

EMG

FACT SHEET SERIES



Water management devices: facts and perspectives

Because South Africa is a dry country, municipalities have to conserve water. But they also rely on income from the sale of water - this is a conflict of interests

For those of us who are lucky enough to have indoor taps and flushing toilets, we probably don't think twice about how much water we use each day.

If we are environmentally conscious, we are aware that water is a precious and scarce resource, and that we should not waste it – but we seldom, or never, experience what its like to open a tap in our home and have no water flow from it. But this is not true for everyone.

Municipalities in South Africa have to provide water to all households, and they have to collect payment for the water they provide. They also have to manage how much water is being used (*demand*) against the amount of water that is available (*supply*). Although they are required by law to provide a lifeline amount (*free basic water*) to households who cannot afford to pay for water, they are under pressure to keep *non-revenue water* (i.e. water that is lost through leaks in the municipal system,

or is provided to households and then not paid for) to a minimum. This is a complex set of responsibilities, and it all plays out in the context of huge inequality, and often weak or tense relationships between government and citizens. Climate change adds another layer of complexity – in an already dry country, climate change means that there will be even less available water, meaning an even greater imperative to conserve water.

One of the ways that municipalities are trying to deal with the challenge of reducing water *demand* without reducing their *income* from the sale of water is to target households who cannot or do not pay for water and to restrict their water use.

This is being done in a variety of ways throughout the country, including through the installation of *water management devices*.



What do different people say about water management devices?

Debt



The city¹ says:

Debt is your fault – but we can help! If you accept a device your debt will be written off after three months.



Community members say:

We don't want to be in debt. Isn't there another way?



EMG says:

Debt is not only the fault of a household – there are many structural reasons why people 'owe' money to the city. These include complex property transfer systems, high leaks, inherited debt, no billing, etc.

The City's credit control policy allows for debt to be frozen and ultimately written off without a device, if a household pays actual bills. Since the roll-out of water management devices started, the City will not allow people to make such an arrangement.

Leaks



The city says:

We will fix leaks in your home, after which you must have a device installed. Future leaks are your responsibility to fix.

Off the record, the officials recognise the systemic problem with leaks that arises from poor household design (particularly in RDP houses), use of poor materials, and theft of metal.



Community members say:

The leaks are recurrent – even when the city fixes them they come back quickly. We have not been trained as artisans and don't know how to fix our leaks. It is expensive to call a plumber.

¹ Cape Town is used as an example in this section. We expect there might be some differences in detail in other municipalities, but the sentiment is similar.



EMG says:

The onus for fixing the systemic problem of frequent, recurrent leaks should not rest solely on households. All players need to come to the table to try to find a more humane and lasting solution. This includes officials from different departments and tiers of government (housing, water, finance, public works, etc.)

The city will not fix household leaks unless that household accepts a device – thus leak fixing is *conditional*.

Household water needs



The city says:

The device is programmed to release 350 litres per day, which amounts to 43 litres per person per day in an 8 person household – this is enough water and is generous compared to other municipalities.

The device is programmed to start releasing the household's daily allocation at 4 am. Once this is used up, the device will stop the flow of water until the following morning at 4 am. If a household does not use its full 350 litres, the remaining amount will carry over to the following day and accumulate. However, any accumulated water at the end of the month will not carry over to the following month.



Community members say:

Our water runs out early in the day. If we want to wash our clothes, we know we will not have water for anything else that day.

We have to go and ask our neighbours for water, but our neighbours don't want to share with us because they also have a device and are scared of running out.

We want to grow veggies and have small businesses, like a car wash, but we do not get enough water.

We want to be able to accumulate the water we have saved in a month and for it to carry over to the next month.



EMG says:

There are pervasive technical failures meaning that many devices cut off water even before 350 litres have been used. If there are leaks, the 350 litres is quickly lost. Frequently backyard dwellers have to share the daily allocation.

350 litres is not a lot of water if you have a flush toilet, which is the only sanitation option available to people in formal housing. Although policy allows for 'multiple uses' of water, this is not provided in practice, meaning people do not have enough water for their gardens or small businesses.

Saving water



The city says:

South Africa is a dry country; everyone must be frugal with water.



Community members say:

We agree. Water is precious. Teach us more about how to save it and look after it.



EMG says:

What the City says is true, but in practice they are only enforcing water saving in poor communities. If you are willing and able to pay, you can use as much water as you like. Pricing and water restricting devices are the primary means through which the City aims to reduce water use by households. The City needs middle and high income earners to buy water as this is a source of income for the City.

Price of water



The city says:

We use pricing as a way to manage demand. We provide sufficient free water to charge a higher tariff for higher use.



Community members say:

Water is expensive. Our bills are high. But we are willing to pay for what we use.



EMG says:

Bills are difficult for most people to read. It is unclear to them which parts refer to water. In Cape Town, there has been a steady trend towards more regressive pricing. Over the past 3-4 years, the average price of water has gone up 8-9% but the tariff tier for low to medium use has gone up 30-35% annually.

Consent for installation of WMDs



The city says:

We carry out community workshops. We get signed consent of households before installing a device.

People have the option to refuse a WMD, in which case we will install a trickler².



Community members say:

We don't know about any community workshops. If we sign, we don't know what we are signing for – they only tell us the benefits and none of the problems. Often it is a child who the City gets to sign. We are not given a copy of the form we sign. We do not believe that this is "prior informed consent".



EMG says:

In reality, households do not have a choice. The City does not know how to carry out meaningful engagement and education with communities – it is challenging and requires a lot of time, dedication and skilled facilitation. If a household refuses a WMD, they are referred back to debt management and will face restrictions or disconnection of electricity until they settle their debt.

The installation of WMDs is outsourced to private companies who are paid on the basis of number of WMDs installed. It is in their interest to fast-track (or fudge) a consent process.

Reporting faults



The city says:

If you run out of water every day, you are either exceeding your daily quota of 350 litres, or your device has a fault. You can report this to our 24 hour call centre on 0860 103 089.



Community members say:

We often do not have talk time. If we load talk time and call the number, our talk time might run out before anyone answers. We know people have reported faults and waited many days to get a response.



EMG says:

The City is specifically targeting low income households for the rollout of water management devices. Few of these homes have land-lines – why then is there not a toll free number for cell-phones to report faults?

Applying for more water



The city says:

People can apply to receive more than 350 litres per day, if they are the owner of their property, and provide their ID book, account and proof of income. If they are deemed to not be able to afford to pay for more water, their application is denied. If they are living on the property but are not the owner, they cannot apply for more water.



Community members say:

We don't know that we have this option. Many of us are not the original owners of our houses, so we can't apply. We don't have a regular income so they will turn us down.



EMG says:

The significant barriers to accessing this option mean that most households will never benefit from it. It is a humiliating process to apply and then be told that you do not earn enough to pay for more water.

Selling of houses in townships is primarily through an informal market, so the registered 'owner' is not the *de facto* owner or resident and has no interest in water provision in that home.

Alternatives



The city says:

We do not trust communities to manage their own water use. It is risky for us to try new ways of doing things.



Community members say:

We can manage our water ourselves! If we have the right skills and information, we can fix our own leaks and stop water wastage.



EMG says:

In the long run, the world needs empowered, confident citizens who can find solutions to society's problems in partnership with government. The water management device keeps people disempowered and resentful of government – there must be a better way.

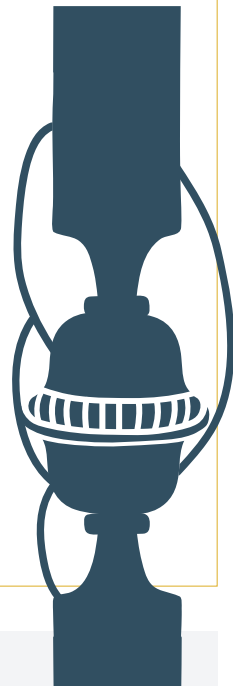
² A tickler is a plastic disc with a pin-prick hole that is inserted into the household's main water pipe, and only allows water to flow one drop at a time.



What is a water management device?

A water management device (or WMD) is an electronic device that can be installed on a household's water meter. It can be programmed to **allow a certain amount of water to flow to the household daily**, after which it cuts the water off until the following day.

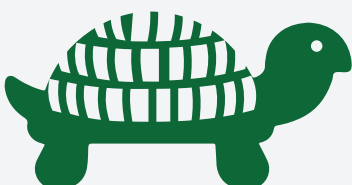
A water management device controls the quantity of water flowing through a water meter.



What other names has it been called?

- A prepaid meter in disguise
- Flow restrictor
- WMD: Weapon of Mass Destruction/ Disempowerment
- *Ufudo* (tortoise in isiXhosa – because it hides inside its shell)

“...it hides in its shell.”



Targeting poor households with water management devices is unjust

In Cape Town, the officials in charge of the installation of water management devices are aware that people really do not like these devices, and have made incremental improvements to the technology. For example, the first devices that were installed were inside a locked box and residents had no way of knowing how much water they had used or how close they were to running out of water; the newer devices have a ‘user interface’ with a digital countdown showing the amount of water remaining for the day. They are also developing a ‘backyarder policy’ whereby backyarder dwellers will have access to a standpipe with a water management device installed, to give them access to 350 litres a day, whereas at present they have to share the main households water.

However, this does not address the underlying technical, cost recovery driven approach to water demand management, which is punitive by nature. We are very concerned that this is the kind of response we will see more and more as climate change places more pressure on municipal water managers.

We should be asking ourselves: Why should poor people bear the burden of having to save water, when middle class and wealthy people have multiple bathrooms, swimming pools and green lawns all year round?

How legitimate is the debt that is supposedly owed to the City for water? Poor people have inherited the legacy of poor planning, badly built houses and deep inequality. A high crime rate also means that metal pipes are regularly stolen, so that broken plumbing is replaced with plastic parts, which often spring serious leaks, contributing further to people's debt. Surely there is a case for writing off these arrears as bad debt and allowing people to start with a clean slate?

The grave issues of procedural injustice must be considered also – the inadequate consultation and consent process, the onerous systems for reporting faults or applying for more water, all make life more difficult for people who are already struggling.



“...lobby your councillor or the DWS for rainwater tanks.”

Tips for activists

- Insist on real meaningful engagement prior to roll-out of water management devices in your neighbourhood
- Push for unconditional leak fixing – i.e. leak fixing without installation of WMDs
- Help to educate citizens about what they are consenting to
- Collect evidence – for e.g. how many households in your area run out of water regularly, have people reported faults and has the City responded, how are people coping if they do not have enough water?
- Come to Water Caucus meetings to share your stories and meet others going through similar things
- Recurrent leaks will occur – find local plumbers, or advocate for leaks fixing training in your area
- Try to lobby your councillor or the DWS (Department of Water and Sanitation) for rainwater tanks

Facts and figures

- Water management devices were first developed for use in **commercial agriculture**, for irrigation.
- In Cape Town they have been used as part of a debt management strategy **since 2007**.
- In Cape Town, they are **installed in low-income areas** where many people are in debt on their municipal accounts, as well as on all new connections, and when old meters are replaced.
- In low-income areas (and where people owe money on their accounts) the device is programmed to release **350 litres per day** and then cut water supply.
- All municipalities in South Africa are required by law to **provide 6kl per month of water to poor households for free**; Cape Town provides 10.5 kl.
- If a tap is left opened at full pressure, **350 litres** will run out in **less than 20 minutes**.
- By **mid-2015**, **140 000** water management devices had been **installed** in the City of Cape Town.
- By mid-2015, **650 000 water management devices** had been **installed in SA** including in Ekurhuleni, Nelson Mandela Bay and eThekweni.

Resources

1 City of Cape Town: Installation of water management device leaflet (Available here: <https://www.capetown.gov.za/en/Water/Documents/Additional%20documents/Installation%20of%20WMD%20DL%20leaflet%20English%20NEW.PDF>)

2 Mahlanza, L. 2014. Water Management Devices in Cape Town: Just Adaptation or Weapons of Mass Destruction. Honours. Thesis. University of Cape Town.

3 Senior Professional Officer, City of Cape Town Device and Meter Management, Personal communication, 29 September 2015

4 Wilson, J. and Pereira, T. 2012. Water demand management's shadow side. EMG water and climate change research report 7. Available here: http://www.emg.org.za/images/downloads/water_cl_ch/wdms%20shadow%20side.pdf

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