

Ensuring water supply for all towns and villages in the Eastern Cape and Western Cape Provinces of South Africa

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Abstract

The Department of Water Affairs (DWA) has embarked on a nationwide programme to develop water-reconciliation strategies for all towns across the country. Reconciliation strategies for the major metropolitan areas and systems (e.g. Johannesburg/Pretoria, East London, Cape Town and Durban) were developed next. The implementation of these strategies is monitored by strategy steering committees. The approach has now been extended to all other metropolitan areas as well as all towns and villages or clusters of villages. In order to prepare the actual strategies, regardless of the size of the town, thorough documentation, research and analysis of the available information was required, as well as evaluation of projected growth scenarios to assess water requirements over the next 25 years and identification of potential additional sources to meet this growing requirement. It has emerged that the poor operation and maintenance of water supply, treatment and reticulation infrastructure are resulting in significant losses, which, if corrected, can reverse the current water shortages being experienced. Similarly, the generally poor management of effluent remains a threat to surface water and groundwater quality downstream. It appears that many municipalities perceive groundwater as an unreliable resource; however, in general, the issue of staff and skills shortages to manage the resource effectively is the actual problem. This is an operational issue rather than a groundwater-resource-specific issue. This aspect requires special attention for existing groundwater schemes and proposed groundwater development. In most instances water conservation and water-demand management and the development of local surface and groundwater resources are the most feasible options to meet any current or projected future water-supply shortfalls. Any intervention must be combined with a skills-development programme at the operational level to ensure the sustainability of the proposed supply options. This paper is based on the experience gained in the development of reconciliation strategies for the towns and villages in the DWA Southern Planning Region (i.e. surface water drainage areas in the Eastern Cape and Western Cape Provinces), which was carried out by Umvoto Africa in association with engineering consulting practice Aurecon.

Keywords: water supply, water reconciliation, groundwater options, operation and maintenance, water conservation and water demand management