

WITZENBERG - RBIG

Witzenberg Municipality experience serious water problems during the 2004/5 drought period, specifically at TULBAGH. The situation forces the municipality to investigate the available water resources for Tulbagh as a matter of urgency. A report completed in 2005 highlights the possible solutions based on very limited available information. The report concluded that the Schalkenbosch tributaries can contribute towards a short term solution and it identify water demand management, the clarification of the safe yield available from groundwater resources and the Mitchell's Pass diversion as possible next steps to be taken.

Following the outcome of the 2005 study a further study was conducted to address the identified problem areas. In June 2008 a report related to Witzenberg Water Management was completed. This report quantifies all available water resources (surface and groundwater) for all the towns within the Witzenberg area. A significant amount of time was spent on a water audit process to verify unconfirmed high non-revenue water figures.

Based on still limited data, dam balancing exercises identify a critical water situation in not only Tulbagh, but also at Wolseley and PA Hamlet. The 2008 report recommended that developments in all three towns be limited until sustainable long term water resource options are implemented. During the second half of 2008 the DWA made additional funding available for the investigation into "ready to built" bulk water supply systems to areas in serious need.

A detail investigation based on the 2030 water demand at a surety of supply of 95%, evaluated 28 different combinations of options for Tulbagh, seven for Wolsley and four for PA Hamlet. Based on Unit Reverence Values and public participation the following options were selected and presented for funding through the RBIG program:

TULBAGH

The abstraction of approximately 120 l/s from the Klein Berg River at a point refer to as the "De Vlei" abstraction point at a cost of R30 880 560, excluding VAT. This project includes additional storage capacity of approximately 750 000m³ and an upgrade of the existing treatment facilities.

Improvements at the Schalkenbosch scheme, one of the existing water resources, also need to be completed at an estimated cost of R2 310 000, excluding VAT, bringing the total project cost to R33 190 560, excluding VAT.

WOLSELEY

The more efficient use of Witzenberg's already allocated "lei water" from the Artois canal system for potable water use. This project will result into a change in the water use from a lei water application to potable use and will consist of an abstraction point in Wolseley from the canal to the bulk water reservoir, as well as an upgrade of the existing bulk infrastructure to provide a joint capacity of 58.8 l/s. The exchange of water use is seen as a temporary arrangement till Mitcheals Pass can supply in the projected needs.

The project cost amounts to R11 854 100 (excluding VAT).

PA HAMLET

Adequate safe yield is already available from the Ceres Dam as part of the existing allocation to Witzenberg. The proposed project consists of the upgrading of an existing 900 mm diameter pipeline, an additional pump station and a new 250 mm diameter pipeline to link the existing Koekedouw Irrigation infrastructure with the existing distribution infrastructure available to PA Hamlet to supply in the 54 l/s design capacity required.

The project cost amounts to R11 412 125, excluding VAT.

Taking all factors into consideration, an amount of R57.92 million was approved for the implementation of the projects over the next 4 years as shown in Table 1.

Table 1: Total RBIG Project Cost contribution

Project	Cost (R)
Tulbagh: New	R 30 880 560
Tulbagh: Existing (Schalkenbosch)	R 2 310 000
Wolseley	R 11 854 100
PA Hamlet	R 11 412 125
Sub Total	R 56 456 785
Social Component (RBIG) = 90%	R 50 811 107
VAT	R 7 113 555
TOTAL	R 57 924 662

The balance of the required funds to complete the projects will be provided by the Witzenberg Municipality. Tulbagh has been identified as a priority and projects have been initiated to address the bulk water problems. Wolseley will follow, with PA Hamlet receiving attention in about two years, depending on the availability of the funding from the RBIG program.