

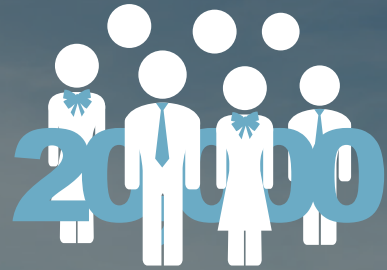


The City of Cape Town, as well as the wider Western Cape is currently experiencing the worst drought in a century.

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This has put extreme pressure on the province's water resources, which have always been limited. The area has been under water restrictions for nearly two years, with stricter restrictions expected to come into effect on February 1st. At 13,5% dam storage, the City will turn off almost all the taps - this is Day Zero. It is currently expected that the City will run out of water within three months. Should Day Zero come to pass, the taps in the City will run dry and residents will be forced to collect water from designated collection points. At these collection points, people will be eligible to receive 25 liters per person per day. This will have significant impact on businesses in both the short and long term.

At 13.5% dam storage, the City will turn off almost all the taps - this is Day Zero. On day zero:



About 20 000 people will be able to collect water at each site per day.



Cape Town citizens will be able to collect approximately 25 liters (6.6 gallons) per person per day in line with the World Health Organization recommendation.



The city will have about 200 water collection sites across the city.



Law enforcement, police and intergovernmental resources will be deployed to ensure safety.



Key Risks

Water is a key component of many businesses. Given the pressure that the Cape water crisis is putting on residents of the city, there is always going to be a strong push to ensure that business complies with water conservation policy and ultimately does its part. Businesses need to be mindful of this scrutiny and effectively manage their water policy accordingly.

The most common concern will lie in the form of business interruption. Any business that relies on water as a fundamental part of its operations, will likely see depressed performance and be under constant scrutiny by local government. Industrial, retail and commercial properties account for approximately 17% of water usage in the City of Cape Town, which may be small in comparison to residential water use (65%), but has also shown the least reduction in consumption under water restrictions. This lead to the implementation of water restrictions specifically aimed at commercial water users. As the water crisis escalates, and tensions amongst water users rise, businesses can expect to come under scrutiny for their water practices by residents and local government in response. Any business in this position will need to implement policies that reduce their reliance on water or find alternative sources to supplement their water needs. This can take the form of seeking new methods or technologies, or adapting current methods to accommodate alternate water sources (such as treated effluent water).

Businesses can also expect to see costs rise as a result of the water crisis. Approximately 94% of businesses in the Western Cape are expected to face operational risk due to the water shortage. Water is becoming an increasingly expensive component in business operations, which will see general increases in the prices of goods and services produced in the impacted area. This will put the business community under strain to remain operational. This will drive businesses to seek

these goods and services from companies that are not impacted by the water shortage. This further adds the risk of businesses losing revenue streams on top of the increased costs. It is expected that some businesses will close doors should the City reach day zero.

As a direct consequence of a decline in business, there will be an increase in unemployment. With businesses depressed or forced to close, an effective cost saving measure is to reduce staffing costs. Businesses will need to make preparations should they need to reduce staff, or implement policies to maintain their staff while reducing costs. Increased unemployment will also have knock on effect on business in the form of reduced demand. With the increased financial strain on consumers, they will be unable to maintain spending levels, which will see non-essential sectors suffering decreased revenues. This may necessitate building reserves, which can sustain the business through the crisis, while seeking new business opportunities in order to maintain current performance.

Employees will be placed under immense strain as the water shortage worsens. As water restrictions become stricter, employees will be forced to seek out additional sources of water (public water sources or expensive bottled water). As time goes on, this will become a more onerous task (with current queues taking easily 50 minutes to an hour) as more and more people are forced to seek out this additional water. Employees will require flexibility in order to obtain this essential water. Should the City reach day zero and water collection becomes mandatory, employees have no alternative but to stand daily in water queues. This will have a large impact on business operations.

A serious issue that everyone in the City will face come day zero will be the likely spread of disease. Lack of water will inevitably lead to poor water conditions as well as poor sanitation conditions. This is the ideal environment for diseases such as cholera, typhoid and



dysentery. Increases in mosquito-borne diseases are also likely as surface water becomes stagnant. Though local government is putting in place measures to contain outbreaks of such diseases, they will have knock-on effects for business due to both employee absences, but also due to the risk of businesses being vectors for transmission. Businesses will need to establish policies to manage these risks (mandatory staying at home, hygiene policies, proper waste management, alternative toilet facilities etc.).

Finally, and perhaps most obviously, businesses will need to ensure water for employees. This could be water sourced by the business itself, or implementing a policy of employees bringing water for their needs. After day zero, flushing the toilet will not be possible and provision will be needed. Cleaning shared cutlery and crockery will become difficult. Washing hands and other basic hygiene measures will become necessary, but they mostly rely on clean water. Alternatives will be needed (e.g. waterless hand sanitizer). Maintaining a clean work environment will also become essential.

Risk Mitigation Strategies

So far, the City of Cape Town has taken the following steps:

- The City has begun water rationing through pressure reduction, to lower water usage.
- Sites for desalination^[1] plants have been identified
- Groundwater extraction^[2] points have been introduced:
- In order to keep the sewerage systems in flow and running, the city will make sure that the available options for injection include:
 - o treated effluent water
 - o groundwater
 - o seawater
 - o non-drinking water

- Cape Town has already started considering storm water harvesting, which has shown initial success. It involves collecting, treating and storing storm water for potential reuse. It's usually used for non-potable purposes or to replenish water in aquifers. But it has only been done on a very small scale in South Africa, limited to on site systems used for irrigation at factories or other businesses. It could reduce the total current residential potable water demand by more than 20%. This could be a significant water savings for the city. Though there are challenges associated with implementing reused storm water, including water quality concerns and limited institutional capacity.
- All commercial properties must ensure their monthly use of municipal drinking water is reduced by 45% compared with the corresponding period in 2015 (pre-drought).

Consideration for maintaining public health:

- Standards will need to be established in order to prevent the spread of water-borne diseases.

[1] Produces fresh drinking water by removing salt and impurities from seawater. If there is no marine outfall nearby, a pump station pipeline must be built to discharge the brine into the ocean a distance from the shoreline.

[2] Involves extracting water from underground, it involves drilling a hole into the ground and fitting a pump into the well pumping up water from the ground