



## water & sanitation

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

### INTERNET ARTICLE

#### **Rain and Sterkfontein water raise water levels at Vaal Dam**

18 November 2013

The water level at Vaal Dam has risen by five percent from 26% to 30,9% in a matter of days, thanks to the recent heavy rains and the release of volumes of water from Sterkfontein Dam.

The rise could not have come at a better time for Gauteng consumers who are reeling from the effects of the debilitating drought.

In the past few months Gauteng became the driest province in the country after water levels at Vaal Dam plunged to 27%, an all-time low in the history of the dam. The figure meant that unless something was done urgently to rescue the situation, the economic hub of South Africa would wobble to its knees, plunging the country into a serious economic crisis.

However, last week journalists watched in awe as engineers from the Department of Water and Sanitation opened the sluice gates of South Africa's water 'reserve bank' to replenish Vaal Dam.

Gauteng residents heaved a collective sigh of relief when the sluice gates were dropped to allow a volume of 20 cubic metres per second water to flow towards Vaal Dam. Although water was released on Monday, it will take minimum five days to reach its destination.

Added to this scientific miracle were the heavy downpours that fell in most parts of Gauteng recently. Hydrologists have warned us that the next three months would mark the arrival of above normal rainfalls in most parts of the country. In some cases, they said, heavy rains might result in flash floods.

The volume at the Vaal will rise gradually to reach its peak of 70 cubic metres per second at the beginning of December before the flow is reduced. The process will then taper off back to the initial 20 cubic metres per second towards the end of December when the release will be ended.

The release of water from Sterkfontein was authorised by Minister of Water and Sanitation, Nomvula Mokonyane as a measure to keep Vaal Dam alive.

Why water from Sterkfontein?



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Over a period of five years a dispute over a local municipality tender to appoint a construction company that should build an alternative national route to Durban via Bergville deprived tourists an idyllic scenery of Sterkfontein Dam. Literally, the dam is built in the middle of nowhere. Tourism in the area died as a result of dispute and consequently, a plethora of holiday destinations were adversely affected.

Known as the reserve bank of water for South Africa, Sterkfontein is a unique water storage facility that boasts a capacity of 2,656 million cubic metres. It was built in 1969 mainly to serve the economic interests of an expanding Greater Johannesburg which formed an economic pillar of South Africa's economy. Nestled between the rolling Drakensberg Mountains, Sterkfontein consists unique hydrological features that make it stand out from other dams in the country. Although it is not in the category of top nine big dams of South Africa, the dam plays an important role in the socio-economic development of the country.

It has an extended nature conservation area around it and is characterised by endless expanse and a lot of water. Besides long walks and hikes, it offers watersport and fishing facilities. Its rare bird species makes Sterkspruit a compulsive route to Natal Midlands

The dam has a curious history, having been built on a number of farms that were expropriated from farmers who lived in the area. The initial site chosen for the construction of the dam was in the adjacent valley to the west on the Elands River. This was the preferred option from an engineering perspective because it would involve a smaller dam wall.

However shortly before construction was about to start the site on the Nuwejaarspruit was selected for political reasons because it would partially have flooded the planned Qwaqwa Homeland. Technically, the dam would have been built in a 'foreign land' which would have made a mockery of apartheid's homeland independence policy.

Sterkspruit Dam has a rare uniqueness in that very little of its water is comes from rainfall. The dam was not built on a river but instead it is sited on what can at best be classed as a large stream in the upper reaches of a valley on the Nuwejaarspruit. Its catchment area is less than three times the water surface area of the dam and therefore not risk to a flood. For this reason, the main dam wall does not have the need for a spillway. Any excess rain water can be safely ejected from its outlet valves. The dam is a highly effective reservoir and has the depth to store a large amount of water, with very little loss to evaporation.

Coupled with the downpours that are currently falling in parts of Gauteng, Sterkfontein water is likely to bring some relief to the drought-stricken province which is currently under the stranglehold of a series of water restrictions.

However, despite the envisaged relief, water conservation must continue for the sake of sustainable development. It can only take South Africans to remove the name of the country from the World Bank list of 30 countries that are faced with a bleak future in 40 years unless they start saving water.

The storage of water and water harvesting must be uppermost in our minds as we use water for different reasons. Given the drought situation, water must be used first and foremost for domestic consumption. This means that the little resource that we have at our disposal must be prioritised for drinking, cooking and washing. The second usage must be reserved for economic development and its sustainability. For instance, agriculture cannot survive without a drop of water. It is important, however, that recycled water be used in such instances rather than using drinking water for growing crops.



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It is against this background that we as affected South Africans we should have our priorities of water use in order for the sake of posterity

**Themba Khumalo**