

Development of a Water Reconciliation Strategy Study for the Kwazulu-Natal Coastal Metropolitan Areas

Conducted by the Department of Water Affairs and Forestry (DWAF)

BACKGROUND INFORMATION DOCUMENT (BID)

An invitation to participate

June 2007

PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to inform stakeholders about the water reconciliation strategy study for the KwaZulu-Natal coastal and metropolitan areas that is currently being undertaken by the Department of Water Affairs and Forestry (DWAF).

Stakeholders are invited to participate in the process by contributing issues of mutual benefit, attend meetings, or through correspondence with the public participation office or the technical team at the addresses provided below.

Public participation office and return address for comments:

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INTRODUCTION

BACKGROUND

The water requirements of the KwaZulu-Natal metropolitan coastal areas in the vicinity of Durban, as shown in figure 1, are growing rapidly. This is as a result of the current economic growth, improved water supply services. urbanisation of the population and associated expansion of residential and other developments being implemented. This trend is expected to continue over the medium term as reflected in planned new urban developments. The area along the coast between the Tongati and the Thukela Rivers within the iLembe District Municipality (DM) is experiencing developments of large residential estates and industries which require additional water resources for the North Coast supply area.

In addition, the development of the Dube Trade Port, which includes the King Shaka Airport and the commercial and residential development that the trade port will attract in the vicinity of La Mercy, will also result in increasing water requirements from the water resources.

The bulk water supply system of the KwaZulu-Natal coastal metropolitan area consists of an extensive network of water conveyance and treatment infrastructure (pipelines and aqueducts) transferring water from the main storage reservoirs, Midmar, Albert Falls, Nagle and Inanda Dams in the Moeni River System and Hazelmeer Dam on the Mdloti River to the water users. Furthermore, the Mooi-Mgeni Transfer Scheme augments the supply of the upper Mgeni River (Midmar Dam) and in the far north of the study area Stanger, in the iLembe DM, currently receives water from the Mvoti River.

In order to reconcile the future water requirements with the available water resources the Department of Water Affairs and Forestry (DWAF) initiated this reconciliation strategy study as the next step in finding appropriate water supply solutions for the region, as motivated in the following section.

RATIONALE FOR THE STUDY

As the trustee of the country's water resources, DWAF recognises the need for a dynamic and interactive planning approach to meet future water requirements. Over the past few years, DWAF, water services authorities (WSA) and water services providers (WSP) have undertaken a number of studies on water conservation and demand management interventions, possible additional sources of supply and bulk distribution infrastructure in the KZN metropolitan coastal area. Information from these investigations indicate that there is an imminent potential shortfall in water supply to the area as available supplies from the existing North Coast and Mgeni Water Supply Systems will soon be inadequate the growing support water to requirements.

DWAF has therefore commissioned this study to develop a strategy that will identify, prioritise and confirm the interventions that will be required to reconcile the water requirements with the available water resources for the next twenty five years. DWAF further recognises that the strategy must be built on existing planning initiatives of the WSAs and WSPs, which will be achieved by involving officials from organisations such as eThekwini Metropolitan Municipality, iLembe. uMgungundlovu and Ugu DMs. Msunduzi LM and Umgeni Water in the detail technical aspects of the study. The stakeholder engagement process of the study also aims to involve the broader public, through public meetings and newsletters after key milestones have been reached.

Integrated Water Resource Management (IWRM) is a participatory planning and implementation process, based on sound science, which brings together stakeholders to determine how to meet society's long-term needs for water and coastal resources while maintaining essential ecological services and economic benefits.

OBJECTIVES OF THE STRATEGY

The study, to develop a Water Reconciliation Strategy for the KZN coastal metropolitan areas, focuses on the following technical tasks:

- Developing water requirement and return flow scenarios.
- Assessment of the water resource availability.
- Evaluate bulk infrastructure plans and identify proposed extensions.
- Identify and assess appropriate water resource augmentation options.
- Investigate possible wastewater reuse options.
- Identify environmental and water quality related issues.
- Document the reconciliation process and strategy.

In addition to the technical tasks, the stakeholder engagement task will enable the public in the study area to participate in the process of the development of the strategy and by implication contribute to managing their water resources. This is done by taking into account the needs and expectations of existing and potential water users.

The following objectives have been set for the water reconciliation strategy:

- To identify interventions that will reconcile the water requirements with the available water for the period up to 2030.
- To develop a strategy that will be flexible to accommodate future changes in actual water use.
- To integrate augmentation and bulk supply options to achieve optimised overall benefits.
- To engage extensively with stakeholders to build partnerships and promote co-operation.
- Assess the potential savings that can be achieved through Water Conservation and Demand Management Measures as well as the potential for reconciling current and future water requirements.

THE STUDY AREA

The focus study area stretches from the KwaZulu-Natal North Coast to the Mgeni System (including the Mooi-Mgeni Transfer) with a planned transfer of water to the South Coast. The area includes portions of the uMgungundlovu, iLembe and Ugu District Municipalities, the Msunduzi Local Municipality and the eThekwini Metropolitan Municipality's area of jurisdiction (Figure 1).



Figure 1 : The Study Area for the KZN Water Reconciliation Strategy Study

The study is comprised of two parallel but integrated processes namely; a technical process and a stakeholder engagement process (Figure 2).



Figure 2 : Processes of the Study

THE TECHNICAL PROCESS

The technical aspect of the project is divided into three phases (see figure 3). The first, being the inception phase entails reviewing and summarising information from previous studies. Its deliverable is an Inception Report and Literature Review Report. Phase two comprises the development of the first stage water reconciliation strategy. This involves deriving water requirements and return flow scenarios, assessment of intervention options and compiling the strategy options available. The deliverable for this phase is a Reconciliation Strategy covering the period up to the year 2030 which contains medium term measures that are certain and broad long term interventions.

The third phase involves refining the long term water requirement and return flow scenarios, assessing the sequence of intervention options required to cover the full term planning horizon, documenting the reconciliation process, whilst considering other issues and concerns of note. During this phase, the second stage Reconciliation Strategy will be developed by improving the confidence of the long term proposed solutions. This water reconciliation strategy will form an integral component of DWAF's, Water Services Authorities' and Providers' planning for future water resources development for the Mgeni and North Coast Systems. According to Niel van Wyk, DWAF's Project Manager on this study, this reconciliation strategy will need to respond to actual water requirement scenarios. It is not a master plan but will provide guidance for future water use in an incremental way. He said it is not DWAF's intention to reinvent the wheel but rather to coordinate all available information in order to deal with the water requirements of the KZN coastal metropolitan area in a structure manner.

The Team assisting DWAF with this Study

The study team is comprised of a consortium of consulting firms with extensive experience in water resource management. The consortium is led by WRP Consulting Engineers, working with DMM Development Consultants, Golder Associates Africa, Kwezi V3, Zitholele Consulting and specialist consultants.

APPROACH TO THE STUDY (cont..)



Figure 3 : Different phases of the Technical Process

THE STAKEHOLDER ENGAGEMENT PROCESS

The stakeholder engagement process is introduced in order to raise awareness and to involve stakeholders in the study. This is in line with the National Water Act (Act No 36 of 1998) which also requires consultation with 'society at large' in the progressive development of a national water resource strategy, of which this Water Reconciliation Strategy forms part. For the purpose of this project the stakeholder engagement process will involve three integrated components.

The first component is that of establishing a Study Steering Committee (SSC). This will be done at the first public meeting where stakeholders representing various sectors of society in the study area will be afforded an opportunity to nominate representatives for their sector to represent them on the Committee. The Study Steering Committee is a voluntary body operating at a strategic level. The committee will meet with the technical team twice a year to ensure that the technical aspect of the study is transparent, open and consultative and that cooperative governance is embraced. The first public meeting is therefore very important for all sectors to attend, particularly those sectors that think they would be affected by the project.

The second level of stakeholder engagement is where the general public will be invited to review the First and Second Stage Reconciliation Strategies. Public meetings will be held once a year, at each phase of the project. The first public meeting will be held in June 2007. The aim is to announce the project and to elect a study steering committee. Information about the public meetings will be distributed through DWAF's regional office, Catchment Management Forums, municipalities and organisations with an interest in water resource management. The third component is awareness creation in the form of newsletters, media releases, radio and newspaper advertisements and information on DWAF's website: http://www.dwaf.gov.za.

Your comment is important

Your comment will ensure that all relevant issues are taken up in the development of the water reconciliation strategy for the KZN metropolitan and coastal areas. Either complete the attached reply sheet, write a letter, call or e-mail the public participation office.