# RUSTENBURG WATER SERVICES TRUST


## QUARTERLY PERFORMANCE REPORT
## 1 JULY TO 25 SEPTEMBER 2020

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**PERFORMANCE REPORT FOR RUSTENBURG LOCAL MUNICIPALITY ON THE RUSTENBURG WATER SERVICES TRUST FOR THE PERIOD 1 JULY 2020 TO 25 SEPTEMBER 2020.**

## 1. TERMS OF REFERENCE FOR THE RUSTENBURG WATER SERVICES TRUST (RWST).

The following report is the result of a performance assessment of the Rustenburg Water Services Trust, for the 3-month period from 1 July 2020 to 25 September 2020. The report takes into account Treasury Guidelines dated May 2007 (ISBN: - 978-0-621-37152-9) entitled, "Framework for Managing Programme Performance Information." The Trust is committed to adhering to these guidelines.

The five purposes/objectives of the Trust is captured in the Business Plan, the Strategic plan and Trust Deed and as such is as follows:

1. To procure the design for the required plant extension;
2. To procure the construction and oversee implementation;
3. To Operate and Maintain the following treatment plants:
    - Rustenburg waste water treatment works,
    - Boitekong waste water treatment works,
    - Monakato waste water treatment works,
    - Lethabong waste water treatment works,
    - Bospoort water treatment works,
    - Kloof water treatment works,

In the most cost effective manner and for the purposes of maximizing the Trust Income to be distributed to the Beneficiary;

4. To provide potable water to RLM in accordance with the Water Services Agreement; and
5. To Supply treated water to the industrial water off-takers in terms of the Off Take agreements.

## 2. PERFORMANCE PLAN SCORECARD FOR THE RWST

### 2.1 Key Performance Area (KPA 5): Basic Services and Infrastructure Development

| Key Focus Area/Goal | Strategies | Area/Ward Serviced | KPI No: | IDP Ref | Weight | Key Performance Indicator (KPI) | Baseline 2020/21 | Portfolio of Evidence | 2020 / 21 Annual Target | Annual Budget 2020 / 21 R'000 | Period | Target | Performance | Score | Reasons for Variance (if any) | Remedial Measures |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **1. MUNICIPAL STRATEGIC PRIORITY: Develop and sustain a spatial, natural and built environment** | | | | | | | | | | | | | | |
| | | **1.1. Municipal Strategic Objective**: Accelerated delivery and maintenance of quality basic and essential services to all Communities | | | | | | | | | | | | | | |
| | | **WATER SERVICES** | | | | | | | | | | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Sewer Purification | 14, 15, 16 , 20, 21, 25, 27, 28 | **1** | OBJ 3 | 5 | Number of functional sewer purification plants operated in terms of Trust Deed | 4 | 4 x log sheets of volumes of purification plants for Boitekong, Lethabong, Rustenburg and Monakato. | 4 | R74.2 | Q1 | 4 | 4 | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Sewer Purification | 14, 15, 16 , 20, 21, 25, 27, 28 | **2.1** | OBJ 3 | 5 | Number of sewer purification plants maintained in terms of the Trust Deed | 4 | Maintenance history for Boitekong, Lethabong, Rustenburg and Monakato. | 4 | R13.3 | Q1 | 4 | 4 | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Sewer Purification | 14, 15, 16 , 20, 21, 25, 27, 28 | **2.2** | OBJ 3 | 5 | Plant availability of sewer purification plants maintained in terms of agreed standards | 85% | Reports of 4 plants, assessing 10 selected items | 85% | R13.3 | Q1 | 85% | 96.2% | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Sewer Purification | 20, 21 | **3** | OBJ 2 | 10 | Boitekong upgrade, completed 2019/2020 | 100% completed 2019/2020 | Engineer's Completion Certificate | N/A - 100% completed 2019/2020 | - | Q1 | N/A | N/A | N/A | Project completed 2019/2020 | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |

| Key Focus Area/Goal | Strategies | Area/Ward Serviced | KPI No: | IDP Ref | Weight | Key Performance Indicator (KPI) | Baseline 2020/21 | Portfolio of Evidence | 2020 / 21 Annual Target | Annual Budget 2020 / 21 R'000 | Period | Target | Performance | Score | Reasons for Variance (if any) | Remedial Measures |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Waste Water Supply | 14,15,16 | **4** | OBJ 5 | 10 | Volume of treated waste water supplied to the industrial water off-takers in terms of the Off-take Agreement | Average 25Ml/day | Anglo & Impala log sheets | Average 25Ml/day | R66.2 | Q1 | 25 Ml/day | 23.84 Mℓ/d | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Waste Water Supply | All | **5** | OBJ 3 | 10 | Percentage compliance in the treatment of sewerage at Waste Water Treatment Works in terms of Anglo/DWS license agreement | 90% | 4 tables on water quality + lab certificates | 90% | R61.5 | Q1 | 90% | 76.9% | 2 | Operational challenges | Improved Operations and management |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Water Purification | All | **6** | OBJ 3 + 4 | 5 | Number of water treatment works operated | 2 | 2 x log sheets of volumes for Bospoort and Kloof | 2 | R43.5 | Q1 | 2 | 2 | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Water Purification | All | **7.1** | OBJ 3 + 4 | 5 | Plant availability: Number of water treatment works maintained | 85% | 2 reports for Bospoort and Kloof assessing 10 selected items | 85% | R13.3 | Q1 | 85% | 100% | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Water Purification | All | **7.2** | OBJ 3 + 4 | 5 | Plant maintenance of water treatment works maintained | 2 | Maintenance history for Bospoort and Kloof | 2 | R13.3 | Q1 | 2 | 2 | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |

| Key Focus Area/Goal | Strategies | Area/Ward Serviced | KPI No: | IDP Ref | Weight | Key Performance Indicator (KPI) | Baseline 2020/21 | Portfolio of Evidence | 2020 / 21 Annual Target | Annual Budget 2020 / 21 R'000 | Period | Target | Performance | Score | Reasons for Variance (if any) | Remedial Measures |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Water Purification | All | **8** | OBJ 2 | 10 | Percentage completion of water treatment plants - civil works upgrading project (Bospoort) | 100% | Engineers take over certificate | Target is remaining 3% to completion. | R7.7 | Q1 | 3% | 0% | 0 | Covid-19 related, labour issues | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Water Supply | All | **9** | OBJ 4 | 10 | Volume of potable water supplied to RLM in accordance with the Water Supply Agreement | Average 12.6 Ml/day | 2 x log sheets for Bospoort and Kloof | Average 12.6 Ml/day | R43.5 | Q1 | Average 12.6 Ml/day | Average 11.29 Ml/day | 3 | No production at Kloof due to no water in supply dam | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Service Delivery: Sustainable Livelihoods and resilient Infrastructure | Water Supply | All | **10** | OBJ 4 | 10 | Percentage compliance in the treatment of water at Water Treatment Works in terms of SANS standards | 95% | 2 x water quality reports and lab certificates | 95% | R18.4 | Q1 | 95% | 97.2% | 3 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| Financial | Financial | All | **11** | OBJ 3 | 10 | Maintain a debt service ratio covenant - to ensure cost effectiveness. | 1.5 | Quarterly financial statement, refer to DSCR | 1,5 times | 1,5 times | Q1 | >1,5 | >1,5 | 5 | N/A | N/A |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |
| **TOTAL** | | | | | **100** | | | | | | Q1 | | | | | |
| | | | | | | | | | | | Q2 | | | | | |
| | | | | | | | | | | | Mid-Year | | | | | |
| | | | | | | | | | | | Q3 | | | | | |
| | | | | | | | | | | | Q4 | | | | | |

| Key Performance Areas (KPAs) | KPI No. | KPA Weightings | KPI Score | Assess Weightings | Weighted Score | Panel Score |
|---|---|---|---|---|---|---|
| Number of functional sewer purification plants operated in terms of Trust Deed | 1 | 3 | 3/3 | 100% | 3 | |
| Number of sewer purification plants maintained in terms of agreed standards | 2.1 | 3 | 3/3 | 100% | 3 | |
| Plant availability of sewer purification plants maintained in terms of agreed standards | 2.2 | 3 | 3/3 | 96.2% | 3 | |
| Percentage completion of sewer purification plants upgrading projects (Boitekong). Project completed 2019 / 2020. | 3 | N/A | N/A | N/A | N/A | |
| Volume of treated waste water supplied to the industrial water off-takers in terms of the Off-take Agreement | 4 | 3 | 3/3 | 95.4% | 3 | |
| Percentage compliance in the treatment of sewerage at Waste Water Treatment Works in terms of DWS license agreement | 5 | 3 | 2/3 | 76.9% | 2 | |
| Number of water treatment works operated in terms of agreed standards | 6 | 3 | 3/3 | 100% | 3 | |
| Plant availability: Number of water treatment works maintained | 7.1 | 3 | 3/3 | 100% | 3 | |
| Plant maintenance of water treatment works maintained | 7.2 | 3 | 3/3 | 100% | 3 | |
| Percentage completion of water treatment plants - civil works upgrading project (Bospoort) | 8 | 3 | 0/3 | 0% | 0 | |
| Volume of potable water supplied to RLM in accordance with the Water Supply Agreement | 9 | 3 | 3/3 | 89.6% | 3 | |
| Percentage compliance in the treatment of water at Water Treatment Works in terms of DWS license | 10 | 3 | 3/3 | 95% | 3 | |
| Debt Service Cover Ratio >1,5 times | 11 | 3 | 5/3 | 100% | 5 | |
| **Total KPA** | | 36 | 34/36 | | 34 | |

## Signatures

| SIGNED AND ACCEPTED ON BEHALF OF COUNCIL | SIGNED AND ACCEPTED BY THE TRUST ACCOUNTING OFFICER |
|---|---|
| NAME: MR EDWARD KOMANE | NAME: MR PETER MAAS |
| SIGNATURE: | SIGNATURE: |
| DATE: | DATE: |

## 2.1 KPI 1: NUMBER OF SEWER PURIFICATION PLANTS OPERATED IN TERMS OF AGREED STANDARDS.

RWST is responsible for the operation and management of the four waste water treatment works, namely -

| | |
|---|---|
| Rustenburg Waste Water Treatment Works | (42 Mℓ/d design capacity) |
| Boitekong Waste Water Treatment Works | (24 Mℓ/d design capacity) |
| Monakato Waste Water Treatment Works | (1 Mℓ/d design capacity) |
| Lethabong Waste Water Treatment Works | (2 Ml/d design capacity) |

Water and Sanitation Services South Africa (Pty) Ltd, trading as Water Solutions Southern Africa (WSSA) has been contracted by the Rustenburg Water Services Trust (RWST) for the operation these plants.

The volumes treated by each plant for the period under review are captured below:

Table: 1 Waste Water Volumes Treated

| PLANT | CAPACITY | APRIL - JUNE 2020 | JULY - SEPT 2020 |
|---|---|---|---|
| Rustenburg WWTW | 42 Mℓ/d | 45.37 Mℓ/d | 40.03 Mℓ/d |
| Boitekong WWTW | 24 Mℓ/d | 10.79 Mℓ/d | 9.54 Mℓ/d |
| Monakato WWTW | 1 Mℓ/d | 2.422 Mℓ/d | 1.541 Mℓ/d |
| Lethabong WWTW | 2 Ml/d | 3.147 Mℓ/d | 0.644 Mℓ/d |

Performance review: all four plants operated in terms of the agreement.

## 2.2 KPI 2: PLANT AVAILABILITY: NUMBER OF SEWER PURIFICATION PLANTS MAINTAINED IN TERMS OF AGREED STANDARDS.

There are 4 (four) waste water treatment works maintained in terms of agreed standards, namely: Rustenburg, Boitekong, Monakato, Lethabong Waste Water Treatment Works.

The successful operation of a Waste Water Treatment Works is largely dependent on the installed machinery and equipment to ensure that the waste water can be treated according to the process the plant was designed for.

It is thus vital that all machinery and equipment be kept in good working condition and available for use when required.

Regular servicing and preventative maintenance however requires that equipment be taken out of service for a certain period. It will thus not always be possible to obtain a 100% of all equipment availability and the target of 85% availability is set.

RWST has contracted WSSA to operate and maintain the four waste water treatment plants under its control.

WSSA is required to complete a daily availability report, reporting on all the major mechanical items on the plant. From this, a monthly availability report is compiled.

Regular spot checks are performed by RWST to verify the accuracy. The availability of the four waste water treatment works is indicated below:

Table: 2 Plant availability

| PLANT | CAPACITY | AVAILABILITY | |
|---|---|---|---|
| | | Target | JULY - SEPT 2020 |
| Rustenburg WWTW | 42 Mℓ/d | 85% | 94.6% |
| Boitekong WWTW | 24 Mℓ/d* | 85% | 100% |
| Monakato WWTW | 1 Mℓ/d | 85% | 96.7% |
| Lethabong WWTW | 2 Ml/d | 85% | 93.3% |
| Overall plant availability | | | 96.2% |

Performance review
All 4 plants exceeded the target availability of 85%.

## 2.3 KPI 3: PERCENTAGE COMPLETION OF SEWER PURIFICATION PLANTS UPGRADING PROJECTS (BOITEKONG).

Boitekong WWTW was the only Waste Water Treatment Works that recently underwent upgrading under the contract of the RWST. The plant was upgraded from 8 Mℓ/d to 24 Mℓ/d.

The work was completed during the 2019 / 2020 financial year and as such, there is no progress to report during this period.

Table 3: Boitekong Construction Progress

| BOITEKONG WWTW CONSTRUCTION PROGRESS | | | |
|---|---|---|---|
| CONTRACT | PROGRESS | | PROGRESS FOR PERIOD |
| | 30 June 2020 | 25 September 2020 | |
| Civil | 100% | 100% | - |
| M&E | 100% | 100% | - |
| **Overall** | **100%** | **100%** | **-** |

## 2.4 KPI 4: VOLUME OF TREATED WASTE WATER SUPPLIED TO THE INDUSTRIAL WATER OFF-TAKERS IN TERMS OF THE OFF-TAKE AGREEMENT.

As per off-take agreement between the RWST and the mines, a total of 25 Mℓ/d treated effluent water from the Rustenburg WWTW is to be made available for use as processed water. Of this 10 Mℓ/d is allocated to Impala and 15 Mℓ/d to Anglo Platinum.

The average supplied volume is detailed in the table below.

Table 4: Average daily supply of treated effluent

| Mine Name | Average for the period |
|---|---|
| Anglo Platinum | 14.585 Mℓ/d |
| Impala | 9.252 Mℓ/d |
| **Total** | **23.837 Mℓ/d** |

## 2.5 KPI 5: PERCENTAGE COMPLIANCE IN THE TREATMENT OF SEWERAGE AT WASTE WATER TREATMENT WORKS IN TERMS OF DWS LICENSE AGREEMENT.

Water discharged from the waste water treatment works needs to comply with the Department of Water and Sanitation (DWS) Water Use License required of the specific plant.

### 2.6.1 BOITEKONG WASTE WATER TREATMENT WORKS

Table 5: DWS License conditions for Boitekong WWTW

| Determinant | Performance standard |
|---|---|
| pH | 6.5 - 8.5 |
| Elec. Conductivity | < 150 mS/m |
| COD | < 75 mg/ℓ |
| Ammonia | < 1 mg/ℓ |
| Nitrate | < 15 mg/ℓ |
| Suspended Solids | < 25 mg/ℓ |
| Faecal Coliform | < 0/100 mℓ |
| Free Chlorine | < 0.25 mg/ℓ |
| Ortho-phosphate | < 1.0 mg/ℓ |

Table 6: Quality performance of Boitekong WWTW for the period under review.

| Determinant | Performance standard (DWS) | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| pH | 6.5 - 8.5 | 7.51 - 7.82 | 100% | 6.62 - 7.95 | 100% |
| Elec. Conductivity | < 150 mS/m | 97 - 108 mS/m | 100% | 105 - 118 mS/m | 100% |
| COD | < 75 mg/ℓ | 15 - 20 mg/ℓ | 100% | 15 - 27 mg/ℓ | 100% |
| Ammonia | < 1 mg/ℓ | 0.10 - 3.34 mg/ℓ | 67% | 0.10 - 0.10 mg/ℓ | 100% |
| Nitrate | < 15 mg/ℓ | 4.87 - 6.50 mg/ℓ | 100% | 4.01 - 6.54 mg/ℓ | 100% |
| Suspended Solids | < 25 mg/ℓ | 2 - 3 mg/ℓ | 100% | 2 - 12 mg/ℓ | 100% |
| Faecal Coliform | < 0 / 100 mℓ | 0 - 230 /100 mℓ | 67% | 0 - 72 / 100 mℓ | 67% |
| Free Chlorine | < 0.25 mg/ℓ | 0.24 - 0.30 mg/ℓ | 33% | 0.24 - 0.40 mg/ℓ | 33% |
| Ortho-Phosphate | < 1.0 mg/ℓ | 0.52 - 5.01 mg/ℓ | 33% | 0.42 - 1.41 mg/ℓ | 67% |
| **OVERALL COMPLIANCE** | | | **77.8%** | | **85.2%** |

## 2.6.2 LETHABONG SEWAGE TREATMENT PLANT

Table 7: DWS License conditions for Lethabong WWTW

| Determinant | Performance standard |
|---|---|
| pH | 6.5 - 8.5 |
| Elec. Conductivity | < 150 mS/m |
| COD | < 75 mg/ℓ |
| Ammonia | < 1 mg/ℓ |
| Nitrate | < 15 mg/ℓ |
| Suspended Solids | < 25 mg/ℓ |
| Faecal Coliform | < 0 / 100 mℓ |
| Free Chlorine | < 0.25 mg/ℓ |
| Ortho-phosphate | < 1.0 mg/ℓ |

Table 8: Quality performance of Lethabong WWTW for the period under review.

| Determinant | Performance standard (DWS) | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| pH | 6.5 - 8.5 | 7.88 - 8.11 | 100% | 7.85 – 7.97 | 100% |
| Elec. Conductivity | < 150 mS/m | 83 - 103 mS/m | 100% | 89 - 90 mS/m | 100% |
| COD | < 75 mg/ℓ | 15.0 - 15.0 mg/ℓ | 100% | 14.6 - 15.0 mg/ℓ | 100% |
| Ammonia | < 1 mg/ℓ | 0.10 - 0.21 mg/ℓ | 100% | 0.10 - 1.48 mg/ℓ | 67% |
| Nitrate | < 15 mg/ℓ | 6.42 - 9.82 mg/ℓ | 100% | 7.51 - 8.90 mg/ℓ | 100% |
| Suspended Solids | < 25 mg/ℓ | 2 - 3 mg/ℓ | 100% | 2 - 19 mg/ℓ | 100% |
| Faecal Coliform | < 0 / 100 mℓ | 0 - 0 / 100 mℓ | 100% | 0 - 0 / 100 mℓ | 100% |
| Free Chlorine | < 0.25 mg/ℓ | 0.26 - 0.32 mg/ℓ | Non-Compliant | 0.22 - 0.30 mg/ℓ | 33% |
| Ortho-Phosphate | < 1.0 mg/ℓ | 0.76 - 1.23 mg/ℓ | 33% | 1.23 - 1.92 mg/ℓ | Non-Compliant |
| **OVERALL COMPLIANCE** | | | **81.4%** | | **77.8%** |

### 2.6.3 MONAKATO SEWAGE TREATMENT PLANT

Table 9: DWS License conditions for Monakato WWTW

| Determinant | Performance standard |
|---|---|
| pH | 6.5 - 8.5 |
| Elec. Conductivity | < 150 mS/m |
| COD | < 75 mg/ℓ |
| Ammonia | < 1 mg/ℓ |
| Nitrate | < 15 mg/ℓ |
| Suspended Solids | < 25 mg/ℓ |
| Faecal Coliform | < 0 / 100 mℓ |
| Free Chlorine | < 0.25 mg/ℓ |
| Ortho-phosphate | < 1.0 mg/ℓ |

Table 10: Quality performance of Monakato WWTW for the period of review.

| Determinant | Performance standard (DWS) | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| pH | 6.5 - 8.5 | 8.40 - 8.44 | 100% | 8.32 - 8.45 | 100% |
| Elec. Conductivity | < 150 mS/m | 83 - 108 mS/m | 100% | 113 - 117 mS/m | 100% |
| COD | < 75 mg/ℓ | 92 - 142 mg/ℓ | Non-Compliant | 97 - 119 mg/ℓ | Non-Compliant |
| Ammonia | < 1 mg/ℓ | 8.76 - 15.10 mg/ℓ | Non-Compliant | 24.4 - 24.8 mg/ℓ | Non-Compliant |
| Nitrate | < 15 mg/ℓ | 0.56 - 3.40 mg/ℓ | 100% | 0.5 - 1.35 mg/ℓ | 100% |
| Suspended Solids | < 25 mg/ℓ | 24 - 53 mg/ℓ | 33% | 3 - 30 mg/ℓ | 67% |
| Faecal Coliform | < 0 / 100 mℓ | 0 - 0 / 100 mℓ | 100% | 0 - 0 / 100 mℓ | 100% |
| Free Chlorine | < 0.25 mg/ℓ | 0.25 - 0.26 mg/ℓ | 67% | 0.2 - 0.4 mg/ℓ | 33% |
| Ortho-Phosphate | < 1.0 mg/ℓ | 1.84 - 3.75 mg/ℓ | Non-Compliant | 2.52 - 2.86 mg/ℓ | Non-Compliant |
| **OVERALL COMPLIANCE** | | | **55.6%** | | **55.6%** |

## 2.6.4 RUSTENBURG SEWAGE TREATMENT PLANT

Table 11: DWS License conditions for Rustenburg WWTW

| Determinant | Performance standard |
|---|---|
| pH | 6.5 - 8.5 |
| Elec. Conductivity | < 150 mS/m |
| COD | < 75 mg/ℓ |
| Ammonia | < 1 mg/ℓ |
| Nitrate | < 6 mg/ℓ |
| Suspended Solids | < 10 mg/ℓ |
| Faecal Coliform | < 0 / 100 mℓ |
| Free Chlorine | < 0.20 mg/ℓ |
| Ortho-phosphate | < 1.0 mg/ℓ |

Table 12: Quality performance of Rustenburg WWTW for the period of review

| Determinant | Performance standard | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| pH | 6.5 - 8.5 | 7.72 - 8.45 | 100% | 7.49 - 8.07 | 100% |
| Elec. Conductivity | < 150 mS/m | 66.3 - 108.0 mS/m | 100% | 86.1 - 100.0 mS/m | 100% |
| COD | < 75 mg/ℓ | 20.0 - 67.0 mg/ℓ | 100% | 31.0 - 43.0 mg/ℓ | 100% |
| Ammonia | < 1 mg/ℓ | 5.67 - 13.0 mg/ℓ | Non-Compliant | 0.1 - 0.1 mg/ℓ | 100% |
| Nitrate | < 6 mg/ℓ | 0.41 - 1.74 mg/ℓ | 100% | 1.05 - 4.73 mg/ℓ | 100% |
| Suspended Solids | < 10 mg/ℓ | 2 - 25 mg/ℓ | 67% | 3 - 8 mg/ℓ | 100% |
| Faecal Coliform | < 0 / 100 mℓ | 0 - 0 / 100 mℓ | 100% | 0 - 85 / 100 mℓ | 67% |
| Free Chlorine | < 0.20 mg/ℓ | 0.01 - 0.08 mg/ℓ | 100% | 0.01 - 0.04 mg/ℓ | 100% |
| Ortho-Phosphate | < 1.0 mg/ℓ | 0.89 - 2.45 mg/ℓ | 33% | 0.76 - 2.62 mg/ℓ | 33% |
| **OVERALL COMPLIANCE** | | | **77.8%** | | **88.9%** |

Table 13: Summary of the quality performance achieved by the 4 WWTW for the period of review, is tabled below

| PLANT | CAPACITY | PERFORMANCE | |
|---|---|---|---|
| | | TARGET | JULY - SEPT 2020 |
| Rustenburg WWTW | 42 Mℓ/d | 90% | 88.9% |
| Boitekong WWTW | 24 Mℓ/d | 90% | 85.2% |
| Monakato WWTW | 1 Mℓ/d | 90% | 55.6% |
| Lethabong WWTW | 2 Mℓ/d | 90% | 77.8% |
| **Overall performance** | | | **76.9%** |

### 2.6.5 Effluent Quality (Anglo Platinum standards)

In terms of an amended agreement with the Anglo Platinum, the 15 Mℓ/d treated effluent supplied is further treated in the dissolved air flotation (DAF) unit to meet the following standards:

Table 14: Anglo Platinum Quality Standards

| PARAMETER | UNIT | CONTRACTED QUALITY | |
|---|---|---|---|
| | | MAXIMUM | REJECT |
| pH | pH Units | 7.5 Min - 7.8 Max | 6.8 Min - 8.2 Max |
| TOC | mg/ℓ | 20 | > 25 |
| COD | mg/ℓ | 60 | > 75 |
| TSS | mg/ℓ | 8 | > 10 |
| Alkalinity | mg/ℓ | 300 | > 350 |
| Ammonia | mg/ℓ | 5 | > 10 |
| Nitrate | mg/ℓ | 10 | > 15 |
| O-Phosphate | mg/ℓ | 9 | > 10 |
| Fats | mg/ℓ | 4 | > 5 |
| TDS | mg/ℓ | 1800 (150 µS/m) | > 2000 (200 µS/m) |
| Ca | mg/ℓ | 350 | > 400 |
| Mg | mg/ℓ | 75 | > 100 |
| Na | mg/ℓ | 150 | > 400 |
| $SO_4$ | mg/ℓ | 200 | > 300 |
| Cl | mg/ℓ | 450 | > 500 |
| Turbidity | NTU | 10 | > 15 |
| E. coli | CFU/100ml | 0 | > 1000 |
| Total Plate Count | CFU/100ml | 1000 | > 10000 |

The water quality is monitored on a daily basis.

Table 14 below gives an indication of the performance of the DAF plant during the period under review, 1 July to 25 September 2020, and includes the performance of the previous period.

Table 15: Quality Measurement at Rustenburg Waste Water Treatment Works (Anglo Standards)

| Determinant | Performance standard (ANGLO) | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| pH | 7.5 Min - 7.8 Max | 7.30 – 8.13 pH-Units | 70.1% [1] | 7.35 – 7.97 pH-Units | 76.7% [1] |
| TOC | 20 mg/ℓ | 6.78 – 13.9 mg/ℓ | 100% | 12.0 – 19.4 mg/ℓ | 100% |
| COD | 60 mg/ℓ | 14.6 - 50.0 mg/ℓ | 100% | 20.0 - 74.0 mg/ℓ | 98.8% |
| TSS | 8 mg/ℓ | 2.0 – 21.0 mg/ℓ | 80% | 2.0 – 20.0 mg/ℓ | 87.2% |
| Alkalinity | 300 mg/ℓ | 106 - 220 mg/ℓ | 100% [1] | 100 - 198 mg/ℓ | 100% [1] |
| Ammonia | 5 mg/ℓ | 1.0 – 18.8 mg/ℓ | 53.6% | 0.43 – 7.8 mg/ℓ | 94.2% |
| Nitrate | 10 mg/ℓ | 1.1 – 12.1 mg/ℓ | 94.8% | 3.0 – 15.8 mg/ℓ | 53.5% |
| O-Phosphate | 9 mg/ℓ | 0.3 – 5.2 mg/ℓ | 100% | 0.9 – 6.3 mg/ℓ | 100% |
| Fats | 4 mg/ℓ | 0.5 - 0.5 mg/ℓ | 100% | 0.5 – 7.1 mg/ℓ | 92.3% |
| TDS | 1800 (150 µS/m) | 325 – 633 (100 µS/m) | 100% [1] | 585 – 627 (100 µS/m) | 100% [1] |
| Ca | 350 mg/ℓ | 29.3 - 37.1 mg/ℓ | 100% [1] | 28.9 - 37.0 mg/ℓ | 100% [1] |
| Mg | 75 mg/ℓ | 20.1 – 26.0 mg/ℓ | 100% [1] | 21.9 – 25.7 mg/ℓ | 100% [1] |
| Na | 150 mg/ℓ | 56.6 – 78.6 mg/ℓ | 100% [1] | 76.7 – 87.4 mg/ℓ | 100% [1] |
| $SO_4$ | 200 mg/ℓ | 73.4 – 85.2 mg/ℓ | 100%[1] | 89.4 – 119.0 mg/ℓ | 100%[1] |
| Cl | 450 mg/ℓ | 88.9 – 106.0 mg/ℓ | 100% | 111.0 – 128.0 mg/ℓ | 100% |
| Turbidity | 10 NTU | 1.04 – 10.2 NTU | 99% | 1.38 – 7.05 NTU | 100% |
| E. coli | 0 CFU/100mℓ | 0 - 1940 CFU/100mℓ | 50% | 0 – 264.0 CFU/100mℓ | 84.6% |
| Total Plate Count | 1000 CFU/100mℓ | 0 - 1000 CFU/100mℓ | 100% | 0 - 1000 CFU/100mℓ | 100% |
| Flow (Average) | 15Mℓ/d (Min) | 0.0 – 16.8 Mℓ/d (10.41) Mℓ/d | 25.8% [2] | 7.96 – 16.33 Mℓ/d (14.58) Mℓ/d | 51.7% [2] |
| **OVERALL COMPLIANCE** | | | **88.1%** | | **91.53%** |

**Notes:**
1. The current plant is not equipped to make adjustments to these parameters.
2. Average flow is currently not in the Business Plan but will be included in the future.

## 2.6 KPI 6: NUMBER OF WATER TREATMENT WORKS OPERATED

RWST is responsible for the operation and maintenance of the following two water treatment plants:

Kloof Water Treatment Works (2 Mℓ/d design capacity)
Bospoort Water Treatment Works (12 Mℓ/d design capacity)

Water and Sanitation Services South Africa (Pty) Ltd, trading as Water Solutions Southern Africa (WSSA) has been contracted by the Rustenburg Water Services Trust (RWST) for the operation these plants.

The volumes treated by each plant for the period under review are captured below.

Table 16: Volumes treated by each plant for the period under review are captured below:

| PLANT | CAPACITY | APRIL - JUNE 2020 | JULY - SEPT 2020 |
|---|---|---|---|
| Bospoort WTW | 12 Mℓ/d | 9.79 Mℓ/d | 10.209 Mℓ/d |
| Kloof WTW | 2 Mℓ/d | 1.003 Mℓ/d | 1.085 Mℓ/d |

## 2.7 KPI 7: NUMBER OF WATER TREATMENT WORKS MAINTAINED

There are 2 (two) water purification plants maintained in terms of agreed standards, namely Bospoort and Kloof Water Purification Works.

The successful operation of a Water Treatment Works is largely dependent on the installed machinery and equipment to ensure that the water can be treated according to the process the plant was designed for.

It is thus vital that all machinery and equipment be kept in good working condition and available for use when required.

Regular servicing and preventative maintenance however requires that equipment be taken out of services for a certain period. It will thus not always be possible to obtain a 100% of all equipment availability and the target of 85% availability is set.

RWST has contracted WSSA to operate and maintain the two water treatment plants under its control.

WSSA is required to complete a daily availability report, reporting on all the major mechanical items on the plant. From this, a monthly availability report is compiled. Regular spot checks are performed by RWST to verify the accuracy.

Table 17: Availability of the 2 Water Treatment Plants

| PLANT | CAPACITY | AVAILABILITY | |
|---|---|---|---|
| | | TARGET | JULY - SEPT 2020 |
| Bospoort WTW | 12 Mℓ/d | 85% | 100% |
| Kloof WTW | 2 Mℓ/d | 85% | 100% |

## 2.8 KPI 8: PERCENTAGE COMPLETION OF WATER TREATMENT PLANTS - CIVIL WORKS UPGRADING PROJECT (BOSPOORT WTW)

Bospoort Water Treatment Works is the only Water Treatment Works undergoing upgrading under the contract of the RWST. The plant is being upgraded from 12 Mℓ/d to 24 Mℓ/d.

The Civil component of the work was to be completed in January 2019 but was delayed mainly due to community unrest and the recent lockdown due to Covid-19 and subsequent labour issues emanating from Covid-19 lockdown. This has resulted in a revised completion date of the end of December 2020.

The Civil portion of the works therefore remained at 97% complete with no progress occurring during the period under review.

Table 18: Bospoort WTW Construction Progress

| BOSPOORT WTW CONSTRUCTION PROGRESS | | | |
|---|---|---|---|
| CONTRACT | PROGRESS | | PROGRESS FOR PERIOD |
| | 30 June 2020 | 25 September 2020 | |
| Civil | 97% | 97% | 0% |
| M&E | - | - | - |
| **OVERALL CONSTRUCTION PROGRESS** | **-** | **-** | **0%** |

The Mechanical and Electrical component of the work has not yet been procured.

## 2.9 KPI 9: VOLUME OF POTABLE WATER SUPPLIED TO RLM IN ACCORDANCE WITH THE WATER SUPPLY AGREEMENT

Bospoort Water Treatment Works has a design capacity of 12 Mℓ/d and Kloof Water Treatment Works a capacity of 2 Mℓ/d. WSSA has been contracted by the RWST for the operation of the these plants.

The average volumes of water supplied to RLM is in accordance with the water supply agreement for the period under review, is table below.

Table 19: Average volumes of water supplied to RLM

| PLANT | CAPACITY | PERFORMANCE | |
|---|---|---|---|
| | | Target @ 90% capacity | JULY - SEPT 2020 |
| Bospoort WTW | 12 Mℓ/d | 10.8 Mℓ/d | 10.209 Mℓ/d (85.1%) |
| Kloof WTW | 2 Mℓ/d | 1.8 Mℓ/d | 1.085 Mℓ/d (54.2%) |

## 2.10 KPI 10: PERCENTAGE COMPLIANCE IN THE TREATMENT OF WATER FOR POTABLE USE IN TERMS OF DWS STANDARDS

The required standard for both Bospoort Water Treatment Works as well as Kloof Water Treatment Works is regulated by SANS 241.

According to the water supply agreement, RWST must supply potable water to RLM, which fully comply with SANS 241, as reflected in the table 20 below from the Bospoort and Kloof Water Treatment Works.

Table 20: SANS 241 Standards

| SANS 241 Determinant | Performance standard |
|---|---|
| Colour Pt-Co | < 15 |
| Treated Conductivity (mS/m) | < 170 mS/m |
| TDS | < 1200 mg/ℓ |
| pH | > 5.0 < 9.7 pH Units |
| Turbidity NTU | < 1 NTU |
| Calcium (mg/ℓ) | < 150 mg/ℓ |
| Faecal Coliform | < 0 /100mℓ |
| Chloride (mg/ℓ) | < 300 mg/ℓ |
| Fluoride (mg/ℓ) | < 1.5 mg/ℓ |
| Magnesium (mg/ℓ) | < 70 mg/ℓ |
| Sulphate (mg/ℓ) | < 250 mg/ℓ |
| Heterotrophic Plate Count cfu/mℓ | < 1000 /mℓ |
| Total Coliform cfu/100mℓ | < 10 cfu/100mℓ |
| Free Chlorine (mg/ℓ) | < 5 mg/ℓ |

Table 21: The quality performance achieved by Bospoort WTW for the period of review is in the table below.

| Determinant | Performance standard (SANS 241) | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| Colour Pt-Co | < 15 | 10-10 | 100% | 10-10 | 100% |
| Treated Conductivity (mS/m) | < 170 mS/m | 95 - 117 mS/m | 100% | 115.8 - 128 mS/m | 100% |
| TDS | < 1200 mg/ℓ | 717 - 772 mg/ℓ | 100% | 799 - 841 mg/ℓ | 100% |
| pH (pH units) | > 5.0 < 9.7 pH units | 7.57 - 7.64 pH units | 100% | 7.42 - 7.95 pH units | 100% |
| Turbidity NTU | < 1 NTU | 0.51 - 1.80 mg/ℓ | 33% | 0.21 - 0.52 mg/ℓ | 100% |
| Calcium (mg/ℓ) | < 150 mg/ℓ | 57.6 - 79.4 mg/ℓ | 100% | 74.0 – 84.7 mg/ℓ | 100% |
| Faecal Coliform | < 0 cfu/100mℓ | 0 - 0 cfu/100mℓ | 100% | 0 - 0 cfu/100mℓ | 100% |
| Chloride (mg/ℓ) | < 300 mg/ℓ | 172 - 187 mg/ℓ | 100% | 196 - 206 mg/ℓ | 100% |
| Fluoride (mg/ℓ) | < 1.5 mg/ℓ | 0.08 - 0.15 mg/ℓ | 100% | 0.15 - 0.22 mg/ℓ | 100% |
| Magnesium (mg/ℓ) | < 70 mg/ℓ | 31.4 – 35.2 mg/ℓ | 100% | 33.0 - 40.4 mg/ℓ | 100% |
| Sulphate (mg/ℓ) | < 250 mg/ℓ | 92 - 138 mg/ℓ | 100% | 144 - 154 mg/ℓ | 100% |
| Heterotrophic Plate Count cfu/mℓ | < 1000 /mℓ | 3 - 11 cfu/mℓ | 100% | 0 - 16 cfu/mℓ | 100% |
| Total Coliform cfu/100mℓ | < 10 cfu/100mℓ | 0 - 2 cfu/100mℓ | 100% | 0 - 0 cfu/100mℓ | 100% |
| Free Chlorine (mg/ℓ) | < 5 mg/ℓ | 0.90 - 1.85 mg/ℓ | 100% | 0.57 – 2.2 mg/ℓ | 100% |
| **WATER QUALITY OVERALL COMPLIANCE:** | | | **95.2%** | | **100%** |
| **PLANT CAPACITY = 12 Mℓ/d: PRODUCTION PERFORMANCE TARGET > 90% of plant capacity** | | | | | |

Performance review: the plant exceeded its performance target of 95%.

## KLOOF WTW

The Kloof Water Treatment Works is a small, very old facility that used to be one of the first sources of potable water to Rustenburg. It is fed from the Dorpspruit, which originates in the Magalies mountain range from springs, and the water quality is normally of a very high standard. Average production for the period under review is at 1.003 Mℓ/d.

Table 22: The quality performance achieved by Kloof WTW for the period of review is tabled below.

| Determinant | Performance standard (SANS 241) | Previous Performance 26 March – 30 June 2020 | | Current Performance 01 July – 25 September 2020 | |
|---|---|---|---|---|---|
| | | Performance achieved | % Compliance | Performance achieved | % Compliance |
| Colour Pt-Co | < 15 | 10 - 10 | 100% | 10 - 10 | 100% |
| Treated Conductivity (mS/m) | < 170 mS/m | 7.78 – 8.72 mS/m | 100% | 6.61 - 10.9 mS/m | 100% |
| TDS | < 1200 mg/ℓ | 52.0 - 58.5 mg/ℓ | 100% | 44.0 – 73.0 mg/ℓ | 100% |
| pH (pH units) | > 5.0 < 9.7 pH units | 7.09 - 7.22 pH Units | 100% | 7.14 - 7.75 pH Units | 100% |
| Turbidity NTU | < 1 NTU | 0.50 - 0.74 mg/ℓ | 100% | 0.50 - 1.59 mg/ℓ | 82% |
| Calcium (mg/ℓ) | < 150 mg/ℓ | 3.35 – 4.07 mg/ℓ | 100% | 3.76 - 7.43 mg/ℓ | 100% |
| Faecal Coliform | < 0 cfu/100mℓ | 0 - 0 cfu/100mℓ | 100% | 0 - 0 cfu/100mℓ | 100% |
| Chloride (mg/ℓ) | < 300 mg/ℓ | 4.32 - 7.34 mg/ℓ | 100% | 5.13 - 15.5 mg/ℓ | 100% |
| Fluoride (mg/ℓ) | < 1.5 mg/ℓ | 0.05 - 0.09 mg/ℓ | 100% | 0.05 - 0.17 mg/ℓ | 100% |
| Magnesium (mg/ℓ) | < 70 mg/ℓ | 2.36 - 3.23 mg/ℓ | 100% | 2.46 - 3.92 mg/ℓ | 100% |
| Sulphate (mg/ℓ) | < 250 mg/ℓ | 1.77 – 3.12 mg/ℓ | 100% | 1.86 - 3.24 mg/ℓ | 100% |
| Heterotrophic Plate Count cfu/mℓ | < 1000 /mℓ | 0 - 9 cfu/mℓ | 100% | 0 - 26 cfu/mℓ | 100% |
| Total Coliform cfu/100mℓ | < 10 cfu/100mℓ | 0 - 0 cfu/mℓ | 100% | 0 - 0 cfu/mℓ | 100% |
| Free Chlorine (mg/ℓ) | < 5 mg/ℓ | 0.04 - 0.32 mg/ℓ | 100% | 0.3 - 0.9 mg/ℓ | 100% |
| **WATER QUALITY OVERALL COMPLIANCE:** | | | **100%** | | **98.7%** |
| **PLANT CAPACITY = 2 Mℓ/d. PRODUCTION PERFORMANCE TARGET > 90% of plant capacity** | | | | | |

Performance review: the plant exceeded its performance target of 95%.

Table 23: Summary of the quality performance achieved by the 2 WTW for the period of review, is tabled below.

| PLANT | CAPACITY | PERFORMANCE | |
|---|---|---|---|
| | | Target @ 90% capacity | JULY - SEPT 2020 |
| Bospoort WTW | 12 Mℓ/d | 95% | 100% |
| Kloof WTW | 2 Mℓ/d | 95% | 98.7% |
| **Overall performance** | | | **99.4%** |

## 3. FINANCIAL PERFORMANCE

In terms of the loan agreement entered with the financiers, the financial health of the RWST is enforced through a KPI called a "debt service ratio covenant".

This is a criterion that is well defined in the agreement, is easily measurable, and measures the profitability and the ability to repay all outstanding long-term debt.

The ratio is defined in terms of the loan agreement as "earnings before interest, tax and depreciation + cash reserves, expressed as a percentage of annual debt repayment".

The ratio is set at 1.5 times and we achieved 11.78 times including cash. The ratio excluding cash, we achieved 1.5 times for the period ending 30 September 2020. This essentially means that the Trust is in a healthy financial position with earnings of 1.5 times higher than the annual commitments. No provision for bad debts has been made to date and there are none currently under consideration. The bad debt provision would drastically weaken the financial position as stated.

Attached is the financial statement for the period ending 30 September 2020.