

The development of a municipal water conservation and demand management strategy and business plan as required by the Water Services Act, South Africa

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ABSTRACT

The implementation of water conservation and water demand management (WC/WDM) at municipal level has been inadequate for many years, despite South Africa being one of the driest countries in the world. This could be attributed to a lack of planning, and not realising the consequences and potential benefits of water restrictions. Many South African municipalities do not have a WC/WDM strategy and business plan although many books, publications and software packages have been produced to assist water supply managers. Most of the existing strategies are also vague and of little value, and the municipalities do not have the necessary financial, technical and institutional capacity to support such a strategy. Municipalities often fail to realise that most WC/WDM activities will pay for themselves and that financial institutions will fund these projects if a proper business case could be compiled. Ironically municipalities have complained that they are unable to obtain funding while most financial institutions complain that they cannot find bankable projects because of the poor quality of the applications and strategies. This guideline provides a simple and pragmatic approach to the development of a WC/WDM strategy and business plan which will enable municipalities to plan, obtain funding, implement and ensure the overall sustainability of water resources in the municipality and the country as a whole.

Keywords: water conservation, demand management

INTRODUCTION

The Water Services Act, Act 108 of 1997 (RSA, 1997a) stipulates that all spheres of government must provide water supply services in an efficient, equitable and sustainable manner. The Act also requires municipalities that have been given Water Services Provider status to provide measures to promote water conservation and demand management which should be included in their Water Conservation and Water Demand Management (WC/WDM) strategy and business plan and Water Services Development Plan (WSDP).

In his 2010 State of the Nation Address, His Excellency JG Zuma, President of the Republic of South Africa, stated, 'We are not a water rich country. Yet we still lose a lot of water through leaking pipes and inadequate infrastructure. We will be putting in place measures to reduce our water loss by half by 2014'.

Although the target for reducing water losses has been set, activities at municipal level to reach this goal have been limited (McKenzie et al., 2012) which could be attributed to a lack of planning, and not realising the consequences and potential benefits of WC/WDM. Although various books, manuals and publications (e.g. Hunt et al., 1998; White, 1998; American Water Works Association, 2006; American Water Works Association, 2010) as well as software packages (McKenzie and Bhagwan, 2000) have been produced over the years to assist water supply managers to develop strategies that address the

various WC/WDM issues, many South African municipalities do not have a WC/WDM strategy. The Department of Water and Environmental Affairs (DWA) reported that many of the existing strategies are vague and of little value (DWA, 2011). Many municipalities have limited financial, technical and institutional capacity to prepare a WC/WDM strategy.

APPROACH

The methodology for this study was developed as part of the so-called 'Large Bulk Water Supply Reconciliation Strategy Study' for the Vaal River system (DWAF, 2006; DWAF, 2009) conducted by the national Department of Water Affairs and Forestry (DWAF, now DWA – Department of Water Affairs). The purpose of the DWAF study was to develop a strategy for meeting the growing water requirements of the industrial and urban sectors that are served by the Integrated Vaal River System (IVRS). WC/WDM has a major influence on future water demand projections and therefore formed an integral part of the study (DWA, 2010). The methodology developed during this study has subsequently been refined in a few case studies (DWA, 2012) as part of the DWA Rapid Response Programme and interactions with the DWA and municipalities.

The research method could be described by the following steps: (i) problem identification and description; (ii) literature review of existing methodologies (iii) perform status quo and constraints assessment through SWOT analysis and quantitative scorecard at municipal and regional workshop level, (iv) develop savings model (v) prepare guideline towards the development of a WC/WDM strategy and business plan, and (vi) prepare templates through various case studies to act as a presentable and user-friendly interface.

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