



GROUNDWATER RESEARCH NEEDS IN THE EASTERN CAPE PROVINCE

The Department of Water Affairs and Forestry has the responsibility for managing and protecting our national water resources for the purposes of ensuring sustainable development, equitable access and beneficial use. Water is an essential resource for economic development, job creation and poverty alleviation through the commercial and industrial sectors. Water is essential for food production and food security, particularly in the rural areas where unemployment levels are high. Water is a basic human need for drinking, cooking and washing. Water has a social and an economic value. To meet the demands for social and economic purposes, the environmental integrity of water resources must be protected and maintained. Once the integrity of the resource is compromised, the chances of sustainable development are slim.

Groundwater is a water resource that is increasingly considered as ideal for development in the rural areas. This is particularly true in the Eastern Cape where rural settlement patterns are characteristically dispersed and often located in inaccessible terrain. Groundwater is often not subject to contamination from surface pollution and in times of disease outbreaks such as cholera it is regarded as a safe supply if the borehole is protected. Groundwater is ideal for small scale operations where large construction and engineering works are impractical and unaffordable. With appropriate technology, the maintenance and operation of groundwater pumps and supply systems can be done by community members in many cases. Groundwater is not subject to the extremes of surface water resources such as flooding. In times of drought, groundwater can continue to provide a reliable source of water if properly managed.

To make use of groundwater in a way that is sustainable requires proper management and a thorough understanding of the processes and factors governing the occurrence and movement of water underground. All too often groundwater is developed in an unsuitable manner due to lack of knowledge and understanding. Groundwater systems are then regarded as unreliable and are rejected as an option by communities who have suffered the consequences of poorly managed groundwater. The benefits of groundwater are lost in terms of its safety, reliable supply in times of drought, low cost and easy maintenance.

The Department welcomes any research towards improving management of groundwater in the Eastern Cape, in support of our commitment to ensuring sustainable development of water resources. Greater understanding of this valuable and hidden resource will enable all water users to unlock its potential to render safe, reliable, low cost water supply, as well as to render reliable water for stock

and irrigation farming, water for industrial and commercial activities and water for eco-tourism, recreation and the hospitality industry. Groundwater has the potential to contribute to the growth and development of the Eastern Cape and is uniquely suitable to the circumstances of our geographic, economic and socio-political context. It is our hope that this document will promote research into groundwater and through this research we will find answers to the challenges of sustainable development of groundwater.

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