



CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD



## SUMMARY GUIDE TO THE INSTALLATION AND USE OF ALTERNATIVE WATER SYSTEMS

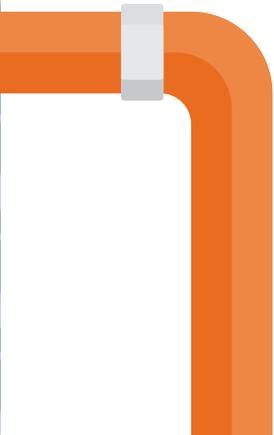
This booklet gives you a summarised guide to the safe installation and connection of alternative water systems, and use of alternative water. See the full version of the guidelines for more information.

Making progress possible. Together.



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# INTRODUCTION

The responsible use of alternative water sources helps reduce the quantity of municipal water drawn from our dams, especially in times of drought. Alternative water also forms part of the City's water resilience drive, as we face a future of uncertain rainfall. However, there are important regulations in place that you need to be aware of.

Alternative water may contain pathogens, bacteria and harmful substances that can contaminate the municipal drinking-quality water if it comes into contact with it. If you don't put the correct measures in place, you can possibly contaminate the water on your property and also the municipal water supply in your area. Alternative water can pose serious human health and environmental risks, which need to be avoided.

This booklet gives you summary information about the safe installation of alternative water systems for irrigation or where they are plumbed into the water installation of a building, and the subsequent use of the water collected/extracted. For the full Guidelines for the Installation of Alternative Water Systems, visit <http://cct.gov.za/AIBNI>

Please note that you are fully responsible for all consequences that may result from using any water that is not drinking-quality water as supplied by the City of Cape Town (the City).



# APPLYING TO INSTALL, CONNECT AND USE ALTERNATIVE WATER SYSTEMS

You need to get approval from the City and/or the national Department of Water and Sanitation (DWS) if you wish to use alternative water and/or install an alternative water system, according to national legislation and the City's Water By-law. In particular, those systems that are intended to be connected to a water installation, which creates the risk of alternative water flowing into the City's water supply network.

The table on the next page summarises what approval, authorisation and licensing is needed for different sources of alternative water.

**NB:** If an alternative water system is installed, **you have to submit an application and obtain a Certificate of Approval from a registered plumber.** To find a plumber registered with the City, visit [www.capetown.gov.za/thinkwater](http://www.capetown.gov.za/thinkwater)



ALTERNATIVE WATER SOURCE	FROM NATIONAL DWS	FROM CITY OF CAPE TOWN
<b>Rainwater</b>	N/A	<ul style="list-style-type: none"> <li>• Approval for installation</li> </ul>
<b>Groundwater</b>	If beyond 'reasonable' domestic use as described in Schedule 1, then General Authorisation or Water Use Licence applies	<ul style="list-style-type: none"> <li>• Registration of boreholes/ wellpoints</li> <li>• Approval for installation</li> </ul>
<b>Basement water</b>	If beyond use permitted by Schedule 1 use, then General Authorisation or Water Use Licence applies	<ul style="list-style-type: none"> <li>• Approval for installation</li> </ul>
<b>Surface water</b>	If beyond use permitted by Schedule 1 use, then General Authorisation or Water Use Licence applies	<ul style="list-style-type: none"> <li>• Permission to abstract stormwater</li> <li>• Approval for installation</li> </ul>
<b>Greywater</b>	N/A	<ul style="list-style-type: none"> <li>• Approval for installation</li> </ul>
<b>Treated effluent - from City</b>	Registration as a water user	<ul style="list-style-type: none"> <li>• Approval for installation</li> </ul>

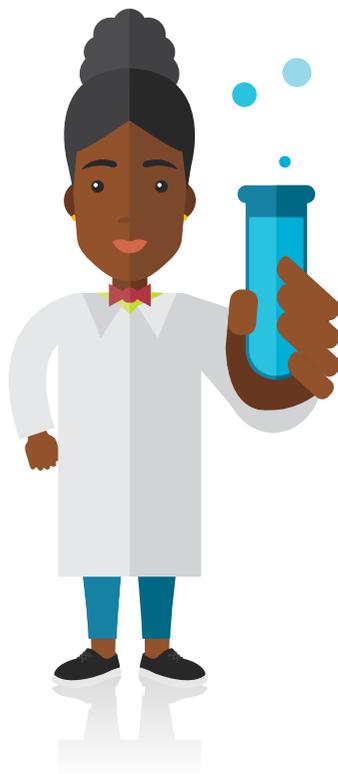
# SAFE USE OF ALTERNATIVE WATER

It's imperative to take safety precautions when you install an alternative water system into a building, or use it for irrigation, including in sports fields, play parks etc.

**Install a Reduced Pressure Zone (RPZ) backflow preventer valve** (or alternatively an 'air gap' tank) so that the municipal drinking water supply in your area cannot be contaminated.

**The quality of an alternative water source, and how it is stored and managed, is key to where/ how it can be used.** Test your alternative water at a SANAS-accredited laboratory first, and compare the results with the 1996 national water quality guidelines. Treatment may be needed.

**Alternative water can be used to flush toilets and for a few other uses, with required permission and quality.** However, you are **not** allowed to drink alternative water or use it for ablution (body washing) and cooking (or food preparation) due to the potential health risks it poses. The only exceptions for this are a few consumers which contract with the City to operate as a Water Service Intermediary, under strict criteria and conditions.



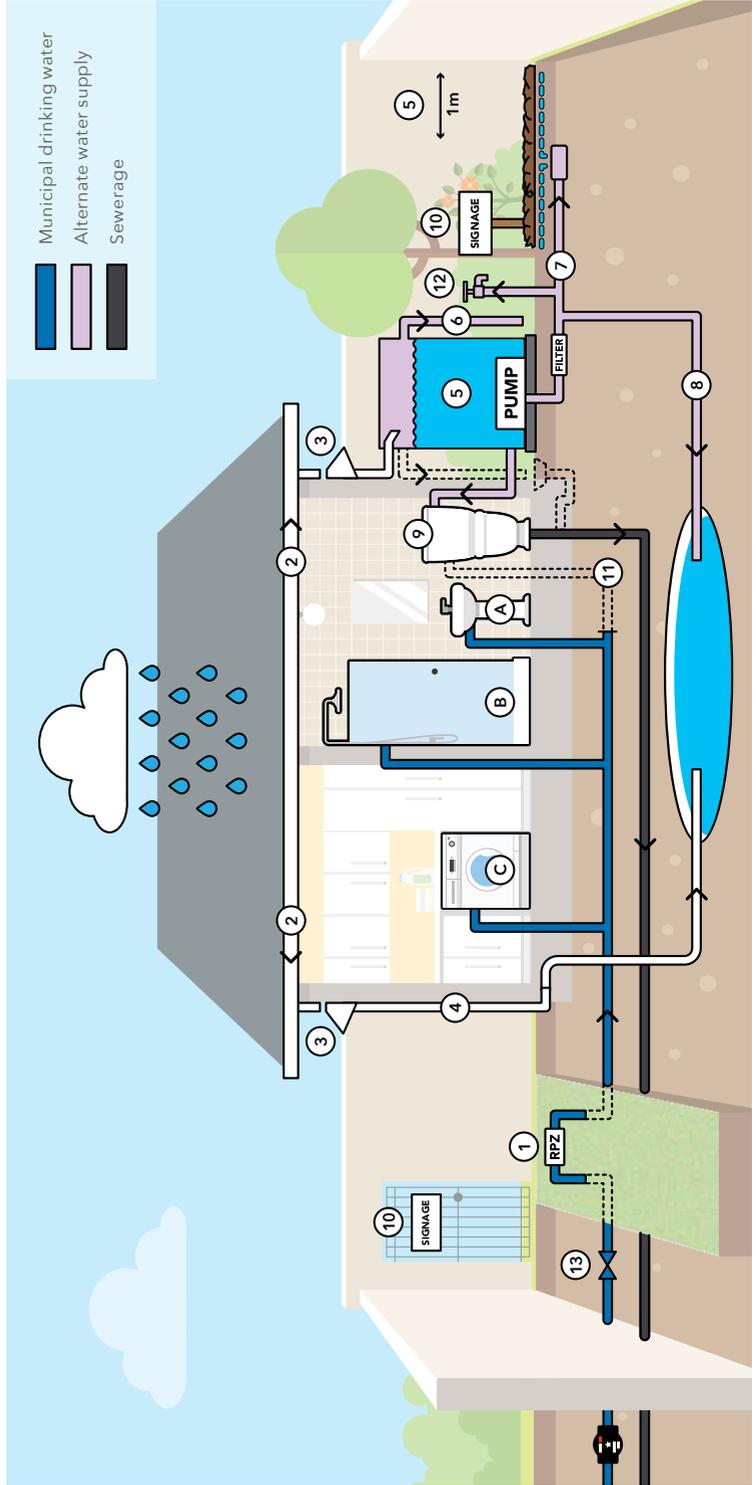
**Discharge of used alternative water or any effluent generated must be directed to the correct place.** Any discharge or overflow from your alternative water system containing harmful chemicals or substances should be directed to the sewer system for treatment/neutralisation at the City's wastewater treatment works, provided that it is within the prescribed limits stipulated in the City's Wastewater and Industrial Effluent By-law. Overflows from tanks containing untreated rainwater should be directed to stormwater drainage.



**'Do not drink' warning signs must be placed** at the property's main thoroughfare (i.e. at the entrance gate) and the point(s) of use, and all pipes that are used in the alternative water system also need to be colour-coded. (See the full guideline documents for the colours required.)

# RAINWATER FOR OUTDOOR USE AND TOILET FLUSHING

An example of a rainwater system for indoor and outdoor use is illustrated and explained for you below. Please note that the system will differ according to the type of alternative water (rainwater, surface water etc.) being used. This is just one example.



- 1 Municipal drinking water supply into property fitted with a RPZ valve back-flow preventer (mandatory). The RPZ must be installed immediately downstream of the private stopcock inside the property boundary, above ground, and according to SANS 10252-1:2016 (Edition 3.1). See the technical drawing/sketch guidance in annexure 4 in the full guideline documents.
- 2 Rainwater channelled to storage tank via gutters.
- 3 Debris diverted by sloped screen.
- 4 Rainwater for topping up pool or other outdoor use, in this instance directly from gutters using gravity feed, for example via flexible plastic sleeve.
- 5 Collection of rainwater in storage tank. Tank installations may be below or above ground and may be elevated if placed on a strong enough base (e.g. concrete). Consider SANS 10252-1:2016 (Edition 3.1) for water storage tanks, SANS 2001-CC2 if you're constructing a concrete base, the National Building Regulations and Building Standards Act 103 of 1977, as well as the manufacturer's specifications. Any underground (subsurface) tank installation must also be at least 1 m away from the boundary wall.
- 6 Storage tank overflow to stormwater. If rainwater is treated with any chemicals, the overflow must be discharged into the sewer.
- 7 Rainwater for drip/subsurface irrigation under a thick layer of mulch, vehicle washing and/or hard-surface cleaning.
- 8 Rainwater for topping up pool. Pool cover as per water restrictions in place at the time.
- 9 Rainwater for toilet flushing.
- 10 Official, weather-proof signage to be placed in main thoroughfare (entrance) and at points of use to warn people against using the rainwater for drinking, cooking and ablution.
- 11 Municipal water supply to cistern must be disconnected when rainwater is used. This may be seasonally disconnected during winter rainfall months, or permanently if there is sufficient storage.
- 12 If the installation includes a tap that people may be tempted to drink from, use or waste, preferably lock it or turn it into a "demand" tap.
- 13 Install a private stopcock after the boundary wall and before the RPZ valve back-flow preventer.

# THINK WATER

CARE A LITTLE. SAVE A LOT.

For water and sanitation-related issues you can reach the City through any one of these channels:

- Online at [www.capetown.gov.za/servicerequests](http://www.capetown.gov.za/servicerequests)
- Email [water@capetown.gov.za](mailto:water@capetown.gov.za)
- SMS **31373** (maximum of 160 characters)
- Call **0860 103 089**
- Visit a Customer Interaction Centre - for the complete list, see [www.capetown.gov.za/facilities](http://www.capetown.gov.za/facilities)

Stick to one of these channels for a faster response, and always get a reference number.



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