

A FRAMEWORK FOR INCLUDING THE IMPACTS OF A CHANGING CLIMATE ON FUTURE WATER SECURITY

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ABSTRACT

Umgeni Water, the second largest bulk water utility in South Africa, is responsible for supplying bulk potable water to some 6 million people at high levels of assurance. The demand for water is increasing as the utility increases its customer base, and addresses the water requirements of the millennium development goals. To maintain this level of service, timeous decision making regarding future water resources and infrastructure requirements is of paramount importance. To facilitate this, a framework that incorporates a changing climate has been developed to provide plausible scenarios of water resources and water supply in the future. The framework is presented as an adaptive management technique, and as a proof of concept, a model configuration and results from the Mgeni catchment in South Africa are discussed.

PALAVRA-CHAVE: Climate Change, Hydrology, Adaptive Management, Risk, Water Yield, Assurance of supply