



BEAUFORT WEST MUNICIPALITY



WATER DISTRIBUTION LOSSES POLICY

2026/2027

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Copies of this document can be viewed at the offices of the Municipality and on the municipal website.

TABLE OF CONTENTS

1. SCOPE	3
2. DEFINITIONS.....	3
3. OBJECTIVE	4
3. LEGISLATION	4
4. TYPES OF LOSSES	5
5. METERING AND DEBT RELIEF CONDITIONS.....	5
6. ACCEPTABLE NORM	6
7. CONTROL AND MONITORING.....	6
8. REPORTING.....	7
9. POLICY REVIEW	8



1. SCOPE

The Beaufort West Municipality is responsible for the purification and distribution of water within the Beaufort West municipal jurisdiction. Water losses can occur during the storage, supply, and distribution of water. This policy will also describe the disclosing of water related losses in terms of the relevant legislation. This policy should be read in conjunction with the Accounting Policy of Beaufort West Municipality.

2. DEFINITIONS

CONCEPT	DEFINITION / MEANING	RELATIONSHIP TO WATER LOSSES
APPARENT (COMMERCIAL) LOSSES	Water consumed but not correctly measured, billed, or paid for due to meter inaccuracies, illegal connections, billing errors, tampering, or unmetered consumption.	Forms part of NRW and directly impacts revenue recovery rather than physical water losses.
AUTHORISED CONSUMPTION	Water consumption permitted by the municipality, whether metered/unmetered and billed/unbilled.	Must not automatically be treated as a "loss" merely because it is unmetered.
AUTHORISED UNBILLED CONSUMPTION	Water used legally for approved purposes without billing, such as firefighting, municipal parks, flushing, or approved free basic water.	Part of NRW but not necessarily inefficiency or theft.
BILLED CONSUMPTION	Water for which an invoice is issued, whether metered or deemed/unmetered.	Forms part of revenue water.
BILLED UNMETERED CONSUMPTION	Fixed or deemed consumption billed without an actual meter reading.	Some distributed water should not be classified as a loss.
DEEMED CONSUMPTION	Estimated or fixed water allocation used where actual metering is unavailable.	Can reduce overstated NRW calculations if rationally and consistently applied.
DISTRIBUTION LOSSES	Water losses occurring within the reticulation and distribution system.	Includes both real and apparent losses.
FREE BASIC WATER (FBW)	Subsidised basic water allocation provided in terms of policy and legislation. mSCOA treats FBW as billed consumption at a zero rate.	Supports excluding from "losses".
METERING INACCURACIES	Losses arising from faulty, old, undersized, bypassed, or unreadable meters.	Classified as apparent/commercial losses.
NON-REVENUE WATER (NRW)	Water for which the municipality receives no income. Calculated as the difference between system input volume and billed/revenue water.	Includes real losses, apparent losses, and authorised unbilled consumption.
PHYSICAL (REAL) LOSSES	Actual physical water losses through leaks, bursts, overflows, and infrastructure failures.	Represents actual inefficiency and infrastructure deterioration.



REVENUE WATER	Water for which revenue should be received, including billed metered and billed unmetered consumption.	Opposite of NRW.
SYSTEM INPUT VOLUME	Total potable water entering the municipal distribution system from treatment works, boreholes, bulk purchases, etc.	Starting point for all water balance calculations. For the calculation of NRW / Water Losses as disclosed in terms of Section 125 the input will be measured from the reservoir or borehole, if directly linked and metered.
UNAUTHORISED CONSUMPTION	Illegal or tampered consumption not approved by the municipality.	Forms part of apparent/commercial losses.
UNAVOIDABLE ANNUAL REAL LOSSES (UARL)	The minimum technically unavoidable level of physical water loss in a system.	Confirms that zero water losses are unrealistic.
UNMETERED AUTHORISED CONSUMPTION	Approved water use without metering, including flat-rate or municipal consumption.	Should not automatically be classified as theft or physical loss.
WATER LOSSES	Difference between system input volume and authorised consumption. Includes both real and apparent losses.	Subset of NRW and for the purposes of this policy to be read with the Distribution Losses and NRW.

3. OBJECTIVE

The objective of the municipality must be to minimize these losses, as these losses can have a significant financial impact with the municipality that will have to pay for the treatment and distribution of water that cannot be billed.

3. LEGISLATION

Municipal Finance Management Act 56 of 2003

Section 125(2) -The notes to the annual financial statements of a municipality or municipal entity must disclose the following information:

- (d) particulars of -
 - (i) any material losses



4. TYPES OF LOSSES

The most common losses occurring in the Municipality are the following:

- Old and Ailing infrastructure.
- Pipe bursts.
- Unmetered water connections.
- Open spaces and sport fields that are unmetered.
- Undetected underground water leaks.
- Old end-user meter; and
- Inaccessible properties- cannot read meters.

This can also be split into technical losses (network / infrastructure related) and non-technical losses (Theft / illegal connections, unmetered, illegal, tampering etc.).

Refer to Section 6 and Section 7 on the considerations and calculations pertaining to water losses as well the relevant definitions.

5. METERING AND DEBT RELIEF CONDITIONS

- The municipality must progressively install **Smart pre-paid meters** in the municipal water distribution areas.
- Commercial and Industrial should make use of Smart metering solutions but unlike residential should not necessarily be pre-paid.
- All new meter replacements and new meter installations should be Smart meter installations as required in terms of the Eskom Debt Relief Programme.
- The Smart metering system to be installed must comprise an electronic smart water metering device or meter which communicates with a main data collector, whereby this data can then be seamlessly integrated into the municipality's billing system.
- The Municipality will be required to participate in the National Treasury transversal tender RT29-2024 in the procurement of their water-meters.



6. ACCEPTABLE NORM

In terms of MFMA Circular No. 71: Uniform Financial Ratios and Norms dated January 2014, the industry norm is between 15% and 30%.

Purpose/Use of the Ratio

The purpose of this ratio is to determine the percentage loss of potential revenue from water service through kilolitres of water purchased but not sold as a result of losses incurred through theft (illegal connections), non- or incorrect metering or wastage as a result of deteriorating water infrastructure. It is expected that implementation of the free basic service policy is included in the calculation for sale of water.

Formula

(Number of Kilolitres Water Purchased or Purified - Number of Kilolitres Water Sold) / Number of Kilolitres Water Purchased or Purified × 100

Interpretation of Results

A ratio within the norm depicts that water losses and water infrastructure are well managed. If the Ratio exceeds the norm, it could indicate various challenges, for example, ageing water infrastructure or poor management, affecting the Municipality, which would require further analysis and explanation to determine the reasons for such losses. In addition, the root causes should be addressed.

7. CONTROL AND MONITORING

The municipality must have the intention to keep the losses of water to below a specified percentage of the total water purified and distributed.

- To keep the losses to a minimum, the metering of water must be monitored sufficiently.
- The water losses must be monitored on a monthly basis.
- Distribution meters must be installed to obtain meaningful meter data, to calculate losses accurately in terms of volume and per distribution area, if possible (ward etc).

- A formal system of communication should be maintained or put in place to ensure effective and efficient communication between the revenue department and the technical department. This will ensure that meters replaced, meter reset, disconnections, last readings etc. being accounted for to ensure that the municipality suffer no losses in this regard; and
- The billing system must be used to detect possible cases of illegal connections (deviation / exception reporting). If theft is detected, the water supply to the premises will be disconnected and a fine need to be paid at a rate as published in the municipal tariffs applicable to the financial year it relates to. Action will be taken as in terms of the municipal policy relating to customer care, credit control and debt collection and criminal charges should be considered.

ACCOUNT FOR THE FLAT-RATE TO BE APPLIED WHERE NO CONSUMPTION MEASUREMENT IS POSSIBLE - UNMETERED AUTHORISED CONSUMPTION:

- For purposes of quantifying and reporting water distribution losses, all unmetered residential households billed on a flat-rate basis may be deemed to have consumed a minimum quantity of 6 kilolitres (6kl) of water per month, equivalent to the Free Basic Water allocation.
- The deemed consumption allocation is intended solely for purposes of conservative water loss quantification and financial reporting and does not constitute an availability charge or represent actual metered consumption.
- The monetary value attributed to this deemed consumption may be levied in a manner consistent with the methodology applied to the municipality's fixed water service charges or flat-rate structure.
- The quantified deemed consumption must be deducted from the quantification of water losses to avoid overstating the cost water losses.
- The municipality acknowledges that the majority of households currently billed on a flat-rate basis are likely to consume at least the equivalent of the Free Basic Water allocation, and that the deemed quantity applied is considered conservative and lower than the estimated average consumption of an indigent household.

8. REPORTING

Water losses must be reported to the Director: Infrastructure on a monthly basis by means of a monthly report. Other reporting requirements will include:

- Quarterly reporting to the Department Water & Sanitation regarding water losses.
- Reporting on a quarterly basis in terms of section 52 of the MFMA.

- The total water losses incurred, must be made public in the annual financial statements of the municipality.
- Water losses are also reported in the Mid-Year Performance Report of the municipality.

The water losses reporting on in terms of financial reporting, must clearly indicate the quantity in terms of the units (Kl's) lost as well as the financial implication of the losses.


9. POLICY REVIEW

The content of the policy will be reviewed as and when required but at least on an annual basis during the budget process.



DOCUMENT CONTROL



VERSION AND DOCUMENT CONTROL			
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