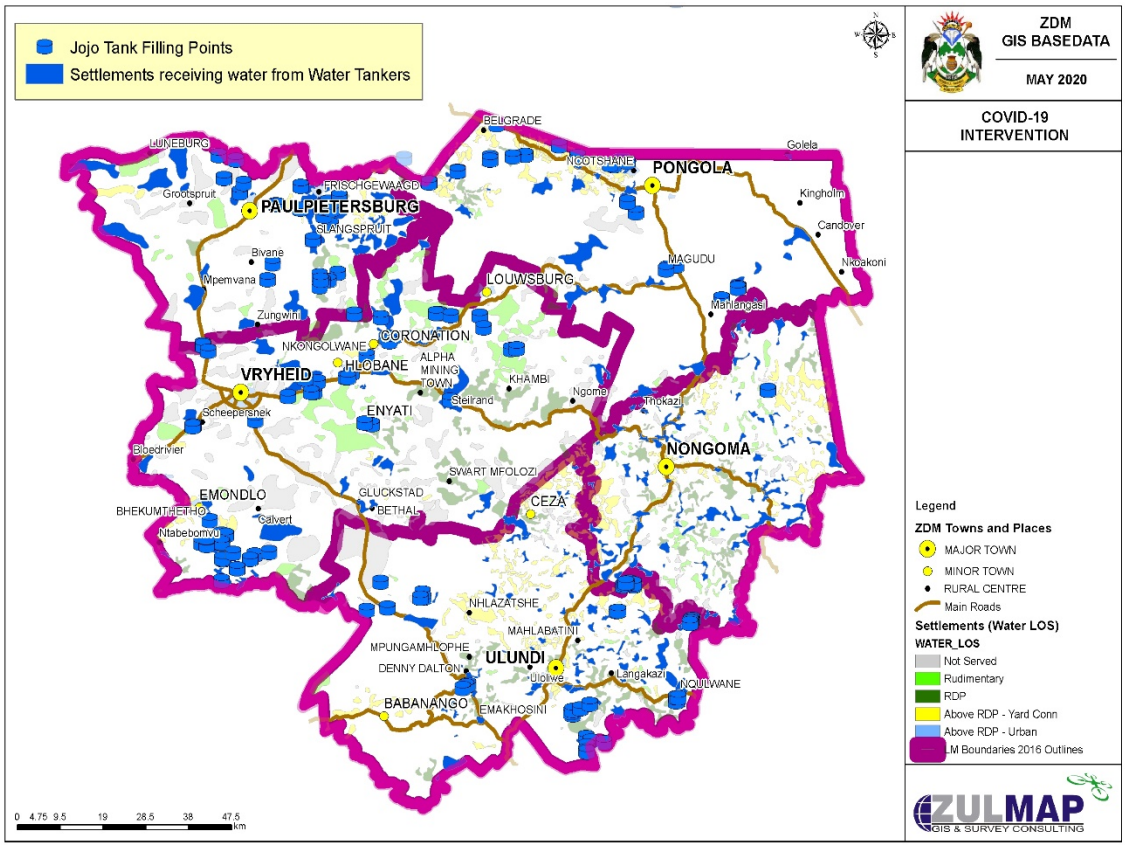
Local Municipality	*Total*	*Hired*	*ZDM*	*Rand Water*	*COGTA*	*LM's*
Ulundi	**22**	18	3	1		
Nongoma	**11**	10		1		
eDumbe	**9**	7	1		1	
Abaqulusi	**15**	12		1	1	1
uPhongolo	**10**	8		2		
	67	**55**	**4**	**5**	**2**	**1**

The majority of the water tankers are hired and operated by external Service Providers, under the supervision of ZDM technical personnel. ZDM water tanker supervisors accompany the water tanker drivers to ensure that the supply routes are adhered to and water is delivered where intended, in accordance with the water supply roster. ZDM also contributed four water tankers from our own fleet towards the programme.

The Department of Water and Sanitation, through Rand Water, contributed an additional five water tankers to the district for the duration of the pandemic. COGTA also contributed two water tankers, albeit directly to the eDumbe and Abaqulusi LM's. These water tankers are being controlled by the respective LM's. Abaqulusi LM also contributed a water tanker from their own fleet.

COGTA made available 50 x 2 700L static tanks during April 2020, and also distributed static tanks directly to certain Local Municipalities.

A map depicting settlements benifitting from the water tanker water supply as well as positions of current Jojo tanks can be reviewed in the map sbelow.



ZDM has also assisted with the provision of emergency sanitation facilities in some areas, as part of the COVID-19 intervention programme. Temporary sanitation facilities have been provided at the following places, to assist with the COVID-19 prevention measures:

- uPhongolo taxi rank (2 units)
- Mavalane road block (4 units)

ZDM has, in response to Circular 11 of 2020, issued by the Department of Cooperative and Traditional Affairs on 1 April 2020, reprioritised the MIG and WSIG capital programmes to make funding available for Covid-19 interventions. ZDM reprioritised R15m from the WSIG and R20m from the MIG allocations towards this programme.

The WSIG Business Plan for the approval and re-prioritisation of R15m funding was also approved. The aim of this programme was to refurbish existing non-functioning water schemes and provide additional handpumps as an emergency intervention for water supply to communities.

11.3.6 5-YEAR WATER & SANITATION RELIABILITY SERVICE DELIVERY IMPLEMENTATION PLAN PROJECTS

These projects are assisting the municipality in providing a 5-year pipeline of projects that will ensure a 90% reliable water and sanitation service through the following 5 workstreams:

- **Infrastructure**
- **Reliability**
- **Water Security**
- **Water Governance**
- **Finances**

11.4 Project Rollouts

11.4.1 Regional Water Supply Schemes

11.4.2 Intermediate Stand-alone Schemes

11.4.3 Rudimentary Water Supply

11.4.4 Sanitation Rollouts

11.4.5 5-Year Water & Sanitation Reliability Service Delivery Projects

Table 11.4.1: Roll-out of Regional Water Infrastructure

REGIONAL SCHEME ROLLOUTS

LM	Reg. Scheme	FIN. YEAR	Wards	Infrastructure Type	Size or Number of households	LENGTH or SIZE	Settlement ID	Description or Settlement Name
AbaQulusi	Coronation	Business Plan In Progress	1,2,3,5,6,7,13,23	Bulks & Retics				Coronation Regional Scheme Masterplan - Stand-alone Schemes
	Hlahlindlela	In Progress	18,20	WCWDM			Town16a	eMondlo Town water conservation & demand management
	Hlahlindlela	In Progress	14,15,21	Reticulation Upgrade				Drilling & equipping of 10 boreholes with associated reticulation network
	Hlahlindlela	Revised Business Plan in Progress	TA	Bulks & Secondary Bulk Connectio	16 051 HH			Remaining Regional Bulks & Secondary bulk connections to all existing stand-alone schemes
	Khambi	Completed	3	Khambi RWSS Augmentation				New Production BH, rising main to existing Khambi WTW.
	Khambi	Completed	3	Settlement Reticulation		26	ZNEW30	Kewulane
	Khambi	Completed	3	Settlement Reticulation		54	ZNEW31	Ndulinde
eDumbe	Coronation	Business Plan In Progress	7	Bulks & Retics				Coronation Regional Scheme Masterplan - Stand-alone Schemes
	Sim West	Completed	4	Treatment	10ML			Phase2 10ML to Sim West
	Sim West	Completed	4	Bulks				Raw Water Abstraction, Booster P/S & Rising Main to Frishgewaagd.
	Sim West	In Progress	2,4,5,6,8	WCDM				Water Conservation & Demand Management
	Sim West	In Progress	2	Bulks	10ML			New 10ML Terminal Res
	Sim West	In Progress	4	Bulks				New P/S to Mpunzi, bulks to Mpunzi Res, new Mpunzi Res 5ML
	Sim West	In Progress	2,10	Bulks				New bulks from Mpunzi Res to Tholakela WTW
	Sim West	In Progress	10	Bulks				New bulks from Tholakela WTW to Mpundu Res, New bulks from Bilanyoni Res to Ophuzane
	Sim West	>2027	5,6,8	Bulks				Remaining scope of works to connect all existing stand-alone schemes
Nongoma	Mandlakazi	Completed	3	Bulks				Phase 5.1 Bulks
	Mandlakazi	Completed	3	Reticulation				PHASE 5.1 Reticulation
	Mandlakazi	Completed	3	Bulks				PHASE 5.3 Bulk Pipelines & Reservoirs
	Mandlakazi	Completed	2,5,22	Bulks				PHASE 5.5 Bulk Pipelines & Reservoirs
	Mandlakazi	In Progress	3,22	Bulks				PHASE 5.2 Bulk Pipelines & Reservoirs
	Mandlakazi	In Progress	3,22	Reticulation				PHASE 5.2 Reticulation
	Mandlakazi	In Progress	3	Reticulation				PHASE 5.3 Reticulation
	Mandlakazi	In Progress	3	Bulks				PHASE 5.4 Bulk Pipelines & Reservoirs
	Mandlakazi	In Progress	3	Reticulation				PHASE 5.4 Reticulation
	Mandlakazi	In Progress	2,5,22	Reticulation				PHASE 5.5 Reticulation
	Mandlakazi	In Progress	20	Bulks				PHASE 5.6A Bulk Pipelines & Reservoirs
	Mandlakazi	In Progress	20	Reticulation				PHASE 5.6A Reticulation
	Mandlakazi	In Progress	6,7,8	Bulks				PHASE 5.6B Bulk Pipelines & Reservoirs
	Mandlakazi	In Progress	6,7,8	Reticulation				PHASE 5.6B Reticulation
	Mandlakazi	In Progress	All	Bulks				Upstream Bulks: Phase 1A-1B Rising Mains up to Mkhuze
	Mandlakazi	In Progress	All	Bulks				Upstream Bulks: Phase 1C Bulks
	Mandlakazi	In Progress	All	Bulks				Upstream Bulks: Mkhuze Pipe Bridge
	Mandlakazi	In Progress	All	Bulks				Upstream Bulks: Abstraction Works
	Mandlakazi	2025/2026	All	Bulks				Upstream Bulks: Phase 2A-2B Bulks
	Mandlakazi	TBC	All	Bulks				Downstream Bulks: WTW Upgrade to 60ML/day
	Mandlakazi	TBC	1,5,6,7,8,20	Bulks				Downstream Bulks: Phase 1A Clearwater Pump Station
	Mandlakazi	TBC	1,5,6,7,8,20	Bulks				Downstream Bulks: Phase 2A Steel Rising Main
	Mandlakazi	TBC	1,5,6,7,8,20	Bulks				Downstream Bulks: Phase 2B Interm. Cleawater P/S & 1ML Res
	Mandlakazi	TBC	1,5,6,7,8,20	Bulks				Downstream Bulks: Phase 2B 800 Steel Rising Main
	Mandlakazi	TBC	1,5,6,7,8,20	Bulks				Downstream Bulks: Phase 5 30ML Command Reservoir
	Mandlakazi	TBC	1,5,6,7,8,20	Bulks				Downstream Bulks: Phase 5 500 Steel Gravity Main
	Mandlakazi	TBC	Hlabisa	Bulks				Downstream Bulks: Phase 6 30ML Command Reservoir
	Mandlakazi	TBC	Hlabisa	Bulks				Downstream Bulks: Phase 6 700 Steel Gravity Main (Res I1 to Res KLM)
	Mandlakazi	TBC	Hlabisa	Bulks				Downstream Bulks: Phase 6 800 Steel Gravity Main (Command Res to Res I1)
	Mandlakazi	TBC	Hlabisa	Bulks				Downstream Bulks: Phase 6 400/500/700 Steel Gravity Main (Res KLM to Hlabisa Res's)
	Mandlakazi	> 2027	Phase 4	Bulks				Phase 4 300 Steel Gravity Main Upgrade

REGIONAL SCHEME ROLLOUTS

LM	Reg. Scheme	FIN. YEAR	Wards	Infrastructure Type	Size or Number of households	LENGTH or SIZE	Settlement ID	Description or Settlement Name
Nongoma	Usuthu	2025/2026	23	Reticulation				Holinyoka Area Reticulation
	Usuthu	Planning	4,6	Bulks				Off-channel Dam
	Usuthu	Completed	9	PS Mech/Electr				Lindizwe PS2
	Usuthu	Completed	9	PS Mech/Electr				Holinyoka PS1
	Usuthu	Completed	9	Usuthu Bulk Res B & 3ML Res				Completion of bulk reservoirs for Zone G
	Usuthu	Completed	15	Usuthu Raw Water Abstraction				Mechanical Works
	Usuthu	Completed	14	Reticulation				Reticulation to Ward 14
	Usuthu	Completed	16	Pump Station				Canaan Pump Station
	Usuthu	Completed	13	Reticulation				Ophalule/Canaan Reticulation
	Usuthu	Completed	18	Bulks				Bulk pipelines for Bulk Res G North
	Usuthu	Pending water source security	18	Bulks				Remaining Bulk pipelines for Bulk Res G North
	Usuthu	Pending water source security	23	Bulks				Bulk Pipline to Res F, Reservoir F
	Usuthu	Pending water source security	10,12,13,23	Reticulation				Reticulation within Bulk Res F Zone
	Usuthu	Pending water source security	23,10	Bulks				Bulk Pipeline to Res J, Reservoir J
	Usuthu	Pending water source security	10,11	Reticulation				Reticulation within Bulk Res J Zone
	Usuthu	Pending water source security	17,21	Bulks				Bulks in Res H Zone
	Usuthu	Pending water source security	17,21	Reticulation				Reticulation in Bulk Res H Zone
	Usuthu	Pending water source security	12,13	Bulks				Bulk supply lines & Reservoirs to Zone D
	Usuthu	Pending water source security	4	Reticulation				White City Reticulation Upgrade
	Usuthu	Pending water source security	16	Reticulation				Mthwatube and surrounding reticulation upgrade
	Usuthu	Pending water source security	13	RWSS				Fish Ladder @ Vuna Dam
	Usuthu	Pending water source security	13	RWSS				Vuna Dredging
Ulundi	Usuthu	Pending water source security	7,8,14	Bulks				Bulk supply lines & Reservoirs to Zone E
	Usuthu	Pending water source security	5	Bulks				Bulk supply lines & Reservoirs to Zone C
	Usuthu	Pending water source security	4,5	Bulks				Bulk Supply to Ceza, Ceza Bulk Res
Ulundi	Nkonjeni	Completed	RWSS	Bulks				Replace Rising Main to Ulundi Town
	Nkonjeni	Completed	15	Reticulation	455		Z417	Reticulation upgrade at Nqulwane
	Nkonjeni	Completed	RWSS	RWSS Borehole Augmentation				Scheme Source Augmentation
	Nkonjeni	In Progress	RWSS	WCDM				Water Conservation & Demand Management
	Nkonjeni	In Progress	RWSS	Bulks	20ML			Upgrade WTW with 20ML
	Nkonjeni	2026/2027	RWSS	Pump Station	22KV			Upgrading of P/S at WTW
	Nkonjeni	>2027	RWSS	WTW	30ML			Upgrading of WTW Phase 3 to 30ML/day
	Nkonjeni	>2027	14,20,24	Bulks				Planned bulk water supply to Nkonjeni Central and East
	Nkonjeni	>2027	13,16,17,23	Bulks				Planned bulk water supply to Mpungamhlope region
	Nkonjeni	>2027	16	Bulks				Planned bulk water supply to Babanango region from Mpungamhlope WTW

REGIONAL SCHEME ROLLOUTS

LM	Reg. Scheme	FIN. YEAR	Wards	Infrastructure Type	Size or Number of households	LENGTH or SIZE	Settlement ID	Description or Settlement Name
uPhongolo	Coronation	Business Plan In Progress	1	Bulks & Retics				Coronation Regional Scheme Masterplan - Stand-alone Schemes
	Gumbi	Completed	1	RWSS Augmentation			ZHR2	uGumbi Trust Water Supply Augmentation
	Gumbi	Planning	1	RWSS Augmentation			ZHR2	Upgrading of Abstraction, Rising Main & WTW
	Sim East	Completed	9	Bulks	1ML			PROJECT 3A: Rising Main, Pump Station & Reservoir S1
	Sim East	Completed	9	Reticulation				PROJECT 3B: Reticulation to Res S1 zone
	Sim East	Completed	11					Augmentation to Golela WTW, Rising Main & Reticulation to Golela Border Post
	Sim East	Pending New Business Plan	9,11	Reticulation				PROJECT 1B: Reticulation to Reservoir S2
	Sim East	Pending New Business Plan	13		700ML			PROJECT 2A: Rising Main, Pump Station & Reservoir S3
	Sim East	Pending New Business Plan	13	Reticulation				PROJECT 2B: Reticulation to Res S3 zone
	Sim East	Pending New Business Plan	9,15		300KL			PROJECT 4-6: 2x Pump Stations & Reservoir P2
	Sim East	Pending New Business Plan	13		300KL			PROJECT 7-9A: Pump Station, Rising Main & Reservoir S5
	Sim East	Pending New Business Plan	13	Reticulation				PROJECT 9B: Reticulation to Res S5
	Sim East	Pending New Business Plan	7,8,13,15					PROJECTS 11-24: Bulks & Reticulation to Res S4, S6,S7,S8, S11, P3, S12, S13, S14
	Sim Central	Completed	3	Bulks	250			Regional bulk pipeline from Luphiso reservoir to new regional bulk reservoir at Ombimbini1
	Sim Central	Completed	3	Storage	3ML			New bulk regional reservoir at Ombimbini
	Sim Central	Pending New Business Plan	3,6	Bulks				Regional bulk to Bongaspoort P/S
	Sim Central	Pending New Business Plan	3	Settlement Reticulation				Ward 3 Settlements reticulation
	Sim Central	Pending New Business Plan	6	Pump Station				Booster Pump Stations at Bongaspoort
	Sim Central	Pending New Business Plan	6	Bulks				Bulk Pipeline to Res 4 at Klipwal
	Sim Central	Pending New Business Plan	6	Storage	1ML			Res 4 at Klipwal
	Sim Central	Pending New Business Plan	6	Settlement Reticulation				Ward 6 settlement reticulation
	Sim Central	Pending New Business Plan	6	Bulks				1ML Res 3 at Emabomvu
	Sim Central	Pending New Business Plan	6	Bulks	1ML			Bulk Pipeline to Res 3 at Emabomvu
	Sim Central	Pending New Business Plan	3	Treatment	18ML			New WTW at abstraction to supply Sim Central
	Sim East	>2027	11	Abstraction	TBA			Planned upgrading of abstraction works at river

Table 11.4.2: Roll-out of Stand-alone Schemes

INTERMEDIATE STAND-ALONE SCHEMES								
Local Municipality	**Regional Scheme**	**Wards**	**Implementation Year**	**Stand-alone Scheme Name**	**Phase**	**Z-Nr**	**Settlement Name**	**Households Served**
AbaQulusi	Hlahlindlela	15	Completed	Bhobozani		Z116	Bhobozani (Ginqa)	238
		15/17	Under construction	Mhlangeni/Nqulwane		Z119	Mhlangeni	249
		15/17	Under construction	Mhlangeni/Nqulwane		Z941	Nqulwane	120
	Khambi	4	Pending water security	Gluckstad/Bevenson	Phase 1		EIA and Approvals	
		4	Pending water security	Gluckstad/Bevenson	Phase 2	ZNew56	Emaqigwe	22
		4	Pending water security	Gluckstad/Bevenson	Phase 2	ZNew57	Hlongane	28
		4	Pending water security	Gluckstad/Bevenson	Phase 2	ZNew58	Enkaleni	53
		4	Pending water security	Gluckstad/Bevenson	Phase 3	ZNew55	KwaNgada	59
		4	Pending water security	Gluckstad/Bevenson	Phase 3	ZNew54	KwaDevan	48
		4	Pending water security	Gluckstad/Bevenson	Phase 4	ZNN6	Egazini	175
		4	Pending water security	Gluckstad/Bevenson	Phase 4	ZNN7	Kwanyoni	29
		4	Pending water security	Gluckstad/Bevenson	Phase 4	ZNN9	Mfofana	79
		4	Pending water security	Gluckstad/Bevenson	Phase 5	ZMAP126	Mangoe	103
		4	Pending water security	Gluckstad/Bevenson	Phase 5	ZNN14	Emangumbu	81
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZNN10	Makukula	207
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZMAP60	KwaSodumo	69
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZTAS52	Cebekazi	138
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZNN1	Zwati	146
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZNN11	Mandunduwe	75
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZTAS50	Esigangeni 2	58
		4	Pending water security	Gluckstad/Bevenson	Phase 6	ZNN13	KwaSozwane	71
		4	Pending water security	Gluckstad/Bevenson	Phase 8	Z897a	Bethel (Mission)	93
		4	Pending water security	Gluckstad/Bevenson	Phase 8	Z897b	Bethel (Salema)	205
	Nkonjeni	4	Pending water security	Gluckstad/Bevenson	Phase 6	ZMAP59	Masigane	50
Nongoma	Mandhlakazi	2	Planned	Nhlebela		Z251	Ovukneni	141
		3	Completed	Sovana	Phase 1	Z330	Sovana	97
		3	Completed	Sovana	Phase 1	Z327	Macijo	62
		3	Completed	Sovana	Phase 1	Z329	Vesonweni	43
		3	Completed	Sovana	Phase 1	Z331	Machibini	133
		3	Completed	Sovana	Phase 1	Z332	Njonyomane	78
		4	Completed	Henenende		Z211	Khokhwaneni	170
		5	Planned	Nhlebela		Z248	Nhlebela	135
		5	Planned	Nhlebela		Z250	Fakude	110
		5	Planned	Nhlebela		Z268	Ndimhlana	140
		5	Planned	Nhlebela		Z266	Khethankomo	198
		5	Planned	Nhlebela		Z264	New Town	74
		5	Planned	Nhlebela		Z265	Mthincongo	183
		5	Planned	Nhlebela		Z280	Singanda	175
		5	Planned	Mphuphuzi		Z247	Mpuphusi	137
		5	Planned	Kwajuba		Z718	Mahlomane	71
		5	Planned	Kwajuba		Z292	Kwajuba	126
		5	Planned	Kwajuba		Z294	Kolubomvu 1	20
		7	Planned	Bhekumthethu		Z956	Egudu	157
		7	Planned	Bhekumthethu		Z957	Nzondwane	40
		7	Planned	Bhekumthethu		Z197	Mpuqwini	206
		7	Planned	Bhekumthethu		Z205	Chinamorgan	45
		7	Planned	Bhekumthethu		Z206	Nkungwini	74
		8	Planned	Bhekumthethu		Z186	Ncemaneni	110
		8	Planned	Bhekumthethu		Z196	Bhekumthetho 2	305
		8	Planned	Bhekumthethu		Z207	Nkonjeni	185
		20	Completed	Henenende		Z630	Vilane	267

INTERMEDIATE STAND-ALONE SCHEMES								
Local Municipality	Regional Scheme	Wards	Implementation Year	Stand-alone Scheme Name	Phase	Z-Nr	Settlement Name	Households Served
Nongoma	Usuthu	4	Completed	Henenende		Z823	Mbonjeni	54
		4	Completed	Henenende		Z218	Henenende	295
		4	Planned	Esiphambanweni		Z219	Esiphambanweni	432
		6	Planned	oDuswhini		Z209	oDuswhini	370
		6	Planned	Manqashi		Z210	Manqashi	762
		10	Completed	Zombodhe		Z575	Kwahelibheshu	15
		10	Completed	Zombodhe		ZBUK56	Nombanjana	65
		10	Completed	Zombodhe		ZNN26	Engongoma	21
		10	Completed	Enzobo		Z572	Qule	22
		11	Completed	Enzobo		Z155	Eziqhumeni	114
		11	Completed	Enzobo		Z156	Entwala	54
		11	Completed	Enzobo		Z157	Nqala	79
		11	Completed	Enzobo		Z158	Entuthukweni	125
		11	Completed	Enzobo		Z159	Elanjeni/Msasanani	174
		11	Completed	Enzobo		ZBA4	Sidakeni 2	27
		11	Completed	Enzobo		ZBA5	Khanjaneni	53
		11	Completed	Enzobo		ZNN22	Ebungwini	121
		11	Completed	Enzobo		Z570	Kwazungu	175
		11	Completed	Enzobo		ZNN23	Emhemeni	62
		11	Completed	Enzobo		Z568	Mbamba	51
		11	Completed	Enzobo		Z567	Othinsangu	115
		11	Completed	Enzobo		ZNN27	Hlathidumayo	80
		11	Completed	Enzobo		ZBA2	Singangeni	73
		11	Completed	Enzobo		Z154	Zampilo	37
		11	Completed	Enzobo		Z153	Mcibilindini	47
		11	Completed	Enzobo		Z151	Mhlabaneni	60
		11	Completed	Enzobo		ZBA1	Kwavumela	76
		11	Completed	Enzobo		Z152	Masokaneni	160
		12	Completed	Kwankulu		Z347	Manhlanhla	169
		13	Completed	Kwankulu		ZMAP17	Emgodi 2	87
		13	Completed	Kwankulu		Z350	Kwamfemfeni	117
		13	Completed	Kwankulu		Z372	Ingundwane	19
		13	Completed	Kwankulu		Z351	Kwankulu	97
		13	Completed	Kwankulu		Z353	Hlambanyathi 1	87
		14	Completed	Esikhumbeni	Phase 1	Z549a	KwaMusi	312
		14	Completed	Esikhumbeni	Phase 1	Z549b	KwaMahashi	39
		14	Completed	Esikhumbeni	Phase 1	Z551b	KwaBoy 2	17
		14	Completed	Esikhumbeni	Phase 1	Z551a	Dayeni	104
		14	Completed	Esikhumbeni	Phase 2	ZMAP29	Mbhukudu	116
		14	Completed	Esikhumbeni	Phase 2	Z555	Ezimpakaneni	164
		14	Completed	Esikhumbeni	Phase 2	Z552	Shisuthu	143
		14	Completed	Esikhumbeni	Phase 2	Z553	Nsimbini	137
		14	Completed	Esphiva	Phase 3	Z550	Onyango	156
		17	Completed	Nongoma Ward 17		Z659	Thokazi	142
		17	Completed	Nongoma Ward 17		ZKAY1	Esiweni	25
		17	Completed	Nongoma Ward 17		ZKAY7	Msasaneni	35
		17	Completed	Nongoma Ward 17		ZMAP34	Phoqukhalo	23
		17	Completed	Nongoma Ward 17		Z660	Mjiza	157
		17	Completed	Nongoma Ward 17		Z658	Mbengo	73
		17	Completed	Nongoma Ward 17		ZKAY8	Echibini	9
		18	Completed	Nongoma Ward 17		ZKAY6	Magedlana B	57
		20	Completed	Henenende		Z224	Qathaqatheni	121
		20	Completed	Henenende		Z223	Ebukhalini	68

INTERMEDIATE STAND-ALONE SCHEMES								
Local Municipality	Regional Scheme	Wards	Implementation Year	Stand-alone Scheme Name	Phase	Z-Nr	Settlement Name	Households Served
Ulundi	Nkonjeni	14	Planned	Nkonjeni East	Phase 3	Z403	Tshiyazane	81
		14	Planned	Nkonjeni East	Phase 3	Z404	Bhongisilwane	32
		14	Completed	Nkonjeni East	Phase 4	Z413	Njomelwane	318
		14	Completed	Sqobelo		Z407	Ezinyosini	203
		14	Completed	Sqobelo		Z782	Sqobelo	70
		14	Completed	P700 (Dindi)		Z412	Zilulwane	99
		14	Completed	Nkonjeni East	Phase 1	Z410	Ganwini	146
		15	Completed	Nkonjeni East	Phase 4	Z416	Zenzele	88
		15	Completed	Nkonjeni East	Phase 4	Z166	Ngqolothi	193
		24	Completed	Nkonjeni East	Phase 1	Z411	Dindi	243
		24	Completed	Nkonjeni East	Phase 2	ZNew100	Eskhaleni Kwankosi	13
		24	Completed	Nkonjeni East	Phase 2	ZTAS13	England	80
		24	Completed	Nkonjeni East	Phase 3	ZTAS17	Nkonjane	213
		24	Completed	Nkonjeni East	Phase 3	ZTAS16	Kwathuthu	19
		24	Planned	Hlopenkulu		ZMAP109	Ezisasaneni	26
		24	Planned	Hlopenkulu		ZMAP108	Basamlilo	66
		24	Planned	Hlopenkulu		Z758	Ekujulukeni	269
		24	Planned	Hlopenkulu		ZTAS18	Ezimfeneni	67
		24	Planned	Hlopenkulu		Z813	Enguqe	178
		24	Planned	Hlopenkulu		Z820b	Sibanisakhe	64
		24	Planned	Hlopenkulu		Z398	Ekatini	42
		24	Planned	Hlopenkulu		Z820a	Hlophekhulu	80
		24	Planned	Hlopenkulu		Z820c	Gijima	85
		24	Planned	Hlopenkulu		ZTAS19	Ezikhumbeni	99
	Usuthu	1	>2027	Ceza	Phase 6	Z26	Obhedeni	36
		2	Completed	Ceza	Phase 4	Z10b	Kwamasane	31
		2	Completed	Ceza	Phase 4	Z16	Mndaweni	78
		2	Completed	Ceza	Phase 4	Z14	Nsimbi	129
		2	Completed	Ceza	Phase 4	Z15	Phethu	78
		2	Completed	Ceza	Phase 4	Z9	Mgxotshwa	14
		2	Completed	Ceza	Phase 4	Z10a	Brush/Nsukangihlale	355
		2	>2027	Ceza	Phase 6	Z19	Nomponjwana	64
		2	>2027	Ceza	Phase 6	ZMAP116	Ezinxagwini	49
		2	>2027	Ceza	Phase 6	Z25	Siyekela	100
		2	>2027	Ceza	Phase 6	ZRN6	Ezimqaqeni	49
		2	>2027	Ceza	Phase 6	ZRN1	Ezihlaqeni	40
		2	In Progress	Ceza	Phase 5	ZMAP115	Nhlohlala	118
		2	Completed	Ceza	Phase 6	ZMAP114	Sikhalampama	80
		2	Completed	Ceza	Phase 6	Z24	Edlakude	81
		2	Completed	Ceza	Phase 6	Z17	Nhlonga	132
		3	Completed	Godlankomo		ZRN4	Godlankomo	322
		3	Completed	Ceza	Phase 1		Weir B, Rising Main & WTW	
		3	Completed	Ceza	Phase 3	Z436	Isihululu	157
		3	Completed	Ceza	Phase 3	Z437a	Mguluze	64
		3	Completed	Ceza	Phase 3	Z437b	Nsukahlale	186
		3	Completed	Ceza	Phase 3	Z443	Nomdidwa	87
		3	Completed	Ceza	Phase 3	Z441	Mkhulwana	84
		3	Completed	Ceza	Phase 3	ZMD9	Ngobodo	89
		3	Completed	Ceza	Phase 3	Z438b	Dayingubu	189
		3	Completed	Ceza	Phase 3	Z438a	Nhlatwini	26
		3	Completed	Ceza	Phase 3	Z440	Magayiseni	56
		3	Completed	Ceza	Phase 3	Z439	Dakaneni	105
		3	Completed	Ceza	Phase 3	ZNew51	Eziqhwageni	52
		3	Completed	Ceza	Phase 3		Weir A & Bulks	
		4	In Progress	Ceza	Phase 5	Z448	Ezembeni 1	281
		4	In Progress	Ceza	Phase 5	ZMD10	Chibini	226
		4	In Progress	Ceza	Phase 5	Z442	Ngubaneni	113
		4	>2027	Ceza	Phase 6	Z446	Esidakeni 2	578

INTERMEDIATE STAND-ALONE SCHEMES								
Local Municipality	**Regional Scheme**	**Wards**	**Implementation Year**	**Stand-alone Scheme Name**	**Phase**	**Z-Nr**	**Settlement Name**	**Households Served**
Ulundi	Usuthu	5	>2027	Ceza	Phase 6	ZNew117	Magagodolo	15
		5	>2027	Ceza	Phase 6	Z33	Ntambonde	76
		5	>2027	Ceza	Phase 6	Z29	Egqumeni	110
		5	>2027	Ceza	Phase 6	Z30	Ndwaleni	48
		5	>2027	Ceza	Phase 6	Z27	Nende	15
		5	>2027	Ceza	Phase 6	Z28	Ezembeni 2	88
		5	>2027	Ceza	Phase 6	ZMAP113	KwaFini	40
		5	Completed	Esikhumbeni	Phase 1	Z83	Kwameke	78
		5	Completed	Esikhumbeni	Phase 1	Z89	Phangole	47
		5	Completed	Esikhumbeni	Phase 1	Z46	Qhudebe	127
		5	Completed	Esikhumbeni	Phase 1	Z82	Sikhumbeni	113
		5	Completed	Esikhumbeni	Phase 2	Z44	Kwadayeni	57
		5	Completed	Esikhumbeni	Phase 2	Z43	Kwasaku	33
		5	Completed	Esikhumbeni	Phase 2	Z45	Odizima	64
		5	Completed	Esikhumbeni	Phase 2	Z42	Okhalweni 1	104
		5	Completed	Esikhumbeni	Phase 2	Z41	Kwampanza	149
		5	Completed	Esikhumbeni	Phase 2	Z40	Esibomvu	124
		5	Completed	Esikhumbeni	Phase 2	ZMAP112	Okhwathe	1
		5	Completed	Esikhumbeni	Phase 2	Z47	Ezimfabeni	166
		5	Completed	Esikhumbeni	Phase 2	Z48	Nsabekkuluma 1	129
		5	Completed	Esikhumbeni	Phase 2	Z49	Emfenyane	71
		5	Completed	Esikhumbeni	Phase 2	ZHR6	Esembeni	267
		6	>2027	Ceza	Phase 6	Z32	Mashiyane	162
		6	>2027	Ceza	Phase 6	Z31	Dlabane	112
		6	Completed	Esikhumbeni	Phase 2	Z38	Emabeka	65
		6	Completed	Esikhumbeni	Phase 2	Z39	Qwasha (Nongoma)	27
		6	Completed	Esikhumbeni	Phase 2	ZHR7	Nzukasi	170
		6	Completed	Esikhumbeni	Phase 2	ZHR5	Shkulile	82
		7	Completed	Esphiva	Phase 2D	Z670	Nqabeni	84
		7	Completed	Esphiva	Phase 2D	Z674	Bhokweni	214
		7	Completed	Esikhumbeni	Phase 1	Z80	Kwamame	252
		7	Completed	Esphiva	Phase 1A	Z676	Thusini	52
		7	Completed	Esphiva	Phase 1A	Z671	Xasane	175
		7	Completed	Esphiva	Phase 1B	Z672	Bhungwane	123
		7	Completed	Esphiva	Phase 1B	Z679	Esphiva	120
		7	Completed	Esphiva	Phase 2B	Z675	Mpangeleni	76
		7	Completed	Esphiva	Phase 2C	ZMAP93	Qubeni	24
		7	Completed	Esphiva	Phase 2C	Z680	Xolo	219
		7	Completed	Esphiva	Phase 3	Z666	Enqunyaneni / Amaphiva	233
		8	2026/2027	Mganimbobo		Z691	Gezizandla	53
		8	2026/2027	Mganimbobo		Z692	Ewela 2	96
		8	2026/2027	Mganimbobo		Z685	Mganimbobo	105
		8	2026/2027	Mganimbobo		ZNew78	Qubenz	7
		8	Completed	Esphiva	Phase 1B	Z684	Mnqakwe	94
		8	Completed	Esphiva	Phase 2A	Z683	Isiphethu	88
		8	Completed	Esphiva	Phase 2A	Z681	Isiguqa 1	31
		8	Completed	Esphiva	Phase 2A	Z682a	Chibini 2	48
		8	Completed	Esphiva	Phase 2B	Z682b	Chibini 1	83
		14	2026/2027	Mabululwane		ZTAS6	Ewela 1	36
		14	2026/2027	Mabululwane		Z701	Mabululwane	74
		14	2026/2027	Mabululwane		Z693	Njojo	107
		14	2026/2027	Mabululwane		Z695	Bhodludaka	47
		14	2026/2027	Mabululwane		Z694	Glula	63
		15	Completed	Lomo		Z686	Makhukwane	192
		15	Completed	Lomo		Z696/Z697/Z7	Lomo	170

INTERMEDIATE STAND-ALONE SCHEMES								
Local Municipality	**Regional Scheme**	**Wards**	**Implementation Year**	**Stand-alone Scheme Name**	**Phase**	**Z-Nr**	**Settlement Name**	**Households Served**
uPhongolo	Simdlangentsha E	14	Completed	Golela		ZMAP124	Golela Border Post	154
AbaQulusi	Coronation	1	Planning Stage	Proposed Production BH Scheme		ZPM17a	Enhlangweni	99
		1	Planning Stage	Proposed Production BH Scheme		ZNew63	Kwanogalaja	8
		2	Planning Stage	Proposed Production BH Scheme		ZNew40	Kwasithole	118
		3	Planning Stage	Proposed Production BH Scheme		ZHR26	Sgubudu	201
		6	Planning Stage	Proposed Production BH Scheme		ZPM6	Mkhuze 2	97
	Hlahlindlela	7	Planning Stage	Proposed Production BH Scheme		ZNew107	Shoba 1	756
		7	Planning Stage	Proposed Production BH Scheme		ZNew108	Shoba 2	497
		12	Planning Stage	Proposed Production BH Scheme		ZNew169	Tintas Drift	843
		13	Planning Stage	Proposed Production BH Scheme		ZNew96	Banya	14
		13	Planning Stage	Proposed Production BH Scheme		ZMAP123	Emadoshini	343
		13	Planning Stage	Proposed Production BH Scheme		ZNew93	Eskame	79
		13	Planning Stage	Proposed Production BH Scheme		ZNew109	Hluma	41
		13	Planning Stage	Proposed Production BH Scheme		ZNew75	Tholithemba	86
	Khambi	3	Planning Stage	Proposed Production BH Scheme		ZNew29	Mabova	37
eDumbe	Coronation	7	Planning Stage	Proposed Production BH Scheme		ZTAS54	Palmietfontein 5841 (Mbhar	22
	Hlahlindlela	7	Planning Stage	Proposed Production BH Scheme		ZMAP5	Khambula	182
		7	Planning Stage	Proposed Production BH Scheme		ZNew150	Mqwabe	38
	Sim West	3	Planning Stage	Proposed Production BH Scheme		ZNew3	Mandakane	534
		7	Planning Stage	Proposed Production BH Scheme		ZMAP6	Koudbad / Welverdiend	92
		9	Planning Stage	Proposed Production BH Scheme		ZMAP3	Geluk 2	63
		9	Planning Stage	Proposed Production BH Scheme		ZMAP121	Mananjalo	82
Nongoma	Mandhlakazi	7	Planning Stage	Proposed Production BH Scheme		Z955	Maganganeni	76
		7	Planning Stage	Proposed Production BH Scheme		Z197	Mpuqwini	243
		7	Planning Stage	Proposed Production BH Scheme		Z204	Sibanyaneni	164
	Usuthu	12	Planning Stage	Proposed Production BH Scheme		ZMAP12	Nqobuzulu	65
		21	Planning Stage	Proposed Production BH Scheme		Z607	Mangomhlophe	327
Ulundi	Nkonjeni	24	Planning Stage	Proposed Production BH Scheme		Z813	Enguqe	221
		24	Planning Stage	Proposed Production BH Scheme		ZTAS19	Ezikhumbeni	115
		24	Planning Stage	Proposed Production BH Scheme		ZMAP109	Ezisasaneni	30
uPhongolo	Coronation	1	Planning Stage	Proposed Production BH Scheme		ZNew37	Kwaslevu	42
		1	Planning Stage	Proposed Production BH Scheme		ZNew38	Mthaniya	42

Table 11.4.3: Roll-out of Rudimentary Water Services

RUDIMENTARY ROLLOUTS

Served/Completed Projects
Settlement Status to be verified (2025/26)
Priority Projects for next financial year

Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		1	Served	ZNew63	Kwanogalaja		3	Functional solar pump	
		1	Served	ZPM17a	Enhlangweni		73	Functional handpump	
		5	Served	ZNew25	Malangweni		72	Functional handpump	
		1	Served	ZPM17b	Mbizo		23		2x Equipped BH
		2	Served	ZBUK61	Endinsi		46		1x BH Equipped
		2	Served	ZBUK60	Kwafakazi		85		1x Spring protection, 1x BH Equipped
		3	Served	ZHR26	Sgubudu		170		1x BH Equipped
		6	Served	ZNew103	Uitzicht		29		1x BH Equipped
		6	Served	ZPM6	Mkhuze 2		78		2x BH equipped
		7	Served	ZHC5	Boomlaer		40		1x BH Equipped
AbaQulusi	Coronation	1	Status to be verified (2025/26)	ZNew45	Madanyini	400 000	29	Spring protections	Recommendation for spring protection
		1	Status to be verified (2025/26)	ZPM11	Ezakhiweni 1	60 000	17	Resolve solar pump problem	To be equipped with handpump
		2	Status to be verified (2025/26)	ZNew46	Emarondweni	420 000	13	Hydrocensus Status to be verified (2025/26)	Land reform, investigate if water can be sourced from farmstead 600m away, alternatively drill 1 borehole.
		2	Status to be verified (2025/26)	ZNew48	Empumazi	450 000	14	Hydrocensus Status to be verified (2025/26)	
		6	Status to be verified (2025/26)	ZNew104	Enkwaleni	350 000	18	Additional BH required	1x BH drilled. To be equipped
		1	2025/2026	ZNew50	Kwantebe	870 000	51	Hydrocensus & Rudimentary water supply	
		2	2025/2026	ZNew22	Kwabudula	580 000	29	Hydrocensus & Rudimentary water supply	
		2	2025/2026	ZNew20	Kwanmnunse	850 000	51	Hydrocensus & Rudimentary water supply	
		2	2025/2026	ZNew40	Kwasithole	1 040 000	77	Hydrocensus & Rudimentary water supply	
		2	2025/2026	ZNew21	Makhwela	1 040 000	73	Hydrocensus & Rudimentary water supply	
		3	2026/2027	ZNew32	Mfabantu	520 000	20	Hydrocensus & Rudimentary water supply	
		6	>2027	ZNew34	Gobeni	460 000	17	Hydrocensus & Rudimentary water supply	
		6	>2027	ZNew33	Mciyo	660 000	29	Hydrocensus & Rudimentary water supply	

RUDIMENTARY ROLLOUTS

Served/Completed Projects
Settlement Status to be verified (2025/26)
Priority Projects for next financial year

Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		7	Served	ZNew107	Shoba 1		266		
		8	Served	ZMAP122	Vryheid Dump Site		115		Functional Handpump
		8	Served	ZNew128	KwaNgethe		45		Served by farm
		8	Served	ZNew153	Kwatwo		29		Served by farm
		12	Served	ZNew177	Brakfontein 2		12		Served by farm
		12	Served	ZNew168	Mabunya		13		Served by farm
		13	Served	ZNew76	Mpofini		53		Water supplied by smallholding
		7	Served	ZNew108	Shoba 2		272		2x BHs drilled.
		7	Served	ZNew95	Voorkeur		63		1x BH Equipped
		12	Served	ZNew161	Emooi		80		Partially served only.
		12	Served	ZNew169	Tintas Drift		84		3x Handpumps
		12	Served	ZNew179	Mdlenevini		34		1x BH Equipped
		12	Served	ZNew172	Haqa		8		1x BH Equipped
		13	Served	ZNew96	Banya		10		1x Handpump
		13	Served	ZMAP123	Ema300		284		2x BHs equipped
		13	Served	ZNew93	Eskame		52		
		13	Served	ZNew109	Hluma		45		1x Handpump
		13	Served	ZNew75	Beafort (Tholithemba)		64	Hydrocensus & Rudimentary water supply	1x Handpump (Partially Served)
		14	Served	Z126	Qweqwe 1		234	Scheme Augmentation: New 250KL reservoir	
		14	Served	Z133	Mvunjane/Simashwini		467	Scheme Augmenetation: 100K Reservoir	
		15	Served	Z125	Esigodini		525	Scheme Augmentation: New 250KL reservoir	
		7	2025/2026	ZNew111	Emakwateni	940 000	68	Hydrocensus & Rudimentary water supply	
		7	2025/2026	ZNew112	Geluk 1	390 000	9	Hydrocensus & Rudimentary water supply	
		7	2025/2026	ZNew113	Kwalancast	480 000	18	Hydrocensus & Rudimentary water supply	
		7	2025/2026	ZNew90	Ntendeka 2	1 140 000	91	Hydrocensus & Rudimentary water supply	
		7	2025/2026	ZNew94	Zungweni	810 000	48	Hydrocensus & Rudimentary water supply	
		8	2025/2026	ZNew130	Hellberg farms	950 000	67	Hydrocensus & Rudimentary water supply	
		8	2026/2027	ZNew127	KwaBeshu	670 000	32	Hydrocensus & Rudimentary water supply	
		8	2026/2027	ZNew129	KwaBevu	490 000	23	Hydrocensus & Rudimentary water supply	
AbaQulusi	Hlahlindlela	8	2026/2027	ZNew126	Magot	680 000	41	Hydrocensus & Rudimentary water supply	
		9	2026/2027	ZNew154	KwaMatiela	510 000	21	Hydrocensus & Rudimentary water supply	
		9	2026/2027	ZNew125	KwaSavells	530 000	25	Hydrocensus & Rudimentary water supply	
		9	2026/2027	ZNew119	Stillwater	1 130 000	90	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew175	Aardappel	540 000	26	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew163	Brakfontein	520 000	24	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew176	Dubbelrecht	440 000	14	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew160	Enyanyeni	510 000	22	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew178	Fairplay	470 000	19	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew173	Geluk 3	410 000	8	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew171	Grootfontein	660 000	40	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew170	KwaMshomoloza	580 000	28	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew164	Langverwacht	660 000	34	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew165	Mawelawela	580 000	28	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew167	Nsengeni	470 000	20	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew162	Vamba	600 000	33	Hydrocensus & Rudimentary water supply	
		13	>2027	ZNew74	Golden Valley	870 000	60	Hydrocensus & Rudimentary water supply	
		13	>2027	ZNew77	Klipfontein	570 000	20	Hydrocensus & Rudimentary water supply	
		13	>2027	ZNew110	Kwabanga 1	960 000	68	Hydrocensus & Rudimentary water supply	
		13	>2027	ZNew92	Kwabanga 2	780 000	51	Hydrocensus & Rudimentary water supply	
		22	>2027	ZNew124	Betel	490 000	22	Hydrocensus & Rudimentary water supply	
		22	>2027	ZNew106	Eensgevonden plotte	1 130 000	96	Hydrocensus & Rudimentary water supply	
		22	>2027	ZNew122	Fearmdale	980 000	66	Hydrocensus & Rudimentary water supply	
		22	>2027	ZNew123	KwaLubeck	490 000	23	Hydrocensus & Rudimentary water supply	
		22	>2027	ZNew120	Scheepersnek	640 000	34	Hydrocensus & Rudimentary water supply	
		22	>2027	ZNew121	Zaaifontein	510 000	22	Hydrocensus & Rudimentary water supply	

RUDIMENTARY ROLLOUTS

Served/Completed Projects
Settlement Status to be verified (2025/26)
Priority Projects for next financial year

Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		2	Served	ZNew18	Kwazondo		21		1x BH Equipped
		2	Served	ZNew13	Ongcwezeni (Eskame)	1370000	185	Hydrocensus & Rudimentary water supply	1x Handpump
		3	Served	ZNew31	Ndulinde		54		
		3	Served	ZNew29	Mabova		32		1x BH Equipped
		4	Status to be verified (2025/26)	ZNew67	Thabankulu		32		1x BH Equiped
		5	Served	ZNew82	KwaJohn 2		21		1x BH Equiped
		13	Served	ZNew72	Ishoba 1		131		4x BH Equipped
		2	Status to be verified (2025/26)	Z853	Dlomodlomo 2	1370000	172		Drilled 3 x BH's (COVID19 project). To equip 2x BH's
		3	Status to be verified (2025/26)	ZMAP127	Bhukubhu	400 000	29	Test 2 springs	Site and drill one borehole
		4	Status to be verified (2025/26)	ZMAP55	Weltevreden 2	60 000	55	Equip existing BH	Equip existing artesian borehole with tank, overflow to livestock.
		4	Status to be verified (2025/26)	ZNew66	KwaPaul	350 000	6	Drill 1x BH	Site and drill one borehole
		4	Status to be verified (2025/26)	ZNew64	Emgageni	1 900 000	146	Hydrocensus & Rudimentary water supply	(2025/26)
		5	Status to be verified (2025/26)	ZMAP75	Mbogozi	900 000	131	Investigate 3x springs	Handed over to COGTA
		2	2025/2026	ZMAP62	Ketango	440 000	17	Hydrocensus & Rudimentary water supply	
		2	2025/2026	ZMAP63a	Nsonyane	870 000	29	Hydrocensus & Rudimentary water supply	
AbaQulusi	Khambi	2	2025/2026	ZMC13	Ntabazelanga	660 000	27	Hydrocensus & Rudimentary water supply	
		2	2025/2026	ZNew16	Kwakopie	420 000	13	Hydrocensus & Rudimentary water supply	
		2	2026/2027	ZNew19	Kwathemba	590 000	30	Hydrocensus & Rudimentary water supply	
		2	2026/2027	ZNew12	Mphitiphtini	1 640 000	134	Hydrocensus & Rudimentary water supply	
		2	2026/2027	ZNew17	Ndulo	390 000	9	Hydrocensus & Rudimentary water supply	
		2	2026/2027	ZNew14	Ngongomane	2 140 000	177	Hydrocensus & Rudimentary water supply	
		2	2026/2027	ZNew15	Dlomodlomo	520 000	25	Hydrocensus & Rudimentary water supply	
		2	>2027	ZNew11	Thuthukani	450 000	14	Hydrocensus & Rudimentary water supply	
		3	>2027	ZNew181	Hlanganani CPA	370 000	6	Hydrocensus & Rudimentary water supply	
		3	>2027	ZNew30	Kewulane	1 070 000	81	Hydrocensus & Rudimentary water supply	
		3	>2027	ZNew28	Mthumeni	380 000	15	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNN21	eMkhweleni	800 000	53	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew70	Berlin	380 000	8	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew60	Dagane	660 000	39	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew68	Elim	460 000	15	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew62	Enqothweni	980 000	78	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew69	Entabeni 1	410 000	8	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew53	Kwamahashi	590 000	30	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew65	Kwaschoeman	490 000	11	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew61	Leeunek 1	510 000	24	Hydrocensus & Rudimentary water supply	
		4	>2027	ZMAP126	Mangoe	1 250 000	103	Hydrocensus & Rudimentary water supply	
		4	>2027	ZNew59	Siyaphambile	650 000	33	Hydrocensus & Rudimentary water supply	
		5	>2027	ZNew81	Ekamvu	560 000	26	Hydrocensus & Rudimentary water supply	
		5	>2027	ZNew131	Lenjane 2	730 000	26	Hydrocensus & Rudimentary water supply	
		8	>2027	ZNew127	KwaBeshu	670 000	32	Hydrocensus & Rudimentary water supply	
		8	>2027	ZNew129	KwaBevu	490 000	23	Hydrocensus & Rudimentary water supply	
		8	>2027	ZNew126	Magot	680 000	41	Hydrocensus & Rudimentary water supply	
		9	>2027	ZNew125	KwaSavells	530 000	25	Hydrocensus & Rudimentary water supply	
		9	>2027	ZNew119	Stillwater	1 130 000	90	Hydrocensus & Rudimentary water supply	
		12	>2027	ZNew160	Enyanyeni	510 000	22	Hydrocensus & Rudimentary water supply	
		13	>2027	ZNew73	Leeunek 2	420 000	12	Hydrocensus & Rudimentary water supply	

RUDIMENTARY ROLLOUTS

	Served/Completed Projects
	Settlement Status to be verified (2025/26)
	Priority Projects for next financial year

Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		7	2025/2026	ZPM35	Baqulusini 5	450 000	15	Hydrocensus & Rudimentary water supply	
		7	2025/2026	ZTAS56	Palmietfontein (Rondspring 137, Kwambhedleni)	550 000	24	Hydrocensus & Rudimentary water supply	
	Coronation	7	2026/2027	ZNew149	Gweje	1 170 000	87	Hydrocensus & Rudimentary water supply	
		7	>2027	ZNew146	Makhwabe	370 000	9	Hydrocensus & Rudimentary water supply	
		7	Served	ZNew150	Mqwabe		28		1x BH Equipped
		7	Served	ZMAP4	Mthashana		44		1x BH Equipped
		7	Served	ZMAP6	Koudbad / Welverdiend		36		
		7	Status to be verified (2025/26)	ZNew6	KwaManzi	300 000	26	Investigate spring	Handed to COGTA
	Hlahlindlela	1	2025/2026	ZNew4	Bivanyana	710 000	38	Hydrocensus & Rudimentary water supply	
		1	2025/2026	ZNew132	Khambula mission	890 000	60	Hydrocensus & Rudimentary water supply	
		1	2026/2027	ZNew133	Penvaan	1 300 000	100	Hydrocensus & Rudimentary water supply	
		7	>2027	ZNew152	Sefamanzi	790 000	47	Hydrocensus & Rudimentary water supply	
		7	>2027	ZNew148	Zungwini	490 000	23	Hydrocensus & Rudimentary water supply	
		1	Status to be verified (2025/26)	ZNew141	Bazangoma		107		
		2	Served	Z788	Mangosuthu		2126	Scheme Augmentation: Boreholes & Rising main	
		3	Status to be verified (2025/26)	ZNew3	Mandakane	700 000	403	Drill 2x BHs	BH's to be drilled for water supply
		1	2025/2026	ZMAP71	Bella Vista	830 000	53	Hydrocensus & Rudimentary water supply	
		1	2025/2026	ZMAP1	Rooipoort	850 000	57	Hydrocensus & Rudimentary water supply	
		1	2025/2026	ZNew143	Brecher	730 000	43	Hydrocensus & Rudimentary water supply	
		1	2025/2026	ZNew135	Eloyi	790 000	49	Hydrocensus & Rudimentary water supply	
		1	2025/2026	ZNew155	Ematafuleni	530 000	22	Hydrocensus & Rudimentary water supply	
eDumbe	Sim West	1	2025/2026	ZNew9	Esitikini	560 000	26	Hydrocensus & Rudimentary water supply	
		1	2025/2026	ZNew139	Hloko	1 100 000	67	Hydrocensus & Rudimentary water supply	
		1	2026/2027	ZNew10	Knoopaan	1 680 000	128	Hydrocensus & Rudimentary water supply	
		1	2026/2027	ZNew140	KwaBhema	850 000	57	Hydrocensus & Rudimentary water supply	
		1	>2027	ZNew134	Kwalembe	900 000	61	Hydrocensus & Rudimentary water supply	
		1	>2027	ZNew142	Loti	660 000	36	Hydrocensus & Rudimentary water supply	
		1	>2027	ZNew136	Mkhupane	540 000	26	Hydrocensus & Rudimentary water supply	
		1	>2027	ZNew137	Ntshakwe	550 000	25	Hydrocensus & Rudimentary water supply	
		1	>2027	ZMAP120	Schikhoek (Land Reform)	870 000	62	Hydrocensus & Rudimentary water supply	
		1	>2027	ZMAP121	Tholwethu (Land Reform)	1 070 000	73	Hydrocensus & Rudimentary water supply	
		1	>2027	ZNew144	Titane	690 000	36	Hydrocensus & Rudimentary water supply	
		7	>2027	ZNew151	Ndabezitha	460 000	13	Hydrocensus & Rudimentary water supply	
		7	>2027	ZNew5	Nzenze	550 000	80	Hydrocensus & Rudimentary water supply	
		8	>2027	ZNew8	Nhlungwane	1 450 000	116	Hydrocensus & Rudimentary water supply	

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Served/Completed Projects
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Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		2	Served	Z234	Kwankweme		58		5x Handpump Equipped
		2	Unsuccessful	ZMAP38	Ntenjane		41	Only Water Tankers	Hydrocensus completed. No source. River/Stream water or Tanker delivery from ZDM.
		5	Served	Z247	Mpuphusi		137		Repair Generator, no drilling
		2	Served	ZBUK21	Enkanyezini	1 050 000	57	Drilled 2x BHs, to equip	Handpump equipped
		7	Status to be verified (2025/26)	Z204	Sibanyaneni		129		3x BH Equipped
		20	Served	Z227	Manqashaneni		116		2x BH Equipped
		2	Status to be verified (2025/26)	ZMAP39	Dungamanzi 1	350 000	62	Drill 1x BH	1x BH drilled, to be equipped
Nongoma	Mandhlakazi	7	Status to be verified (2025/26)	Z954	Bhidi	350 000	74	Drill 1x BH	
		1	2025/2026	ZMAP20	Mhlanjeni	510 000	16	Hydrocensus & Rudimentary water supply	
		2	2025/2026	Z236	Esixeni	530 000	22	Hydrocensus & Rudimentary water supply	
		2	2026/2027	ZBUK11	Vusu Musi	1 090 000	70	Hydrocensus & Rudimentary water supply	
		3	2026/2027	ZBUK25	Magendene	550 000	25	Hydrocensus & Rudimentary water supply	
		7	>2027	Z198b	Dongothule	2 070 000	69	Hydrocensus & Rudimentary water supply	
		7	>2027	ZBUK23	Mgolokotho	610 000	27	Hydrocensus & Rudimentary water supply	
		18	>2027	ZBUK24	Meyame	440 000	15	Hydrocensus & Rudimentary water supply	
		18	>2027	Z243	Zibusele	1 710 000	145	Hydrocensus & Rudimentary water supply	Only partially served.
		13	Served	ZMAP28	Mahayoyo		228	Regional scheme water supply	
		21	Served	Z607	Mangomhlophe		300		
		4	Status to be verified (2025/26)	Z362B	Emaqeleni 3	350 000	23	Drill 1x BH	There is a water pipe that comes from a water tank. The water comes from a spring uphill that
		12	Status to be verified (2025/26)	Z338	Esigoqobeni	980 000	63	Drill 1x BH	
		12	Status to be verified (2025/26)	ZKAY4	Emayeni 1	350 000	50	Drill 1x BH	No source of water in the area for this community. Site and drill one borehole around
		12	Status to be verified (2025/26)	Z342	Emayeni 2	350 000	83	Drill 1x BH	
		12	Status to be verified (2025/26)	Z340	Esidakeni 1	350 000	58	Drill 1x BH	
Nongoma	Usuthu	12	Status to be verified (2025/26)	Z339	Ngwabe	700 000	78	Drill 2x BHs	
		13	Status to be verified (2025/26)	Z359	Embokodweni	1 120 000	75	Protect spring & refurbish reticulation	
		4	>2027	Z362	Emaqeleni 2	370 000	10	Hydrocensus & Rudimentary water supply	
		11	2025/2026	Z147	Ngolotshe	3 710 000	316	Hydrocensus & Rudimentary water supply	
		11	>2027	ZMAP9	Doncaneni	950 000	56	Hydrocensus & Rudimentary water supply	
		12	2025/2026	ZMAP15	Dum-Dum	680 000	35	Hydrocensus & Rudimentary water supply	
		12	2025/2026	Z349	Isizinda A	410 000	9	Hydrocensus & Rudimentary water supply	
		12	2025/2026	Z341	Isizinda B	1 620 000	117	Hydrocensus & Rudimentary water supply	
		12	2025/2026	Z373	Nhloyane	410 000	10	Hydrocensus & Rudimentary water supply	
		12	2026/2027	ZMAP13	Nqalu	780 000	46	Hydrocensus & Rudimentary water supply	
		12	2026/2027	ZAM12	Ezingolaneni	610 000	26	Hydrocensus & Rudimentary water supply	
		12	>2027	ZMAP16	KwaLuphonjwana	1 650 000	124	Hydrocensus & Rudimentary water supply	
		12	>2027	Z346	KwaQuqu	350 000	10	Hydrocensus & Rudimentary water supply	
		12	>2027	Z374	Ngalonde	1 350 000	94	Hydrocensus & Rudimentary water supply	
		12	>2027	ZAM11	Nzama	1 300 000	96	Hydrocensus & Rudimentary water supply	
		21	2026/2027	Z614	Mayini / Ntonga	2 380 000	205	Hydrocensus & Rudimentary water supply	
		21	2026/2027	Z597	Semangadini	1 250 000	87	Hydrocensus & Rudimentary water supply	
		21	>2027	Z598	Mpunzana	2 190 000	194	Hydrocensus & Rudimentary water supply	

RUDIMENTARY ROLLOUTS

Served/Completed Projects
Settlement Status to be verified (2025/26)
Priority Projects for next financial year

Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		8	Served	Z931	Mahlabathini		210	Handpump	
		13	Served	ZHC3	Witpoort		17	Handpump	
		13	Served	ZNew115	KwaHenie (Thandabantu)		178		2x Boreholes Equipped
		14	Served	Z413	Njomelwane		318	Handpump	
		16	Served	Z479	Emakhosini		330	Scheme Augmenetation: Borehole, Rising Main and Reservoir	
		20	Served	Z795	KwaMvula		141	Handpump	
		20	Served	Z745	Kwagqikazi		326	Handpump	
		20	Served	Z402a	Kwavilakazi 2		122	Handpump	
		24	Served	Z813	Enguqe		178	Handpump	
		24	Served	ZTAS18	Ezimfeneni		67	Drilled, tested, to equip	1x Handpump (Partially Served)
		24	Served	ZMAP108	Basamlilo		66		2x BH Equipped
		24	Served	ZTAS19	Ezikhumbeni		99		1x Handpump
		24	Served	ZMAP109	Ezisasaneni		26		2x BH Equipped
		9	Status to be verified (2025/26)	ZNew79	Manaba	350 000	10	Drill & equip borehole	No source in the area. Borehole proposed in the area
		8	Status to be verified (2025/26)	Z88	Donsamahoho	1 000 000		Scheme extension	
		8	Status to be verified (2025/26)	Z692	eWela 2	350 000		Drill & equip borehole	
		8	Status to be verified (2025/26)	Z685	Mganimbobo			Drill & equip borehole	
Ulundi	Nkonjeni	14	Status to be verified (2025/26)		eWela 1	350 001		Drill & equip borehole	
		23	Status to be verified (2025/26)	Z939	Denny Dalton	2 000 000	40	Scheme Augmentation	
		13	2025/2026	ZTAS10	Mandeva	490 000	20	Hydrocensus & Rudimentary water supply	
		13	2025/2026	ZAM5	Ensileni	400 000	9	Hydrocensus & Rudimentary water supply	
		13	2026/2027	ZMAP96	Mbombo	650 000	34	Hydrocensus & Rudimentary water supply	
		13	2026/2027	ZNew87	Maduna	460 000	16	Hydrocensus & Rudimentary water supply	
		13	>2027	ZNew114	Nhlazatshe	550 000	48	Hydrocensus & Rudimentary water supply	
		13	>2027	ZAM9a	Thkelana 1	580 000	27	Hydrocensus & Rudimentary water supply	
		13	>2027	ZMAP95	Mzingathi	550 000	25	Hydrocensus & Rudimentary water supply	
		15	2025/2026	ZMAP92	Nsingizane 2	420 000	11	Hydrocensus & Rudimentary water supply	
		16	2026/2027	ZMAP90	Nzololo	1 200 000	62	Equip BH & rising main	
		16	>2027	ZNew80	Mandevu 1	340 000	4	Hydrocensus & Rudimentary water supply	
		16	>2027	ZNew24	Nyashana	350 000	5	Hydrocensus & Rudimentary water supply	
		16	>2027	ZNew23	Qanuatho	400 000	9	Hydrocensus & Rudimentary water supply	
		21	2026/2027	ZMAP102	Kwamadumela	540 000	19	Hydrocensus & Rudimentary water supply	
		21	>2027	ZNew101	Dorsfontein	350 000	2	Hydrocensus & Rudimentary water supply	
		24	>2027	ZNew99	Isandlwana	380 000	5	Hydrocensus & Rudimentary water supply	

RUDIMENTARY ROLLOUTS

Served/Completed Projects
Settlement Status to be verified (2025/26)
Priority Projects for next financial year

Local Municipality	Regional Scheme	Wards	Year	Z-Nr	Settlement Name	Cost Estimate	Households	Proposed Intervention	Progress to date
		6	Served	Z32	Mashiyane		162		3x BH Equipped
		7	Served	Z674	oBhokweni		214	Reticulation	Stand-alone scheme
		14	Served	Z706	Mbanda		37	Served by Esphiva scheme	
		14	Served	Z705	Mshayazafe		21	Hydrocensus & Rudimentary water supply	
		5	Status to be verified (2025/26)	ZMAP111	Hluthy (Kwa-Hlaza)	700 000	30	Drill 2x BHs	No source in the area. Community get water from Umfolozi River. Two boreholes are proposed at Hluthy Hlaza and Hluthy Dlaiya
		15	Status to be verified (2025/26)	Z688	Makhalathini	2 480 000	218	Hydrocensus Status to be verified (2025/26)	Investigation Status to be verified (2025/26)
		14	>2027	ZNew102	Kwamswane	590 000	23	Hydrocensus & Rudimentary water supply	
Ulundi	Usuthu	15	2025/2026	ZMAP110	Mgubameni	520 000	25	Hydrocensus & Rudimentary water supply	
		15	>2027	Z689	Obinda	590 000	15	Hydrocensus & Rudimentary water supply	
		15	>2027	Z698	Pholela	1 580 000	130	Hydrocensus & Rudimentary water supply	
		1	Served	ZNew37	Kwaslevu		37	Drill 2x BHs	
	Coronation	1	Served	ZNew41	Kwamshikashika		32		Only one successful borehole uotside settlement
		1	2026/2027	ZNew42	Kwaphatha	600 000	28	Hydrocensus & Rudimentary water supply	
		1	Served	ZNew43	Morreson		85		Only one successful borehole equipped
		1	Proposed	Z936	Magudu	10 000 000	151	Scheme Augmentation	
		1	2025/2026	ZMAP52	Hhinihhini	490 000	18	Hydrocensus & Rudimentary water supply	
	Gumbi	1	2025/2026	ZNew36	Emganwini	600 000	28	Hydrocensus & Rudimentary water supply	
uPhongolo		1	2026/2027	ZNew44	Emkhayeni	1 420 000	100	Hydrocensus & Rudimentary water supply	
		14	2026/2027	ZNew157	Ngulwane	600 000	35	Hydrocensus & Rudimentary water supply	
	Sim Central	6	Served	ZBUK63	Dlomodlomo 1		95	Handpump	
	Sim East	7	Served	Z496	Sivule		195	Served by Regional Scheme	
		1	Status to be verified (2025/26)	ZNew118	Eskhaleni	350 000	69	Drill BH	1x Spring tested, unsuccessful. Investigate BH supply
		1	2025/2026	ZMAP32	Kwampondo	920 000	61	Hydrocensus & Rudimentary water supply	
	Usuthu	1	2025/2026	ZHC25	Mpalaza	1 180 000	93	Hydrocensus & Rudimentary water supply	
		1	2026/2027	ZNew35	Embangeni	770 000	49	Hydrocensus & Rudimentary water supply	

Table 11.4.4: Roll-out of New Rural Sanitation Services

URBAN SEWER ROLLOUTS						
Municipality	**Bulk Sewer**	**Wards**	**Z_Number**	**Settlement Name**	**Households**	**Cost**
Abaqulusi		2	ZNew47	Kwamadamu	149	
eDumbe	Water-borned Sewer to eDumbe & Paulpietersburg town	3,9	ZNew46	Paulpietersburg & eDumbe	2962	205 000 000
Nongoma	Upgrade Nongoma Town water-borne sewer	9,19	ZNew31	Nongoma Town	419	295 000 000
Ulundi	Upgrade Ulundi Town water-borne sewer	12,19,22	Not on GIS	Ulundi Town	5806	120 000 000
uPhongolo	Upgrade Pongola Town WWTW	2,10,11	Not on GIS	Pongola & Ncotshane	5720	TBC

NEW RURAL SANITATION ROLLOUTS							
Municipality	**Sanitation Year**	**Wards**	**Z_Number**	**Settlement Name**	**Households**	**Cost**	
Abaqulusi Local Municipality	Completed	2	ZNew47	Kwamadamu	149	Completed	
		2	ZNew46	Emarondweni	12	Completed	
		3	ZNew31	Ndulinde	119	Completed	
		15	Not on GIS	Esigodini	100	Completed	**NOT PART OF SAN BP or WSDP rollouts**
		15	Not on GIS	Ginqa	40	Completed	**NOT PART OF SAN BP or WSDP rollouts**
		15	Not on GIS	Thelezeni	40	Completed	**NOT PART OF SAN BP or WSDP rollouts**
		15	Not on GIS	Ntshibantshiba	30	Completed	**NOT PART OF SAN BP or WSDP rollouts**
		15	Z116	Ginqa (Bhobozane)	40	Completed	
		17	Z941	Emadwaleni 1	127	Completed	
		23	ZNew97	KwaBoy 3	67	Completed	
	Allocated by ZDM in 2022/2023 but were not implemented	4	Not on GIS	Bhelekazi	52	1 040 000	**NOT PART OF SAN BP or WSDP rollouts**
		4	Not on GIS	Mabhula	51	1 020 000	**NOT PART OF SAN BP or WSDP rollouts**
		4	Not on GIS	Ngada	51	1 020 000	**NOT PART OF SAN BP or WSDP rollouts**
		13	Not on GIS	Esidakeni	6	120 000	**NOT PART OF SAN BP or WSDP rollouts**
		13	Not on GIS	E17	48	960 000	**NOT PART OF SAN BP or WSDP rollouts**
		15	Z121	St. Paul	40	800 000	**Already served with previous project**
		15	Not on GIS	Mdengenduku	20	400 000	**NOT PART OF SAN BP or WSDP rollouts**
	2025/2026	All	Geoundwater Protocol & Baseline Studies for Project Areas			TBA	
		15	Z119	Mhlangeni	270	5 400 000	
	2026/2027	2	ZNew48	Empumazi	16	320 000	
		2	ZNew49	Kwamsezane	62	1 240 000	
		2	ZNew40	Kwasithole	84	1 680 000	
		2	ZNew15	Dlomodlomo	33	660 000	
		2	ZNew22	Kwabudula	30	600 000	
		2	ZNew16	Kwakopie	16	320 000	
		2	ZNew20	Kwanmnunse	61	1 220 000	
		2	ZNew19	Kwathemba	35	700 000	
		2	ZNew18	Kwazondo	23	460 000	
		2	ZNew21	Makhwela	94	1 880 000	
		2	ZMAP65	Mkuze	13	260 000	
		2	ZNew17	Ndulo	9	180 000	
		2	ZNew14	Ngongomane	208	4 160 000	
		2	ZNew13	Ongcwezeni	190	3 800 000	
		3	ZNew29	Mabova	33	660 000	
		5	Z960	Boschoek (Bhokwe) Low-cost Housing	1000	14 000 000	**From 2022 allocated by ZDM**
		7	ZNew107	Shoba 1	512	10 240 000	
		7	ZNew108	Shoba 2	382	7 640 000	
		5	ZNew83	Shikila	331	6 620 000	
		13	ZNew86	Triangle store	1059	21 180 000	
		6	ZNew104	Enkwaleni	18	360 000	
		6	ZNew34	Gobeni	19	380 000	
	>2027	6	ZNew33	Mciyo	37	740 000	
		6	ZNew103	Uitzicht	33	660 000	
		2	ZNew12	Mphitiphtini	146	2 920 000	
		2	ZNew11	Thuthukani	17	340 000	
		3	ZNew27	Hlanewana	44	880 000	
		3	ZNew181	Hlanganani CPA	4	80 000	
		3	ZNew30	Kewulane	88	1 760 000	
		3	ZNew32	Mfabantu	20	400 000	
		3	ZNew28	Mthumeni	14	280 000	
		3	ZNew26	Shawelwo	75	1 500 000	
		4	ZNew64	Emgageni	157	3 140 000	
		4	ZNew53	Kwamahashi	33	660 000	
		4	ZNew70	Berlin	10	200 000	
		4	ZNew52	Boschoek	18	360 000	
		4	ZNew60	Dagane	48	960 000	
		4	ZNew68	Elim	16	320 000	
		4	ZNew56	Emaqigwe	26	520 000	
		4	ZNew58	Enkaleni	57	1 140 000	
		4	ZNew62	Enqothweni	83	1 660 000	
		4	ZNew69	Entabeni 1	9	180 000	
		4	ZNew57	Hlongane	38	760 000	
		4	ZNew54	KwaDevan	58	1 160 000	
		4	ZNew55	KwaNgada	62	1 240 000	
		4	ZNew66	KwaPaul	9	180 000	
		4	ZNew65	Kwaschoeman	17	340 000	
		4	ZNew61	Leeunek 1	31	620 000	
		4	ZNew71	Lenjane 1	70	1 400 000	

NEW RURAL SANITATION ROLLOUTS						
Municipality	**Sanitation Year**	**Wards**	**Z_Number**	**Settlement Name**	**Households**	**Cost**
Abaqulusi Local Municipality	>2027	4	ZNew59	Siyaphambile	38	760 000
		4	ZNew67	Thabankulu	38	760 000
		5	ZNew81	Ekamvu	20	400 000
		5	ZNew82	KwaJohn 2	22	440 000
		5	ZNew116	KwaMdaga	104	2 080 000
		5	ZNew131	Lenjane 2	26	520 000
		7	ZNew89	Bozuzu	30	600 000
		7	ZNew111	Emakwateni	95	1 900 000
		7	ZNew105	Entabeni 2	81	1 620 000
		7	ZNew112	Geluk 1	14	280 000
		7	ZNew130	Hellberg farms	80	1 600 000
		7	ZNew129	KwaBevu	26	520 000
		7	ZNew91	Kwabozuzu	23	460 000
		7	ZNew113	Kwalancast	19	380 000
		7	ZNew128	KwaNgethe	47	940 000
		7	ZNew153	Kwatwo	29	580 000
		7	ZNew126	Magot	45	900 000
		7	ZNew88	Mtenteka	59	1 180 000
		7	ZNew90	Ntendeka 2	111	2 220 000
		7	ZNew95	Voorkeur	84	1 680 000
		7	ZNew94	Zungweni	62	1 240 000
		8	ZMAP122	Vryheid Dump Site	130	2 600 000
		9	ZNew154	KwaMatiela	21	420 000
		9	ZNew125	KwaSavells	26	520 000
		9	ZNew119	Stillwater	100	2 000 000
		12	ZNew163	Brakfontein	33	660 000
		12	ZNew177	Brakfontein 2	12	240 000
		12	ZNew174	Driefontein	30	600 000
		12	ZNew176	Dubbelrecht	14	280 000
		12	ZNew161	Emooi	92	1 840 000
		12	ZNew160	Enyanyeni	24	480 000
		12	ZNew173	Geluk 3	8	160 000
		12	ZNew171	Grootfontein	51	1 020 000
		12	ZNew166	Jimane/Driekwart	174	3 480 000
		12	ZNew164	Langverwacht	39	780 000
		12	ZNew168	Mabunya	14	280 000
		12	ZNew172	Middelpunt	10	200 000
		12	ZNew169	Tintas Drift	163	3 260 000
		12	ZNew162	Vamba	33	660 000
		13	ZNew96	Banga	10	200 000
		13	ZNew75	Beafort	79	1 580 000
		13	ZMAP123	Ema300	285	5 700 000
		13	ZNew93	Eskame	61	1 220 000
		13	ZNew74	Golden Valley	74	1 480 000
		13	ZNew109	Hluma	46	920 000
		13	ZNew72	Ishoba 1	153	3 060 000
		13	ZNew85	Ishoba 2	28	560 000
		13	ZNew77	Klipfontein	20	400 000
		13	ZNew110	Kwabanga 1	85	1 700 000
		13	ZNew92	Kwabanga 2	66	1 320 000
		13	ZNew73	Leeunek 2	14	280 000
		13	ZNew84	Ma'Romenie	155	3 100 000
		13	ZNew76	Mpofini	40	800 000
		22	ZNew124	Betel	26	520 000
		22	ZNew106	Eensgevonden plotte	115	2 300 000
		22	ZNew122	Fearmdale	70	1 400 000
		22	ZNew123	KwaLubeck	25	500 000
		22	ZNew120	Scheepersnek	41	820 000
		22	ZNew121	Zaaifontein	28	560 000
eDumbe Local Municipality	2025/2026	All	Geoundwater Protocol & Baseline Studies for Project Areas			TBA
		7	ZNew152	Sefamanzi	50	1 000 000
	2026/2027	7	ZNew147	Mazezeni	40	800 000
		7	ZNew146	Makhwabe	9	180 000
		7	ZNew148	Zungwini	27	540 000
		7	ZNew149	Gweje	111	2 220 000
		7	ZNew150	Mqwabe	37	740 000
		7	ZNew156	Doornkloof	43	860 000
		7	ZNew145	Matshekazi	180	3 600 000
	>2027	1	ZMAP120	Schikhoek (Land Reform)	70	1 400 000
		1	ZNew143	Brecher	43	860 000
		1	ZNew139	Hloko	66	1 320 000
		1	ZNew140	KwaBhema	65	1 300 000
		1	ZNew137	Ntshakwe	31	620 000
		1	ZNew138	Ntshakwe (Mhlamone)	169	3 380 000
		4	ZNew182	Bilanyoni New Stands	20	400 000
		9	ZNew134	Kwalembe	67	1 340 000
		9	ZMAP121	Tholwethu (Land Reform)	73	1 460 000
		9	ZNew144	Titane	32	640 000

NEW RURAL SANITATION ROLLOUTS						
Municipality	**Sanitation Year**	**Wards**	**Z_Number**	**Settlement Name**	**Households**	**Cost**
Nongoma Local Municipality	Completed	3	Z331	Machibini	148	Completed
		3	ZBUK25	Magendene	26	Completed
		3	Z336	Mapambeni	135	Completed
		3	Z332	Njonyomane	95	Completed
		3	Z329	Vesonweni	50	Completed
		5	Z247	Mpuphusi	150	Completed
		5	Z269	Toyisa Langalesizwe	185	Completed
	2025/2026	All	Geoundwater Protocol & Baseline Studies for Project Areas			TBA
		23	ZNew159	Sikheleni B	96	1 920 000
		9	Z215	Mfankomo	94	1 880 000
	2026/2027	4	Z192	Makholweni	61	1 220 000
		4	Z190	Manyoni 1	237	4 740 000
		4	Z193	Sindaba	90	1 800 000
		9	Z214	Mhlwehlwe	73	1 460 000
		11	ZNN23	Emhemeni	65	1 300 000
		10	Z569	Kwandwandwe	148	2 960 000
		11	ZNN27	Hlathidumayo	79	1 580 000
		11	Z570	Kwazungu	176	3 520 000
		11	Z567	Othinsangu	119	2 380 000
	>2027	12	Z375	Macekaneni	98	1 960 000
		12	ZAM12	Ezingolaneni	27	540 000
		12	Z349	Isizinda A	10	200 000
		12	Z373	Nhloyane	10	200 000
		12	ZMAP13	Nqalu	54	1 080 000
		6	Z170	Ekuvukeni	191	3 820 000
		6	Z171	Ndololwane	63	1 260 000
		10	Z164	Esweni	92	1 840 000
		10	Z165	Hlathi	146	2 920 000
		10	ZMAP18	Nokhesheni	19	380 000
		12	ZMAP16	KwaLuphonjwana	121	2 420 000
		12	ZMAP14	Ndlazini	75	1 500 000
		10	Z168	Magutshwa	120	2 400 000
		13	Z362	Emaqeleni 2	25	500 000
		13	Z362	Emaqeleni 3	25	500 000
		13	Z359	Embokodweni	77	1 540 000
		13	Z360	Engwelezane	29	580 000
		13	Z374	Ngalonde	96	1 920 000
		14	Z554	Badlaneni	150	3 000 000
		14	Z560	Khalweni	52	1 040 000
		14	Z559	Newgoli	111	2 220 000
		23	Z361	Mashenge	55	1 100 000
		3	Z314	Emathlomane	56	1 120 000
		3	Z322	Esigodiphola 1	72	1 440 000
		3	Z291	Geqa	55	1 100 000
		3	Z317	Hlushwaneni	108	2 160 000
		3	Z316	Mduda	111	2 220 000
		3	Z321	Mgxanyini	131	2 620 000
		3	Z313	Mngamunde	30	600 000
		3	Z303	Mthonjaneni	123	2 460 000
		3	Z304	Ntweni 1	84	1 680 000
		3	ZBUK29	Shalashala	69	1 380 000
		3	Z290	Zidwadweni	93	1 860 000
		6	Z194/Z195/Z187	Esidinsi	665	13 300 000
		11	ZMAP9	Doncaneni	75	1 500 000
		11	Z156	Entwala	61	1 220 000
		11	Z155	Eziqhumeni	142	2 840 000
		11	ZBA1	Kwavumela	88	1 760 000
		11	Z152	Masokaneni	180	3 600 000
		11	Z153	Mcibilindini	54	1 080 000
		11	Z151	Mhlabaneni	71	1 420 000
		11	Z147	Ngolotshe	340	6 800 000
		11	Z157	Nqala	95	1 900 000
		11	Z154	Zampilo	41	820 000
		17	ZKAY8	Echibini	13	260 000
		17	Z641	Efefe	150	3 000 000
		17	Z644a	Kwanomehle	29	580 000
		17	Z645	Majomela	438	8 760 000
		17	Z644b	Maqoma	157	3 140 000
		17	Z642	Obhuqwini	126	2 520 000
		22	Z294	Kolubomvu 1	20	400 000
		22	Z292	Kwajuba	136	2 720 000
		22	Z718	Mahlomane	78	1 560 000

NEW RURAL SANITATION ROLLOUTS							
Municipality	**Sanitation Year**	**Wards**	**Z_Number**	**Settlement Name**	**Households**	**Cost**	
Ulundi Local Municipality	Completed	16	ZMAP87	Nsingizane 1	38	Completed	
		16	ZNew24	Nyashana	4	Completed	
		16	ZMAP88	Qaba	6	Completed	
		16	ZMAP117	Mhlathuze	45	Completed	
		16	ZMAP82	Mombeni	27	Completed	
		16	ZMAP118	Ngenetsheni	14	Completed	
		16	ZNew23	Qanuatho	9	Completed	
	Allocated in 2022/2023 but were not implemented	All	Community	Public Amenities - Ulundi	250	5 000 000	**NOT PART OF SAN BP or WSDP rollouts**
		All	Community	Public Amenities - Babanango	250	5 000 000	**NOT PART OF SAN BP or WSDP rollouts**
	2025/2026	All	Geoundwater Protocol & Baseline Studies for Project Areas			TBA	
		16	ZBUK49	Uitzight 203	17	340 000	
	2026/2027	16	ZNew183	Ntinini	81	1 620 000	
		16	ZMAP119	Hlengile	51	1 020 000	
		13	ZNew115	KwaHenie	204	4 080 000	
	>2027	13	ZNew87	Maduna	18	360 000	
		13	ZNew114	Nhlazatshe	57	1 140 000	
		16	ZNew80	Mandevu 1	3	60 000	
		16	ZBUK51	Langfontein	146	2 920 000	
		16	ZMAP90	Nzololo-Maganda	60	1 200 000	
		15	ZMAP110	Mgubameni	26	520 000	
		16	ZMAP100	Dingaanstad	61	1 220 000	
		21	ZNew101	Dorsfontein	2	40 000	
		24	ZNew100	Eskhaleni Kwankosi	13	260 000	
		24	ZNew99	Isandlwana	4	80 000	
		9	ZNew79	Manaba	12	240 000	
		11	ZNew98	Kwamhlongo	10	200 000	
		15	Z689	Obinda	12	240 000	
		15	Z710/Z711	Okhukhu Phansikwentaba	80	1 600 000	
uPhongolo Local Municipality	Completed	1	ZHR3	Dwarsrand	116	Completed	
		1	ZNew36	Emganwini	39	Completed	
		1	ZMAP52	Hhinihhini	14	Completed	
		1	ZNew41	Kwamshikashika	29	Completed	
		1	ZNew42	Kwaphatha	33	Completed	
		1	ZNew37	Kwaslevu	45	Completed	
		1	ZNew43	Morreson	92	Completed	
		1	ZNew38	Mthaniya	43	Completed	
		6	Z527	Mfaluvalo	69	Completed	
		6	ZTAS57	Thusazane	39	Completed	
	2025/2026	All	Geoundwater Protocol & Baseline Studies for Project Areas			TBA	
		3	Z753	Newstand	118	2 360 000	
	2026/2027	6	Z768	Klipwal	179	3 580 000	
		6	Z767	Mfenyane	82	1 640 000	
		6	ZBUK63	Dlomodlomo 1	86	1 720 000	
		12	Z463	Kwesimhlope (Manyander	145	2 900 000	
		12	Z460	Manyandeni	265	5 300 000	
		12	Z464	Gabela (Manyandeni)	119	2 380 000	
	>2027	1	ZNew35	Embangeni	56	1 120 000	
		1	ZNew39	Emthunzini	39	780 000	
		1	ZNew118	Eskhaleni	92	1 840 000	
		12	Z789	Kwazibhedlu	32	640 000	
		12	Z486	Nyawoshane	122	2 440 000	
		1	ZNew44	Emkhayeni	96	1 920 000	
		1	ZMAP33	Kwamhlanga	52	1 040 000	
		1	ZMAP32	Kwampondo	71	1 420 000	
		1	ZJD1	Kwasotsha	21	420 000	
		1	Z936	Magudu	168	3 360 000	
		1	ZTAS51	Manzamhlophe	130	2 600 000	
		1	ZMAP31	Mpakama	292	5 840 000	
		1	ZHC25	Mpalaza	100	2 000 000	
		1	ZMAP81	Nyaliza	88	1 760 000	
		1	ZTAS58	Sithole	43	860 000	

Table 11.4.5: 5-Year Water & Sanitation Reliability Service Delivery Projects

Projects from the 5-year Water Reliability Master Plan will be implemented through the newly completed Water Conservation and Water Demand Management Plan. The most critical projects will be addressed first as funding is allocated for these projects.

11.5 Project Rollout Maps

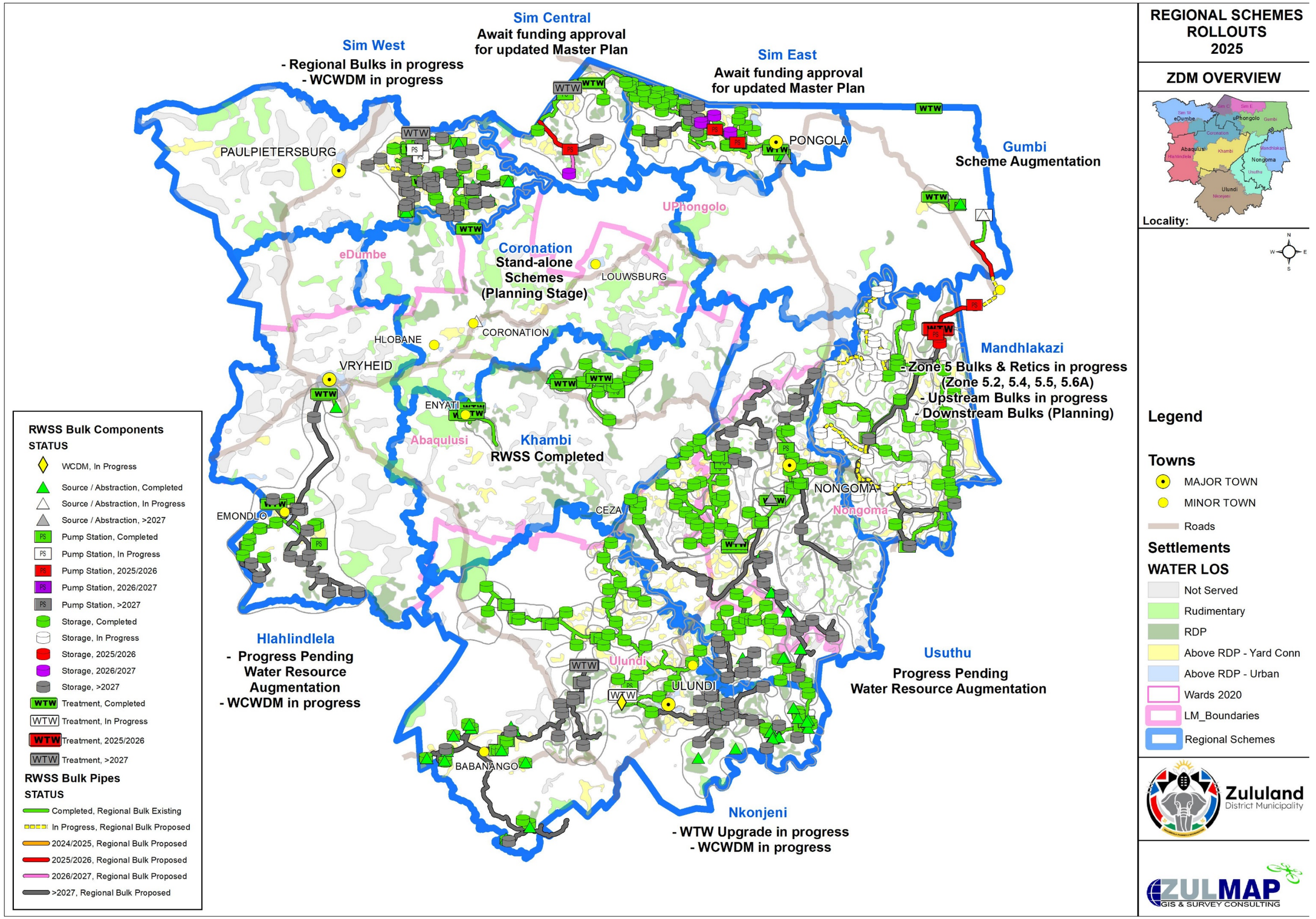
11.5.1 Regional Water Supply Schemes

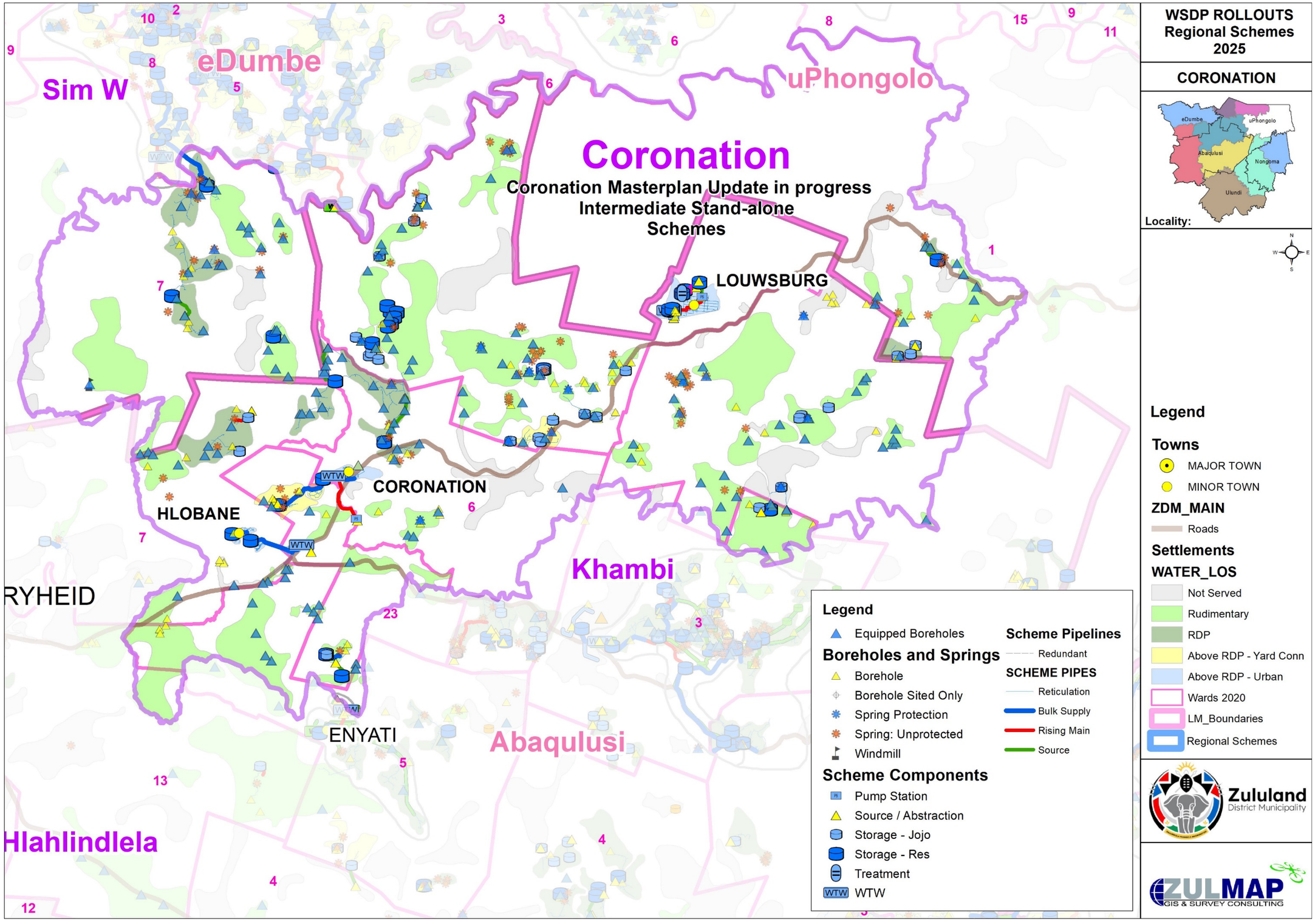
11.5.2 Intermediate Stand-alone Schemes

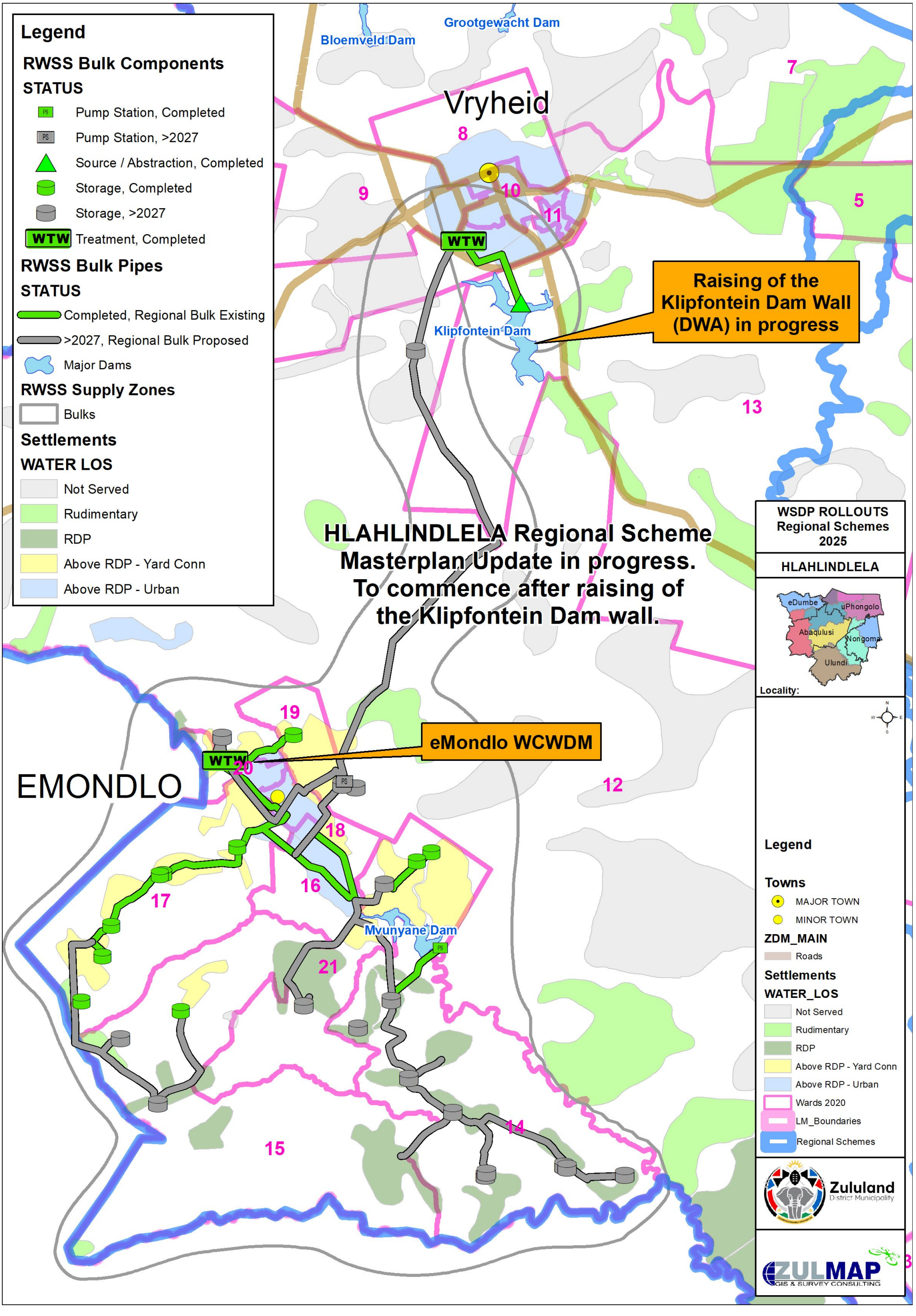
11.5.3 Rudimentary Water Supply

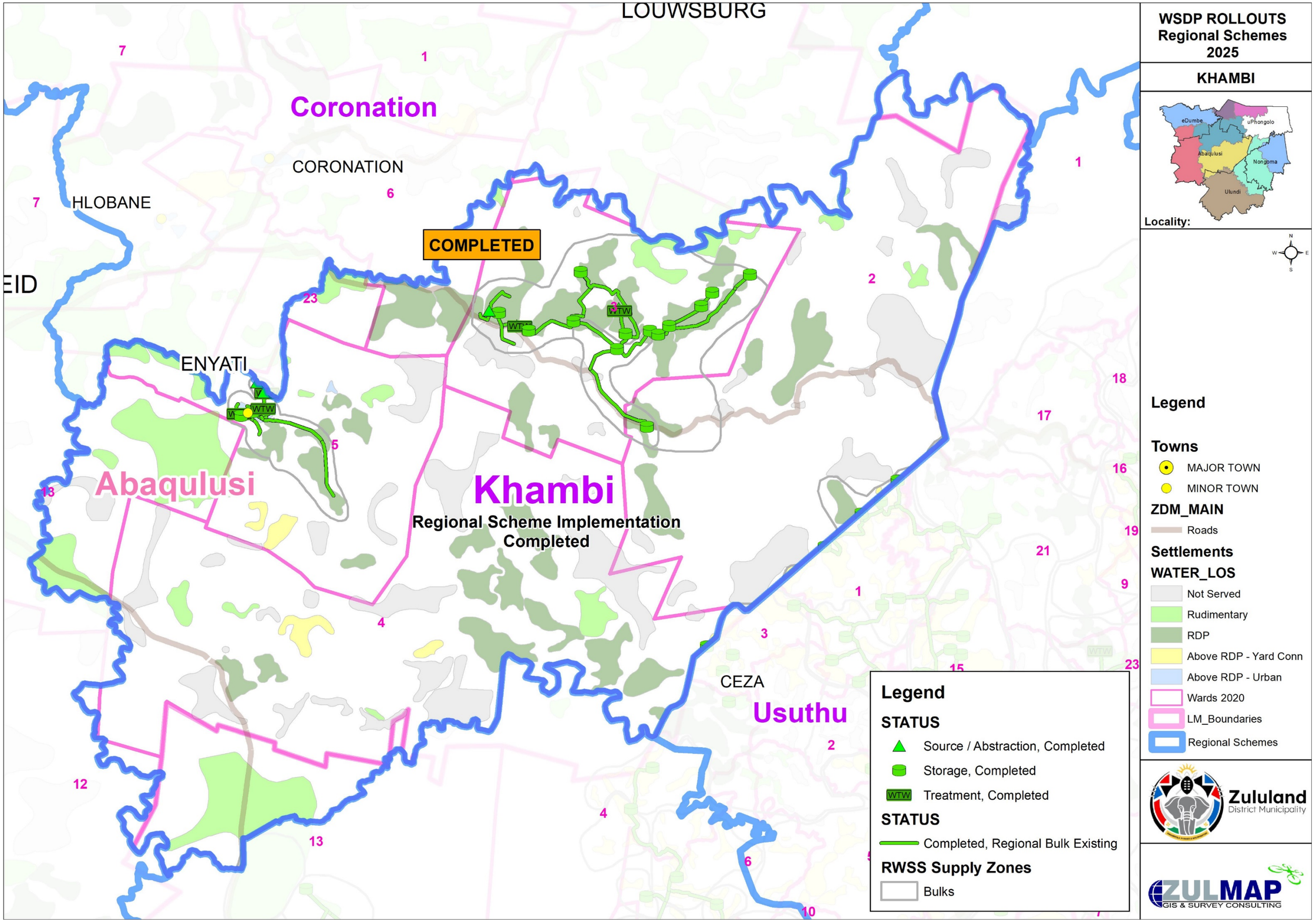
11.5.4 Sanitation Rollouts

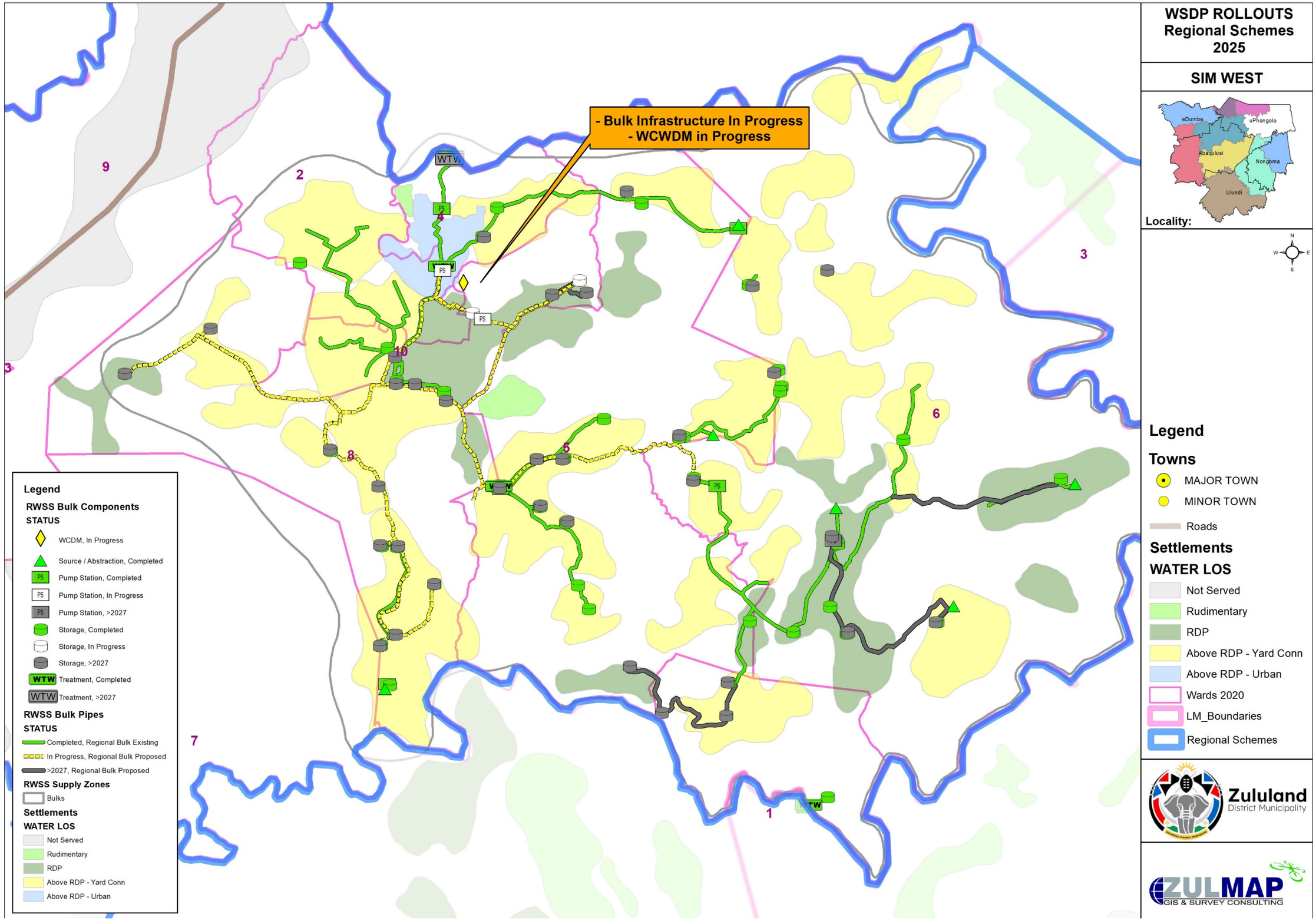
Map 11.5.1: Roll-out of regional water services in the district

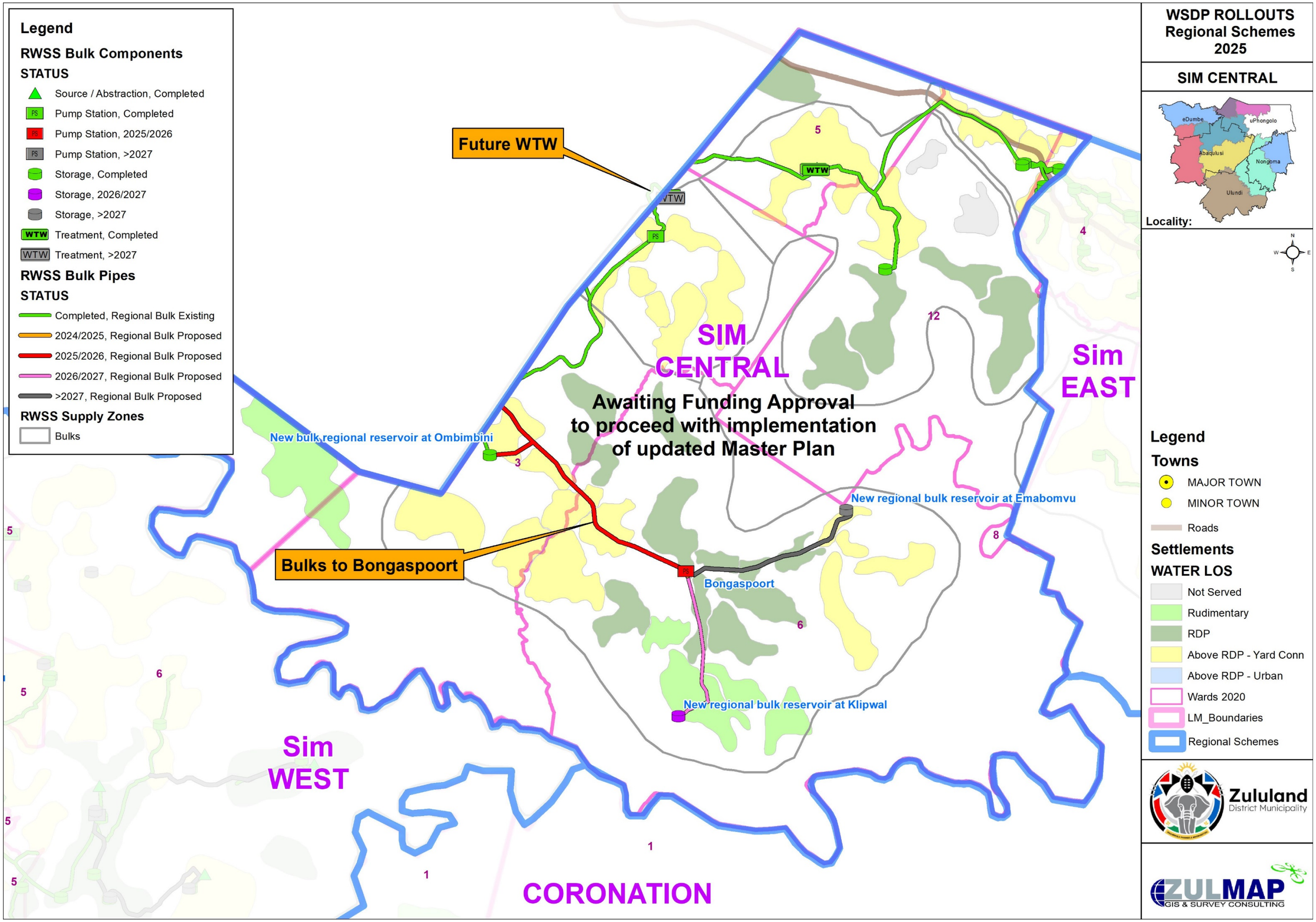



Sim W
eDumbe
uPhongolo
Coronation
Coronation Masterplan Update in progress
Intermediate Stand-alone
Schemes
LOUWSBURG
CORONATION
HLOBANE
ENYATI
Khambi
Abaqulusi
Hlahlindlela
RYHEID
WTW
Legend
Equipped Boreholes
Boreholes and Springs
Borehole
Borehole Sited Only
Spring Protection
Spring: Unprotected
Windmill
Scheme Components
Pump Station
Source / Abstraction
Storage - Jojo
Storage - Res
Treatment
WTW
Scheme Pipelines
Redundant
SCHEME PIPES
Reticulation
Bulk Supply
Rising Main
Source
WSDP ROLLOUTS
Regional Schemes
2025
CORONATION
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
N
W
E
S
Legend
Towns
MAJOR TOWN
MINOR TOWN
ZDM_MAIN
Roads
Settlements
WATER_LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING


Legend
RWSS Bulk Components
STATUS
Pump Station, Completed
Pump Station, >2027
Source / Abstraction, Completed
Storage, Completed
Storage, >2027
Treatment, Completed
RWSS Bulk Pipes
STATUS
Completed, Regional Bulk Existing
>2027, Regional Bulk Proposed
Major Dams
RWSS Supply Zones
Bulks
Settlements
WATER LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Bloemveld Dam
Grootgewacht Dam
Vryheid
Klipfontein Dam
Raising of the Klipfontein Dam Wall (DWA) in progress
HLAHLINDLELA Regional Scheme Masterplan Update in progress. To commence after raising of the Klipfontein Dam wall.
EMONDLO
eMondlo WCWDM
Mvunyane Dam
WTW
PS
5
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
WSDP ROLLOUTS
Regional Schemes
2025
HLAHLINDLELA
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
Legend
Towns
MAJOR TOWN
MINOR TOWN
ZDM_MAIN
Roads
Settlements
WATER_LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING


LOUWSBURG
Coronation
CORONATION
HLOBANE
ENYATI
Abaqulusi
Khambi
Regional Scheme Implementation
Completed
COMPLETED
Usuthu
CEZA
WTW
WT
Legend
STATUS
Source / Abstraction, Completed
Storage, Completed
Treatment, Completed
STATUS
Completed, Regional Bulk Existing
RWSS Supply Zones
Bulks
WSDP ROLLOUTS
Regional Schemes
2025
KHAMBI
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
N
W
E
S
Legend
Towns
MAJOR TOWN
MINOR TOWN
ZDM_MAIN
Roads
Settlements
WATER_LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING


- Bulk Infrastructure In Progress
- WCWDM in Progress
WTW
PS
9
2
4
3
10
8
5
6
7
1
Legend
RWSS Bulk Components
STATUS
WCDM, In Progress
Source / Abstraction, Completed
Pump Station, Completed
Pump Station, In Progress
Pump Station, >2027
Storage, Completed
Storage, In Progress
Storage, >2027
Treatment, Completed
Treatment, >2027
RWSS Bulk Pipes
STATUS
Completed, Regional Bulk Existing
In Progress, Regional Bulk Proposed
>2027, Regional Bulk Proposed
RWSS Supply Zones
Bulks
Settlements
WATER LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
WSDP ROLLOUTS
Regional Schemes
2025
SIM WEST
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
N
W
E
S
Legend
Towns
MAJOR TOWN
MINOR TOWN
Roads
Settlements
WATER LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING

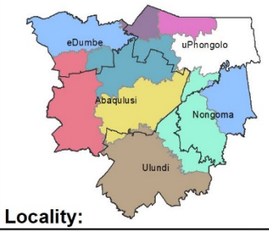

Legend
RWSS Bulk Components
STATUS
Source / Abstraction, Completed
Pump Station, Completed
Pump Station, 2025/2026
Pump Station, >2027
Storage, Completed
Storage, 2026/2027
Storage, >2027
Treatment, Completed
Treatment, >2027
RWSS Bulk Pipes
STATUS
Completed, Regional Bulk Existing
2024/2025, Regional Bulk Proposed
2025/2026, Regional Bulk Proposed
2026/2027, Regional Bulk Proposed
>2027, Regional Bulk Proposed
RWSS Supply Zones
Bulks
Future WTW
New bulk regional reservoir at Ombimbini
Bulks to Bongaspoort
New regional bulk reservoir at Emabomvu
Bongaspoort
New regional bulk reservoir at Klipwal
SIM CENTRAL
Awaiting Funding Approval
to proceed with implementation
of updated Master Plan
Sim EAST
Sim WEST
CORONATION
WSDP ROLLOUTS
Regional Schemes
2025
SIM CENTRAL
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
N
W
E
S
Legend
Towns
MAJOR TOWN
MINOR TOWN
Roads
Settlements
WATER LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING

Sim EAST

Await Funding Approval
for updated Master Plan to proceed
with remainder of Regional Scheme

WSDP ROLLOUTS
Regional Schemes
2025

SIM EAST



Locality:

PHASE 24
PHASE 22
PHASE 19
PHASE 21
PHASE 18
PHASE 17
PHASE 13
PHASE 12
PHASE 16
PHASE 9
PHASE 2
PHASE 1B
PHASE 3
NCOTSHANE
PONGOLA
UPhongolo
MKHUZE
CORONATION

Legend

RWSS Bulk Components
STATUS
- Source / Abstraction, Completed
- Source / Abstraction, >2027
- Pump Station, Completed
- Pump Station, 2025/2026
- Pump Station, 2026/2027
- Pump Station, >2027
- Storage, Completed
- Storage, 2026/2027
- Storage, >2027
- WTW Treatment, Completed

RWSS Bulk Pipes
STATUS
- Completed, Regional Bulk Existing
- 2025/2026, Regional Bulk Proposed
- 2026/2027, Regional Bulk Proposed
- >2027, Regional Bulk Proposed

Legend

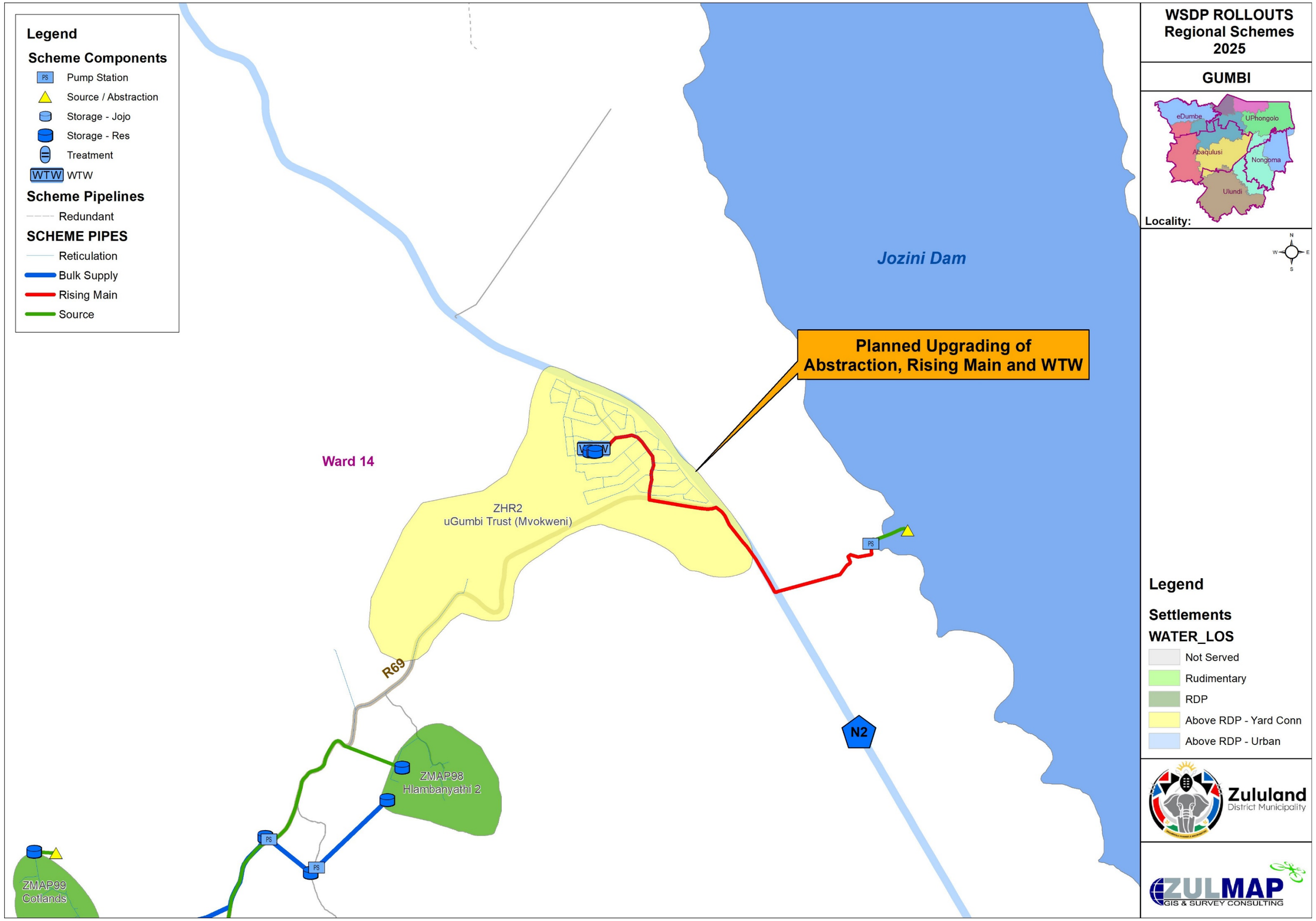
Towns
- MAJOR TOWN
- MINOR TOWN

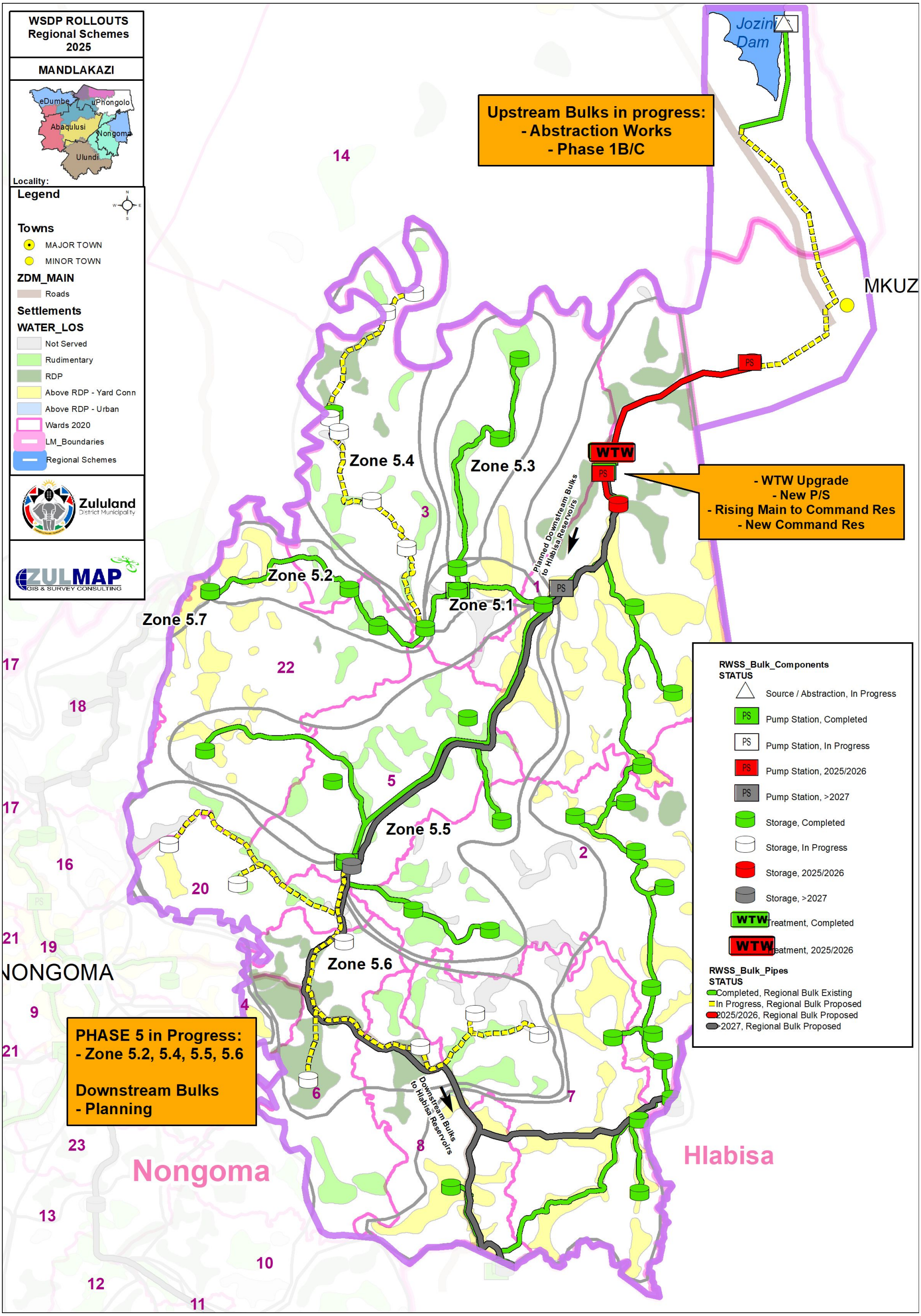
ZDM_MAIN
- Roads

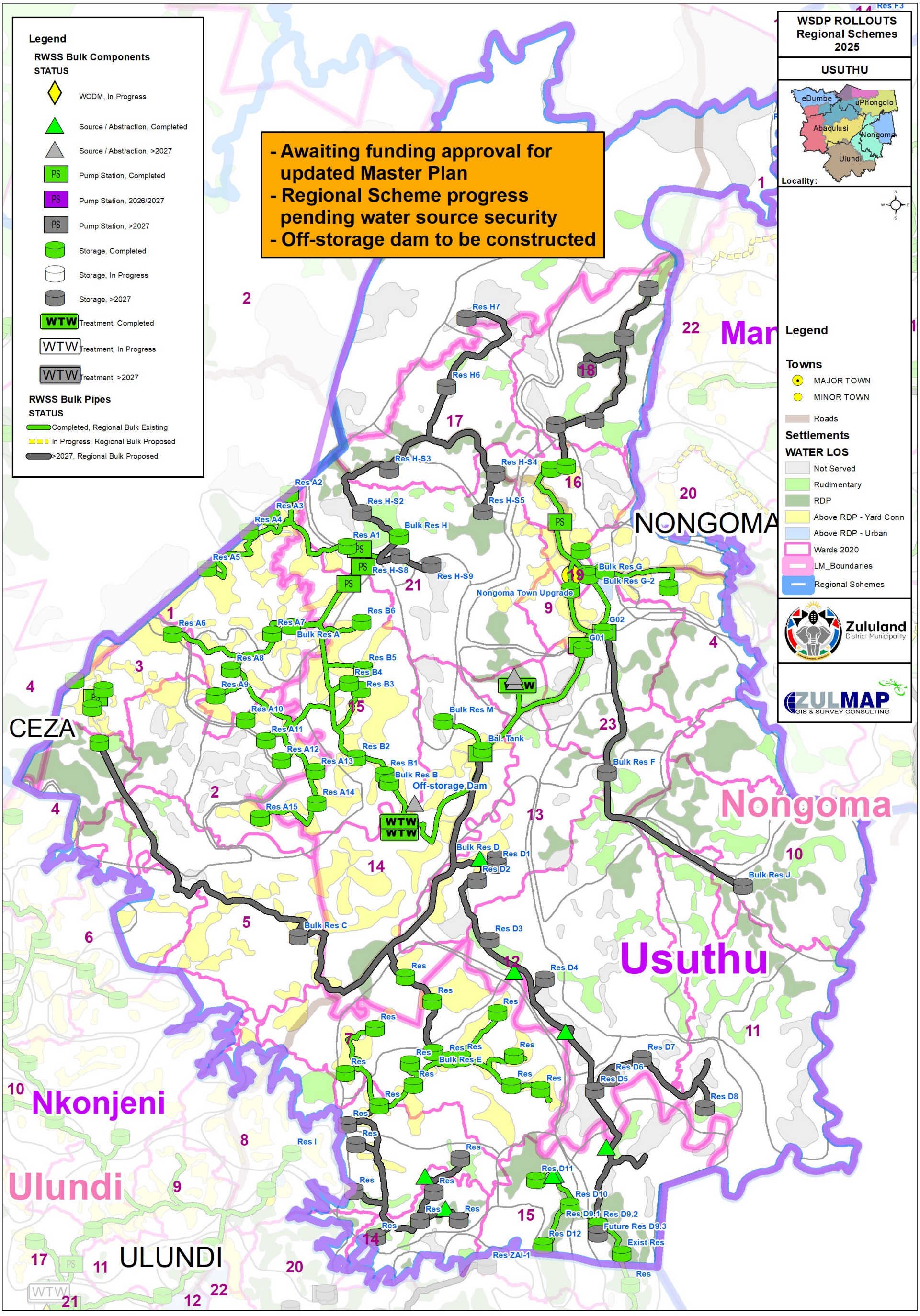
Settlements
WATER LOS
- Not Served
- Rudimentary
- RDP
- Above RDP - Yard Conn
- Above RDP - Urban
- Wards 2020
- LM Boundaries
- Regional Schemes

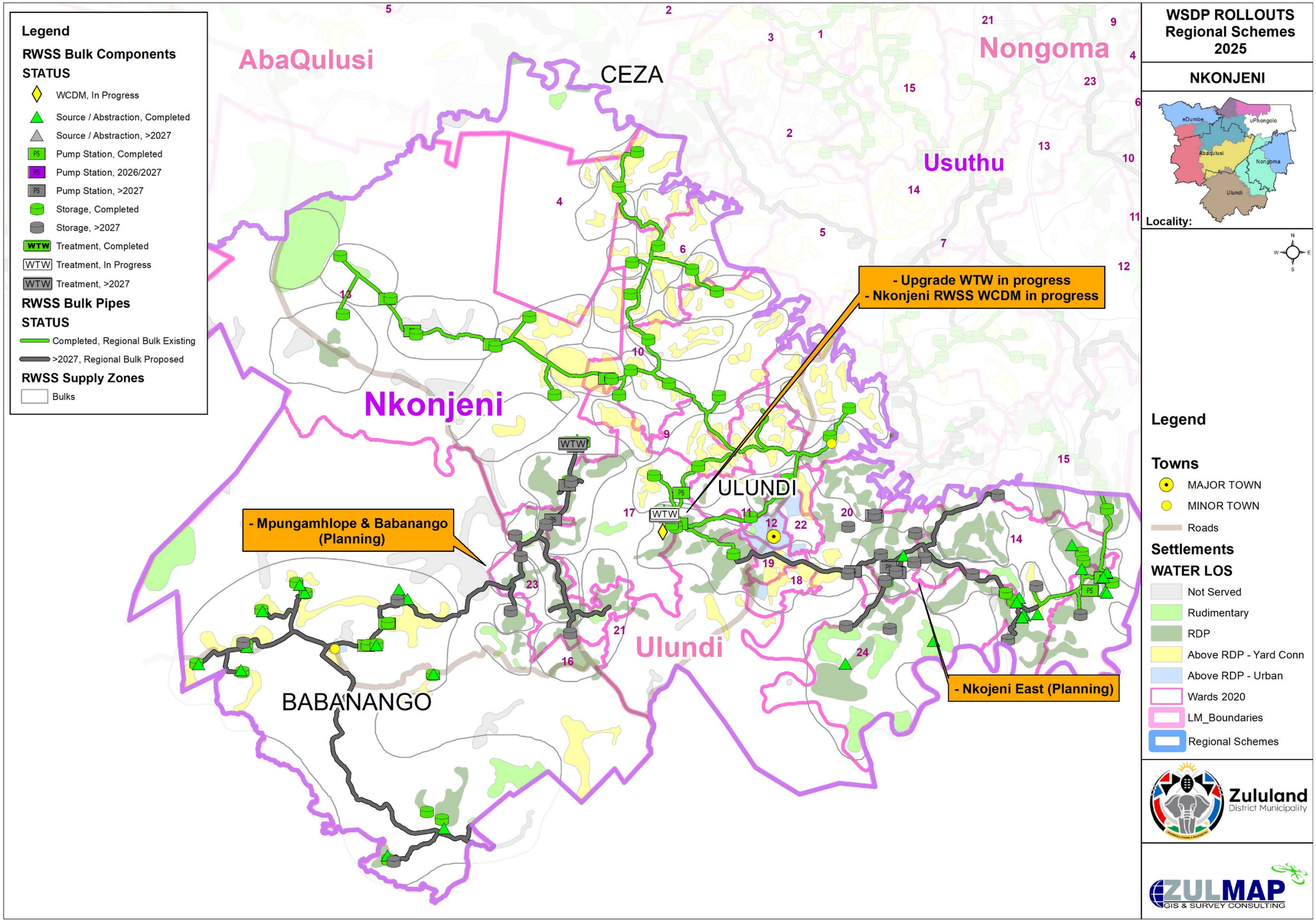
Zululand District Municipality

ZULMAP GIS & SURVEY CONSULTING


Legend
Scheme Components
PS Pump Station
Source / Abstraction
Storage - Jojo
Storage - Res
Treatment
WTW WTW
Scheme Pipelines
Redundant
SCHEME PIPES
Reticulation
Bulk Supply
Rising Main
Source
Jozini Dam
Planned Upgrading of Abstraction, Rising Main and WTW
Ward 14
ZHR2
uGumbi Trust (Mvokweni)
R69
N2
ZMAP98
Hlambanyathi 2
ZMAP99
Cotlands
PS
WSDP ROLLOUTS
Regional Schemes
2025
GUMBI
eDumbe
UPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
N
W
E
S
Legend
Settlements
WATER_LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING


WSDP ROLLOUTS
Regional Schemes
2025
MANDLAKAZI
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
Legend
Towns
MAJOR TOWN
MINOR TOWN
ZDM_MAIN
Roads
Settlements
WATER_LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
GIS & SURVEY CONSULTING
Jozini
Dam
Upstream Bulks in progress:
- Abstraction Works
- Phase 1B/C
14
MKUZ
PS
WTW
PS
- WTW Upgrade
- New P/S
- Rising Main to Command Res
- New Command Res
Planned Downstream Bulks to Hlabisa Reservoirs
Zone 5.4
Zone 5.3
Zone 5.2
Zone 5.1
Zone 5.7
Zone 5.5
Zone 5.6
PS
1
2
3
4
5
6
7
8
17
22
18
17
16
20
21
19
9
21
23
13
10
12
11
NONGOMA
Nongoma
Hlabisa
PHASE 5 in Progress:
- Zone 5.2, 5.4, 5.5, 5.6
Downstream Bulks
- Planning
Downstream Bulks to Hlabisa Reservoirs
RWSS_Bulk_Components
STATUS
Source / Abstraction, In Progress
Pump Station, Completed
Pump Station, In Progress
Pump Station, 2025/2026
Pump Station, >2027
Storage, Completed
Storage, In Progress
Storage, 2025/2026
Storage, >2027
Treatment, Completed
Treatment, 2025/2026
RWSS_Bulk_Pipes
STATUS
Completed, Regional Bulk Existing
In Progress, Regional Bulk Proposed
2025/2026, Regional Bulk Proposed
>2027, Regional Bulk Proposed


Legend
RWSS Bulk Components
STATUS
WCDM, In Progress
Source / Abstraction, Completed
Source / Abstraction, >2027
PS Pump Station, Completed
PS Pump Station, 2026/2027
PS Pump Station, >2027
Storage, Completed
Storage, In Progress
Storage, >2027
WTW Treatment, Completed
WTW Treatment, In Progress
WTW Treatment, >2027
RWSS Bulk Pipes
STATUS
Completed, Regional Bulk Existing
In Progress, Regional Bulk Proposed
>2027, Regional Bulk Proposed
- Awaiting funding approval for updated Master Plan
- Regional Scheme progress pending water source security
- Off-storage dam to be constructed
WSDP ROLLOUTS
Regional Schemes
2025
USUTHU
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
Legend
Towns
MAJOR TOWN
MINOR TOWN
Roads
Settlements
WATER LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand District Municipality
ZULMAP GIS & SURVEY CONSULTING
CEZA
NONGOMA
Nongoma
Usuthu
Nkonjeni
Ulundi
ULUNDI
Res F3
Res H7
Res H6
Res H-S3
Res H-S4
Res A2
Res H-S2
Res H-S5
Res A3
Res A4
Bulk Res H
Res A1
Res A5
Res H-S8
Res H-S9
Bulk Res G
Bulk Res G-2
Nongoma Town Upgrade
Res B6
Res A6
Res A7
Bulk Res A
G02
G01
Res A8
Res B5
Res B4
Res B3
Res A9
Res A10
Bulk Res M
Res A11
Bal. Tank
Res A12
Res B2
Res A13
Res B1
Bulk Res F
Bulk Res B
Off-storage Dam
Res A14
Res A15
Bulk Res D
Res D1
Res D2
Bulk Res J
Bulk Res C
Res D3
Res D4
Res D7
Res D6
Res D5
Res D8
Bulk Res E
Res I
Res D11
Res D10
Res D9.1
Res D9.2
Future Res D9.3
Exist Res
Res D12
Res ZAI-1


Legend
RWSS Bulk Components
STATUS
WCDM, In Progress
Source / Abstraction, Completed
Source / Abstraction, >2027
Pump Station, Completed
Pump Station, 2026/2027
Pump Station, >2027
Storage, Completed
Storage, >2027
Treatment, Completed
Treatment, In Progress
Treatment, >2027
RWSS Bulk Pipes
STATUS
Completed, Regional Bulk Existing
>2027, Regional Bulk Proposed
RWSS Supply Zones
Bulks
AbaQulusi
CEZA
Nongoma
Usuthu
Nkonjeni
ULUNDI
Ulundi
BABANANGO
- Upgrade WTW in progress
- Nkonjeni RWSS WCDM in progress
- Mpungamhlope & Babanango (Planning)
- Nkojeni East (Planning)
WSDP ROLLOUTS
Regional Schemes
2025
NKONJENI
eDumbe
uPhongolo
Abaqulusi
Nongoma
Ulundi
Locality:
N
W
E
S
Legend
Towns
MAJOR TOWN
MINOR TOWN
Roads
Settlements
WATER LOS
Not Served
Rudimentary
RDP
Above RDP - Yard Conn
Above RDP - Urban
Wards 2020
LM_Boundaries
Regional Schemes
Zululand
District Municipality
ZULMAP
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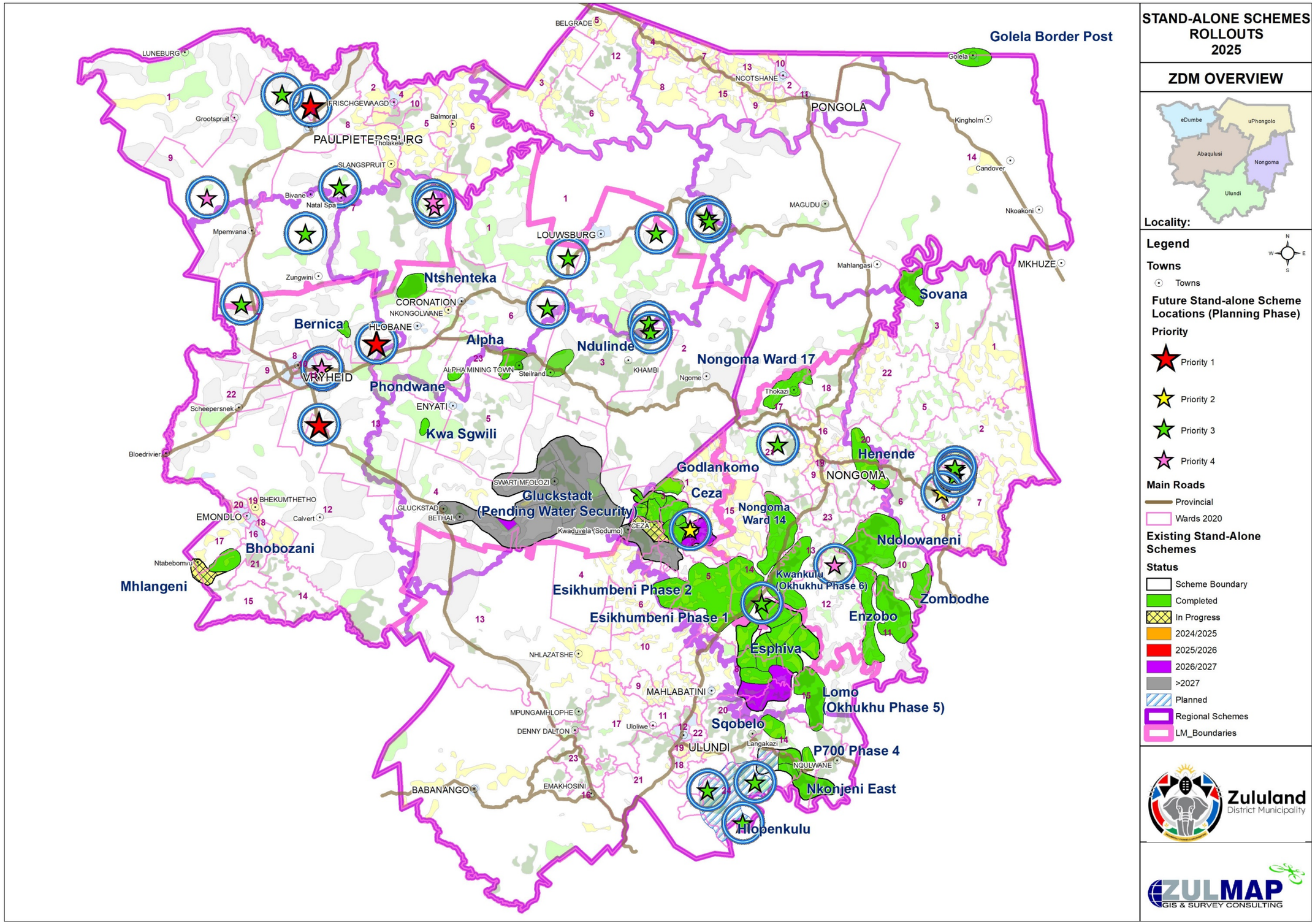
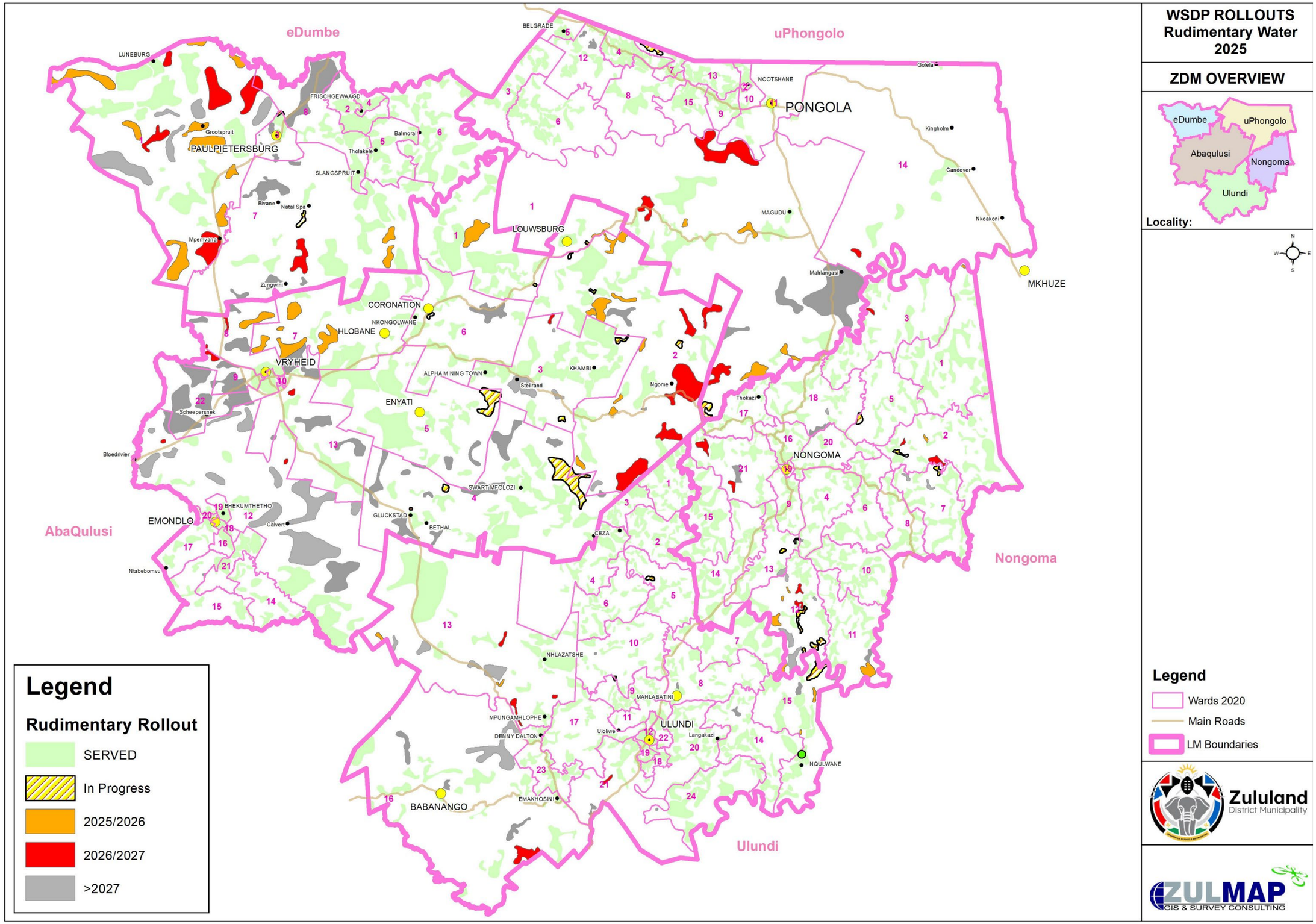
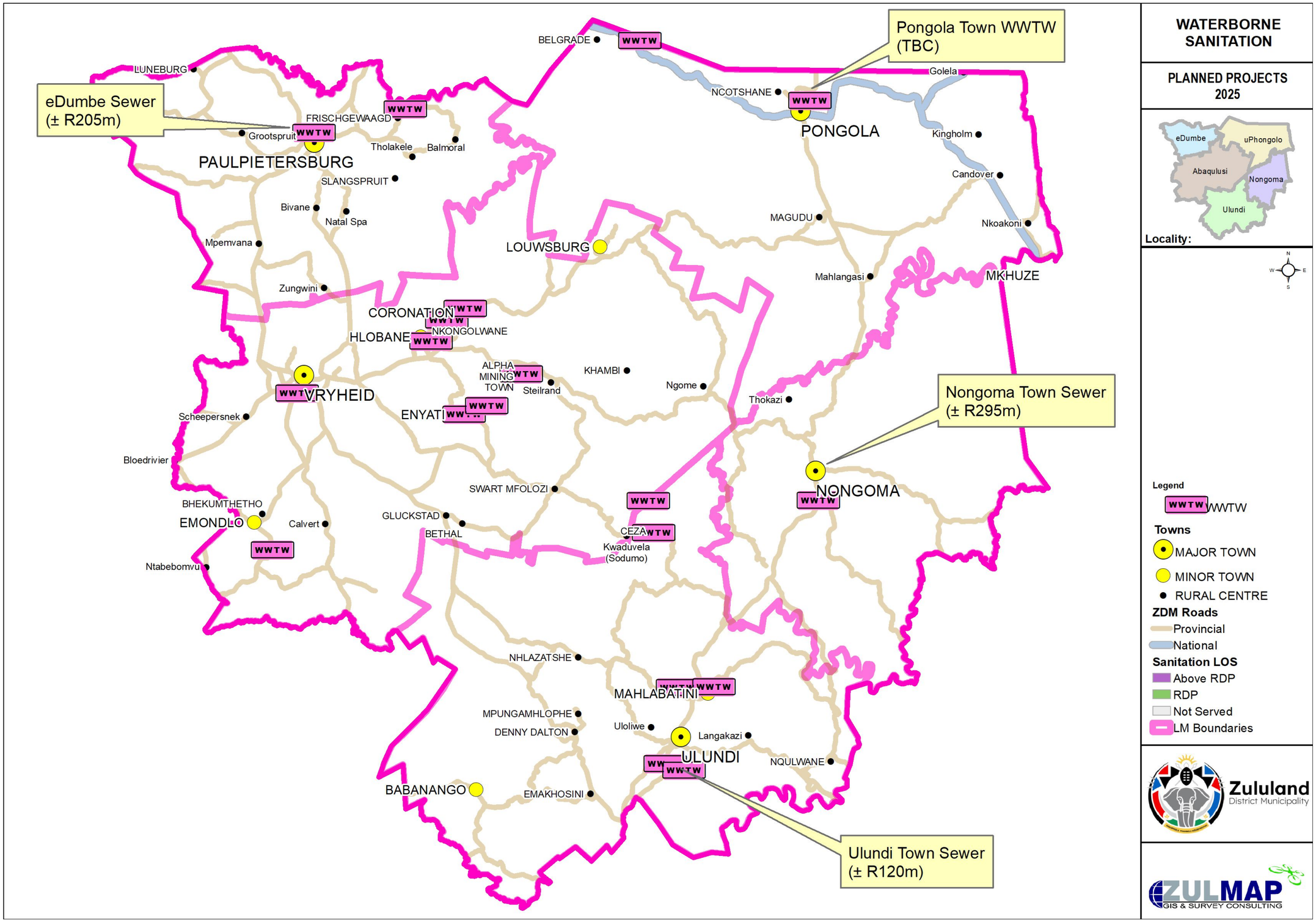
Map 11.5.2: Identified Stand-alone Schemes



Map 11.5.3: Rudimentary water supply rollouts



Map 11.5.4: Roll-out of urban sanitation services in the district



Map 11.5.5: Roll-out of rural sanitation services in the district