

A drinking water quality framework for South Africa

Kim Hodgson¹ and Leonardo Manus^{2*}

¹Umgeni Water, PO Box 9, Pietermaritzburg 3200, South Africa

²Department of Water Affairs and Forestry, Private Bag X313, Pretoria 0001, South Africa

Abstract

In recognition of the importance of safe drinking water to public health, DWAF initiated a project to draft a *Drinking Water Quality Framework for South Africa* to enable effective management of drinking water quality and the protection of public health. The Framework is based on a preventative risk management approach, which is comprehensive from catchment to consumer. The approach promotes an understanding of the entire water supply system, the events that can compromise drinking water quality and the operational control necessary for optimising drinking water quality and protecting public health. However, the Framework also recognises the challenges facing water services authorities (WSAs) in South Africa, and advocates a continual incremental improvement approach towards long-term targets. Short- and medium-term intervention strategies were developed as well as a longer term Drinking Water Quality Management Strategy to achieve the vision of 'Effective Drinking Water Quality Management Ensuring Safe Drinking Water'. The drinking water quality management project also developed a number of supportive documents and tools to provide the water sector with the information needed to monitor, manage, communicate and regulate drinking water quality.

Keywords: drinking water, *Drinking Water Quality Framework for South Africa*, monitoring, public health, catchment to consumer

Introduction

Access to safe drinking water is a basic human right and essential to people's health. Safe drinking water that complies with the South African National Standard (SANS) 241 Drinking Water Specification does not pose a significant risk to health over a lifetime of consumption, including different sensitivities that may occur between life stages (babies and infants, the immunocompromised and the elderly). Improving access to safe drinking water can thus result in tangible benefits to public health and every effort should be made to achieve a drinking water quality that complies with national safety standards.

Since 1994, significant progress has been made in the provision of basic services, including drinking water and sanitation. However, notwithstanding this progress, service delivery backlogs still exist in key areas including the provision of safe drinking water. The quality of the drinking water being provided at point-of-use is of vital consideration. Current investigations show that an unacceptably high incidence of poor drinking water quality occurs in non-metro South Africa. Reasons for failure of drinking water standards include:

- A lack of understanding by WSAs regarding the requirements for effective drinking water quality management
- Inadequate management including monitoring of drinking water services
- Inadequate asset management
- Inadequate WSA institutional capacity (staffing, funding, expertise, education)
- Lack of intervention to address poor drinking water quality when detected.

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* To whom all correspondence should be addressed.

☎+2712 336-6583; fax:+2712 336-6679;

e-mail: ManusLev@dwaf.gov.za

In recognition of these challenges faced by WSAs in South Africa, the Department of Water Affairs and Forestry (DWAF), as the lead institution for the regulation of drinking water quality in South Africa, identified key stakeholders and appropriate mechanisms for their involvement in a task team and subsequent development of a *Drinking Water Quality Framework* for South Africa. Key stakeholders included:

- DWAF, National and Regional Offices
- Department of Health (DoH)
- South African Local Government Association (SALGA)
- Department of Provincial and Local Government (DPLG)
- Water Research Commission (WRC).

The outcome of this project was a *Drinking Water Quality Framework* for South Africa and a number of supportive tools to enable the effective management of drinking water quality and the protection of public health.

The drinking water quality framework for South Africa

The Framework is based on an integrated system of approaches and procedures which address the key factors that govern drinking water quality and safety in South Africa. The Framework focuses on a preventative risk management approach, which is comprehensive from catchment to consumer. This approach promotes an understanding of the entire water supply system, the events that can compromise drinking water quality and the operational control necessary for optimising drinking water quality and protecting public health.

Recognising the challenges facing WSAs in South Africa, a continual improvement approach is also advocated in the Framework, with emphasis on fulfilment of minimum legislated requirements and achievement of interim goals and milestones as set by the Water Services Authority to improve drinking water quality.