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GOVERNMENT NOTICE

DEPARTMENT OF WATER AFFAIRS

No. 91 **12 February 2010**

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 THE MOOI-MGENI TRANSFER SCHEME PHASE 2 AND THE ENVIRONMENTAL IMPACT ASSESMENT RELATING THERETO

The Minister of Water and Environmental Affairs intend constructing the government water works 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 works and the environmental impact assessment by 15 April 2010. Comments must be submitted to the Director-General, Department of Water Affairs, Private Bag X313, Pretoria; Fax; 012 336-7399 and marked for attention of Mr. JA Bester, Acting Chief Engineer Options Analysis (East).

SCHEDULE TO THE PROPOSED CONSTRUCTION OF THE MOOI-MGENI TRANSFER SCHEME PHASE 2 (GOVERNMENT WATER WORKS) AND A SUMMARY OF THE ENVIROMENTAL IMPACT ASSESMENT

A. PROPOSED CONSTRUCTION OF THE SCHEME

The Mooi-Mgeni Transfer Scheme Phase 2 (MMTS-2) will augment the water supplies of the Mgeni System that supplies domestic and industrial water to South Africa's second largest regional economy, viz the Durban-Pietermaritzburg region. The system's main water users are the eThekwini Metropolitan Municipality, the Msunduzi Local Municipality and the uMgungundlovu District Municipality. Together these three municipalities serve a total urban and rural population of about 5 million people. The Mgeni System yield is currently 334 million m^3/a. Construction of the MMTS-2 will increase the current system yield by 60 million m^3/a to 394 million m^3/a. A locality map of the proposed scheme is attached.

The MMTS-2 will consist of:

1. SPRING GROVE DAM AND APPURTENANT WORKS

- *Spring Grove Dam*
  The Spring Grove Dam will be situated on the Mooi River approximately 2 km south-west from the Rosetta Village in the KwaZulu-Natal midlands. The dam will be provided with outlet works capable making river releases that will meet the demands of downstream users as well as the ecological reserve. The outlet works will also be capable of abstracting water from the dam for transfer to the Mgeni catchment. Technical details of the proposed dam is summarised in the table below:

Description	Detail	Unit
Dam type	Composite	-
Gross full supply capacity	142.50	million m^3
Net full supply capacity initially	141.60	million m^3
Dam's contribution to system yield at Inanda Dam	60.00	million m^3/a
Surface area at full supply level	1 035	ha
Full supply level (FSL)	1433.50	m.a.s.l
Riverbed level (RBL)	1401.00	m.a.s.l
Dam wall length	approx. 733.10	m
Maximum height of dam wall (NOC – RBL)	approx. 38.50	m
Dam height at FSL (FSL – RBL)	32.50	m

* The above detail is subject to final design which may create minor changes to the level of the non-overspill crest (NOC) and the overall length of the dam wall.

- *A flow measuring weir on the Mooi River immediately downstream of the dam*
  A Crump type flow gauging weir needs to be constructed immediately downstream of the dam on the Mooi River. The location of the weir is at a point about 200m from the dam's upstream reference line where suitable hydraulic conditions for flow gauging occur. The approximately 1 m high weir will be used to record and calibrate all operational releases made from Spring Grove Dam.

- *A flow measuring weir on the Mpofana River downstream of the outfall works*
  A river flow gauging weir is to be constructed on the Mpofana River about 400m downstream of the transfer outfall works and immediately upstream of the Mpofana Falls. The facility will be used to manage the flows in the Mpofana River in accordance with the requirements of the Environmental Management Plan for the receiving streams that has been approved for Phase-1 of the Mooi-Mgeni Transfer Scheme.

- *Little Mooi River flow gauging weir*
  A river flow gauging weir shall be constructed on the Little Mooi River about 380 m downstream of the Rosetta/Kamberg/Estcourt road bridge on the property Sansouci A 8303. The site is about 37 km upstream of Mearns Weir (measured along the river) and has coordinates 29°19'2.8" S and 29°43'11.1" E. The purpose of this weir will be to coordinate and manage downstream releases and transfers from Spring Grove Dam.

2. MMTS-2 CONVEYANCE SYSTEM

The MMTS-2 transfer conveyance will comprise the following components:

- *The Spring Grove Pumping Station*
  The pumping station with a maximum pumping capacity of 4.5 m^3/s will be located a short distance downstream of the dam on the right bank of the Mooi River. The pumping station will be provided with four 1.5 m^3/s pumping sets of which one will serve as a standby unit.

- *Rising main from the pumping station to the break pressure tank at Gowrie*
  The rising main of about 1 400 mm diameter from the Spring Grove Pumping Station to a new break pressure tank at the watershed at Gowrie, Nottingham Road

will be approximately 6km long. The pipeline will traverse some smallholdings of Rosetta for the first 3 km whereafter it will join the existing Mearns pipeline and run next to it in the existing servitude of aqueduct to the break pressure tank.

- *Break pressure tank at Gowrie*
  The existing break pressure tank of the Mearns pipeline at Gowrie will be demolished and replaced with a new one with a capacity capable of serving both the MMTS-2 and the existing Mearns pipeline. The new single break pressure tank will be constructed a safe distance away from any buildings and will aesthetically blend in with the surrounding residential structures.

- *Gravity main from the break pressure tank to the outfall works on the Mpofana River*
  A new gravity pipeline, of about 600 mm diameter, will run next to the existing 900 mm diameter Mearns gravity pipeline in the same servitude of aqueduct for a distance of approximately 8km down to the existing outfall works on the Mpofana River. Provision of the new gravity main will increase the transfer capacity from the current 3.2 m^3/s to 4.5 m^3/s.

- *Outfall works on the Mpofana River*
  The existing outfall works will be upgraded to accommodate the new gravity main. In addition, special measures will be provided to protect the river banks against scouring due to the increased discharge.

B. SUMMARY OF THE ENVIRONMENTAL IMPACT ASSESMENT (EIA) (For more information please see full EIA on the website http://www.mmts-2.co.za/)

- *Fish Barrier Weir*
  It is proposed to construct a fish barrier weir on the property Coldstream (Vaalekop 3297 sub 2 of sub 46) about 1.2 km upstream of the Inchbrakie Falls and about 200m upstream of the upstream extent of Spring Grove Dam's. The purpose of the weir is to prevent smallmouth bass found in the Mooi River downstream of the Inchbrakie Falls, a natural barrier to bass movement, from entering the Upper Mooi River where it can displace brown trout that has been present in these waters since 1890. The weir will protect the fly fishing industry of the Upper Mooi River that relies on the presence of brown trout and is therefore a socio-economic mitigation measure. The fish barrier will be a concrete weir with an overall length of approximately 120 m containing a 75 m long ogee spillway with a maximum height of less than 5 m.

- *Acquisition of land*
  The acquisition of land will be done according to best practises in accordance with standing legislation.

- *Impact on quality and quantity of river flow*
  The proposed dam will make releases to existing downstream users as well as for ecological requirements.

- *Wetlands*
  Some wetlands will be inundated. The property Strathern Farm (Riverholm15967/3 and 15967/2) will be acquired in its entirety. This property, situated on the southern side of the dam's impoundment, contains a considerable area of wetland that will provide a habitat for animals seeking refuge. It is also proposed that this area will be retained in its natural state and that no development be allowed thereon. Additional damaged wetlands will be rehabilitated.

- *Relocation and upgrading of access roads*
  The existing access roads to the Vaalekop South Smallholdings as well as Riverholm Remainder will become inundated by the impoundment of the dam and need to be relocated. This relocation will occur mainly on the properties Inchbrakie 14850 and Stockton 14870/12.

  Road D146 in Rosetta, taking off from the R103, will be used as the main access road to the dam site and needs to be upgraded for this purpose.

- *Rock quarry*
  Should the contractor decide to mine the rock quarry identified on the property Spring Vale 2170 and Wellington 2212, it would be necessary to upgrade the access road to the site.

- *Culverts and Embankments*
  The Loteni Road P27-30 from Nottingham Road, could be affected by backwater levels in the dam during high floods. Mitigation of the impact will have to be negotiated with the appropriate road authority and will largely depend on the final spillway configuration selected for Spring Grove Dam. Another section of the road, also an embankment and culvert structure that could possibly be affected is located on the property Ebernburg.

- *Inchbrakie Plants*
  Some rare plant communities growing at the Inchbrakie Falls will be lost through inundation of the falls by Spring Grove Dam. It has, however, been established that these plant communities can be retained for the ecology if transplanted at the Reekie Lyn Falls some 20km upstream from Inchbrakie Falls on the Mooi River.

- *Graves*
  Thirty (30) graves have been identified within the Spring Grove Dam basin area. They will have to be relocated. Of these, 22 have been identified through a formal planning investigation. Subsequent to this investigation a further 8 graves were identified on the property Riverholm 15967 sub 2 by the uMngeni Local Municipality Ward 3 committee members.

- *Cultural Sites*
  Four historical and cultural sites have been identified within the Spring Grove Dam basin area through a formal investigation and will have to be mitigated. One rock painting is on the property Vaalekop 3297 sub 16 and a settlement site on the property Vaalekop 3297 sub 43 fall below the full supply level of the dam, while the Smythe family farmhouse and a well preserved cottage built for indentured Indian labourers on the property Ebernburg 2210 fall within the dam's "buffer line".

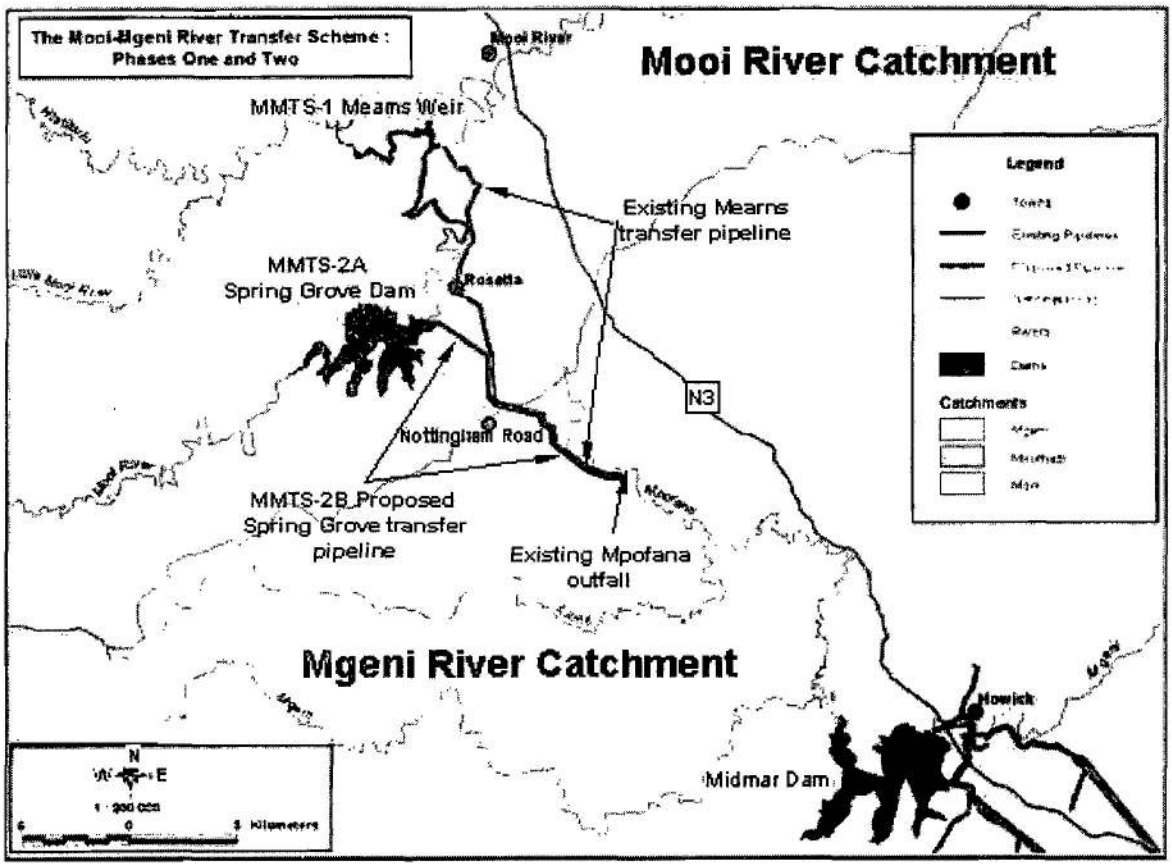
- *Construction related impacts*
  Construction activities result into a range of impacts that are common to most construction sites. Potential impacts include dust, noise, traffic, influx of people, crime and destruction of valuable flora and fauna. The Environmental Management plan will address and mitigate these impacts.

- *Water for social and economic development*
  The existing Mgeni System is stressed and demand outstrips supply. This scheme is urgently required to support the social and economic development in the region.

- *Job creation*

  Up to 500 temporary jobs will be created during the construction phase of the project as well some permanent jobs in the subsequent operational phase.

- *Environmental Management Plan*
  Detailed environmental and social specification described in the Environmental Management Plan in terms of the Record of Decision (RoD) will be implemented by the Department of Water Affairs.


The Mooi-Mgeni River Transfer Scheme : Phases One and Two
Mooi River
Mooi River Catchment
MMTS-1 Mearns Weir
Existing Mearns transfer pipeline
MMTS-2A Spring Grove Dam
Rosetta
Nottingham Road
N3
MMTS-2B Proposed Spring Grove transfer pipeline
Existing Mpofana outfall
Mgeni River Catchment
Howick
Midmar Dam
Legend
Towns
Existing Pipelines
Rivers
Dams
Catchments
N
E
Kilometers