



Fair Trading Commission

ANALYSIS OF BARBADOS WATER AUTHORITY ANNUAL STANDARDS OF SERVICE REPORT

January 1, 2018 - December 31, 2018

Date: August 23, 2019

INTRODUCTION

The Fair Trading Commission (the Commission) is empowered under the Fair Trading Commission Act, CAP. 326B (FTCA) and the Utilities Regulation Act, CAP. 282 (URA) of the Laws of Barbados to determine, monitor and review Standards of Service (SOS) applicable to regulated utilities. The role of the Standards of Service programme is to ensure operational consistency and outline the minimum standards of quality, customer service and reliability that must be met by the Barbados Water Authority (BWA).

This report evaluates the performance of the BWA with respect to both Guaranteed and Overall Standards of Service for the period January 1, 2018 to December 31, 2018. Analysis of the BWA's performance is based on the Standards of Service Decision 2018 - 2020, which was issued by the Commission on May 31, 2017 and took effect from January 1, 2018. This is therefore the inaugural annual Standards of Service report for the BWA, thus, no historical comparison is available.

There are two (2) Sections contained herein. Section 1 provides an assessment of the BWA's performance under the Guaranteed Standards of Service, which measure a regulated utility's provision of service to customers. Section 2 assesses the utility's performance under the Overall Standards of Service, which measure BWA's efficiency in delivering service to its customers at the national level.

SECTION 1 - GUARANTEED STANDARDS OF SERVICE

The nine (9) Guaranteed Standards of Service are outlined below. A summary of the BWA's performance for the period January 1, 2018 to December 31, 2018, is presented in Table 1. During the period under review, the BWA was unable to provide data for GWS 8 Scheduling of Field Appointments and GWS 9 Reliability of Supply. The BWA explained that the system to be used to capture relevant information is under development. In the second quarter, there were substantial improvements in the BWA's performance when compared to the first quarter. However, the BWA advised that chronic financial and operational challenges, later coupled with the Barbados Economic Recovery Transformation (BERT) exercise, resulted in the retrenchment of employees in critical areas which severely impacted its ability to function and report during the final quarters of the year.

Table 1: Guaranteed Standards of Service

STANDARD	TARGET	AVERAGE (%) COMPLIANCE January 1, 2018 - December 31, 2019	
		R	C
GWS1 Installation of a Service 1a. Time taken between application, payment for service, and the installation for a standard connection in a Zone other than a Zone 1 area.	Residential (R) - 14 days Commercial (C) - 10 days	48.42	18.75
1b. Time taken to complete an investigation on receipt of an application for service, in a Zone 1 area.	Residential (R) - 14 days Commercial (C) - 10 days	71.80 ¹	
1c. Installation time after the completion of the investigation and approval in Zone 1 area. (Zones are as defined by the BWA)	Residential (R) - 14 days Commercial (C) - 10 days	N/A	

¹ The BWA did not differentiate between Residential and Commercial.

STANDARD	TARGET	AVERAGE (%) COMPLIANCE January 1, 2018 – December 31, 2019	
		R	C
<p>GWS 2 Issuance of First Bill</p> <p>The time elapsing between the installation of water service and the issuance of the first water bill.</p> <p>(Interim bill to be issued if read bill cannot be generated)</p>	<p>Residential – No more than 30 days after installation of service</p> <p>Commercial – No more than 30 days after installation of service</p>	33.21	100.00 ²
<p>GWS 3 Response to Complaints</p> <p>The timeframe in which the BWA must acknowledge a customer’s complaint about billings or other standards of service.</p>	<p>Acknowledgement provided within 7 days of receipt of complaint.</p>	92.01	78.51
	<p>Investigation of complaint and findings provided within 20 days of receipt of complaint. (Inclusive of acknowledgement time)</p>	21.35	17.65
<p>GWS 4 Wrongful Disconnections</p> <p>The loss of service where the customer has been disconnected in error.</p>	<p>Reconnected within 10 hours after notification of the error.</p> <p>(Residential)</p>	100.00	No complaints received of wrongful disconnections of commercial entities
<p>GWS 5 Meter Installation (Existing Service)</p> <p>The time frame in which the BWA will install a meter on the customer’s request. (Customer with a fixed rate requesting meter)</p>	<p>Meter to be installed within 45 days of receipt of request</p>	100.00 ³	100.00 ⁴
<p>GWS 6 Repair/Replacement of Faulty Meter</p> <p>The time taken, after the report of a fault, for the BWA to assess and</p>	<p>Assess and determine operational status of meter and report findings to the customer within 15 days</p>	91.00 ⁵	

² Information was submitted for the 4th quarter only.

³ Information was submitted for the 2nd, 3rd and 4th quarters only.

⁴ Information was submitted for the 4th quarter only.

⁵ Information was submitted for the 2nd, 3rd and 4th quarters only. The BWA did not differentiate between Residential and Commercial.

STANDARD	TARGET	AVERAGE (%) COMPLIANCE January 1, 2018 – December 31, 2019	
		R	C
repair/replace a faulty meter where applicable.	Replace/repair faulty meter within 30 days of confirmation of defect	99.29 ⁶	
GWS 7 Reconnection After Payment of Overdue Amount and Reconnection Fee The timely reconnection of a customer's service after satisfactory settlement of overdue amounts and reconnection fee at the BWA's offices.	Maximum of 24 hours to restore supply	98.37 ⁷	
GWS 8 Scheduling of Appointments Appointments scheduled by BWA representatives. Where the BWA is unable to keep an appointment with a customer, the BWA will contact the customer at least 24 hours before the scheduled appointment to cancel and notify of a new date. (Monday to Friday) . The customer should be given a work order number as confirmation of a scheduled appointment.	All scheduled appointments shall be honoured. Appointments may be scheduled: Morning (8:00 a.m. to 12:00 noon) or afternoon (12:01 p.m. to 4:00 p.m.)	N/A	
GWS 9 Reliability of Supply The provision of a minimum quantity of running water over a 30 day period (a billing period).	Customers shall be supplied with at least 8m ³ of running water over a 30 day period (a billing period)	N/A	

R - Residential Customers; C - Commercial Customers.

N/A - Data not available

⁶ The BWA did not differentiate between Residential and Commercial.

⁷ The BWA did not differentiate between Residential and Commercial.

GWS 1 Installation of Service

GWS 1 refers to the period of time within which a connection, in Zone 1 and other areas, should be completed. The BWA's report suggested that delays were not always attributable to the company but were also due to the applicants' action or inaction, or the inaction of another governmental agency. Nonetheless, these results were less than satisfactory and indicate much scope for improvement.

In a Zone other than a Zone 1 area, the time between application, payment for service and installation should not exceed fourteen (14) days for residential customers and ten (10) days for commercial customers (1a). The same targets apply to the time it should take for an investigation to be completed following receipt of an application for service in a Zone 1 area (1b); and the time it should take for installation after completion of the investigation and approval of the application in a Zone 1 area (1c).

Residential

For the period under review, there was an average compliance rate of 48.42% for GWS 1a. Eight hundred and twenty-four (824) applications for service were received but only three hundred and ninety-nine (399) installations were completed in the requisite time.

The BWA achieved 71.80% compliance for GWS 1b, with fifty-six (56) of the seventy-eight (78) investigations completed in the stipulated time.

With respect to GWS 1c, information was only submitted for one (1) quarter for this particular Standard. During that quarter, there was one (1) instance where the installation was not completed as a result of force majeure. Therefore, this was not registered as a breach.

Commercial

The compliance rate for installations in a zone other than a Zone 1 area was 18.75%, representing a significant failure to meet the Standard. This metric was especially low in the final quarter, which substantially depressed the average for the year. In the final

quarter, the BWA was able to meet its target on one (1) occasion out of fourteen (14) requests. This represents an unsatisfactory performance and signals the need for considerable improvement.

GWS 2 Issuance of First Bill

This Standard specifies that the time between the installation of water service and the issuance of the first water bill should not exceed thirty (30) days.

Residential

The BWA indicated that it was unable to consistently provide data on this Standard due to integrity issues with the extraction of data from its newly implemented system. There was therefore insufficient information for a complete assessment of the BWA's performance under this Standard. However, anecdotal information suggests a sub-standard compliance rate of 33.21%. Data provided for three (3) quarters indicated that there were two hundred and sixty-five (265) new installations, but the target was only met eighty-eight (88) times.

Commercial

Information relating to this metric was submitted for the final quarter only. It would not be prudent to extrapolate one (1) quarter's performance for the year's performance. The available data indicated that the BWA's compliance rate for this period was 100%, as there were one hundred and one (101) new installations and all customers received their initial bills in the required time.

GWS 3 Response to Complaints

This Standard details the time frame within which the BWA must respond to a customer's complaint about a billing issue or other Standards of Service. BWA must acknowledge the complaint within seven (7) days and complete the investigation within twenty (20) days.

Residential

During the year under review, the BWA reported a compliance rate of 92.01% in providing an acknowledgment on receipt of complaints. The BWA received four hundred and fifty-six (456) complaints and provided an acknowledgement within the required time on four hundred and fourteen (414) occasions. Investigations were initiated three hundred and eighty-four (384) times, but only eighty-two (82) were completed in the specified time. The BWA was able to complete the investigations and provide findings within the stipulated twenty (20) days only 21.35% of the time. This represents a significant performance deficit.

Commercial

The BWA realised a compliance rate of 78.51% in providing an acknowledgement within the stipulated time. However, improvement is required with regard to the completion of investigation and the provision of findings, as this compliance rate was 17.65%.

GWS 4 Wrongful Disconnections

This Standard denotes the time in which the BWA must reconnect service to customers that were disconnected in error. The reconnection must be within ten (10) hours of the BWA being notified of the error.

Residential and Commercial

Compliance for this category was 100%. This was one of the few commendable performances of the BWA. There were one thousand, one hundred sixteen (1,116) reported instances of wrongful disconnections and all were reconnected within the stipulated time. The BWA indicated that no complaints were received from commercial entities under this Standard.

GWS 5 Meter Installations (Existing Service)

Under this Standard, the BWA must install a meter within forty-five (45) days of the customer's request.

Residential and Commercial

The BWA's performance was commendable, as sixteen (16) requests for meters were fulfilled within the stipulated time and thus achieved a compliance rate of 100%.

GWS 6 Repair/Replacement of Faulty Meter

Under GWS 6, the BWA must assess and determine the operational status of the meter and report the findings to the customer within fifteen (15) days. In the event that the meter is faulty, it must be repaired or replaced within thirty (30) days of the confirmation of the defect.

The BWA only supplied information for the final three (3) quarters of the review period and indicated that initially there were integrity issues with the extraction of data from the newly implemented system.

Residential and Commercial

In 91% of instances, the BWA assessed the operational status of the meter within fifteen (15) days. Out of one thousand, six hundred forty-four (1,644) reports of faulty meters, the operational assessment was completed in the stipulated time one thousand, four hundred and ninety-six (1,496) times. After the completion of the assessment, the meters were repaired or replaced in the stipulated time eight hundred and forty (840) times out of eight hundred and forty-six (846) reports. This compliance rate of 99.29% represents a creditable performance.

GWS 7 Reconnection after Payment of Overdue Amount and Reconnection Fee

Under this Standard, the BWA must reconnect consumers in a timely manner after the settlement of the overdue account and reconnection charges at the BWA's offices.

The stipulated time of the restoration under these circumstances is twenty-four (24) hours.

Residential

The compliance level for this Standard was 98.37%. Six hundred and seventy-five (675) services were disconnected for arrears and six hundred and sixty-four (664) were reconnected within the stipulated time. This represents a commendable performance.

Commercial

There were no reports of service not being reconnected within the stipulated time after disconnection for the period under review.

GWS 8 Scheduling of Field Appointments

This Standard requires the BWA to keep scheduled appointments and, in instances where the appointment cannot be kept, the customer should be given twenty-four (24) hours' notice of cancellation and notified of a new date. **The BWA reported that data was unavailable for an assessment of this Standard since the system to capture this information is under development.**

GWS 9 Reliability of Supply

This Standard requires the BWA to supply customers with at least 8m³ of running water over a thirty (30) day period. **The BWA reported that data was unavailable for an assessment of this Standard since the system to capture the information is under development.**

SECTION 2 - OVERALL STANDARDS OF SERVICE

Overall Standards of Service assess the BWA’s countrywide performance in relation to its delivery of service. Overall Standards do not require compensation to be paid to individual consumers if targets are not met. However, where there are persistent breaches the Commission may, at its discretion, invoke Section 43 of the FTCA and Sections 31 and 38 of the URA, which refer to the imposition of fines.

The BWA’s performance under the Overall Standards of Service for the review period was generally unsatisfactory. A summary of the BWA’s performance under the Overall Standards of Service for the period January 1, 2018 to December 31, 2018 is presented in Table 2.

Table 2: Overall Standards of Service

STANDARD	TARGET	AVERAGE % COMPLIANCE January 1 - December 31, 2018
OWS 1 Meter Reading	100% of accessible meters to be read monthly.	97.27
OWS 2 Investigation of Water Quality	In 95% of instances, preliminary reports are to be submitted within 72 hours and comprehensive reports are to be submitted within 2 weeks of receipt of complaint.	54.55 ⁸
OWS 3 Reinstatement of Service after Electrical Outages by Supplier of Electricity	In 95% of instances, the water supply shall be reinstated within 8 hours of restoration of electrical supply.	86.77
OWS 4 Reinstatement of Service after In-House Fault (Fault residing within the control of BWA)	In 95% of instances the supply shall be reinstated within 8 hours of occurrence of fault.	53.68

⁸ Information was submitted for one quarter only.

STANDARD	TARGET	AVERAGE % COMPLIANCE January 1 - December 31, 2018
OWS 5 Reinstatement of Property	In 95% of instances temporary reinstatement shall occur at the end of work each day.	70.87
	In 95% of instances permanent reinstatement shall occur within 20 working days ⁹ of completion of works.	30.33
OWS 6 Minimum/Maximum Water Pressure	A water pressure of between 25 to 80 pounds per square inch (psi) shall be maintained at all times.	N/A ¹⁰
OWS 7 Notify Public of Intention to Interrupt Supply	In 95% of instances customers are to be notified not less than 48 hours before scheduled service interruption.	55.78
OWS 8 Correction of Sewerage Problem	95% of all sewerage problems shall be corrected within 48 hours of notification of the sewerage problem.	100.00 ¹¹
OWS 9 Wastewater Effluent Quality	95% of samples shall conform to the Environmental Protection Department's (EPD's) wastewater discharge standards.	27.36 ¹²
OWS 10 Potable Water Quality	100% of samples taken shall be within the potable water quality limits established by the WHO.	99.25 ¹³
OWS 11 Repair of Ruptured Pipes	90% of ruptured pipes shall be repaired within 5 days of notification of rupture.	46.67
OWS 12 Repair of Ruptured Mains	In 95% of instances mains repairs shall be effected within 24 hours of notification of rupture.	94.47

⁹ Working days refers to Mondays to Fridays (8:00 a.m. to 4:00 p.m.) only and exclude public holidays and weekends. In measuring the response time for targets expressed in terms of working days, the day the complaint is made is excluded.

¹⁰ N/A - Data not available

¹¹ Information was submitted for the 1st, 2nd and 3rd quarters only.

¹² Information was submitted for the 2nd and 3rd quarters only.

¹³ Information was submitted for the 2nd and 3rd quarters only.

OWS 1 Meter Reading

Under this Standard, 100% of all accessible meters must be read every month. The BWA reported 97.27% compliance, representing a marginal failure to attain the target. During the period under review, one million, two hundred and sixty-seven thousand, nine hundred eighty-five (1,267,985) actual meter readings were taken out of one million, three hundred and three thousand, five hundred thirty-four (1,303,534) potential readings. This represents an above average performance.

OWS 2 Investigation of Water Quality

This Standard requires the BWA, in 95% of instances, to investigate and submit a preliminary report to the Commission within seventy-two (72) hours after a complaint is received. The BWA only reported data for one (1) quarter, where the compliance rate was 54.55%. The BWA indicated that, in addition to the relevant department being understaffed, there is currently no system to track the number of complaints related to water quality issues. However, the BWA has revealed that an interface between the Customer Service Correspondence and the Work Management System is being developed to facilitate accurate reporting.

OWS 3 Reinstatement of Service after Electrical Outages by Supplier of Electricity

Under OWS 3, in 95% of instances, service should be restored within eight (8) hours of restoration of the electricity supply. The BWA reported 86.77% compliance, which was a breach of the target.

The BWA advised that the Supervisory Control and Data Acquisition (SCADA) system, which would allow it to control processes locally or at remote locations, as well as monitor, gather, and process real-time data, was not available. The absence of SCADA, the BWA contends, impacts its ability to record the actual reinstatement of service times after an electrical outage. The BWA informed the Commission that it is only when the

station is manned and a BWA officer logs the outage and reinstatement times, that this information would be available.

OWS 4 Reinstatement of Service after In-House Fault (Fault residing within the control of BWA)

Under OWS 4, in 95% of instances, water supply must be reinstated within eight (8) hours after an in-house fault. However, the BWA only met this target 53.68% of the time, representing a failure to reach the target. While BWA's first quarter performance was extremely poor, there was substantial improvement over the subsequent quarters. The BWA advised that the issues raised in OWS 3 also applied to this Standard.

OWS 5 Reinstatement of Property

This Standard requires the BWA to, in 95% of instances, temporarily reinstate property at the end of the work day and permanently reinstate property within twenty (20) working days.

While the first quarter's results exceeded the target, the BWA indicated that increasing financial difficulties negatively impacted its ability to temporarily reinstate property. As a result, a compliance rate of 70.87% for the year was achieved for temporary reinstatement. However, the permanent reinstatement of property was only accomplished 30.33% of the time, representing an unsatisfactory performance.

OWS 6 Minimum/Maximum Water Pressure

Under this Standard, the BWA must maintain water pressure between twenty-five (25) and eighty (80) pounds per square inch. **The BWA never reported on this Standard and maintained that it does not possess the appropriate equipment and instruments to facilitate the measurement. The BWA has indicated that reporting on this Standard should begin with the completion of the District Metered Areas (DMAs) project. This project commenced in 2017 and is expected to be completed in three (3) years.**

OWS 7 Notify Public of Intention to Interrupt Supply

Under this Standard, customers must be notified forty-eight (48) hours in advance of an interruption of service 95% of the time. The compliance rate achieved overall was 55.78%, with a first quarter compliance rate of 35.65%. There were one hundred and sixty-eight (168) scheduled interruptions, however the public was only given advanced notice eighty-two (82) times.

The BWA attributed its poor performance to financial challenges which impacted its ability to fulfill the notification requirement. However, the BWA improved by employing Facebook and the Government Information Service website to notify customers. As a result, the BWA was able to notify the public on every occasion during the remainder of the period under review.

OWS 8 Correction of Sewerage Problem

Under OWS 8, in 95% of instances the BWA is expected to correct sewerage issues within forty-eight (48) hours of being informed of a problem. The BWA reported on the first three (3) quarters, but did not report on this Standard for the fourth quarter due to what it described as critical personnel retrenchment. The BWA reported a 100% compliance rate but inserted a qualifier indicating that this related to issues that were correctable within twenty-four (24) hours. The BWA failed to report on issues that required further investigation or that remained unaddressed. It should be noted that the South Coast Sewage Treatment Plant's ongoing issue would be considered force majeure, and consequently would not be considered in reporting for this Standard.

OWS 9 Wastewater Effluent Quality

For OWS 9, 95% of samples from the BWA's sewerage treatment plants should conform to the Environmental Protection Department (EPD) wastewater discharge guidelines.

The BWA only reported on this Standard for the second and third quarters. During the second quarter, sixty-five (65) samples were taken of the wastewater discharge, however

only fifteen (15) met the Standard. The BWA acknowledged that the results were below the required standard and advised that extensive work was ongoing at the Bridgetown Sewerage Treatment Plant to improve the treatment process and, by extension, the sample analysis result. For the third quarter, forty-one (41) samples were taken but only fourteen (14) met the target. The BWA advised that this Standard was also impacted by personnel retrenchment during the final quarter and therefore reports were unavailable. The compliance rate was 27.36% for the two quarters combined, which is unacceptable.

OWS 10 Potable Water Quality

Under OWS 10, 100% of samples taken must be within the potable water quality limits established by the World Health Organization (WHO). The BWA only reported on the second and third quarters. During this period, two thousand and ninety-eight (2,098) samples were taken at abstraction wells/points and two thousand and eighty-three (2,083) were in compliance. The BWA advised that the non-complying samples related to elevated levels of salinity from over pumping during the drought, at the Whim and Haymans in St. Peter and elevated nitrates at Belle, St. Michael and Ashton Hall, St. Peter.

OWS 11 Repair of Ruptured Pipes

OWS 11 requires that 90% of ruptured pipes be repaired within five (5) days of notification of complaint. The BWA reported that the target was met six thousand, three hundred and fifty-nine (6,359) times out of the thirteen thousand, six hundred and twenty-six (13,626) complaints, resulting in a compliance rate of 46.67% and a breach of the Standard. This inability to repair pipes in a timely manner contributes significantly to Non-Revenue Water (NRW). NRW is defined as the difference between the amount of water produced for consumption and the amount of water for which customers are actually billed.

However, whilst this metric is unsatisfactory, there are many extenuating circumstances to be considered. The BWA has an aged, deteriorating infrastructure, with some of the

mains dating as far back as the 1800s. As a result, the infrastructure is more susceptible to frequent ruptures and the BWA is unable to expeditiously effect repairs. The BWA estimates that there are between eight hundred (800) and one thousand two hundred (1,200) ruptured service lines per month. There is a need for significant improvement in this Standard, however, given the BWA's contention of financial challenges, short term solutions are restricted.

OWS 12 Repair of Ruptured Mains

For OWS 12, in 95% of instances, repairs should be effected within twenty-four (24) hours of notification. The BWA was able to maintain a compliance rate of 94.47%, falling marginally short of the target. There were nine hundred and ninety-five (995) reports of ruptured mains, with the BWA effecting repairs in the stipulated time on nine hundred and forty (940) occasions.

The BWA indicated that challenges were experienced in achieving the Standard due to equipment failure and the rescheduling of repairs to accommodate the 'cap' on repair work overtime.

SUMMARY

The BWA's inaugural performance was subpar in the majority of the Standards of Service, both Guaranteed and Overall. The continual under-performance of the BWA can have significant implications for Barbados. Failure to reach and maintain standards related to the Potable Water Quality (OWS 10), the Correction of Sewerage Problem (OWS 8) and the Wastewater Effluent Quality (OWS 9) in particular, can jeopardise the health of Barbadians, the sustainability of the environment and the viability of the tourism industry. Whilst the BWA reported that its challenges related to an aged infrastructure and limited finances, the level of its service delivery to customers could still be improved.

During the first quarter, the BWA's performance under the Standards was considerably inadequate, with a general failure to attain the targets. Some improvements were realised in the second quarter in relation to the reporting and actual performance. However, the BWA's performance regressed in the third and final quarters. The utility asserted that the absence of funds resulted in shortages of material and equipment critical to achieving an efficient level of operation. Additionally, the BWA reported that the impact of the BERT resulted in the retrenchment of staff, some of whom were integral to the BWA's operational and reporting processes. This also eroded the improvements that had previously accrued.

A review of the data submitted by the BWA revealed that GWS 4 Wrongful Disconnections and GWS 5 Meter Installation were the only Guaranteed Standards of Service that consistently attained compliance. GWS 3 Response to Complaints, GWS 6 Repair/Replacement of Faulty Meter and GWS 7 Reconnection after Payment of Overdue Amount and Reconnection Fee marginally failed to achieve the compliance rate. Conversely, GWS 1 Installation of Service and GWS 2 Issuance of First Bill recorded poor performance.

Metrics were never reported for GWS 8 Scheduling of Field Appointments nor GWS 9 Reliability of Supply, thus the Commission was unable to monitor the performance of the BWA under these Standards. The BWA reported that while the system was developed to track field appointments and personnel were to be trained in its use, scheduled training was abandoned as staff had to be reallocated to other functions due to retrenchments under BERT. With respect to GWS 9, the BWA indicated that the anticipated delivery of the software to facilitate reporting was not delivered on the due date of November 2018. The BWA has not indicated the revised expected date of delivery.

With regard to Overall Standards, some data was unavailable for OWS 8 Correction of Sewerage Problem, OWS 9 Wastewater Effluent Quality and OWS 10 Potable Water Quality. The BWA reported that employees with direct responsibility for reporting on these Standards were casualties of the retrenchment exercise. Given the importance of potable water and the potential issues which could arise from contamination, it is imperative that the BWA provide timely reports on OWS 8 and OWS 9 and OWS 10. Particularly, an improved performance is essential for OWS 9 which had an extremely low compliance rate.

The BWA has identified financial challenges as the reason for repairs being undertaken instead of the replacement or complete refurbishment of its aged infrastructure. However, this approach contributes to frequent system breakdowns that translate to the loss of water, a major contributor to Non-Revenue Water (NRW). This, in turn, represents significant operational and maintenance expenditure to the BWA without a corresponding increase in revenue, contributing to the financial burden of the utility. The BWA must improve its response time to such breakdowns (OWS 11 Repair of Ruptured Pipes) in order to minimise wastage of water while repairs are being effected.

Furthermore, the BWA must bring its monitoring capabilities up to standard, either manually or through the implementation and operation of SCADA. The absence of interminable monitoring will erode any confidence in the metrics submitted. The BWA

must also ensure that it addresses its recording and reporting of data. In several instances, the veracity of the data was brought into question and in others, the data was altogether absent. The Commission, as the regulatory authority, has instituted mandatory Standards of Service. The BWA as the regulated entity must comply and provide timely and accurate reports on all Standards, both Guaranteed and Overall. This will allow the Commission to accurately identify areas for improvement. Moreover, it is essential for the BWA to improve its level of service delivery to customers.