



REFERENCE: 15/P

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ENQUIRIES: E. Visagie

TO: All Municipal Managers in the Western Cape

CIRCULAR NO: C1 of 2018

Water Crisis Response Policy Guidelines for the Western Cape

1. Purpose

The purpose of this Circular is to provide information to municipalities and key stakeholders on the Policy Guidelines to respond to the water crisis in the Western Cape. The Western Cape Department of Human Settlements (hereafter referred to as the Department) is broadening the current norms and standards with the aim of addressing the water crisis by offering directions for the implementation of water demand and supply management measures in all Departmental and contracted projects.

Projects include all Departmentally-managed projects including those undertaken via a land availability agreement and any project for which any approval is required from the Department. This includes projects undertaken through grant funding made available by the Department to municipalities.

The Guidelines were approved by the Provincial Minister on the 21st of November 2017.

2. Policy Guideline Principles

It is proposed that the following guiding principles be incorporated in the water demand and supply management of all Departmental and contracted projects:

- to be water sensitive in the design and construction of human settlements;
- water to be managed and treated in a manner which reflects the principles of water sensitivity;
- promoting the efficient, sustainable and beneficial use of water resources;
- facilitating social and economic development;
- providing for growing demand for water use;
- reducing and preventing pollution and degradation of water resources;
- environmental integrity;
- ensure effective and appropriate information management, reporting and awareness-raising of sustainable water management;
- meeting international obligations; and
- managing floods and droughts.

3. Context and Background

South Africa is characterised by low and variable rainfall, and water security is one of the biggest challenges facing the country in the 21st century. The Western Cape is presently undergoing the harshest drought on record. The dams and reservoirs feeding the municipalities are at record lows.

Three years of below-average rainfall (2015, 2016 and 2017) has exacerbated the situation. Severe multi-year droughts are very rare in Cape Town and these droughts have become more difficult to predict and, according to one climatologist, the impact of climate change is probably the reason that climate cycles have become unpredictable. **This implies that the current water crisis must be viewed not as a temporary phenomenon that will resolve in a year or two, but rather as a long-term challenge.**

Water scarcity could get rapidly worse as our supply contracts and demand escalates due to growth, urbanisation, unsustainable use, water losses and a decrease in rainfall due to climate change. Since 1995 the City of Cape Town's population has grown 55%, from about 2.4 million to an expected 4.3 million in 2018. Over the same period dam storage has increased by only 15%.

The Department is in the business of building houses, and associated infrastructure, which has a direct impact on the natural environment. The construction and operation of buildings account for 50% of all CO₂ emissions (which contributes to climate change) released into the atmosphere and worldwide buildings account for 12% of water usage.

Given the current water crisis, the construction industry in the Western Cape has an obligation to reduce its consumption by switching to clean energy sources and committing to water resource efficiency and sustainable human settlements. The industry is also increasingly coming under pressure from National Government and international bodies to alter its mode of operation by adopting climate change mitigation measures that reduce emissions and adaptation measures that reduce climate risk to vulnerable communities.

In November 2017, municipalities were invited to submit comments on the Water Response Policy Guidelines. Comments received have been included in this Circular, where applicable.

4. Legislative Mandate

According to Section 27(1)(b) of the Bill of Rights in the Constitution, everyone has the right to have access to sufficient water.

Under normal conditions the responsibility for water provision is divided between the three spheres of government as follows:

- Major water infrastructure – National Government;
- Oversight, monitoring and support – Provincial Government; and
- Supply systems for clean water delivery to households – Local Government.

The role of the Provincial Government is not peripheral, but central to identify the crisis and to take the necessary steps to pre-empt it.

5. The Western Cape Government's Response to the Water Crisis

In light of the current water crisis, Premier Helen Zille implemented, in terms of Section 41(2) of the Disaster Management Act, provincial-wide directives dealing with restrictions on the use of potable water for domestic and industrial purposes.

6. Western Cape Department of Human Settlements' Water Demand and Supply Management Measures/Immediate Actions

Large volumes of water (but not necessarily potable water) are required to construct human settlement developments. Many developments do not have water efficiency measures in place after they have been built. In order to combat the impact of the drought and to build resilience, the following demand and supply measures are to be implemented on all Departmentally-managed and contracted projects:

It is required of all successful bidders to submit a project specific **Water Demand Management Plan for approval to the respective Regional Directors. In developing these Water Demand Management Plans the following interventions may serve as guidelines.**

Interventions have been categorised into two broad themes: **Technical Interventions** relating to norms and standards and contractor activities and **Behavioural and Administrative Interventions** which include consumer education activities, rain-water harvesting, contract management activities and other recommendations.

6.1 DURING THE DESIGN PHASE

Technical Interventions:

- a. Apply urban design principles with increased focus on the reduction of potable water usage.
- b. Insist on water saving toilets and cisterns; that is, cisterns with capacities not exceeding 6 litre per full flush.
- c. Consider dual water supply plumbing to toilets for future non-potable supply.
- d. Specify water saving diffusers for all taps and showers, i.e. aerator/washer regulator. Not to exceed 10 litre per minute for showers and 6 litre per minute for taps.
- e. Consider "push flow" taps for internal plumbing at public buildings or site buildings.
- f. Replace baths with showers.
- g. Project managers and designers to engage with the municipality for the installation of pressure control devices for whole or parts of new developments and developments already under construction (this is especially relevant for areas where static pressure exceeds 3 bar).

- h. Add gutters, downpipes and rainwater tanks for all new projects and projects currently under construction. Allow for a solid base, plastic stopcock and removable lid. Tank size to be not more than 1000l depending on practical considerations and product availability. This should include two fascia boards and gutters on both sides of the house connected to the tank. However, due to the high cost and small amounts of water collected from subsidised housing roofs, the use of rainwater tanks needs to be considered carefully. In general, greater water savings, for a fraction of the cost, can be achieved with measures (d) to (f) above.
- i. Review and update Departmental minimum standards, as required.

Behavioural and Administrative Interventions:

- a. Conditions of contract to provide for fines (for example in the Environmental Management Plan) as well as enhanced role of the Environmental Control Officer and/or the Client's Occupational Health and Safety (OH&S) Agent.
- b. All interventions listed in the following section '**During Construction**', excluding Behavioural and Administrative Interventions: (k) and (l), to be included in contract documentation.

6.2 DURING CONSTRUCTION

Technical Interventions:

- a. Where not already in place and where practical and feasible, contractors need to develop with immediate effect alternative, non-potable sources of water; be it boreholes, well points, trucking of non-potable water to their site, etc.
- b. Fit all hoses on site with a "squirt" or "squeeze" nozzle to minimise the use of water, where non-potable water is not available or implemented.
- c. Use chemical toilets instead of flushing toilets at site camp.
- d. Use ready-mixed concrete instead of mixing on site.
- e. Block cutting/angle grinding to be accompanied by water poured from a container rather than a hosepipe.
- f. Cover sand stockpiles with filter cloth or plastic or equivalent.

Behavioural and Administrative Interventions:

- a. Instruct contractors to use water from sources other than municipal supply, such as recycled water, well points and boreholes. Departmental work inspectors to monitor and report on potable versus non-potable water use on site.
- b. The use of potable water for road making, washing of plant and equipment and for on-site concrete, plasters and screeds is to be phased out with immediate effect. Potable water to be used only for making of reinforced concrete, testing of water pipes and drinking.
- c. Contractors to capture rain water from the roofs of site office buildings.
- d. Contractor to issue the workers with refillable water bottles for their use during daily operations on site, instead of from running taps.
- e. All workers to wash their tools/equipment (after daily activities) at a dedicated bucket/facility on site – instead of under running water. Wash water to be reused.

- f. Contractor to report weekly on volume of water used, audited monthly against municipal account. Meters to be checked overnight and weekends to identify leakages during 'no-use' times. (It goes without saying that any standpipe without a meter will be reported to the municipality for fines, over and above any remedies that the Department may implement in terms of the contract).
- g. Fines to be included in contract document for water usage determined to be wasteful or excessive.
- h. Contractor to conduct "tool box" talks advising workers on water saving measures to be adopted and regularly conduct such talks to reinforce the message.
- i. Educational flyers/posters on site to enforce notion of water saving/awareness.
- j. The role of the Employer's Environmental Control Officer or OH&S Agent is to be extended to include reporting on water use and any abuse of water on site.
- k. Departmental staff (works inspectors and project managers) to check for leaking taps, water pipes and any other leaks on site.
- l. Departmental project managers to engage with the municipalities for taking over the boreholes, well points, etc. sunk and developed by contractors as a municipal/community resource.

6.3 AFTER HANDOVER

Technical Interventions:

- a. Departmental works inspectors to follow up before the end of the maintenance defects liability period on completed projects to check for leaking plumbing, specifically cisterns. Checklists to be revised.
- b. Whilst contractors are still on-site, works inspectors to go through the handed over houses again before completion of the last house to make sure none of the internal plumbing is leaking in recently handed over houses.

Behavioural and Administrative Intervention:

- a. Place special emphasis on water saving as part of the consumer education phase.

7. How to Apply for Funding

Project managers will request quotations from contractors and developers for the water demand and supply management measures (contained in Section 6). These quotations will form the basis of applications for funding to be considered by the Department.

Tender and contract documentation to list all aspects that will incur additional costs in a separate schedule so that value for money impact of each measure can be assessed against funding availability.

All requests for funding are to be submitted to the Regional Directors:

Region	Director	Email address
Metro & West Coast	Mr Niel Muller	Niel.Muller@westerncape.gov.za
Eden & Central Karoo	Mr Esais Pieterse	Esais.Pieterse@westerncape.gov.za
Cape Winelands	Mr Preshane Chandaka	Preshane.Chandaka@westerncape.gov.za
Overberg	Mr Vusimuzi Dlamini	Vusimuzi.Dlamini@westerncape.gov.za

8. Date of Inception

These Policy Guidelines will be effective as of the 1st of February 2018. It will not be applied to completed projects or where houses have been handed over to beneficiaries. It is only applicable to on-going and new projects.



HEAD OF DEPARTMENT: HUMAN SETTLEMENTS: MR T MGULI

DATE: 05 FEB 2018