

Challenges facing the implementation of water demand management initiatives in Gauteng Province

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Abstract

Gauteng Province is the industrial heartland of South Africa and is one of the few large urbanised areas in the world that is not located adjacent to a major source of water. The demand for water in Gauteng outstripped the local resource of the Vaal River many years ago with the result that the area relies heavily on large water schemes which transfer water from adjacent river basins into the Vaal River basin. The water transfer schemes associated with the Vaal River basin are large by any international standards and the water resource system is one of the most complex and integrated anywhere in the world.

As the demand for water continues to grow in Gauteng, the Department of Water Affairs and forestry is investigating the various alternative water resource development options as well as the potential for reducing the growth in demand through water conservation (WC) and water demand management (WDM) measures. From the most recent investigations it has become clear that WDM is no longer considered a possible option but rather a necessity that must be implemented as a matter of urgency. It has been established that even if new water resource development options are implemented, it will still be necessary to introduce the WDM measures. In this regard, several of the large municipalities in Gauteng have already commenced with various WDM interventions, some of which are already in operation and showing significant savings.

The paper will highlight the need for WDM in Gauteng and provide details of the latest investigations into the potential savings that can be achieved. Some of the key problems that are hampering the implementation of WDM interventions in Gauteng will be discussed and the measures taken to overcome these difficulties will be explained. The benefits that can be obtained from a potent web-based data acquisition system which is already operational in several parts of Gauteng will also be highlighted.

The paper concludes with the clear message that wasting water in Gauteng province is a luxury that cannot be sustained and measures to eliminate the wastage must be introduced as a priority before the situation deteriorates to such an extent that water shortages become a common occurrence.

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