



Fair Trading Commission

Analysis of Barbados Water Authority Annual Standards of Service Report

January 1 - December 31, 2021

March 18, 2024

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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, 2021 to December 31, 2021.

There are two (2) Sections contained herein. Section 1 provides an assessment of the BWA’s performance under the Guaranteed Standards of Service (hereinafter referred to as “GWS”), which measure the regulated utility’s provision of service to customers. The BWA is required to issue compensatory payments to individual customers affected by breaches of the Guaranteed Standards. However, the customer is required to submit a manual claim in order to receive compensation.

Section 2 assesses the utility’s performance under the Overall Standards of Service (hereinafter referred to as Overall Standards or “OWS”), which measure BWA’s efficiency in delivering service to its customers at the national level. Overall Standards do not require compensation to be paid to individual consumers if targets are not met. However, where a breach persists, the Commission may, at its discretion, invoke Section 43 of the Fair Trading Commission Act, CAP. 326 of the Laws of Barbados and Sections 31 and 38 of the Utilities Regulation Act, CAP. 282 of the Laws of Barbados, which allow for the imposition of fines.

1.0 GUARANTEED STANDARDS OF SERVICE

This section contains a review of the BWA's compliance with regard to the nine (9) categories of Guaranteed Standards. Each Guaranteed Standard is assessed based on the percentage of compliance, and is compared with compliance in the previous review period.

An overview of BWA's compliance for each Guaranteed Standard is captured in **Figure 1** for the period January 1, to December 31, 2021. It should be noted that the level of compliance in each Guaranteed Standard is categorized into residential and commercial customers. Discussed herein are the different targets which apply to each category of customer for each Guaranteed Standard. Generally, the graph shows several areas of improvement over the performance from the previous year (2020). Notably, the BWA was able to attain compliance rates of 90% or greater, for GWS 2 - Issuance of First Bills (Commercial customers), GW 3 - Response to Complaints - Acknowledgment (Residential customers), GWS 4 - Wrongful Disconnections, GWS 6 - Repair/Replacement of Faulty Meter and GWS 7 - Reconnection After Payment of Overdue Amount and Reconnection Fee. However, there are still areas where a greater effort is required in order to attain an acceptable performance, namely GWS 3 - Response to Complaints - Investigations.



- GWS 1 - Installation of service
- GWS 2 - Issuance of first bill
- GWS 3 - Response to complaints
- GWS 4 - Wrongful Disconnections
- GWS 5 - Meter Installations (Existing Service)
- GWS 6 - Repair/Replacement of Faulty Meter
- GWS 7 - Reconnection after Payment of Overdue Amount and Reconnection Fee
- GWS 8 - Scheduling of Field Appointments
- GWS 9 - Reliability of supply

GWS 1A - This refers to the time it should take between application, payment for service and the installation, for a standard connection in a Zone other than a Zone 1 area.

GWS 1B - This refers to the time to complete an investigation on receipt of an application for service in a Zone 1 area.

GWS 1C - This refers to the installation time after the completion of the investigation and approval in a Zone 1 area.

GWS 3 Ack - This refers to acknowledgement within 7 days of receipt of complaint.

GWS 3 Inv - This refers to investigation of complaint and findings provided within 20 days of receipt of complaint (inclusive of acknowledgement time).

GWS 6 Assess - This refers to an assessment and determination of the operational status of a meter and report findings to the customer within 15 days.

GWS 6 Repair - This refers to the replacement or repair of a faulty meter within 30 days of confirmation of the defect.

Note: The absence of compliance indicates that there were no instances for which to report compliance.

Figure 1: Guaranteed Standards of Service Compliance Rates (January 1 – December 31, 2021)

GWS 1 - Installation of Service

GWS 1 (1a) refers to the time taken to complete a connection in a Zone other than a Zone 1¹ area, which includes the time between application, payment for service and installation.

¹ Zone 1 - Areas of greatest restriction and normally no new developments are allowed by either the Planning and Development Department or the Environmental Protection Department.

GWS 1 (1b) refers to the time to complete an investigation upon receipt of an application for service in a Zone 1 area.

GWS 1 (1c) refers to the time it should take for installation after completion of the investigation and approval of the application in a Zone 1 area.

- i. **Residential Customers** - no more than fourteen (14) days in each instance (1a,1b, 1c)
- ii. **Commercial Customers** - no more than ten (10) days in each instance (1a,1b, 1c).

Table 1: GWS 1 - Installation of Service

GWS	January 1 - December 31, 2021		January 1 - December 31, 2020	
	Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
1a	23.01%	87.91%	24.01%	38.89%
1b	88.31%	No applications	91.25%	No applications
1c		No Investigation		

Residential Category

For the period under review, the BWA reported that there were eight hundred and twenty-three (823) breaches, with an average compliance rate of 23.01%. This is a marginal decline from the previous year’s result of 24.01% for GWS 1a. This represents a suboptimal performance. (Refer to Table 1)

A compliance rate of 88.31% was reported for the completion of investigations on receipt of applications for service in a Zone 1 area. This is a decline from the 91% achieved in 2020.

Commercial Category

There were eleven (11) breaches reported, resulting in a compliance rate of 87.91% for installations in a zone other than a Zone 1 area. Of the ninety-one (91) applications for service, eighty (80) were completed in the stipulated time. This was a substantial

improvement when compared to the previous year's 38.89% and thus a good performance.

The utility reported that there were no applications for service in a Zone 1 area during the period under review.

BWA's Justification

The BWA reported that the unavailability of labour, materials and equipment negatively impacted productivity, which resulted in the poor compliance rates. The utility has committed to improving its performance by continuing to improve its situation with respect to available resources. This is expected to be accomplished by increasing the complement of the plumbing crew, the availability of equipment, the availability of transportation and the storage of adequate fittings and materials.

Additionally, the BWA advised that the time taken to complete the investigations was impacted by the lingering pandemic, since, as a consequence of compliance with the COVID-19 Health Protocols, in-person visits were avoided in the early part of the year.

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.

Table 2: GWS 2 - Issuance of First Bill

January 1 - December 31, 2021		January 1 - December 31, 2020	
Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
72.36%	100%	58.02%	64.71%

Residential Category

The BWA reported one hundred and ninety-nine (199) breaches, with a compliance rate of 72.36%. This represents a significant improvement in performance when compared to the previous year's result of 58.02%. (Refer to Table 2)

Commercial Category

There were no breaches reported in this category, resulting in a compliance rate of 100%. This represents an improvement from the previous year's compliance of 64.71% and an excellent performance.

BWA's Justification

According to the utility, there were information technology related issues and delays in the transmission of information to the Commercial Department which prevented a perfect compliance score in the residential sector. However, according to the BWA, the process to aid the performance of the standard had been addressed and there was expected to be an improvement from the next reporting period (2022).

GWS 3 - Response to Complaints

This Standard requires the BWA to respond to a customer's complaint about a billing issue or other Standards of Service matters within seven (7) days and complete the investigation within twenty (20) days.

Table 3: GWS 3 - Response to Complaints

	January 1 - December 31, 2021		January 1 - December 31, 2020	
	Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
Acknowledgement (Billing related)	86.16%	80.33%	66.22%	72.73%
Acknowledgement (Service related)	91.20%	87.50%	70.86%	67.74%
Investigations (Billing related)	27.17%	33.33 %	17.07%	12.50%
Investigations (Service related)	31.34%	25%	0.00	80%

Residential Category

With respect to acknowledgment on receipt of billing complaints, the utility reported a compliance rate of 86.16%, with fifty-three (53) breaches. This is a significant improvement in performance over the 66.22% result of 2020. Breaches under the category of acknowledgment of service complaints totalled twenty-five (25), with a

compliance rate of 91.20%, an improvement from the previous year's compliance of 70.86%. (Refer to Table 3)

The BWA achieved a compliance rate of 21.17% in completing billing complaint-related investigations and providing findings within the stipulated twenty (20) days; with two hundred and fifty-two (252) breaches. A modest improvement in the performance from the 17.07% of 2020. There were one hundred and ninety-five (195) breaches, with a compliance rate of 31.34%, as the BWA was unable to complete investigations into most service complaints in the stipulated time. Although this represents a poor performance, it is nonetheless an improvement over the previous year's dismal compliance rate of 0.00%.

Commercial Category

There were twelve (12) breaches related to providing an acknowledgement within the stipulated time for billing complaints, resulting in a compliance rate of 80.33%. This is an improvement from the rate of 72.73% in 2020 and a good performance. The utility reported one (1) breach in relation to acknowledging service complaints in the stipulated time with a compliance rate of 87.50%. This is also an improvement over the previous year's 67.74%.

With regard to the completion of investigations and the provision of findings, the BWA reported thirty-six (36) breaches, resulting in a compliance rate of 33.33% for billing complaints and six (6) breaches for service complaints, with a compliance rate of 25.00%. The previous year's performance in each category, i.e., billing and service, was 12.50% and 80%, respectively.

BWA's Justification

The BWA advised that in relation to the complaints, priority was given to the billing function as there were limited staffing resources. The BWA indicated that there were challenges such as the backlog of unassigned work in the Work Management System, unavailability of some materials and limited human resources to complete work in the field. Additionally, the BWA reported that a unit was created during the third quarter

to address the issue. However, the utility advises that there was a learning curve and it is anticipated that as the officers become more experienced and the department enhances its capacity, the averages will improve. The BWA stated that the current metric for the investigation and resolution of a domestic complaint is twenty-nine (29) working days and a commercial complaint is thirty-six (36) working days, as usually commercial complaints have more complex issues.

The Commission will continue to monitor the BWA’s performance under this standard.

GWS 4 - Wrongful Disconnections

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

Table 4: GWS 4 - Wrongful Disconnections

January 1 - December 31, 2021		January 1 - December 31, 2020	
Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
100%	No Disconnections	100%	100%

Residential Categories

Compliance for this category was 100%, as there were no reported breaches of this Standard. (Refer to Table 4) The utility was able to attain this level of performance for three (3) consecutive years.

Commercial Categories

There were no disconnections in the commercial sector for the period under review.

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 Category

The utility reported that there were no requests for installation of meters.

Commercial Category

The utility reported that there were no requests for installation of meters.

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.

Table 5: GWS 6 - Repair/Replacement of Faulty Meter

	January 1 - December 31, 2021		January 1 - December 31, 2020	
	Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
Assess	96.94%	98.16%	93.50%	93.44%
Repair/Replacement	99.48%	99.20%	98.94%	98.25%

Residential Category

During the period under review, the BWA advised that there were one hundred and fifty-seven (157) breaches, resulting in a compliance rate of 96.94% for the assessment of meters. (Refer to Table 5)

This represents a marginal increase from the previous year's compliance of 93.50%. A compliance rate of 99.48% was realized in the repair of the meters, with fifteen (15) breaches, an insignificant statistical change from the previous year's result of 98.94%.

Commercial Category

A compliance rate of 98.16% was reported for the assessment of the operational status of the meter within fifteen (15) days. This represents a marginal increase in the

compliance rate of 93.44% from the previous year. The utility attained a compliance rate of 99.20% for the repair/replacement of the meters.

GWS 7 - Reconnection after Payment of Overdue Amount and Reconnection Fee

This Standard requires the BWA to reconnect consumers in a timely manner after the settlement of the overdue amount and reconnection charges at the BWA’s offices. The target time for reconnection is twenty-four (24) hours.

Table 6: GWS 7 - Reconnection after Payment of Overdue Amount and Reconnection Fee

January 1 - December 31, 2021		January 1 - December 31, 2020	
Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
96.96%	No disconnections	99.78%	No disconnections

Residential Category

For the period under review, there were twenty-eight (28) breaches or disconnections that were not reconnected in the stipulated time frame. (Refer to Table 6)

This resulted in a compliance rate of 96.96%, which is a miniscule decline from 99.78% in 2020.

Commercial Category

The utility reported that there were no disconnections of service in the commercial sector for overdue amounts.

GWS 8 - Scheduling of Field Appointments

This Standard requires the BWA to keep scheduled appointments and, in instances where the appointment must be rescheduled, the customer should be given twenty-four (24) hours’ notice of cancellation and notified of a new date.

Table 7: GWS 8 - Scheduling of Field Appointments

January 1 - December 31, 2021		January 1 - December 31, 2020	
Residential Customer	Commercial Customer	Residential Customer	Commercial Customer
86.67%	81.82%	DNA ²	DNA

Residential Category

Previously, the BWA did not submit any metrics for this Standard as the template for capturing the information had not been developed. However, reporting on this Standard commenced from the year 2021. The BWA reported two (2) breaches as it attained a compliance rate of 86.67%. (Refer to Table 7)

Commercial Category

During the period under review, the BWA reported a compliance rate of 81.82%, with just two (2) breaches.

GWS 9 - Reliability of Supply

This Standard requires the BWA to supply customers with at least 8m³ of running water over a 30-day period. The BWA reported that data remains unavailable for an assessment of this Standard, as it does not have the wherewithal to commence measurement.

BWA’s Justification

The BWA has advised that compliance with this standard is contingent upon the receipt of grant funding which it is pursuing in order to continue with the District Metering project.

The Commission continues to engage the utility in the provision of compensation to consumers that have not received at least 8m³ of running water over a 30-day period.

² DNA - Data Not Available

Customer Claim Compensation

Customers are entitled to compensation where the BWA fails to meet the targets stipulated under the Guaranteed Standards. However, customers are required to submit manual claims to the BWA within three (3) months of the occurrence of the event that gave rise to the claim. The BWA reported that no claims were submitted for compensatory credits during the year 2021 and therefore no payments were made.

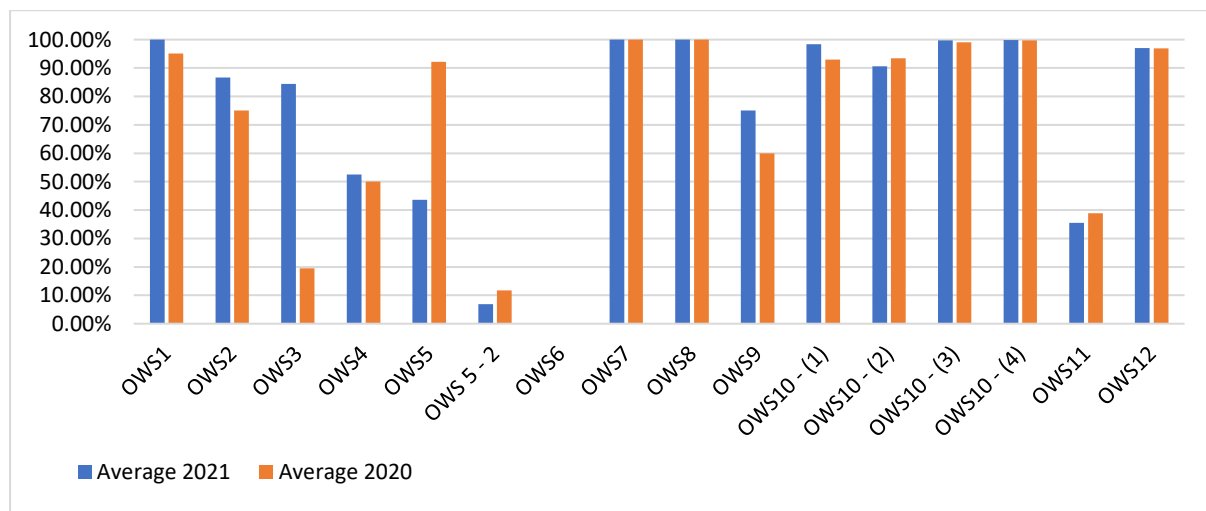
Table 8: Customers Claims Summary

Category	No. of Customers	Compensation
Number of customers eligible for compensation	1,956	\$45,085
Number of customer claims received	Nil	Nil
Number of customer claims paid	Nil	Nil

2.0 OVERALL STANDARDS OF SERVICE

Overall Standards of Service (OWS) assess the BWA’s countrywide performance in relation to its delivery of service.

An overview of the performance of the BWA for each Overall Standard is captured in **Figure 2** for the period January 1 to December 31, 2021. Discussed herein are the targets for each Overall Standard. Generally, the graph shows that the BWA was able to improve its performance over the previous year and actually attained or surpassed the compliance rates for OWS 1 (Meter Reading), OWS 7 (Notify Public of Intention to Interrupt Supply), OWS 8 (Correction of Sewerage Problem) and OWS 12 (Repair of Ruptured Mains). However, there are areas where improvements are required, namely OWS 4 (Reinstatement of Service after Electrical Outages by the Supplier of Electricity), OWS 5 (Reinstatement of Property), OWS 9 (Wastewater Effluent Quality) and OWS 11 (Repair of Ruptured Pipes).



- OWS 1 - Meter Reading
- OWS 2 - Investigation of Water Quality
- OWS 3 - Reinstatement of Service after Electrical Outages by Supplier of Electricity
- OWS 4 - Reinstatement of Service after In-House Fault
- OWS 5 - Reinstatement of Property
- OWS 6 - Minimum/Maximum Water Pressure
- OWS 7 - Notify Public of Intention to Interrupt Supply
- OWS 8 - Correction of Sewerage Problems
- OWS 9 - Wastewater Effluent Quality
- OWS 10 - Potable Water Quality
- OWS 11 - Repair of ruptured Pipes
- OWS 12 - Repair of Ruptured Mains

Figure 2: OWS Compliance rates for the period January 1 to December 31st, 2021

OWS 1 - Meter Reading

Under this Standard, 100% of all accessible meters must be read every month. The BWA reported 100% compliance, which is an improvement over the 95.07% compliance in the previous year. The BWA reported that on one million thirty thousand and forty-nine (1,030,049) occasions, all the accessible meters were read. This represents an attainment of the target.

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 reported that of the sixty (60) reports received, fifty-two (52) were investigated in the stipulated time for a compliance rate of 86.67%. This represents a failure to reach the compliance rate, but an improvement over the previous year's result of 75%. While this is unacceptable, the utility did report that there were extenuating circumstances.

BWA's Comment

The utility indicated that the COVID-19 pandemic coupled with limited human resources negatively impacted its ability to achieve compliance. Moreover, these activities required in-person visits which were avoided given the COVID-19 Health Protocols.

The BWA asserted that the majority of the complaints under this Standard related to turbidity issues, occurring mainly in St. Lucy and to a lesser extent in St. James and St. Philip. In response, the BWA indicated that it increased the frequency of main flushing in St. Lucy. However, the schedule was significantly impacted by the availability of water or insufficient water pressure to effectively flush the mains.

The utility advised that Polyphosphate, a sequestrant, was added to the Alleynedale Pumping Station during the fourth quarter and consequently, there have been

reported improvement in some areas. However, the utility indicated that the issues in the affected areas will not be solved solely by the sequestrant, and that mains replacement is a significant part of the solution. The BWA informed that a significant portion of the mains between Lamberts, St. Lucy and Boscobel, St. Peter had been replaced, leading to a more consistent supply and fewer discolouration incidents.

The BWA also advised, that an additional source at Villa Maria, Ashton Hall, St. Peter had been added to the St. Lucy water supply. Leading to a more consistent supply and fewer discolouration incidents caused by changes in pressure or interruption of supply.

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

Under OWS 3, service should be restored within eight (8) hours of restoration of the electricity supply. The compliance target for this Standard is 95%.

Out of the three hundred and seven (307) reported incidents of electrical outages arising from the supplier of electricity, service was reinstated in the stipulated time in two hundred and fifty-nine (259) instances. Representing a compliance rate of 84.36%, a significant improvement from the 19.51% result in 2020. Whilst this result was a significant improvement in the performance, it nonetheless represents a failure to attain the target.

BWA's Comment

The BWA indicated that in instances where power is lost and later restored, it takes more than eight (8) hours to move water through the system again. The utility reported that in recent times, outages have been longer and time has to be allocated after power has been restored, to test and replace pumps where necessary. Depending on the severity, testing, repairs and replacement, service restoration can extend beyond eight (8) hours, not including the time it takes for the water to reach into the system. The BWA advised that in areas of higher elevation, the service takes even longer to reach the customer, as usage from customers in elevated areas is significant after outages. The utility advised that there has been an increase in the frequency of

these incidents, as the utility has been experiencing ongoing issues with the supply of reliable voltage from the Barbados Light & Power Co. Ltd.

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.

There were one hundred and seventy-five (175) incidents of in-house faults, but the BWA reported that it was only able to reinstate supply within the stipulated time on ninety-two (92) occasions, for a compliance rate of 52.57%. This represents a marginal improvement in the performance as compared to the previous year's 50%. Nonetheless, the utility once again performed below par and failed to reach the target.

BWA's Comment

The BWA advised that it continues to develop the Supervisory Control and Data Acquisition (SCADA) system to improve functionality, usability and reliability. The BWA informed that it has addressed many of the challenges experienced in the past with the upgrade to a more flexible SCADA and that BWA employees are now able to view SCADA on mobile phones. The BWA advised that plans are in progress for the BWA to have SCADA systems at all sites over the next two (2) years.

OWS 5 - Reinstatement of Property

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

The utility reported a compliance rate of 43.57% for temporary reinstatement in 2021, representing a substantial decline over the 92.15% compliance rate from the previous year and trending in the wrong direction. Out of the seven hundred (700) instances when there was a dislocation of property due to repairs, the BWA was able to reinstate service by the end of the working day on three hundred and five (305) occasions.

There was also a decline in the permanent reinstatement of property, as the BWA was only able to achieve an anaemic rate of 6.86%. In absolute numbers, the BWA was able to permanently reinstate property on forty-eight (48) occasions. This is a deterioration in performance as compared to the rate of 11.67% in 2020. This represents unacceptable performance.

BWA's Comment

The utility advised, that given the limited resources currently available, there was a challenge to achieve full compliance, especially as it related to permanent reinstatement. The BWA further advised that it had recently issued a public tender notice for the provision of reinstatement of services to address this concern.

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.

BWA's Comment

The BWA never reported on this Standard and maintained that it does not possess the appropriate equipment and instruments to facilitate the measurement.

The utility indicated that the measurement of water pressure is facilitated through the installation of a system of measurement points across the network, which would see the sub-division of the network into a series of districts with an average of 500 property connections per district. The utility advised that the establishment of these District Metered Areas (DMAs) would give it the ability to extrapolate the relative pressure being experienced within the districts. At each of the measurement points, the BWA would then require the facility to record pressure through the installation of the relevant pressure measurement equipment and data recording devices which would then report the information back to the BWA's information servers. The reports from the BWA would then either reflect the percentage of time that the pressure was maintained or the instances (date, time, duration) in which the pressure was outside

the required range for the reporting period. The causes of the deviation would have to be investigated.

The BWA informed that it currently does not have the capacity to achieve the above as it requires a significant capital outlay to accomplish these installations. The BWA advised that it is cognizant of the importance of acquiring and installing the required equipment and whilst the project had been conceptualized prior to the implementation of the Commission's Standards, the funding was not available.

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. The target for this Standard is 95%.

The compliance rate achieved overall was 100%, which mirrors the compliance rate for the previous year. The BWA reported that the public was notified in advance on every occasion of the forty-six (46) planned interruptions of service. The BWA was able to attain the target for three (3) consecutive years.

OWS 8 - Correction of Sewerage Problem

Under OWS 8, the BWA is expected to correct sewerage issues within forty-eight (48) hours of being informed of a problem. The compliance target is 95%.

The BWA reported that over the period under review, the request for this service was significantly reduced and in the ten (10) instances where complaints were made, investigations revealed that the complaints were found to be on the side of the customer to be addressed by the customer, and not the responsibility of the BWA. The BWA attained the target with a 100% compliance rate.

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)'s wastewater discharge guidelines.

During the period under review, the utility reported a compliance rate of 75%. The utility took twenty (20) samples of the wastewater discharge, but five (5) of the samples were not in compliance. This is an unsatisfactory performance, given the potentially negative impact on the health and threat to our economic well-being in light of the current climate amid the impact of COVID-19.

BWA's Comment

The BWA advised that its sampling regime was curtailed in the early part of the year due to the lockdown restrictions. After the lifting of the restrictions, testing resumed but on a limited scale. The frequency of testing and the parameters tested were later increased as the demands on the lab due to COVID-19 were reduced. The utility indicated that the demands of the Best-dos Santos lab (which also affected the Government Analytical Services Laboratory) due to the COVID-19 pandemic, negatively impacted this target for the period under review.

The utility advised that there was a significant increase in the Total Dissolved Solids (TDS) of the effluent, showing that the treatment process was not efficient. However, the utility advised, that this could be expected from only having one process unit in operation at the time which required maintenance.

The Chemical Oxygen Demand (COD) was high due to elevated levels of the sludge blanket within the process unit as a result of having one process unit in operation, effectively reducing the ability to equalize the activated sludge which would occur across the two process units as per normal.

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).

During the year under review, the BWA reported a compliance rate of 98.40% for chlorine at Source, an improvement from the previous year's result of 92.99%. There was however a decline in the compliance rate for the bacteria at Source, as the utility

reported a 90.66% compliance rate for the year under review, versus the compliance rate of 93.45% for the year 2020.

As it relates to the distribution system, BWA reported metrics of 99.88% for chlorine at Distribution and 99.77% for bacteria at Distribution. This represents an insignificant statistical change from the 99.75% compliance rate for chlorine at Distribution and the 99% rate for bacteria at Distribution during the previous year. These results nonetheless represent a marginal failure to attain the target.

During the period under review of the two thousand six hundred and twenty (2,620) samples taken, forty-two (42) tested positive for chlorine at Source. There were thirty-eight (38) positive samples for bacteria at Source out of the four hundred and seven (407) tests completed. There were four (4) failures out of one thousand, seven hundred and twenty-nine (1,729) samples for bacteria at Distribution and two (2) failures for chlorine, i.e., the detected chlorine level fell below the minimum value of 0.2 ppm. The BWA advised that repeat samples tested were negative.

BWA's Comment

The demands of the Best-dos Santos lab and by extension the Government Analytical Services Lab, due to the COVID-19 pandemic has impeded the testing of BWA samples in a timely manner.

OWS 11 - Repair of Ruptured Pipes

OWS 11 requires that 90% of ruptured pipes be repaired within five (5) days of notification.

There were sixteen thousand, four hundred and six (16,406) reports of ruptured pipes and the utility advised that it was able to effect the repairs of five thousand, eight hundred and twenty-one (5,821) in the stipulated time. The BWA reported a compliance rate of 35.48%, a deterioration of the performance from 2020, which was 38.91%; this represents a breach of the Standard. This inability to effect the repair of pipes in a timely manner continues to be a significant contributor 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. It also indicates the utility's lack of responsiveness and efficiency.

It is understood that there are many extenuating circumstances, as the BWA continues to operate with an aged, deteriorating infrastructure, with some of the mains having been in operation since the 1800s. As a result, the infrastructure is more susceptible to frequent ruptures and the BWA is unable to expeditiously effect repairs. The BWA cites the unavailability of materials, equipment and transportation as factors that continue to negatively impact its performance under this Standard. There is a need for significant improvement in this Standard. However, given the BWA's contention of continued financial challenges, short term solutions continue to be restricted.

BWA's Comment

The utility advised that the unavailability of labour, materials and equipment, negatively impacted productivity and resulted in the poor compliance score. The BWA informed that it expects to continue building to improve on the resources which have impacted its performance over the period under review, these include increasing the compliment of plumbing crews, the availability of equipment, the availability of transportation and adequate levels of storage of fittings and materials.

OWS 12 - Repair of Ruptured Mains

For OWS 12, 95% of repairs should be effected within twenty-four (24) hours of notification.

The BWA advised that it received one thousand, two hundred and twenty-nine (1,229) reports of ruptured mains and it was able to effect the repairs within the required timeframe one thousand, one hundred and ninety-three (1,193) times. The BWA was able to maintain a compliance rate of 97.07%, a negligible increase from the previous year's rate of 96.92%; this represents an attainment of the Standard.

BWA's Comment

The utility informed that the performance was constrained at times by equipment unavailability. The utility advised that it is seeking to increase its resources in an effort to enhance this Standard.

SUMMARY

During the period under review, the BWA reported areas of improvement, more noticeably under the Guaranteed Standards. The BWA recorded optimal performances under Installation of a Service (GWS 1a) for commercial customers and (GWS 1b) for residential customers, Response to Complaints (GWS 3) – Acknowledgment, Wrongful Disconnection (GWS 4), Repair/Replacement of Faulty Meter (GWS 6), Reconnection After Payment of Overdue Amount and Reconnection Fee (GWS 7) and Scheduling of Appointments (GWS 8). Notably the BWA was able to commence reporting on GWS 8 from the 2021 reporting period.

The BWA was also able to attain the target for Meter Reading (OWS 1), Notify Public of intention to Interrupt Supply (OWS 7), and Repair of Ruptured Mains (OWS 12). On the other hand, the BWA reported subpar performances for Reinstatement of Service after In-House Fault (OWS 4), Reinstatement of Property (OWS 5), and Repair of ruptured pipes (OWS 11).

With financial and operational issues continuing to negatively impact its performance, Installation of Service (GWS 1), Reinstatement of Property (OWS 5), Repair of Ruptured Pipes (OWS 11) and Repair of Ruptured Mains (OWS 12), were severely impacted due to the unavailability of materials. Additionally, the onset of the COVID-19 pandemic contributed to the further decline in the performance, as adjustments had to be made to many of its processes to comply with the COVID-19 protocols outlined by the government. Particularly, the national curfew instituted by the government.

Given the aged infrastructure, the utility continues to struggle with frequent system breakdowns resulting in water loss, a major contributor to NRW. Whilst it is recognized that the aged infrastructure is susceptible to breaks, the utility must as a matter of urgency address this issue and implement interim measures to mitigate against it. While it is unrealistic to expect the BWA to eliminate NRW, it must be brought to an acceptable level given the significant operational and maintenance expenditure resulting from its occurrence. In order to alleviate this in the interim, the

BWA must repair all reported instances of ruptures or breaks in a timely manner (OWS 11 - Repair of Ruptured Pipes) in order to minimise water wastage.

Whilst the utility showed an improvement in performance in relation to some Standards, there is still a need for the utility to enhance its performance. Despite the financial and infrastructural challenges, there are still areas that the utility can continue to improve, notably in areas that do not require significant capital outlay. One of these areas is that of customer engagement. Where there is a perception that the utility is responsive to the needs of its customers, the overall perception of the utility would improve, should this area receive more focussed attention.

Additionally, the BWA needs to streamline its internal processes to ensure that where departmental collaboration is required, there is no undue delay in the transmission of information that is critical in the decision-making process.

The BWA must be mindful of its core function, the production and distribution of clean, safe water to the public. As long as this mandate is fulfilled, customers will be satisfied.