

## High level talks around Western Cape water crisis continue

The Western Cape provincial government is again calling on all stakeholders and the public to do everything possible to reduce water use. The average level for dams across the province for the week starting October 9 is 36%, compared with 63% last year. Theewaterskloof dam is currently at 27.6%, Voëlvlei dam at 32%, Clanwilliam dam at 40% and Brandvlei dam at 32%. "We are doing everything within our power to ensure no community runs dry over the coming months, but we must advise that matters will likely only get worse from here on out until our next rainfall season," Western Cape Environmental Affairs and Development Planning minister Anton Bredell said in a statement on Monday. Bredell met with Water and Sanitation Minister Nomvula Mokonyane last week to discuss ongoing augmentation schemes. "We had a productive meeting and I remain confident that all three spheres of government, working better together, can pull the province through this drought," he said. Bredell is also set to appear before the national Portfolio Committee on Water and Sanitation within the next few days to discuss the ongoing crisis.

### Desalination—a risky option

Cape Town Mayor Patricia de Lille had earlier announced CPT's plans to produce an extra 500ML of water through a mix of desalination plants, ground water extraction, and water reuse. The suggestion temporarily brought relief to Capetonians. Yet, while desalination is a popular solution for many, it is not an overnight one...

### How long does it take to build a desalination plant?

It takes up to two years from starting construction to finishing it. If we include the process from the very beginning – as in, gaining the permission to build and carrying out environmental impact research – it can be as long as three years. A company looking to build would need 25 acres of land that straddles the sea. Once water extraction equipment is in place, work then has to begin on building the pipes to take clean water into the city. That water then has to find its way into the supply, and maintenance staff have to ensure nothing will leak into nearby aquifers.

Besides environmental risks, desalination is and energy intensive, and given this was a region that struggled with electricity load-shedding just two years ago, the vast amounts of energy these facilities use need to be considered. Nothing can be built unless guarantees are properly sourced and given to government departments.

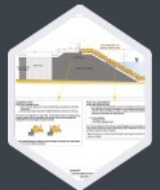
### Are these facilities environmentally friendly?

It's not just a case of bringing water in to City. Construction firms must be responsible for dealing with the 'outflow' these plants churn out. The treatment process creates a lot of brine (water with exceptionally high quantities of salt that makes it thicker). This needs to be separated from any potential drinking water. The brine simply cannot be dumped back into the ocean, either. It's extremely harmful to marine life. With it being denser than surface water, it sinks the ocean floor and kills off whatever is in its path. The treated water also contains residue of chemicals used to sanitise the water itself, which means these facilities need to ensure harmful materials aren't corroding any pipework. It's expensive, time-consuming, and logistically a nightmare. The next best solution (reverse osmosis) is only marginally quicker. Yes, desalination is perhaps the most popular solution. But it may well be our least practical to help ease the water crisis.

Sources: [Engineering News, 09 October 2017](#); [The South African, 09 October 2017](#)

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