

Preparing for (and coping with) Day Zero

Many of these suggestions entail an unavoidable increase in your ecological footprint – be as frugal and conservative as possible, choose environmentally friendly products, start a compost heap, recycle, and learn how to make Eco Bricks (google it) with all your empty plastic water bottles.

At home

In advance

Measure it to manage it:

- Find your water meter and learn how to read it
- Sign up on the city's eservices website (<https://eservices.capetown.gov.za/>) to enter your own meter readings. This prevents you being billed based on estimate readings based on previous years' usage, which may be excessively expensive given current water price.
- Figure out where your water usage happens – what are the most water intensive activities at home - unless you can measure it, you can't change it

Prepare for the worst:

- Locate your sewer line – where will a blockage manifest itself? Discuss strategy with neighbours for when this becomes a likelihood – can you isolate your property/properties? Ensure drains are clear of roots.
- Locate the switch on your electricity distribution board to turn off the geyser (when the taps are turned off, so too should your geyser be)
- Make sure you have fire extinguishers (in date) at several strategic locations around your house (kitchen especially)

Harvesting rainwater:

- Make sure the gutters from your roof are draining onto your property (so you can collect the water) – especially important if you're in a complex/semi-detached. A small Ziploc bag filled with sand, placed in a shared gutter over the property boundary will keep your roof water in your gutters
- Don't put stupid small attachments on the end of downpipes to catch water (e.g. cut off top of Coke bottle) – in heavy rain, water will back up in the downpipe and your gutters will fill up and fall off.
- Get rainwater tanks – problem is not going away soon. For each mm of rain on 100 square metres of roof, you will collect 100 litres of water. Can see how much water you have available, unlike borehole, which can dry up at any time.
- Get rain tanks professionally fitted. Solid, level base. Leaf trap, seal around downpipe – otherwise you will get mosquito larvae, bird poop, bits and pieces of stuff off the roof, and dead mice in your tanks, and the water is much harder to use. Ensure you can isolate each tank – several smaller tanks is a more robust installation than one massive one (also flexible – can extend to more tanks, takes up less space, one tank can fail and you won't lose all your water). But slimline tanks are more expensive per litre of storage than larger ones so weigh up your options.
- Quick and dirty small-scale alternative to rainwater tanks, and much cheaper = blue plastic 210 litre drums. Often available second hand after being used to transport glucose or other

food products (check what was in it before you buy it). Use as overflow for rain tanks, or as primary collection vessel (but then don't drink it).

- Wheelie bins are not designed to hold the weight of 300 litres of water. Do not try to move a wheelie bin full of water!

Boreholes/wellpoints:

- Borehole or wellpoint – get the water professionally tested if you plan to use it in the house. This will inform the level of filtration and purification required to make it safe. The panel of tests you want is SANS 241.
- Keep abreast of legislation around groundwater abstraction – it is changing rapidly and seems to be getting more restrictive (<https://openbylaws.org.za/za-cpt/act/by-law/2010/water/#section-57> and <http://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/Annexure%20A%20Draft%20Water%20Amendment%20Bylaw.pdf>).

Going off grid:

- If you pump rainwater or borehole water through your house, fit a meter so you can monitor usage (cheap Gardena one for R500 works well) – don't use being off the grid as an excuse to be extravagant with water. Also bear in mind that under current bylaws, being off the grid is technically illegal (<https://openbylaws.org.za/za-cpt/act/by-law/2010/water/#section-56>).
- If you pump rainwater or borehole water through the house, ensure that there is NO WAY for it to flow back into the municipal water supply in the event of a failure on your side. An air gap (complete disconnection of the municipal linkage) is a 100% safe option.
- Filter rainwater or borehole water (correct pH – prevents corrosion of your pipes, remove particulates, UV light for bacteria etc) if you want to run it through the house pipes – otherwise just use for flushing in buckets if untreated
- Untreated borehole water with high iron content may stain the inside of your toilet orange if you use it for flushing

Consider becoming a regular at your local spring – make SURE the water is potable if you're going to drink it (St James Main Road and Dido Valley near Simons Town are not)

Shopping list

Plan for 3-4 months' supply. You can share with friends and family if you have excess. Anything left over at the end of the crisis can be donated to NGOs or people you come across who have smaller means than you.

- Savlon/Dettol – lots of it – drop it into everything – toilets, basins for washing hands, laundry water. With less water, hygiene is critical. Usually, this is contested around it killing good and bad bacteria but for now we'll take our chances...
- Water purifying drops or tablets at Cape Union Mart, Dischem, outdoor/camping shops (try to order online if they're out of stock) - add these to rainwater before using it for washing up
- Jik – an alternative to water purifying tablets/drops, also useful for cleaning and for extending the very short shelf life of grey water by a day or two
- Milton – can use for wiping surfaces, cleaning vegetables
- Bicarb – can be used to remove the smell from grey water, and from clothes
- Get a small trolley for transporting jerry cans

- Water containers – make sure they haven't been used for anything else and do your utmost to ensure they remain spotlessly clean – don't put hands or utensils into them, etc. If you do get ones with taps, make sure the taps can be removed and replaced with a proper cap – they will be prone to breaking off during transport
- Funnel for getting water out of jerry cans into smaller containers
- Waterless hand sanitiser, compostable baby wipes, femiwipes
- First aid kit – Burnshield (gel and/or pads), activated charcoal, immodium, buscopan, anti bacterial wound wipes (baby wipes are not usually anti bacterial – they simply clean), iodine wipes
- Plastic bucket with a lid, a plunger – for a plunger bucket washing machine
- Biodegradable paper plates, cups, bowls, perhaps even wooden cutlery
- Clean spray bottles for hand washing, pre-prayer ablutions

Kitchen

In advance

Pull out (or find online) instruction manual for dish washer, washing machine – how much water does each cycle use? Better still use your water meter to determine this, it will be more accurate.

Washing laundry:

- Cold water wash clothes so you can mix colours – eco wash cycle or experiment with two successive rinse cycles (add detergent to the first one) – this may use less water. Hang lightly soiled clothes outside/in the sun to freshen up, or iron them, to get another day's wear.
- Catch washing machine water for flushing (if needed), put it on the garden, use for car wash, re-use in washing machine (easy if top loader). Make sure your washing machine water collection method can't cause a flood back into the house if the outlet gets blocked – which it will – with lint and hair. Our setup: open the water outlet pipe on outside wall, attach pool hose which feeds into small bucket, another outlet at bottom of bucket with hose attached. If anything gets blocked, bucket will overflow harmlessly.
- Stop using fabric softener (vinegar is a good alternative – google it – or nothing at all) and use a biodegradable washing powder / one that is free of phosphates (e.g. BioClassic) if you pipe the water out onto the garden.
- If you're replacing your washing machine, consider a twin tub
- Hand wash underwear with Dettol
- Change to cheap, dark coloured bedding – it's going to take a beating when you can't use the washing machine any more
- Put a tub in sink to catch rinse and hand washing water - use for garden

Cooking:

- One pot cooking – stop with the sticky roasts. Line trays with foil or use disposable foil trays if you can stomach the environmental impact!
- Fill the freezer with prepared meals that don't require a lot of dishes – these will be useful when there's less water available (freeze in disposable containers – see above)
- Long life/ideal milk in cupboard for coffee/tea

When it comes

Google “plunger bucket washing machine” (DIY Sputnik) and make one in advance while you can still source the components

Switch to paper plates, cups – biodegradable or compostable if necessary

If you're using dodgy "spring" water or untreated rainwater for drinking, take care. Water treatment tablets, or bring to a rolling boil for 3-5 minutes.

Bathroom

In advance

Fit low flow shower head, aerators on taps

Showering:

- Get a different coloured bucket that will stay clean to catch the cold water before you start showering. Use for tea/coffee, cleaning, pets, etc.
- Plastic tub in the basin to catch hand/face wash water (can reuse for hand washing afterwards and flush with it when it's cloudy)
- Kiddies inflatable pool for the shower or large tub that catches all the water
- Shower over the bath (with plug in) if you have one
- Share bathwater with whole family if kids must bath / get a BabyDam
- Wash with a flannel and a litre of water as often as you can (saves water and is good practice). Heat some water in the kettle or cold wash, don't wait for the hot tap.

Grey water:

- You will need lots of buckets for grey water (the ones with a lip for pouring are ideal) – scrub them clean periodically
- If lifting buckets is too hard, or you can't get all the water out of the bath, get a submersible pump for a water feature/fish tank and use this to pump the water out of the tub/bath into buckets. (Assuming you're bathing kids, or people who can't stand up to shower, or don't have a shower.)
- Don't store grey water without treating it (jik, HTH, expensive "grey water treatment products" on the market) – rather just don't store it, and if you have that much then you need to examine your water usage elsewhere
- Store grey water in sealed containers if you have small kids, or lock the bathroom door

Flushing:

- Switch to single ply toilet paper – flushes easier with less water
- Flush by pouring grey water directly into the toilet bowl (on the back surface of the bowl is most effective) – doesn't matter if it uses more than a flush, as long as it's grey water
- Grey water can clog cistern with hair etc – filter through a stocking if you're pouring directly into the cistern (also may get slimy inside the cistern)
- Do not flush feminine hygiene products. (These shouldn't be flushed even when water is plentiful.) Consider a mooncup (if so, carry a bottle of water with you at all times).

Personal care:

- Stop conditioning your hair (use coconut oil or specialised hair oils), gents get an electric razor that doesn't require water to shave
- Use cheap, thin towels that you can hang in the sun every day to extend intervals between washing (or microfiber travel/camping towels)

When it comes

Personal care:

- Use a low-foam soap like Dove or castile soap – less water required for rinsing
- Switch to face cloths (easier to clean than sponges)
- Bucket wash – practise this in advance (see above)
- High pressure spray bottle (for gardening) works for “showering” and will use less than 300 ml of water for a complete wash excluding hair
- Solar shower (available at camping stores) – your geyser will have to be turned off if there’s no water coming out of the tap and a 5 litre warm shower is better than no shower
- Dry shampoo

Toilet options:

- Stop putting toilet paper into the toilet. Need to give the sewers the best possible chance of staying open.
- Lined dustbin or paper bags for loo paper (number 1 only), burn them
- Camping toilet – don’t forget the chemicals (can pour into the loo when it’s full). Tents are available for these toilets in case privacy is an issue
- Composting toilet – can make one’s own with bucket, sawdust. Horse people know where to get sawdust. For a full-service option check out www.dryloo.co.za. Disposal into a composting unit – see www.greengenie.co.za
- EcoSan waterless toilet – large, fairly expensive, permanent (not a bad thing – this is not going away soon) – check out www.ecosan.co.za
- Dig a pit latrine and get a camping toilet seat – not ideal, and definitely don’t do this if the water table is high in your area. You will pollute everyone’s groundwater. Also, you’re likely to underestimate the depth required for this to be a long term solution.
- Very last resort = plastic bag over inside of toilet bowl. Deal with urine separately in a plastic tub (good for the garden). Invest in latex gloves – going to be gross. Consider the garbage men – don’t expect them to handle your shit

Sea water is not a sustainable long-term alternative for flushing. Will destroy your pipes and kill the bacteria at the treatment plant that breaks down the sewage (causing a GIANT problem). Also, illegal to take bulk sea water without a permit.

General precautions

Make sure the people who help you at home (gardener, helper, nanny) are taken care of. Talk to them about how to balance the requirement to save water, with doing their jobs well and to a high standard. These can be perceived as two conflicting demands, and you may need to carefully and compassionately handle any anxiety that arises as a result.

Put pressure on kids’ school to make preparations if they aren’t already doing so

Plan your exercise schedule so that you only need to shower/wash once per day

General precautions when there’s a chance of civil unrest:

- Keep some petrol in your car at all times (fill it up when it gets to half a tank) – refineries also need water to function and I’m not sure whether they have resilient supply
- Keep a bit of cash in a drawer

- When locations of water distribution points are released, you may need to check out some alternative routes to work if you'll be passing one of those locations.

Misinformation:

- Take care what sources of news and information you consume. Most of the Watershedding Western Cape Group on facebook is hysterical garbage. Listen to engineers and climatologists rather than politicians. Anthony Turton, Peter Johnson, Anton Eberhard, Peter Flower (COCT water & sanitation chief) are credible but information may still be conflicting. Don't be gullible.
- Don't entertain stupid conspiracy theories – the water crisis is not an organised effort to decrease the population through mass disease; the sluice gates at Theewaterskloof are not jammed open; the dams are NOT full; informal settlements use a tiny fraction of the amount of water used by the leafy suburbs.
- Information sources to help you:
 - www.helenmoffett.com/green-hat/ for middle class water saving tips
 - www.wwf.org.za for their Wednesday Water Files (published on a ... Wednesday!)
 - Green Guerillas, Permaculture Research Institute, others offer training and resources on composting toilets and humanure – lots of info on facebook, youtube and Google

Be mindful of your own mental health. Rehearse scenarios but don't become consumed by the issue. Taking steps and making plans to ensure your family's health and safety will give you a feeling of control, which helps.

Make sure you have list of emergency numbers, including how to report water faults, readily available.

Suppliers to look at (a lot of things are either sold out or subject to long waiting lists at the moment):

- Faithful to Nature (biodegradable home products)
- hardware stores or direct from the manufacturer (rainwater tanks) – lots of scams, beware the man with a bakkie who says he can deliver tanks tomorrow
- Sustainable.co.za (grey water systems, Sputnik washing machines, rain harvesting and grey water products etc.)
- Be careful of websites that have just sprung up to sell a single product (e.g. Sputniks) or providers you found on facebook. Ask for details of recent clients (not family members)
- EcoPack (www.ecopack.co.za) for compostable crockery and cutlery, in bulk

clarelindeque@gmail.com