



Ugu District Municipality

Water Conservation and Water Demand Management Initiatives

Presentation to Strategy Steering Committee – Meeting 10
30 August 2016

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Vision and Mission Statement

Vision

A place where everyone benefits equally from socio-economic opportunities and services

Mission

To create an enabling environment for social and economic development resulting in the provision of quality drinking water and access to decent sanitation by ensuring community participation and coordination of public and private players

Background

- ▶ 2014/2016 interventions reduced NRW by volume from 28.1% to 26.1 %
- ▶ The Infrastructure Leakage Index was reduced from 4.69 to 3.75
- ▶ The Inefficiency of Use was also reduced from 22.3 % to 17.6 %
- ▶ The following gaps were identified in the programme :
 - Lack of education and training of personnel
 - Inadequate awareness by the stakeholders and community
 - Aging infrastructure

2014/2019 Strategy Plan

With NRW reduction interventions, the following benefits would be realized :

Key Performance Indicator	Current (2015/16)	Without Intervention (+3 years)	With Intervention (+3 years)
NRW by Volume %	26,1	28,1	22,2
Inefficiency of Use %	17,6	17,7	13,2

Reduction of Real Losses by 27 %

Reduction of Non-Revenue Water by Volume by 17 %

Reduction in Unbilled Authorized Consumption by 14%

Increase in Billed Authorized Consumption by 3%.

Implementation Plan to the Strategy

- Active Leakage Control through specialized leak detection and repairs
- DMAs monitoring tools
- On-going maintenance of DMAs
- Enforcement of By-Laws to deal with Illegal Connections
- Water Conservation Campaigns for Community Awareness
- Capacity Building
- Wastewater Metering to achieve reliable water balancing
- Intelligent bulk meter and DMA data acquisition
- Pressure Management and Advanced Pressure Management
- War on Leaks
- Meter Replacement and billing improvement
- Standpipe and Tanker point metering strategies
- Pipeline Replacement

Work Done to date

- ▶ Installation of a total of 57 additional pressure reducing valves (PRVs) of various sizes and types on in addition to previously existing 152 valves;
- ▶ Active leakage control activities resulting in 5 208 leaking properties, standpipes and reticulation being resolved;
- ▶ Establishment of 17 reservoir outlet metering and district metered areas (DMAs);
- ▶ Commissioning of a leak detection and pressure management training facility;
- ▶ Re-commissioning of on-line loggers for meter reading at mostly outlying water treatment works;

Work Done to date

- ▶ Standpipe audit across the entire district;
- ▶ Installation of 175 cluster meters for standpipe metering;
- ▶ WC/WDM awareness campaigns;
- ▶ Re-commissioning of existing PRVs and zone discreteness verification;
- ▶ Limited pipeline replacement;
- ▶ Tracking of annual key KPI's for NRW; and
- ▶ Staff training
- ▶ Commissioning of bulk meters at all water and wastewater plants

Opening of the leak detection and Pressure Management Training and Control Room



Work still to be done

The critical areas which the municipality needs to further focus on, in order to sustain low NRW levels and to further reduce NRW down to an economically acceptable level and to avoid regression are the following:

- ▶ Active Leakage Control through specialised leak detection and repairs
- ▶ DMAs monitoring tools – online pressure sensors
- ▶ On-going maintenance of DMAs and PMAs
- ▶ Enforcement of By-Laws to deal with Illegal Connections
- ▶ Continued Water Conservation Campaigns for Community Awareness

Work still to be done

- ▶ Continued Capacity Building
- ▶ Wastewater Metering to achieve reliable water balancing
- ▶ Advanced Pressure Management
- ▶ Continued Pressure Management
- ▶ Continued War on Leaks
- ▶ Consumer Meter Replacement and billing improvement
- ▶ Pipeline Replacement
- ▶ Enforcement on Illegal consumption (increased by 547 kl/day)

Achievements to date

- ▶ The number of registered connections increased by 949 (excluding of stand pipes)
- ▶ Average daily supply (daily purchases from Umgeni Water and Ugu District Municipality's operated plants' production) increased by 3 675 kl/day
- ▶ Average daily sales to customers increased by 7 970 kl/day
- ▶ Non-Revenue Water volumes decreased by an average of 4 295 kl/day
- ▶ Unbilled Authorised Consumption decreased by an average of 297 kl/day

Achievements to date

- ▶ Non-Revenue Water decreased by 4,7%
- ▶ Inefficiency of Use of Water Resources, which essentially measures the physical leak or real loss volume, improved by 4,9%
- ▶ Total Water Losses per Connection deteriorated by 108 litres/connection/day

Water saving awareness



Water saving awareness



Community Bus



Questions and Discussions

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