



**cogta**

Department:  
Co-operative Governance and Traditional Affairs  
**PROVINCE OF KWAZULU-NATAL**

**PROJECT: DEVELOP A UNIVERSAL ACCESS PLAN ACROSS FIVE DISTRICT MUNICIPALITIES IN KZN**



**FOCUS**

A Division of the Crowie Property Group



## **[REPORT: DEVELOPMENT OF UNIVERSAL ACCESS PLAN FOR WATER SERVICES: COMBINED EXECUTIVE SUMMARY AND CONCLUSION]**

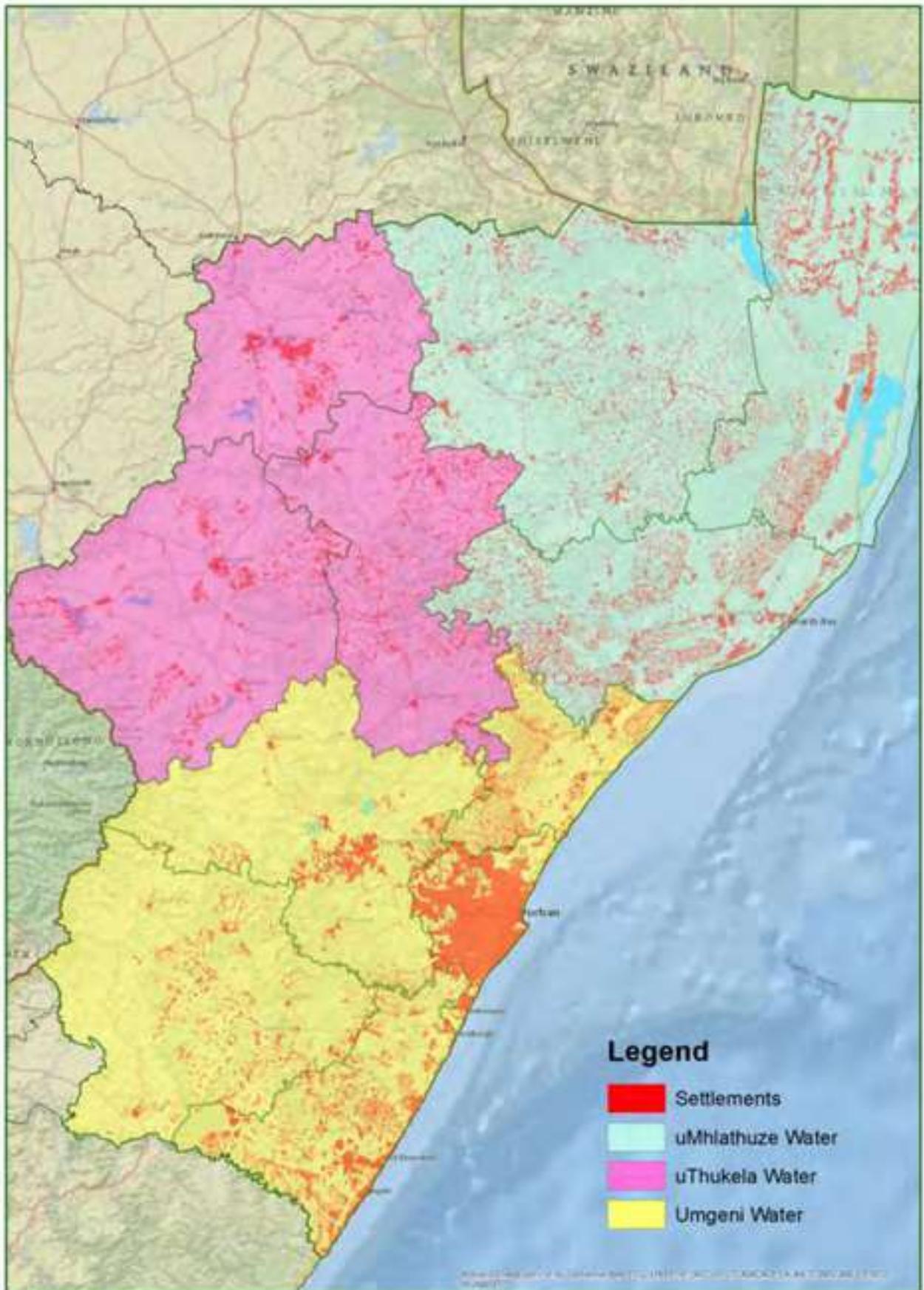
## A concept plan to supply bulk water in KwaZulu-Natal

South Africa is exposed to many of the pressures of a developing country, notably the provision of access to basic services such as a sustainable source of drinking water. In 1990 it was estimated that around 15 million people were without a safe water supply. Recently there have been numerous, and often contradictory reports that attempt to quantify the extent of the countries, backlog to drinking water. These backlog numbers are often used as a basis to determine and justify the infrastructure programmes required to reduce the backlogs, as part of the countries water supply planning process. These reports usually emanate from water utilities (such as Umgeni Water) that develop bulk Infrastructure Master Plans (IMPs), Water Service Authorities (WSAs) that develop Integrated Development Plans (IDPs) and Water Services Development Plans (WSDPs). In addition to these water supply plans, there are currently several supporting programmes including the Department of Water and Sanitation's (DWS) Total Water Services Business Master Planning process, the All Towns / Reconciliation Studies, the Prioritisation of Water Services to 23 District Municipalities, the Interim/Intermediate Water Supply Programme (IIWSP), Municipal Infrastructure Grant (MIG), and the Co-operative Governance and Traditional Affairs (COGTA) Universal Access Plan (UAP). It is widely recognised that the water supply planning process, to date, has not entirely fulfilled the water planning requirements of the country as was originally envisaged. Realising that many of these initiatives have a common vision and agenda, Umgeni Water, as an agent of both COGTA and the DWS recently undertook a water access planning programme for the province of KwaZulu-Natal (KZN). The main objective of this project was to co-ordinate the development of an "all-inclusive" conceptual water supply plan for KZN. The plan includes:

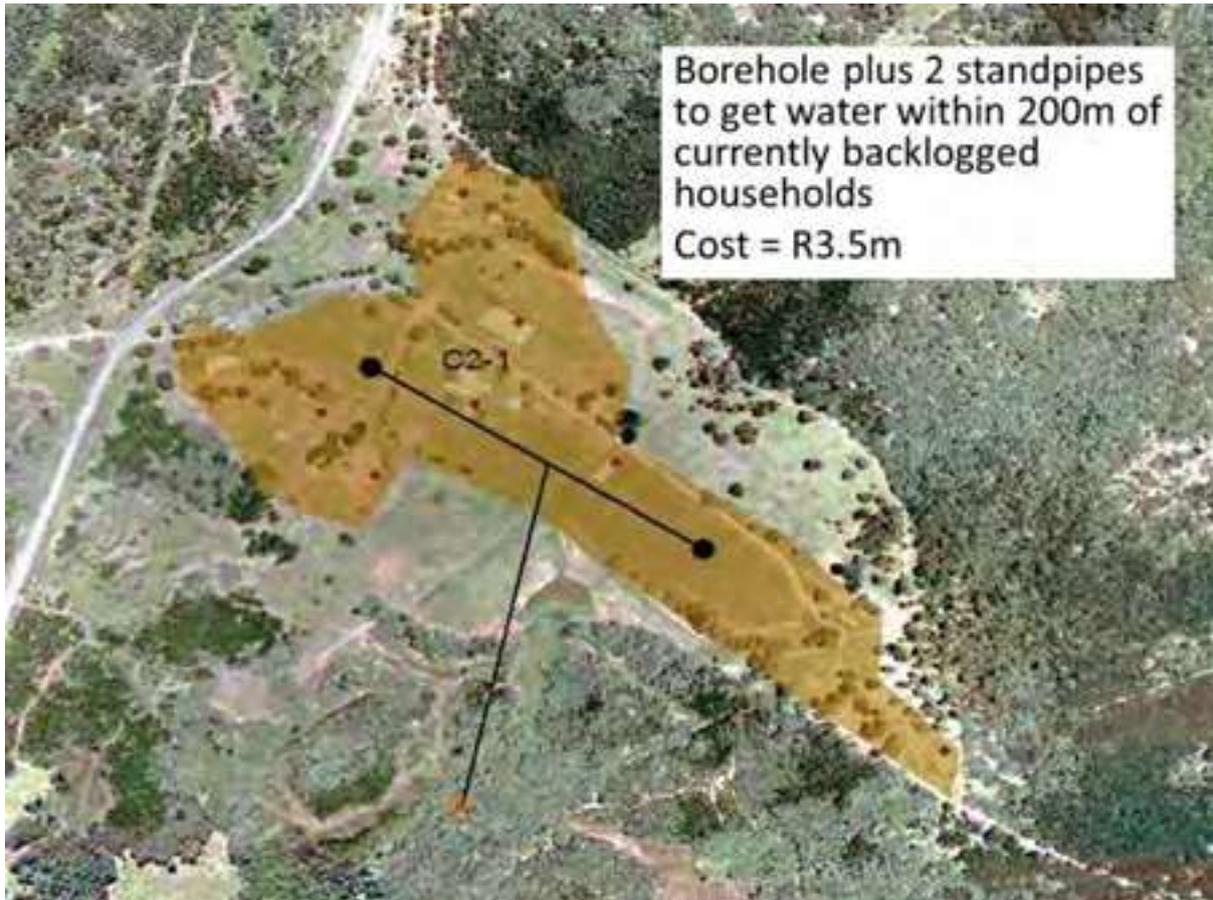
- The development of continuous water supply footprint areas showing demographics, current and required levels of water service, and importantly any gaps in water service delivery to the 1.8m households in KZN (**Figure 1**),
- The provision of conceptual plans of regional or stand-alone schemes to supply water,
- In areas where regional schemes aren't viable or where an interim water supply is needed to meet intermediate deadlines, a local scheme is recommended (**Figure 2**), and
- An indication of costing and implementation timing to address water backlogs.

To provide a basis of all water planning studies to date, a status quo assessment was done of all existing studies and reports relating to water supply. This included the all town studies (by DWS), all municipal WSDPs, IDPs, Infrastructure Grant Projects, various Geographic databases, and field verification with the Municipalities themselves.

Spatial datasets including Eskom's building count data (2011), the DWS Level of Service data, Census 2011 (Stats SA) and orthophoto imagery were used to delineate continuous Water Supply Footprint Areas showing current and required levels of water service. These footprints were verified where possible with the relevant Municipal officials during site visits. The footprint data has been used as a central repository for all relevant data including future water demands.



**Figure 1.** Study area for the Universal Access Plan study, showing concentration of households.



**Figure 2.** Example of one of the 1388 short term supply schemes proposed for this study.

Existing and planned water supply schemes were identified initially from the status quo assessment, and then verified where possible with the relevant Municipal officials. To address the short term water backlogs, local and regional supply schemes (at a conceptual level) have been proposed and costed to achieve Universal Access to water for all 10 Municipalities (**Table 1**). There are some 300 000 (of 1.8m) households without adequate access to potable water in KZN. The study found that to achieve Universal Access would require some 1400 schemes at a cost of ca. R20.7 billion. These schemes range from schemes with small water treatment plants to bulk lines, reservoirs to reticulation and stand pipe connections to boreholes with tanks and hand-pumps.

Various pre-existing Infrastructure Grant projects (included in **Table 1**) were generally not considered when proposing conceptual alternate schemes to eradicate current backlogs. Consequently, there could be overlapping of the proposed conceptual schemes to the regional bulk schemes and thus overlapping of infrastructure costs.

In addition to reporting and maps, all spatial data have been loaded to a spatial database.

The project has not only enabled COGTA to achieve their interim strategic need to provide Universal Access Plans for water, but has also provided a sound basis for Umgeni Water’s regional water planning. This is especially significant since the utility has been requested to begin operations in other parts of KZN and the eastern Cape.

Although it would appear that universal access to water is possible, this is fraught with difficulties. Notably, the study is based on small, short term and often unreliable schemes. Consequently, Umgeni Water has commissioned a second phase of this study to identify areas where sustainable regional schemes could be used. Many don't have the means to pay for water, hence making the viability of water supply challenging, especially for longer term operation and maintenance of the schemes. Nonetheless, Umgeni Water is continuing with it's quest to provide clean safe water to all people in it's area.

Phase 2 of this work is documented in Umgeni Water’s scorecard as “Progressively develop the regional concept plan for KwaZulu-Natal and eastern Cape (Alfred Nzo and Ngquza Hill)”, with a completion date of June 2015. The purpose of this phase is to build on the results of Phase 1 by extending the planned schemes to sustainable regional bulk schemes.

**Table 1.** Summary of UAP water backlogs and proposed schemes (for implementation by 2020) in KwaZulu-Natal.

District Municipality	Backlog (households)	Backlog (%)	# of proposed schemes	Cost (R)	MWIG 2014
Harry Gwala	28281	27	103	R 1 160 000 000	R 3 725 626 814
Umzinyathi	15097	18	84	R 347 000 000	R 1 778 176 784
uThungulu	15281	17	29	R 813 000 000	R 5 947 359 627
Umgungundlovu	8512	4	30	R 224 000 000	R 4 073 582 259
Ilembe	12047	11	49	R 307 000 000	R 4 251 330 305
Amajuba	23914	29	79	R 927 022 088	R 1 057 401 792
Zululand	44473	28	589	R 4 797 717 979	R 3 134 658 799
Ugu	16540	14	59	R 1 415 983 390	R 5 889 576 950
Umkhanyakude	36439	35	134	5763423725	R 4 076 737 351
Uthukela	96113	48	232	R 4 968 798 729	R 2 704 212 440
<b>Totals</b>	<b>296697</b>		<b>1388</b>	<b>R 20 723 945 911</b>	<b>R 36 638 663 121</b>