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PRETORIA, 26 MAY  
MEI 2000

No. 21218

**We all have the power to prevent AIDS**

AIDS  
affects  
us all



A  
new  
struggle

**Prevention is the cure**

**AIDS  
HELPUNE**

**0800 012 322**

DEPARTMENT OF HEALTH

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         No.***GOVERNMENT NOTICE****Water Affairs and Forestry, Department of***Government Notice*

- 518 National Water Act (36/1998): Invitation to submit written comments in terms of section 110 on the proposed construction of Phase-1 of the Mooi-Mgeni River Transfer Scheme and environmental impact assessment relating thereto.....

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## GOVERNMENT NOTICE

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### DEPARTMENT OF WATER AFFAIRS AND FORESTRY

No. 518

26 May 2000

#### INVITATION TO SUBMIT WRITTEN COMMENTS IN TERMS OF SECTION 110 OF THE NATIONAL WATER ACT, 1998 (ACT 36 OF 1998) ON THE PROPOSED CONSTRUCTION OF PHASE-1 OF THE MOOI-MGENI RIVER TRANSFER SCHEME AND ENVIRONMENTAL IMPACT ASSESSMENT RELATING THERETO

The Minister of Water Affairs and Forestry intends constructing a government water work as contained in the Schedule hereto.

In terms of section 110(1)(b)(iii) interested parties are invited to submit written comments on the proposed water work and the environmental impact assessment by 31 July 2000. Comments must be submitted to the Director-General, Department of Water Affairs and Forestry, Private Bag X313, Pretoria 0001; Fax: 012- 336-8295 and marked for the attention of Mr. J.J. Geringer, Chief Engineer Project Planning East.

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#### SCHEDULE ON THE PROPOSED PHASE 1 OF THE MOOI-MGENI RIVER TRANSFER SCHEME (A GOVERNMENT WATER WORK) AND SUMMARY OF THE ENVIRONMENTAL IMPACT ASSESSMENT

##### A. PROPOSED CONSTRUCTION OF THE SCHEME

The Mgeni River is the major source of water for the Durban-Pietermaritzburg region. The river is already fully developed (with 4 major dams, the key one being the most upstream Midmar Dam), with no scope for further development within its catchment. In 1996, in terms of Section 58 of the then Water Act (Act 54 of 1956), a White Paper (WP C-'96) was published to announce the intention of the Minister of Water Affairs and Forestry to implement the Mooi-Mgeni River Transfer Scheme. The implementation stage started with the further refinement and design of the project

In order to postpone the highly capital intensive construction phase as long as possible, great attention was given to the management of demand. The postponement of some 4 years gave further opportunity for the optimising of the design.

The Minister of Water Affairs and Forestry now proposes to construct the reconfigured Phase 1 of the Mooi-Mgeni River Transfer Scheme comprising a new 8 m high diversion weir on the Mooi River at a site immediately downstream from the existing 2m high Mearns Weir, the provisioning of a standby pumping capacity at the existing Mearns pumping station, the raising of the Midmar Dam by 3,5 m to effectively store water that will be pumped from the Mooi River and obtaining rights (servitude of aqueduct) along the receiving stream. These measures will increase the yield of the Mgeni System by 25 million m<sup>3</sup> per annum at 99 % assurance of supply at a capital cost, excluding VAT, estimated at R83,5 million at today's prices. An estimated further R3 million will be required for mitigation of the receiving streams.

It is proposed that the construction of Phase 1 of the transfer scheme commences at the end of the year 2000 with completion at the end of 2002.

##### B. SUMMARY OF ENVIRONMENTAL IMPACT ASSESSMENTS (EIA)



Over the past five years, a number of environmental planning investigations, supported by specialist studies have been undertaken for the infrastructure components comprising the first phase of the Mooi-Mgeni Transfer Scheme (MMTS). The planning process has been characterised by full public participation and has been iterative in nature. The findings of the environmental impact assessments undertaken have influenced the design and final configuration of the scheme, thereby minimising potential impacts. Net residual impacts associated with the scheme will be further reduced through the implementation of recommended mitigation. For practical purposes the various components that comprise the scheme have been registered separately with the KwaZulu-Natal Department of Agriculture and Environmental Affairs as EIA/0091, EIA/0691 and EIA/1356.

The following section summarises the scope of work, results, and conclusions of the impact assessments undertaken for each scheme component which, together, constitute the assessment for the project as a whole.

## **1. Mearns Weir and the Installation of Stand-by Capacity at Mearns Pumping Station**

Various levels were considered originally for an impoundment at Mearns. Comprehensive social and biophysical impact assessments were undertaken, supported by relevant specialist studies which included an assessment of in-stream-flow-requirements. Key issues of concern, which were raised during the planning process, included:

- 1.1 The impacts on Rosetta associated with flooding;
- 1.2 Potential impacts on resident crane populations associated with the inundation of wetlands;
- 1.3 Impacts on employment and agricultural productivity associated with the loss of riparian water use entitlements.

In respect of the above concerns, the decision was taken to plan for the construction of a substantially lower weir with a full supply level at 1381,9m above sea level, in order to reduce environmental impacts to acceptable levels. With regards to point 1.2, the EIA found that the construction of the Mearns Weir does not pose any significant environmental threats. In respect of point 1.3 the possibility of allowing farmers to pump directly from the impoundment will be explored to further mitigate impacts on irrigated farm land.

Provision for standby pumping capacity at the Mearns Pumping Station has already been made in the past but has never been installed. The current action only requires the installation of an additional set of pumps in the already existing station and will therefore not have any impact on the environment.

An Environmental Management Plan (EMP) will be prepared and implemented during the detailed design and construction phase of the project to guide and guarantee the process of impact management.

An EIA report was lodged with the KwaZulu-Natal Department of Agriculture and Environmental Affairs to obtain project authorisation in terms of the Environment Conservation Act (Act 73 of 1989). This particular application was registered as EIA/0091.

## **2. Raising of Midmar Dam by 3,5m**

An EIA was undertaken into the impacts associated with the raising of Midmar Dam. Key issues of concern included:

- 2.1 Impacts on the existing Midmar Game Reserve following inundation of approximately 81 ha, or 9% of the game reserve. The game reserve is currently 962 ha in area, and would reduce to 881ha, with inundation. An issue of concern is the loss of Southern Tall Grassveld, a veld type which is poorly conserved in KwaZulu-Natal with only 0,9% being formally conserved and 12,24% of this conserved in Midmar Game Reserve.



- 2.2 Impacts on recreators associated with the loss of land, and access infrastructure, including roads, jetties, and day visitor facilities;
- 2.3 Changes in the downstream flood hydrology which could impact on the 1:50 year floodline and on residential property in Howick.

In respect of points 2.1 and 2.2 it should be noted that impacts associated with the land surrounding the dam basin must be viewed within the context of the Agreement (8 January 1973) between DWAF and the Administrator of Natal Parks Board (now KwaZulu-Natal Nature Conservation Service). Discussions are currently in progress to reach consensus amongst the various parties.

In respect of point 2.3 it has been found that the dam can be raised in such a way as to avoid any impact on downstream building lines associated with a potential change in flood hydrology.

An Environmental Management Plan (EMP) will be prepared during the detailed design and construction phase of the project to guide and guarantee the process of impact management. The EMP will focus on mitigating the impacts associated with the construction process as well as potential changes in zonation on and around the surface of the dam and other impacts associated with an increased area of inundation.

An EIA report was lodged with the Department of Environmental Affairs and Tourism to obtain project authorisation in terms of the Environment Conservation Act (Act 73 of 1989). The particular application was registered as EIA/0691.

### **3. Transfer of Water from the Mooi Catchment into the Receiving Streams**

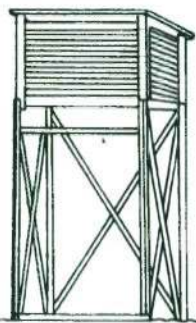
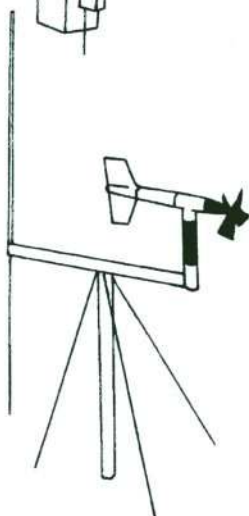
The Mooi-Mgeni Transfer Scheme will discharge into Midmar Dam via the Mpofana, Lions, and Mgeni rivers. The emergency transfer scheme, which was implemented during the drought of 1983, currently transfers a maximum of  $3,2 \text{ m}^3/\text{s}$ . A comprehensive EIA report concluded in 1996 that the maximum and average transfer flows in the receiving rivers should not exceed 6 and  $4,5 \text{ m}^3/\text{s}$ , respectively. The maximum transfer capacity of Phase-1 of the scheme is  $3,2 \text{ m}^3/\text{s}$  which is well below the allowable maximum  $6 \text{ m}^3/\text{s}$  and has scope to be increased to  $4,5 \text{ m}^3/\text{s}$  with further phases. This has reduced the potential impacts associated with the inter-basin transfer.

A further environmental investigation, comprising a combined EIA and Environmental Management Plan (EMP), have subsequently been initiated with the aim of reviewing the findings of the 1996 study. The EIA will guide the compensation process for properties which will be affected by raised river levels while the EMP will guide and guarantee the process of impact management.

This report will shortly be lodged with the KwaZulu-Natal Department of Agriculture and Environmental Affairs to obtain project authorisation in terms of the Environment Conservation Act (Act 73 of 1989). This particular application was registered as EIA/1356.

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