

Media release

Water supply in the Crocodile West River System is well planned

The Department of Water Affairs is making significant progress toward ensuring that future water requirements in the Crocodile West River System are met. The Crocodile West River catchment is one of the most developed river catchments in the country. It is characterised by the sprawling urban and industrial areas of northern Johannesburg and Pretoria, extensive irrigation downstream of Hartbeespoort Dam and large mining developments north of the Magaliesberg.

The Crocodile River is one the country's rivers most severely impacted by human activities, and where more specific management strategies are crucial.

As such, at the recent Strategy Steering Committee meeting of the Department of Water Affairs (DWA), on the Crocodile West River System key scenarios were evaluated of future water requirements, supply and availability taking into account growth in water requirements due to anticipated developments around the coal reserves close to Lephalale. Amongst the initiatives implemented by the DWA and local authorities are the following to ensure sufficient water supply:

1. The *Mokolo-Crocodile Water Augmentation Project* (MCWAP): Construction of Phase 1 of the project will begin in the second half of 2011 to augment supply from the Mokolo Dam through a parallel pipeline from the Mokolo Dam to the Steenbokpan area. Delivery of water is expected in July 2013. Further phases of the project are expected to be constructed after 2013 – these will include amongst other a transfer scheme from the Crocodile West River at Vlieëpoort near Thabazimbi to the Lephalale area.
2. Water Conservation and Demand Management activities such as addressing water losses through replacement of leak prone pipelines, leak detection, pressure reduction, rezoning and the improvement of reservoir integrity are being implemented by municipalities in the Crocodile West River System.

In addition the Department will shortly also engage with water users to set up a System Operating Forum (SOF) with the specific purpose of establishing operating rules for all the significant dams in the system. One of the objectives of the SOF will be evaluating and selecting appropriate drought management rules as a part of preparedness planning and efficient distribution of the available water.

HARTEBEEPOORT DAM

Despite the challenges, important work is also being carried out to improve the water quality in the Crocodile West River system. DWA is implementing the Harties Metsi A Me project which was established in 2005 to improve amongst other things the water quality in the Hartbeespoort Dam. The project is regarded as a total remediation programme for the dam which is severely impacted by upstream pollution sources, eutrophication. Strategies and plans are being implemented to ensure the improvement of the dam's water quality and biodiversity. The main recommendation from the Reserve study also indicated that water quality must be improved to improve ecology. The Strategy Steering Committee (SSC) will promote and coordinate an approach for continual improvement of water quality.

BACKGROUND

The Department of Water Affairs (DWA) first developed a Water Reconciliation Strategy for the Crocodile West Water Supply System and published it in 2008. The strategy was primarily focused on the quantitative

reconciliation of the requirements for and availability of water, with due consideration of water quality where it impacts on the reconciliation. Its main aim is to ensure sufficient and reliable supply of water of appropriate quality to all existing as well as future users, taking into account provision for the ecological Reserve.

“Planning for existing and future water requirements to ensure growth and development in South Africa is critical to our core function as the Department of Water Affairs”, says Mr Tendani Nditwani, Study Leader for the Maintenance of the Reconciliation Strategy for the Crocodile River West system.

The Strategy is designed to cater for a spectrum of plausible future scenarios, and also to be both flexible and robust under changing conditions. The main strategies to ensure sufficient water use are as follows:

- (i) Gauteng North, which is mainly the part of the catchment south of the Magaliesberg: Water for urban and industrial use in the Gauteng North area will continue to be supplied by Rand Water.
- (ii) The Crocodile West River catchment north of the Magaliesberg: Growth in water requirements in this area will be supplied from the growing effluent return flows from the urban and industrial users south of the Magaliesberg.
- (iii) The Lephalale area: Surplus effluent from the Crocodile River catchment will be supplied to the Lephalale area. Future projected deficits will be made up with transfers from the Vaal River. It has already been identified that effluent from Johannesburg Water Treatment Works situated South of Soweto could be used for this. This part of the strategy is also covered in the Vaal Reconciliation Strategy.
- (iv) Establish a Strategy Steering Committee (SSC) to take responsibility for the implementation of the Strategy and to make recommendations on long-term planning activities required to ensure ongoing reconciliation of water requirement from and available supply to the Crocodile West Water Supply System.

The SSC was established in July 2010 and had its second meeting on 24 February 2011. The SSC considered important changes to the situation in preparation for a major strategy review that is scheduled for September 2011.

DEVELOPMENTS

Current and future developments around the available coal reserves in the Steenbokpan area close to Lephalale in the Limpopo Province are proposed by number of developers and the DWA has to fulfill its mandate as custodian of water resources in South Africa to ensure adequate planning for future water needs. However, the biggest influence on the Strategy flows from South Africa undertaking to decrease its carbon footprint. The result is evident in the Integrated Resource Plan (IRP) for electricity which shows a dramatic reduction in coal-fired power stations and an increase in renewable energy sources as well as nuclear stations.

The net result is a dramatic reduction in coal-fired water requirements in the Lephalale area with the long term demand dropping from 137 million cubic meter per annum (m^3/a) to 39 million m^3/a in two of the scenarios.

This resulted in a change in the water situation in the Crocodile West River catchment from one where growth in return flows being supported with additional transfers from the Vaal River surplus to a situation where a surplus treated effluent will exist in the Crocodile River catchment. The planning focus will now shift to determine the best use of this growing surplus in the water stressed inland areas of the country.

Some of this water will have to be reserved for possible coal mining activities in Lephalale. The Olifants River catchment to the east is also under severe pressure and some of this water may have to be transferred to the mines in this area, albeit at a high cost.

The other option is to recycle some of this water in Gauteng itself after additional treatment. The SSC will consider all of these in updating the strategy.

The SSC will meet again later this year to assess the results of technical assessed and a revision of the strategy will be discussed and debated by all stakeholders. DWA will then use the guidance of the SSC members to formulate the important Second Water Resource Reconciliation Strategy for the Crocodile West River system.

In conclusion the Strategy Steering Committee reiterated the importance of implementing Water Conservation and Water Demand Management by each municipality. This means that every water user must take water conservation more seriously to ensure that the water that is available is used much more effectively.

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