



Project Sheet

Development of Water Reconciliation Strategies for Towns in the Central Region

LOCATION: The Study Area included the central region of South Africa and is made up of the Free State, the greater part of the Northern Cape Province and the western part of the North West Province, a small portion of the northern part of the Eastern Cape Province and a portion of the Mpumalanga Province.

CUSTOMER: Department of Water Affairs

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STATUS: In process of finalising **DURATION:** August 2008 – Current

OBJECTIVE: The key objectives of the Study were to develop water reconciliation strategies for all towns in the central region of South Africa

DESCRIPTION

The motivation for the Study arose from the need to develop strategies that will ensure adequate future reconciliation of water requirements and water availability from existing and potential water resources for each of the towns and villages in the study area. These reconciliation strategies aim to provide water resource management perspectives that would contribute to the knowledge and support other planning processes such as the development of Water Services Development Plans (WSDP) and the Regional Bulk Infrastructure Grant (RBIG) investigations.

Close to 300 towns/villages were identified in the study area and due to the large number of towns and the substantial amount of information that needed to be incorporated into the reconciliation strategies, a strategy development process was developed.

Given the various and diverse aspects that needed to be covered in the reconciliation strategies, specialised reviews and synthesis of the data were carried out by specialist team which included the following:

- Demographic assessment of all the towns in the Central Region to produce current population estimates as well as develop scenarios of future population trends up to the year 2030.
- Development of future water requirement projection scenarios using the using a Water Requirements and Return Flow Database Model into which the population projection scenarios incorporated.
- Assessment of the potential savings that can be achieved through the implementation of Water Conservation and Water Demand Management measures.
- Interpretation of the available information on the water supply infrastructure.
- Assessment of the groundwater availability (or yield) of the existing boreholes and the potential for further development of the groundwater resources. Information on the groundwater quality was also captured and presented.
- Estimation of the availability (yield) of the surface water resources from available data or using low confidence estimation methods if no data was available.

- Assessment and interpretation of the data on the quality for the water sources as well as information pertaining to the status of wastewater treatment facilities.

The projected water requirements and the yield of the existing water resources were used to compile annual water balances for each town or water resource system.

RESULTS

- Population and Water Requirement Database Model for all towns in the study area
- Water reconciliation strategies for each of the towns in the study



