



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Day Zero and Water-related FAQs

(Last update: 15 February 2018)

Visit www.capetown.gov.za/thinkwater for all drought-related information.

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Disclaimer:

This document is subject to frequent updating and should be regarded as a living document which aims to provide clarity on Day Zero and water-related operations.

Day Zero General

1. Where can I find a copy of the Water Disaster Plan?

Please see www.capetown.gov.za/thinkwater.

2. How can Day Zero be avoided?

The only way we can avoid Day Zero is if all Capetonians join in the savings drive and immediately reduce their consumption to below 50 litres per person per day. This will bring our collective consumption to 450 million litres a day. If daily consumption continues to exceed this target, Day Zero will be a reality.

Consumption is monitored daily, and restrictions and the city-wide usage target could change at short notice. The City will lower the target to required levels, whichever these may be for the scenario faced at the time.

The Day Zero date will be pushed back into later in the year through more aggressive demand management and hence our call to action to Team Cape Town to help reduce water usage even further. The agricultural sector, which is also a major user in the Western Cape Supply System, will be reaching its water allocation limit based on the production season, which would reduce the pressure on the system and assist with moving Day Zero out to later in the year.

This City administration will continue to move mountains to get us through this unprecedented drought.

Our augmentation programmes will assist us in the medium term and into the long term to become a more resilient city.

3. Does Day Zero move?

Yes, Day Zero moves as it depends on the dam levels. Agricultural usage influences this as well as our city and agriculture uses from the same supply schemes.

(Visit www.capetown.gov.za/dayzerodashboard)

The dam levels depend on water usage, evaporation, how much water the agricultural sector uses and available water from the additional water supply projects.

Day Zero can be avoided. A number of Capetonians have done, and are doing, some amazing work to save water. We now need all our residents to join in the savings drive and immediately bring their daily use down to 50 litres per person.

The City is working tirelessly to do everything we can to avoid Day Zero. We are pursuing all possibilities and have consulted experts in order to deliver on our plan to produce additional water from multiple sources, between February 2018 and July 2019.

4. When will we no longer have access to municipal water at our properties?

Day Zero is listed on the www.capetown.gov.za/dayzerodashboard as 4 June 2018. Day Zero depends on a host of changing factors, for example whether we reduce our daily water usage. The more we save, the further Day Zero will move and we will have a better chance to reach our winter season's rains, without having to turn off the taps. The operations of Day Zero will follow a phased approach.

5. What would trigger Day Zero?

Day Zero will take effect when dam levels are at 13,5%.

Any changes to this figure will be communicated in due course.

Day Zero is the day that the municipality takes control of the municipal water supply in a phased approach in order to stretch this supply, until the dams are at a sufficient level to allow water to be distributed via the reticulation system once again.

6. Who will stay connected?

We will prioritise some key areas to stay connected on Day Zero (the day when the taps are turned off). Densely populated informal settlements will stay connected, as many of them are already using standpipes to collect water. Critical infrastructure, population density and risk profile for disease outbreak are some of the factors that the City will take into account to decide which areas stay connected.

Strategic commercial areas, high-density areas with significant risk of increased burden of disease, and critical services, such as hospitals and clinics, where possible, will continue to receive drinking water through the reticulation network.

Significant monitoring and enforcement will be put in place to ensure that water usage at these points is significantly reduced.

Our priority will be to keep strategic economic areas and industrial areas connected, in order for the economy to continue to function, to minimise the impact of this disaster on job losses, and ensure that people continue to get paid.

Despite this, the impact of Day Zero on the economy of Cape Town will be catastrophic - and avoiding Day Zero is crucial if we are to stave off massive job losses.

We are engaging with as many of these organisations as possible to work out what will be the best way to meet their water needs in a Day Zero scenario. The crisis that we face requires a whole of society approach. We will be discussing what strategies organisations such as this will employ to meet their water needs in the case of Day Zero – and how we can support these strategies in our planning and implementation of the Water Disaster Plan.

7. Will residents have to pay for this water?

No payment will be required at the collection points.

Once water collection points have been implemented, affected properties will be charged a flat rate of R104,88 per month to cover the cost of supplying water to collection points and to ensure that an income is available to maintain the service.

Properties that maintain their water supply via normal channels after Day Zero will have level 7 tariffs applied which will carry significantly increased costs to ensure consumption at these properties remains low.

8. When did the water tariffs increase and where can I find the new tariffs?

Level 6B water restrictions and associated tariffs came into effect on 1 February 2018, to help finance water services and to reduce usage.

To cover the costs of water and sanitation provision, and to assist in driving down demand further, the water and sanitation tariffs have been increased. The tariffs remain based on usage. The more you use, the more you pay. High users will be hit especially hard. The City does not make a profit on income from the sale of water.

This is part of the City's efforts to avoid Day Zero and to create financial stability for the provision of water services. Although we have brought usage down from 1,1 billion litres per day to just under 600 million litres per day, we need to get to 450 million litres of collective usage per day.

The tariffs are available at www.capetown.gov.za/tariffs.

9. What key institutions and facilities will remain connected and receive water supply via the water reticulation system?

Strategic commercial areas, high-density areas with significant risk of increased burden of disease, such as informal settlements, and critical services, such as hospitals, old age homes, prisons, hospitals, fire stations, police stations, clinics, children homes, where possible, will continue to receive drinking water through normal channels. Significant monitoring and enforcement will be put in place to ensure that water usage at these points is significantly reduced.

10. What will happen on Day Zero?

Day Zero is the day when dam levels reach 13,5% and the taps will be turned off in a phased approach.

We will use the reticulation network to supply approximately 200 water collection sites with water. The public will be informed of the nearest collection site in advance before we reach Day Zero.

The City is looking at a number of ways to distribute water to residents once this happens. These include engaging with major food retailers to act as water distribution points. We will also deploy water tankers to deliver water to key institutions, which will be cut off from the supply of water through the reticulation network.

- The City will provide water to residents through the water collection points. Water tankers will be used to deliver water to vulnerable groups such as old age homes and care facilities. We are also engaging retailers and the bottled water association to ramp up their distribution networks to increase bottled water supply, so that those who do not want to use the water collection points can purchase water. The quantity of 25 litres per person per day is in line with the World Health Organisation's recommendation.
- Each Water Collection Site will supply water for approximately 20 000 people.
- The City's Water and Sanitation Department will monitor Day Zero's impact on sanitation services. We will launch an extensive public health communication campaign before Day Zero to ensure that all sanitation systems continue to function and limit the risk and spread of disease.
- The City is working with the South African Police Service (SAPS) and the National Defence Force (SANDF) to ensure the safety of residents and the collection sites. SAPS and SANDF will be present to maintain law and order. The City conducted a pilot of a water collection site in Maitland on 9 November 2017. We have trained teams to set up and roll out these water collection sites.

11. Why was pressure reduction only started now and not earlier?

Pressure reduction has been ongoing for approximately 10 years. It was ramped up from March 2017 and throughout 2017. The City made decisions about the implementation of emergency measures based on consumption patterns that remained above the target, as well as dam level changes.

Pressure reduction is a complex process. Unfortunately, it is not as straightforward as simply turning off sections of the system, as this could lead to serious damage to the infrastructure.

12. Will the City engage the private sector, NGOs, community structures, and any other sector players for assistance?

The City has ongoing engagements with external stakeholders on how they can assist with managing this drought and mitigating its effects.

The City cannot get Cape Town through the drought on its own. Constructive partnerships are vital. All water users must support us and help to drive awareness to come up with solutions that will help Cape Town through this unprecedented crisis.

Managing this disaster will require us as local government to coordinate with civil society at a level that has never been seen before.

13. Will there be further water restrictions?

Yes. We assess the situation constantly. Decisions might be communicated at short notice due to the severity of the situation.

14. Will new developments and other economic activity be limited if the situation becomes worse?

We will take decisions that affect the City's economy and jobs with the utmost care if the need arises. We encourage the construction industry to save water and use treated effluent where possible that the City has made available. All economic sectors must adhere to the water restrictions imposed by the City and employ their own water storage and supply contingency measures where possible.

15. What are businesses going to do that rely on water e.g. all the restaurants etc.? If they are forced to close, the economic impact will be enormous.

Strategic commercial areas, high-density areas with significant risk of increased burden of disease, such as informal settlements, and critical services, such as hospitals, old age homes, prisons, hospitals, fire stations, police stations, clinics, children homes, where possible, will continue to receive drinking water through normal channels. Significant monitoring and enforcement will be put in place to ensure that water usage at these points is significantly reduced.

We are engaging with as many of these organisations as possible to work out what will be the best way to meet their water needs in a Day Zero scenario. The crisis that we face requires a whole of society approach. We will be discussing what strategies that organisations such as these will employ to meet their water needs in the case of Day Zero – and how we can support the strategies in our planning and implementation of the Water Disaster Plan.

16. What engagement does the City have with businesses to plan for Day Zero?

The City has been engaging with many different businesses both on an individual level and with associations and different sector bodies.

Our engagements have been about actions that they can take now to help avoid Day Zero and various practical steps that will need to be taken in order to prepare for it. In these engagements we

have also drawn on the expertise of Green Cape who has been able to assist a number of businesses to make use of alternative water sources and implement practical measures to ensure business continuity.

Some examples of the sectors we have engaged with include the tourism sector, the film sector, the petroleum sector, the retail sector, restaurant groups, agro-processing companies, industrial area collectives and a host of many others.

17. What steps is the City taking to go to businesses and inform/discuss with them how to save water, and how to continue operating during Day Zero?

Business sector engagements have been taking place over the past few months and further engagements are ongoing. The City is also sending out information directly to these stakeholders in an effort to advise them of lowering consumption and preparing their operations if Day Zero is reached.

18. How much water is agriculture using?

Currently, (February 2018) the agriculture sector is drawing about 30% of the water in the supply scheme. This should fall to approximately 15% in March and 10% in April. The City does not have any control over agricultural releases, so this is the best estimate we can make with the information at hand.

This is a welcome decline in water usage and gives Cape Town and some of the other municipalities hope, but importantly, we need to get our consumption down to 450 million litres per day to prevent the remaining water supplies from running out before the arrival of winter rains. We cannot accurately predict the volume of rainfall still to come, or when it will come.

19. Which factors do you include when calculating Day Zero? Is agricultural use included in the calculation?

In calculating Day Zero, we have consistently taken a conservative approach (based on what we have experienced before, especially in relation to agricultural usage) to water management and demand.

We've taken into account:

- Evaporation: The model assumes maximum calculated evaporation rates, based on historic calculations adjusted for increases in temperature and wind.
- Agricultural releases: The City extrapolated the National Department of Water and Sanitation's (NDWS) unverified release data as read from the NDWS hydrology website. In the previous season, agriculture exceeded its unrestricted allocation by a small percentage. The City thus had no historical evidence base to assume that agriculture would remain within their allocation. However, the national department has now shut off supply to two irrigation

boards that utilised their full allocation by the end of January 2018. The City therefore feels more confident that agriculture will stay within their allocation this year, as opposed to the previous year. Had agricultural releases not slowed down, the threat of Day Zero would have moved closer.

- Urban usage: While the City has worked tirelessly to fix pipe bursts and leaks, install water management devices and implement advanced pressure management to drive down consumption and minimise leaks and bursts, urban demand is very much reliant on the behaviour of water users. For this reason, the model assumes that consumption will remain at the previous weeks' average usage levels.

20. How long do you expect this level of water restrictions to be in place?

At least three to five months, depending on how the situation unfolds.

21. I know that the focus is on Day Zero and avoiding it, but are we at a point where we are considering winter and what that will bring?

Currently, the long-term prediction is not favourable for good rain during the start of winter, in fact it indicates below normal rainfall. We are planning accordingly with further reduction, conservation efforts and additional water projects.

22. How will the City prevent people from selling water?

The sale of **unmodified** municipal water is unlawful in terms of our by-laws. It is, however, not unlawful to sell 'prepared water' (i.e. water that has been modified with added flavours, bubbles, or otherwise).

We can enforce our by-law, but the supply of bottled water is a supplier-consumer issue with which we cannot interfere.

In general, (note this response does not apply to a particular company) it depends on the source of the water. If water is being taken from the municipal supply it will constitute the resale of water which is prohibited in terms of section 31 of the City of Cape Town's Water By-law, 2010. They will then be liable to a fine or imprisonment in terms of section 64 of the Water By-law, 2010.

If a company is abstracting water from an alternative source (other than from the municipal supply), for example from boreholes or springs, then a formal application must be sent to the National Department of Water and Sanitation. The latter is not within the City's mandate to oversee.

Note, it is the responsibility of consumers to do their homework and to find out where the water comes from (municipal supply or not) or whether approval has been granted by the National Government for such use. Consumers must ensure that what they purchase is not unlawful. Demand proof of the source of the water and whether it has been legitimately extracted.

Furthermore, the City can only guarantee that the water that we provide via the municipal supply is of drinking-water quality. For all alternative sources of water, such as greywater or borehole water, or water from springs and other sources, the City advises residents to only use it for flushing toilets.

Report all cases via 107 or 112 from a cell phone or 021 480 7700 or send a Whatsapp message to 063 407 3699 to report. Please note, always try to submit as much evidence as possible.

23. What will happen to the sewer system if people can't flush?

The City will provide residents with guidelines on managing sanitation within households to ensure that impacts on the sewerage system are minimised. Additional actions will be taken by the City to manage any sewerage build up and use alternative water to flush the system at strategic points. Where residents have grey water, rain water and boreholes, this water should be prioritised for flushing, to help keep the sewage system functioning.

Where non-drinking water is kept for flushing, this should not be stored for longer than three days. Mark the containers clearly "FOR FLUSHING ONLY". Alternative resources include:

- Borehole water
- Spring water
- From rivers/wetlands – best to use gloves when collecting non-drinking water and any household disinfectant can be used. If in doubt contact your nearest Environmental Health Office.
- Use less toilet paper or single-ply toilet paper as this requires less water to flush
- Wet wipes and sanitary pads are not to be flushed down toilets as this causes blockages –wrap and place in a dustbin.
- Don't flush in a rush 'if it's yellow, let it mellow'.

24. Has consideration been given to the declaration of a state of emergency while the collection points remain in operation?

Consideration has been given, but it is not a recommendation from the City at this stage.

25. What will happen to other essential services if City officials are deployed at collection sites?

This matter is still under discussion with the Disaster Coordinating Committee (DCC). Basic and essential services, such as clinics, are to continue.

26. Will residents be able to use seawater for some residential needs, such as flushing the toilet? Is gathering seawater restricted?

In general, the City does not encourage the large-scale household-level flushing of toilets with seawater. It could corrode parts of the reticulation infrastructure and our wastewater treatment

facilities are not designed to handle high salinity. As far as possible, residents are encouraged to use appropriate greywater and alternative sources, such as from boreholes, to flush toilets.

As alternative resources could diminish due to usage limits, the City will flush the sewerage system at appropriate points. This forms part of the comprehensive operational plan that the City is developing. Highly experienced and qualified engineers are working hard at putting measures in place that will ensure the system continues functioning as far as possible in the event of Day Zero occurring, to safeguard both public health and the infrastructure.

We all have to reassess our relationship with water, and the City supports the move by residents to explore more sustainable water-wise technologies such as composting/waterless toilets.

27. What is the cost of this drought?

The City is continuously monitoring the impact of the drought on the City's economy. All actions taken terms of the Disaster Plan are based on minimising the economic impact of the drought on the City and its residents. The cost to the economy is constantly weighed against the risk of water supply, with the safety of residents being paramount.

28. Those with boreholes and wellpoints – what are the dos and don'ts with that type of water?

Please see link to Level 6 and Level 6B water restrictions. (Visit www.capetown.gov.za/thinkwater)

Firstly, the City does not regulate borehole usage. The custodian of water resources is the National Department of Water and Sanitation. But the City has, in the implementation of previous water restrictions, encouraged conservative usage of borehole water. We have recommended limited usage in accordance with water restrictions for municipally-supplied drinking water.

Our Level 6b restrictions make further recommendations for the use of boreholes. It is not in the City's mandate to regulate the usage of groundwater sources, but we have tried as far as possible to drive the message home that unlimited usage of boreholes is not sustainable.

The main consideration here is that private boreholes are not recharged. Private users do not replace the underground water that is used. This is in contrast to the City's aquifer programme, where aquifer recharge will be a non-negotiable aspect of abstraction.

Our goal is not only to survive the drought and to thrive despite it, but to change our relationship with water.

We advocate for the sustainable use of borehole water for indoor purposes but we do not support the use of borehole water for outdoor purposes, such as gardening.

29. During the Day Zero period, how will businesses be monitored in terms of their water use?

As some key commercial areas will receive water via normal channels, businesses in these areas will have their water use monitored via oversight of their accounts. We appeal in the most serious manner that those with access to nodes that are still supplied, to not abuse this access and continue to treat the existing water supply as severely scarce.

30. Must I switch off my geyser as there will be no water in the pipes?

Residents are advised to switch off their geysers to avoid any damage that may be caused by water suspension when the water comes back online again. Check your home insurance cover. The City is not liable for any damages.

Switch off all plumbing that could result in leaks or water damage when the water comes back on.

Residents are advised to start adjusting their water stop-cocks now to reduce water usage, as pressure reduction over the coming months before Day Zero could cause temporary interruption of supply. If the water flow is reduced, any damage will be minimised once the water comes back on.

31. Will it be business as usual (work and school etc.) should Day Zero happen?

It will largely be left up to relevant role players in these sectors to determine suitable contingency plans and concessions for employees and students.

In terms of educational facilities, this would be for schools, governing bodies and the relevant government departments to collectively decide on.

Residents should be aware that the Day Zero phase is an extreme disaster scenario, and significant disruption of daily life is to be expected.

32. Why has the City not (substantially) reduced pressure on water? Would this result in some areas being cut off? But then can't special provisions be made for these areas in the meanwhile?

The City has in fact been substantially reducing water pressure since March 2017. Our engineers have been reducing water pressure in the bulk pipes at our reservoirs as well as in the reticulation network that feeds our households. Much of this work has been an engineering-first.

Water flows to a property because of the action of water pressure. For the water to reach different areas, pressure must be managed. This is done by controlling the flow of water to every area in the city. Some areas in the city are located at lower points, while others are located higher up. Water, like everything else, is bound by the laws of gravity. So, it will either flow downwards or it will remain at the same level. If we want it to get to higher-lying areas, or properties located on high ground or into tall buildings, we need to use valves and pumps to get it to those areas.

To get through this drought, there are water restrictions and water usage limits in place. We then provide the allowable water to an area. If everyone stays within their daily usage limit, households should not be affected by rationing. But if people in a lower-lying area do not stick to this allocation, people in higher-lying areas are affected. Even with reduced pressure, lower-lying areas will have water as it flows easier because of gravity. But, if the flow is reduced, the water does not have sufficient pressure to flow to higher-lying areas or buildings.

That is why tall buildings and higher-lying areas will often be affected by pressure management. Some areas will not have water.

The City's water reticulation network provides water at pressures between 2.4 and 9 bar. Operational staff have lowered the pressures across the City but the intention is to keep the system pressurised (keep water flowing). This is because a lot of damage could be done if we switch off this pressure system entirely.

High-rise buildings and dwellings located 10 m or higher than road level will be impacted indefinitely but theoretically everyone living at ground level should have water supply at their metered connection. However, when many users draw water at once, a peak in the demand is created. This happens when, for example, people tend to do laundry in the morning or shower at more or less the same time during the day. This peak (typically between 05:00 and 09:00 and between 17:00 and 21:00) will draw down the system creating a temporary outage. In this case the system should recover once the demand decreases, i.e. after the washing is on the line. Residents on higher-lying areas within pressure zones are vulnerable and their water supply is dependent on their lower-lying neighbours.

From our reservoirs, we have allocated the precise amount of water that could be required for essential usage while protecting the resources that we have left. Nothing more is given than what is required. It is therefore up to all of us to ensure that we stick to our daily limits. When pressure management is introduced, it remains active in an area all the time. No outages are planned as they are solely dependent on the behaviour of users. Because we cannot physically control the behaviour of users, we cannot guess how long it will take for an area to get its water usage down to what is required.

Further advanced pressure management is being rolled out, with some areas at 0,5 bars and lower. But, adjustments may be made on an hourly basis if required.

That is why the City has been advising since March to keep some water for non-essential use but not to store excessive municipal water.

Bringing down the demand through pressure management and communication to promote water reduction among our users has been a vital intervention in helping to buy us time and to stretch our water supplies further.

33. Has the City considered water “load shedding” in the same way they did with electricity.

The City’s position is that “water shedding” or turning off water supply to an area for a few hours each day, should be avoided if at all possible, as it can lead to air entering the pipework which greatly increases the likelihood of leaks and bursts, and associated water wastage. Further to this, water shedding has not been proven to result in net savings as it can lead to residents stockpiling water.

The City’s is rather adjusting our system so that as many people as possible are supplied at as low a pressure as possible. The City has been progressively lowering pressure for some time now, and will continue to intensify these efforts over the coming weeks in order to try push out Day Zero even further.

We have sent out media releases advising that residents may notice supply interruptions due to these efforts, especially in higher-lying areas, but that water supply should return to normal once demand within the area subsides. Furthermore, residents have been advised to keep an emergency store of between 5 to 10 l of water for drinking and basic hygiene at all times going forward.

We started intensifying our pressure management efforts in March last year and this is now being rolled out further as part of the efforts to avoid Day Zero.

34. Has the City considered tapping into the water running in the tunnels underneath the city?

These tunnels historically carried spring water from Table Mountain, but have since in many cases been incorporated into the stormwater network.

The City is working to maximise the use of spring water, and has extensively studied the springs on Table Mountain in terms of whether they can be used to augment drinking water supply.

The City currently produces 2,8 million litres of drinking water per day from the Albion Spring in Newlands, and has recently commissioned a new project to produce approximately 2 million litres of drinking water per day from the Oranjezicht Main Springs Chamber.

In the case of other springs, it has been found that the amount of water these would provide would not justify the cost of the infrastructure required to redirect the water into the City’s reticulation network and treat it to drinking standards. Procuring greater volumes of water could be done more economically, for instance, via aquifer abstraction or the treatment of wastewater, and the City is rather pursuing these options.

In other cases, the City is exploring whether unused spring water could be used for non-drinking purposes such as industry and irrigation, and has applied to the National Department of Water and Sanitation to authorise the City to use the water in this way. This would also take pressure off drinking water reserves somewhat.

35. Just about every shop in Cape Town is selling more bottled water. Does the City have any suggestions to residents on what to do with the excess plastic bottles they are buying? Are plans being made to collect the excess plastic that will result from the huge increase in bottled water sales?

Shop smartly: First, residents should shop smartly for their bottled water – clear, uncoloured plastic bottles are recycled easier than those with printing directly on the bottle, metal caps/lids, paper labels or shrink wrap labels.

Re-use: According to the Polyethylene Terephthalate Recycling Company (PETCO), the PET (clear and uncoloured) bottles that the bottled water is bought in, are safe and convenient for further storage of water, but need to be rinsed (or washed if dirty) before reuse, as with any other container.

Donate: Many residents in the City aren't able to afford bottled water or containers. Rather than throwing away your empty (5 litre or similar) water bottles, consider donating them to fellow residents who may need containers for their water. Alternatively, contact your local charity to see if they are in need of additional water containers.

Recycle: The City's Think Twice programme collects recyclables (including plastic bottled water bottles) from households in certain areas. Visit the waste recyclers app to see if you qualify, or to find private or community recycling companies, at <http://web1.capetown.gov.za/web1/wasterec/map>

The City's drop-off facilities also accept recyclable materials. To find your closest drop-off facility, visit www.capetown.gov.za.

The City's drop-off facilities will be key. We have diverted more than 50% of our waste from landfills already, and we expect this practice to continue.

36. Is the City talking to retailers about possibly collecting bottles back from residents to ensure recycling?

The City has engaged with PETCO, who agrees that the above-mentioned drop-off or recycling sites are the best place to take your water bottles. The sites are already connected to recycling companies, who provide jobs through recycling the PET bottles.

37. There is a lot of talk of 70 water springs in the city. Is this true? Are all these locations known?

The City has explored in detail whether 69 identified springs on Table Mountain could be incorporated into the drinking water system. The City does currently produce 2,8 million litres of drinking water per

day from the Albion Spring in Newlands, and has recently commissioned a new project to produce approximately 2 million litres drinking water per day from the Oranjezicht Main Springs Chamber. This has been done under existing water licences.

However, in the case of other springs it has been found that flow is too small to justify the cost of staff and infrastructure required to treat the water to drinking standards. In the interests of ratepayers, the City must ensure that augmentation schemes offer value for money. Procuring greater volumes of water could be done more economically, for instance via aquifer abstraction or wastewater treatment, and the City is pursuing these options. Please note that even if all water from the springs could be incorporated into the drinking water system they would only be able to service a tiny fraction of the City's water requirements. Residents and businesses saving as much as possible remains the key factor in avoiding Day Zero.

In terms of the unused spring water, the City is exploring whether this water could be used for non-potable purposes such as irrigation, as this does not carry the same associated infrastructure costs, and would also take pressure off potable water reserves. The City has applied to the National Department of Water and Sanitation to authorise us to use the water in this way.

38. What does the City recommend locals to collect water from natural springs?

The City is advising that water collected directly from springs is boiled before use, as this is water is not quality-controlled, and could be contaminated.

Water Collection Points

39. Where can we find information about the collection sites?

A map of the collection points along with necessary information will be publicised over the coming weeks and placed on the City's website. Signage will be placed in each community indicating where the nearest water collection point is situated. All essential information on the Water Collection Sites will be placed on the City's website and communicated via multiple communication channels – including electronic communication channels such as SMS, email and social media and physical communications in the form of posters, signage and pamphlets.

We have not finalised each and every detail yet.

If we want this Disaster Plan to be adopted with as little risk and inconvenience as possible, we need to look to the local context of each water distribution point. We need to anticipate what strategies households and businesses will employ to meet their water needs in the case of Day Zero – and how we can support these strategies instead of frustrating them.

We need to design and manage these collection points in a way that makes sense. It is essential that our approach is flexible enough to maximise efficiency as far as possible. There are some operational details of the water collection points that will undergo continuous refinement right up until Day Zero.

We need to design and manage these collection points in a way that makes sense – to maximise efficiency.

In order to do this the Disaster Risk Management Team is labouring over questions such as:

- What range and size of containers will people choose to use?
- How will they carry these containers to and from the standpipe?
- What time of day will they come to the Collection Point?
- What transport will they opt to use to and from the Collection Point?
- How will families and neighbours organise themselves to collect water in a way that makes sense?
- Who within the household or business will be designated to collect water and for how many people will they collect?

For the next two months we will be trouble-shooting each Water Collection Point so that if Day Zero arrives, people are able to collect water as quickly and safely as possible.

The one thing that is certain is that even if these water collection points run as smoothly as possible, the act of collecting water will be a massive inconvenience for Capetonians. If we don't want to queue, we will all need to save water now.

40. What will a water collection site look like?

The collection points will comprise pedestrian and drive-through options. Each point will have a Venue Operations Centre where Disaster Risk Management staff will coordinate with Law Enforcement, City officials and volunteers to manage the collection of water at these sites. There will also be a medical point at each site.

The following is an example:



41. What will the operating hours of these collection sites be?

The operating hours will be tailored to what makes sense in terms of the times of day that are most convenient for persons to collect water and also taking into account minimising queue lengths. The operating hours will be adjusted and extended according to need.

Residents will be asked to avoid peak times, if possible, to minimise queue lengths.

42. How many water outlets will be available at these points?

Each Water Collection Point will have more than 50 taps. Where space permits, some Water Collection Points will be geared primarily for vehicles in order to allow for drive-through water collection.

The City has technical specifications, which include the number of standpipes and water flow rate. These factors will determine the number of people that we can serve per site. At the moment 149 of

the 200 sites have been confirmed and we will be erecting signage at these points within the coming weeks so that persons in these communities are aware of where their collection point will be situated.

These collection points will contain sections for pedestrian and vehicular collections in order to maximise efficiency as much as possible.

43. How much water per person will be available?

Each person is allowed 25 litres of water per day for personal use. However, any one person will be permitted to collect up to 100 litres per collection.

It is anticipated that some people will collect 100 litres to use for themselves over four days. Others will be collecting the daily water allocation for other members of their family or community.

44. How much does 25 litres of water weigh?

25 kg.

45. Are people allowed to use trolleys to cart their water from collection points?

Trolleys are allowed, but the number of canisters/containers will be policed.

Only one 25l container will be allowed on the trolley as you're allowed to fill up only that amount of water at a time.

You can go back for more water, but you will have to join the back of the queue.

46. Are you going to have enough time to set up all the required operations?

Yes. It will take approximately six weeks to set up.

47. From where will the water supply to the collection points come? And how long is it set to last?

Water collection points will be activated when dams reach 13,5%. Most taps will be shut off in phases so that the last available water in our dams can be preserved for basic use until we receive rainfall, and until additional water from aquifers, desalination and recycling schemes can be brought online. The water at the collection points will be fed through sections of the existing reticulation system that have been isolated to keep running.

48. What happens when this water runs out?

With the drastic reduction in consumption that will be seen once taps are turned off and collection points are activated, the last reserves are expected to stretch far enough to see us through to the rainy season. Additional water from new resources will help to extend water resources but for the immediate future, only to a small extent.

49. What level of regulation will be in place at the Water Collection Sites?

The City will take reasonable measures to ensure that water rationing happens fairly and appropriately.

In order to keep the Water Distribution Sites operating as efficiently as possible, only light regulation will be put in place to monitor how much water each person is collecting. The onus is on our water users to act responsibly, honestly, fairly and conscientiously during this crisis.

No one will be turned away from the Water Collection Point. All persons living in Cape Town will be entitled to collecting water at these points. Being in possession of a South African ID or water account bill will not be a pre-requisite for people to collect their daily allocation of water.

50. Will people be permitted to collect water for others?

The City will take reasonable measures to ensure that water rationing happens fairly and appropriately. Households and individuals will adapt to this crisis differently and the City is aware of the need for flexibility at sites.

It is important that persons are permitted to collect water for others as not all members of society will be able to collect water for themselves, for example young children, the elderly and disabled.

Also, allowing persons to collect water for others will reduce the number of persons queuing at the Water Collection Sites on any given day.

In terms of preventing abuse, we will all need to work together to ensure efficient functioning of the sites and fair access to water for all residents.

51. How will water collection be monitored?

We can assure residents that there will be an official presence at collection points to prevent abuse of the system and to limit undue inconvenience.

The rules around collection sites will be finalised once we have more detailed information on factors such as:

- How many people each site will provide water to
- How quickly and efficiently this water can be distributed
- What level of oversight we can provide
- Any system we put in place will to a certain degree have to rely on residents to act in a conscientious and conservative manner when collecting water for it to work as efficiently as possible.

52. What control measures will be in place to prevent someone from going from one point to another to collect more than their allocation?

The City will institute appropriate measures to ensure that daily supply limits are not abused, however, the practical design of the sites and the water collection system will limit the possibilities for abuse. The City does not expect significant and wide scale abuse to occur due to the practical challenge of collecting and transporting large amounts of water.

We will all need to work together to ensure efficient functioning of the sites and fair access to water for all residents.

53. Will the City supply residents with containers?

Unfortunately, it is not feasible for the City to provide residents with containers.

The City will conduct a wide-scale call to action for the donation of containers for those who cannot afford to purchase a suitable container for the collection of water. These donated containers will be available at the sites to respond to need.

54. What kind of containers is recommended?

- A dedicated container is needed for the collection of drinking water – clearly labelled ‘drinking water’.
- If possible, use hard plastic, durable containers that can be sealed.
- This container should not have been used previously for the storage of harmful substances such as cleaning detergents, pesticides, etc.

55. If I do not use my entire 50 l per day municipal water allocation, may I stockpile the rest in preparation for Day Zero?

Water users should use no more than 50 litres per person per day as per L6b water restrictions. It is absolutely necessary for us to reduce our collective usage to 450 million litres per day and to ensure that we stretch our water supplies into the winter months and beyond. We are nearing this target and we cannot give up now. We are confident that Team Cape Town will show South Africa and the rest of the world how to beat a drought.

However, if you are getting by with less than your 50 litres and stockpiling that, it goes against the new relationship with water that we are all trying to establish. If you are using or stockpiling municipal water above your allocation, it is an illegal act and doing so will bring Day Zero closer again. This will also mean that you will pay hefty tariffs for high municipal water usage.

56. How should we store water?

- Store the water in a cool, dry place.

- Make sure that the containers are closed and sealed during storage. Boil the water before use when in doubt.
- The container must have a top that can be tightly closed.
- Containers must be made of durable, unbreakable material (i.e. not glass).
- Do not use containers which have previously been used to store chemical or toxic substances.

57. How will the City ensure sanitation at the collection sites?

Chemical toilets will be available at each site.

58. How will the City ensure water quality at the collection sites?

Water that is fed to the sites will have undergone normal treatment and quality control processes, overseen by the City's department of Scientific Services. Should there be any drop in quality this will be picked up very quickly and the appropriate interventions taken immediately. In addition to this level of surety, we will make water testing kits available on-site and test the water daily.

59. What assistance will be provided to vulnerable people to assist them to collect water from these sites, particularly the elderly and people with disabilities?

We are aware that special provisions need to be made to ensure all people are able to access water, particularly those who are physically unable to collect it from a Water Collection Point.

We are engaging with national government, provincial government, businesses, communities and NGOs to support us to care for our most vulnerable residents, such as the elderly and those with disabilities, during this time.

Mass information sessions are being set up with Neighbourhood Watch Groups, NGOs, religious organisations and community groups to brief them on the Critical Water Shortages Disaster Plan and the role they will need to play in ensuring that all persons are able to access their 25 litres of water per day.

Ensuring that the persons described above are able to access water during this time will require a massive coordination effort from government and civil society. As part of the information sessions, we will be asking partners to gather information on extremely vulnerable persons in the areas where they operate.

There will be a wide-scale call to action for these organisations to volunteer to collect water for vulnerable persons.

Subcouncils and Ward Committees will be driving the identification of vulnerable persons in their areas and aligning these with local Civil Society Organisations who can assist them during this time of crisis.

60. What about people who don't have transport to get to water collection sites? Will free transport be provided?

Able-bodied residents will need to find their own way of getting to and from the collection points. Public transport will be available as usual. Other distribution mechanisms are being investigated. We are selecting sites to try and provide reasonable access to as many residents as possible and are talking to civil society about ways to assist vulnerable people.

61. How many personnel will be working at the water collection sites?

The number of personnel working at a site will depend on the layout, security risk assessment and population throughput. A high-risk water collection site's environment set-up would require approximately 90 people on site to provide all services.

62. How much time in total (including queuing) do you expect people to require on average?

Exact times cannot be determined at this stage. The City will make every effort to ensure operations are optimised to keep queuing time to a minimum. However, residents should not underestimate the severity of the situation and should prepare to wait in queues to collect water, especially during peak times.

63. Will the water collection points be able to manage inclement weather?

Yes, where possible shading will be provided to protect those queuing from the sun. However, residents are advised to prepare as they normally would for inclement weather.

64. What security will be provided at Water Collection Sites?

The deployment of security policing role players will depend on the categorising of the Points of Distribution in terms of High Risk, Medium Risk and Low Risk. The services included in the deployment will be SAPS, Metro police, traffic and law enforcement.

SAPS and SANDF have confirmed that they will assist the City with the securing of these Water Collection Points.

The deployment will include inner perimeter security, as well as the outer perimeter security. We will have static deployment and rotational vehicle patrols.

65. Apart from security at water collection points, have we given serious enough consideration to the situation in gang-ravaged areas and how that might affect people's ability to access Water Collection Points?

An extensive integrated security plan has been developed to address the situation in gang-ravaged areas, this includes deployment from SAPS, Metro Police, Law Enforcement, Neighbourhood Watch

groups and Community Police Forums. Taking into account security concerns, Provincial Joints and National Joints structures have been established to provide for National Departmental assistance, which includes the SANDF.

Disease and Health

66. Has the city put in place a public health program to address potential health problems, e.g. water borne diseases such as cholera?

The City is part of an established outbreak response team together with Provincial Government.

All notifiable cases of disease are investigated thoroughly to determine the source and to ensure that appropriate containment measures are enacted, where necessary.

Health officers are actively monitoring the incidence of cases during the diarrhoea season to pick up trends in order to ensure rapid responses to disease outbreaks

Healthcare facilities ensure that individuals who are sick and dehydrated (especially children) receive priority treatment to prevent disease progression.

67. Will the national and provincial Government play a role to assist the City should there be a water-related disease outbreak?

Critical services (for example hospitals) will continue to receive drinking water through normal channels. We will implement significant monitoring and enforcement measures to ensure that water usage at these points is significantly reduced. Any water-borne disease outbreak will be jointly managed by the City, Provincial and National health departments.

68. What measures have the City put in place to combat likely disease outbreaks?

Preventative measures:

- Increased health and hygiene programmes
- City clinics have regular health talks about the prevention of water- and food-borne diseases and diarrhoea danger signs
- Posters at Water Collection Sites

People should not stop their normal precautionary health measures during this crisis.

- The public is encouraged to continue with their routine visitations to health clinics and ensure all immunisations of all family members are up to date.
- The City will continue to promote childhood vaccinations at all its healthcare facilities.
- When persons display symptoms of dehydration they should drink a sugar/salt solution (Half a teaspoon of salt, eight teaspoons of sugar in one litre of water) and if the symptoms persist then proceed to the nearest clinic for treatment.

69. Will the City provide information of the need to keep hands clean above all else during the Day Zero period and discouraging handshaking?

Yes, the City will provide sanitary guidelines.

The City is advising the following:

Preventative measures:

- Increased health and hygiene programmes
- City clinics have regular health talks about the prevention of water- and food-borne diseases and diarrhoea danger signs.
- Health posters at water collection sites.

People should not stop their normal precautionary health measures during this crisis

- The public is encouraged to continue with their routine visits to health clinics and ensure that immunisations of all family members are up to date.
- The City will continue to promote childhood vaccinations at all its healthcare facilities
- When persons display symptoms of dehydration they should drink a sugar/salt solution (Half a teaspoon of salt, eight teaspoons of sugar in one litre of water) and if the symptoms persist then proceed to the nearest clinic for treatment.

70. What can we do to contain disease outbreaks?

The City is part of an established outbreak response team together with Provincial Government.

All notifiable cases of disease are investigated thoroughly to determine the source and appropriate containment measures are enacted, where necessary.

Health officers are actively interrogating any information during the diarrhoea season to pick up trends in order to ensure rapid responses to disease outbreaks.

Healthcare facilities ensure that individuals who are sick and dehydrated (especially children) are fast-tracked to prevent disease progression.

71. Is the City stockpiling antibiotics?

The City's clinics will be capacitated to see to those in need.

72. What health risks will become more prevalent during Day Zero?

Water-borne diseases will likely become more prevalent, linked to the improper storage of water where contaminated containers are used. These include: Diarrhoea, Hepatitis A, and Typhoid Fever.

Handwashing and washing of fruit and vegetables is imperative

Food-borne diseases will likely become more prevalent, due to cross contamination and insufficient sanitisation of foods and food preparation surfaces.

The five key food safety tips are:

- Wash your hands with your allocated water
- Separate raw and cooked food
- Cook food thoroughly
- Keep food at safe temperatures
- Use clean water and fresh food

Fires

73. Where will the water come from to fight big vegetation fires, which are characteristic of this time of year?

The current water crisis necessitated the Fire and Rescue Service to rethink the current strategy around how we will manage fires over this period.

The Fire and Rescue Service also has five Compressed Air Foam System (CAFS) vehicles that use a foam/water concentrate mix. These vehicles are being dispatched first where possible to contain fires and limit the use of potable water. We are looking to retrofit some of our other vehicles to perform in a similar manner in the months ahead, although this is budget dependent.

Treated effluent is also being used to an extent where possible.

For vegetation fires, the helicopters contracted for the summer season will use seawater to fight flames in areas that are inaccessible to firefighters. On the ground, greater emphasis will be placed on perimeter firefighting and monitoring. Fire and Rescue Services will always consider life and property as a first priority, and should drinking water have to be used in these instances, we will do so to save same. In addition, the Fire and Rescue Service is ramping up its education and awareness campaigns around fire safety in the home, but also in public and the maintenance of fire breaks.

The summer season, coupled with the water shortage, requires that the public seriously consider their actions around the use of fire during this period. They are requested to be cautious and vigilant, and to report fires as soon as they are witnessed in order that the emergency fire-fighting services can reach them as quickly as possible. The public are also assured that the Fire and Rescue Service will do all in their power to combat fires if and when they occur, using the most convenient alternate water sources available.

74. How will fires in buildings and businesses be handled?

The City advises all businesses and facility managers in the public and private sector to get up to speed about how to treat fires during a period of extreme drought especially when water pressure may also be lowered dramatically in an effort to suppress demand.

According to building regulations sprinkler systems need to be installed however, during the disaster phase no water will feed into a fire sprinkler system. Businesses must please check their insurance.

Tips:

- Ensure that water pressure remains adequate for your needs.
- Ensure all fire hydrants are in working condition and serviced and acquire more if required.

- Ensure that all staff and occupants know the emergency processes that are related to a fire i.e. conduct regular fire drills.
- Speak to your insurer to ensure that you are aware of all requirements and consequences of pressure management/flooding and fires.
- Conduct ongoing staff and occupant awareness initiatives.

75. What will happen if there are fires in informal settlements?

The City aims to ensure that water supply and pressure remains as adequate as possible in informal settlements. Informal settlements which are responsible for approximately 4% of our water usage are also at a high risk of fire-, floods and disease due to the informal nature of these settlements and the high densities.

Events

76. How much does the events and film industry contribute to the local economy? Is it justified to bring more people into the City with these events and through the film industry?

The events and film industries provide enormous benefit to the local economy. Eight of the signature events hosted in the city annually contribute more than R3 billion to the local economy and create more than 20 000 temporary jobs.

The film industry contributes approximately R5 billion to the local economy annually and has created more than 35 000 jobs over a three-year period.

While some of the jobs related to these industries are temporary, they afford people the opportunity to gain experience and acquire skills for future permanent employment.

Given the scale of the City's supply system, it is unlikely that tourists visiting Cape Town for sporting events will have any noticeable impact on overall consumption. They would only account for a tiny fraction of overall usage.

While the City appreciates the concern of residents, we cannot take a blanket decision to shut down these two industries that collectively contribute over R8 billion annually to the local economy that benefits small business owners. Being labour-intensive industries, there will be serious consequences that will be detrimental to many residents' livelihoods if these sectors are curtailed.

77. What is the event (in particular the Two Oceans Marathon and Cycle tour) and film industry doing to adapt their operations to meet the stringent requirements of the water crises?

Old Mutual Two Oceans Marathon

- Water for the race day has been sourced from a natural spring, allocated and approved by the National Department of Water and Sanitation. This water will be used in the sachet and non-sachet water delivery system for all race participants.
- The event organiser has engaged with runners to use hydration packs and to fill up at the start of the race instead of using their daily household allocation of potable water.
- Of special note is the use of recycled water for ice to keep the race water sachets cool – kept in sealed bags and marked 'not for consumption'.
- All sponsors and sponsor partners have been requested to invest in similar strategies. A key decision has been taken to remove all showers for after the race. Caterers have committed to supplying their staff and crew with liquid refreshments that include bottled water. Water from the

spring supply will be used in food preparation, and grey water will be utilised in clean-up operations after the event concludes.

- All chemical toilets brought to the various sites will have certified recycled water from the respective service providers
- Participants will be bound by the water savings initiatives of the event's venue partners and accommodation sponsors.

Cape Town Cycle Tour

- Water will be brought in from outside the province for drinking and ice on the route. Locally produced desalinated water will be used for all cleansing purposes. The number of water stations along the route will be reduced to 14 essential stations, which are necessary from a medical point of view.
- In addition, suppliers to the cycle tour will sign service level agreements that specify their usage and where their water will be sourced. Suppliers will not be allowed to use water from the city's grid.

Film industry

As a labour-intensive industry that usually has a large crew, the film industry has implemented significant water savings initiatives that are yielding positive results:

- Table cloths have been replaced with reusable plastic table covers that can be wiped clean. This has reduced water usage from 10 litres to 50 ml per table cloth translating into savings of 500 litres per day. Approximately 15 000 litres of water is saved monthly.
- Biodegradable and disposable crockery and cutlery have replaced non-disposable items. This shift has cut consumption for washing dishes to about 250 litres per day from 1 500 litres which was used previously. Approximately 45 000 litres of potable water has been saved monthly.
- Miscellaneous water saving measures includes steaming instead of boiling and reusing boiled water to clean the kitchen and toilets. Kitchens are equipped with alcohol sanitizers for washing hands, and the grey water from frozen goods is used to clean floors. All of these measures have realised a saving of 30 000 litres per month.

78. How will the latest water restrictions impact on sport fields and sport codes?

In terms of Level 6B restrictions, outdoor usage of boreholes is strongly discouraged. Usage of groundwater for irrigation purposes is limited to a maximum of one hour only on Tuesdays and Saturdays before 09:00 or after 18:00. This restriction is necessary in order to ensure that the existing aquifer is not depleted, as this water will be required to flush the city's sewer network in the event of a Day Zero scenario.

However, as far as possible, we will permit the irrigation of sports fields with borehole water to allow key sporting events and tournaments to continue. We are engaging with each of the sports codes to

ascertain to what extent the various league competitions can continue. Each sports federation is requested to submit a list of their most important fixtures and the City will prioritise the fields required for irrigation with treated effluent or borehole water.

In the case of soccer, the City's 29 artificial surfaces will be used to accommodate as many of the major fixtures as possible.

79. Who will coordinate the use of fields that are still in a playable condition?

It has been agreed that sporting federations and not individual clubs will coordinate the use of fields which are still in a playable condition for matches and practices to continue. The fields will be assessed and scored on a weekly basis to determine their suitability for continued use. This assessment is being done to ensure that the best interests of all parties are considered.

We recognise that the current water crisis is negatively impacting on the functioning of the various sports codes and we are committed to working with them to ensure that the impact is minimised, whilst still taking the necessary steps to preserve the city's remaining water resources.