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## **WATER SERVICES DEVELOPMENT PLAN 2023 – 2028**

### **EXECUTIVE SUMMARY**

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Date: 10 May 2023

Prepared for:

Breedevally Local Municipality  
30 Baring Street  
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| <i>Approval</i>  |                  |                    |             |                  |
|                  |                  |                    |             |                  |

**LIST OF ABBREVIATIONS AND DEFINITIONS**

|                      |  |
|----------------------|--|
| BDS                  | Blue Drop Certification System   |
| DWS                  | Department of Water Affairs  |
| FY:                  | Financial Year - means in relation to – <ul style="list-style-type: none"> <li>• a national or provincial department, the year ending 31 March; or</li> <li>• a municipality, the year ending 30 June.</li> </ul>  |
| GDS                  | Green Drop Certification System  |
| IDP:                 | Integrated Development Plan - An IDP is a legislative requirement for municipalities which identifies the municipality's key development priorities; formulates a clear vision, mission, and values; formulates appropriate strategies; shows the appropriate organisational structure and systems to realise the vision and the mission and aligns resources with the development priorities. |
| m <sup>3</sup>       | cubic metres = 1 000 liter = 1 kiloliter   |
| MI                   | Megaliter = 1 000 kiloliter = 1 000 000 liter  |
| SDBIP:               | Service Delivery Budget Implementation Plan – is a management, implementation and monitoring tool that enable the Municipal Manager to monitor the performance of senior managers, the mayor to monitor the performance of the Municipal Manager, and for the community to monitor the performance of the municipality.  |
| WSA:                 | Water Services Authority - means a municipality with the executive authority and the right to administer water services as authorised in terms of the Municipal Structures Act, 1998 (Act No. 117 of 1998)   |
| WSDP:                | Water Services Development Plan – means the plan to be developed and adopted by the WSA in terms of the Water Services Act, 1997 (Act No. 108 of 1997)   |
| WSDP Guide Framework | Modular tool which has been developed by the DWA to support Water Services Authorities in complying to the Water Services Act with respect to Water Services Development Planning and which is also used by the DWA to regulate such compliance  |
| WSP:                 | Water Services Provider - means any person or institution who provides water services to consumers or to another water services institution, but does not include a water services intermediary  |

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## 1. INTRODUCTION

*The Water Services Act, 1997 (Act No. 108 of 1997) places a duty on Water Services Authorities to prepare a Water Services Development Plan as part of the process of preparing any integrated development plan. Section 15 (5) of the Water Services Act, 1997 states that:*

*A water services development plan must form part of any integrated development plan contemplated in the Local Government Transition Act, 1993 (Act No. 209 of 1993).*

The Breede Valley Local Municipality is an authorised Water Services Authority and as such must adhere to the relevant sections of the Water Services Act (No 108 of 1997) and the Municipal Systems Act (No 32 of 2000).

The following water services business elements are addressed as part of the WSDP guidelines:

- Administration
- Demographics
- Services levels
- Socio Economic
- Water Services Infrastructure
- Operation and Maintenance
- Associated Services
- Conservation and Demand Management
- Water Resources
- Financial Profile
- Water Services Institutional Arrangements
- Social and Consumer Services Requirements
- Needs Development Plan (list of Projects)

The following list of documentation and information was consulted in formulating the 2023 - 2028 WSDP.

- BVM Annual Report 2021/22
- Draft Multi-Year Budget
  - 2022/2025
- Water Services Development Plan 2018
- Water Master Plan – Feb 2023
- Sewer Master Plan – Feb 2023
- IDP 2022/27
- Breede Valley Municipality Spatial Development Framework – Feb 2020
- WSDP Annual Audit Report 2021/22
- Municipal Strategic Self-Assessment (MuSSA) 2022

## 2. PURPOSE OF THE WSDP

The primary purpose of the WSDP is to assist WSA's to carry out their mandate effectively. It is an important tool to assist the WSA to develop a realistic long-term investment plan which prioritises the provision of basic water services, promotes economic development and is affordable and sustainable over time.

The purpose of preparing a WSDP can be summarised as follows:

- Develop a culture of effective planning and management
- Know and understand the business
- Set out the way (action plan)
- Performance between WSA and customers, Province, and National Government
- Ensures integration and synergism
- Serves as a basis for effective management
- Compliance monitoring
- Communication system
- Heart of the regulatory system
- Building block of NIS and National Strategy

## 3. ADMINISTRATION

The Breede Valley Municipality (DM Ref Nr: WC025) is situated in the town Worcester where the management of all the other included towns and settlements occurs.

Postal Address: Private Bag X3046

Worcester

6849

Physical Address: Baring Street

Worcester

6850

### **Responsible Municipal Personnel**

The following personnel were consulted as part of the development of the WSDP.

| Responsible Official           | Area of Expertise | Tel No.      | E-mail             |
|--------------------------------|-------------------|--------------|--------------------|
| Senior Manager: Water Services | Jevon Pekeur      | 023 348 2803 | jpekeur@bvm.gov.za |

## Section A: Status Quo Overview

### **1. Background**

In terms of provincial notice 490/2000 (Provincial Gazette Extraordinary 5590) of 22 September 2000, the former municipalities of De Doorns, Rawsonville, Touws River and Worcester Transitional Council were dissolved and the Breede Valley Municipality (WC 025) was established. Latter came into effect on 6 December 2000. The Breede Valley Municipality is classified as a Category B municipality.

The Breede Valley Municipality covers an area of approximately 3 833 km<sup>2</sup> stretching from the Du Toitskloof Mountains in the south-west to the Kwadousberg Mountains in the south-east and including the towns of Rawsonville, Worcester, De Doorns and Touwsrivier as well as the rural areas adjacent to and between these towns and the Matroosberg rural area. The most striking feature of the Breede Valley in the Western Cape is its scenic beauty. Majestic mountains, fertile valleys, vineyards, and vast plains, covered with indigenous semi-desert vegetation, captivate the soul.

According to the Census 2011 figures the region has a counted population of 166 825 (inclusive of the informal settlements). Population size provides an indication of the volume of demand for government services in a particular geographical space. It also serves as a planning measure to assist budget planners to match available resources to address the relative demand for services.

The Breede Valley Local Municipality (BVLM) is the Water Services Authority (WSA) and is responsible for providing safe potable water to:

- Worcester
- Rawsonville
- De Doorns
- Touws River

### **2. Vision**

#### **The Breede Valley Municipality Vision:**

“A unique and caring Valley of service excellence, opportunity and growth”

The vision describes where Breede Valley wants to be as a municipality and within the greater Cape Winelands area. We endeavour to leverage our comparative and locational advantage to drive economic development and inclusive growth, creating sustainable employment for all our citizens.

### **3. Mission**

#### **The mission of the municipality offers the people of Breede Valley the following:**

"To provide sustainable and affordable basic services in a safe and healthy environment which promotes social and economic welfare through participative governance in a committed service-orientated approach, and appreciates committed staff as the organisation's most valuable resource and key to service delivery."

**4. Overview**

The local municipality is approximately 100 kilometres east of Cape Town. It is part of the Cape Winelands District municipality. Breede Valley has the 2nd largest population in the Cape Winelands District which has a population size of 787 490. Breede Valley municipality’s head office is in Worcester.

Figure 1.1 below indicates the location of Breede Valley Local Municipality in respect with the Cape Winelands District Municipality and Western Cape Provincial.

Figure 1.1: Location of Breede Valley Local Municipality



The population of Breede Valley was counted at 166 825 during the 2011 census which comprised approximately 42 527 households. The households are spread over several formal and informal settlement areas, which after the 2011 local elections were split into 21 wards. The increase in households and counted residents/households provides for a possible revenue increase in revenue, but also an increase in the demand for services.



|       |  |        |         |        |         |        |         |        |         |    |   |    |   |   |   |   |   |   |   |
|-------|--|--------|---------|--------|---------|--------|---------|--------|---------|----|---|----|---|---|---|---|---|---|---|
| TOTAL |  | 42,528 | 166,825 | 48,283 | 188,948 | 48,993 | 193,104 | 49,752 | 196,098 | 21 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------|--|--------|---------|--------|---------|--------|---------|--------|---------|----|---|----|---|---|---|---|---|---|---|

Table 2: Water Services Overview (Sanitation Category)

| Settlement Type | Ward | Area   | 2011*         |                | 2019          |                | 2020          |                | 2021          |                | Sanitation category |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
|-----------------|------|--|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------------|--------------------|---------------------------|----------------------------|----------------|---------------------------|----------------------------|-------------------------------------|-----------------------|---------------------|--|
|                 |      |  | Households    | Population     | Households    | Population     | Households    | Population     | Households    | Population     | Adequate: Formal    | Adequate: Informal | Adequate: Shared Services | Water resources needs only | O&M needs only | Infrastructure needs only | Infrastructure & O&M needs | Infrastructure, O&M & Resource need | No Services: Informal | No Services: Formal |  |
| <b>URBAN</b>    |      |  |               |                |               |                |               |                |               |                | <b>Adequate</b>     |                    |                           | <b>Below RDP</b>           |                |                           |                            | <b>None</b>                         |                       |                     |  |
| 1               |      | The entire community of Touwsrivier, including business and residential area.  | 2,071         | 8,751          | 2,351         | 10,428         | 2,385         | 10,658         | 2,422         | 10,823         | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 2               |      | De Doorns South, Stofland and adjacent farms   | 3,361         | 9,413          | 3,816         | 10,525         | 3,873         | 10,756         | 3,933         | 10,923         | ✓                   |                    | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 3               |      | The centre of De Doorns, Hasie Square, Ekuphumleni and adjacent farm areas.  | 2,155         | 9,592          | 2,446         | 10,729         | 2,482         | 10,965         | 2,521         | 11,135         | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 4               |      | Section of De Doorns town centre, Orchards and adjacent farm areas.  | 2,276         | 9,981          | 2,584         | 11,143         | 2,622         | 11,389         | 2,663         | 11,565         | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 5               |      | De Doorns farming areas including Brandwag, De Wet and Sandhills, Altona   | 2,719         | 11,442         | 3,087         | 12,703         | 3,132         | 12,982         | 3,181         | 13,184         | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 6               |      | N1 Worcester entrance, Altona, Tuindorp, Bergsig, Van Riebeeck Park, Panorama, Hosp. Hills & Fairway Heights, Altona | 1,654         | 5,349          | 1,879         | 6,202          | 1,906         | 6,338          | 1,936         | 6,436          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 7               |      | Paglande, Meirings Park, Part of Roux Park, De La Bat, Fairy Glen, Industrial area                                   | 2,152         | 6,187          | 2,443         | 7,096          | 2,479         | 7,252          | 2,517         | 7,364          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 8               |      | The Chessis and part of Worcester south (Zweletemba)   | 2,328         | 8,911          | 2,643         | 10,002         | 2,682         | 10,222         | 2,724         | 10,381         | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 9               |      | Roodewal area and Esselen Park   | 1,513         | 6,847          | 1,718         | 7,800          | 1,744         | 7,971          | 1,771         | 8,095          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 10              |      | Hexpark, Johnsonspark and Roodewal Flats   | 1,633         | 7,924          | 1,854         | 8,950          | 1,882         | 9,147          | 1,911         | 9,289          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 11              |      | OVD, Riverview and Parkersdam  | 1,757         | 6,694          | 1,996         | 7,637          | 2,025         | 7,805          | 2,056         | 7,926          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 12              |      | Part of Avian Park, CBD and Russell Scheme   | 1,525         | 7,183          | 1,732         | 8,158          | 1,757         | 8,338          | 1,784         | 8,467          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 13              |      | Johnsons Park 1, 2 & part of 3, part of Noble Park and Riverview houses.   | 1,749         | 7,592          | 1,985         | 8,595          | 2,015         | 8,784          | 2,046         | 8,920          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 14              |      | Riverview flats & Victoria Park  | 1,321         | 5,924          | 1,499         | 6,815          | 1,521         | 6,965          | 1,545         | 7,073          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 15              |      | Langrug, Worcester West, Somerset Park and Goudini farms   | 2,045         | 8,105          | 2,321         | 9,142          | 2,355         | 9,343          | 2,392         | 9,488          | ✓                   |                    |                           |                            |                |                           |                            |                                     |                       |                     |  |
| 16              |      | Zweletemba   | 2,703         | 7,938          | 3,068         | 8,973          | 3,113         | 9,171          | 3,162         | 9,313          | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 17              |      | Zweletemba   | 927           | 3,378          | 1,053         | 4,096          | 1,068         | 4,186          | 1,085         | 4,251          | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 18              |      | Zweletemba & farms from Overhex, Nonna, etc.   | 2,060         | 8,111          | 2,339         | 9,143          | 2,373         | 9,345          | 2,410         | 9,489          | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 19              |      | Part of centre of Rawsonville and outlying farming community.  | 1,398         | 6,124          | 1,587         | 7,025          | 1,611         | 7,179          | 1,636         | 7,291          | ✓                   |                    | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 20              |      | Part of the centre of Rawsonville and areas towards N1.  | 1,828         | 7,627          | 2,075         | 8,627          | 2,105         | 8,817          | 2,138         | 8,953          | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| 21              |      | Avian Park and all surrounding informal areas.   | 3,353         | 13,752         | 3,806         | 15,159         | 3,862         | 15,492         | 3,922         | 15,732         | ✓                   | ✓                  | ✓                         |                            |                |                           |                            |                                     |                       |                     |  |
| <b>TOTAL</b>    |      |  | <b>42,528</b> | <b>166,825</b> | <b>48,283</b> | <b>188,948</b> | <b>48,993</b> | <b>193,104</b> | <b>49,752</b> | <b>196,098</b> | <b>21</b>           | <b>8</b>           | <b>10</b>                 | <b>0</b>                   | <b>0</b>       | <b>0</b>                  | <b>0</b>                   | <b>0</b>                            | <b>0</b>              | <b>0</b>            |  |

The water services levels of the respective settlements are illustrated in context of its adequacy (as per WSDP Guide Framework definitions), and further summarized under Business Element 2: Service Levels of this report. Due to its categorization in terms of adequacy, a single settlement may be categorized in terms of more than one adequacy definition (example a portion of the households may receive adequate service whilst the remainder may have a specific infrastructure “upgrade” or “refurbishment” need).

## 6. Business Element 2: Service Levels

The residential water services delivery access profile is presented below and is aligned with the format proposed for the Municipal Annual Report as contemplated in the MFMA. It is emphasized that this access profile does not consider quality- or adequacy of services as presented in the next section. It also must be noted that the figures indicated reflects the service level within the urban edge only. There are several households outside the urban edge such as farms that are not serviced by the municipality. No detail information on the level of service is available for these households. The census 2011 does indicate there are several households outside the urban edge that do not have access to adequate water and sanitation services. The provision of services to these areas however falls outside the mandate of the Municipality. Reporting is therefore done on the areas within the urban edge.

Table 3: Water Service Delivery Access Profile within the Urban Edge

| Description   | 2020/21#      | 2021/22#      |
|---|---------------|---------------|
|   | Actual        | Actual        |
| <b>Household</b>  |               |               |
| <b>Water: (above minimum level)</b>   |               |               |
| Piped water inside dwelling   | 20 860        | 22 298        |
| Piped water inside yard (but not in dwelling)   | 0             | 0             |
| Using public tap (within 200m from dwelling)  | 9 467         | 9 521         |
| Other water supply (within 200m)  | 0             | 0             |
| Minimum service level and above subtotal  | 30 327*       | 31 819*       |
| Minimum service level and above percentage  | 100           | 100%          |
| <b>Water: (below minimum level)</b>   |               |               |
| Using public tap (more than 200m from dwelling)   | 0             | 0             |
| Other water supply (more than 200m from dwelling)   | 0             | 0             |
| No water supply   | 0             | 0             |
| Below minimum service level subtotal  | 0             | 0             |
| Below minimum service level percentage  | 0             | 0%            |
| <b>Total number of households (formal and informal)</b>                                   | <b>30 327</b> | <b>31 819</b> |
| *Total reflects the total number of households including households not separately billed |               |               |
| #Data in line with SAMRAS and BVLM database   |               |               |

The table below provide a summary of the level of service for sanitation services within the urban edge of the Breede Valley Local Municipality. The service provided by Breede Valley Local Municipality is relatively high/acceptable. All formal areas have access to waterborne sanitation services. In informal areas chemical toilets are provided in accordance with the prescribed ratio (per person's toilet).

Table 4: Sanitation Services Delivery Profile within then Urban Edge

| Description  | 2019/20 | 2021/22 |
|--|---------|---------|
|  | Actual  | Actual  |
| <b>Household</b>   |         |         |
| <b>Sanitation / sewerage: (above minimum level)</b>  |         |         |
| Flush toilet (connected to sewerage)   | 21 608  | 23 275  |
| Flush toilet (with septic tank)  | 411     | 415     |
| Chemical toilet  | 847     | 1383    |
| Pit toilet (ventilated)  | 0       | 0       |
| Other toilet provisions (below minimum service level)  | 0       | 0       |
| Minimum service level and above sub-total  | 22 866  | 25 073  |
| Minimum service level and above percentage   | 100%    | 100.0%  |
| <b>Sewer: (below minimum level)</b>  |         |         |
| Bucket toilet  | 0       | 0       |
| Other toilet provisions (below minimum service level)  | 0       | 0       |
| No toilet provisions   | 0       | 0       |
| Below minimum service level sub-total  | 0       | 0       |
| Below minimum service level percentage   | 0       | 0%      |
| Total number of households (formal and informal)   | 22 866  | 25 073  |
| <i>*Total reflects the total number of households including households not separately billed</i> |         |         |

The residential water services delivery adequacy profile as presented below aligns with the service level category of the WSDP Guide Framework and considers the water resources-, operational- and infrastructure needs of the water services provider by the Breede Valley Municipality. In essence, the above, paves the way for the identification of projects to address the relevant needs. When interpreting the adequacy profile, it should be recognised that a specific settlement that are serviced by the municipality, may have more than one need and hence, that provision is made for double counting of households, where such duplication needs have been identified.

It should also be emphasized that where areas are serviced privately such as households residing on farms, that the adequacy service level has been identified as Adequate: Informal as per the guidelines for the DWA Reference

Framework, meaning that any infrastructure development needs (as may be evident from the access profile) is not assigned for implementation by the Breede Valley Municipality.

It must be noted that the adequacy profile is based on levels of service for the areas within the urban edge and aligned with the Department of Water Affairs, reference framework figures. The adequacy profile represents a WSA perspective and hence, includes all wards located within the Breede Valley municipal boundary

The Breede Valley Municipality's water services adequacy profile contains the following needs:

- Infrastructure- and services needs to be extended in informal settlements of Rawsonville, Avian Park, Zweletemba, Sand Hills, Orchards, and Touws River.
- There is a high need of refurbishment for both the water- and sewer infrastructure.

Table: Residential water services delivery adequacy profile (Water)

| Water<br>Categorisation                       | Number<br>of<br>settlements | FORMAL                    |                             |                                 |                |          |          |          |          |                            |             |                         |                    | INFORMAL              |          |          |          |             |          |          |          |          |          |
|---|-----------------------------|---------------------------|-----------------------------|---------------------------------|----------------|----------|----------|----------|----------|----------------------------|-------------|-------------------------|--------------------|-----------------------|----------|----------|----------|-------------|----------|----------|----------|----------|----------|
|   |                             | Adequate                  |                             |                                 |                |          |          |          |          | Water<br>Resource<br>needs | O & M Needs | Infrastructure<br>Needs |                    |                       |          |          |          | No services | Adequate | No       |          |          |          |
|   |                             | House<br>Connections<br>% | Yard<br>Connections<br>HH % | Stand Pipes<br>Services<br>HH % | Shared<br>HH % | HH %     | HH %     | HH %     | HH %     |                            |             | Upgrades<br>HH %        | Extensions<br>HH % | Refurbishment<br>HH % | HH %     | HH %     | HH %     |             |          |          |          |          |          |
| 1   | 21                          | 22 298                    | 100                         |                                 |                |          |          |          |          |                            |             |                         |                    |                       |          |          |          |             |          |          |          |          |          |
| 2   | 3                           |                           |                             | 9,521                           | 31             |          |          |          |          |                            |             |                         |                    |                       |          |          |          |             |          |          |          |          |          |
| 3   | 12                          |                           |                             |                                 |                |          |          |          |          |                            |             |                         |                    |                       |          |          |          |             |          |          |          |          |          |
| 4   | 0                           |                           |                             |                                 |                |          |          |          |          |                            |             |                         |                    |                       |          |          |          |             |          |          |          |          |          |
| 5   | 0                           |                           |                             |                                 |                |          |          |          |          |                            |             |                         |                    |                       |          |          |          |             |          |          |          |          |          |
| <b>Total Household Interventions required</b> |                             | <b>22 298</b>             | <b>0</b>                    | <b>9,521</b>                    | <b>0</b>       | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>                   | <b>0</b>    | <b>0</b>                | <b>0</b>           | <b>0</b>              | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>    | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |

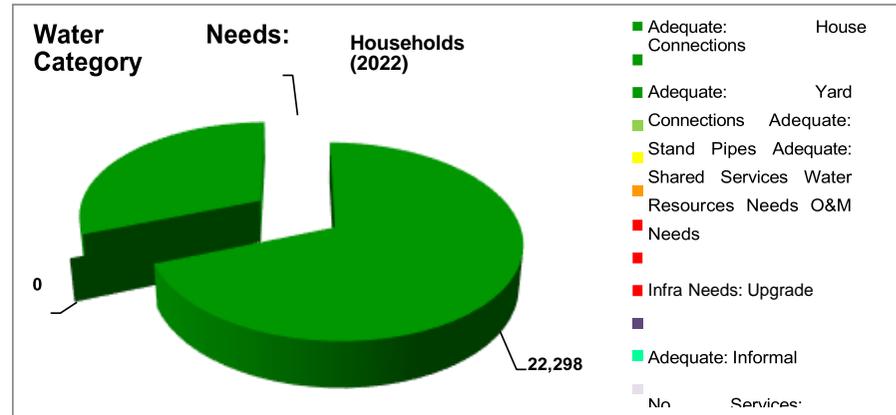
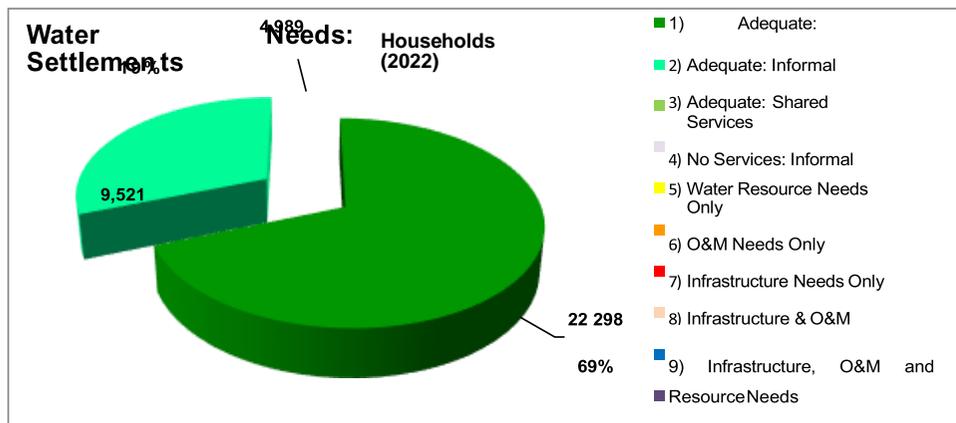
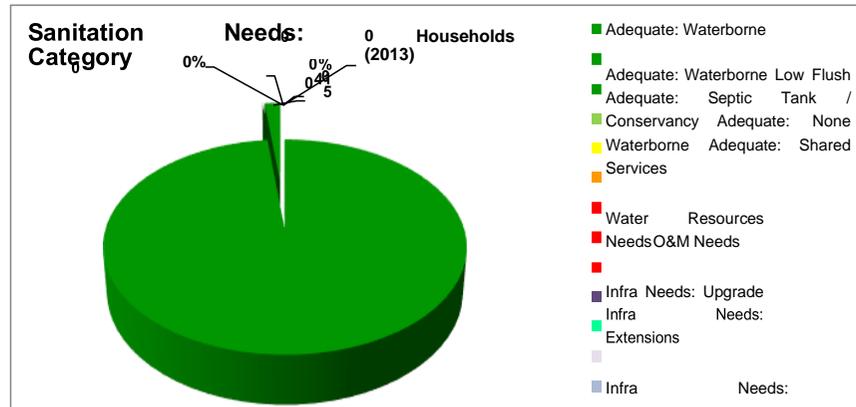
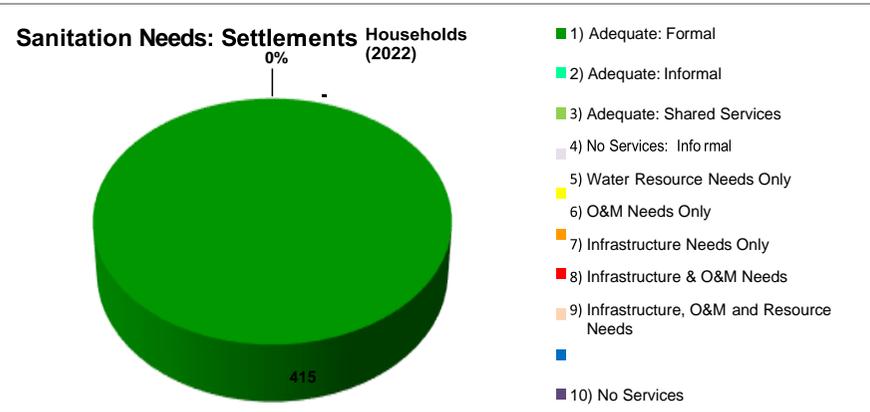


Table: Residential water services delivery adequacy profile (Sanitation)

| Water Categorisation   | Number of settlements | FORMAL         |     |              |   |      |     |        |   |   |   |                |   |         |   |                |   |              |   | INFORMAL |   |    |   |         |   |    |   |   |   |
|------------------------|-----------------------|----------------|-----|--------------|---|------|-----|--------|---|---|---|----------------|---|---------|---|----------------|---|--------------|---|----------|---|----|---|---------|---|----|---|---|---|
|                        |                       | Adequate       |     |              |   |      |     |        |   |   |   | Water Resource |   | O & M   |   | Infrastructure |   |              |   |          |   | No |   | Adequat |   | No |   |   |   |
|                        |                       | Waterborne Low |     | Septic Tank/ |   | None |     | Shared |   | H |   | H              |   | Upgrade |   | Extension      |   | Refurbishmen |   | H        |   | H  |   | H       |   | H  |   |   |   |
|                        |                       | HH             | %   | H            | % | HH   | %   | H      | % | H | % | H              | % | H       | % | H              | % | H            | % | H        | % | H  | % | H       | % | H  | % | H | % |
| 1                      | 21                    | 23             | 275 | 95%          |   |      | 415 | 2%     |   |   |   |                |   |         |   |                |   |              |   |          |   |    |   |         |   |    |   |   |   |
| 2                      | 0                     |                |     |              |   |      |     |        |   |   |   |                |   |         |   |                |   |              |   |          |   |    |   |         |   |    |   |   |   |
| 3                      |                       |                |     |              |   |      |     |        |   |   |   |                |   |         |   |                |   |              |   |          |   |    |   |         |   |    |   |   |   |
| 4                      |                       |                |     |              |   |      |     |        |   |   |   |                |   |         |   |                |   |              |   |          |   |    |   |         |   |    |   |   |   |
| 5                      |                       |                |     |              |   |      |     |        |   |   |   |                |   |         |   |                |   |              |   |          |   |    |   |         |   |    |   |   |   |
| Total Household        |                       | 23             | 275 | 0            |   | 415  | 0   | 0      |   | 0 |   | 0              |   | 0       |   | 0              |   | 0            |   | 0        |   | 0  |   | 0       |   | 0  |   |   |   |
| Interventions required |                       | 23             | 275 | 0            |   | 415  | 0   | 0      |   | 0 |   | 0              |   | 0       |   | 0              |   | 0            |   | 0        |   | 0  |   | 0       |   | 0  |   |   |   |



## 7. **Business Element 4: Water Services Infrastructure Management (Infrastructure)**

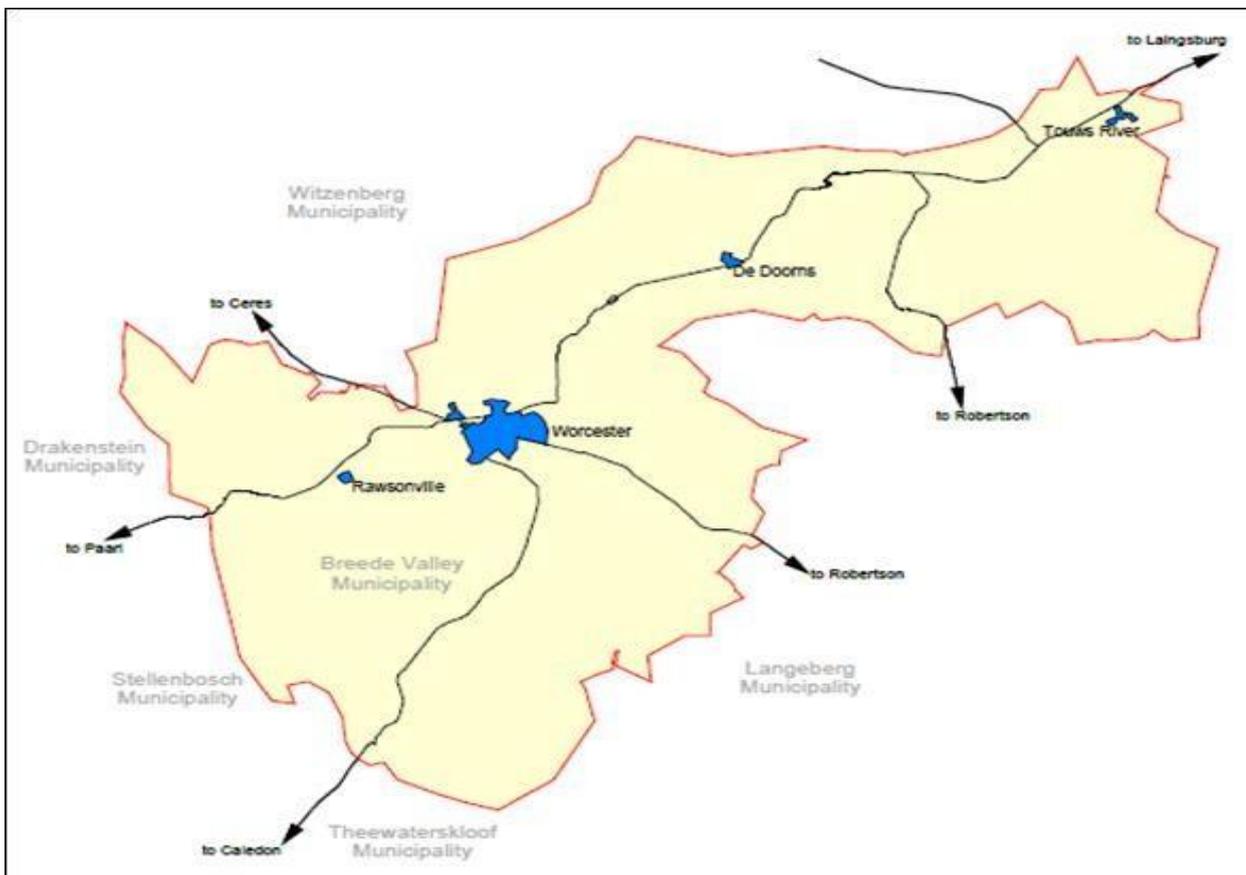
### 7.1 Existing Water Infrastructure

The following section provides a summary overview of the Water Infrastructure and supply area for the Breede Valley Municipality. The supply of water in the Breede Valley Municipal Area can be divided into four supply areas, they are:

- De Doorns Supply Area
- Rawsonville Supply Area
- Touws River Supply Area
- Worcester Supply Area

The map below indicates the four supply areas within the Breede Valley Municipality.

Figure 2.1: Supply Areas within the Breede Valley Local Municipality



More detail regarding the existing water infrastructure can be obtained from the Draft Breede Valley Water Services Master Plan dated February 2023.

Table 5: Water Infrastructure Summary

| AREA        | INFRASTRUCTURE TYPE                        | EXTENT  | CAPACITY |
|-------------|--|---------|----------|
| Worcester   | Water Treatment Plants (Stettynskloof)     | 1       | 60 Mℓ/d  |
|             | Water Treatment Plants (Fairy Glen)        | 1       | 10 Mℓ/d  |
|             | Reservoirs (including Towers) Worcester    | 9       | 93.24 Mℓ |
|             | Pumpstation/s Worcester                    | 6       | 794l/s   |
|             | Pipe Length (Worcester)                    | 362.5km | -        |
| Rawsonville | Boreholes (Rawsonville – Emergencies only) | 4       | 0.8 Mℓ/d |
|             | Reservoirs (including Towers) Rawsonville  | 3       | 2.83 Mℓ  |
|             | Pumpstation/s Rawsonville                  | 2       | 30l/s    |
|             | Pipe Length (Rawsonville)                  | 17.1km  | -        |
| De Doorns   | Water Treatment Plants                     | 1       | 4.8 Mℓ/d |
|             | Reservoirs (including Towers)              | 7       | 8.79 Mℓ  |
|             | Pumpstation/s                              | 2       | 73l/s    |
|             | Pipe Length                                | 60.5km  | -        |
| Touws River | Water Treatment Plants                     | 1       | 3.2 Mℓ/d |
|             | Reservoirs (including Towers)              | 3       | 6.045 Mℓ |
|             | Pumpstation/s                              | 0       | -        |
|             | Pipe Length                                | 88.1km  | -        |

### 7.2 De Doorns Water Supply

The system is operated in 5 separate zones, viz. the De Doorns Upper zone, De Doorns Lower zone, Stofland reservoir zone, Stofland PRV zone and the Orchard zone. Water is pumped from the N1 pump station, located adjacent to the N1 reservoirs, through the upper zone distribution network into the Upper reservoir, Lower reservoirs and Orchard reservoir and distributed into the zones respectively. The Stofland reservoir is supplied with water from the N1 reservoirs through the Stofland pump station (also located on the N1 reservoir site) and accompanying 200 mm diameter rising main. The Stofland reservoir supplies the Stofland reservoir and Stofland PRV zones.

Water for De Doorns is provided by Hex Valley Water Users Association Irrigation Board.

There are six reservoirs ranging from 0.4Mℓ to 2.3Mℓ and two pump stations. There is a total of 57.6km of pipeline that supply the town's reticulation network.

### 7.3 Rawsonville Water Supply

The system is operated in one zone, supplied with water from the Rawsonville 2.0 Mℓ reservoir through a 5.7 km 250 mm diameter ductile iron pipeline. Water pressure before the town is relieved through a PRV. There are boreholes which are no longer operational but are maintained for emergency purposes when required.

The Rawsonville reservoir is supplied with water from the Stettynskloof pipeline, which also supplies water to Worcester. There is a total of 16.8km of pipeline that supply the town's reticulation network.

#### 7.4 Touws River Water Supply

The bulk water supply lines from the Bokrivier Water Treatment Plant feed 3 separate reservoirs. These reservoirs feed into 3 separate zones respectively. Touws River receives water from two diversions in the Donkerkloof and Waterkloof. These water sources are supplemented by boreholes and natural springs. The total of this water can be diverted to be collected and stored in the Bok River balancing dam. The water is then channelled to a water treatment facility from where the treated water is stored in three reservoirs.

These reservoirs range from 0.05Mℓ to 4.5Mℓ with a total storage of 6Mℓ. The pipelines that supply bulk water from the source to the treatment works are 28km long and vary in diameter from 200mm to 300mm. The water reticulation network consists of 61km of pipe work and varies from 45mm to 225 in diameter.

#### 7.5 Worcester Water Supply

Worcester is supplied with potable water from two different sources. The main water source is Stettynskloof Dam that is situated approximately 32 km from Worcester in the Du Toitskloof Mountains. The other source, Fairy Glen Dam is much smaller in capacity and is situated closer to Worcester. The water is treated at both sources before released into the potable drinking water system. A total of 32 km of pipelines, ranging from 375 mm to 1 075 mm in diameter transfer the bulk water within the Worcester areas to various storage reservoirs. These reservoirs range from 2 Mℓ up to 20 Mℓ providing a total treated water holding capacity of 93.24 Mℓ.

The system is operated in 7 zones supplied from 4 sets of reservoirs. The Preload zone is the largest of the zones and supplies 70% of the total water demand (TWD). Three booster pumping zones are present in the high lying areas.

The Preload reservoir supplies the Worcester West Sump with water under gravity. The Worcester West Upper reservoir is in turn supplied from the Worcester West Sump via the Brandwacht pumping station and rising main. The De Koppen reservoir could be supplied by the Preload reservoir via the Panorama pumping station in an emergency. The total water reticulation network consists of 345 km of pipework ranging from 45 mm to 1075mm diameter pipes.

Table 6: Existing Water Pipeline Infrastructure

| PIPES<br>Diam. (mm)       | Length (m)     |                |                |            |
|---------------------------|----------------|----------------|----------------|------------|
|                           | Bulk           | Network        | Total          | %          |
| <b>DE DOORNS</b>          |                |                |                |            |
| > 45 ≤ 75                 | 0              | 2 040          | 2 040          | 3          |
| > 75 ≤ 125                | 960            | 35 774         | 36 734         | 61         |
| > 125 ≤ 175               | 3 920          | 9 110          | 13 030         | 22         |
| > 175 ≤ 275               | 6 245          | 1 825          | 8 070          | 13         |
| > 275                     | 535            | 65             | 600            | 1          |
| <b>De Doorns Total</b>    | <b>11 660</b>  | <b>48 814</b>  | <b>60 474</b>  | <b>100</b> |
| <b>RAWSONVILLE</b>        |                |                |                |            |
| > 45 ≤ 75                 | 0              | 5 685          | 5 685          | 33         |
| > 75 ≤ 125                | 25             | 5 060          | 5 085          | 30         |
| > 125 ≤ 175               | 405            | 125            | 530            | 3          |
| > 175 ≤ 275               | 5830           | 5              | 5 835          | 34         |
| > 275                     | 25             | 0              | 25             | 0          |
| <b>Rawsonville Total</b>  | <b>6285</b>    | <b>10 875</b>  | <b>17 160</b>  | <b>100</b> |
| <b>TOUWS RIVER</b>        |                |                |                |            |
| > 45 ≤ 75                 | 0              | 8 065          | 8 065          | 9          |
| > 75 ≤ 125                | 0              | 5 950          | 5 950          | 7          |
| > 125 ≤ 175               | 870            | 17 435         | 18 305         | 21         |
| > 175 ≤ 275               | 55 730         | 5              | 55 735         | 63         |
| > 275                     | 0              | 0              | 0              | 0          |
| <b>Touws River Total</b>  | <b>56 600</b>  | <b>31 455</b>  | <b>88 055</b>  | <b>100</b> |
| <b>WORCESTER</b>          |                |                |                |            |
| ≤ 45                      | 0              | 950            | 950            | 0          |
| > 45 ≤ 75                 | 0              | 28 541         | 28 541         | 8          |
| > 75 ≤ 125                | 0              | 150<br>140     | 150<br>140     | 41         |
| > 125 ≤ 175               | 0              | 80 785         | 80 785         | 22         |
| > 175 ≤ 275               | 710            | 30 110         | 30 110         | 8          |
| > 275 ≤ 375               | 1 915          | 14 815         | 14 815         | 4          |
| > 375 ≤ 475               | 0              | 10 035         | 10 035         | 3          |
| > 475 ≤ 575               | 0              | 1 680          | 1 680          | 0          |
| > 575 ≤ 675               | 2 580          | 1 735          | 4 315          | 0          |
| > 675 ≤ 775               | 31 440         | 0              | 31 440         | 9          |
| > 775                     | 9 425          | 300            | 9 725          | 3          |
| <b>WORCESTER TOTAL</b>    | <b>46 070</b>  | <b>319 091</b> | <b>362 536</b> | <b>98</b>  |
| <b>BREDE VALLEY TOTAL</b> | <b>120 615</b> | <b>410 235</b> | <b>530 850</b> | <b>100</b> |

Table 7: Existing Reservoirs and Water Towers

| NAME                      | TYPE      | CAPACITY<br>(k ℓ) | TWL<br>(m a.s.l.) |
|---------------------------|-----------|-------------------|-------------------|
| <b>De Doorns</b>          |           |                   |                   |
| De Doorns Lower           | Reservoir | 2 270             | 542,5             |
| De Doorns Upper 1         | Reservoir | 1 000             | 564,2             |
| De Doorns Upper 2         | Reservoir | 1 000             | 564,2             |
| Orchard                   | Reservoir | 500               | 484,0             |
| N1 Reservoir 1            | Reservoir | 1 154             | 490,2             |
| N1 Reservoir 2            | Reservoir | 364               | 489,7             |
| Stofland                  | Reservoir | 2 500             | 615,0             |
| <b>TOTAL</b>              |           | <b>8 788</b>      |                   |
| <b>Rawsonville</b>        |           |                   |                   |
| Rawsonville Old Reservoir | Reservoir | 580               | 225,6             |
| Rawsonville 2.0 ML        | Reservoir | 2 000             | 296,8             |
| Rawsonville Tower         | Reservoir | 250               | 234,4             |
| <b>TOTAL</b>              |           | <b>2 830</b>      |                   |
| <b>Touws River</b>        |           |                   |                   |
| Crescent Lower            | Reservoir | 4 500             | 793,3             |
| Crescent Upper            | Reservoir | 45                | 801,0             |
| Steenvliet                | Reservoir | 1 500             | 810,9             |
| <b>TOTAL</b>              |           | <b>6 045</b>      |                   |
| <b>Worcester</b>          |           |                   |                   |
| De Koppen                 | Reservoir | 11 370            | 366,0             |
| Langerug Res 1            | Reservoir | 13 630            | 291,3             |
| Langerug Res 2            | Reservoir | 20 000            | 291,3             |
| Preloads                  | Reservoir | 45 510            | 304,8             |
| Worcester West Sump       | Reservoir | 680               | 285,0             |
| Worcester West Upper      | Reservoir | 2 050             | 318,0             |
| <b>TOTAL</b>              |           | <b>93 240</b>     |                   |
| <b>BVLM TOTAL</b>         |           | <b>110 903</b>    |                   |

Table 8: Existing Water Pumps

| TOWN OR ZONE | NAME             | CAPACITY<br>(ℓ / s) | HEAD<br>(m) |
|--------------|------------------|---------------------|-------------|
| DE DOORNS    | N1 Pump Stations | 35                  | 80          |
|              | Stofland PS      | 38                  | 166         |
| RAWSONVILLE  | Rawsonville      | 20                  | 30          |
|              | De Nova          | 10                  | 30          |
| TOUWS RIVER  | None             |                     |             |
| WORCESTER    | Brandwacht       | 30                  | 40          |
|              | Carinus Street   | 17                  | 19          |
|              | Fairway Heights  | 3                   | 30          |
|              | Langerug         | 11                  | 18          |
|              | Main             | 650                 | 50          |
|              | Panorama         | 36                  | 60          |

A summary of the sewer infrastructure is provided in the table below. The figures are based on the February 2023 Master Plan information.

Table 9: Sewer Infrastructure Summary

| AREA        | INFRASTRUCTURE TYPE          | EXTENT  | CAPACITY  |
|-------------|------------------------------|---------|-----------|
| Worcester   | Waste Water Treatment Plants | 1       | 30 Mℓ/d   |
|             | Pumpstation/s                | 8       | -         |
|             | Pipe Length                  | 271.1km | -         |
| Rawsonville | Waste Water Treatment Plants | 1       | 0.24 Mℓ/d |
|             | Pumpstation/s                | 2       | -         |
|             | Pipe Length                  | 10.1km  |           |
| De Doorns   | Waste Water Treatment Plants | 1       | 2.34 Mℓ/d |
|             | Pumpstation/s                | 1       | -         |
|             | Pipe Length                  | 52.2km  |           |
| Touws River | Waste Water Treatment Plants | 1       | 0.84 Mℓ/d |
|             | Pumpstation/s                | 8       | -         |
|             | Pipe Length                  | 22.7km  | -         |

Table 10: Sewer Pipeline Infrastructure

| <b>BREAKDOWN OF PIPE LENGTHS ACCORDING TO DIAMETER</b> |                           |                          |
|--|---------------------------|--------------------------|
| <b>Normal Pipe Diameter<br/>(mm Ø)</b>                 | <b>Gravity Pipes (km)</b> | <b>Rising Mains (km)</b> |
| <b>DE DOORNS</b>                                       |                           |                          |
| ≤ 125  | 2.1                       | 2.2                      |
| > 125 ≤ 175  | 40.6                      | 0.0                      |
| > 175 ≤ 225  | 2.02                      | 0.0                      |
| > 225 ≤ 275  | 5.3                       | 0.0                      |
| > 275 ≤ 275  | 0.0                       | 0.0                      |
| <b>Sub-total</b>                                       | <b>50.0</b>               | <b>2.2</b>               |
| <b>RAWSONVILLE</b>                                     |                           |                          |
| > 125 ≤ 175  | 8.7                       | 1.4                      |
| > 175 ≤ 225  | 0.0                       | 0.0                      |
| <b>Sub-total</b>                                       | <b>8.7</b>                | <b>1.4</b>               |
| <b>TOUWS RIVER</b>                                     |                           |                          |
| ≤ 125  | 0.0                       | 3.5                      |
| > 125 ≤ 175  | 15.9                      | 1.5                      |
| > 175 ≤ 225  | 1.6                       | 0.0                      |
| > 225 ≤ 275  | 0.1                       | 0.0                      |
| > 275 ≤ 325  | 0.0                       | 0.0                      |
| <b>Sub-total</b>                                       | <b>17.7</b>               | <b>5.0</b>               |
| <b>WORCESTER</b>                                       |                           |                          |
| ≤ 125  | 0.0                       | 0.6                      |
| > 125 ≤ 175  | 15.3                      | 1.9                      |
| > 175 ≤ 225  | 15.2                      | 0.0                      |
| > 225 ≤ 275  | 6.5                       | 2.1                      |
| > 275 ≤ 325  | 10.6                      | 0.0                      |
| > 325 ≤ 375  | 7.7                       | 0.0                      |
| > 375 ≤ 425  | 2.1                       | 0.0                      |
| > 425 ≤ 475  | 3.1                       | 0.0                      |
| > 475 ≤ 525  | 0.4                       | 0.0                      |
| > 525 ≤ 575  | 1.1                       | 0.0                      |
| > 575 ≤ 675  | 2.9                       | 0.0                      |
| > 675  | 0.6                       | 0.0                      |
| <b>Sub-total</b>                                       | <b>266.4</b>              | <b>4.7</b>               |
| <b>TOTAL</b>   | <b>342.8</b>              | <b>13.3</b>              |

Table 11: Waste Water Treatments Plants

| DETAILS OF BULK DISCHARGE POINTS AND WASTEWATER TREATMENT PLANTS (WWTP'S) |                 |               |                  |
|---|-----------------|---------------|------------------|
| Name  | Capacity (kℓ/d) | IPDWF (ℓ / s) | Process          |
| De Doorns WWTP  | 2340            | ±15           | Activated sludge |
| Rawsonville WWTP  | 240             | 40            | Activated sludge |
| Touws River WWTP  | 840             |               | Activated sludge |
| Worcester WWTP  | 30 000          | ±645          | Activated sludge |

Table 12: Sewer Pumpstations

| EXISTING PUMPING STATION |                         |                  |                              |
|--------------------------|-------------------------|------------------|------------------------------|
| Town or Zone             | Name                    | Capacity (ℓ / s) | Diameter of rising main (mm) |
| <b>DE DOORNS</b>         | Orchard                 | 12               | 100                          |
| <b>RAWSONVILLE</b>       | Rawsonville             | 12               | 150                          |
|                          | Grey Street             | *                |                              |
|                          | Public Toilets          | *                |                              |
| <b>TOUWS RIVER</b>       | Dahlia Street           | 8                | 100                          |
|                          | Du Plessis Street       | 12               | 100                          |
|                          | Hopland                 | 8                | 100                          |
|                          | Old Age Home            | *                |                              |
|                          | Noord                   | 12               | 100                          |
|                          | Steenvliet              | 12               | 150                          |
|                          | Total                   | 5                | 100                          |
| <b>WORCESTER</b>         | Avian Park <sup>1</sup> | 48               | 250                          |
|                          | Johnson Park            | 35.3             | 150                          |
|                          | Noble Park              | 6.5              | 100                          |
|                          | Mountain Mill           | 12               | 160                          |
|                          | Mountain Mill New       | *                |                              |
|                          | Santa Weida             | 35               | 150                          |
|                          | Zweletemba              | 13               | 100                          |
|                          | Lily Farm               | *                | 300                          |
|                          | Transhex                | *                | 300                          |

|  |                |   |  |
|--|----------------|---|--|
|  | Nekkies Resort | * |  |
|  | Nekkies Chalet | * |  |

\*to be verified

## **8. Business Element 5: Water services Infrastructure Management (O&M)**

### **8.1 Groundwater Infrastructure**

There are only three new boreholes that will be used for drinking purposes in De Doorns. These boreholes are still in process of development. The other existing boreholes will be available for emergencies. The water quality will however be tested on a monthly basis. The depth, yield of the borehole and the abstraction will record as part of the operating procedures. The abstraction of the boreholes will be registered with the Department of Water Affairs.

### **8.2 Surface Water Infrastructure**

BVLM is supplied with surface water from different sources namely Stettynskloof and the Fairy Glen Dam which supply water to Worcester and Rawsonville, Grootkloof and Hex River Irrigation Board supplying water to the De Doorns, Touwsrivier is supplied with water from Waterkloof, Donkerkloof and Witklip borehole and springs.

Physically the condition of the surface water infrastructure is in a good and sound condition. The infrastructure is routinely inspected and maintained. There is an operation and maintenance programme in place.

### **8.3 Water Treatment Works**

Water is treated at the sources before released into the reticulation network.

Worcester has two treatment works, one at Stettynskloof dam has a capacity of 60.0 Mℓ/d and the other at De Koppen for the Fairy Glen dam has a capacity of 10.0 Mℓ/d.

De Doorns have one treatment facility with a capacity of 4.8 Mℓ/d and Touws River has one treatment facility with a capacity of 3.2 Mℓ/d.

#### 8.4 Water Pump Stations

There are ten pump stations in total that are owned by the Breede Valley Local Municipality. Two in De Doorns (N1 Pump Station with a capacity of 35l/s and Stofland with a capacity of 38l/s), two in Rawsonville (Rawsonville with a capacity of 20l/s and De Nova with a capacity of 10l/s) and six in Worcester (Brandwacht with a capacity of 30l/s, Carinus Street with a capacity of 17l/s, Fairway Heights with a capacity of 3l/s, Langerug with a capacity of 11l/s, Main with a capacity of 650l/s and Panorama with the capacity of 36l/s).

#### 8.5 Sewer Pump Stations

BVLM has a total of 22 sewer pump stations with a capacity ranging from 2l/s to 48l/s. Pump stations and pumps are all in a good condition and have a maintenance programme in place. The pump stations are all situated within a formal building and are electrically operated. All the pumps are operational and operate 24 hours per day and each have a standby pump set available.

#### 8.6 Waste Water Treatment Works

Each town within the Breede Valley Municipality has their own waste water treatment works. These treatment works operate 24 hours per day and discharge the treated effluent into the Breede River, Smalblaar River and Hex River respectively. For Worcester, Touws River and De Doorns a portion of the treated effluent is used by other end users for irrigation. Only Touws River does not discharge any treated effluent back in to the river but all is disposed of for irrigation. Water quality is measured at Worcester on a weekly basis and monthly for the other towns. 100% of the effluent that leaves the treatment works is chlorinated.

The physical condition of the treatment works is good/average and the infrastructure is well maintained. Although the treatment works does experience infrequent breakages/failures during operation there are spare parts available on site and problems can be fixed quickly.

### 9. Business Element 6: Associated Services

All schools, hospitals and clinics and other facilities in the BVLM have adequate water and sanitation services as indicated in table 13 Below.

Table 13: Associated Services in Breede Valley Municipality

| Associated Services Facilities | Number     | Adequate water services (Yes/No) |
|--------------------------------|------------|----------------------------------|
| <b>EDUCATION</b>               |            |                                  |
| Schools                        | 84         | Yes                              |
| Tertiary education facilities  | 2          | Yes                              |
| <b>Total: Education</b>        | <b>86</b>  | <b>Yes</b>                       |
| <b>HEALTH</b>                  |            |                                  |
| Clinics                        | 12         | Yes                              |
| Hospitals                      | 4          | Yes                              |
| <b>Total: Health</b>           | <b>18</b>  | <b>Yes</b>                       |
| <b>INSTITUTIONAL</b>           |            |                                  |
| Public Institutions            |            |                                  |
| Magistrate Offices             | 1          | Yes                              |
| Police Stations                | 5          | Yes                              |
| Prisons                        | 2          | Yes                              |
| <b>Total: Institutional</b>    | <b>8</b>   | <b>Yes</b>                       |
| <b>INDUSTRIAL</b>              |            |                                  |
| Dry industries                 | 324        | Yes                              |
| Wet industries                 | 5          | Yes                              |
| <b>Total: Industrial</b>       | <b>329</b> | <b>Yes</b>                       |
| <b>COMMERCIAL</b>              |            |                                  |
| Businesses                     | 780        | Yes                              |
| <b>Total: Commercial</b>       | <b>780</b> | <b>Yes</b>                       |
| <b>MINING</b>                  |            |                                  |
| <b>Total: Mining</b>           | <b>0</b>   | <b>N/A</b>                       |
| <b>OTHER</b>                   |            |                                  |
| Churches                       | 87         | Yes                              |
| Unknown                        | 9          | Yes                              |
| <b>Total: Other</b>            | <b>96</b>  | <b>Yes</b>                       |

All new applications for water and sewer for new schools, hospitals, businesses, or any other land use is managed on the same basis. An application must be made to the Municipality for approval with specific conditions. The cost for connecting to the municipal infrastructure is for the account of the developer.

## **10. Business Element 7: Water Resources**

### 10.1 Introduction

Water sources ranges from boreholes to surface water. The BVLM is independent from other external water suppliers and operates and maintain their own water systems, management, and infrastructure.

### 10.2 De Doorns

The water to De Doorns is provided by Hex Valley Water Users Association Irrigation Board from the Roode Els Dam as well as the Grootkloof River. Water is supplied to the De Doorns Water Treatment Plant before distribution.

The total current capacity for De Doorns is as follows: Resource capacities (Licensed Abstraction Mℓ/a)

Hex Valley Water Users Association - Grootkloof River 300 Mℓ/a

Hex Valley Water Users Association - Hex Valley 400 Mℓ/a

Hex Valley Water Users Association - Osplaas 200 Mℓ/a

### **TOTAL 900 Mℓ/a**

There are 3 boreholes in De Doorns which yield 500kl/day but currently they are not functional. This water is also used as drinking water to the WTW. The boreholes are managed by BVLM.

### 10.3 Rawsonville

Water for Rawsonville is supplied from Stettynskloof Dam to the Rawsonville Reservoir. There are four boreholes that are currently not operational but are maintained for emergency purposes. Resource capacities (Licensed Abstraction Mℓ/a)

Smalblaar River 67 Mℓ/a

Ground Water 622 Mℓ/a

### **TOTAL 689 Mℓ/a**

### 10.4 Touws River

The main water supply to Touws River is from the Bokrivier storage dam. Another supply utilised during the drier summer months to supplement the network is the Witklip Borehole. Furthermore, there are three springs that feed into canals. All these above sources supply water to the 90Mℓ Bokriver Reservoir.

Resource capacities (Licensed Abstraction Mℓ/a)

Waterkloof / Donkerkloof 412 Mℓ/a

Witklip Borehole 7 Mℓ/a

Matroosberg Spring 207 Mℓ/a

**TOTAL 626 Mℓ/a**

#### 10.5 Worcester

Worcester receives its water from two sources, viz. the Stettynskloof dam which is situated in the Du Toitskloof Mountains and Fairy Glen dam situated in the Brandwacht Mountains. The main source is from the Stettynskloof Dam with more than 90% contribution to the total water demand. Another source is from a diversion in the Hex River for Irrigation to some parts of the town.

Resource capacities (Licensed Abstraction Mℓ/a)

Stettynskloof 15 000 Mℓ/a

Fairy Glen 216 Mℓ/a

Hex River 2 727 Mℓ/a

**TOTAL 17 943 Mℓ/a**

#### 10.6 Demand Projections

The main contribution to demand increases is due to:

Population growth

Economic growth

Demand management and Conservation.

The Comprehensive Bulk Infrastructure Master Plan has full details in respect of the calculations of the future water demand projections. A summary of the projected demand for the next 10 years based on a specific planning scenario is provided in Table 14 below.

Table 14: Present and Future Water Demand Summary

| USER                          | ACTUAL PRESENT AADD<br>(kl/d) - 2022 | POTENTIAL FUTURE<br>AADD (kl/d) - 2032 |
|-------------------------------|--------------------------------------|--|
| <b>DE DOORNS</b>              |                                      |  |
| Existing formal Stands        | 3 200                                | 3 540                                  |
| Potential Future Developments |                                      | 1045                                   |
| <b>SUB-TOTAL</b>              | <b>3 200</b>                         | <b>4 585</b>                           |
| <b>RAWSONVILLE</b>            |                                      |  |
| Existing formal Stands        | 780                                  | 840                                    |
| Potential Future Developments |                                      | 642                                    |
| <b>SUB-TOTAL</b>              | <b>780</b>                           | <b>1 482</b>                           |
| <b>TOUWSRIVER</b>             |                                      |  |
| Existing formal Stands        | 2 500                                | 2 630                                  |
| Potential Future Developments |                                      | 922                                    |
| <b>SUB-TOTAL</b>              | <b>2500</b>                          | <b>3 552</b>                           |
| <b>WORCESTER</b>              |                                      |  |
| Existing formal Stands        | 34 220                               | 35 830                                 |
| Potential Future Developments |                                      | 3 995                                  |
| <b>SUB-TOTAL</b>              | <b>34 220</b>                        | <b>39 825</b>                          |
| <b>TOTAL</b>                  | <b>40 700</b>                        | <b>49 444</b>                          |

#### 10.7 Gap Identification and Recommendations

- Increase the capacity of the Stettynskloof Dam by rising the dam wall
- Areas within Touws River is experiencing low water pressure
- Install zonal bulk meters
- Implement a water measuring method for informal settlement areas to determine their water usage and update the non-revenue water figure accordingly to achieve the set goals for unaccounted for water levels.
- Eradicate unmetered water connections.

## 11. **Business Element 8: Conservation and demand Management**

Continuous attention and support to water demand management with the aim of permanent reduction in demand should be considered as it could substantially impact the capital expenditure required to meet the future demand. The need for demand-side interventions that effectively reduce physical losses in water networks, artificial demand at the end-user level created through leakage, as well as apparent losses due to metering and billing deficiencies is abundantly clear.

In response to this need, the municipality conducted a Water Demand Management Strategy study, defining priorities for water loss reduction and demand management measures for each town. The municipality has initiated interventions, programmes, and projects to reduce the demand for water with varying levels of success.

### 11.1 Water Balance

By undertaking a water balance, WSA can calculate the amount of water that is being lost to their systems. The non-revenue water provides an indicator of how efficient the water supply system is being run, and provides information to the WSA on how to improve the system. Non-revenue water is a direct loss to the WSA. The bulk meter readings (total water abstracted / treated) less the individual meter readings (treasury sales) resulted in the following existing current water losses.

The tables below provide a water balance and its summary for BVLM for the period 1 July 2021 to 30 June 2022.

Table 15: Water Balance for 1 July 2021 to 30 June 2022

| Description                                | Volume (kl/annum) | Volume (kl/annum) | Percentage of System input |
|--|-------------------|-------------------|----------------------------|
| <b>Bulk Water Supply at Source (Yield)</b> |                   | 14 168 718        |                            |
| <b>Total System Input</b>                  |                   | 14 168 718        |                            |
| <b>Revenue Water</b>                       |                   | 11 741 327        | 82.87%                     |
| <b>Non-Revenue Water</b>                   |                   | 2 427 391         | 17.13%                     |
| >Unbilled Authorized Consumption           | 56 986            |                   | 0.40%                      |
| >Customer Meter and data Errors            | 301 062           |                   | 2.12%                      |
| >Real Losses                               | 2 069 342         |                   | 14.61%                     |
| Water Losses for BVM                       | 2 427 390         |                   | 17.13%                     |

The water balance summary for BVLM for the 2021/2022 financial year is as per the table below.

Table 16: BVLM Water Balance Summary for 1 July 2021 to 30 June 2022

| <b>Total System Input</b>   | <b>Authorised Consumption</b>                                       | <b>Billed authorised Consumption</b>  | <b>Billed metered Consumption</b>  | <b>Revenue water</b>   |
|-----------------------------|---|---|--|--|
| 14 168 718kl/annum<br>±2.5% | 11 798 551kl/annum<br>±2.5%   | 11 741 327<br>kl/annum<br>82.87%  | 11 741 327<br>kl/annum<br>82.87%   | 11 741 327<br>kl/annum<br>82.87%   |
|                             |   |   | <b>Billed Unmetered Consumption</b>                                      |  |
|                             |   | <b>Unbilled Authorised Consumption:</b><br>56 986 kl/annum<br>±2.5%<br>R 413 149.00 | <b>Unbilled Metered Consumption:</b>                                     | <b>Non-revenue water:</b><br>2 427 391 kl/annum<br>±18.90%<br>R 17 598 585 |
|                             | <b>Water Losses:</b><br>2 370 405kl/annum<br>±19.4%<br>R 17 185 954 | <b>Apparent Losses:</b><br>301 062.17<br>kl/annum<br>R 2 182 701                    | <b>Unbilled Unmetered Consumption:</b><br>56 986.00<br>±2.5%<br>Kl/annum |  |
|                             |   |   | <b>Unauthorised Consumption:</b>   |  |
|                             |   |   | <b>Customer meter and Data errors:</b><br>301 062.17/annum<br>2.12%      |  |
|                             |   | <b>Real Losses:</b><br>2 069 342.83 kl/annum<br>R 15 002 736<br>±22.2%              |  |  |

## 11.2 Non-Revenue Water

The non-revenue water for 2021/22 financial year amounts to 17.13%. The real losses for this period are 22.2% which is more the industry norm of 15%. The Rand value of the NRW amounts to R 17 59 585.

The main aim of the BVLM is to manage the non-revenue water below 20%. The following table identifies the resource availability to implement WC/WDM within the BVLM.

Table 17: Resource availability to implement WC/WDM within the BVLM

The following table below identifies the resource availability to implement WC/WDM within the BVLM.

| TASKS   | Resources available to perform function<br>(Yes/No/NA) |         |                |           |
|---|--|---------|----------------|-----------|
|   | Budgets  | By-laws | Infrastructure | Personnel |
| Targets for reducing non-revenue water and inefficiencies (M/year: rural)       | No   | No      | No             | No        |
| Targets for reducing non-revenue water and water inefficiencies (m/year: rural) | No   | No      | No             | No        |
| Reducing high pressure for residential consumers: urban                         | No   | No      | Yes            | Yes       |
| Reducing high pressure for residential consumers: rural                         | No   | No      | No             | No        |
| Consumer/end-use demand management: public information and education programme  | No   | No      | No             | No        |
| Leak and meter repair programme: urban  | Yes  | No      | Yes            | Yes       |
| Leak and meter programme: rural   | No   | No      | No             | No        |
| Working for water programme   | Yes  | No      | Yes            | Yes       |
| Conjunctive use of surface- and groundwater                                     | Yes  | No      | Yes            | Yes       |

The Breede Valley Municipality Water Services bylaws are in place.

### 11.3 Interventions to Reduce Non-Revenue Water

- Reduction in water pressure for high pressure areas

Throughout the extent of the BVM water management area, including urban and rural areas, there are no high-water pressure areas. The bulk water system and reticulation network were designed in such a way to use the topography of the area to the best potential without unaccepted high pressure. The introduction of pressure control systems would therefore not assist to achieve the goals to reduce non-revenue water targets.

- Conservation and Demand Management

A comprehensive Water Conservation and Demand Management Strategy needs to be developed for the Breede Valley Municipality. The Municipality is also currently in the process of investigating and testing Smart Metering devices to determine the most suitable solution for the municipal area. There are currently approximately 550 Smart Meter Devices installed for this pilot project. User education and awareness programs also need to be expanded and be implemented more frequently.

- Leakage detection and meter repairs

A dedicated team concentrates on repairing and replacing faulty meters throughout the BVM area. This includes domestic, industry and bulk meters. There is no performance measuring system in place to monitor the progress of this initiative. The only monitoring system in place is the logs of complaints by the public. A system to monitor the progress and results for this intervention will increase the management of this. No measure of this team's success in reducing unaccounted for water is available.

- Ground and Surface Water

Surface water storage for Worcester is adequate to sustain the current water demand. With the new developments taking place in the Worcester area the water demand will increase. This will necessitate additional storage capacity at Stettynskloof Dam. The raising of the dam wall is currently being investigated. The Towns De Doorns and Touws River however need to make use of additional ground water extraction to be able to fulfil the water demand. These ground water abstraction points must be well managed and monitored. The volume of abstracted water from these boreholes needs to consider the refilling rate of the underground aquifer from which there is abstracted.

- Water Pipeline Replacement

The water network infrastructure in the Breede Valley Municipality is very old and consist largely of Asbestos Cement pipes. The current water pipeline replacement capital budget allocated is not sufficient to address the current need. However, the pipeline replacement programme focusses on the areas of the greatest needs. Record is kept of all the burst pipes and indicated on the GIS system to visually indicate areas of the priority. As part of the replacement of water pipes the meters are also replaced to each property. The municipality is currently testing Smart Metering Devices in various areas to determine the most suitable application for the Municipal area.

#### 11.4 Gap Identification and recommendations

- Finalise the Water Conservation and Water Demand Management Strategy for the Breede Valley Municipality
- Set new performance criteria and measurement methods for water meter repair team to be able to report more accurately against the number of claims received and the water losses discovered.
- Finalise the Smart Metering Pilot project and recommend suitable application for the Municipality.
- Replacement of all asbestos cement water pipes especially in areas of higher pressure.
- Implement a water leakage management plan to systematically eradicate non-revenue water in the Breede Valley Local Municipality along with performance measurement and measurement criteria.
- Set applicable by-laws to help with non-revenue water management.
- More specific detailed measurement is needed to identify specific high water loss areas.

- Recommend water conservation and demand management devices for new development applications.
- End user information sharing and educational programmes.

## 12. Business element 10: water services institutional arrangements

### 12.1 WSA Functions and Outputs

Institutional arrangements are policies, systems, processes, and structures used by the municipality to legislate plan and manage their activities efficiently and effectively coordinate with others in fulfilling their mandates.

BVLM is the official Water Services Authority (WSA) within this municipality. Its functions and outputs are briefly summarised in the following table.

(Y – Yes, N – No, I – Insufficient/inadequate, NA – Not Applicable)

Table 18: Functions and Outputs

| WSA Functions/ Outputs   | In Place? | Resources Available to Perform Function? |         |                |           | If no, when will it be in place? | Support required (Yes/No) |
|--|-----------|--|---------|----------------|-----------|----------------------------------|---------------------------|
|  |           | Budget                                   | By-laws | Infrastructure | Personnel |                                  |                           |
| <b>Policy Development</b>  |           |  |         |                |           |                                  |                           |
| Indigent policy  | Yes       | Yes                                      | Yes     | Yes            | Yes       | n/a                              | No                        |
| Free basic water policy (including equitable share)                          |           |  |         |                |           |                                  |                           |
| Procurement policy   |           |  |         |                |           |                                  |                           |
| Credit control and debt collection policy                                    |           |  |         |                |           |                                  |                           |
| <b>Regulation and tariffs</b>  |           |  |         |                |           |                                  |                           |
| Water services by-laws with conditions as required by the Water Services Act | Yes       | Yes                                      | Yes     | Yes            | Yes       | n/a                              | Yes-legal                 |
| Mechanisms to ensure compliance with by-laws                                 | Yes       | Yes                                      | Yes     |                | Yes       | Not known                        | Not known                 |
| Tariff structure   | Yes       | Yes                                      | Yes     |                | Yes       | n/a                              | No                        |
| Tariffs promulgated  | Yes       | Yes                                      | Yes     |                | Yes       | n/a                              | No                        |
| <b>Infrastructure development (projects)</b>                                 |           |  |         |                |           |                                  |                           |
| Mechanisms to undertake project feasibility studies                          |           |  |         |                |           |                                  |                           |
| Criteria for prioritizing projects   |           |  |         |                |           |                                  |                           |
| Mechanisms to assess and approve project business                            |           |  |         |                |           |                                  |                           |

|   |     |     |     |     |     |     |    |
|---|-----|-----|-----|-----|-----|-----|----|
| Mechanisms for selecting, contracting, managing, and monitoring implementing agents | Yes | Yes | Yes | Yes | Yes | n/a | No |
| Mechanisms to monitor project implementation  |     |     |     |     |     |     |    |

Table 19: Functions and Outputs (Continued)

| WSA Functions/<br>Outputs                                | In<br>Place?  | Resources Available to Perform<br>Function? |         |                |           | If no, when<br>will<br>it be in<br>place? | Support<br>required<br>(Yes/No) |
|--|---|---|---------|----------------|-----------|---|---------------------------------|
|  |   | Budget                                      | By-laws | Infrastructure | Personnel |   |                                 |
| <b>Water conservation and demand management strategy</b> |   |   |         |                |           |   |                                 |
| Water conservation and demand management strategy        | Yes   | Yes   | Yes     | Yes            | Yes       | In place                                  | Yes                             |
| <b>Performance management and monitoring</b>             |   |   |         |                |           |   |                                 |
| Performance management system                            | Performance contracts are in place at Municipal Manager level. No individual performance reviews are undertaken below that level. The provision of water and sanitation services is monitored against Key Performance Indicators (KPIs) |   |         |                |           | With entire municipality                  | No                              |
| <b>WSDP</b>  |   |   |         |                |           |   |                                 |
| WSDP information system                                  | Yes   | Yes   | Yes     | Yes            | Yes       | n/a                                       | No                              |
| Mechanisms for stakeholder participation                 |   |   |         |                |           |   |                                 |
| Mechanisms to monitor and report on WSDP implementation  |   |   |         |                |           |   |                                 |
| <b>WSP institutional arrangements</b>                    |   |   |         |                |           |   |                                 |
| Criteria to select appropriate WSP's                     | Yes   | Yes   | Yes     | Yes            | Yes       | n/a                                       | No                              |
| Mechanisms to contract, manage and monitor WSP's         |   |   |         |                |           |   |                                 |
| Mechanisms to approve WSP business plans                 |   |   |         |                |           |   |                                 |
| <b>WSA overall capacity</b>                              |   |   |         |                |           |   |                                 |
| Sufficient staff and systems to fulfil all WSA functions |   |   | No      |                |           | With entire municipality                  | Yes                             |

### 12.2 WSA Capacity Development

Training and awareness development is continuously promoted by the BVLM although funding limits the extent of these awareness campaigns. Wherever new or upgrade developments occur the end users are informed of the benefits and management of these services. The installation of these services makes provision for emerging contractors and contractor training.

Table 20: Public Awareness and Skills Development

| WSA PRIORITIES FOR CAPACITY DEVELOPMENT                    | CAPACITY NEEDS ASSESSMENT CONDUCTED | FORMAL SKILLS TRAINING REQUIRED | PROPOSED TIMEFRAME FOR CAPACITY DEVELOPMENT | ESTIMATED COST                       |
|--|-------------------------------------|---------------------------------|---|--------------------------------------|
| Public awareness of basic sanitation and health practices. | Yes                                 | Yes                             | Ongoing                                     | Annual costs vary and are continuous |
| Staff Skills Development                                   | Yes                                 | Yes                             | Ongoing                                     | R15000 per person                    |

### 12.3 By laws affecting water services

The by-laws for the provision of water and sewer are in place for the BVLM.

Table 21: Water and Sanitation Resource Availability

| BULK AND RETAIL FUNCTIONS OF BVM (THE WSP) | Resources available to perform function |         |                |           |
|--|---|---------|----------------|-----------|
|  | Budget                                  | By-laws | Infrastructure | Personnel |
| Water service providers (retail water)     | Yes                                     | Yes     | Yes            | Yes       |
| Water service providers (sanitation)       | Yes                                     | Yes     | Yes            | Yes       |
| Water service providers (bulk water)       | Yes                                     | Yes     | Yes            | Yes       |
| Water service providers (bulk sanitation)  | Yes                                     | Yes     | Yes            | Yes       |
| Support service agents (water)             | Yes                                     | n.a     | n.a            | n.a       |
| Sanitation promotion agent                 | Yes                                     | n.a     | n.a            | n.a       |
| Support service contracts                  | Yes                                     | n.a     | n.a            | n.a       |
| Water service institutions                 | Yes                                     | n.a     | n.a            | n.a       |
| WSP staffing levels: water                 | Yes                                     | n.a     | Yes            | Yes       |

|                                 |     |     |     |     |
|---------------------------------|-----|-----|-----|-----|
| WSP staffing levels: sanitation | Yes | n.a | Yes | Yes |
| WSP training programme          | Yes | n.a | Yes | Yes |

#### 12.4 Water services provider (retail water)

The BVLM is the Water Services Provider for retail water. The Hex Valley Water Users Association Irrigation Board provides bulk water to BVLM for the De Doorns area.

The BVLM is the only Water Service Provider for sanitation in all the areas in the BVLM. The following table 21 represent the information on staffing levels for the provision of water and sanitation services.

Table 22: Personnel Status Quo: Water

| CATEGORY            | Number of Employees             |                   |          |                         |                  |           |
|---------------------|---------------------------------|-------------------|----------|-------------------------|------------------|-----------|
|                     | Executive and Senior Management | Middle Management | Clerical | Supervisory And Artisan | Technical worker | Total     |
| Bulk Water          | 1                               | 1                 | 1        | 5                       | 14               | <b>22</b> |
| Civil Works - Water | 1                               | 1                 | 1        | 4                       | 41               | <b>48</b> |
| Civil Works - Sewer | 1                               | 1                 | 1        | 5                       | 14               | <b>22</b> |
| Bulk Sewage         | 1                               | 1                 | 1        | 5                       | 36               | <b>44</b> |

#### 12.5 Water Service provider training programme

There are no formal training programmes or schedules in place. Training occurs on an ad-hoc base or on the job. No criteria to meet training needs are in place.

#### 12.6 Municipal Strategic Self-Assessment (MuSSA)

The Department of Water and Sanitation has overseen the annual use of the MuSSA to survey and assess the overall “business health” of a Municipality when fulfilling its water services function. The MuSSA asks senior municipal financial and technical managers 5 clear and relatively simple “essence” questions that cover 18 key business health attributes, and thereby generates key strategic flags (as opposed to deep technical detail, which is captured elsewhere). Responses to the questions are reflected in your MuSSA Spider Diagram below which illustrates the vulnerability levels across key service areas/business attributes.

To address MuSSA vulnerability findings, both the Department of Water and Sanitation (DWS) and the South African Local Government Association (SALGA) recommends the adoption of “a start-to-finish management

approach” (i.e., a “Plan-Do-Check-Act” framework), and has developed a structured Municipal Priority Action Planning (MPAP) process to support such. The MPAP comprises the following four parts:

- Step I – Analyse the current situation via the MuSSA, whereby both the WSA and Regional DWS jointly prioritise where the WSA needs to improve and set associated targets.
- Step II – Determine the approaches on how to achieve the desired improvements.
- Step III – Set Actions to achieve these improvements and targets.
- Step IV – Monitor, Evaluate and Communicate progress (including updating the MuSSA), by both the WSA and DWS regional office.

The MuSSA and MPAP are planning tools and form integral components of support for the Water Services Development Plan (WSDP) process at a strategic level. In so doing the MuSSA and MPAP will also guide the DWS Master Planning process and subsequent Feasibility Studies to be undertaken. Inclusion of the MuSSA and MPAP within the WSDP processes ensures that the WSDP (which informs the IDP) will include an appropriate and supported allocation of resources to systematically address the prioritized vulnerabilities. This will in turn lead to an improvement to the overall water services business health of your WSA.

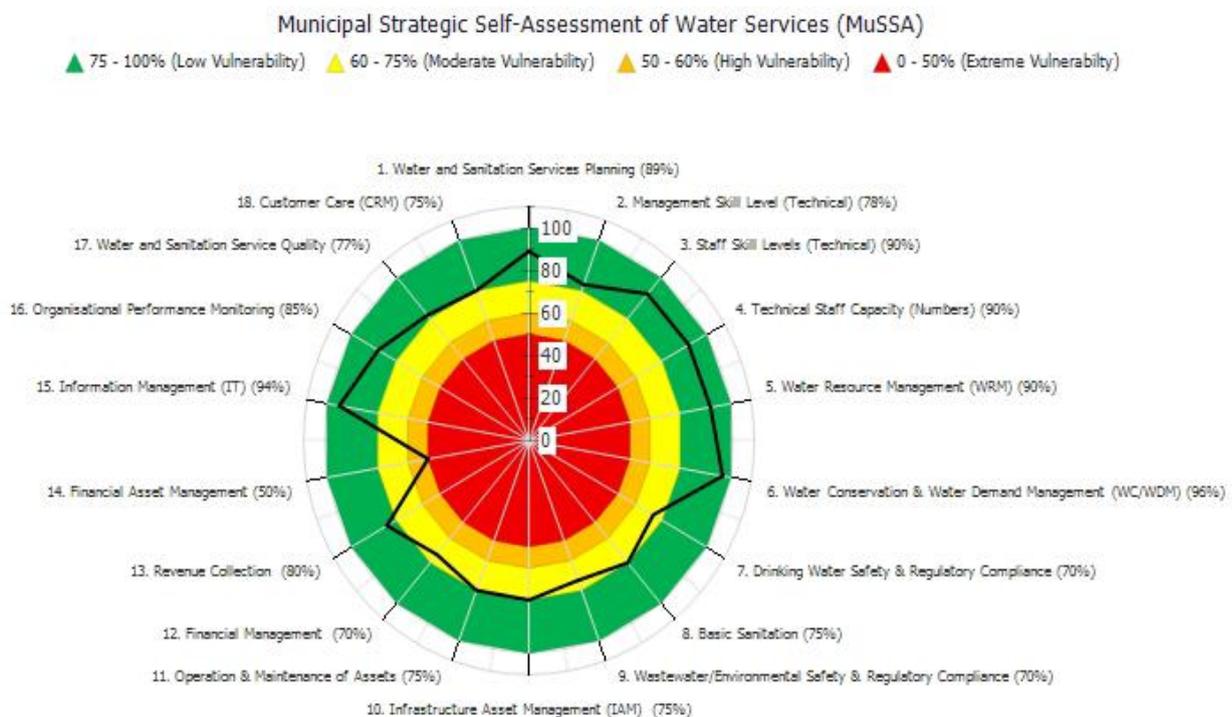


Figure 3.1: MuSSA Vulnerability Index (2022)

The top area/s of vulnerability of concern to the Department are:

- Financial Asset Management (50.0%)

#### 12.7 Situation assessment and profile

The Breede Valley Municipality includes the urban towns of Worcester, Rawsonville, De Doorns and Touws River as well as the rural areas of Kwaggaskloof, Matroosberg, The Orchards, Chavonnes Statven, Aan-de-Doorns and Cacudini/Slanghoek.

#### 12.8 Gap Identification and Recommendations

- Implement By-Laws to better the ability to provide services levels.
- Improve the technical staff capacity.
- Update the Asset Register and compile Asset Management Plan.
- Implement formal training programmes to inform the public of water services, good practice, and water conservation.

### 13. Business Element 11: Customer Services Requirements

#### 13.1 Situation Assessment

The Breede Valley Municipality has a central customer care 24-hour reporting centre. All queries are then distributed to the responsible directorate for attention. A Customer Service Charter is in place and adopted by Council. The water and sanitation by-laws are in place. The service standards as indicated in the Customer Charter for water and sanitation is indicated in the table below as an example.

Table 23: Service Standards

| Water and Sanitation   |   |
|--|---|
| A new connection   | Within 20 working days or as agreed, within 1 metre of client's erf                                   |
| Repair or replacement of a broken water meter                            | Within 5 working days   |
| Attend to a burst water pipe   | Close system within 2 hours after burst. Repair system within 8 hours of burst during daylight hours. |
| Attend to leaking water pipe or valve or hydrant                         | Within 4 working days   |
| Fire Hydrant is faulty   | Within 20 working days  |
| Attend to water service delivery   | Within 24 hours   |
| Testing the water quality after a repair                                 | Within 48 hours   |
| Attend to burst main water pipe  | Within 5 working days   |
| Investigate the quality of drinking water - colour or smell or taste     | Within 4 hours  |
| Attend to a blockage in leiwater system resulting in reduced or no flow  | Within 24 hours.  |
| Attend to a serious overflowing sewer manhole                            | A private plumber should preferably be used.  |
| A pump station is not working and resulting in sewer spill from manholes |   |
| A main sewer blocked   |   |
| A blocked sewer on a private property                                    |   |

#### 13.2 Quality of water services for urban and rural areas, excluding farms

The Breede Valley Municipality has implemented a comprehensive drinking water sampling programme for its formal water supply schemes. A total of 5 supply systems are monitored on a monthly basis. The pH and residual chlorine levels are however monitored daily at the each of the water treatment plants.

The Department of Water and Sanitation (DWS) launched the Blue and Green Drop Certification, regarding drinking water quality and the quality of treated effluent discharge from WWTW's in September 2008. The Blue Drop Report for the Breede Valley Municipality the past years are indicated below:

- 2010: 74%
- 2011: 86%
- 2012: 89%
- 2014: 89%

The Green Drop Score for the Breede Valley Municipality for the past few years are as follows:

- 2009: 32.5%
- 2011: 78.3%
- 2013: 90.6%
- 2021: 87.0%

As indicated in the Blue Drop and Green Drop scoring for the Breede Valley Municipality major progress has been made in terms of water and waste water quality. This is a continuous process and the Municipality is dedicated towards ensuring the quality of water are within required standards.

Some of the high-level processes relating to customer care are:

- Water quality is monitored prior to distribution into the water services network for consumption.
- Water quality is controlled and all users receive treated water. Water for consumption is chlorinated.
- Waste water quality is measured and managed before released back into the environment.
- All water is metered bulk at the source but not intensive enough within the distribution network. Included in the Quality criteria is both communal water supply and uncontrolled volume supply. There are no controlled water supply points within the BVLM.
- Interruptions in water supply are kept at a minimum with no interruption being greater than seven days continuous.
- Water supply to all consumers is more than 10ℓ/min.
- All customers receive at least a basic level of service.
- Smart Metering devices are currently being piloted.

### 13.3 Attending to complaints

Limited information is available on the response time of all the queries. The system is however being refined to include accurate data capturing for reporting purposes. Generally, complaints within the urban and rural areas (farm areas excluded) are attended to within 24hrs. Information from the customer care service relating to pipe burst and sewer blockages are captured on a GIS. The information assists with the planning of proactive management of the water and sewer infrastructure.

### 13.4 Education and pollution awareness

BVLM has no formal Education or Pollution awareness programme in place. In the past there has been an initiative to promote these initiatives but there is currently not sufficient funding or personnel to support this system. Ad hoc initiatives are currently being done.

### 13.5 Gap Identification and recommendations

- Streamline the customer care facility and log detail information for each query.
- Initialise a formal education and pollution awareness programme.
- Funding for educational and pollution awareness programmes.

### Section B: State of Water Services Planning

The Breede Valley Local Municipality has a detailed Water and Sewer Master Plan that was completed in February 2023. The planning scenario for the master plans is based on the approved Spatial Development Framework. Detailed computer models for the water and sewer system were done and linking the models to the stand and water meter database of the treasury financial system. All networks were evaluated for the current and future models to determine the infrastructure requirements based on the specific planning scenario. Detail infrastructure requirements and timeframes is the main output of the master plans. The master plans also assist with the evaluation of new development applications to ensure that the required infrastructure for the development will be adequate.

An output of the Master Plans is also detailed infrastructure plans of the current infrastructure. This can be used for asset register verification and/or updating of the asset register. All information is available in an electronic system for easy viewing and planning purposes. All water and sewer information is integrated in one system.

The Transhex development was approved and is in implementation stage. This is a huge development consisting of approximately 8 000 new households. The project will be implemented in phases. The first phase consisting of 1 500 households. This will have a major impact on the current infrastructure in the Worcester area as well as capacity to manage the additional infrastructure required for this scale of development. Currently the bulk infrastructure for this development is being constructed to ensure that sufficient capacity will be available for this development. The infrastructure requirements were identified through the previous master planning process.

The current master Plan for Water and Sewer is sufficient for the development trends in the Breede Valley Local Municipality. Should the Spatial development Framework be updated the master Plans will be realigned to ensure integration with the planning scenarios as indicated in the Spatial Development Framework.

Section C: Water Services Existing Needs Perspective

The existing capital needs for water and sewer infrastructure is based on the output of the Water and Sewer Master Plans for the Breede Valley Municipality. The detailed proposed works, cost estimates and phasing per town is indicated in the master Plans. A summary of the cost of infrastructure requirements up to 2030 is provided below:

Table 24: Water Master Project Needs

| SUPPLY AREA                                   | SYSTEM                   | ESTIMATED TOTAL COST    |
|---|--------------------------|-------------------------|
| De Doorns                                     | Distribution System      | R 2 335 848.89          |
|   | Bulk Distribution System | R 18 056 585.38         |
| <b>SUB-TOTAL</b>                              |                          | <b>R 20 392 434.27</b>  |
| Rawsonville                                   | Distribution System      | R 1 252 842.01          |
|   | Bulk Distribution System | R 9 053 741.04          |
| <b>SUB-TOTAL</b>                              |                          | <b>R 10 306 583.05</b>  |
| Touwsriver                                    | Distribution System      | R 6 549 785.27          |
|   | Bulk Distribution System | R 9 255 462.00          |
| <b>SUB-TOTAL</b>                              |                          | <b>R 15 805 247.27</b>  |
| Worcester                                     | Distribution System      | R 63 051 732.00         |
|   | Bulk Distribution System | R 15 747 560.00         |
| <b>SUB-TOTAL</b>                              |                          | <b>R 78 799 292.00</b>  |
| <b>TOTAL BREEDE VALLEY LOCAL MUNICIPALITY</b> |                          | <b>R 125 303 556.59</b> |

(Estimated cost includes P&G's, contingencies, and Fees, but excluding VAT at Year 2022/2023 Rand Values)

Table 25: Sewer Master Project Needs

| DRAINAGE AREA                                 | SYSTEM              | ESTIMATED TOTAL COST   |
|---|---------------------|------------------------|
| De Doorns                                     | Distribution System | R 14 374 076           |
| Rawsonville                                   | Distribution System | R 356 131.00           |
| Touwsriver                                    | Distribution System | R 4 986 413.00         |
| Worcester                                     | Distribution System | R 19 317 989.00        |
| <b>TOTAL BREEDE VALLEY LOCAL MUNICIPALITY</b> |                     | <b>R 39 034 609.00</b> |

(Estimated cost includes P&G's, contingencies, and Fees, but excluding VAT at Year 2022/2023 Rand Values)

Section D: Water Services Objectives and Strategies

The water services objectives and strategies presented below were derived from the water services Service delivery Business Implementation Plan (SDBIP) for 2022/23. The link to the National and NDP objectives are also indicated in the table below.

| National Outcome  | Strategic Objective  | National KPA           | NDP Objectives          | Municipal KPI  | Unit of Measurement                             | Performance Standard                   | Annual Target |
|---|--|------------------------|-------------------------|--|---|--|---------------|
| An effective, competitive, and responsive economic infrastructure network | To ensure a safe, healthy, clean, and sustainable external environment for all Breede Valley's people  | Basic Service Delivery | Economy and Development | Spend 90% of the capital budget allocated to the construction of the 20ML service reservoir by 30 June 2023{(total actual capital project expenditure/total capital project budget} x 100) | 90% of budget spent                             | 90%                                    | 90%           |
| An effective, competitive, and responsive economic infrastructure network | To ensure a safe, healthy, clean, and sustainable external environment for all Breede Valley's people  | Basic Service Delivery | Economy and Development | Spend 90% of the budget allocated towards the pipe cracking projects/works by 30 June 2023   | % of scheduled maintenance programme completed  | 90% of scheduled maintenance completed | 90%           |
| An effective, competitive, and responsive economic infrastructure network | To ensure a safe, healthy, clean, and sustainable external environment for all Breede Valley's people  | Basic Service Delivery | Economy and Development | Recycle 80 tonnage of waste by 30 June 2023  | Tonnage of waste recycled                       | 80%                                    | 80%           |
| An effective, competitive, and responsive economic infrastructure network | To ensure a safe, healthy, clean, and sustainable external environment for all Breede Valley's people. | Basic Service Delivery | Economy and Development | Install 4 recycling awareness boards (one in each town) by 30 June 2023  | Number of recycling awareness boards installed. | 4                                      | 4             |

|   |  |                        |   |  |  |                                     |     |
|---|--|------------------------|---|--|--|-------------------------------------|-----|
| An effective, competitive, and responsive economic infrastructure network | To provide and maintain basic services and ensure social upliftment of the Breede Valley community | Basic Service Delivery | Environmental Sustainability and Resilience | Achieve 95% average water quality level as measured per SANS 241 criteria during the 2022/23 financial year  | % water quality level  | Achieve Top Layer kpi's for 2022/23 | 95% |
| An effective, competitive, and responsive economic infrastructure network | To provide and maintain basic services and ensure social upliftment of the Breede Valley community | Basic Service Delivery |   | Spend 90% of the budget allocated towards the improvement of the sewerage system by 30 June 2023{Actual expenditure divided by the total approved budget) x 100}                     |  |                                     |     |
| An effective, competitive, and responsive economic infrastructure network | To provide and maintain basic services and ensure social upliftment of the Breede Valley community | Basic Service Delivery | Environmental Sustainability and Resilience | Review the 5-year WSDP IDP Water Sector Input Report and submit to council for consideration by 31 March 2023.   | Water Service Development Plan IDP Water Sector Input Report submitted to Council for consideration. | Achieve Top Layer kpi's for 2022/23 | 1   |
| An effective, competitive, and responsive economic infrastructure network | To provide and maintain basic services and ensure social upliftment of the Breede Valley community | Basic Service Delivery | Environmental Sustainability and Resilience | 80% of sewerage samples comply with effluent standard during the 2022/23 financial year. {(Number of sewerage samples that comply with SANS/Number of sewerage samples tested) x100} | % of sewerage samples compliant  | Achieve Top Layer kpi's for 2022/23 | 80% |

Section E: Water Services MTREF Projects

| Nr | Project Number | Project Name   | Description                | Component         | Funding Source | Project Cost (22/23) | Project Cost (23/24) | Project Cost (24/25) |
|----|----------------|--|----------------------------|-------------------|----------------|----------------------|----------------------|----------------------|
| 1  | CP_0002        | Upgrading of Stettynskloof Supply Pipe Line - Phase 3 (MIG 164422) |                            | Bulk Pipeline     | MIG            | R3 421 924.00        | R0.00                | R0.00                |
| 2  | CP_0461        | Increase dam Level (Stetteynskloof Dam)                            |                            | Dams/Water Source | Own            | R2 000 000.00        | R10 000 000.00       | R10 000 000.00       |
| 3  | CP_0004        | Rawsonville WwTW: Extension of WwTW (0,24 MI/day)                  |                            | WWTW              | Own            | R27 000 000.00       | R0.00                | R0.00                |
| 4  | CP_0018        | Reservoirs: Preloads   | Construction of a new 20ML | Reservoir         | MIG            | R18 481 271.00       | R0.00                | R0.00                |

|   |         |  |  |              |         |                |                |                |
|---|---------|--|--|--------------|---------|----------------|----------------|----------------|
|   |         |  | reservoir at<br>BVM<br>Preloads site:<br>Worcester                                     |              |         |                |                |                |
| 5 | CP_0018 | Reservoirs:<br>Preloads                            | Construction<br>of a new<br>20ML<br>reservoir at<br>BVM<br>Preloads site:<br>Worcester | Reservoir    | Own     | R55 000 000.00 | R0.00          | R0.00          |
| 6 | CP_0453 | Upgrading of<br>Sewer<br>Network:<br>External Loan |  | Reticulation | Own     | R15 000 000.00 | R3 000 000.00  | R0.00          |
| 7 | CP_0454 | Upgrading of<br>Sewer<br>Network:<br>External Loan |  | Reticulation | Own/CRR | R0.00          | R10 000 000.00 | R10 000 000.00 |

|    |         |   |  |               |     |             |               |                |
|----|---------|---|--|---------------|-----|-------------|---------------|----------------|
| 8  |         | Rehabilitation<br>of Bok River<br>Pipe Line -<br>Phase 6                            |  | Bulk Pipeline | MIG | R0.00       | R7 000 000.00 | R0.00          |
| 9  | CP_0420 | Touws River:<br>Waste Water<br>Treatment<br>Works<br>(WwTW)<br>Augmentation:<br>MIG |  | WWTW          | MIG | R500 000.00 | R2 000 000.00 | R26 000 000.00 |
| 10 | CP_0420 | Touws River:<br>Waste Water<br>Treatment<br>Works<br>(WwTW)<br>Augmentation:<br>MIG |  | WWTW          | CRR | R0.00       | R0.00         | R18 000 000.00 |

|    |         |  |  |      |      |               |                |               |
|----|---------|--|--|------|------|---------------|----------------|---------------|
| 11 | CP_0420 | Touws River:<br>Waste Water<br>Treatment<br>Works<br>(WwTW)<br>Augmentation:<br>MIG        |  | WWTW | WSIG | R0.00         | R17 000 000.00 | R0.00         |
| 12 | CP_0400 | Augmentation<br>of Water<br>treatment<br>works (MIG<br>Counter<br>funding):<br>Touws River |  | WTW  | WSIG | R2 557 000.00 | R0.00          | R0.00         |
| 13 | CP_0400 | Augmentation<br>of Water<br>treatment<br>works (MIG<br>Counter                             |  | WTW  | MIG  | R0.00         | R2 000 000.00  | R1 000 000.00 |

|    |  |  |  |              |         |       |             |       |
|----|--|--|--|--------------|---------|-------|-------------|-------|
|    |  | funding):<br>Touws River   |  |              |         |       |             |       |
| 14 |  | Touwsriver:<br>Water Network<br>Upgrades to<br>Affordable<br>Housing Project |  | Reticulation | MIG     | R0.00 | R500 000.00 | R0.00 |
| 15 |  | Touwsriver:<br>Water Network<br>Upgrades to<br>Affordable<br>Housing Project |  | Reticulation | Own/CRR | R0.00 | R175 000.00 | R0.00 |
| 16 |  | Touwsriver:<br>Sewer Network<br>Upgrades to<br>Affordable<br>Housing Project |  | Reticulation | MIG     | R0.00 | R500 000.00 | R0.00 |
| 17 |  | Touwsriver:<br>Sewer Network   |  | Reticulation | Own/CRR | R0.00 | R175 000.00 | R0.00 |

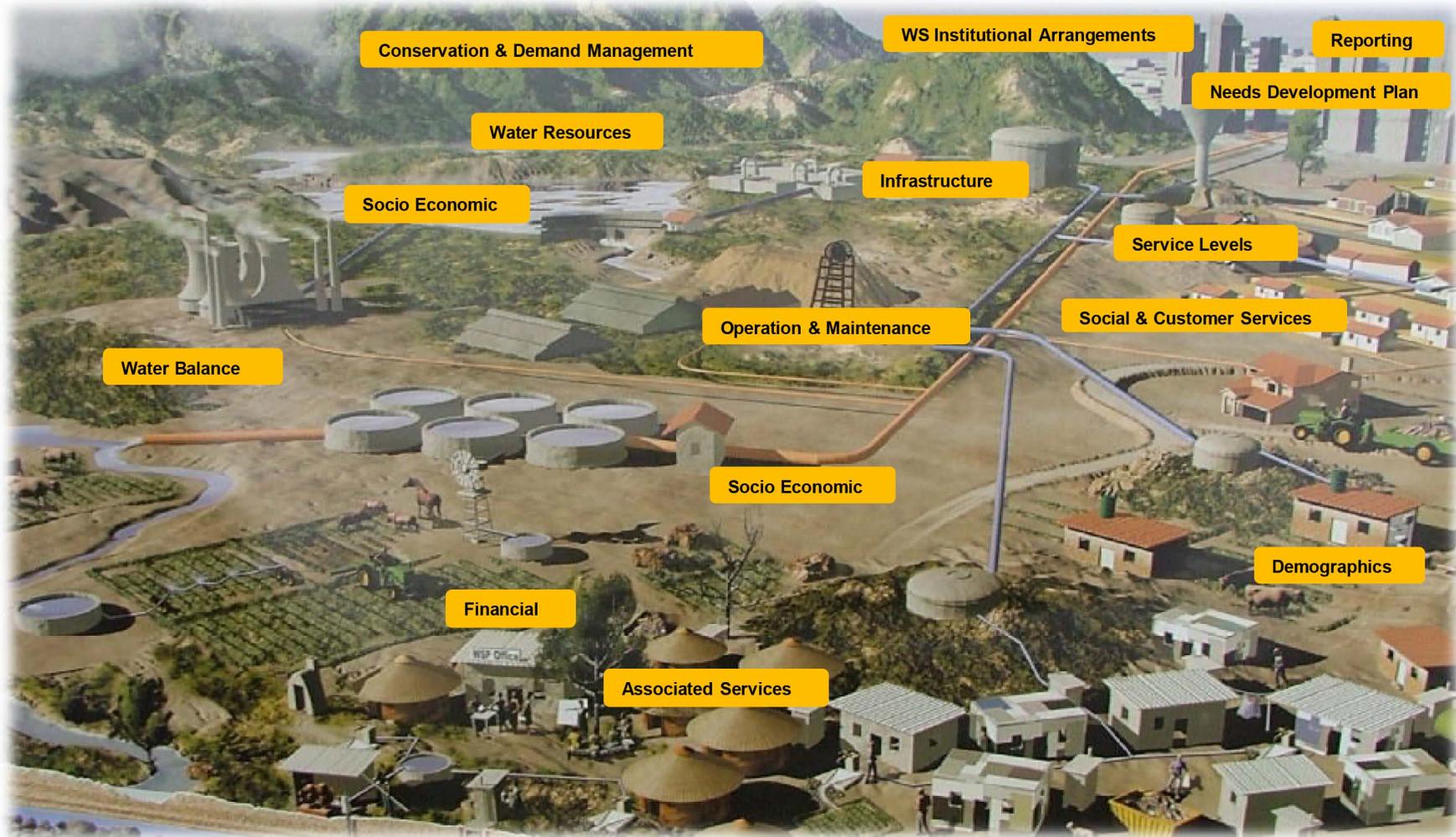
|    |         |  |                     |              |         |               |               |               |
|----|---------|--|---------------------|--------------|---------|---------------|---------------|---------------|
|    |         | Upgrades to Affordable Housing Project                                     |                     |              |         |               |               |               |
| 18 |         | Pipe Cracking (all wards)  | Pipe rehabilitation | Reticulation | Own/CRR | R3 000 000.00 | R3 000 000.00 | R3 000 000.00 |
| 19 | CP_0130 | De Doorns Water Purification Works: Augmentation of DAF Unit (MIG funding) |                     | WTW          | MIG     | R7 773 398.00 | R0.00         | R0.00         |
| 20 | CP_0511 | De Doorns WWTW Reactor   |                     | WWTW         | WSIG    | R2 550 000.00 | R0.00         | R0.00         |
| 21 |         | WWTW - Mobile Generator  |                     | WWTW         | Own/CRR | R0.00         | R800 000.00   | R800 000.00   |

|    |  |   |  |              |         |               |               |               |
|----|--|---|--|--------------|---------|---------------|---------------|---------------|
| 22 |  | Fencing and Safeguarding of WWTW & PS                 |  | WWTW/PS      | Own/CRR | R0.00         | R2 000 000.00 | R2 000 000.00 |
| 23 |  | Pump station upgrading & refurbishment                |  | PS           | Own     | R2 000 000.00 | R2 000 000.00 | R2 000 000.00 |
| 24 |  | Upgrading of Offices (Fairbairn Str)                  |  | Buildings    | Own/CRR | R1 500 000.00 | R0.00         | R0.00         |
| 25 |  | Land Infill Developments<br>- Avian Park Ind. - Water |  | Reticulation | Own     | R146 043.00   | R146 043.00   | R0.00         |
| 26 |  | Land Infill Developments<br>- Avian Park Ind. - Sewer |  | Reticulation | Own     | R438 005.00   | R438 005.00   | R0.00         |

|    |  |  |  |              |     |               |                |       |
|----|--|--|--|--------------|-----|---------------|----------------|-------|
| 27 |  | Land Infill<br>Developments<br>- Avian Park<br>Ind. -<br>Stormwater        |  | Reticulation | Own | R94 928.00    | R94 928.00     | R0.00 |
| 28 |  | Land Infill<br>Developments<br>- Avian Park<br>Ind. - Sewer<br>Pumpstation |  | Reticulation | Own | R5 000 000.00 | R14 000 000.00 | R0.00 |
| 29 |  | Land Infill<br>Developments<br>- Somerset Park<br>- Water                  |  | Reticulation | Own | R146 043.00   | R0.00          | R0.00 |
| 30 |  | Land Infill<br>Developments<br>- Somerset Park<br>- Sewer                  |  | Reticulation | Own | R438 005.00   | R0.00          | R0.00 |

|    |  |  |  |              |     |            |       |       |
|----|--|--|--|--------------|-----|------------|-------|-------|
| 31 |  | Land Infill<br>Developments<br>- Somerset Park<br>- Stormwater |  | Reticulation | Own | R94 928.00 | R0.00 | R0.00 |
|----|--|--|--|--------------|-----|------------|-------|-------|

Water Services Development Plan



Water Services Development Plan

WSDP Compiled and submitted for approval

Municipal WSDP Coordinator: Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

WSDP Recommended for approval

Municipal Manager:  
Recommended: Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Not Recommended: Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Final Council approval:

Capacity: \_\_\_\_\_

Approved: Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Not Approved: Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Water Services Development Plan

Role Players Contact Details

| Position                             | Name     | Surname  | Tel          | Fax          | Cell         | E-mail               | Interaction Acknowledgement Yes/No | Interaction Acknowledgement Signature |
|--------------------------------------|----------|----------|--------------|--------------|--------------|----------------------|------------------------------------|---------------------------------------|
| Municipal Manager                    | David    | McThomas | 023 348 2602 | 023 348 3852 | 083 778 9480 | dmcthomas@bvm.gov.za | N                                  | N                                     |
| Director of Public Services          | Jevon    | Pekeur   | 023 348 2803 | 023 348 2709 | 082 896 2090 | jpekeur@bvm.gov.za   | Y                                  | Y                                     |
| WSDP Custodian                       | Jevon    | Pekeur   | 023 348 2803 | 023 348 2709 | 082 896 2090 | jpekeur@bvm.gov.za   | Y                                  | Y                                     |
| Manager: Water & Sanitation Services | Wilfred  | Titus    | 023 348 2625 | 023 348 2709 | 073 784 6570 | wtitus@bvm.gov.za    | Y                                  | Y                                     |
| Chief Financial Officer              | Roddrick | Ontong   | 023 348 4994 | 023 348 4997 | 084 678 8816 | rontong@bvm.gov.za   | Y                                  | Y                                     |
| GIS Officer                          | Adam     | Steer    | 023 348 2632 | 023 348 2630 |              | asteer@bvm.gov.za    | Y                                  | Y                                     |

Water Services Development Plan

Professional Service Provider (PSP)

**Company** Africoast Consulting Engineers  
**Name of PSP WSDP Project Manager** Thomas Jachens  
**Tel:** 041 505 8000      **Cell:** 083 630 2613      **Fax:** 041 585 3437      **Email:** thomas@afriacoast.com

Inputs

**Name of PSP WSDP Information Systems Operator** Nopasika Mhlana  
**Tel:** 041 505 8000      **Cell:** 083 401 4558      **Fax:** 041 585 3437      **Email:** nopasika@afriacoast.com

| Components | Chapter | Name            | Designation     | Role            | Contact Address, and Number                        |
|------------|---------|-----------------|-----------------|-----------------|--|
| All        | All     | Nopasika Mhlana | Project Manager | Project Manager | 34 Mangold Street<br>Newton Park<br>Port Elizabeth |

Water Services Development Plan

**Sector Integration**

Did this plan consult with other Sector Plans and incorporated their needs

| Sector Plan                    | Sector Interaction | Area                                    | WSA           |
|--------------------------------|--------------------|---|---------------|
| IDP                            | Yes                | Planning and budgeting                  | Breede Valley |
| Finance                        | Yes                | Budgeting                               | Breede Valley |
| Water Master Plan              | Yes                | Future planning, projects and budgeting | Breede Valley |
| Sewer Master Plan              | Yes                | Future planning, projects and budgeting | Breede Valley |
| SDF                            | Yes                | Future planning                         | Breede Valley |
| Unaccounted for Water Strategy | Yes                | Water demand and water conservation     | Breede Valley |
| LED                            | Yes                | Housing requirements                    | Breede Valley |
| PMU                            | Yes                | Project implementation and progress     | Breede Valley |
| Institutional                  | Yes                | Human resources                         | Breede Valley |



Water Services Development Plan

| Nr | Project Number | Project Name  | Description  | Project Type          | Project Solution | Main Category | Sub Category  | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                | Project Cost (R'000) | Funding Source (R'000) |        |        |       |    |      |       |   |   |
|----|----------------|---|--|-----------------------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|------|-------------------------|----------------|----------------------|------------------------|--------|--------|-------|----|------|-------|---|---|
|    |                |   |  |                       |                  |               |               | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM | WWTW | Water Bourne Sanitation | VIP Sanitation |                      | Own                    | MIG    | RBIG   | ACIP  | DR | MWIG | Other |   |   |
| 4  | CP_0130        | De Doorns Water Purification Works : Augmentation of DAF Unit (MIG funding) | Augmentation of DAF Unit   | Local Scheme Solution |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | N                      | 7,773  | 0      | 7,773 | 0  | 0    | 0     | 0 | 0 |
| 5  | CP_0420        | Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG          | Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | Y                       | N              | N                    | 28,500                 | 0      | 500    | 0     | 0  | 0    | 0     | 0 |   |
| 6  | CP_0511        | De Doorns WWTW Reactor  | De Doorns WWTW Reactor   |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | Y    | N                       | N              | 2,550                | 0                      | 0      | 0      | 0     | 0  | 0    | 2,550 |   |   |
| 7  | CP_0453        | Upgrading of Sewer Network: External Loan                                   | Upgrading of Sewer Network: External Loan                          |                       |                  | Sanitation    |               | N                 | Y                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 18,000                 | 15,000 | 0      | 0     | 0  | 0    | 0     | 0 |   |
| 8  | CP_0018        | Additional reservoir capacity at Preloads                                   | 20 MI @ 305m TWL Reservoir_ Construction of new 20ML Reservoir     | Local Scheme Solution |                  | Water         | Internal Bulk | Y                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 73,481                 | 55,000 | 18,481 | 0     | 0  | 0    | 0     | 0 |   |
| 9  |                | Land Infill Developments - Somerset Park - Sewer                            | Land Infill Developments - Somerset Park - Sewer                   |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 438                    | 438    | 0      | 0     | 0  | 0    | 0     | 0 |   |
| 10 |                | Land Infill Developments - Avian Park Ind. - Water                          | Land Infill Developments - Avian Park Ind. - Water                 | Local Scheme Solution |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 292                    | 146    | 0      | 0     | 0  | 0    | 0     | 0 |   |

Water Services Development Plan

| Nr  | Project Number | Project Name   | Description  | Project Type             | Project Solution | Main Category | Sub Category  | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |        | Project Cost (R'000) | Funding Source (R'000) |      |    |      |       |   |   |
|---|----------------|--|--|--------------------------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|------|-------------------------|----------------|-----|--------|----------------------|------------------------|------|----|------|-------|---|---|
|   |                |  |  |                          |                  |               |               | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM | WWTW | Water Bourne Sanitation | VIP Sanitation | Own | MIG    |                      | RBIG                   | ACIP | DR | MWIG | Other |   |   |
| 11  |                | Land Infill Developments - Avian Park Ind. - Sewer             | Land Infill Developments - Avian Park Ind. - Sewer             |                          |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N      | 876                  | 438                    | 0    | 0  | 0    | 0     | 0 | 0 |
| 12  |                | Land Infill Developments - Avian Park Ind. - Sewer Pumpstation | Land Infill Developments - Avian Park Ind. - Sewer Pumpstation |                          |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | 19,000 | 5,000                | 0                      | 0    | 0  | 0    | 0     | 0 |   |
| 13  |                | Pump station upgrading & refurbishment                         | Pump station upgrading & refurbishment                         |                          |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | 6,000  | 2,000                | 0                      | 0    | 0  | 0    | 0     | 0 |   |
| 14  |                | Pipe Cracking (all wards)                                      | Pipe Cracking (all wards)                                      | Local Scheme Solution    |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | 9,000  | 3,000                | 0                      | 0    | 0  | 0    | 0     | 0 |   |
| Topic 4 - Water Services Operations & Maintenance (O&M)       |                |  |  |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |        |                      |                        |      |    |      |       |   |   |
| Topic 5.1 - Conservation & Demand Management - Water Resource |                |  |  |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |        |                      |                        |      |    |      |       |   |   |
| Topic 5.2 - Conservation & Demand Management - Water Balance  |                |  |  |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |        |                      |                        |      |    |      |       |   |   |
| Topic 6 - Water Resource                                      |                |  |  |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |        |                      |                        |      |    |      |       |   |   |
| 15  | CP_0461        | Increase dam Level (Stetteynskloof Dam)                        | Increase dam Level (Stetteynskloof Dam)                        | Regional Scheme Solution |                  | Water         | Regional Bulk | Y                 | N                 | N           | N   | N         | Y                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | 22,000 | 2,000                | 0                      | 0    | 0  | 0    | 0     | 0 |   |

Water Services Development Plan

| Nr | Project Number | Project Name | Description | Project Type | Project Solution | Main Category | Sub Category | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      | Project Cost (R'000) | Funding Source (R'000) |                         |                |     |     |      |      |
|----|----------------|--------------|-------------|--------------|------------------|---------------|--------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|----------------------|------------------------|-------------------------|----------------|-----|-----|------|------|
|    |                |              |             |              |                  |               |              | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM |                      | WWTW                   | Water Bourne Sanitation | VIP Sanitation | Own | MIG | RBIG | ACIP |

| Funding Source (R'000) |        |        |      |      |    |      |       |
|------------------------|--------|--------|------|------|----|------|-------|
|                        | Own    | MIG    | RBIG | ACIP | DR | MWIG | Other |
| Total Funding:         | 83,022 | 30,177 | 0    | 0    | 0  | 0    | 5,107 |



Water Services Development Plan

| Nr | Project Number | Project Name   | Description  | Project Type          | Project Solution | Main Category | Sub Category  | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                | Project Cost (R'000) | Funding Source (R'000) |        |        |      |    |      |       |        |   |
|----|----------------|--|--|-----------------------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|------|-------------------------|----------------|----------------------|------------------------|--------|--------|------|----|------|-------|--------|---|
|    |                |  |  |                       |                  |               |               | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM | WWTW | Water Bourne Sanitation | VIP Sanitation |                      | Own                    | MIG    | RBIG   | ACIP | DR | MWIG | Other |        |   |
| 5  | CP_0454        | Upgrading of Sewer Network: External Loan                          | Upgrading of Sewer Network: External Loan                          |                       |                  | Sanitation    |               | N                 | Y                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | N                      | 20,000 | 10,000 | 0    | 0  | 0    | 0     | 0      | 0 |
| 6  | CP_0420        | Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG | Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | Y    | N                       | N              | N                    | 17,000                 | 0      | 0      | 0    | 0  | 0    | 0     | 17,000 |   |
| 7  |                | Rehabilitation of Bok River Pipe Line                              | Rehabilitation of Bok River Pipeline (Phases 6)                    | Local Scheme Solution |                  | Water         | Internal Bulk | Y                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 7,000                  | 0      | 7,000  | 0    | 0  | 0    | 0     | 0      |   |
| 8  |                | Land Infill Developments - Avian Park Ind. - Water                 | Land Infill Developments - Avian Park Ind. - Water                 | Local Scheme Solution |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 292                    | 146    | 0      | 0    | 0  | 0    | 0     | 0      |   |
| 9  |                | Land Infill Developments - Avian Park Ind. - Sewer                 | Land Infill Developments - Avian Park Ind. - Sewer                 |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 876                    | 438    | 0      | 0    | 0  | 0    | 0     | 0      |   |
| 10 |                | Land Infill Developments - Avian Park Ind. - Sewer Pumpstation     | Land Infill Developments - Avian Park Ind. - Sewer Pumpstation     |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 19,000                 | 14,000 | 0      | 0    | 0  | 0    | 0     | 0      |   |
| 11 |                | Touwsriver: Water Network Upgrades to Affordable Housing Project   | Upgrading of WTW (Bulk Water Bokrivier)                            | Local Scheme Solution |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N                    | 500                    | 0      | 500    | 0    | 0  | 0    | 0     | 0      |   |

Water Services Development Plan

| Nr  | Project Number | Project Name   | Description  | Project Type          | Project Solution | Main Category | Sub Category  | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     | Project Cost (R'000) | Funding Source (R'000) |      |    |      |       |   |   |   |
|---|----------------|--|--|-----------------------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|------|-------------------------|----------------|-----|-----|----------------------|------------------------|------|----|------|-------|---|---|---|
|   |                |  |  |                       |                  |               |               | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM | WWTW | Water Bourne Sanitation | VIP Sanitation | Own | MIG |                      | RBIG                   | ACIP | DR | MWIG | Other |   |   |   |
| 12  |                | Touwsriver: Water Network Upgrades to Affordable Housing Project | Water (Augmentation of Network, Worcester West Dev.)             | Local Scheme Solution |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | N                    | 175                    | 175  | 0  | 0    | 0     | 0 | 0 | 0 |
| 13  |                | Touwsriver: Sewer Network Upgrades to Affordable Housing Project | Touwsriver: Sewer Network Upgrades to Affordable Housing Project |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 500                  | 0                      | 500  | 0  | 0    | 0     | 0 | 0 |   |
| 14  |                | Touwsriver: Sewer Network Upgrades to Affordable Housing Project | Touwsriver: Sewer Network Upgrades to Affordable Housing Project |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 175                  | 175                    | 0    | 0  | 0    | 0     | 0 | 0 |   |
| 15  |                | Pump station upgrading & refurbishment                           | Pump station upgrading & refurbishment                           |                       |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 6,000                | 2,000                  | 0    | 0  | 0    | 0     | 0 | 0 |   |
| 16  |                | Pipe Cracking (all wards)  | Pipe Cracking (all wards)  | Local Scheme Solution |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 9,000                | 3,000                  | 0    | 0  | 0    | 0     | 0 | 0 |   |
| Topic 4 - Water Services Operations & Maintenance (O&M)       |                |  |  |                       |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |   |
|   |                |  |  |                       |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |   |
| Topic 5.1 - Conservation & Demand Management - Water Resource |                |  |  |                       |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |   |
|   |                |  |  |                       |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |   |
| Topic 5.2 - Conservation & Demand Management - Water Balance  |                |  |  |                       |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |   |
|   |                |  |  |                       |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |   |

Water Services Development Plan

| Nr                       | Project Number | Project Name                            | Description                             | Project Type             | Project Solution | Main Category | Sub Category  | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     | Project Cost (R'000) | Funding Source (R'000) |        |    |      |       |   |   |   |
|--------------------------|----------------|---|---|--------------------------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|------|-------------------------|----------------|-----|-----|----------------------|------------------------|--------|----|------|-------|---|---|---|
|                          |                |   |   |                          |                  |               |               | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM | WWTW | Water Bourne Sanitation | VIP Sanitation | Own | MIG |                      | RBIG                   | ACIP   | DR | MWIG | Other |   |   |   |
| Topic 6 - Water Resource |                |   |   |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |        |    |      |       |   |   |   |
| 17                       | CP_0461        | Increase dam Level (Stetteynskloof Dam) | Increase dam Level (Stetteynskloof Dam) | Regional Scheme Solution |                  | Water         | Regional Bulk | Y                 | N                 | N           | N   | N         | Y                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | N                    | 22,000                 | 10,000 | 0  | 0    | 0     | 0 | 0 | 0 |

| Funding Source (R'000) |        |        |      |      |    |      |        |
|------------------------|--------|--------|------|------|----|------|--------|
|                        | Own    | MIG    | RBIG | ACIP | DR | MWIG | Other  |
| Total Funding:         | 42,934 | 12,000 | 0    | 0    | 0  | 0    | 17,000 |



Water Services Development Plan

| Nr  | Project Number | Project Name                            | Description                             | Project Type             | Project Solution | Main Category | Sub Category  | Component(Yes/No) |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     | Project Cost (R'000) | Funding Source (R'000) |      |    |      |       |   |   |
|---|----------------|---|---|--------------------------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----|-----------|--------------------|--------------------|-------------|------------|-------------|------|------|-------------------------|----------------|-----|-----|----------------------|------------------------|------|----|------|-------|---|---|
|   |                |   |   |                          |                  |               |               | Bulk Pipeline     | Reticulation Line | Pumpstation | WTW | Reservoir | Source Development | Power Installation | Feasibility | Operations | Maintenance | WCDM | WWTW | Water Bourne Sanitation | VIP Sanitation | Own | MIG |                      | RBIG                   | ACIP | DR | MWIG | Other |   |   |
| 5   |                | Pump station upgrading & refurbishment  | Pump station upgrading & refurbishment  |                          |                  | Sanitation    |               | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 6,000                | 2,000                  | 0    | 0  | 0    | 0     | 0 | 0 |
| 6   |                | Pipe Cracking (all wards)               | Pipe Cracking (all wards)               | Local Scheme Solution    |                  | Water         | Internal Bulk | N                 | N                 | N           | N   | N         | N                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 9,000                | 3,000                  | 0    | 0  | 0    | 0     | 0 | 0 |
| Topic 4 - Water Services Operations & Maintenance (O&M)       |                |   |   |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |
| Topic 5.1 - Conservation & Demand Management - Water Resource |                |   |   |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |
| Topic 5.2 - Conservation & Demand Management - Water Balance  |                |   |   |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |
| Topic 6 - Water Resource                                      |                |   |   |                          |                  |               |               |                   |                   |             |     |           |                    |                    |             |            |             |      |      |                         |                |     |     |                      |                        |      |    |      |       |   |   |
| 7   | CP_0461        | Increase dam Level (Stetteynskloof Dam) | Increase dam Level (Stetteynskloof Dam) | Regional Scheme Solution |                  | Water         | Regional Bulk | Y                 | N                 | N           | N   | N         | Y                  | N                  | N           | N          | N           | N    | N    | N                       | N              | N   | N   | 22,000               | 10,000                 | 0    | 0  | 0    | 0     | 0 | 0 |

|                |        | Funding Source (R'000) |     |      |      |    |      |       |
|----------------|--------|------------------------|-----|------|------|----|------|-------|
|                |        | Own                    | MIG | RBIG | ACIP | DR | MWIG | Other |
| Total Funding: | 25,000 | 27,000                 | 0   | 0    | 0    | 0  | 0    | 0     |

Water Services Development Plan

Chapter 2:

**Topic 1: Settlement Demographics & Public Amenities**

| Settlement Summary              |        |                  |
|---------------------------------|--------|------------------|
| Section                         | Value  | Assessment Score |
| 1.1 Total Population            | 196098 | 80               |
| 1.2 Total Number of Households  | 49752  | 80               |
| 1.3 Average Household Size      | 4.16   | 80               |
| 1.4 Total Number of Settlements | 4      | 80               |

| Summary by Settlement Group |             |            |            |
|-----------------------------|-------------|------------|------------|
| Settlement Type             | Settlements | Population | Households |
| Urban                       | 4           | 196098     | 49752      |

Water Services Development Plan

| Amenities Summary      |                 |                  |
|------------------------|-----------------|------------------|
| Description            | Number per type | Assessment Score |
| Educational facilities | 86              | 80               |
| Health Facilities      | 14              | 80               |

Water Services Development Plan

| Assessment Score |                     |                       |                                |                                |   |              |
|------------------|---------------------|-----------------------|--------------------------------|--------------------------------|---|--------------|
| Settlement Type  |                     | Number of settlements | Population per settlement type | Households per settlement type | Average Households size per settlement type |              |
| Urban            | Urban - Formal Town | 4                     | 196098                         | 49752                          | 4.16  | 80           |
| <b>Total</b>     |                     |                       |                                |                                |   | <b>80.0%</b> |

| Topic 1 Master Plan                     |   |  |
|---|---|--|
| Section                                 | Is there a master plan to address this problem? | Does this plan address the plan address this problem 100%? |
| 1.1 Settlements Summary                 | Yes   | Yes  |
| 1.2 Summary by Settlement Group         | Yes   | Yes  |
| 1.3 Assessment Score by Settlement Type | Yes   | Yes  |
| 1.4 Amenities Summary                   | Yes   | Yes  |

Strategic Interpretation

Detail situation assessments per Topic element

1.1 Settlements Summary

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | The current population is 196 098 the total number of households is 49 752, with 4 settlements and an average household size of approximately 4.16 people per household. |
|---------------------------------|--|

### Water Services Development Plan

#### 1.2 Summary by Settlement Group

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | There are total of 4 settlements, all allocated within the Municipal boundary. The four settlements are located within the urban fringe. |
|---------------------------------|--|

#### 1.3 Assessment Score by Settlement Type

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | There are a total of 4 settlements, which are 4 Urban settlements. |
|---------------------------------|--|

#### 1.4 Amenities Summary

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | There are a total of 100 public amenities consisting of 14 health facilities (2 hospitals, 2 Health Centers, 10 Clinics) and 86 education facilities (50 Primary, 14 Secondary, 3 Combined, 1 Tertiary, 4 Special, 4 Pre-Primary and 10 ABET). Other public amenities i.e. Police Stations, Prisons, Municipal / Provincial / National Entities, Libraries, Community Halls is not included. |
|---------------------------------|--|

| Business Element Report Items           | Compliance Score | Intervention Required | %   | Solution description as identified by Master Plan                                 | %   | Is there an Existing project addressing this problem? | % | Does this current listed project address the problem totally? | % | Project Approved by Council as part of WSDP Database? | % | Approved by council, in project database and part of 5 yr IDP cycle projects | % | Project listed in 3 yr MTEF - cycle | % | Total Points | Current Demand Overall Scoring % |
|---|------------------|-----------------------|-----|---|-----|---|---|---|---|---|---|--|---|-------------------------------------|---|--------------|----------------------------------|
| 1.1 Settlements Summary                 | 80               | Yes                   | 100 | Provide basic water and sanitation facilities to informal and urban settlements.  | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 1.2 Summary by Settlement Group         | 0                | Yes                   | 100 | Provide basic water and sanitation facilities to informal and urban settlements.  | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 1.3 Assessment Score by Settlement Type | 80               | Yes                   | 100 | Provide basic water and sanitation facilities to formal and informal settlements. | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 1.4 Amenities Summary                   | 80               | Yes                   | 100 | Maintain water and sanitation infrastructure to health and education facilities.  | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |

**Demand Overall Scoring Average** 28.57

Water Services Development Plan

WSDP FY2023: Strategies and Objectives

Breede Valley

| Nr | Objective<br>Strategy | Key<br>Performance<br>Indicator | Baseline (2022<br>status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|-----------------------|---------------------------------|-------------------------------|----------------|--------|--------|--------|--------|--------|
|    |                       |                                 |                               |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |                       |                                 |                               |                | Target | Target | Target | Target | Target |
|    |                       |                                 |                               |                |        |        |        |        |        |
|    |                       |                                 |                               |                |        |        |        |        |        |
|    |                       |                                 |                               |                |        |        |        |        |        |

Water Services Development Plan

Topic 2: Service Levels Profile

| <b>Direct Backlog (Water &amp; Sanitation)</b>  |               |                         |
|---|---------------|-------------------------|
|   | <b>Totals</b> | <b>Assessment Score</b> |
| Direct settlement backlog water house holds. Total house hold of settlement with a water need (irrelevant the type of need)           | 0             | 80                      |
| Direct settlement backlog water population. Total population of settlement with a water need (irrelevant the type of need)            | 0             | 80                      |
| Direct settlement backlog sanitation house holds. Total house hold of settlement with a sanitation need (irrelevant the type of need) | 1383          | 80                      |
| Direct settlement backlog sanitation population. Total population of settlement with a sanitation need (irrelevant the type of need)  | 4495          | 80                      |

| <b>Water Profile</b>                                      |               |                         |
|---|---------------|-------------------------|
|   | <b>Totals</b> | <b>Assessment Score</b> |
| <b>Water Services Infrastructure Supply Level Profile</b> |               |                         |
| Piped water inside the dwelling/house-Households          | 22298         | 80                      |
| Piped water inside yard-Households                        | 0             | 80                      |
| Piped water distance <200m - Households                   | 9521          | 80                      |
| Piped water distance <201m - Households                   | 0             | 80                      |
| Borehole in the yard - Households                         | 0             | 80                      |
| Rain-water tank in yard - Households                      | 0             | 80                      |
| Water vendor-carrier/tanker - Households                  | 0             | 80                      |
| Stagnant water - dam/pool - Households                    | 0             | 80                      |
| Flowing water/spring/ stream/river - Households           | 0             | 80                      |
| Water Other - Households                                  | 17933         | 80                      |
| <b>Water Reliability Profile</b>                          |               |                         |
| Water Supply System - Single Type                         | 0             | 80                      |
| Water Supply System - Scheme based                        | 4             | 80                      |

Water Services Development Plan

| <b>Water Profile</b>   |               |                         |
|--|---------------|-------------------------|
|  | <b>Totals</b> | <b>Assessment Score</b> |
| Total Number of Households having Reliable Service. (Interpret Direct Backlog field above)                 | 49752         | 80                      |
| Total Number of Households NOT having Reliable Service. (Interpret Direct Backlog field above)             | 0             | 80                      |
| System Total Number of Households NOT having Reliable Service due to: Functionality (O&M and Management)   | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Resource                                    | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Infrastructure                              | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Resource - Conservation & Demand Management | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Resource - New Source                       | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Infrastructure – UPGRADE/REFURBISHMENT      | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Infrastructure – EXTENSION                  | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: Infrastructure – NEW SCHEME                 | 0             | 80                      |
| Total Number of Households NOT having Reliable Service due to: REPLACE OLD                                 | 0             | 80                      |

| <b>Sanitation Profile</b>                                     |               |                         |
|---|---------------|-------------------------|
|   | <b>Totals</b> | <b>Assessment Score</b> |
| <b>Sanitation Service Infrastructure Supply Level Profile</b> |               |                         |
| None - Households   | 0             | 80                      |
| Flush toilet (connected to sewerage system) - Households      | 23275         | 80                      |
| Flush toilet (with septic tank) - Households                  | 415           | 80                      |
| Chemical Toilet - Households                                  | 1383          | 80                      |
| Pit toilet with ventilation (VIP) - Households                | 0             | 80                      |
| Pit without ventilation - Households                          | 0             | 80                      |
| Bucket toilet - Households                                    | 0             | 80                      |
| <b>Sanitation Reliability Profile</b>                         |               |                         |
| Household requiring VIP Refurbishment                         | 0             | 80                      |
| Household requiring Existing Scheme Refurbishment             | 0             | 80                      |
| Household not having reliable service due to Functionality    | 0             | 80                      |

Water Services Development Plan

| Sanitation Profile   |        |                  |
|--|--------|------------------|
|  | Totals | Assessment Score |
| Household not having reliable service due to Resource - Water Security | 0      | 80               |
| Infrastructure to be upgraded: Pit to VIP (HH)                         | 0      | 80               |
| Infrastructure to be upgraded: Buckets to waterborne (HH)              | 0      | 80               |
| Infrastructure requirement: None to to waterborne. (HH)                | 1383   | 80               |
| Infrastructure to be upgraded: Buckets to VIP (HH)                     | 0      | 80               |
| Infrastructure to be upgraded: None to VIP (HH)                        | 0      | 80               |
| Infrastructure to be upgraded: Pit to waterborne (HH)                  | 0      | 80               |
| Infrastructure to be upgraded: VIPs to waterborne (HH)                 | 0      | 80               |

|                        | Waterstatus |
|------------------------|-------------|
| Consumer types         | Adequate    |
| Educational facilities | 86          |
| Health Facilities      | 14          |
| Grand Total            | 100         |

## Water Services Development Plan

| 2.1 Water Services             |                      |                                   |                             |                                     |   |                  |
|--------------------------------|----------------------|-----------------------------------|-----------------------------|-------------------------------------|---|------------------|
| Associated Services Facility   | Number of facilities | Facilities with Adequate services | Facilities with No services | Facilities with Inadequate services | Total Potential Cost (basic level) (RM) | Assessment Score |
| <b>2.1.1 Education Plan</b>    |                      |                                   |                             |                                     |   |                  |
| Primary School                 | 54                   | 54                                | 0                           | 0                                   | 0.00                                    | 90               |
| Secondary School               | 15                   | 15                                | 0                           | 0                                   | 0.00                                    | 90               |
| Tertiary                       | 1                    | 1                                 | 0                           | 0                                   | 0.00                                    | 90               |
| Combined                       | 12                   | 12                                | 0                           | 0                                   | 0.00                                    | 90               |
| Special Needs                  | 4                    | 4                                 | 0                           | 0                                   | 0.00                                    | 90               |
| Other                          | 0                    | 0                                 | 0                           | 0                                   | 0.00                                    | 90               |
| <b>Total</b>                   | <b>86</b>            | <b>86</b>                         | <b>0</b>                    | <b>0</b>                            | <b>0.00</b>                             |                  |
| <b>2.1.2 Health Plan</b>       |                      |                                   |                             |                                     |   |                  |
| Hospitals                      | 2                    | 2                                 | 0                           | 0                                   | 0.00                                    | 90               |
| Health Centers                 | 0                    | 0                                 | 0                           | 0                                   | 0.00                                    | 90               |
| Clinics                        | 12                   | 12                                | 0                           | 0                                   | 0.00                                    | 90               |
| Other                          | 0                    | 0                                 | 0                           | 0                                   | 0.00                                    | 90               |
| <b>Total</b>                   | <b>14</b>            | <b>14</b>                         | <b>0</b>                    | <b>0</b>                            | <b>0.00</b>                             |                  |
| <b>2.2 Sanitation Services</b> |                      |                                   |                             |                                     |   |                  |
| <b>2.2.1 Education Plan</b>    |                      |                                   |                             |                                     |   |                  |
| Primary School                 | 54                   | 54                                | 0                           | 0                                   | 0.00                                    | 90               |
| Secondary School               | 15                   | 15                                | 0                           | 0                                   | 0.00                                    | 90               |
| Tertiary                       | 1                    | 1                                 | 0                           | 0                                   | 0.00                                    | 90               |
| Combined                       | 12                   | 12                                | 0                           | 0                                   | 0.00                                    | 90               |
| Special Needs                  | 4                    | 4                                 | 0                           | 0                                   | 0.00                                    | 90               |
| Other                          | 0                    | 0                                 | 0                           | 0                                   | 0.00                                    | 90               |

Water Services Development Plan

|                          |           |           |          |          |             |    |
|--------------------------|-----------|-----------|----------|----------|-------------|----|
| <b>Total</b>             | <b>86</b> | <b>86</b> | <b>0</b> | <b>0</b> | <b>0.00</b> |    |
| <b>2.2.2 Health Plan</b> |           |           |          |          |             |    |
| Hospitals                | 2         | 2         | 0        | 0        | 0.00        | 90 |
| Health Centers           | 0         | 0         | 0        | 0        | 0.00        | 90 |
| Clinics                  | 12        | 12        | 0        | 0        | 0.00        | 90 |
| Other                    | 0         | 0         | 0        | 0        | 0.00        | 90 |
| <b>Total</b>             | <b>14</b> | <b>14</b> | <b>0</b> | <b>0</b> | <b>0.00</b> |    |

| <b>Topic 2 Master Plan</b>                             |  |   |
|--|--|---|
| <b>Section</b>   | <b>Is there a master plan to address this problem?</b> | <b>Does this plan address the plan address this problem 100%?</b> |
| Direct Backlog Water                                   | Yes  | Yes   |
| Water Services Infrastructure Supply Level Profile     | Yes  | Yes   |
| Sanitation Service Infrastructure Supply Level Profile | Yes  | Yes   |
| Water Services: Education                              | Yes  | Yes   |
| Sanitation Services: Education                         | Yes  | Yes   |
| Health and Educational Facilities                      | Yes  | Yes   |
| Direct Backlog Sanitation                              | Yes  | Yes   |
| Water Reliability Profile                              | Yes  | Yes   |
| Sanitation Reliability Profile                         | Yes  | Yes   |
| Water Services: Health                                 | Yes  | Yes   |
| Sanitation Services: Health                            | Yes  | Yes   |

**Strategic Interpretation**

Detail situation assessments per Topic element

### Water Services Development Plan

#### Direct Backlog Water

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All the 49752 households in Breede Valley Municipality have adequate water supply. |
|---------------------------------|--|

#### Water Services Infrastructure Supply Level Profile

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | Approximately 22298 (45%) of households have piped water inside dwelling/house, 9521 (19%) have piped water less than 200m from dwelling and 17 933 (36%) households have other sources of water. |
|---------------------------------|---|

#### Sanitation Service Infrastructure Supply Level Profile

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | Approximately 47% (23275) of the households have flush toilets connected to sewerage system, 0.8% (415) have flush toilets with septic /conservancy tanks, (2.8%) 1383 have chemical toilets, and 24 679 households have other sanitation services. |
|---------------------------------|---|

#### Water Services: Education

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All education facilities have adequate water services. |
|---------------------------------|--|

#### Sanitation Services: Education

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All education facilities have access to basic sanitation services. |
|---------------------------------|--|

#### Health and Educational Facilities

Water Services Development Plan

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | All public health and education facilities have adequate water and sanitation facilities. |
|---------------------------------|---|

Direct Backlog Sanitation

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All of the 49752 households have adequate sanitation services. |
|---------------------------------|--|

Water Reliability Profile

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | All of the total 49 752 households in Breede Valley have reliable water supply. |
|---------------------------------|---|

Sanitation Reliability Profile

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All 49 752 households have adequate sanitation |
|---------------------------------|--|

Water Services: Health

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | All health facilities have basic water supply |
|---------------------------------|---|

Sanitation Services: Health

Water Services Development Plan

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | All health facilities have access to basic sanitation services. |
|---------------------------------|---|

| Business Element Report Items                          | Compliance Score | Intervention Required | %   | Solution description as identified by Master Plan   | %   | Is there an Existing project addressing this problem? | % | Does this current listed project address the problem totally? | % | Project Approved by Council as part of WSDP Database? | % | Approved by council, in project database and part of 5 yr IDP cycle projects | % | Project listed in 3 yr MTEF - cycle | % | Total Points | Current Demand Overall Scoring % |
|--|------------------|-----------------------|-----|---|-----|---|---|---|---|---|---|--|---|-------------------------------------|---|--------------|----------------------------------|
| Direct Backlog Water                                   | 80               | Yes                   | 100 | Maintain water supply to all households.  | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Water Services Infrastructure Supply Level Profile     | 80               | Yes                   | 100 | Maintain basic water supply to 49 752 households.   | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Sanitation Service Infrastructure Supply Level Profile | 80               | Yes                   | 100 | Provide waterborne sanitation to 1383 households with sanitation needs.                         | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Water Services: Education                              | 90               | Yes                   | 100 | Maintain provision of basic water to all education facilities.                                  | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Sanitation Services: Education                         | 90               | Yes                   | 100 | Maintain provision of basic sanitation services to all education facilities.                    | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Health and Educational Facilities                      | 0                | Yes                   | 100 | Maintain provision of basic water and sanitation to all 14 health- and 86 education facilities. | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Direct Backlog Sanitation                              | 0                | Yes                   | 100 | Maintain basic sanitation services to 49 752 households.  | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Water Reliability Profile                              | 0                | Yes                   | 100 | Maintain basic water services to 49 752 households.   | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Sanitation Reliability Profile                         | 0                | Yes                   | 100 | Maintain basic sanitation to 49 752 households.   | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Water Services: Health                                 | 0                | Yes                   | 100 | Maintain provision of basic water services to all 14 health facilities.                         | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |
| Sanitation Services: Health                            | 0                | Yes                   | 100 | Maintain provision of basic sanitation services to all 14 health facilities.                    | 100 | No  | 0 |   | 0 |   | 0 |  | 0 |                                     | 0 | 200          | 28.57                            |

**Demand Overall Scoring Average** 28.57

WSDP FY2023: Strategies and Objectives

Breede Valley

| Nr | Objective | Key Performance | Baseline (2022) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|-----------|-----------------|-----------------|----------------|--------|--------|--------|--------|--------|
|    |           |                 |                 |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |

Water Services Development Plan

| Nr | Objective<br>Strategy | Key<br>Performance<br>Indicator | Baseline (2022<br>status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|-----------------------|---------------------------------|-------------------------------|----------------|--------|--------|--------|--------|--------|
|    |                       |                                 |                               |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |                       |                                 |                               |                | Target | Target | Target | Target | Target |
|    |                       |                                 |                               |                |        |        |        |        |        |
|    |                       |                                 |                               |                |        |        |        |        |        |
|    |                       |                                 |                               |                |        |        |        |        |        |

Water Services Development Plan

Topic 3: Water Services Asset Management

| Yes No Grid |     |                  |
|-------------|-----|------------------|
| Question    | Yes | Assessment Score |

| 3.1 General Information                                     |      |    |
|---|------|----|
| 3.1.1 Is there an Asset Management plan                     | True | 90 |
| 3.1.2 Is there a disaster management plan                   | True | 90 |
| 3.1.3 Is there a plan in place to manage untreated effluent | True | 80 |

| Questions |   |    |     |    |    |    |    |   |      |            |
|-----------|---|----|-----|----|----|----|----|---|------|------------|
| Question  | B | AP | WTW | WP | SP | WL | SL | R | WWTW | Assessment |

Water Services Development Plan

|   |   |   |    |    |    |        |       |    |    | Score |
|---|---|---|----|----|----|--------|-------|----|----|-------|
| [section]   |   |   |    |    |    |        |       |    |    |       |
| 3.1.1 Total number of components / km of pipeline / units         | 7 | 7 | 4  | 10 | 22 | 120.59 | 27.35 | 22 | 4  | 75    |
| 3.2.1.1 Previous incidents including Security Problems (Regular)  |   | 0 | 0  | 0  | 0  |        |       | 0  | 0  | 80    |
| 3.2.1.2 Previous incidents including Security Problems (Periodic) |   | 0 | 0  | 0  | 0  |        |       | 0  | 0  | 80    |
| 3.2.1.3 Previous incidents including Security Problems (Sporadic) |   | 7 | 4  | 10 | 22 |        |       | 22 | 4  | 80    |
| 3.2.1.4 Previous incidents including Security Problems (None)     |   | 0 | 0  | 0  | 0  |        |       | 0  | 0  | 80    |
| 3.2.2.1 Safety inspection performed (Regular)                     |   | 7 | 4  | 10 | 22 |        |       | 22 | 4  | 80    |
| 3.2.2.2 Safety inspection performed (Periodic)                    |   | 0 | 0  | 0  | 0  |        |       | 0  | 0  | 80    |
| 3.2.2.3 Safety inspection performed (Sporadic)                    |   | 0 | 0  | 0  | 0  |        |       | 0  | 0  | 80    |
| 3.2.2.4 Safety inspection performed (None)                        |   | 0 | 0  | 0  | 0  |        |       | 0  | 0  | 80    |
| 3.2.5 Average Operating hours per day (X hrs)                     |   |   | 24 |    |    |        |       |    | 24 | 80    |
| 3.3.1.1 General physical condition: Dysfunctional                 | 0 | 0 | 0  | 0  | 0  | 0      | 0     | 0  | 0  | 80    |

Water Services Development Plan

|   |      |      |      |       |       |        |       |        |      |    |
|---|------|------|------|-------|-------|--------|-------|--------|------|----|
| 3.3.1.2 General physical condition: Operational     | 7    | 7    | 4    | 10    | 22    | 0      | 0     | 22     | 4    | 90 |
| 3.3.1.3 General physical condition: Prime Condition | 0    | 0    | 0    | 0     | 0     | 0      | 0     | 0      | 0    | 90 |
| 3.3.1.4 General physical condition: Vandalised      | 0    | 0    | 0    | 0     | 0     | 0      | 0     | 0      | 0    | 90 |
| 3.3.2 Number of breakages / failures per year       | 0    | 0    | 0    | 0     | 0     | 0      | 0     | 0      | 0    | 80 |
| 3.3.3 Total refurbishment needs %                   | 5%   | 5%   | 10%  | 10%   | 10%   | 10%    | 5%    | 5%     | 10%  | 80 |
| 3.3.4 Total refurbishment needs cost (RM)           | 0.15 | 0.00 | 2.00 | 1.01  | 1.83  | 0.29   | 2.52  | 1.56   | 3.00 | 80 |
| 3.3.4.1 Refurbishment cost for 5 year               | 0.27 | 0.72 | 2.82 | 1.641 | 2.879 | 0.152  | 1.418 | 2.737  | 3.88 | 80 |
| 3.3.4.2 Refurbishment cost for 10 year              | 0.42 | 1.16 | 4.5  | 2.3   | 3.783 | 0.3548 | 1.188 | 2.5015 | 5.41 | 80 |
| 3.3.4.3 Refurbishment cost for 15 year              | 0.59 | 1.52 | 5.19 | 2.91  | 5.529 | 0.539  | 3.74  | 3.2195 | 6.62 | 80 |
| 3.3.5 Total replacement needs %                     | 5%   | 5%   | 10%  | 10%   | 10%   | 10%    | 5%    | 5%     | 10%  | 75 |
| 3.3.6 Total replacement needs cost (RM)             | 0.51 | 0.72 | 2.20 | 1.93  | 2.03  | 0.37   | 2.97  | 2.41   | 3.20 | 80 |
| 3.3.6.1 Replacement cost for 5 year                 | 0.37 | 0.81 | 2.64 | 4.1   | 3.176 | 0.29   | 2.735 | 2.817  | 3.98 | 80 |

Water Services Development Plan

|  |      |       |      |      |       |        |       |       |      |    |
|--|------|-------|------|------|-------|--------|-------|-------|------|----|
| 3.3.6.2 Replacement cost for 10 year                 | 0.51 | 1.587 | 4.53 | 5.91 | 4.179 | 0.4318 | 2.161 | 3.398 | 4.11 | 80 |
| 3.3.6.3 Replacement cost for 15 year                 | 0.79 | 1.99  | 5.87 | 8.05 | 6.281 | 0.646  | 8.39  | 4.011 | 6.81 | 80 |
| 3.3.7 Total New development cost required            | 0    | 0     | 0    | 0    | 0     | 0      | 0     | 0     | 0    | 80 |
| 3.3.7.1 New development cost for 5 year              | 0    | 0     | 0    | 0    | 0     | 0      | 0     | 0     | 0    | 80 |
| 3.3.7.2 New development cost for 10 year             | 0    | 0     | 0    | 0    | 0     | 0      | 0     | 0     | 0    | 80 |
| 3.3.7.3 New development cost for 15 year             | 0    | 0     | 0    | 0    | 0     | 0      | 0     | 0     | 0    | 80 |
| 3.3.8 % Of Components already reached useful life    | 0%   | 0%    | 0%   | 0%   | 0%    | 0%     | 0%    | 0%    | 0%   | 80 |
| 3.3.9 % Whereoff the WSA Self is the Current Owner   | 100% | 100%  | 100% | 100% | 100%  | 100%   | 100%  | 100%  | 100% | 80 |
| 3.3.10 % Whereoff the WSA Self is Current Operator   | 100% | 100%  | 100% | 100% | 100%  | 100%   | 100%  | 100%  | 100% | 80 |
| 3.4.1 % Expected total lifespan: Short (1-3 yrs)     | 0    | 0     | 0    | 0    | 0     | 0      | 0     | 0     | 0    | 80 |
| 3.4.2 % Expected total lifespan: Medium (3 - 10 yrs) | 0    | 0     | 0    | 0    | 0     | 0      | 0     | 0     | 0    | 80 |
| 3.4.3 % Expected total lifespan: Long (10 - 20 yrs)  | 100  | 100   | 100  | 100  | 100   | 100    | 100   | 100   | 100  | 80 |

Water Services Development Plan

| Sanitation Schemes |            |                  |
|--------------------|------------|------------------|
| Sanitation Schemes | Green Drop | Assessment Score |
| De Doorns          | False      | 90               |
| Rawsonville        | False      | 90               |
| Touws River        | False      | 90               |
| Worcester          | False      | 90               |

Water Services Development Plan

| Water Schemes                     |           |                  |
|-----------------------------------|-----------|------------------|
| Water Schemes                     | Blue Drop | Assessment Score |
| Breede Valley Rural               | False     | 90               |
| Breede Valley Water Supply System | False     | 90               |
| De Doorns                         | False     | 90               |
| Rawsonville                       | False     | 90               |
| Touws River                       | False     | 90               |
| WSA Level                         |           |                  |

| Topic 3 Master Plan     |   |  |
|-------------------------|---|--|
| Section                 | Is there a master plan to address this problem? | Does this plan address the plan address this problem 100%? |
| 3.1 General Information | Yes   | Yes  |
| 3.2 Operation           | Yes   | Yes  |

Water Services Development Plan

|                                  |     |     |
|----------------------------------|-----|-----|
| 3.3 Functionality Observation    | Yes | Yes |
| 3.4 Asset Assessment Spectrum    | Yes | Yes |
| 3.5 Water and Sanitation schemes | Yes | Yes |

Strategic Interpretation

Detail situation assessments per Topic element

3.1 General Information

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | There are 7 Boreholes of which 3 are operational and the 4 are only used for emergencies , Seven (7) Abstraction Points, Four (4) Water Treatment Works, 10 Water Pump Stations, 22 Sewer Pump Stations, 96 km of Bulk Water Pipelines, 352km Bulk Sewer Pipelines, 23 Reservoirs of which one (1) is under construction and four (4) Wastewater Treatment Works. |
|---------------------------------|---|

3.2 Operation

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All assets are in operational condition with refurbishments / replacements of components required. |
|---------------------------------|--|

3.3 Functionality Observation

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | All assets are functional, with some assets requiring refurbishment and / or replacement. |
|---------------------------------|---|

3.4 Asset Assessment Spectrum

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All infrastructure is operational, with refurbishment / replacements required. |
|---------------------------------|--|

Water Services Development Plan

3.5 Water and Sanitation schemes

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | There are five (5) existing water schemes and four (4) existing sanitation schemes |
|---------------------------------|--|

| Business Element Report Items         | Compliancy Score | Intervention Required | %   | Solution description as identified by Master Plan  | %   | Is there an Existing project addressing this problem? | %   | Does this current listed project address the problem totally? | %   | Project Approved by Council as part of WSDP Database? | %   | Approved by council, in project database and part of 5 yr IDP cycle projects | %   | Project listed in 3 yr MTEF - cycle | %   | Total Points | Current Demand Overall Scoring % |
|---------------------------------------|------------------|-----------------------|-----|--|-----|---|-----|---|-----|---|-----|--|-----|-------------------------------------|-----|--------------|----------------------------------|
| 3.1 General Information               | 83.75            | Yes                   | 100 | Update and Maintain Asset register/ database to confirm Asset Values, refurbishment needs.                         | 100 | No  | 0   | No  | 0   | No  | 0   | No   | 0   | No                                  | 0   | 200          | 28.57                            |
| 3.2 Operation                         | 80               | Yes                   | 100 | All assets operational, refurbishment required to improve functionality.   | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | Yes                                 | 100 | 700          | 100                              |
| 3.3 Functionality Observation         | 79.77            | Yes                   | 100 | Maintain all infrastructure in functional condition by attending to all refurbishment- and / or replacement needs. | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | Yes                                 | 100 | 700          | 100                              |
| 3.4 Asset Assessment Spectrum         | 90               | Yes                   | 100 | Maintain all assets by attending to all refurbishment- and / or replacement needs.                                 | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | Yes                                 | 100 | 700          | 100                              |
| 3.5 Water and Sanitation schemes      | 81               | Yes                   | 100 | Maintain existing water and sanitation schemes to meet the future water and sanitation requirements.               | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | Yes                                 | 100 | 700          | 100                              |
| <b>Demand Overall Scoring Average</b> |                  |                       |     |  |     |   |     |   |     |   |     |  |     |                                     |     | <b>85.71</b> |                                  |

WSDP FY2023: Strategies and Objectives

Breede Valley

| Nr                                     | Objective<br>Strategy | Key Performance Indicator | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|--|-----------------------|---------------------------|----------------------------|----------------|--------|--------|--------|--------|--------|
|  |                       |                           |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|  |                       |                           |                            |                | Target | Target | Target | Target | Target |
| <b>Water Services Asset Management</b> |                       |                           |                            |                |        |        |        |        |        |
|  |                       |                           |                            |                |        |        |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy   | Key Performance Indicator                                | Baseline (2022 status quo) | Linked Project   | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|---|--|----------------------------|--|--------|--------|--------|--------|--------|
|    |   |  |                            |  | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |   |  |                            |  | Target | Target | Target | Target | Target |
| 1  | Ensure continuity of bulk water supply to all households  | New supply pipeline to Crescent Upper Reservoir          | 1                          | CP_0400, Augmentation of Water treatment works (MIG Counter funding): Touws River    |        |        |        |        |        |
| 1  | Ensure continuity of bulk water supply to all households  | New Supply pipeline to Crescent Upper Reservoir.         | 1                          | CP_0400, Augmentation of Water treatment works (MIG Counter funding): Touws River    |        | 1      | 1      |        |        |
| 2  | Ensure continuity of bulk water supply  | Refurbishment of Bulk supply pipeline                    | 1                          | CP_0002, Upgrading of Stettynskloof Supply Pipe Line - Phase 3 (MIG 164422)          | 1      |        |        |        |        |
| 3  | Ensure continuous, safe disposal of treated effluent to the environment, from Touws river waster water treatment works. | Refurbishment of Waste Water Treatment Works.            | 1                          | CP_0420, Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG          | 1      | 1      | 1      |        |        |
| 4  | Securing of Treated Water Supply  | Refurbishment of DAF unit at De Doorns                   | 1                          | CP_0130, De Doorns Water Purification Works : Augmentation of DAF Unit (MIG funding) | 1      |        |        |        |        |
| 3  | Ensure continuous, safe disposal of treated effluent to environment, from Touws River wastewater treatment works.       | Refurbishment of Touws River Wastewater Treatment Works. | 1                          | CP_0420, Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG          |        |        | 1      |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy   | Key Performance Indicator  | Baseline (2022 status quo) | Linked Project  | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|---|--|----------------------------|---|--------|--------|--------|--------|--------|
|    |   |  |                            |   | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |   |  |                            |   | Target | Target | Target | Target | Target |
| 5  | Ensure continuous, safe disposal of treated effluent to environment, from all wastewater treatment works.                           | Refurbishment of De Doorns wastewater treatment works reactor.       | 1                          | CP_0511, De Doorns WWTW Reactor   | 1      |        |        |        |        |
| 6  | Ensure conveyance of water from Somerset Park households safely.  | New water pipeline to somerset park for the Land Infill developments | 1                          |   | 1      |        |        |        |        |
| 7  | Ensure conveyance of wastewater from all households safely and no environmental impact, to wastewater works for treatment/disposal. | Upgrading of sewer network in Rawsonville.                           | 1                          | CP_0453, Upgrading of Sewer Network: External Loan                          | 1      | 1      | 1      |        |        |
| 8  | Ensure conveyance of wastewater from all households safely and no environmental impact, to wastewater works for treatment/disposal. | Upgrading of sewer network in Worcester (Zwelethemba).               | 1                          | CP_0454, Upgrading of Sewer Network: External Loan                          |        | 1      | 1      |        |        |
| 3  | Ensure continuous, safe disposal of treated effluent to environment, from Touws River wastewater treatment works.                   | Refurbishment of Touws River wastewater treatment works.             | 1                          | CP_0420, Touws River: Waste Water Treatment Works (WwTW) Augmentation : MIG |        | 1      |        |        |        |
| 9  | Ensure continuity of bulk water supply.   | New 20MI Reservoir at Preloads                                       | 1                          | CP_0018, Additional reservoir capacity at Preloads                          | 1      |        |        |        |        |
| 9  | Ensure continuity of bulk water supply to all households..  | Rehabilitation of Bok River Supply pipeline                          | 1                          |   | 1      | 1      | 1      |        |        |
| 6  | Ensure continuity of sewer supply to all households.  | Sewer pipeline to Somerset Park land infill developments.            | 1                          |   | 1      |        |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy  | Key Performance Indicator   | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|--|---|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |  |   |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |  |   |                            |                | Target | Target | Target | Target | Target |
| 10 | Ensure continuity of water supply to all households.   | New water reticulation for land infill developments in Avian Park Industrial. | 1                          |                | 1      | 1      |        |        |        |
| 10 | Ensure continuity of sewer supply to all households.   | New sewer reticulation to Avian Park Ind land infill developments             | 1                          |                | 1      | 1      |        |        |        |
| 10 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment. | New pump station for land infill developments at Avian Park Ind.              | 1                          |                |        | 1      | 1      |        |        |
| 11 | Ensure continuity of water supply to all households.   | Upgrade of water treatment work (Bulk Water Bokrivier) in Touws River         | 1                          |                |        | 1      |        |        |        |
| 11 | Ensure continuity of water supply to all households.   | Upgrading of water network to affordable housing project in Touws River       | 1                          |                |        | 1      |        |        |        |
| 12 | Ensure continuity of sanitation supply to all households.  | Upgrading of sewer network to affordable housing projects in Touws River.     | 1                          |                |        | 1      |        |        |        |
| 12 | Ensure continuity of sanitation supply to all households.  | Upgrading of sewer network to affordable housing project in Touws River.      | 1                          |                |        | 1      |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy   | Key Performance Indicator                                      | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|---|--|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |   |  |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |   |  |                            |                | Target | Target | Target | Target | Target |
| 13 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment.              | New pump station at Touws River                                | 1                          |                |        |        |        |        |        |
| 14 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment.              | New second Pump station at Touws River.                        | 1                          |                |        |        |        |        |        |
| 15 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment.              | Upgrade sewer pump station in Touws River.                     | 1                          |                |        |        |        |        |        |
| 16 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment.              | Upgrading of waste water treatment works at De Doorns by 1Ml/d | 1                          |                |        |        |        |        |        |
| 17 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment.              | Extension of Rawsonville waste water treatment works.          | 1                          |                |        |        |        |        |        |
| 18 | Ensure conveyance of wastewater from all households safely and no environmental impact, to wastewater works for treatment/disposal. | New outfall sewer in Rawsonville.                              | 1                          |                |        |        |        |        |        |
| 19 | Ensure conveyance of wastewater from all households safely and no environmental impact, to wastewater works for treatment/disposal. | Upgrading of Bulk Sewer in Rawsonville.                        | 1                          |                |        |        |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy  | Key Performance Indicator   | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|--|---|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |  |   |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |  |   |                            |                | Target | Target | Target | Target | Target |
| 20 | Ensure continuity of safe disposal of wastewater conveyance from all households, and prevent pollution of environment. | Upgrading and Refurbishment of several pump stations.   | 1                          |                | 1      | 1      | 1      |        |        |
| 21 | Ensure continuity of bulk water supply to all households.  | New 85 l/s @ 105m PS (PRJ-TW-006) in Touws River.   | 1                          |                |        |        |        |        |        |
| 22 | Ensure continuity of bulk water supply to all households.  | 50 l/s @ 58m PS, 585m x 250mm dia pipeline, 5 MI @ 360m Reservoir (Altona / Barclay Farm Dev.) (PRJ-WW-008) | 1                          |                |        |        |        |        |        |
| 23 | Ensure continuity of bulk water supply to all households.  | Water (Network upgrade - Pre Load Lower Zone, Altona / Barclay Farm Dev.) (PRJ-WW-009)                      | 1                          |                |        |        |        |        |        |
| 24 | Ensure continuity of water and sanitation supply to all households.  | Pipe Cracking on all Breede Valley Wards.   | 1                          |                | 1      | 1      | 1      |        |        |
| 25 | Ensure continuity of bulk water supply and water storage.  | Augmentation of 2 MI @ 297m Reservoir (PRJ-RW-003) for future developments.                                 | 1                          |                |        |        |        |        |        |
| 26 | Ensure continuity of bulk water supply and reduce storage facility with no water losses.                               | New 28 l/s @ 28m PS, 240m x 200mm dia pipeline, 1.8 MI @ 828m Reservoir (PRJ-TW-005)                        | 1                          |                |        |        |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy  | Key Performance Indicator  | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|--|--|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |  |  |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |  |  |                            |                | Target | Target | Target | Target | Target |
| 27 | Ensure continuity of bulk water supply to all households.    | New FCV @ Crescent Upper Reservoir (PRJ-TW-001)  | 1                          |                |        |        |        |        |        |
| 28 | Ensure continuity of bulk water supply.                      | Upgrade 65 l/s @ 80m PS, 1385m x 315mm dia pipeline, FCVs (PRJ-DW-001)                           | 1                          |                |        |        |        |        |        |
| 29 | Ensure continuity of bulk water supply.                      | Upgrade 60 l/s @ 160m PS, 2555m x 200mm dia pipeline (PRJ-DW-005)                                | 1                          |                |        |        |        |        |        |
| 30 |  | New Pre-Loads Upper PS and Supply Pipeline (Altona / Barclay Farm Dev.                           | 1                          |                |        |        |        |        |        |
| 30 | Ensure continuity of bulk water supply and storage facility. | 2.5 MI @ 615m Reservoir (PRJ-DW-003)   | 1                          |                |        |        |        |        |        |
| 31 | Ensure continuity of bulk water supply in Worcester          | New 20 l/s @ 35m PS (PRJ-WW-014)   | 1                          |                |        |        |        |        |        |
| 34 | Ensure continuity of bulk water supply.                      | New FCV @ Steenvliet Reservoir (PRJ-TW-003)  | 1                          |                |        |        |        |        |        |
| 35 | Ensure continuity of bulk water supply.                      | Bulk Supply Pipeline (Network Infrastructure - Pre Loads Upper Zone, Altona / Barclay Farm Dev.) | 1                          |                |        |        |        |        |        |

Water Services Development Plan

Topic 4: Water Services O&M

| In Place                                    | Assesement Score   |                           |             |                  |
|---|--------------------|---------------------------|-------------|------------------|
| 4.1 Operation & Maintenance Plan            |                    |                           |             |                  |
| Is There a Operation and Maintenance Plan?  |                    |                           |             |                  |
| True  | 90                 |                           |             |                  |
| Phase                                       | Compliance         | StatusQuo                 | Impact      | Assesement Score |
| 4.2 Resources                               |                    |                           |             |                  |
| 4.2.1 Existing Groundwater Infrastructure   |                    |                           |             |                  |
| Operation                                   | Staff              | Below Minimum requirement | Medium/High | 90               |
| Maintenance                                 | Staff              | Below Minimum requirement | Medium/High | 90               |
| Operation                                   | External resources | Minimum basic requirement | Low         | 90               |
| Maintenance                                 | External resources | Minimum basic requirement | Low         | 90               |
| Operation                                   | Spare Parts        | Below Minimum requirement | Medium/High | 90               |
| Maintenance                                 | Spare Parts        | Below Minimum requirement | Medium/High | 90               |
| Operation                                   | Tools & Equipment  | Below Minimum requirement | Medium/High | 90               |
| Maintenance                                 | Tools & Equipment  | Below Minimum requirement | Medium/High | 90               |
| Operation                                   | Budget             | Below Minimum requirement | Medium/High | 90               |
| Maintenance                                 | Budget             | Below Minimum requirement | Medium/High | 90               |
| 4.2 Resources                               |                    |                           |             |                  |
| 4.2.2 Existing Surface Water Infrastructure |                    |                           |             |                  |
| Operation                                   | Staff              | Below Minimum requirement | Medium/High | 90               |

Water Services Development Plan

|   |                    |                           |             |    |
|---|--------------------|---------------------------|-------------|----|
| Maintenance   | Staff              | Below Minimum requirement | Medium/High | 90 |
| Operation   | External resources | Minimum basic requirement | Low         | 90 |
| Maintenance   | External resources | Minimum basic requirement | Low         | 90 |
| Operation   | Spare Parts        | Below Minimum requirement | Low         | 90 |
| Maintenance   | Spare Parts        | Below Minimum requirement | Low         | 90 |
| Operation   | Tools & Equipment  | Below Minimum requirement | Low         | 90 |
| Maintenance   | Tools & Equipment  | Below Minimum requirement | Low         | 90 |
| Operation   | Budget             | Below Minimum requirement | Medium/High | 90 |
| Maintenance   | Budget             | Below Minimum requirement | Medium/High | 90 |
| 4.2 Resources   |                    |                           |             |    |
| 4.2.3 Existing Waste Water Treatment Works Infrastructure |                    |                           |             |    |
| Operation   | Staff              | Below Minimum requirement | Medium/High | 90 |
| Maintenance   | Staff              | Below Minimum requirement | Medium/High | 90 |
| Operation   | External resources | Minimum basic requirement | Low         | 90 |
| Maintenance   | External resources | Minimum basic requirement | Low         | 90 |
| Operation   | Spare Parts        | Below Minimum requirement | Low         | 90 |
| Maintenance   | Spare Parts        | Below Minimum requirement | Low         | 90 |
| Operation   | Tools & Equipment  | Below Minimum requirement | Low         | 90 |
| Maintenance   | Tools & Equipment  | Below Minimum requirement | Low         | 90 |
| Operation   | Budget             | Below Minimum requirement | Medium/High | 90 |
| Maintenance   | Budget             | Below Minimum requirement | Medium/High | 90 |
| 4.2 Resources   |                    |                           |             |    |
| 4.2.4 Existing Water Treatment Works Infrastructure       |                    |                           |             |    |
| Operation   | Staff              | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Staff              | Below Minimum requirement | Medium/High | 90 |
| Operation   | External resources | Minimum basic requirement | Low         | 90 |
| Maintenance   | External resources | Minimum basic requirement | Low         | 90 |
| Operation   | Spare Parts        | Below Minimum requirement | Low         | 90 |
| Maintenance   | Spare Parts        | Below Minimum requirement | Low         | 90 |
| Operation   | Tools & Equipment  | Below Minimum requirement | Low         | 90 |
| Maintenance   | Tools & Equipment  | Below Minimum requirement | Low         | 90 |

Water Services Development Plan

|   |                    |                           |             |    |
|---|--------------------|---------------------------|-------------|----|
| Operation                                       | Budget             | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Budget             | Below Minimum requirement | Medium/High | 90 |
| 4.2 Resources                                   |                    |                           |             |    |
| 4.2.5 Existing Pump Station Infrastructure      |                    |                           |             |    |
| Operation                                       | Staff              | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Staff              | Below Minimum requirement | Medium/High | 90 |
| Operation                                       | External resources | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | External resources | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Spare Parts        | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Spare Parts        | Below Minimum requirement | Medium/High | 90 |
| Operation                                       | Tools & Equipment  | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Tools & Equipment  | Below Minimum requirement | Medium/High | 90 |
| Operation                                       | Budget             | Below Minimum requirement | Critical    | 90 |
| Maintenance                                     | Budget             | Below Minimum requirement | Critical    | 90 |
| 4.2 Resources                                   |                    |                           |             |    |
| 4.2.6 Existing Bulk Pipeline Infrastructure     |                    |                           |             |    |
| Operation                                       | Staff              | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Staff              | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | External resources | Minimum basic requirement | Low         | 90 |
| Maintenance                                     | External resources | Minimum basic requirement | Low         | 90 |
| Operation                                       | Spare Parts        | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Spare Parts        | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Tools & Equipment  | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Tools & Equipment  | Below Minimum requirement | Medium/High | 90 |
| Operation                                       | Budget             | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                     | Budget             | Below Minimum requirement | Medium/High | 90 |
| 4.2 Resources                                   |                    |                           |             |    |
| 4.2.7 Existing Tower & Reservoir Infrastructure |                    |                           |             |    |
| Operation                                       | Staff              | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Staff              | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | External resources | Minimum basic requirement | Low         | 90 |

Water Services Development Plan

|   |                           |                           |             |    |
|---|---------------------------|---------------------------|-------------|----|
| Maintenance                                       | External resources        | Minimum basic requirement | Low         | 90 |
| Operation   | Spare Parts               | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | Spare Parts               | Minimum basic requirement | Medium/High | 90 |
| Operation   | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Budget                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | Budget                    | Minimum basic requirement | Medium/High | 90 |
| <b>4.2 Resources</b>                              |                           |                           |             |    |
| <b>4.2.8 Existing Reticulation Infrastructure</b> |                           |                           |             |    |
| Operation   | Staff                     | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                       | Staff                     | Below Minimum requirement | Medium/High | 90 |
| Operation   | External resources        | Minimum basic requirement | Low         | 90 |
| Maintenance                                       | External resources        | Minimum basic requirement | Low         | 90 |
| Operation   | Spare Parts               | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                       | Spare Parts               | Below Minimum requirement | Medium/High | 90 |
| Operation   | Tools & Equipment         | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                       | Tools & Equipment         | Below Minimum requirement | Medium/High | 90 |
| Operation   | Budget                    | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                       | Budget                    | Below Minimum requirement | Medium/High | 90 |
| <b>4.3 Information</b>                            |                           |                           |             |    |
| <b>4.3.1 Existing Groundwater Infrastructure</b>  |                           |                           |             |    |
| Operation   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Operation   | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Operation   | Tools & Equipment         | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                       | Tools & Equipment         | Below Minimum requirement | Medium/High | 90 |
| Operation   | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                       | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |

Water Services Development Plan

| 4.3 Information   |                           |                           |             |    |
|---|---------------------------|---------------------------|-------------|----|
| 4.3.2 Existing Surface Water Infrastructure               |                           |                           |             |    |
| Operation   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Operation   | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Operation   | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| 4.3 Information   |                           |                           |             |    |
| 4.3.3 Existing Water Treatment Works Infrastructure       |                           |                           |             |    |
| Operation   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Operation   | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Operation   | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| 4.3 Information   |                           |                           |             |    |
| 4.3.4 Existing Waste Water Treatment Works Infrastructure |                           |                           |             |    |
| Operation   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Operation   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Maintenance   | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Operation   | As-Built info.            | Minimum basic requirement | Medium/High | 90 |

Water Services Development Plan

|   |                           |                           |             |    |
|---|---------------------------|---------------------------|-------------|----|
| Maintenance                                     | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| 4.3 Information                                 |                           |                           |             |    |
| 4.3.5 Existing Pump Station Infrastructure      |                           |                           |             |    |
| Operation                                       | Manuals Available         |                           |             | 0  |
| Maintenance                                     | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| 4.3 Information                                 |                           |                           |             |    |
| 4.3.6 Existing Bulk Pipeline Infrastructure     |                           |                           |             |    |
| Operation                                       | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Manuals Available         | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Asset Register            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | As-Built info.            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Tools & Equipment         | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Contingency & Safety Plan | Minimum basic requirement | Medium/High | 90 |
| 4.3 Information                                 |                           |                           |             |    |
| 4.3.7 Existing Tower & Reservoir Infrastructure |                           |                           |             |    |

Water Services Development Plan

|  |  |                           |             |    |
|--|--|---------------------------|-------------|----|
| Operation                                  | Manuals Available                      | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Manuals Available                      | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Asset Register                         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Asset Register                         | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | As-Built info.                         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | As-Built info.                         | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Tools & Equipment                      | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Tools & Equipment                      | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Contingency & Safety Plan              | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Contingency & Safety Plan              | Minimum basic requirement | Medium/High | 90 |
| 4.3 Information                            |  |                           |             |    |
| 4.3.8 Existing Reticulation Infrastructure |  |                           |             |    |
| Operation                                  | Manuals Available                      | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                | Manuals Available                      | Below Minimum requirement | Medium/High | 90 |
| Operation                                  | Asset Register                         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Asset Register                         | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | As-Built info.                         | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | As-Built info.                         | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Tools & Equipment                      | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                | Tools & Equipment                      | Below Minimum requirement | Medium/High | 90 |
| Operation                                  | Contingency & Safety Plan              | Below Minimum requirement | Medium/High | 90 |
| Maintenance                                | Contingency & Safety Plan              | Below Minimum requirement | Medium/High | 90 |
| 4.4 Activity Control & Management          |  |                           |             |    |
| 4.4.1 Existing Groundwater Infrastructure  |  |                           |             |    |
| Operation                                  | Procedures                             | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Procedures                             | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Record keeping in place                | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Record keeping in place                | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Quality Control procedures established | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                | Quality Control procedures established | Minimum basic requirement | Medium/High | 90 |
| Operation                                  | Risk Management                        | Minimum basic requirement | Medium/High | 90 |

Water Services Development Plan

|  |  |                           |             |    |
|--|--|---------------------------|-------------|----|
| Maintenance  | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation  | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| <b>4.4 Activity Control &amp; Management</b>                     |  |                           |             |    |
| <b>4.4.2 Existing Surface water infrastructure</b>               |  |                           |             |    |
| Operation  | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Operation  | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation  | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation  | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation  | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| <b>4.4 Activity Control &amp; Management</b>                     |  |                           |             |    |
| <b>4.4.3 Existing Water Treatment Works infrastructure</b>       |  |                           |             |    |
| Operation  | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Operation  | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation  | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation  | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation  | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| <b>4.4 Activity Control &amp; Management</b>                     |  |                           |             |    |
| <b>4.4.4 Existing Waste Water Treatment Works infrastructure</b> |  |                           |             |    |
| Operation  | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance  | Procedures   | Minimum basic requirement | Medium/High | 90 |

Water Services Development Plan

|   |  |                           |             |    |
|---|--|---------------------------|-------------|----|
| Operation                                   | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| 4.4 Activity Control & Management           |  |                           |             |    |
| 4.4.5 Existing Pump Station infrastructure  |  |                           |             |    |
| Operation                                   | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| 4.4 Activity Control & Management           |  |                           |             |    |
| 4.4.6 Existing Bulk Pipeline infrastructure |  |                           |             |    |
| Operation                                   | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                 | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation                                   | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |

Water Services Development Plan

|   |  |                           |             |    |
|---|--|---------------------------|-------------|----|
| Maintenance                                     | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| 4.4 Activity Control & Management               |  |                           |             |    |
| 4.4.7 Existing Tower & Reservoir infrastructure |  |                           |             |    |
| Operation                                       | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| 4.4 Activity Control & Management               |  |                           |             |    |
| 4.4.8 Existing Reticulation infrastructure      |  |                           |             |    |
| Operation                                       | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Procedures   | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Record keeping in place                            | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Quality Control procedures established             | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Risk Management                                    | Minimum basic requirement | Medium/High | 90 |
| Operation                                       | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |
| Maintenance                                     | Reporting (data analysis & report generation est.) | Minimum basic requirement | Medium/High | 90 |

Water Services Development Plan

| Topic 4 Master Plan                               |   |  |
|---|---|--|
| Section   | Is there a master plan to address this problem? | Does this plan address the plan address this problem 100%? |
| 4.1 Operation & Maintenance Plan                  | Yes   | Yes  |
| 4.1.1 Is There an Operation and Maintenance Plan? | Yes   | Yes  |
| 4.2 Resources                                     | Yes   | Yes  |
| 4.3 Information                                   | Yes   | Yes  |
| 4.4 Activity Control & Management                 | Yes   | Yes  |

Strategic Interpretation

Detail situation assessments per Topic element

4.1 Operation & Maintenance Plan

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | The municipality does have Operation & Maintenance Plan in place. |
|---------------------------------|---|

4.1.1 Is There an Operation and Maintenance Plan?

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | There is Operational and Maintenance Plan in place. |
|---------------------------------|---|

4.2 Resources

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | The available resources (staff/equipment, tools, spare parts) meets basic requirements for operation and maintenance of infrastructure. |
|---------------------------------|---|

Water Services Development Plan

4.3 Information

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | There is adequate information access in terms of Manuals Available, Asset Register, As-built information, GIS, Operation and Maintenance of infrastructure. |
|---------------------------------|---|

4.4 Activity Control & Management

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | There are adequate Activity & Control Management: Procedures, Record keeping, Quality Control procedures, Risk Management and Reporting. |
|---------------------------------|--|

| Business Element Report Items                     | Compliance Score | Intervention Required | %   | Solution description as identified by Master Plan  | %   | Is there an Existing project addressing this problem? | % | Does this current listed project address the problem totally? | % | Project Approved by Council as part of WSDP Database? | % | Approved by council, in project database and part of 5 yr IDP cycle projects | % | Project listed in 3 yr MTEF - cycle | % | Total Points | Current Demand Overall Scoring % |
|---|------------------|-----------------------|-----|--|-----|---|---|---|---|---|---|--|---|-------------------------------------|---|--------------|----------------------------------|
| 4.1 Operation & Maintenance Plan                  | 90               | Yes                   | 100 | Maintain Operation and Maintenance plan.   | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 4.1.1 Is There an Operation and Maintenance Plan? | 90               | Yes                   | 100 | Maintain Operational and Maintenance Plan.   | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 4.2 Resources                                     | 90               | Yes                   | 100 | Resources meets minimum basic requirements.  | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 4.3 Information                                   | 90               | Yes                   | 100 | Maintain & Update Access to Information including Manuals Available, Asset Registers GIS and As Built Information. | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 4.4 Activity Control & Management                 | 0                | Yes                   | 100 | Activity Control and management meets the minimum basic requirements.  | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |

**Demand Overall Scoring Average** 28.57

WSDP FY2023: Strategies and Objectives

Breede Valley

| Objective | Key | Baseline (2022 | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|-----------|-----|----------------|--------|--------|--------|--------|--------|
|           |     |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|           |     |                |        |        |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy | Key Performance Indicator | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|-----------------------|---------------------------|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |                       |                           |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |                       |                           |                            |                | Target | Target | Target | Target | Target |
|    |                       |                           |                            |                |        |        |        |        |        |
|    |                       |                           |                            |                |        |        |        |        |        |

Water Services Development Plan

Topic 5: Conservation & Demand Management

Topic 5.1: Water Resource Management

| Demand Info   |                    |                  |
|---|--------------------|------------------|
| Question  | Resource Available | Assessment Score |
| 5.1 Reducing unaccounted water and water inefficiencies           |                    |                  |
| 5.1.1 Night flow metering   | 1                  | 90               |
| 5.1.2 Day flow metering   | 1                  | 90               |
| 5.1.3 Reticulation leaks  | 1                  | 90               |
| 5.1.4 Illegal connections   | 1                  | 90               |
| 5.1.5 Un-metered connections                                      | 1                  | 90               |
| 5.2 Leak and meter repair programmes. Consumer units targeted by: |                    |                  |

Water Services Development Plan

|   |   |    |
|---|---|----|
| 5.2.1 Leak repair assistance programme  | 1 | 90 |
| 5.2.2 Retro-fitting of water inefficient toilets                                  | 3 | 90 |
| 5.2.3 Meter repair programme  | 1 | 90 |
| 5.3 Consumer/end-use demand management: Public Information & Education Programmes |   |    |
| 5.3.1 Schools targeted by education programmes                                    | 1 | 90 |
| 5.3.2 Consumers targeted by public information programmes                         | 1 | 90 |

|                               |                              |                         |
|-------------------------------|------------------------------|-------------------------|
| <b>Demand Info Question 8</b> |                              |                         |
| <b>Question</b>               | <b>Number of Settlements</b> | <b>Assessment Score</b> |

|  |   |    |
|--|---|----|
| Conjunctive use of surface - and groundwater |   |    |
| 891  | 4 | 90 |
| 893  | 4 | 90 |
| 894  | 4 | 90 |

Water Services Development Plan

| Demand Info Question 9                           |        |                  |
|--|--------|------------------|
| Question   | Yes/No | Assessment Score |
| 5.5 Working for Water                            |        |                  |
| Is there a Working for Water Programme in place: | 1      | 90               |

| Demand Info Question 10            |                  |
|------------------------------------|------------------|
| Project Name                       | Assessment Score |
| Provide List of Projects           |                  |
| Water meter replacement            | 80               |
| Piloting of smart metering options | 80               |
|                                    |                  |

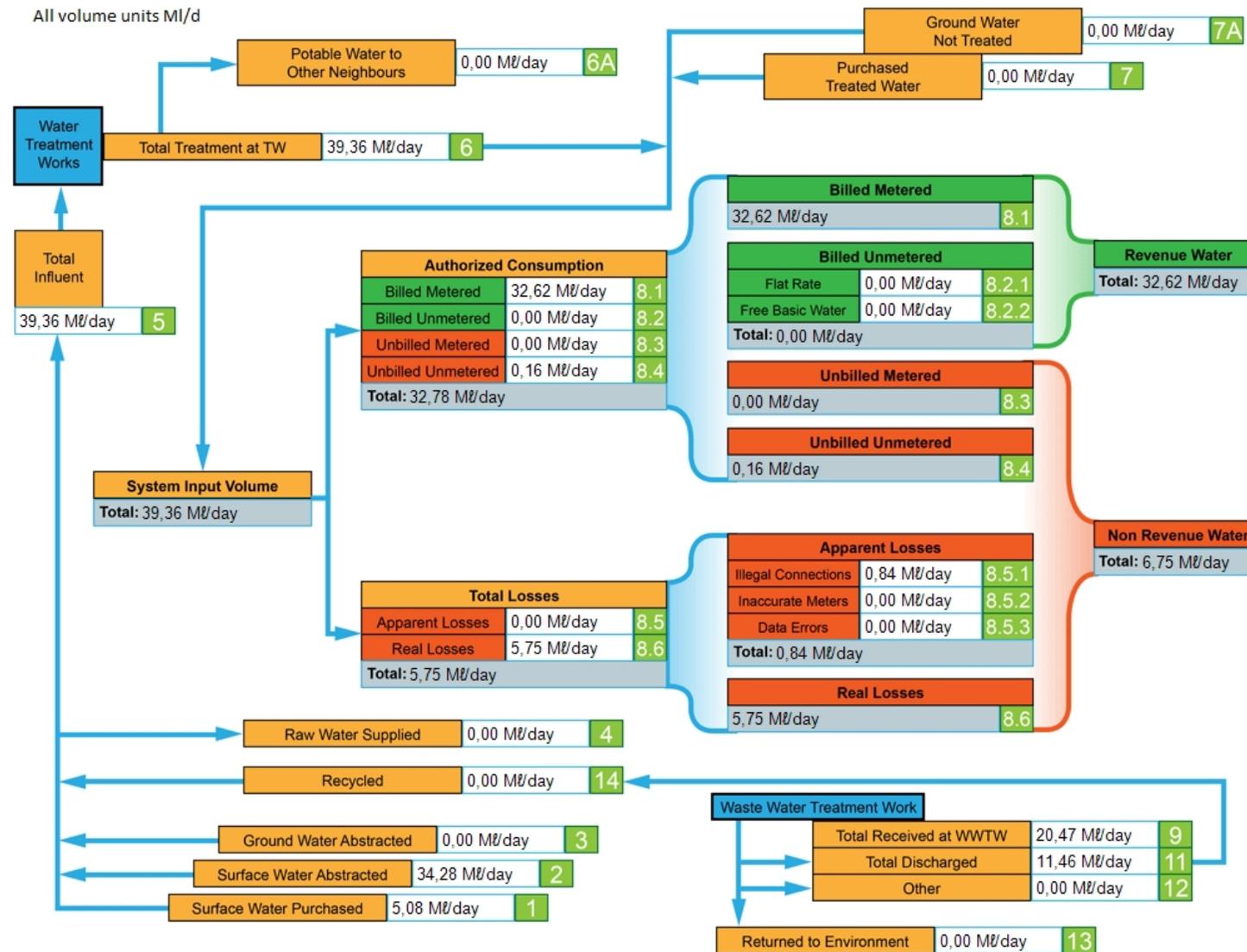
Water Services Development Plan

|  |    |
|--|----|
|  |    |
|  |    |
|  |    |
|  | 80 |

| Topic 5.1 Master Plan   |   |  |
|---|---|--|
| Section   | Is there a master plan to address this problem? | Does this plan address the plan address this problem 100%? |
| 5.1 Reducing unaccounted water and water inefficiencies                           | Yes   | Yes  |
| 5.2 Leak and meter repair programmes.   | Yes   | Yes  |
| 5.3 Consumer/end-use demand management: Public Information & Education Programmes | Yes   | Yes  |
| 5.4: Conjunctive use of surface - and groundwater                                 | Yes   | Yes  |
| 5.5 Working for Water   | Yes   | Yes  |

**Topic 5.2: Water Balance**

Water Services Development Plan



Topic 5.2: Water Balance

Water Services Development Plan

| Questions   | Assessment Score |
|---|------------------|
| 5.2.1 Amount of surface water purchased.  | 90               |
| 5.2.2 Amount of surface water abstracted.   | 90               |
| 5.2.3 Amount of ground water abstracted.  | 90               |
| 5.2.4 Amount of raw water supplied.   | 90               |
| 5.2.5 Total influent of water to water treatment plants.  | 90               |
| 5.2.6 Total water treated at water treatment plants.  | 90               |
| 5.2.6A Potable water sent to neighbours.  | 90               |
| 5.2.7 Total amount of treated water purchased.  | 90               |
| 5.2.7A Amount of untreated water pumped directly into reticulation system.  | 90               |
| 5.2.8.1 Amount of billed and metered water consumed.  | 90               |
| 5.2.8.2 Amount of billed, but not metered, water consumed.  | 90               |
| 5.2.8.3 Amount of unbilled metered water consumed.  | 90               |
| 5.2.8.4 Amount of unbilled and unmetered water consumed.  | 90               |
| 5.2.8.5 Apparent loss of water.   | 90               |
| 5.2.8.6 Real loss of water.   | 90               |
| 5.2.8.2.1 Water is billed for based on a flat rate tariff (i.e. not based on a meter reading).                                | 90               |
| 5.2.8.2.2 Free basic water used through unbilled unmetered stand pipes or yard connections.                                   | 90               |
| 5.2.8.5.1 Water used through illegal connections.   | 90               |
| 5.2.8.5.2 Water used but not billed for because of inaccurate meters.   | 90               |
| 5.2.8.5.3 Water used but not billed for because of data transfer errors, low estimated readings or any administrative errors. | 90               |
| 5.2.9 Total amount of water received at waste water treatment works.  | 90               |
| 5.2.11 Total amount of water discharged from waste water treatment works.   | 90               |
| 5.2.12 Other  | 90               |
| 5.2.13 Amount of water returned to the environment.   | 90               |
| 5.2.14 Amount of recycled water supplied.   | 90               |

Water Services Development Plan

Topic 5.2 Master Plan

| Topic 5.2 Master Plan |   |  |
|-----------------------|---|--|
| Section               | Is there a master plan that addresses this problem? | Does this plan address this problem 100% ? |
| 5.2 Water Balance     | Yes   | Yes  |

Strategic Interpretation

Detail situation assessments per Topic element

5.1 Reducing unaccounted water and water inefficiencies

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | The municipality has operation and maintenance in place to reduce unaccounted water and inefficiencies. |
|---------------------------------|---|

5.2 Leak and meter repair programmes.

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | The municipality does have a leak and meter repair programme in place |
|---------------------------------|---|

5.3 Consumer/end-use demand management: Public Information & Education Programmes

Water Services Development Plan

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | The municipality has a Public Awareness and Education programme in place to address consumer and end user demand management. |
|---------------------------------|--|

5.4: Conjunctive use of surface - and groundwater

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | Investigation the conjunctive use of surface and ground water resources to maintain current and future water requirements. |
|---------------------------------|--|

5.5 Working for Water

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Interpret Situation Assessment: | Working for water programme in place. |
|---------------------------------|---------------------------------------|

5.2 Water Balance

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | BVLM has a water balance system in place. |
|---------------------------------|---|

| Business Element Report Items   | Compliance Score | Intervention Required | %   | Solution description as identified by Master Plan                  | %   | Is there an Existing project addressing this problem? | %   | Does this current listed project address the problem totally? | %   | Project Approved by Council as part of WSDP Database? | %   | Approved by council, in project database and part of 5 yr IDP cycle projects | %   | Project listed in 3 yr MTEF - cycle | %   | Total Points | Current Demand Overall Scoring % |
|---|------------------|-----------------------|-----|--|-----|---|-----|---|-----|---|-----|--|-----|-------------------------------------|-----|--------------|----------------------------------|
| 5.1 Reducing unaccounted water and water inefficiencies                           | 90               | Yes                   | 100 | Maintain the plans to reduce unaccounted water and inefficiencies. | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | Yes                                 | 100 | 700          | 100                              |
| 5.2 Leak and meter repair programmes.   | 90               | Yes                   | 100 | maintain the leak and water repair programme in place.             | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | Yes                                 | 100 | 700          | 100                              |
| 5.3 Consumer/end-use demand management: Public Information & Education Programmes | 90               | Yes                   | 100 | Municipality to maintain the education programme in place.         | 100 | Yes   | 100 | Yes   | 100 | Yes   | 100 | Yes  | 100 | No                                  | 0   | 600          | 85.71                            |

Water Services Development Plan

|   |    |     |     |  |     |    |   |    |   |    |   |    |   |    |   |     |       |
|---|----|-----|-----|--|-----|----|---|----|---|----|---|----|---|----|---|-----|-------|
| 5.4: Conjunctive use of surface - and groundwater | 80 | Yes | 100 | Continued investigation on conjunctive surface and groundwater resources to increase the supply sources efficiently. | 100 | No | 0 | 200 | 28.57 |
| 5.5 Working for Water                             | 0  | Yes | 100 | Working for Water Programme.   | 100 | No | 0 | 200 | 28.57 |
| 5.2 Water Balance                                 | 0  | Yes | 100 | Maintain the water balance.  | 100 | No | 0 | 200 | 28.57 |

Demand Overall Scoring Average

61.9

WSDP FY2023: Strategies and Objectives

Breede Valley

| Nr | Objective<br>Strategy | Key Performance Indicator | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|-----------------------|---------------------------|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |                       |                           |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |                       |                           |                            |                | Target | Target | Target | Target | Target |
|    |                       |                           |                            |                |        |        |        |        |        |
|    |                       |                           |                            |                |        |        |        |        |        |

WSDP FY2023: Strategies and Objectives

Breede Valley

| Nr            | Objective<br>Strategy | Key Performance Indicator | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|---------------|-----------------------|---------------------------|----------------------------|----------------|--------|--------|--------|--------|--------|
|               |                       |                           |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|               |                       |                           |                            |                | Target | Target | Target | Target | Target |
| Water Balance |                       |                           |                            |                |        |        |        |        |        |
|               |                       |                           |                            |                |        |        |        |        |        |

Water Services Development Plan

| Nr | Objective<br>Strategy  | Key Performance Indicator   | Baseline (2022 status quo) | Linked Project | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|----|--|---|----------------------------|----------------|--------|--------|--------|--------|--------|
|    |  |   |                            |                | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|    |  |   |                            |                | Target | Target | Target | Target | Target |
| 33 | Demand Management, through Monitoring of Water Usage, Water Resources, through effective metering. Conservation and Demand Management, through Water Use Management and Billing. | Municipality-wide: Water demand management interventions in all towns, incl. zone meters, telemetry, pressure management, leak detection, community education, tariffs, reuse of waste water etc. | 1                          |                |        |        |        |        |        |

Water Services Development Plan

Topic 6: Water Resources

| * Current Water Sources          | * Number of sources | * Current abstraction (Mm3/A) | Components abstraction registered | Components abstraction recorded | * Licensed abstraction (Mm3/A) | * Community water supply |       | Assesment Score |
|----------------------------------|---------------------|-------------------------------|-----------------------------------|---------------------------------|--------------------------------|--------------------------|-------|-----------------|
|                                  |                     |                               |                                   |                                 |                                | Rural                    | Urban |                 |
| Boreholes                        | 7                   | 0.04672                       | 7                                 | 7                               | 0                              |                          |       | 80              |
| Surface Water Abstract           | 7                   | 12.338901                     | 7                                 | 7                               | 19.295                         |                          | 4     | 80              |
| External Sources (Bulk Purchase) |                     |                               |                                   |                                 |                                |                          |       | 80              |
| Water returned to source         |                     |                               |                                   |                                 |                                |                          |       | 80              |
| Conjunctive Use                  |                     |                               |                                   |                                 |                                |                          |       | 80              |

| Additional Source Available | * Number of sources | Potential Volume | * Licensed abstraction (Mm3/A) | Assessment Score |
|-----------------------------|---------------------|------------------|--------------------------------|------------------|
| Ground Water                |                     |                  |                                | 90               |

Water Services Development Plan

|                                  |  |  |  |    |
|----------------------------------|--|--|--|----|
| Surface Water                    |  |  |  | 90 |
| External Sources (Bulk Purchase) |  |  |  | 90 |

| Question                             | In Place | Assessment Score |
|--------------------------------------|----------|------------------|
| 6.2 Monitoring                       |          |                  |
| Is there a monitoring plan in place? | Yes      | 90               |

| Question   | General Assessment | Status Quo | Assessment Score |
|--|--------------------|------------|------------------|
| 6.2 Monitoring   |                    |            |                  |
| 6.2.1 % of water abstracted monitored:<br>Surface water                                | 100                | No         | 90               |
| 6.2.2 % of water abstracted monitored:<br>Ground water                                 | 100                | No         | 90               |
| 6.2.4 Surface water levels (1: daily, 2:<br>weekly, 3: monthly, 4: annually, 5: never) | 2                  | No         | 90               |
| 6.2.5 Ground water levels (1: daily, 2:<br>weekly, 3: monthly, 4: annually, 5: never)  | 3                  | No         | 90               |

Water Services Development Plan

|   |   |    |    |
|---|---|----|----|
| 6.2.6 Water quality for formal schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)      | 2 | No | 90 |
| 6.2.7 Water quality for rudimentary schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never) | 2 | No | 90 |
| 6.2.8 Borehole abstraction? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)                  | 3 | No | 90 |

| Question                               | In Place | Assessment Score |
|--|----------|------------------|
| 6.3 Water Quality                      |          |                  |
| Is there a Water Safety Plan in Place? | Yes      | 90               |

| Question   | General Assessment | Status Quo | Assessment Score |
|--|--------------------|------------|------------------|
| 6.3 Water Quality  |                    |            |                  |
| 6.3.1 Reporting on quality of water taken from source: urban & rural | 100                | No         | 90               |
| 6.3.2 Quality of water returned to the resource: urban               | 0                  | No         | 90               |
| 6.3.3 Quality of water returned to the resource: rural               | 0                  | No         | 90               |

Water Services Development Plan

|   |     |    |    |
|---|-----|----|----|
| 6.3.4 Is there a Pollution contingency measures plan in place?                  | 100 | No | 90 |
| 6.3.5 Quality of water taken from source: urban - % monitored by WSA self?      | 100 | No | 90 |
| 6.3.6 Quality of water taken from source: rural - % monitored by WSA self?      | 100 | No | 90 |
| 6.3.7 Quality of water returned to the source: urban - % monitored by WSA self? | 0   | No | 90 |
| 6.3.8 Quality of water returned to the source: rural - % monitored by WSA self? | 0   | No | 90 |
| 6.3.9 Are these results available in electronic format? (Yes/no)                | 100 | No | 90 |
| 6.3.10 % Time (days) within SANS 241 standards per year                         | 100 | No | 90 |

| Question   | B | AP | WTW | WP | SP | WL | SL | R | WWTW | Assessment Score |
|--|---|----|-----|----|----|----|----|---|------|------------------|
| [section]  |   |    |     |    |    |    |    |   |      |                  |
| 6.4.1.1 The abstraction IS registered with DWS     | 7 | 7  |     |    |    |    |    |   |      | 80               |
| 6.4.1.2 The abstraction IS NOT registered with DWS | 0 | 0  |     |    |    |    |    |   |      | 80               |

Water Services Development Plan

|   |   |   |  |  |  |  |  |  |  |    |
|---|---|---|--|--|--|--|--|--|--|----|
| 6.4.2.1 The abstraction IS recorded     | 7 | 7 |  |  |  |  |  |  |  | 80 |
| 6.4.2.2 The abstraction IS NOT recorded | 0 | 0 |  |  |  |  |  |  |  | 80 |

| Topic 6 Master Plan                |   |  |
|------------------------------------|---|--|
| Section                            | Is there a master plan to address this problem? | Does this plan address the plan address this problem 100%? |
| 6.1.1 Current Water Sources        | Yes   | Yes  |
| 6.2 Monitoring                     | Yes   | Yes  |
| 6.3 Water Quality                  | Yes   | Yes  |
| 6.4 Operation                      | Yes   | Yes  |
| 6.1.2 Additional Sources Available | Yes   | Yes  |

Strategic Interpretation

Detail situation assessments per Topic element

6.1.1 Current Water Sources

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | The current water resources are adequate for the current water demand. |
|---------------------------------|--|

6.2 Monitoring

Water Services Development Plan

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | The municipality has a monitoring programme in place. |
|---------------------------------|---|

6.3 Water Quality

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | Water quality is based on regulatory basis to SANS 1041 basic requirements. |
|---------------------------------|---|

6.4 Operation

|                                 |  |
|---------------------------------|--|
| Interpret Situation Assessment: | All assets are operational, with long expected lifespan. |
|---------------------------------|--|

6.1.2 Additional Sources Available

|                                 |   |
|---------------------------------|---|
| Interpret Situation Assessment: | Continued investigation and exploration of surface and groundwater sources to sustain water requirements. |
|---------------------------------|---|

| Business Element Report Items | Compliancy Score | Intervention Required | %   | Solution description as identified by Master Plan            | %   | Is there an Existing project addressing this problem? | % | Does this current listed project address the problem totally? | % | Project Approved by Council as part of WSDP Database? | % | Approved by council, in project database and part of 5 yr IDP cycle projects | % | Project listed in 3 yr MTEF - cycle | % | Total Points | Current Demand Overall Scoring % |
|-------------------------------|------------------|-----------------------|-----|--|-----|---|---|---|---|---|---|--|---|-------------------------------------|---|--------------|----------------------------------|
| 6.1.1 Current Water Sources   | 83.75            | Yes                   | 100 | Adequate current basic water requirements.                   | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 6.2 Monitoring                | 90               | Yes                   | 100 | Water monitoring programme in place.                         | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |
| 6.3 Water Quality             | 90               | Yes                   | 100 | Maintain of the Water Quality Monitoring Processes with DWS. | 100 | No  | 0 | No  | 0 | No  | 0 | No   | 0 | No                                  | 0 | 200          | 28.57                            |

Water Services Development Plan

|                                       |    |     |     |  |     |     |     |     |     |     |     |     |     |     |     |              |       |
|---------------------------------------|----|-----|-----|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------|-------|
| 6.4 Operation                         | 80 | Yes | 100 | Maintain Operational procedures, to achieve functional water and sanitation system for all households. | 100 | No  | 0   | 200          | 28.57 |
| 6.1.2 Additional Sources Available    | 0  | Yes | 100 | Investigation and exploration of surface and groundwater sources.                                      | 100 | Yes | 100 | 700          | 100   |
| <b>Demand Overall Scoring Average</b> |    |     |     |  |     |     |     |     |     |     |     |     |     |     |     | <b>42.86</b> |       |

WSDP FY2023: Strategies and Objectives

Breede Valley

| Nr                     | Objective<br>Strategy                                | Key Performance Indicator         | Baseline (2022 status quo) | Linked Project                                   | WSDP   | WSDP   | WSDP   | WSDP   | WSDP   |
|------------------------|--|-----------------------------------|----------------------------|--|--------|--------|--------|--------|--------|
|                        |  |                                   |                            |  | FY2023 | FY2024 | FY2025 | FY2026 | FY2027 |
|                        |  |                                   |                            |  | Target | Target | Target | Target | Target |
| <b>Water Resources</b> |  |                                   |                            |  |        |        |        |        |        |
| 1                      | Securing of Water Supply from Surface Water Sources. | Increase Stetteynskloof Dam level | 0                          | CP_0461, Increase dam Level (Stetteynskloof Dam) | 0      | 0      | 0      | 0      | 0      |

Water Services Development Plan

Topic 7: Finance

Expenditure Cost Standards & Ratios (Rand Million)

|   |  | 2023        | 2024     | 2025 | 2026  |      |       |      |       |
|---|--|-------------|----------|------|-------|------|-------|------|-------|
| Ratios and efficacy indicators  | Sanitation service O&M [and repair] as a % of budget   | 0.59        | 0.58     | 0.57 |       |      |       |      |       |
|   | Sanitation service O&M [and repair] as a % Asset value [PPE]   | 0.31        | 0.31     | 0.31 |       |      |       |      |       |
|   | Water service O&M [and repair] Cost as % of budget value   | 0.38        | 0.37     | 0.37 |       |      |       |      |       |
|   | Water service O&M [and repair] Cost as % of Asset value [PPE]  | 0.20        | 0.20     | 0.20 |       |      |       |      |       |
|   | Untreated waste water units released   |             |          |      |       |      |       |      |       |
|   | Cost to purify water   |             |          |      |       |      |       |      |       |
|   | Cost to deliver water to consumer  |             |          |      |       |      |       |      |       |
|   | Cost to treat waste water  |             |          |      |       |      |       |      |       |
|   | Cost to deliver waste water to treatment facility  |             |          |      |       |      |       |      |       |
|   | Blue drop cost   |             |          |      |       |      |       |      |       |
|   | Blue drop number WTW   |             |          |      |       |      |       |      |       |
|   | Green drop cost  |             |          |      |       |      |       |      |       |
|   | Green drop WWTW number of plants   |             |          |      |       |      |       |      |       |
| <b>Water balance cost [Non Revenue Water]</b>                             |  |             |          |      |       |      |       |      |       |
| MTEF  |  | 2023        |          | 2024 |       | 2025 |       | 2026 |       |
|   |  | R/c         | Units    | R/c  | Units | R/c  | Units | R/c  | Units |
| Operation /Function / Process: Water Balance Cost / Revenue               | Metered units bulk-raw water, or bulk potable water purchased and- or produced. Water that goes into a water supply system |             | 13727506 |      |       |      |       |      |       |
|   | Billed Metered Consumption   | 55873000.00 | 20610    |      |       |      |       |      |       |
|   | Billed Un Metered Consumption  |             |          |      |       |      |       |      |       |
|   | Un Billed Metered Consumption  |             |          |      |       |      |       |      |       |
|   | Un Billed Un Metered Consumption   |             | 18225    |      |       |      |       |      |       |
|   | Apparent (commercial) losses   |             | 563446   |      |       |      |       |      |       |
|   | Real (physical) losses   |             | 2440363  |      |       |      |       |      |       |
| Water used [lost] during the process of Operation, Repair and Maintenance |  |             |          |      |       |      |       |      |       |

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| Operational Resource Costs [Cost to operate & or deliver service]   |  |             |  |             |             |      |
|---|--|-------------|--|-------------|-------------|------|
| MTEF  |  | 2023        |  | 2024        | 2026        | 2027 |
| Resource (Required/used for Service delivery activities - In Public Procurement there are generally three procurement categories: goods, works and services.) | Staff  | 49958286.00 |  | 51956620.00 | 54294669.00 |      |
|   | Vehicles / transport                             | 297200.00   |  | 310400.00   | 325100.00   |      |
|   | Chemicals  | 14996761.62 |  | 15896567.32 | 16850361.36 |      |
|   | Materials  | 13781195.00 |  | 14047895.00 | 14357995.00 |      |
|   | Equipment  | 4786700.00  |  | 5073902.00  | 5378336.12  |      |
|   | Tools  |             |  |             |             |      |
|   | Operation  |             |  |             |             |      |
|   | Administration                                   | 14861495.00 |  | 15753184.70 | 16698375.78 |      |
|   | Maintenance (corrective; adaptive; preventative) | 13174064.00 |  | 13703919.00 | 14322582.00 |      |
|   | Billing  |             |  |             |             |      |
|   | Revenue collection                               |             |  |             |             |      |
|   | Management                                       |             |  |             |             |      |

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| MTEF Expenditure Million                            |          |   |             |             |
|---|----------|---|-------------|-------------|
| MTEF  | 2023     | 2024  | 2025        | 2026        |
| Property - WTW                                      |          |   |             |             |
| Dams - WTW  | 28335500 | 30035630  | 31837767.8  | 33748033.87 |
| Springs - WTW                                       |          |   |             |             |
| Weirs - WTW   |          |   |             |             |
| Boreholes - WTW                                     |          |   |             |             |
| Reservoirs - WTW                                    |          |   |             |             |
| Water Treatment Works (WTW) Civil works             |          |   |             |             |
| Water Treatment Works (WTW) Mechanical works        |          |   |             |             |
| Water Treatment Works (WTW) Electrical works        |          |   |             |             |
| Pump Station (PS) Civil works                       |          |   |             |             |
| Pump Station (PS) Mechanical works                  |          |   |             |             |
| Pump Station (PS) Electrical works                  |          |   |             |             |
| Internal [water] reticulation - WTW                 | 16416518 | 17401509.08   | 18445599.62 | 19552335.6  |
| Bulk [water] reticulation - WTW                     | 9285400  | 9842524   | 10433075.44 | 11059059.97 |
| Meters Bulk - WTW                                   |          |   |             |             |
| Meters Household - WTW                              |          |   |             |             |
| Property - WWTW                                     | 10931700 | 11587602  | 12282858.12 | 13019829.61 |
| Waste Water Treatment Works (WWTW) Civil works      |          |   |             |             |
| Waste Water Treatment Works (WWTW) Mechanical works |          |   |             |             |
| Waste Water Treatment Works (WWTW) Electrical works |          |   |             |             |
| Pump Station (PS) Civil works - WWTW                |          |   |             |             |
| Pump Station (PS) Mechanical works - WWTW           |          |   |             |             |
| Pump Station (PS) Electrical works - WWTW           |          |   |             |             |
| Internal sanitation reticulation                    | 13948400 | 14785304  | 15672422.24 | 16612767.57 |
| Bulk sanitation reticulation - WWTW                 |          |   |             |             |
| Meters Bulk - WWTW                                  |          |   |             |             |
| Ponds - WWTW  |          |   |             |             |
| <b>Total</b>  |          |   |             |             |
| Notes:  | 1        | Pump stations should be included separate itemised in asset registers due to the impact of type of station [e.g. diesel costs;Distance; Etc.] |             |             |
|   | 2        | NRW excludes FBS and is a MTEF cost to service  |             |             |

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| CAPEX Million   |   |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|---|---|------------------------------------|----------------------------------|--------------------------------|--------------------------------------|---|------------------------------------|---------------------------------------|---|--|------------------------------------|--|--|--------------------------------|--|
| Assets per Class  | Fund source name                          | Transfers recognised - operational | Local Government Equitable Share | Municipal Infrastructure Grant | Municipal Water Infrastructure Grant | Expanded Public Works Programme Integrated Grant (Municipality) | Urban Settlement Development Grant | Rural Households Infrastructure Grant | Backlogs in Water and Sanitation at Clinics and Schools Grant | Implementation of Water Services Projects [ACIP; Etc.] | Regional Bulk Infrastructure Grant | Water Services Operating and Transfer Subsidy Grant (Schedule 6) | Water Services Operating and Transfer Subsidy Grant (Schedule 7) | Municipal Drought Relief Grant | Accelerated Community Infrastructure Programme |
|   | Votes                                     |                                    |                                  | R 30 176 593                   | R 5 107 000                          |   |                                    |                                       |   |  |                                    |  |  |                                |  |
| Property - Plant and Equipment - Water Treatment System       | Property - WTW                            |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Dams - WTW                                |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Springs - WTW                             |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Weirs - WTW                               |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Boreholes - WTW                           |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Reservoirs - WTW                          |                                    |                                  | 18481271.00                    |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | WTW Civil works                           |                                    |                                  | 7773398.00                     | 2557000.00                           |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | WTW Mechanical works                      |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | WTW Electrical works                      |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Pump Station (PS) Civil works             |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Pump Station (PS) Mechanical works        |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Pump Station (PS) Electrical works        |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Internal [water] reticulation - WTW       |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Bulk [water] reticulation - WTW           |                                    |                                  | 3421924.00                     |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Meters Bulk - WTW                         |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
| Meters Household - WTW  |   |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
| Property - Plant and Equipment - Waste Water Treatment System | Property                                  |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | WWTW Civil works                          |                                    |                                  | 500000.00                      | 2550000.00                           |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | WWTW Mechanical works                     |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | WWTW Electrical works                     |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Pump Station (PS) Civil works - WWTW      |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Pump Station (PS) Mechanical works - WWTW |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Pump Station (PS) Electrical works - WWTW |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Internal sanitation reticulation          |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Bulk sanitation reticulation              |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
|   | Meters Bulk WWTW                          |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |
| Ponds - WWTW  |   |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |

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| Assets per Class | Fund source name | Transfers recognised - operational | Local Government Equitable Share | Municipal Infrastructure Grant | Municipal Water Infrastructure Grant | Expanded Public Works Programme Integrated Grant (Municipality) | Urban Settlement Development Grant | Rural Households Infrastructure Grant | Backlogs in Water and Sanitation at Clinics and Schools Grant | Implementation of Water Services Projects (ACIP, Etc.) | Regional Bulk Infrastructure Grant | Water Services Operating and Transfer Subsidy Grant (Schedule 6) | Water Services Operating and Transfer Subsidy Grant (Schedule 7) | Municipal Drought Relief Grant | Accelerated Community Infrastructure Programme | Total |
|------------------|------------------|------------------------------------|----------------------------------|--------------------------------|--------------------------------------|---|------------------------------------|---------------------------------------|---|--|------------------------------------|--|--|--------------------------------|--|-------|
|                  |                  |                                    |                                  |                                |                                      |   |                                    |                                       |   |  |                                    |  |  |                                |  |       |

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| REVENUE Million  |                           |   |   |                                    |                 |                                       |                 |   |                   |
|--|---------------------------|---|---|------------------------------------|-----------------|---------------------------------------|-----------------|---|-------------------|
| Fund source name   | Service charges - service | Water Services Operating and Transfer Subsidy Grant (Sch 6) | Water Services Operating and Transfer Subsidy Grant (Sch 7) | Transfers recognised - operational | Agency services | Interest earned - outstanding debtors | Equitable Share | Trading Entities (e.g. Rand Water; Pikitup; Etc.) | Partnership Funds |
| Votes  |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Agency services  |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Agriculture + rural water services   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Agriculture + rural sanitation service   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| FBS Sanitation   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| FBS Water  |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Urban HLS Water  |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Sanitation Urban HLS   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Industrial Water   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Industrial Waste Water   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| NRW  |                           |   |   |                                    |                 |                                       |                 |   |                   |
| <b>Total</b>   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| The assumption is that rural and urban costs are differentiated and that Assumption is made that potable water and industrial water tariffs differ |                           |   |   |                                    |                 |                                       |                 |   |                   |
| NRW excludes FBS and is a MTEF cost to service   |                           |   |   |                                    |                 |                                       |                 |   |                   |
| Pump stations should be included separate itemised in asset registers due to the impact of type of station [e.g. diesel costs; Etc.]               |                           |   |   |                                    |                 |                                       |                 |   |                   |

**Topic 8: Water Services Institutional Arrangements and Customer Services**

Context Information

Water Services Development Plan

| Questions  | Answers   |  |  |                                    |                        |                                  |                |
|--|---|--|--|------------------------------------|------------------------|----------------------------------|----------------|
| Date of completion   | 09/15/2022 00:00:00                                   |  |  |                                    |                        |                                  |                |
| Municipality type  | A - Metro   | B1 - LM  | B2 - LM  | B3 - LM                            | B4 - LM                | C2 - DM                          |                |
| Water service provider type  | Internal (i.e. municipality)                          | External (e.g. Water Board, service provider)        | Combination of internal and external                 |                                    |                        |                                  |                |
| Wastewater service provider type   | Internal (i.e. municipality)                          | External (e.g. Water Care Company, service provider) | Combination of internal and external                 |                                    |                        |                                  |                |
| Water system maintenance   | Internal (i.e. municipality)                          | External (e.g. service provider)                     | Combination of internal and external                 |                                    |                        |                                  |                |
| Wastewater system maintenance  | Internal (i.e. municipality)                          | External (e.g. service provider)                     | Combination of internal and external                 |                                    |                        |                                  |                |
| You are able to respond within necessary timeframes to emergencies, via internal staff and resources, or through other procurement processes (e.g. 'as and when' required contracts) | Yes, strongly agree                                   | In place, with occasional non-optimal response       | Partially in place, but not ideal                    | No, disagree                       | Don't know             |                                  |                |
| The key staff (i.e. managerial) turnover in your WSA   | High: > 25% (i.e. problematic, frequently lose staff) | Moderate: 10 - 25% (i.e. occasionally lose staff)    | Low: < 10% (i.e. not an issue, good staff retention) | Don't know                         |                        |                                  |                |
| Your WSA has developed and implemented a scarce skills policy  | Yes, developed and implemented                        | Yes, developed and partially implemented             | In development                                       | No, not developed                  | Don't know             |                                  |                |
| Your WSA is preparing for the impacts of pending and/or new regulations (for e.g. Regulation 813 (previously Regulation 17) (WTW and WWTW process controllers))                      | Yes, strongly agree                                   | In process   | No, disagree   | Don't know                         |                        |                                  |                |
| Your WSA actively provides required drinking water related data to the Regulator (e.g. Blue Drop participation)  | Yes, strongly agree                                   | In process   | No, disagree   | Don't know                         |                        |                                  |                |
| Regular drinking-water quality monitoring and management (including boreholes) is performed for ALL communities/towns in the WSA   | Yes, all (i.e. 100% of WSA population)                | Almost all (i.e. >95% of WSA population)             | Most (i.e. >75% of WSA population)                   | Some (i.e. >50% of WSA population) | <50% of WSA population | None (i.e. 0% of WSA population) | Don't know     |
| WTWs operational capacity as a function of total design capacity (NOTE: Combine for ALL WTWs within your WSA)  | >105%   | >100% - 105%   | >95% - 100%  | 90% - 95%                          | <90%                   | Don't know                       | Not applicable |

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|  |  |   |   |  |            |                |                |
|--|--|---|---|--|------------|----------------|----------------|
| Your WSA actively provides required wastewater related data to the Regulator (e.g. Green Drop participation)   | Yes, strongly agree  | In process  | No, disagree  | Don't know   |            |                |                |
| Regular wastewater quality monitoring and management is performed for ALL wastewater systems in the WSA  | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)  | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%       | None (i.e. 0%) | Don't know     |
| WWTWs operational flow capacity as a function of total design capacity (NOTE: Combine for ALL WWTWs within your WSA)   | >105%  | >100% - 105%  | >95% - 100%   | 90% - 95%  | <90%       | Don't know     | Not applicable |
| WWTWs operational COD load as a function of total design load (NOTE: Combine for ALL WWTWs within your WSA)  | >105%  | >100% - 105%  | >95% - 100%   | 90% - 95%  | <90%       | Don't know     | Not applicable |
| Your WSA actively provides required water conservation and water demand management related data to the Regulator (e.g. No Drop participation)  | Yes, strongly agree  | In process  | No, disagree  | Don't know   |            |                |                |
| Your WSA actively promotes improved hygiene practices through campaigns in communities (e.g. hand washing education, safe and improved sanitation)   | Yes strongly agree (i.e. campaigns established and functioning)                      | Partially in place, but not ideal                               | No, disagree  | Don't know   |            |                |                |
| Billing & accounts - With regards to water and sanitation bills, please indicate the frequency of billing and posting of accounts.   | Actual billing and posting of accounts on a monthly basis                            | Actual billing and posting of accounts at least every 2nd month | Billing and posting of accounts at least on a quarterly basis | Billing and posting of accounts less frequently than quarterly | Don't know |                |                |
| Development contributions - With regard to new developments, by-laws in your municipality require developers to adequately contribute towards construction of new bulk infrastructure (i.e. developers charges). | Yes, strongly agree  | In place, with occasional non-optimal response                  | in process  | No, disagree   | Don't know |                |                |
| Please indicate what proportion of your requested water and sanitation services budget (CAPEX and OPEX) is actually funded?  | >100%  | >90% - 100%   | >80% - 90%  | >70% - 80%   | <70%       | Don't know     |                |
| Council is stable with functional Council meetings.  | Yes, strongly agree (i.e. Council meetings are held at least quarterly)              | Partially in place, but not ideal                               | No, disagree  | Don't know   |            |                |                |
| Council has functional Oversight Committees and Ward Committees, as appropriate (DM would be served via LM Ward Committees)  | Yes, strongly agree (i.e. Oversight and Ward Committees established and functioning) | Partially in place, but not ideal                               | No, disagree  | Don't know   |            |                |                |

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|   |   |   |                                   |                          |            |  |  |
|---|---|---|-----------------------------------|--------------------------|------------|--|--|
| Council has effective systems of internal control and functional governance structures (internal audit unit, audit committee, risk committee, IT governance)  | Yes, strongly agree (i.e. internal audit unit established and posts filled, governance structures in place, frequent meetings held and risk assessments conducted, audit plan developed and quarterly reports submitted to council) | Partially in place, but not ideal   | No, disagree                      | Don't know               |            |  |  |
| Forensic investigations are undertaken as and when necessary to ensure adherence to governance requirements (i.e. either internally initiated by the municipality or externally initiated by, for example, Public Protector, Auditor General) | Yes, strongly agree   | Partially in place, but not ideal   | No, disagree                      | Don't know               |            |  |  |
| Your municipality actively implements actions against identified instances of fraud and corruption, maladministration and failure to fulfil statutory obligations   | Yes, strongly agree   | In place, with occasional non-optimal response                            | Partially in place, but not ideal | No, disagree             | Don't know |  |  |
| Your municipality has policies, procedures and systems in place that negate the impact of vandalism / sabotage of municipal water and sanitation infrastructure on services delivery  | Yes, strongly agree   | In place, with occasional non-optimal response                            | Partially in place, but not ideal | No, disagree             | Don't know |  |  |
| Your municipality has ongoing and appropriate public participation, is transparent in its decision making, and is accountable to its constituency (fiscal and social).  | Yes, strongly agree   | Partially in place, but not ideal   | No, disagree                      | Don't know               |            |  |  |
| Those of your 18 MuSSA Business Aspects which reflect Extreme and/or Highly Vulnerable, are included within your WSAs Corporate Risk Register   | Yes, strongly agree   | Partially in place, but not ideal   | No, disagree                      | Don't know               |            |  |  |
| Your MuSSA was completed with appropriate inputs from senior officials within Technical Services, Finance and Human Resources (as a minimum these 3 departments should participate).  | Yes, strongly agree (i.e. Technical Services HOD, Finance AND HR all participated)  | Agree (i.e. Technical Services HOD and either Finance OR HR participated) | Only Technical Services HOD       | Other Technical Services | Don't know |  |  |
| Names, designation and contact details (phone, email) of all MuSSA participants (e.g. Mr Thabo Smit; Technical Director; 0215436789; thabos@muni.gov.za)  | Jevon Pekeur, Acting Director: Public Services; 0233482803; jpekeur@bvm.gov.za  |   |                                   |                          |            |  |  |

**Water Services Development Plan**

Water Services Development Plan

MuSSA Questionnaire

| Questions  | Answers  |   |   |   |   |   |            |  |
|--|--|---|---|---|---|---|------------|--|
| <b>1. Water and Sanitation Services Planning</b>   |  |   |   |   |   |   |            |  |
| Your appropriate water and sanitation services planning (e.g. WSDP) and associated master planning processes include and are aligned with appropriate Water and Sewage Master Plans, Spatial Development Framework (SDF), Water Safety Plans and Wastewater Risk Abatement Plans (W2RAPs), and are aligned to your IDP and associated SDBIP targets. | Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. 100%) | Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 95%)   | Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 75%) | Yes, appropriate water services plans are developed and include all required plans and alignment (i.e. > 50%) | Plans still in development  | Plan development not yet initiated      | Don't know |  |
| You are implementing an up-to-date and adopted municipal water and sanitation services plan (e.g. WSDP.)   | Yes, municipal water and sanitation services plans up-to-date, adopted and implemented                       | Municipal water and sanitation services plans adopted and implemented, but out-of-date (i.e. requires revision) | Municipal water and sanitation services plans adopted but not yet implemented                                 | Municipal water and sanitation services plans not adopted but implemented                                     | Municipal water and sanitation services plans neither adopted nor implemented | Don't know                              |            |  |
| Your current project list addresses existing needs/shortcomings identified through the WSDP and associated master planning process.  | Yes, all projects are identified via the planning process (i.e. 100%)  | Almost all (i.e. >95% of projects)  | Most projects (i.e. >75%)   | Some projects (i.e. >50%)   | <50% of projects  | None (i.e. 0%)                          | Don't know |  |
| Project progress is monitored, tracked and reported to municipal top management/council and the Regulator (through the annual water and sanitation services report)  | Yes, strongly agree (both to municipal top management/council and Regulator)                                 | Only to municipal top management/council  | Only to Regulator   | No, disagree  | Don't know  |   |            |  |
| Projects identified through your various planning processes have been implemented in the last 3 years.   | Yes, all projects identified via planning have been implemented (i.e. 100%)                                  | Almost all implemented (i.e. >95%)  | Most implemented (i.e. >75%)  | Some implemented (i.e. >50%)  | <50% implemented  | None implemented (i.e. 0%)              | Don't know |  |
| <b>2. Management Skill Level (Technical)</b>   |  |   |   |   |   |   |            |  |
| Your council approved technical management organisational organogram meets your business requirements, and key posts are filled (e.g. Technical Director, Water Services Manager, Sanitation Services Manager).  | Yes, and all posts filled (i.e. 100%)  | Yes, and almost all posts filled (i.e. >95%)  | Yes, and most posts filled (i.e. >75%)  | Yes, but only some posts filled (i.e. >50%)   | Yes, but <50% of posts filled   | No, does not meet business requirements | Don't know |  |

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|  |  |  |   |  |  |   |            |                |
|--|--|--|---|--|--|---|------------|----------------|
| You have sufficient technical management and technical support staff.  | Yes, 100% as per approved organogram                                 | Yes, strongly agree (i.e. >95% as per approved organogram)                       | Mostly agree (i.e. >75% as per approved organogram)                   | Agree somewhat (i.e. >50% as per approved organogram)                      | <50% as per approved organogram                              | None (i.e. 0% as per approved organogram) | Don't know |                |
| Technical management and technical support staff have the correct skills/qualifications and experience as per Job Description requirements (e.g. if Job Description requires PrEng, PrTech or CPM, the staff have these qualifications). | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)   | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%   | None (i.e. 0%)                            | Don't know |                |
| Managers and technical support staff regularly attend appropriate water and sanitation services skills development/training to support professionalisation   | Quarterly (or more frequent) skills development/ training            | Bi-annual skills development/ training   | Annual skills development/ training                                   | Less frequent skills development/ training (i.e. >1 year)                  | No skills development/ training                              | Don't know                                |            |                |
| Key technical managers (e.g. Section 56 and other Senior Management) have signed and monitored Performance Agreements.   | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)   | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%   | None (i.e. 0%)                            | Don't know |                |
| <b>3. Staff Skill Levels (Technical)</b>   |  |  |   |  |  |   |            |                |
| WTWs are operated by staff with the required skills/qualifications and experience (as per Regulation 2834).  | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)   | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%   | None (i.e. 0%)                            | Don't know | Not applicable |
| WWTWs are operated by staff with the required skills/qualifications and experience (as per Regulation 2834).   | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)   | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%   | None (i.e. 0%)                            | Don't know | Not applicable |
| Water system plumbers, millwrights, mechanics and electricians have the required skills/qualifications and experience (including contractors/outsourced resources)   | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)   | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%   | None (i.e. 0%)                            | Don't know |                |
| Sewage system plumbers, millwrights, mechanics and electricians have the required skills/qualifications and experience (including contractors/outsourced resources)  | Yes, all (i.e. 100%)   | Almost all (i.e. >95%)   | Most (i.e. >75%)  | Some (i.e. >50%)   | <50%   | None (i.e. 0%)                            | Don't know |                |
| Staff regularly attend appropriate water and sanitation services skills development/training (including safety) (e.g. ESETA courses).  | Quarterly (or more frequent) skills development/ training            | Bi-annual skills development/ training   | Annual skills development/ training                                   | Less frequent skills development/ training (i.e. >1 year)                  | No skills development/ training                              | Don't know                                |            |                |
| <b>4. Technical Staff Capacity (Numbers)</b>   |  |  |   |  |  |   |            |                |
| Your council approved technical staff organisational organogram meets your business requirements, and posts are filled (i.e. Superintendent of WTWs/WWTWs and below).  | Yes, and all posts filled (i.e. 100%) as per the approved organogram | Strongly agree, and most posts filled (i.e. >95%) as per the approved organogram | Yes, and most posts filled (i.e. >75%) as per the approved organogram | Yes, but only some posts filled (i.e. >50%) as per the approved organogram | Yes, but <50% of posts filled as per the approved organogram | No, does not meet requirements            | Don't know |                |

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|--|--|--|--|---|--|---|----------------|----------------|
| WTWs are operated by the appropriate number of staff (as per Regulation 2834).   | Yes, 100% as per requirements  | Strongly agree (i.e. >95% as per requirements)                     | Mostly agree (i.e. >75% as per requirements)                         | Agree somewhat (i.e. >50% as per requirements)            | <50% as per requirements                                 | None (i.e. 0% as per requirements)            | Don't know     | Not applicable |
| WWTWs are operated by the appropriate number of staff (as per Regulation 2834).  | Yes, 100% as per requirements  | Strongly agree (i.e. >95% as per requirements)                     | Mostly agree (i.e. >75% as per requirements)                         | Agree somewhat (i.e. >50% as per requirements)            | <50% as per requirements                                 | None (i.e. 0% as per requirements)            | Don't know     | Not applicable |
| You have sufficient water and sewerage/sanitation network operations and repair staff/plumbers including contractors/outsourced resources (i.e. you have the appropriate number of staff).   | Yes, 100% as per functional requirements                                     | Strongly agree (i.e. >95% as per functional requirements)          | Mostly agree (i.e. >75% as per functional requirements)              | Agree somewhat (i.e. >50% as per functional requirements) | <50% as per functional requirements                      | None (i.e. 0% as per functional requirements) | Don't know     |                |
| An active mentoring/shadowing programme is in place where experienced staff train your younger, inexperienced municipal staff.   | Yes, strongly agree  | In place, but not ideal  | No, disagree   | Don't know  |  |   |                |                |
| <b>5. Water Resource Management (WRM)</b>  |  |  |  |   |  |   |                |                |
| The recommendations and actions from the Reconciliation Strategies (Large Systems/All Towns) have been incorporated into your WSDP, master planning and IDP processes.   | Yes, strongly agree  | In process   | No, disagree   | Don't know  | Not applicable   |   |                |                |
| The metered quantity of water available from the resources is sufficient for your current WSA needs (at the stipulated level of abstraction and assurance of supply).  | No shortage (i.e. sufficient water)  | 1 - 10% shortage   | 11-20% shortage  | 21-30% shortage   | 31-40% shortage  | 41-50% shortage                               | >50% shortage  | Don't know     |
| The metered quantity of water available from the resources is sufficient for your future WSA needs (at the stipulated level of abstraction and assurance of supply, and considering possible climate change impacts) (i.e. no shortage in 10 years). | No shortage (i.e. sufficient water)  | 1 - 10% shortage   | 11-20% shortage  | 21-30% shortage   | 31-40% shortage  | 41-50% shortage                               | >50% shortage  | Don't know     |
| The source water quality is currently acceptable for its purpose.  | Yes, strongly agree (i.e. all sources (100%) by water volume are acceptable) | Mostly agree (i.e. >75% of sources by water volume are acceptable) | Agree somewhat (i.e. >50% of sources by water volume are acceptable) | <50% of sources by water volume acceptable                | None (i.e. 0% of sources by water volume are acceptable) | Don't know                                    | Not applicable |                |
| The trend indicates a deteriorating source water quality.  | Yes, all sources (100%) by water volume are deteriorating                    | >75% of sources by water volume are deteriorating                  | >50% of sources by water volume are deteriorating                    | >25% of sources by water volume are deteriorating         | < 25% of sources by water volume are deteriorating       | No, no sources (0%) are deteriorating         | Don't know     | Not applicable |
| <b>6. Water Conservation &amp; Water Demand Management (WC/WDM)</b>  |  |  |  |   |  |   |                |                |

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|---|---|--|--|--|-----------------------------|--|---|------------|
| Your WSA has developed a council approved Water Conservation and Water Demand Strategy which includes a standard water balance (e.g. modified IWA).   | WC/WDM Strategy and water balance developed       | Only WC/WDM Strategy developed               | Only water balance developed               | None developed                               | Don't know                  |  |   |            |
| Please indicate your percentage Non-Revenue Water (NRW) as per the modified IWA water balance.  | Less than 15%                                     | Less than 20%                                | Less than 30%                              | Less than 40%                                | Less than 50%               | 50% or more                            | Don't know  |            |
| System input volumes (bulk) to the WSA are accurately monitored using calibrated bulk meters (e.g. check metering).   | Yes, all (i.e. 100%)                              | Almost all (i.e. >95%)                       | Most (i.e. >75%)                           | Some (i.e. >50%)                             | <50%                        | None (i.e. 0%)                         | Don't know  |            |
| Please indicate what percentage of all connections are metered and billed (residential and non-residential (commercial, industrial, etc.)) on a monthly basis.  | >98%  | 75% - 98%                                    | 50% - 75%                                  | <50%   | < 25%                       | No metering                            | Don't know  |            |
| Your WSA is implementing appropriate intervention programmes to reduce NRW (e.g. minimisation of night flows through pressure management, removal of unlawful connections, leak detection and repairs, consumer education/awareness).                   | Yes, strongly agree (i.e. 100% implementation)    | Mostly agree (i.e. >75% implementation)      | Agree somewhat (i.e. >50% implementation)  | <50% implementation                          | No implementation (i.e. 0%) | Don't know                             |   |            |
| <b>7. Drinking Water Safety &amp; Regulatory Compliance</b>   |   |  |  |  |                             |  |   |            |
| Please indicate your microbiological drinking-water quality compliance for E.coli (or faecal coliforms) for the communities you are monitoring, for the last 12 months.   | 99% - 100%  | 97% - <99%                                   | 95% - <97%                                 | < 95%  | Don't know                  |  |   |            |
| ALL your supply schemes, WTWs, process controllers, monitoring programmes, sample points, laboratories, results, procedures, protocols, etc. are managed with a suitable Water Safety Planning framework.   | Yes, strongly agree (i.e. 100% covered)           | Strongly agree (i.e. >95% covered)           | Mostly agree (i.e. >75% covered)           | Agree somewhat (i.e. >50% covered)           | <50% covered                | None covered (i.e. 0%)                 | Don't know  |            |
| Council have been made aware of high risk / critical water safety plan related issues (including those identified via the Blue Drop Certification programme) that require budget and actioning, and these issues have been actioned (where applicable). | Yes, strongly agree (i.e. all (100%) tabled)      | Strongly agree (i.e. >95% tabled)            | Mostly agree (i.e. >75% tabled)            | Agree somewhat (i.e. >50% tabled)            | <50% tabled                 | Issues noted but none tabled (i.e. 0%) | Not applicable (no issues requiring council resolution exist) | Don't know |
| Sufficient funds have been made available to address all these identified water safety related issues.  | Yes, strongly agree (i.e. 100% of required funds) | Strongly agree (i.e. >95% of required funds) | Mostly agree (i.e. >75% of required funds) | Agree somewhat (i.e. >50% of required funds) | <50% of required funds      | Issues noted but no funds (i.e. 0%)    | Not applicable (no issues requiring funding exist)            | Don't know |

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|--|---|--|--|--|--|---|--|----------------|
| Required corrective actions/remedial measures to address all these identified water safety related issues have been successfully implemented.  | Yes, strongly agree (i.e. 100% implementation)                              | Strongly agree (i.e. >95% implementation)                              | Mostly agree (i.e. >75% implementation)                                | Agree somewhat (i.e. >50% implementation)                              | <50% implementation  | Issues noted but no implementation (i.e. 0%)  | Not applicable (no issues requiring corrective actions exist)  | Don't know     |
| <b>8. Basic Sanitation</b>   |   |  |  |  |  |   |  |                |
| You have formal housing areas that are not fully serviced with sanitation infrastructure   | No, all formal areas are fully serviced (i.e. no bucket sanitation service) | Yes, but these are new households that will be serviced within 2 years | Yes, still trying to meet formal backlog but >90% are serviced         | Yes, still trying to meet formal backlog with 80 - 90% serviced        | Yes, still trying to meet formal backlog with 60 - 80% serviced              | Yes, still trying to meet formal backlog with <60% serviced (e.g. occurrence of bucket systems, existence of open defecation) | Don't know   |                |
| You have informal housing or rural areas that are not fully serviced with sanitation infrastructure  | No, all informal and rural areas are fully serviced                         | We have no informal areas and rural areas are serviced                 | Yes, but these are new households that will be serviced within 2 years | Yes, still trying to meet informal or rural backlog with >90% serviced | Yes, still trying to meet informal or rural backlog but 80- 90% are serviced | Yes, still trying to meet informal or rural backlog with 60 - 80% serviced  | Yes, still trying to meet informal or rural backlog with <60% serviced (e.g. occurrence of bucket systems, existence of open defecation) | Don't know     |
| You have a detailed plan and programme to provide safe sanitation to all households (including health and hygiene education and user awareness including Water, Sanitation and Health (WASH) aspects)                                    | Yes, strongly agree (i.e. 100% implementation)                              | Strongly agree (i.e. >95% implementation)                              | Mostly agree (i.e. >75% implementation)                                | Agree somewhat (i.e. >50% implementation)                              | <50% implementation  | No implementation (i.e. 0%)   | Don't know   | Not applicable |
| Your sanitation budget is appropriate for required sanitation programmes (implementation and O&M)  | Yes, strongly agree (i.e. 100% of required funds)                           | Mostly agree (i.e. >95% of required funds)                             | Some shortfall (i.e. >75% of required funds)                           | Disagree, significant shortfall (50-75% of required funds)             | Serious underfunding (<50% of required funds)                                | No funds (i.e. 0%)  | Don't know   | Not applicable |
| You are servicing your basic sanitation facilities (e.g. pit latrines) as per safe sanitation requirements (healthy, environmentally safe, structurally sound, regularly maintained, following faecal sludge management best practices). | Yes, 100% as per requirements   | Strongly agree (i.e. >95% as per requirements)                         | Mostly agree (i.e. >75% as per requirements)                           | Agree somewhat (i.e. >50% as per requirements)                         | No, we only manage to service <50% of the sanitation infrastructure          | No, we have serious shortfalls in the servicing of sanitation infrastructure (i.e. <20 %)                                     | Don't know   | Not applicable |
| <b>9. Wastewater/Environmental Safety &amp; Regulatory Compliance</b>  |   |  |  |  |  |   |  |                |
| Please indicate your treated wastewater effluent compliance for COD for your (or your service provider's) WWTWs for the last 12 months.  | >95%  | 90% - 95%  | 80% - <90%   | <80%   | Don't know   |   |  |                |

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|--|--|--|--|--|-------------------------|--|---|----------------|
| ALL your WWTWs, process controllers, monitoring programmes, sample points, laboratories, results, procedures, protocols, etc. are managed with a suitable waste water risk abatement framework.  | Yes, strongly agree (i.e. 100% covered)            | Agree (i.e. >95% covered)  | Mostly agree (i.e. >75% covered)           | Agree somewhat (i.e. >50% covered)           | < 50% covered           | None covered (i.e. 0%)                       | Don't know  |                |
| Council have been aware of all W2RAP related issues (e.g. pollution incidents, Green Drop deficiencies) that require budget and actioning, and these issues have been actioned (where applicable).   | Yes, strongly agree (i.e. all (100%) tabled)       | Agree (i.e. >95% covered)  | Mostly agree (i.e. >75% tabled)            | Agree somewhat (i.e. >50% tabled)            | < 50% tabled            | Issues noted but none tabled (i.e. 0%)       | Not applicable (no issues requiring council resolution exist) | Don't know     |
| Sufficient funds have been made available to address all identified wastewater and environmental safety related issues.  | Yes, strongly agree (i.e. 100% of required funds)  | Agree (i.e. >95% covered)  | Mostly agree (i.e. >75% of required funds) | Agree somewhat (i.e. >50% of required funds) | < 50% of required funds | Issues noted but no funds (i.e. 0%)          | Not applicable (no issues requiring funding exist)            | Don't know     |
| Required corrective actions/remedial measures to address all identified wastewater and environmental safety related issues have been successfully implemented.   | Yes, strongly agree (i.e. 100% implementation)     | Agree (i.e. >95% covered)  | Mostly agree (i.e. >75% implementation)    | Agree somewhat (i.e. >50% implementation)    | <50% implementation     | Issues noted but no implementation (i.e. 0%) | Not applicable (no issues requiring corrective actions exist) | Don't know     |
| <b>10. Infrastructure Asset Management (IAM)</b>   |  |  |  |  |                         |  |   |                |
| You have an appropriate and up-to-date water and sanitation services technical Asset Register (includes asset name, location, condition, extent, remaining useful life, performance and risk). NOTE: This does only not refer to GRAP17 asset register requirements. | Yes, strongly agree (e.g. advanced asset register) | Yes, agree (e.g. basic asset register - i.e. not all aspects included) | Not ideal (e.g. outdated asset register)   | No, disagree (i.e. no asset register)        | Don't know              |  |   |                |
| You have developed an appropriate Infrastructure Asset Management (IAM) Plan for your WSA.   | Yes, strongly agree                                | Partially in place, but not ideal                                      | No, disagree                               | Don't know                                   |                         |  |   |                |
| You are implementing the IAM outcomes  | Yes, strongly agree (i.e. 100% implementation)     | Agree (i.e. >95% implementation)                                       | Mostly agree (i.e. >75% implementation)    | Agree somewhat (i.e. >50% implementation)    | < 50% implementation    | No implementation (i.e. 0%)                  | Don't know  |                |
| Budget allocated to implement IAM outcomes is sufficient and is being effectively spent.   | Yes, strongly agree (i.e. 100%)                    | Agree (i.e. >95%)  | Mostly agree (i.e. >75%)                   | Agree somewhat (i.e. >50%)                   | < 50%                   | No (i.e. 0%)                                 | Don't know  |                |
| You conduct annual technical assessments of your water and wastewater related systems (including sources, WTWs, WWTWs, pump stations, network, etc.) and implement required follow-up actions.   | Yes, all systems (i.e. 100%)                       | Almost all systems (i.e. >95%)   | Most systems (i.e. >75%)                   | Some systems (i.e. >50%)                     | < 50% systems           | No systems (i.e. 0%)                         | Don't know  | Not applicable |
| <b>11. Operation &amp; Maintenance of Assets</b>   |  |  |  |  |                         |  |   |                |

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|--|---|---|---|--|--------------------------------|------------|--|--|
| Appropriate maintenance facility(ies) that is(are) secure and stocked with essential equipment (e.g. spare parts), plant and tools is(are) available.  | Yes, strongly agree                                     | Partially in place, but not ideal                     | No, disagree                                | Don't know                                   |                                |            |  |  |
| Appropriate water and sanitation services infrastructure/equipment planned/preventative maintenance schedules are developed.   | Yes, strongly agree                                     | Partially in place, but not ideal                     | No, disagree                                | Don't know                                   |                                |            |  |  |
| Appropriate planned/preventative maintenance is performed at all WTWs and associated reservoirs, pump stations, distribution network.  | Yes, all (i.e. 100%)                                    | Most (i.e. >75%)                                      | Some (i.e. > 50%)                           | < 50%  | None (i.e. 0%)                 | Don't know |  |  |
| Appropriate planned/preventative maintenance is performed at all WWTWs and associated collection system, pump stations.  | Yes, all (i.e. 100%)                                    | Most (i.e. >75%)                                      | Some (i.e. > 50%)                           | < 50%  | None (i.e. 0%)                 | Don't know |  |  |
| Please indicate your infrastructure repairs and maintenance costs as a function of total operating expenditure (%).  | <5%   | 5% - <8%  | 8% - <10%                                   | 10% - <15%                                   | 15% or more                    | Don't know |  |  |
| <b>12. Financial Management</b>  |   |   |   |  |                                |            |  |  |
| Financial controls - Please state the audit opinion with regard to your last audit report on the financial statements.   | Clean audit outcome (i.e. unqualified with no findings) | Financially unqualified audit opinion (with findings) | Qualified audit opinion                     | Disclaimer of audit opinion                  | Adverse audit opinion          | Don't know |  |  |
| Cash flow status - Please state your Cash/Cost Coverage Ratio (excluding Unspent Conditional Grants)   | > 90 days   | 60 - 90 days  | 30 - 60 days                                | < 30 days                                    | Don't know                     |            |  |  |
| Your actual operating expenditure closely reflects your budgeted operating expenditure (i.e. Operating Expenditure Budget Implementation Indicator)  | 95% - 100%  | 90% - <95%  | 85% - <90%                                  | 80% - <85%                                   | <80%                           | Don't know |  |  |
| Your actual revenue closely reflects your budgeted operating revenue (i.e. Operating Revenue Budget Implementation Indicator)  | 95% - 100%  | 90% - <95%  | 85% - <90%                                  | 80% - <85%                                   | <80%                           | Don't know |  |  |
| Liabilities (Creditors) - Money is owed by your municipality to major/critical service providers (e.g. Eskom, Water Board, largest contractors, etc.) for more than 30 days from receipt of invoice (NOTE: Ignore disputed invoices) | Never   | Once per year   | Twice per year                              | Once per quarter                             | More frequently than quarterly | Don't know |  |  |
| <b>13. Revenue Collection</b>  |   |   |   |  |                                |            |  |  |
| Please indicate the frequency of actual consumer meter readings.   | Actual meter reading on a monthly basis                 | Actual meter reading at least every 2nd month         | Meter reading at least on a quarterly basis | Meter reading less frequently than quarterly | Don't know                     |            |  |  |

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|---|----------------------|-----------------------|------------------------|-----------------------|----------------|----------------|------------|--|
| Net Surplus/Deficit - Please state your net surplus/deficit from water services activities for the last 12 months (NOTE: This question tests whether your WSA currently has fully cost reflective Water and Sanitation tariffs (which take into account cost of maintenance and renewal of purification plants and networks, and the cost of new infrastructure). | Surplus (i.e. >0%)   | Breakeven (i.e. = 0%) | Net deficit (i.e. <0%) | Don't know            |                |                |            |  |
| Revenue collection - Please state the revenue collection rate in respect to Water & Sanitation Services (%)   | <50%                 | 50% - <70%            | 70% - <80%             | 80% - <95%            | 95% or more    | Don't know     |            |  |
| Revenue Growth - Please state your Water and Sanitation Services revenue growth for the last financial year(%).   | >CPI                 | Equals CPI            | <CPI, but >0%          | Negative growth (-ve) | Don't know     |                |            |  |
| Grant dependency - Actual operating revenue less operational grants/subsidies (e.g. equitable share) sufficiently covers actual operating expenditure.  | Yes, all (i.e. 100%) | Most (i.e. >75%)      | Some (i.e. > 50%)      | < 50%                 | None (i.e. 0%) | Don't know     |            |  |
| <b>14. Financial Asset Management</b>   |                      |                       |                        |                       |                |                |            |  |
| Capital Expenditure (Municipal) - Please state your municipal Capital Expenditure as a percentage of Total Expenditure (i.e. Total Operating Expenditure + Capital Expenditure)   | <5%                  | 5% - <10%             | 10% - <15%             | 15% - <20%            | 20% or more    | Don't know     |            |  |
| Capital Expenditure (Water Services) - Please state your Capital Expenditure on Water and Sanitation Services as a percentage of Total Capital Expenditure (Capital Expenditure (Municipal))  | <25%                 | 25% - <50%            | 50% - <75%             | 75% or more           | Don't know     |                |            |  |
| Asset Renewal - Please state your Asset Renewal investment as percentage of Depreciation costs  | 100%                 | >90%                  | >75%                   | >50%                  | <50%           | None (i.e. 0%) | Don't know |  |
| Repairs and Maintenance - Please state your Repairs and Maintenance expenditure as a percentage of Property, Plant and Equipment, Investment Property (Carrying Value)  | <5%                  | 5% - <8%              | 8% - <10%              | 10% or more           | Don't know     |                |            |  |
| Grant funding of capital expenditure - Please state your reliance on grant funding  | >90%                 | > 75%                 | >50%                   | <50%                  | Don't know     |                |            |  |
| <b>15. Information Management (IT)</b>  |                      |                       |                        |                       |                |                |            |  |

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|---|--|--|--|---------------------------|------------------------------------|------------|--|--|
| You have a developed, approved and implemented IT Master Systems Plan (e.g. covering 3 - 5 years) that addresses your IT business requirements.   | Yes, developed, approved and being implemented                                 | Developed and approved, but not yet implemented  | Developed but not yet approved or implemented  | In development            | No, disagree                       | Don't know |  |  |
| You have a developed, approved and implemented ICT Technology Master Plan that addresses your current and future IT infrastructure requirements.  | Yes, developed, approved and being implemented                                 | Developed and approved, but not yet implemented  | Developed but not yet approved or implemented  | In development            | No, disagree                       | Don't know |  |  |
| You have IT systems that support your full range of water and sanitation services business requirements (e.g. billing, GIS, customer care, O&M, asset management).  | Yes, strongly agree (i.e. 100% of required systems)                            | Mostly agree (i.e. >75% of required systems)   | Agree somewhat (i.e. >50% of required systems) | < 50% of required systems | None (i.e. 0% of required systems) | Don't know |  |  |
| ICT service continuity - Adequate IT security exists with off-site back-ups/archiving of operation critical applications, databases, data, etc. routinely performed in terms of an IT Disaster Recovery Plan.   | Yes, strongly agree (i.e. All (100%) in place)                                 | Mostly agree (i.e. >75% in place)  | Agree somewhat (i.e. >50% in place)            | < 50% in place            | Nothing in place (i.e. 0%)         | Don't know |  |  |
| You have sufficient budget and staff to keep key IT systems stable and up-to-date as per IT policies and procedures.  | Yes, strongly agree (i.e. 100%)  | Mostly agree (i.e. >75%)   | Agree somewhat (i.e. >50%)                     | < 50%                     | No (i.e. 0%)                       | Don't know |  |  |
| <b>16. Organisational Performance Monitoring</b>  |  |  |  |                           |                                    |            |  |  |
| Appropriate plans, policies and procedures to address Disaster Management/emergencies and other issues (safety, public participation, communication, etc.) are developed and implemented. NOTE: Although Disaster Management is a district function, LMs need to ensure they are aware of their associated roles and responsibilities and have developed a Disaster Management Framework. | Yes, developed and implemented   | Developed but not yet implemented  | In development                                 | No, disagree              | Don't know                         |            |  |  |
| An organisational performance management system is developed and implemented (i.e. effectively measure, monitor and track water and sanitation services performance indicators).  | Yes, developed and implemented   | Developed but not yet implemented  | In development                                 | No, disagree              | Don't know                         |            |  |  |
| A municipal risk management framework is developed and implemented and includes monitoring and tracking of water and sanitation related risks.  | Yes, developed and implemented and includes water and sanitation related risks | Yes, developed and implemented but does not include water and sanitation related risks | Developed but not yet implemented              | In development            | No, disagree                       | Don't know |  |  |

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|--|--|--|--|--|---|--|--|------------|
| Effective administration support is available to technical staff to assist with processing work orders, providing order numbers, handling correspondence, etc.   | Yes, strongly agree (i.e. 100% effective)  | Mostly agree (i.e. >75% effective)   | Agree somewhat (i.e. >50% effective)   | < 50% effective  | No, completely ineffective (i.e. 0%)                                      | Don't know   |  |            |
| "Access to Basic Water and Sanitation Services" progress reports are frequently produced and presented to council for discussion, action and follow-up.  | At least quarterly   | At least bi-annually   | At least annually  | Less frequently (i.e. > 1 year)  | No, never   | Don't know   |  |            |
| <b>17. Water and Sanitation Service Quality</b>  |  |  |  |  |   |  |  |            |
| Critical business databases and documents (e.g. as-built drawings, records, manuals, agreements, billing/revenue collection, project and scheme management data, etc.) are current, maintained and stored in secure locations (on-site and off-site, both paper and electronic). | Yes, strongly agree (i.e. 100% in place)   | Mostly agree (i.e. >75% in place)  | Agree somewhat (i.e. >50% in place)  | < 50% in place   | Nothing in place (i.e. 0%)  | Don't know   |  |            |
| Customers have a functional, reliable and safe water supply system with sufficient quantity and flow, good quality, and minimal interruptions.   | Yes, all have a functional, reliable and safe service (i.e. 100%)  | At least 90% have a functional, reliable and safe service  | Most have a functional, reliable and safe service (i.e. >75%)                  | Some have a functional, reliable and safe service (i.e. > 50%)           | < 50% of customers have a functional, reliable and safe service           | None have a functional, reliable and safe service (i.e. 0%)                | Don't know   |            |
| All consumers served experience interruptions of less than 48 hours (at any given time) and a cumulative interruption time during the year of less than 15 days.   | Yes, all (i.e. 100%)   | >90% of households   | >75% of households   | >50% of households   | <50% of households  | None (i.e. 0%)   | Don't know   |            |
| Households in your WSA do not experience water pressure problems (i.e. no flow/partial flow less than 10 litres/minute) (not to be confused with interruption to supply).  | Yes, no households experience pressure problems (i.e. 100% do not experience pressure problems)                          | >90% of households do not experience pressure problems   | >75% of households do not experience pressure problems                         | >50% of households do not experience pressure problems                   | <50% of households do not experience pressure problems                    | All households (i.e. 100%) experience pressure problems                    | Don't know   |            |
| Customers have a functional, reliable, dignified and safe sanitation system with no blockages resulting in overflows that impact on the environment, including effective collection and treatment of faecal sludge.  | Yes, all customers have a functional, reliable, dignified and safe service with no impact on the environment (i.e. 100%) | > 98% of all customers have a functional, reliable, dignified and safe service with minimal impact on environmental health | Almost all have a functional, reliable, dignified and safe service (i.e. >90%) | Most have a functional, reliable, dignified and safe service (i.e. >75%) | Some have a functional, reliable, dignified and safe service (i.e. > 50%) | < 50% of customers have a functional, reliable, dignified and safe service | None have a functional, reliable, dignified and safe service (i.e. 0%) | Don't know |
| <b>18. Customer Care (CRM)</b>   |  |  |  |  |   |  |  |            |
| A functional customer service system manned by appropriate customer services representatives and using a complaints register, is in place to address complaints and appropriately inform customers of service interruptions, contamination of water, boil water alert, etc.      | Yes, strongly agree  | In place, with occasional non-optimal performance  | Partially in place, but not ideal  | No, disagree   | Don't know  |  |  |            |

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|  |                                      |  |  |                                  |            |                |            |  |
|--|--------------------------------------|--|--|----------------------------------|------------|----------------|------------|--|
| Regular municipal wide customer satisfaction surveys are conducted to determine customer satisfaction levels and inform the Customer Care Management Plan  | Annual customer satisfaction surveys | Biennial (i.e. every 2nd year) customer satisfaction surveys | Less frequent customer satisfaction surveys (i.e. > 2 years) | No customer satisfaction surveys | Don't know |                |            |  |
| Please indicate what percentage of the reported water related complaints/callouts are acknowledged, including consumer response, within 24 hours.  | All (i.e. 100%)                      | Almost all (i.e. >95%)                                       | Most (i.e. >75%)   | Some (i.e. > 50%)                | < 50%      | None (i.e. 0%) | Don't know |  |
| Please indicate what percentage of the reported wastewater/sanitation related complaints/callouts are acknowledged, including consumer response, within 24 hours.  | All (i.e. 100%)                      | Almost all (i.e. >95%)                                       | Most (i.e. >75%)   | Some (i.e. > 50%)                | < 50%      | None (i.e. 0%) | Don't know |  |
| A comprehensive customer awareness programme (informing customers of water and wastewater system O&M activities, water quality, resource protection/pollution, reporting incidents/security concerns, etc.) is in place and implemented. | Yes, strongly agree                  | Partially in place, but not ideal                            | No, disagree (i.e. no awareness programme)                   | Don't know                       |            |                |            |  |

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**Chapter 3:**

**Water Master Plan Perspective**

List of projects per Water Services Business Element (Topics) based on Demand Modeling

| Question  |   | Answer   | Score |
|-----------|---|----------|-------|
| <b>1.</b> | <b>Is there a Water Master Plan that addresses Future Demands in regards to the following:</b>  |          |       |
| a.        | Existing needs that will take more than 5 years to resolve  | Yes      | 25    |
| b.        | Resource Development Plan for a 5, 10 and 15 year scenario  | Yes      | 25    |
| c.        | Infrastructure Development Plan for a 5, 10 and 15 year scenario  | Yes      | 25    |
| d.        | Functionality Needs Prediction for a 5, 10 and 15 year scenario   | Yes      | 25    |
| <b>2.</b> | <b>Did council approve any projects that should have started this current year that address the following:</b>  |          |       |
| a.        | Existing needs that will take more than 5 years to resolve  | Yes      | 25    |
| b.        | Resource Development Plan for a 5, 10 and 15 year scenario  | Yes      | 25    |
| c.        | Infrastructure Development Plan for a 5, 10 and 15 year scenario  | Yes      | 25    |
| d.        | Functionality Needs Prediction for a 5, 10 and 15 year scenario   | Yes      | 25    |
| <b>3.</b> | <b>Are these future projects included in the next 5 year IDP programme for the following:</b>   |          |       |
| a.        | Existing needs that will take more than 5 years to resolve  | Yes      | 25    |
| b.        | Resource Development Plan for a 5, 10 and 15 year scenario  | Yes      | 25    |
| c.        | Infrastructure Development Plan for a 5, 10 and 15 year scenario  | Yes      | 25    |
| d.        | Functionality Needs Prediction for a 5, 10 and 15 year scenario   | Yes      | 25    |
| <b>4.</b> | <b>Taking in to consideration the current financial and institutional capacity of the WSA, score the probability scenario of the timeous implementation of these projects i</b> |          |       |
| a.        | Existing needs that will take more than 5 years to resolve  | Definite | 100   |
| b.        | Resource Development Plan for a 5, 10 and 15 year scenario  | Definite | 100   |
| c.        | Infrastructure Development Plan for a 5, 10 and 15 year scenario  | Definite | 100   |
| d.        | Functionality Needs Prediction for a 5, 10 and 15 year scenario   | Definite | 100   |

|   |         |
|---|---------|
| <b>Overall Future Perspective Score</b> | 100.00% |
|---|---------|

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Chapter 4: Investment Framework

Investment Framework costs per Infrastructure Component

| Infrastructure Type | Infrastructure Component | Replacement Cost |       |       |                | Refurbishment Cost |       |       |                |
|---------------------|--------------------------|------------------|-------|-------|----------------|--------------------|-------|-------|----------------|
|                     |                          | 5 yr             | 10 yr | 15 yr | Existing Value | 5 yr               | 10 yr | 15 yr | Existing Value |
|                     |                          |                  |       |       |                |                    |       |       |                |

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|                                     |                             |      |      |      |      |      |      |      |      |
|-------------------------------------|-----------------------------|------|------|------|------|------|------|------|------|
| Water Infrastructure Pipelines      | Water Internal Reticulation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|                                     | Water Bulk pipeline         | 0.29 | 0.43 | 0.65 | 0.37 | 0.15 | 0.35 | 0.54 | 0.29 |
| Sanitation Infrastructure Pipelines | Sewer internal Reticulation | 0.00 | 0.00 | 0.00 | 2.97 | 0.00 | 0.00 | 0.00 | 2.52 |
|                                     | Sewer Bulk pipeline         | 2.74 | 2.16 | 8.39 | 0.00 | 1.42 | 1.19 | 3.74 | 0.00 |
| Infrastructure Works                | WTW                         | 2.64 | 4.53 | 5.87 | 2.20 | 2.82 | 4.50 | 5.19 | 2.00 |
|                                     | WWTW                        | 3.98 | 4.11 | 6.81 | 3.20 | 3.88 | 5.41 | 6.62 | 3.00 |
|                                     | Water Pump stations         | 4.10 | 5.91 | 8.05 | 1.93 | 1.64 | 2.30 | 2.91 | 1.01 |
|                                     | Sanitation Pump stations    | 3.18 | 4.18 | 6.28 | 2.03 | 2.88 | 3.78 | 5.53 | 1.83 |
| Infrastructure                      | Reservoirs                  | 2.82 | 3.40 | 4.01 | 2.41 | 2.74 | 2.50 | 3.22 | 1.56 |

Investment Framework costs per Future Infrastructure Component

| Infrastructure Type            | Infrastructure Component    | New Development Cost |       |       |                |
|--------------------------------|-----------------------------|----------------------|-------|-------|----------------|
|                                |                             | 5 yr                 | 10 yr | 15 yr | Existing Value |
| Water Infrastructure Pipelines | Water Internal Reticulation | 0.00                 | 0.00  | 0.00  | 0.00           |
|                                | Water Bulk pipeline         | 0.00                 | 0.00  | 0.00  | 0.00           |

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|  |                             |      |      |      |      |
|--|-----------------------------|------|------|------|------|
| <b>Sanitation Infrastructure Pipelines</b> | Sewer internal Reticulation | 0.00 | 0.00 | 0.00 | 0.00 |
|  | Sewer Bulk pipeline         | 0.00 | 0.00 | 0.00 | 0.00 |
| <b>Instructure Works</b>                   | WTW                         | 0.00 | 0.00 | 0.00 | 0.00 |
|  | WWTW                        | 0.00 | 0.00 | 0.00 | 0.00 |
|  | Water Pump stations         | 0.00 | 0.00 | 0.00 | 0.00 |
|  | Sanitation Pump stations    | 0.00 | 0.00 | 0.00 | 0.00 |
| <b>Infrastructure</b>                      | Reservoirs                  | 0.00 | 0.00 | 0.00 | 0.00 |

Water Services Development Plan

Chapter 5: WSDP Scoring

| Total Score | STATUS |
|-------------|--------|
| 85.32       |        |

