



BREDE VALLEY

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BREDE VALLEY MUNICIPALITY

Water Services Development Plan- IDP Water Sector Input Report

for IDP incorporation as directed by the Water Services Act (Act 108 of 1997)

FY 2020 - 2021

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Abbreviations and Definitions

| | |
|----------------------|---|
| DM | District Municipality |
| DWA | Department of Water Affairs |
| BDS | Blue Drop Certification System |
| FY: | Financial Year - means in relation to – <ul style="list-style-type: none"> • a national or provincial department, the year ending 31 March; or • a municipality, the year ending 30 June. |
| 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. |
| LM | Local Municipality |
| MuSSA | Municipal Strategic Self-Assessment |
| MPAP | Municipal Priority Action Plan |
| m ³ | cubic metres = 1 000 liter = 1 kiloliter |
| MI | Megaliter = 1 000 kiloliter = 1 000 000 liter |
| NDP | National Development Plan |
| 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 |

Table of Contents

| | |
|--|----|
| Abbreviations and Definitions..... | 3 |
| Introduction | 5 |
| Section A: Status Quo Overview | 6 |
| Topic 1: Settlements and Demographics | 7 |
| Topic 2: Service Levels..... | 12 |
| Topic 3: Water Services Infrastructure Management (Infrastructure)..... | 19 |
| Topic 4: Water services Infrastructure Management (O&M) | 28 |
| Topic 5: Water Conservation and Demand Management | 31 |
| Topic 6: Water Resources | 32 |
| Topic 7: Finance | 35 |
| Topic 8: Water Services Institutional Arrangements and Customer Care | 38 |
| Section B: State of Water Services Planning | 43 |
| Section C: Water Services Existing Needs Perspective | 44 |
| Section D: Water Services Strategies | 48 |
| Section E: Water Services MTEF Projects..... | 51 |
| Section F: WSDP Projects | 50 |

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 purpose of this report is to provide relevant and summarized water services development planning inputs for incorporation into the ADM integrated development planning process and is structured as follows:

Section A: Status Quo Overview: *providing a summarized view of the water services status quo in terms of the water services functional business elements as aligned to the WSDP framework.*

Section B: State of Water Services Planning: *presents the status of- and references the water services development plan of the Water Services Authority.*

Section C: Water Services Existing Needs Perspective: *an overview of the WSA's assessment and interpretation of its water services, with specific focus on problem definition statements.*

Section D: Water Services Objectives and Strategies: *outlines the 5-year water services objectives and strategies as developed through the water services development planning process for incorporation in terms of the integrated development plan and aligned to the water services functional business elements.*

Section E: Water Services MTEF Projects: *the agreed water services projects for the medium-term expenditure framework and inclusive of funding sources.*

Section F: WSDP Projects: *presents the projects identified during the water services development planning process in order to meet the water services strategies of the water services authority, as aligned to the outflow from the situation analysis per water services business element.*

Section A: Status Quo Overview

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 km² 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 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 located in Worcester.

Figure A1.1 below indicates the location of Breede Valley Municipality in respect with the Cape Winelands District Municipality and Western Cape Provincial.

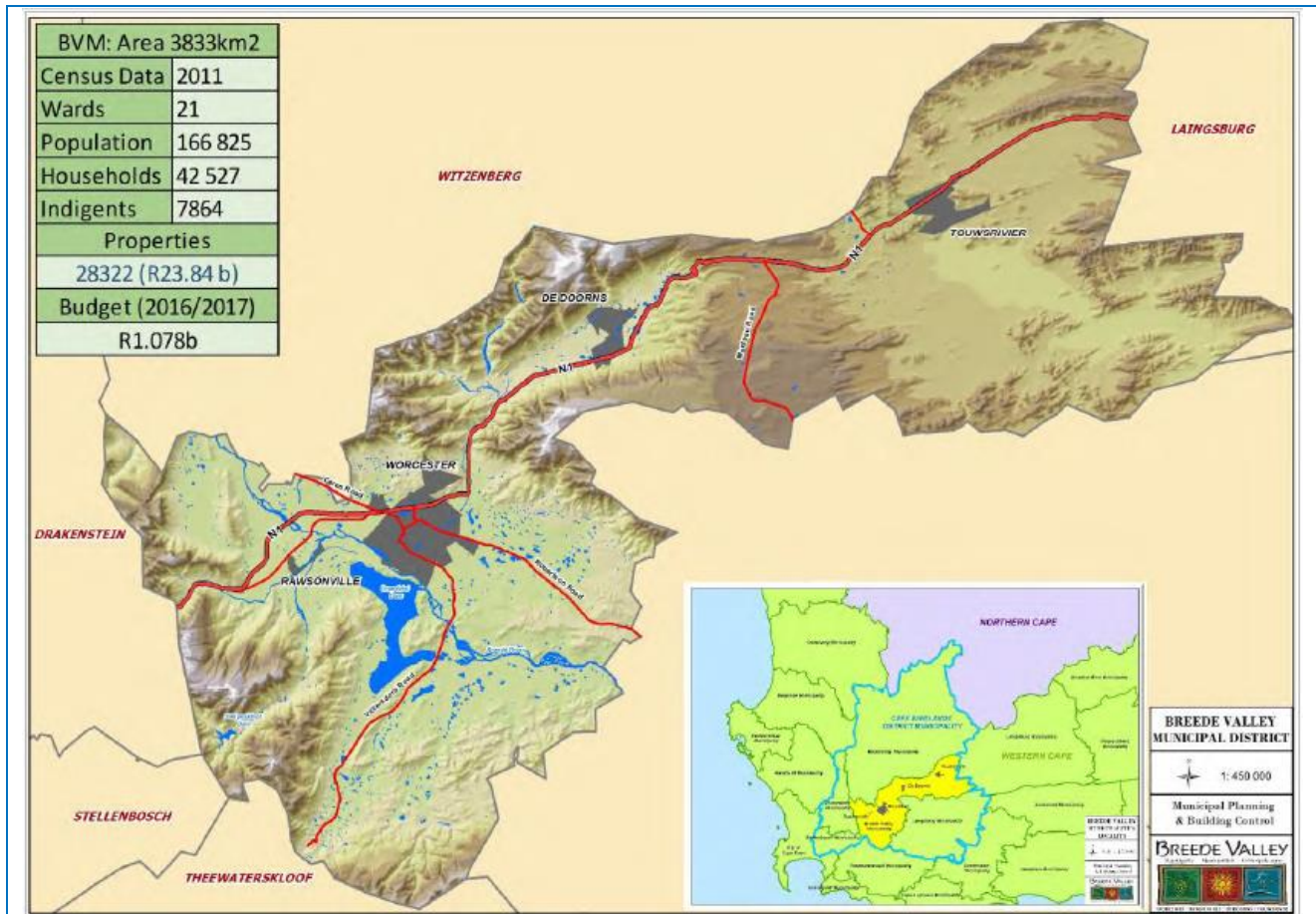
Figure A1.1: Location of Breede Valley Municipality Province



Topic 1: Settlements and Demographics

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 a number of formal and informal settlement areas, which subsequent to 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. Figure A1.2 below indicates the location of Breede Valley Municipality authority area of jurisdiction.

Figure A1.2: Map of WSA area of jurisdiction



The Breede Valley Municipality is currently structured into 21 wards. The region has a counted population of 176 578 comprising of 47 569 households, based on the Community Survey 2016 StatsSA data, of which approximately 14,7% (7000) are classified as indigent.

Figure A1.3: Location of Municipal Wards within the Breede Valley Municipality

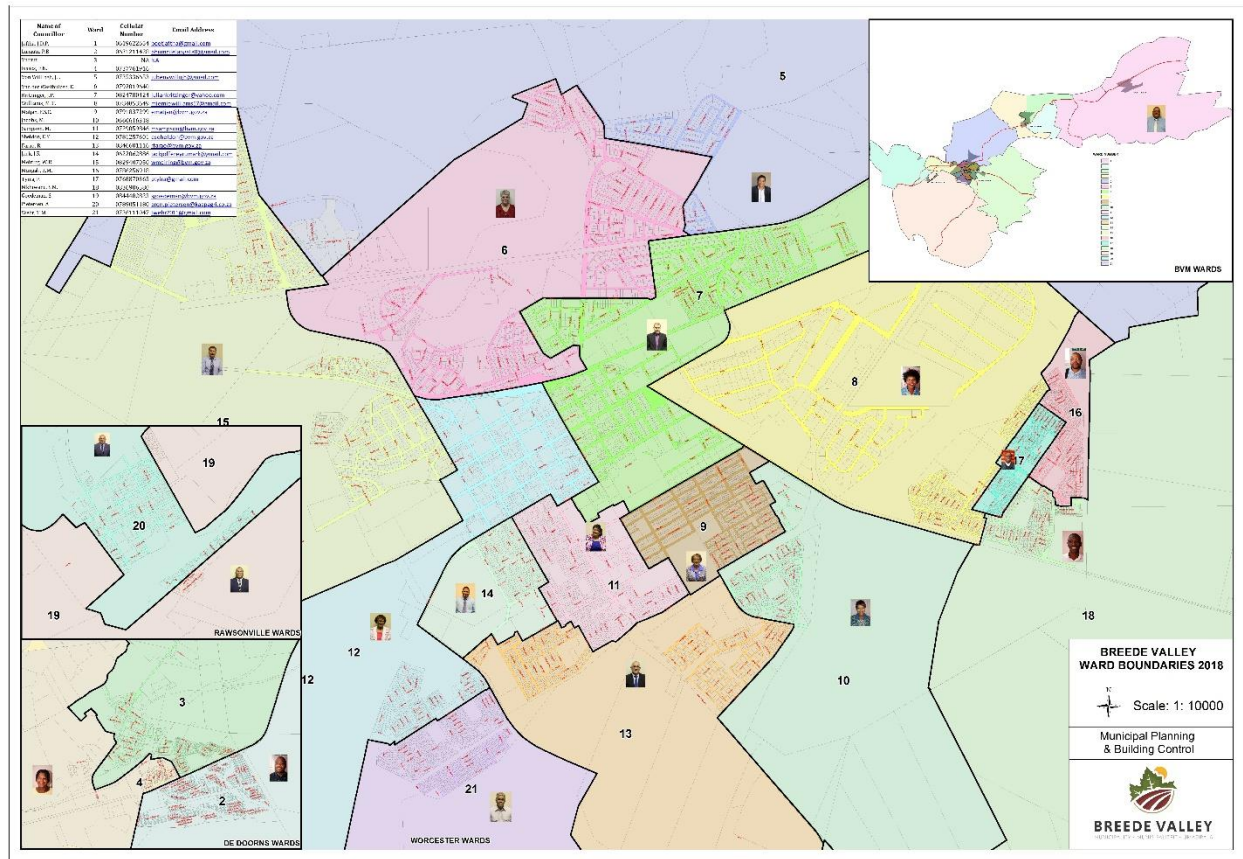


Table A1.1 Water services overview (water)

| Settlement Type | | 2011* | | 2016 | | 2017 | | 2018 | | 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 |
| | | | | | | | | | | | | | | | | | | | |
| URBAN | | | | | | | | | | | | | | | | | | | |
| Ward | Area | | | | | | | | | Adequate | Below RDP | | | | None | | | | |
| 1 | The entire community of Touwsrivier, including business and residential area. | 2 071 | 8 751 | 2 316 | 9 786 | 2 316 | 9 786 | 2 316 | 10 298 | ✓ | ✓ | ✓ | | | | | | | |
| 2 | De Doorns South, Stofland and adjacent farms | 3 361 | 9 413 | 3 760 | 10 530 | 3 760 | 3 760 | 3 760 | 10 393 | ✓ | | ✓ | | | | | | | |
| 3 | The centre of De Doorns, Hasie Square, Ekuphumleni and adjacent farm areas. | 2 155 | 9 592 | 2 410 | 10 727 | 2 410 | 10 727 | 2 410 | 10 595 | ✓ | ✓ | ✓ | | | | | | | |
| 4 | Section of De Doorns town centre, Orchards and adjacent farm areas. | 2 276 | 9 981 | 2 546 | 11 165 | 2 546 | 11 165 | 2 546 | 11 004 | ✓ | | | | | | | | | |
| 5 | De Doorns farming areas including Brandwag, De Wet and Sandhills | 2 719 | 11 442 | 3 041 | 12 797 | 3 041 | 12 797 | 3 041 | 12 544 | ✓ | ✓ | ✓ | | | | | | | |
| 6 | N1 Worcester entrance, Altona, Tuindorp, Bergsig, Van Riebeeck Park, Panorama, Hosp. Hills & Fairway Heights | 1 654 | 5 349 | 1 850 | 5 983 | 1 850 | 5 983 | 1 851 | 6 124 | ✓ | | | | | | | | | |
| 7 | Paglande, Meirings Park, Part of Roux Park, De La Bat, Fairy Glen, Industrial area. | 2 152 | 6 187 | 2 407 | 6 920 | 2 407 | 6 920 | 2 407 | 7 007 | ✓ | | | | | | | | | |
| 8 | The Chessis and part of Worcester south (Zweletemba) | 2 328 | 8 911 | 2 604 | 9 967 | 2 604 | 9 967 | 2 604 | 9 877 | ✓ | | | | | | | | | |
| 9 | Roodewal area and Esselen Park | 1 513 | 6 847 | 1 693 | 7 662 | 1 693 | 7 662 | 1 693 | 7 702 | ✓ | | | | | | | | | |
| 10 | Hexpark, Johnsonspark and Roodewal Flats | 1 633 | 7 924 | 1 827 | 8 865 | 1 827 | 8 865 | 1 827 | 8 838 | ✓ | | | | | | | | | |
| 11 | OVD, Riverview and Parkersdam | 1 757 | 6 694 | 1 966 | 7 490 | 1 966 | 7 490 | 1 966 | 7 541 | ✓ | | | | | | | | | |
| 12 | Part of Avian Park, CBD and Russell Scheme | 1 525 | 7 183 | 1 706 | 8 036 | 1 706 | 8 036 | 1 706 | 8 056 | ✓ | | | | | | | | | |
| 13 | Johnsons Park 1, 2 & part of 3, part of Noble Park and Riverview houses. | 1 749 | 7 592 | 1 956 | 8 491 | 1 956 | 8 491 | 1 956 | 8 487 | ✓ | | | | | | | | | |
| 14 | Riverview flats & Victoria Park | 1 321 | 5 924 | 1 477 | 6 624 | 1 477 | 6 624 | 1 477 | 6 730 | ✓ | | | | | | | | | |
| 15 | Langrug, Worcester West, Somerset Park and Goudini farms | 2 045 | 8 105 | 2 287 | 9 064 | 2 287 | 9 064 | 2 287 | 9 028 | ✓ | | | | | | | | | |
| 16 | Zweletemba | 2 703 | 7 938 | 3 023 | 8 878 | 3 023 | 8 878 | 3 023 | 8 861 | ✓ | ✓ | ✓ | | | | | | | |
| 17 | Zweletemba | 927 | 3 378 | 1 037 | 3 779 | 1 037 | 3 779 | 1 037 | 4 045 | ✓ | ✓ | ✓ | | | | | | | |
| 18 | Zweletemba & farms from Overhex, Nonna, etc. | 2 060 | 8 111 | 2 304 | 9 072 | 2 304 | 9 072 | 2 304 | 9 029 | ✓ | ✓ | ✓ | | | | | | | |
| 19 | Part of centre of Rawsonville and outlying farming community. | 1 398 | 6 124 | 1 564 | 6 851 | 1 564 | 6 851 | 1 564 | 6 937 | ✓ | | ✓ | | | | | | | |
| 20 | Part of the centre of Rawsonville and areas towards N1. | 1 828 | 7 627 | 2 044 | 8 528 | 2 044 | 8 528 | 2 044 | 8 519 | ✓ | ✓ | ✓ | | | | | | | |
| 21 | Avian Park and all surrounding informal areas. | 3 353 | 13 752 | 3 750 | 15 380 | 3 750 | 15 380 | 3 750 | 14 969 | ✓ | ✓ | ✓ | | | | | | | |
| TOTAL | | 42 528 | 166 825 | 47 568 | 186 595 | 47 568 | 186 595 | 47 569 | 186 584 | 21 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table A2.2 Water services overview (sanitation)

| Settlement Type | | 2011* | | 2016 | | 2017 | | 2018 | | 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 |
| | | | | | | | | | | | | | | | | | | | |
| URBAN | | | | | | | | | | | | | | | | | | | |
| Ward | Area | | | | | | | | | Adequate | | Below RDP | | | | None | | | |
| 1 | The entire community of Touws rivier, including business and residential area. | 2 071 | 8 751 | 2 316 | 9 786 | 2 316 | 9 786 | 2 316 | 10 298 | ✓ | ✓ | ✓ | | | | | | | |
| 2 | De Doorns South, Stofland and adjacent farms | 3 361 | 9 413 | 3 760 | 10 530 | 3 760 | 3 760 | 3 760 | 10 393 | ✓ | | ✓ | | | | | | | |
| 3 | The centre of De Doorns, Hasie Square, Ekuphumleni and adjacent farm areas. | 2 155 | 9 592 | 2 410 | 10 727 | 2 410 | 10 727 | 2 410 | 10 595 | ✓ | ✓ | ✓ | | | | | | | |
| 4 | Section of De Doorns town centre, Orchards and adjacent farm areas. | 2 276 | 9 981 | 2 546 | 11 165 | 2 546 | 11 165 | 2 546 | 11 004 | ✓ | | | | | | | | | |
| 5 | De Doorns farming areas including Brandwag, De Wet and Sandhills | 2 719 | 11 442 | 3 041 | 12 797 | 3 041 | 12 797 | 3 041 | 12 544 | ✓ | ✓ | ✓ | | | | | | | |
| 6 | N1 Worcester entrance, Altona, Tuindorp, Bergsig, Van Riebeeck Park, Panorama, Hosp. Hills & Fairway Heights | 1 654 | 5 349 | 1 850 | 5 983 | 1 850 | 5 983 | 1 851 | 6 124 | ✓ | | | | | | | | | |
| 7 | Paglande, Meirings Park, Part of Roux Park, De La Bat, Fairy Glen, Industrial area. | 2 152 | 6 187 | 2 407 | 6 920 | 2 407 | 6 920 | 2 407 | 7 007 | ✓ | | | | | | | | | |
| 8 | The Chessis and part of Worcester south (Zweletemba) | 2 328 | 8 911 | 2 604 | 9 967 | 2 604 | 9 967 | 2 604 | 9 877 | ✓ | | | | | | | | | |
| 9 | Roodewal area and Esselen Park | 1 513 | 6 847 | 1 693 | 7 662 | 1 693 | 7 662 | 1 693 | 7 702 | ✓ | | | | | | | | | |
| 10 | Hexpark, Johnsonspark and Roodewal Flats | 1 633 | 7 924 | 1 827 | 8 865 | 1 827 | 8 865 | 1 827 | 8 838 | ✓ | | | | | | | | | |
| 11 | OVD, Riverview and Parkersdam | 1 757 | 6 694 | 1 966 | 7 490 | 1 966 | 7 490 | 1 966 | 7 541 | ✓ | | | | | | | | | |
| 12 | Part of Avian Park, CBD and Russell Scheme | 1 525 | 7 183 | 1 706 | 8 036 | 1 706 | 8 036 | 1 706 | 8 056 | ✓ | | | | | | | | | |
| 13 | Johnsons Park 1, 2 & part of 3, part of Noble Park and Riverview houses. | 1 749 | 7 592 | 1 956 | 8 491 | 1 956 | 8 491 | 1 956 | 8 487 | ✓ | | | | | | | | | |
| 14 | Riverview flats & Victoria Park | 1 321 | 5 924 | 1 477 | 6 624 | 1 477 | 6 624 | 1 477 | 6 730 | ✓ | | | | | | | | | |
| 15 | Langrug, Worcester West, Somerset Park and Goudini farms | 2 045 | 8 105 | 2 287 | 9 064 | 2 287 | 9 064 | 2 287 | 9 028 | ✓ | | | | | | | | | |
| 16 | Zweletemba | 2 703 | 7 938 | 3 023 | 8 878 | 3 023 | 8 878 | 3 023 | 8 861 | ✓ | ✓ | ✓ | | | | | | | |
| 17 | Zweletemba | 927 | 3 378 | 1 037 | 3 779 | 1 037 | 3 779 | 1 037 | 4 045 | ✓ | ✓ | ✓ | | | | | | | |
| 18 | Zweletemba & farms from Overhex, Nonna, etc. | 2 060 | 8 111 | 2 304 | 9 072 | 2 304 | 9 072 | 2 304 | 9 029 | ✓ | ✓ | ✓ | | | | | | | |
| 19 | Part of centre of Rawsonville and outlying farming community. | 1 398 | 6 124 | 1 564 | 6 851 | 1 564 | 6 851 | 1 564 | 6 937 | ✓ | | ✓ | | | | | | | |
| 20 | Part of the centre of Rawsonville and areas towards N1. | 1 828 | 7 627 | 2 044 | 8 528 | 2 044 | 8 528 | 2 044 | 8 519 | ✓ | ✓ | ✓ | | | | | | | |
| 21 | Avian Park and all surrounding informal areas. | 3 353 | 13 752 | 3 750 | 15 380 | 3 750 | 15 380 | 3 750 | 14 969 | ✓ | ✓ | ✓ | | | | | | | |
| TOTAL | | 42 528 | 166 825 | 47 568 | 186 595 | 47 568 | 186 595 | 47 569 | 186 584 | 21 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 1: Settlement Summary

| 1.1 Settlements Summary | | |
|---------------------------------|--------|------------------|
| Section | Value | Assessment Score |
| 1.1 Total Population | 186584 | 100% |
| 1.2 Total Number of Households | 47569 | 100% |
| 1.3 Average Household Size | 3.7 | 100% |
| 1.4 Total Number of Settlements | 4 | 100% |

Table 2: Urban/Rural Split

| 1.2 Summary by Settlement Group | | | | |
|---------------------------------|-------------|------------|------------|------------------|
| Settlement Type | Settlements | Population | Households | Assessment Score |
| Rural | | | | |
| Urban | 4 | 186584 | 47569 | 100% |

Table 3: Settlement Type

| 1.3 Assessment Score by Settlement Type | | | | | | |
|---|---|-------------|------------|------------|---------------------|------------------|
| Main Type | Settlement Type | Settlements | Population | Households | Avg. Household Size | Assessment Score |
| Rural | Rural - Small Village <= 5000 | - | | | | |
| Rural | Rural - Dense Village > 5000 | - | | | | |
| Rural | Rural Scattered | - | | | | |
| Rural | Farming | - | | | | |
| Rural | Working Towns and Service Centres - Mines, Prisons etc. | - | | | | |
| Urban | Urban - Former Township | - | | | | |
| Urban | Urban - Informal Settlements (Squatter Camp) | - | | | | |
| Urban | Urban - Formal Town | 4 | 186584 | 47569 | 3.7 | 100% |

Table 4: Health & Education Facilities

| 1.4 Amenities Summary | | |
|------------------------|---------------------|------------------|
| Amenity Type | Number of Amenities | Assessment Score |
| Health Facilities | 18 | 100% |
| Educational facilities | 58 | 100% |

Topic 2: Service Levels

Brede Valley Municipality has a comprehensive Performance Management System in place which is used to monitor organisational performance. The SDBIP is the process plan and performance indicator / evaluation for the execution of the budget. The SDBIP is being used as a management, implementation and monitoring tool that assists and guide the Executive Mayor, Councillors, Municipal Manager, Senior Managers and the community. The plan serves as an input to the performance agreements of the Municipal Manager and Directors. It also forms the basis for the monthly, quarterly, mid-year and the annual assessment report and performance assessments of the Municipal Manager and Directors. The Performance Audit Committee reviews the municipality's performance management system, which includes the quarterly reports produced and submitted by Internal Audit.

The performance evaluation of the water and sanitation indicators / targets, as included in the SDBIP and completed for the end of June 2017, is as follows (KPIs for Capital Projects and the Operational Performance):

Service Delivery Indicators for Water and Sanitation Services

| Ref | KPI | Unit of Measurement | Wards | 2017/18 | | Overall Performance for 2018/19 | | |
|------|---|---|-------|---------|--------------------|---------------------------------|--------|----|
| | | | | Target | Actual performance | Target | Actual | |
| TL12 | Number of formal residential properties that are billed for water as at 30 June 2019 | Number of residential properties that are billed for residential consumption water meters charged residential domestic tariffs or residential flat rate tariffs using an erf as a household except municipal rental flats which will be measured by using the number of rental units. | All | 19 420 | 20 813 | 20 820 | 20 860 | G2 |
| TL24 | Limit unaccounted water losses to less than 21% by 30 June 2019 {(Number of kiloliters water available from reservoirs - number of kiloliters water sold) / (number of kiloliters water purchased or purified) x 100} | % unaccounted for water | All | 21% | 14.05% | 21% | 16.38% | B |
| TL45 | Review 5-year Water Service Development Plan (WSDP) and submit to MayCo for approval by 31 March 2019 | Reviewed WSDP submitted by 31 March 2019 | All | 1 | 1 | 1 | 1 | G |
| TL46 | Complete the project for the replacement of | Project completed | All | 1 | 1 | 1 | 1 | G |

| Ref | KPI | Unit of Measurement | Wards | 2017/18 | | Overall Performance for 2018/19 | | |
|------|---|-----------------------------------|--------|---|---|---------------------------------|--------|----|
| | | | | Target | Actual performance | Target | Actual | |
| | water pipes by 30 June 2019 | | | | | | | |
| TL48 | Complete Langerug 20 ML reservoir to Transhex development by 30 June 2019 | Project completed | 10; 18 | New performance indicator for 2018/19. No comparative audited results available | New performance indicator for 2018/19. No comparative audited results available | 1 | 0 | R |
| TL40 | Achieve 95% average water quality level as measured per SANS 241 criteria during the 2018/19 financial year | % water quality level per quarter | All | 95% | 97.06% | 95% | 97.11% | G2 |

| Ref | KPI | Unit of Measurement | Wards | 2017/18 | | Overall Performance for 2018/19 | | |
|------|---|---|--------|---------|--------------------|---------------------------------|--------|----|
| | | | | Target | Actual performance | Target | Actual | |
| TL14 | Number of formal residential properties that are billed for sanitation/sewerage services as at 30 June 2019 | Number of residential properties that are billed for residential sewerage tariffs using the erf as property | All | 18 190 | 18 351 | 18 370 | 18 590 | G2 |
| TL47 | Complete the project for the replacement of sewerage pipes by 30 June 2019 | Project completed | All | 1 | 1 | 1 | 1 | G |
| TL50 | Achieve 90% of capital budget spent on the replacement of sewerage pipes by 30 June 2019 | % of capital budget spent | All | 1 | 1 | 1 | 1 | G |
| TL49 | Complete the construction of the Transhex sewer pump station and rising main by 30 June 2019 | Project completed | 10; 18 | 90% | 82.92% | 1 | 1 | G |
| TL51 | 80% of sewerage samples comply with effluent standard during the 2018/19 financial year {(Number of sewerage samples that comply with SANS/Number of sewerage samples tested) x100} | % of sewerage samples compliant | All | 80% | 88.34% | 80% | 85.30% | G2 |

Residential water services delivery access profile

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 has to be noted that the figures below indicate the service level within the urban edge only. There are a number of 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 a number of households outside the urban edge that do not have access to adequate water and sanitation services. The provision of services to these areas however fall outside the mandate of the Municipality. Reporting is therefore done on the areas within the urban edge.

Table : Residential water services delivery access profile: Water

| Census Category | Description | Year 0 | | Year -1 | | Year -2 | |
|--|---|---------------|-------------|---------------|-------------|---------------|-------------|
| | | FY2018 | | FY2017 | | FY2016 | |
| | | Nr | % | Nr | % | Nr | % |
| | WATER (ABOVE MIN LEVEL) | | | | | | |
| Piped (tap) water inside dwelling/institution | House connections | 21 380 | 73% | 20 813 | 65% | 18 992 | 64% |
| Piped (tap) water inside yard | Yard connections | 0 | 0% | 3 803 | 12% | 3 803 | 13% |
| Piped (tap) water on community stand: distance less than 200m from dwelling/institution | Standpipe connection < 200 m | 7 969 | 27% | 7 376 | 23% | 6 813 | 23% |
| | Sub-Total: Minimum Service Level and Above | 29 349 | 100% | 31 992 | 100% | 29 608 | 100% |
| | WATER (BELOW MIN LEVEL) | | | | | | |
| Piped (tap) water on community stand: distance between 200m and 500m from dwelling/institution | Standpipe connection: > 200 m < 500 m | 0 | 0% | 0 | | 0 | 0% |
| Piped (tap) water on community stand: distance between 500m and 1000m (1km) from dwelling /institution | Standpipe connection: > 500 m < 1 000 m | | | 0 | | 0 | 0% |
| Piped (tap) water on community stand: distance greater than 1000m (1km) from dwelling/institution | Standpipe connection: > 1 000 m | | | 0 | | 0 | 0% |
| No access to piped (tap) water | No services | 0 | 0% | 0 | 0% | 0 | 0% |
| | Sub-Total: Below Minimum Service Level | 0 | 0% | 0 | 0% | 0 | 0% |
| | Total number of households | 29 349 | 100% | 31 992 | 100% | 29 608 | 100% |

Table 5: Improvement in Eradicating the Water Backlog

| LM | Urban / Rural | 2018/19 | | 2016/17 (-Y1) | |
|-----|---------------|------------------|--------------------------|------------------|--------------------------|
| | | Water backlog HH | Water Backlog Population | Water backlog HH | Water Backlog Population |
| BVM | Rural | - | - | - | - |
| BVM | Urban | | | | |
| | | | | | |

The table below provide a summary of the level of service for sanitation services within the urban edge of the Breede Valley Municipality. The service provided by Breede Valley 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: Residential water services delivery access profile: Sanitation

| Census Category | Description | Year 0 | | Year -1 | | Year -2 | |
|---|---|---------------|-------------|---------------|-------------|---------------|-------------|
| | | FY2018 | | FY2017 | | FY2016 | |
| | | Nr | % | Nr | % | Nr | % |
| | SANITATION (ABOVE MIN LEVEL) | | | | | | |
| Flush toilet (connected to sewerage system) | Waterborne | 21 405 | 95% | 18 351 | 73% | 18 191 | 73% |
| | Waterborne: Low Flush | 0 | 0% | 0 | 0% | | 0% |
| Flush toilet (with septic tank) | Septic tanks / Conservancy | 385 | 2% | 2 634 | 10% | 2 634 | 11% |
| Chemical toilet | Non-waterborne (above min. service level) | 670 | 3% | 4 179 | 17% | 4 179 | 17% |
| Pit toilet with ventilation (VIP) | | 0 | 0% | 0 | 0% | 0 | 0% |
| Other | | 0 | 0% | 0 | 0% | 0 | 0% |
| | Sub-Total: Minimum Service Level and Above | 22 460 | 100% | 25 164 | 100% | 25 004 | 100% |
| | SANITATION (BELOW MIN LEVEL) | | | | | | |
| Pit toilet without ventilation | Pit toilet | 0 | 0% | 0 | 0% | 0 | 0% |
| Bucket toilet | Bucket toilet | 0 | 0% | 0 | 0% | 0 | 0% |
| Other toilet provision (below min. service level) | Other | 0 | 0% | 0 | 0% | 0 | 0% |
| No toilet provisions | No services | 0 | 0% | 0 | 0% | 0 | 0% |
| | Sub-Total: Below Minimum Service Level | 0 | 0% | 0 | 0% | 0 | 0% |
| | Total number of households | 22 460 | 100% | 25 164 | | 25 004 | 100% |

Table 6: Improvement in Eradicating the Sanitation Backlog

| LM | Urban / Rural | 2018/19 | | 2017/18 (-Y1) | |
|-----|---------------|-----------------------|-------------------------------|-----------------------|-------------------------------|
| | | Sanitation backlog HH | Sanitation Backlog Population | Sanitation backlog HH | Sanitation Backlog Population |
| BVM | Rural | - | - | - | - |
| BVM | Urban | | | | |
| | | | | | |

Table 7: Direct Backlog (Water and Sanitation)

| Direct Backlog (Water & Sanitation) | Totals | Assessment Score |
|--|--------|------------------|
| Direct settlement backlog water households. Total household of settlement with a water need (irrelevant the type of need) | | |
| Direct settlement backlog water population. Total population of settlement with a water need (irrelevant the type of need) | | |
| Direct settlement backlog sanitation households. Total household of settlement with a sanitation need (irrelevant the type of need) | | |
| Direct settlement backlog sanitation population. Total population of settlement with a sanitation need (irrelevant the type of need) | | |

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:

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

Table 8: Water Supply Level Profile

| Water Profile | Totals | Assessment Score |
|--|--------|------------------|
| Section: Water Services Infrastructure Supply Level Profile | | |
| Piped water inside the dwelling/house-Households | 21380 | |
| Piped water inside yard-Households | 0 | |
| Piped water distance <200m - Households | 7969 | |
| Piped water distance >201m - Households | 0 | |
| Borehole in the yard – Households | 0 | |
| Rain-water tank in yard – Households | 0 | |
| Water vendor-carrier/tanker - Households | 0 | - |
| Stagnant water - dam/pool - Households | 0 | - |
| Flowing water/spring/ stream/river - Households | 0 | - |
| Water Other – Households | 0 | - |

Table 9: Water Reliability Profile

| Section: Water Reliability Profile | Totals | Assessment Score |
|--|--------|------------------|
| Water Supply System | 3 | |
| Total Number of Households having Reliable Service. (Interpret Direct Backlog field above) | 29349 | 100% |
| Total Number of Households NOT having Reliable Service due to: Resource - Conservation & Demand Management | - | - |
| Total Number of Households NOT having Reliable Service due to: Infrastructure – EXTENSION | - | - |

Table 10: Sanitation Level of Service

| Sanitation Profile | Totals | Assessment Score |
|--|--------|------------------|
| Section: Sanitation Service Infrastructure Supply Level Profile | | |
| Bucket toilet - Households | 0 | |
| Pit without ventilation - Households | 0 | |
| Pit toilet with ventilation (VIP) - Households | 0 | |
| Chemical Toilet - Households | 670 | |
| Flush toilet (with septic tank) - Households | 385 | |
| Flush toilet (connected to sewerage system) - Households | 21405 | |
| None - Households | 0 | |

Table 11: Sanitation Reliability Profile

| Section: Sanitation Reliability Profile | Totals | Assessment Score |
|--|--------|------------------|
| Infrastructure to be upgraded: None to VIP (HH) | - | |
| Infrastructure requirement: None to waterborne. (HH) | - | |
| Infrastructure to be upgraded: Pit to VIP (HH) | - | |
| Household not having reliable service due to Resource - Water Security | - | |
| Household not having reliable service due to Functionality | - | |
| Household requiring Existing Scheme Refurbishment | - | |
| Household requiring VIP Refurbishment | - | |

Table 12: Water Service Levels: Education Facilities

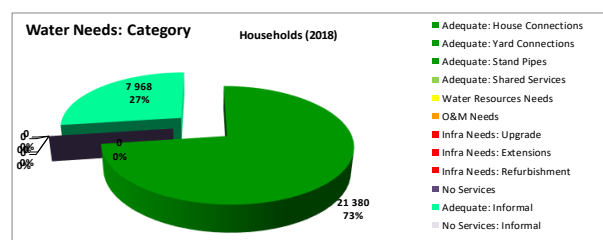
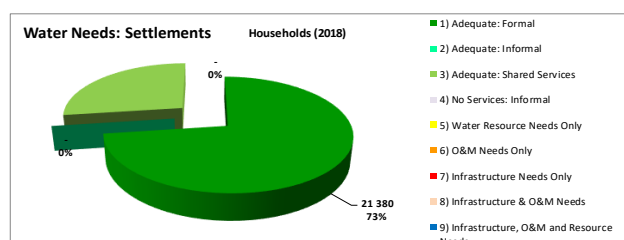
| Table 12: Water Service Levels: Education Facilities | | | | |
|--|----------------------|-----------------------------|-------------------------------------|---|
| Associated services facility | Number of facilities | Facilities with No Services | Facilities with Inadequate Services | Total Potential Cost (basic level) (RM) |
| Water | | | | |
| 2.1.1 Education Plan | | | | |
| Primary School and Secondary | 56 | 0 | 0 | - |
| Tertiary | 2 | 0 | 0 | - |
| | Total | | | |
| 2.1.2 Health Plan | | | | |
| Hospitals | 4 | 0 | 0 | - |
| Clinics | 14 | 0 | 0 | - |
| | Total | | | |

Table 13: Sanitation Service Levels: Health Facilities

| Table 13: Sanitation Service Levels: Health Facilities | | | | |
|--|----------------------|-----------------------------|-------------------------------------|---|
| Associated services facility | Number of facilities | Facilities with No Services | Facilities with Inadequate Services | Total Potential Cost (basic level) (RM) |
| Sanitation | | | | |
| 2.1.1 Education Plan | | | | |
| Primary & Secondary Schools | 56 | 0 | 0 | - |
| Tertiary | 2 | 0 | 0 | - |
| | Total | | | |
| 2.1.2 Health Plan | | | | |
| Hospitals | 4 | 0 | 0 | - |
| Clinics | 14 | 0 | 0 | - |
| | Total | | | |

Residential water services delivery adequacy profile (Water)

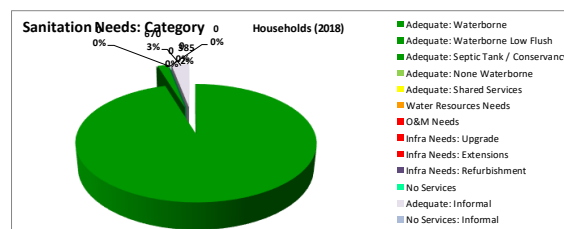
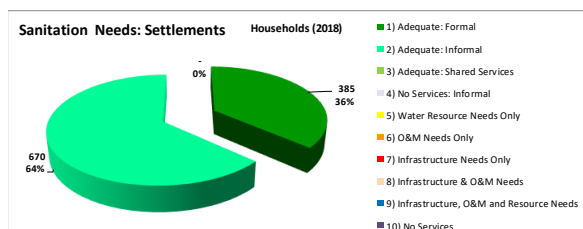
| Water Categorisation | Number of settlements | FORMAL | | | | | | | | | | | | | | | | | | INFORMAL | | | | | |
|--|--------------------------|----------------------|------|------------------|---|-------------|---|-----------------|---|----------------------------|---|-------------|---|----------------------|---|------------|---|---------------|---|-------------|---|----------|---|-------------|--|
| | | Adequate | | | | | | | | Water Resource needs | | O & M Needs | | Infrastructure Needs | | | | | | No services | | Adequate | | No services | |
| | | House Connections | | Yard Connections | | Stand Pipes | | Shared Services | | | | | | Upgrades | | Extensions | | Refurbishment | | | | | | | |
| | | HH | % | HH | % | HH | % | HH | % | HH | % | HH | % | HH | % | HH | % | HH | % | HH | % | HH | % | | |
| 1 | 9 | 21 380 | 100% | - | | | | | | | | | | | | | | | | | | | | | |
| 2 | 23 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 29 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Household Interventions required | | 21 380 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 7 968 | | 0 | |



| | | | | | | | | | |
|---|--------------------|---|---------------------------|---|-----------------------------------|---|----------------------------------|----|--------------------------------------|
| 1 | Adequate | 3 | Adequate: Shared services | 5 | Water Resources Needs <u>Only</u> | 7 | Infrastructure Needs <u>Only</u> | 9 | Infrastructure, O&M & Resource Needs |
| 2 | Adequate: Informal | 4 | No Services: Formal | 6 | O & M Needs <u>Only</u> | 8 | Infrastructure & O&M needs | 10 | No Services |

Residential water services delivery adequacy profile (Sanitation)

| Water Categorisation | Number of settlements | FORMAL | | | | | | | | | | | | | | | | | | INFORMAL | | | | | | |
|--|--------------------------|------------|------|-------------------------|---|-----------------------------|------|--------------------|---|-----------------|---|----------------------------|-------------|----------------------|---|------------|---|---------------|---|-------------|----------|---|-------------|-----|------|---|
| | | Adequate | | | | | | | | | | Water Resource needs | O & M Needs | Infrastructure Needs | | | | | | No services | Adequate | | No services | | | |
| | | Waterborne | | Waterborne Low flush | | Septic Tank/ Conservancy | | None Waterborne | | Shared Services | | | | Upgrades | | Extensions | | Refurbishment | | | | | | | | |
| | | HH | % | HH | % | HH | % | HH | % | HH | % | | | HH | % | HH | % | HH | % | | | | | | HH | % |
| 1 | 6 | 21 405 | 100% | | | 385 | 100% | | | | | | | | | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 49 | | | | | | | | | | | | | | | | | | | | | | | 670 | 100% | |
| 4 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Household Interventions required | | 21 405 | | 0 | | 385 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 670 | | 0 |



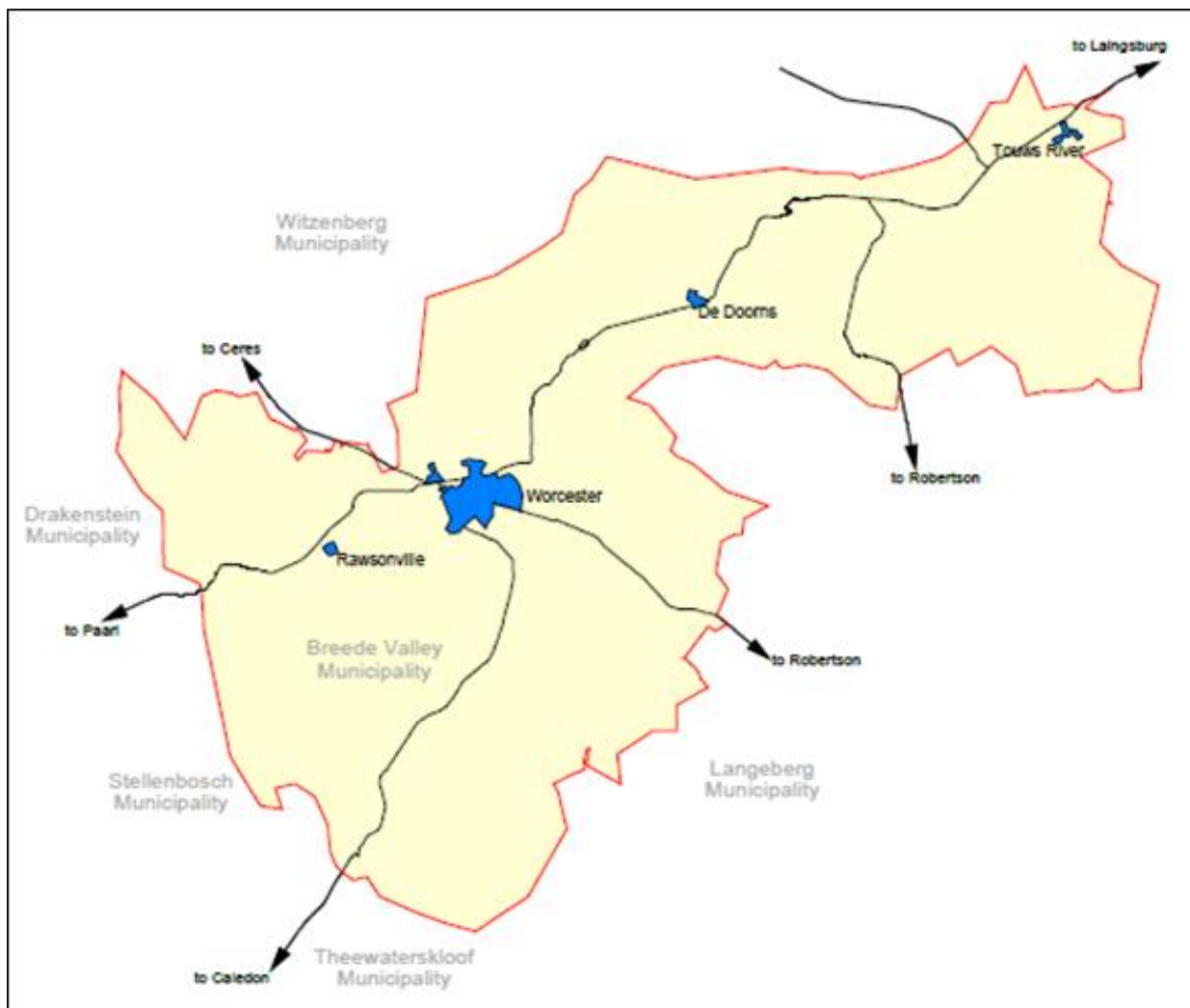
| | | | | | | | | | |
|---|--------------------|---|---------------------------|---|-----------------------------------|---|----------------------------------|----|--------------------------------------|
| 1 | Adequate | 3 | Adequate: Shared services | 5 | Water Resources Needs <u>Only</u> | 7 | Infrastructure Needs <u>Only</u> | 9 | Infrastructure, O&M & Resource Needs |
| 2 | Adequate: Informal | 4 | No Services: Formal | 6 | O & M Needs <u>Only</u> | 8 | Infrastructure & O&M needs | 10 | No Services |

Topic 3: Water Services Infrastructure Management (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:

- Worcester Supply Area
- Rawsonville Supply Area
- De Doorns Supply Area
- Touwsriver Supply Area

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



Water Infrastructure Summary

| AREA | INFRASTRUCTURE TYPE | EXTENT | CAPACITY |
|-------------|--|--------|----------|
| Worcester | Water Treatment Works (Stettynskloof) | 1 | 60MI/d |
| | Water Treatment Works (Fairy Glen) | 1 | 10MI/d |
| | Reservoirs (including Towers) Worcester | 7 | 73.24MI |
| | Pumpstation/s Worcester | 6 | - |
| | Pipe Length (Worcester) | 345km | - |
| Rawsonville | Boreholes (Rawsonville – Emergencies only) | 4 | 0.8MI/d |
| | Reservoirs (including Towers) Rawsonville | 3 | 2.83MI |
| | Pumpstation/s Rawsonville | 1 | - |
| | Pipe Length (Rawsonville) | 16.8km | - |
| De Doorns | Water Treatment Works | 1 | 4.8MI/d |
| | Reservoirs (including Towers) | 7 | 8.79MI |
| | Pumpstation/s | 2 | - |
| | Pipe Length | 57.7km | - |
| Touws River | Water Treatment Works | 1 | 3.2MI/d |
| | Reservoirs (including Towers) | 3 | 6.045MI |
| | Pumpstation/s | 0 | - |
| | Pipe Length | 89.2km | - |

Worcester Supply Area

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 11 Mℓ providing a total treated water holding capacity of 73 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.

Rawsonville Supply Area

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.

The Rawsonville reservoir is supplied with water from the Stettynskloof pipeline, which also supplies water to Worcester.

There are a total of 16.8km of pipeline that supply the town's reticulation network.

De Doorns Supply Area

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. Only one pump station is currently operational and delivering 3mℓ/day at an operating head of 80m. The construction of the other pump station is complete and is in the commissioning process.

There are a total of 57.6km of pipeline that supply the town's reticulation network.

Touwsriver Supply Area

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.

Existing Water Pipeline Infrastructure

| PIPES | Length (m) | | | |
|---------------------------|------------|---------------|----------------|----------------|
| | Diam. (mm) | Bulk | Network | Total |
| DE DOORNS | | | | |
| ≤ 45 | | 0 | 0 | 0 |
| > 45 ≤ 75 | | 0 | 2 040 | 2 040 |
| > 75 ≤ 125 | | 960 | 33 930 | 34 890 |
| > 125 ≤ 175 | | 3 920 | 9 110 | 13 030 |
| > 175 ≤ 275 | | 5 245 | 1 825 | 7 070 |
| > 275 | | 535 | 65 | 600 |
| De Doorns Total | | 10 660 | 46 970 | 57 630 |
| RAWSONVILLE | | | | |
| ≤ 45 | | 0 | 0 | 0 |
| > 45 ≤ 75 | | 0 | 5 685 | 5 685 |
| > 75 ≤ 125 | | 25 | 4 700 | 4 725 |
| > 125 ≤ 175 | | 405 | 125 | 530 |
| > 175 ≤ 275 | | 85 | 5 750 | 5 835 |
| > 275 | | 0 | 25 | 25 |
| Rawsonville Total | | 515 | 16 285 | 16 800 |
| TOUWS RIVER | | | | |
| ≤ 45 | | 0 | 0 | 0 |
| > 45 ≤ 75 | | 0 | 8 065 | 8 065 |
| > 75 ≤ 125 | | 0 | 7 110 | 7 110 |
| > 125 ≤ 175 | | 870 | 17 405 | 18 255 |
| > 175 ≤ 275 | | 55 735 | 5 | 55 765 |
| > 275 | | 0 | 0 | 0 |
| Touws River Total | | 56 600 | 32 615 | 89 215 |
| WORCESTER | | | | |
| ≤ 45 | | 0 | 950 | 950 |
| > 45 ≤ 75 | | 0 | 25 798 | 25 795 |
| > 75 ≤ 125 | | 0 | 150 140 | 150 140 |
| > 125 ≤ 175 | | 0 | 80 785 | 80 785 |
| > 175 ≤ 275 | | 0 | 30 110 | 30 131 |
| > 275 ≤ 375 | | 0 | 14 815 | 14 815 |
| > 375 ≤ 475 | | 0 | 10 036 | 10 035 |
| > 475 ≤ 575 | | 0 | 1 680 | 1 680 |
| > 575 ≤ 675 | | 0 | 1 035 | 1 735 |
| > 675 ≤ 775 | | 27 825 | 0 | 28 893 |
| > 875 | | 0 | 0 | 0 |
| WORCESTER TOTAL | | 27 879 | 317 080 | 344 959 |
| BREDE VALLEY TOTAL | | 95 654 | 412 950 | 508 604 |

Existing Reservoirs and Water Towers

| NAME | TYPE | CAPACITY (k ℓ) | TWL (m a.s.l.) |
|---|-----------|-------------------|-------------------|
| De Doorns | | | |
| 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 |
| TOTAL | | 8 788 | |
| Rawsonville | | | |
| Rawsonville Old Reservoir | Reservoir | 580 | 225.6 |
| Rawsonville 2.0 ML | Reservoir | 2 000 | 296.8 |
| Rawsonville Tower | Reservoir | 250 | 234.4 |
| TOTAL | | 2 830 | |
| Touws River | | | |
| Crescent Lower | Reservoir | 4 500 | 793,3 |
| Crescent Upper | Reservoir | 45 | 801,0 |
| Steenvliet | Reservoir | 1 500 | 810,9 |
| TOTAL | | 6 045 | |
| Worcester | | | |
| De Koppen | Reservoir | 11 370 | 366,0 |
| Langerug | Reservoir | 13 630 | 291,3 |
| Preloads | Reservoir | 45 510 | 304,8 |
| Worcester West Sump | Reservoir | 680 | 285,0 |
| Worcester West Upper | Reservoir | 2 050 | 318,0 |
| TOTAL | | 73 240 | |
| BREEDE VALLEY MUNICIPALITY TOTAL | | 90 933 | |

Existing Water Pumps

| TOWN OR ZONE | NAME | CAPACITY (ℓ / s) | HEAD (m) |
|--------------|-----------------|---------------------|-------------|
| DE DOORNS | N1 Pump Station | 35 | 80 |
| | Stofland PS | 38 | 166 |
| RAWSONVILLE | Rawsonville | *20 | *30 |
| | De Nova | *10 | *30 |
| TOUWS RIVER | None | | |
| WORCESTER | Brandwacht | 30 | 40 |

Sewer Infrastructure Summary

| AREA | INFRASTRUCTURE TYPE | EXTENT | CAPACITY |
|-------------|-----------------------------|--------|----------|
| Worcester | Waste Water Treatment Works | 1 | 30MI/d |
| | Pumpstation/s | 9 | - |
| | Pipe Length | 276.4 | - |
| Rawsonville | Waste Water Treatment Works | 1 | 0.25MI/d |
| | Pumpstation/s | 1 | - |
| | Pipe Length | 10.1 | - |
| De Doorns | Waste Water Treatment Works | 1 | 2.35MI/d |
| | Pumpstation/s | 1 | - |
| | Pipe Length | 51.2km | - |
| Touws River | Waste Water Treatment Works | 1 | 0.84MI/d |
| | Pumpstation/s | 8 | - |
| | Pipe Length | 22.5 | - |

Sewer Pipeline Infrastructure

| BREAKDOWN OF PIPE LENGTHS ACCORDING TO DIAMETER | | |
|---|--------------------|-------------------|
| Normal Pipe Diameter (mm Ø) | Gravity Pipes (km) | Rising Mains (km) |
| DE DOORNS | | |
| ≤ 125 | 2.1 | 2.2 |
| > 125 ≤ 175 | 39.6 | 0.0 |
| > 175 ≤ 225 | 2.0 | 0.0 |
| > 225 ≤ 275 | 5.3 | 0.0 |
| > 275 ≤ 275 | 0.0 | 0.0 |
| > 325 | 0.0 | 0.0 |
| Sub-total | 49.0 | 2.2 |
| RAWSONVILLE | | |
| ≤ 125 | 0.0 | 0.0 |
| > 125 ≤ 175 | 8.7 | 1.4 |
| > 175 ≤ 225 | 0.0 | 0.0 |
| > 225 ≤ 275 | 0.0 | 0.0 |
| > 275 ≤ 325 | 0.0 | 0.0 |
| > 325 | 0.0 | 0.0 |
| Sub-total | 8.7 | 1.4 |
| TOUWS RIVER | | |
| ≤ 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 |
| > 325 | 0.0 | 0.0 |
| Sub-total | 17.7 | 5.0 |
| WORCESTER | | |
| ≤ 125 | 0.0 | 0.6 |

| BREAKDOWN OF PIPE LENGTHS ACCORDING TO DIAMETER | | |
|---|--------------------|-------------------|
| Normal Pipe Diameter (mm Ø) | Gravity Pipes (km) | Rising Mains (km) |
| > 125 ≤ 175 | 13.3 | 1.9 |
| > 175 ≤ 225 | 14.8 | 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 |
| Sub-total | 263.0 | 4.7 |
| TOTAL | 338.5 | 13.3 |

Waste Water Treatment Plants

| DETAILS OF BULK DISCHARGE POINTS AND WASTEWATER TREATMENT PLANTS (WWTP'S) | | | |
|---|--------------------|------------------|------------------|
| Name | Capacity (kℓ/d) | IPDWF (ℓ / s) | Process |
| De Doorns WWTP | 650 | ±15 | Activated sludge |
| Rawsonville WWTP | 250 | 40 | Activated sludge |
| Touws River WWTP | 840 | | Activated sludge |
| Worcester WWTP | 28 200 | ±645 | Activated sludge |

Sewer Pump Stations

| EXISTING PUMPING STATION | | | |
|--------------------------|-------------------|---------------------|------------------------------------|
| Town or Zone | Name | Capacity (ℓ / s) | Diameter of rising main (mm) |
| DE DOORNS | Orchard | **12 | 100 |
| RAWSONVILLE | Rawsonville | *12 | 150 |
| TOUWS RIVER | Dahlia Street | *8 | 100 |
| | Du Plessis Street | *12 | 100 |
| | Hopland | *8 | 100 |
| | Hotel | *2 | 50 |
| | Loop Street | *4 | 75 |
| | Noord | *12 | 100 |
| | Steenvliet | *12 | 150 |

| EXISTING PUMPING STATION | | | |
|--------------------------|-------------------------|------------------|------------------------------|
| Town or Zone | Name | Capacity (ℓ / s) | Diameter of rising main (mm) |
| | Total | *5 | 100 |
| WORCESTER | Avian Park ¹ | 48 | 250 |
| | Johnson Park | 35.3 | 150 |
| | Noble Park | 6.5 | 100 |
| | Mountain Mill | *12 | 160 |
| | Santa Weida | **35 | 150 |
| | Zweletemba | 13 | 100 |

* Required minimum capacity – to be verified

** to be verified

Table 14: Infrastructure Components

| Assets | Boreholes | Abstraction Points | WTW | Water Pump Stations | Sewer Pump Stations | Water Bulk Pipelines | Sewer Bulk Pipelines | Reservoirs | WWTW | Assessment Score |
|---|-----------|--------------------|-----|---------------------|---------------------|----------------------|----------------------|------------|------|------------------|
| 3.1.1 Total number of components / km of pipeline / units | 0 | 4 | 4 | 9 | 19 | 508.7 km | 360.2 km | 20 | 4 | |

Table 15: Refurbishment Need & O&M Occurrence

| | Refurbishment Need | | | O&M Occurrence | | | Observation | | |
|---------------------|--------------------|--------|-----|----------------|----------|------|---------------|-------------|-----------------|
| | High | Medium | Low | Regular | Periodic | None | Dysfunctional | Operational | Prime Condition |
| Boreholes | x | | | | | x | x | | |
| Reservoirs | | x | | | x | | | x | |
| Water Pump Stations | | x | | | x | | | x | |
| Bulk Lines | x | | | | x | | | x | |
| WTW | X (2) | X (2) | | | x | | | x | |
| WWTW | X (2) | X (2) | | | x | | | x | |

Topic 4: Water services Infrastructure Management (O&M)

The Breede valley Municipality has a detailed Water and Sewer Master Plan that was completed in June 2014. The planning scenario for the master plans is based on the approved Spatial Development Framework. Detailed computer models for the water and sewer system was 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 was identified through the master planning process.

The current master Plan for Water and Sewer is sufficient for the development trends in the Breede Valley 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.

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 bases. The depth, yield of the borehole and the abstraction will be recorded as part of the operating procedures. The abstraction of the boreholes will be registered with the Department of Water Affairs.

Surface Water Infrastructure

The dam safety registration for the Stettynskloof, Fairy Glen and Bokriver dams are in place. This is not needed for the other dams in De Doorns and Rawsonville. Abstraction is recorded for all the surface water sources and is registered with the Department of Water and Sanitation.

The infrastructure is routinely inspected and maintained. There is however no operation and maintenance manual or procedure for these specific tasks in place. Physically the condition of the surface water infrastructure is in a good and sound condition.

Water Treatment Works

Water is treated at the sources before released into the reticulation network. Worcester has two treatment works, one at Stettynskloof dam and the other at De Koppen for the Fairy Glen dam. Rawsonville, De Doorns and Touws River each have one treatment facility. These treatment facilities operate 24 hours per day for Stettynskloof, De Doorns and Touws River and eight hours per day for De Koppen and Rawsonville. The abstraction of all the treatment facilities is monitored, recorded and registered with the Department of Water Affairs. No vandalism problems have been recorded.

The physical condition of all the treatment facilities is good except for Touws River where a very poor rating is being recorded. There is no fixed maintenance programme in place for the treatment facilities. Spare parts are readily available and stored at the facilities or in the municipal general store.

For Rawsonville the pumps need to be refurbished and the Lime and Chlorination dosing facility needs to be replaced. In the case of De Doorns the Chlorine Chamber needs to be refurbished and for Touws River the complete works need to be replaced.

Pump Stations

There are nine pump stations in total that are owned by the BVM. One in De Doorns (N1 Pump Station), two in Rawsonville (Rawsonville and De Nova) and six in Worcester (Brandwacht, Carinus Street, Fairway Heights, Langerug, Main and Panorama). These 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. The pumps operate 24 hours per day and each have a standby pump set available.

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. 95% of the effluent that leaves the treatment works is chlorinated.

Since the rollout of the Green drop Certification to date, Breede Valley Municipality has gradually improved the average scoring performance. The Municipality is responsible for the following systems:

- Worcester WWTW
- Rawsonville WWTW
- De Doorns WWTW
- Touwsrivier WWTW

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.

By laws affecting water services

The by-laws for the provision of water and sewer is in place for the Breede Valley Municipality.

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) | No | n.a | n.a | n.a |
| Sanitation promotion agent | No | n.a | n.a | n.a |
| Support service contracts | No | n.a | n.a | n.a |
| Water service institutions | No | 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 | No | n.a | No | No |

Table 16: Operation & Maintenance

| Compliance i.t.o. staff, external resources, tools, spare parts, budget | Existing Ground water Infrastructure | Existing Surface Water Infrastructure | Existing Water Treatment Works Infrastructure | Existing Waste Water Treatment Works Infrastructure | Existing Pump Station Infrastructure | Existing Bulk Pipeline Infrastructure | Existing Tower & Reservoir Infrastructure | Existing Reticulation Infrastructure |
|---|--------------------------------------|---------------------------------------|---|---|--------------------------------------|---------------------------------------|---|--------------------------------------|
| Resources | 0% | 90% | 90% | 75% | 90% | 80% | 90% | 75% |
| Information | 0% | 80% | 80% | 60% | 80% | 75% | 80% | 50% |
| Activity Control & Management | 0% | 50% | 50% | 20% | 50% | 50% | 50% | 70% |

Topic 5: Water Conservation and Demand Management

Table 14: Reducing Unaccounted Water

| Reducing unaccounted water and water inefficiencies | | | Assessment Score |
|--|-----|--|------------------|
| 5.1.1 Night flow metering | Yes | | 100% |
| 5.1.2 Day flow metering | Yes | | 100% |
| 5.1.3 Reticulation leaks | Yes | | 70% |
| 5.1.4 Illegal connections | Yes | | 90% |
| 5.1.5 Un-metered connections | Yes | | 80% |
| Topic: 5.2 Leak and meter repair programmes. Consumer units targeted by: | | | |
| 5.2.1 Leak repair assistance programme | Yes | | 70% |
| 5.2.2 Retro-fitting of water inefficient toilets | No | | N/A |
| 5.2.3 Meter repair programme | Yes | | 70% |
| Topic: 5.3 Consumer/end-use demand management: Public Information & Education Programmes | | | |
| 5.3.1 Schools targeted by education programmes | Yes | | 70% |
| 5.3.2 Consumers targeted by public information programmes | Yes | | 70% |

Overview of water conservation and demand management activities

| WSDP Ref. # | Regulations Ref. # | Description | Year 0 | | Year - 1 | | Year - 2 | |
|-------------|--------------------|---|-----------|------------|-----------|------------|-----------|------------|
| | | | 2018-2019 | 2017-2018 | 2016-2017 | 2015-2016 | 2014-2015 | 2013-2014 |
| 7.1.1 | 10.2.g.iii | REDUCING UNACCOUNTED FOR WATER AND WATER INEFFICIENCIES | | | | | | |
| | | Number of customers where the following activities have been pursued: | Nr | % of total | Nr | % of total | Nr | % of total |
| 7.1.1.1 | | Night flow metering | 31 992 | 100% | 29 521 | 100% | 26 120 | 100% |
| 7.1.1.2 | | Day flow metering | 31 992 | 100% | 29 521 | 100% | 26 120 | 100% |
| 7.1.1.3 | | Reticulation leaks fixed | 470 | 100% | 522 | 100% | 344 | 100% |
| 7.1.1.4 | | Illegal connections formalized | 0 | | 0 | | 0 | |
| 7.1.1.5 | | Un-metered connections, metered | 0 | | 0 | | 0 | |
| 7.1.2 | 10.2.g.iii | REDUCING HIGH PRESSURES FOR RESIDENTIAL CONSUMERS | | | | | | |
| | | Number of residential consumers with water supply pressure of: | Nr | % of total | Nr | % of total | Nr | % of total |
| 7.1.2.1 | | < 300 kPa | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| 7.1.2.2 | | 300 kPa - 600 kPa | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| 7.1.2.3 | | 600 kPa - 900 kPa | #REF! | #REF! | #REF! | #REF! | #REF! | #REF! |
| 7.1.2.4 | 10.2.b.iii | > 900 kPa | | | 0 | | 0 | |
| 7.1.3 | 10.2.g.iii | LEAK AND METER REPAIR PROGRAMMES | | | | | | |
| | | Number of consumer units targeted by: | Nr | % of total | Nr | % of total | Nr | % of total |
| 7.1.3.1 | | Leak repair assistance programme | 0 | | 0 | | 0 | |
| 7.1.3.2 | 10.2.g.iv | Retro-fitting of water inefficient toilets | 0 | | 0 | | 0 | |
| 7.1.3.3 | | Meter repair programme | | | | | 737 | |
| 7.1.4 | 10.2.g.iii | CONSUMER / END-USE DEMAND MANAGEMENT: PUBLIC INFO AND EDUCATION PROGRAMMES | | | | | | |
| | | | | | Nr | % of total | Nr | % of total |
| 7.1.4.1 | | Number of schools targeted by education programmes | 3 | 4% | 3 | 4% | 3 | 4% |
| 7.1.4.2 | | Number of consumers (people) targeted by public information programmes | | | | | | |

Topic 6: Water Resources

Water Resources

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

De Doorns

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

Resource capacities (Licensed Abstraction Mℓ/a)

| | |
|---|-----------------|
| Hex Valley Water Users Association - Grootkloof River | 250 Mℓ/a |
| Hex Valley Water Users Association - Hex Valley | 400 Mℓ/a |
| Hex Valley Water Users Association - Osplaas | 200 Mℓ/a |
| TOTAL | 850 Mℓ/a |

Sewer water is treated at the De Doorns WWTW to an acceptable standard for irrigation and supplied to Hex Valley Water Users Association Irrigation Board of approximately 1.5Ml/d. This volume in turn then provided by the Hex Valley Water Users Association Irrigation Board in potable water to the De Doorns water treatment plant for distribution.

A borehole is also used for drinking water and also pumped to the WTW 13kl/h. There are also 3 new boreholes drilled in De Doorns of 2x8.2 kl/h, 10.5kl/h. This water will also be used as drinking water to the WTW. The boreholes will be managed by BVM.

There are three different operation zones. This is the De Doorns upper zone, the De Doorns lower zone and the Orchards zone. Water is pumped from the N1 pumpstation through the upper zone reticulation network into the upper, lower and Orchards reservoirs respectively. From there the distribution to the respective networks is supplied.

Rawsonville

Water for Rawsonville is supplied from Stettynskloof Dam to the newly constructed Reservoir. The boreholes are no longer operational but is maintained for emergency purposes when required.

Resource capacities (Licensed Abstraction Mℓ/a)

| | |
|-----------------|-----------------|
| Smalblaar River | 67 Mℓ/a |
| Ground Water | 622 Mℓ/a |
| TOTAL | 689 Mℓ/a |

There are two different operation zones. This is the Rawsonville town zone and the De Nova zone. Two separate submersible pumps pump potable water from the Rawsonville reservoir into the Rawsonville town zone and De Nova zone respectively. The water for the Rawsonville town zone is also pumped into a water tower that serves as an emergency off peak supply.

Touws River

The main water supply to Touws River is from the Bokrivier storage dam. The Bokrivier dam is situated 30 km west of Touws River and comprises two weir diversions namely the Waterkloof River and Donkerkloof River. 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 Bokrivier 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 |

There are three different operation zones. Water is pumped from the Bokrivier water treatment facility to the different reservoirs and distributed to the reticulation network respectively.

Worcester

Two water sources supply Worcester with potable water with a combined yield of 26 000 Mℓ/year. Stettynskloof dam 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 |

There are seven different operation zones. These zones are supplied by four sets of reservoirs with the Preload reservoirs the largest and supplies 70% of the total water demand. For the higher lying areas there are three booster pumping zones to maintain the prescribed operational pressure. The Preload reservoir supplies the Worcester West Sump with water under gravity. The Worcester West Upper Reservoir in turn is supplied by 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 case of an emergency.

Table 15: Water Resources

| * Number of sources | * Current abstraction (Mm3/A) | Components abstraction registered | Components abstraction recorded | * Licensed abstraction (Mm3/A) | Community water supply | | Assessment Score |
|----------------------------------|-------------------------------|-----------------------------------|---------------------------------|--------------------------------|------------------------|-------|------------------|
| | | | | | Rural | Urban | |
| Boreholes | 0 | | | 0 | | | N/A |
| Surface Water Abstract | 11845 | | | 11845 | | 11845 | 100% |
| External Sources (Bulk Purchase) | | | | | | | N/A |
| Water returned to source | | | | | | | N/A |
| Conjunctive Use | | | | | | | N/A |

Table 169: Additional Sources from External Providers

| Additional Source Available | * Number of sources | Potential Volume | * Licensed abstraction (Mm3/A) | Assessment Score |
|----------------------------------|------------------------------|------------------|--------------------------------------|---------------------|
| Ground Water | 0 | | | N/A |
| Surface Water | | | | N/A |
| External Sources (Bulk Purchase) | 1 | 2727 | 2727 | 100% |

Table 20: Monitoring

| Topic: 6.2 Monitoring | Assessment Score |
|---|---------------------|
| 6.2.1 % of water abstracted monitored: Surface water | 95% |
| 6.2.2 % of water abstracted monitored: Ground water | 5% |
| Topic: 6.2 Monitoring | Assessment Score |
| 6.2.4 Surface water levels (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never) | Weekly 90% |
| 6.2.5 Ground water levels (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never) | Never 0 |
| 6.2.6 Water quality for formal schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never) | Monthly 100% |
| 6.2.7 Water quality for rudimentary schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never) | Annually 100% |
| 6.2.8 Borehole abstraction? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never) | Never 0 |

Table 21: Water Quality

| Topic: 6.3 Water Quality | In place | Status Quo | Assessment Score |
|---|----------|------------|---------------------|
| 6.3.1 Reporting on quality of water taken from source: urban & rural | Yes | | 100% |
| 6.3.2 Quality of water returned to the resource: urban | Yes | | 100% |
| 6.3.3 Quality of water returned to the resource: rural | Yes | | 100% |
| 6.3.4 Is there a Pollution contingency measures plan in place? | No | | |
| 6.3.5 Quality of water taken from source: urban - % monitored by WSA self? | Yes | | 100% |
| 6.3.6 Quality of water taken from source: rural - % monitored by WSA self? | Yes | | 100% |
| 6.3.7 Quality of water returned to the source: urban - % monitored by WSA self? | Yes | | 100% |
| 6.3.8 Quality of water returned to the source: rural - % monitored by WSA self? | Yes | | 100% |
| 6.3.9 Are these results available in electronic format? (Yes/no) | Yes | | 100% |
| 6.3.10 % Time (days) within SANS 241 standards per year | Yes | | 100% |
| 6.4 Abstraction IS registered with DWS | Yes | | 100% |
| 6.4.1.2 The abstraction IS NOT registered with DWS | | | |
| 6.4.2.1 The abstraction IS recorded | Yes | | 100% |
| 6.4.2.2 The abstraction IS NOT recorded | | | |

Topic 7: Finance

7.1 Metering, Billing and Free Basic Services

An overview of the Breede Valley Municipality's metering and billing information is presented in Table 7.2 below and highlights that 100 % of the house- and dwelling connections are currently metered and billed. Due to the structuring of the municipal water services tariffs, all consumers receive free basic water services of 6 kl/ month.

Table 22: Tariffs

| No | Category | Sector | Unit | Tariff (VAT excluded) | | | % increase Year 0 | | |
|-----|---|------------------------------------|-------|-----------------------|----------|----------|----------------------|--|-------|
| | | | | Year 0 | Year - 1 | Year - 2 | | | |
| | | | | FY2018 | FY2017 | FY2016 | | | |
| 1,1 | <u>BASIC CHARGES</u> | | | | | | | | |
| | Residential | | R/c/m | | 0,00 | 0,00 | | | |
| | Sport clubs/ Educational/ Institutions and Churches | | R/c/m | 26,09 | 8,38 | 7,89 | | | 33.31 |
| | Handel / Business/Commerce | | R/c/m | 121,74 | 111,68 | 105,26 | | | 42,86 |
| | Connection greater than- 149 mm | | R/c/m | 143,48 | 130,30 | 122,81 | | | 51,51 |
| 2 | <u>VOLUME CHARGES</u> | | | | | | | | |
| | 0 - 6 Kl | Residential | R/Kl | 4,02 | 3.72 | 3,51 | | | 6,00 |
| | 7 - 20 Kl | Residential | R/Kl | 7,04 | 6.51 | 3,51 | | | 6,00 |
| | 21 - 40 Kl | Residential | R/Kl | 9,05 | 8.38 | 6,14 | | | 41,28 |
| | 41 - 80 Kl | Residential | R/Kl | 12,06 | 11.17 | 10,53 | | | |
| | 81 + Kl | Residential | R/Kl | 22,11 | 20.48 | 19,30 | | | |
| | | | | | | | | | |
| | 0 - 20 Kl | Commercial | R/Kl | 9,43 | 8.73 | 8,23 | | | 6,00 |
| | 21 - 40 Kl | Commercial | R/Kl | 10,20 | 9.45 | 8,90 | | | 6,00 |
| | 41 - 60 Kl | Commercial | R/Kl | 11,20 | 10.37 | 9,77 | | | 6,00 |
| | 61 - 100 Kl | Commercial | R/Kl | 12,55 | 11.62 | 10,96 | | | 6,00 |
| | 101 - 150 Kl | Commercial | R/Kl | 13,07 | 12.10 | 11,40 | | | 6,00 |
| | 151 - 300 Kl | Commercial | R/Kl | 12,24 | 11.34 | 10,68 | | | 13,16 |
| | 301 - 600 Kl | Commercial | R/Kl | 10,51 | 9.74 | 9,18 | | | 31,79 |
| | | | | | | | | | |
| | | Sport Clubs | R/Kl | 4,02 | 3.72 | 3,51 | | | 6,00 |
| | Excluding private schools/colleges | Educational (schools and Colleges) | R/Kl | 4,02 | 3.72 | 3,51 | | | 6,00 |
| | | Welfare and Old Age Homes | R/Kl | 4.02 | 3.72 | 3,51 | | | 6,00 |
| | Excludes rectory if consumption metered separately | Churches | R/Kl | 4,02 | 3.72 | 3,51 | | | 6,00 |
| | | Municipal | R/Kl | 4,02 | 3.72 | 3,51 | | | 6,00 |
| | | Fire Fighting | R/Kl | 4,02 | 3.72 | 3,51 | | | 6,00 |
| | <u>IRRIGATION</u> | | | | | | | | |
| | Purified | | R/Kl | 9,05 | 8.38 | 7,89 | | | 6,00 |
| | Non-purified | | R/Kl | 1,31 | 1.21 | 1,14 | | | 6.00 |
| | | | | | | | | | |

Note: All cost excluding VAT

Table 23: Overview of metering, billing and Free Basic Services

| Regulations Ref. # | Description | Unit | Year 0 | Year - 1 | Year - 2 |
|-----------------------|--|-----------|--------------|---------------|---------------|
| | | | FY2018 | FY2017 | FY2016 |
| | UNITS SUPPLIED (as per water services access profile) | - | - | - | - |
| 10.2 (b) (i) | Household water connections (house and yard connections) | Nr | 20906 | 20 813 | 18 992 |
| 10.2 (b) (iv) | Household sewerage connections | Nr | 20458 | 18 351 | 18 050 |
| | METERING | - | - | - | - |
| | Metered Water Connections (aligned with Billing System) | | | | |
| | Residential | Nr | 20906 | 18 992 | 18992 |
| | Commercial / Business | Nr | 794 | 780 | 769 |
| | Industrial | Nr | 26 | 24 | 24 |
| | Government / Institutional | Nr | 819 | 814 | 1 900 |
| | etc. | Nr | | | |
| | Sub-Total: Metered Water Connections | Nr | | 20 610 | 21 685 |
| | Proportion of metered connections (residential) | % | | | 100% |
| | Total number of meters | Nr | 22545 | 20 610 | 21 685 |
| 10.2 (b) (vi) | Total number of new connections (aligned with Table C.2.1) | Nr | 38 | 110 | 218 |
| 10.2 (e) (i) | Total number of new meters installed | Nr | 38 | 110 | 218 |
| | Proportion of new connections, metered | % | 100% | 100% | 100% |
| | Number of meters tested | Nr | 14 | | |
| 10.2 (e) (ii) | Proportion of meters tested to total number of meters | % | | 0 | 0 |
| | Number of meters replaced | Nr | 144 | | |
| 10.2 (e) (ii) | Proportion of meters replaced to total number of meters | % | | 0 | 0 |
| | BILLING | - | - | - | - |
| | Customer billing (water and sewerage) | | | | |
| | Residential | Nr | 20906 | 18 992 | 18992 |
| | Commercial / Business | Nr | 794 | 780 | 769 |
| | Industrial | Nr | 26 | 24 | 24 |
| | Government / Institutional | Nr | 819 | 814 | 1 900 |
| | etc. | Nr | | | |
| | Sub-Total: Customers billed | Nr | 22545 | 21 424 | 21 685 |
| | Proportion of bills to metered connections | % | 100% | 103,9% | 100,0% |
| | Residential | % | 100% | 100,0% | 100,0% |
| | Commercial / Business | % | 100% | 100,0% | 100,0% |
| | Industrial | % | 100% | 100,0% | 100,0% |
| | Government / Institutional | % | 0% | 0,0% | 0,0% |
| | etc. | % | 100% | 100,0% | 100,0% |
| | FREE BASIC SERVICES | - | - | - | - |
| | Nr customers receiving: | | | | |
| | Free Basic Water | Nr | 8596 | 7 860 | 6 996 |
| 10.2 (b) (v) | Free Basic Sanitation | Nr | 8596 | 7 860 | 6 996 |
| | Proportion of Free Basic Services | | | | |
| | Water | % | | 38% | 37% |
| | Sewerage | % | | 43% | 39% |

Topic 8: Water Services Institutional Arrangements and Customer Care

8.1 WSA functions and outputs

BVM 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 24: Function and Outputs and Outputs

| Table 24: Function and Outputs and Outputs | | | | | | | |
|--|-----------|--------------------------------|---------|----------------|-----------|----------------------------------|---------------------------|
| WSA Functions/ Outputs | In Place? | Resources Available to Perform | | | | If no, when will it be in place? | Support required (Yes/No) |
| | | Function? | | | | | |
| | | Budget | By-laws | Infrastructure | Personnel | | |
| Policy Development | | | | | | | |
| 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 | | | | | | | |
| Regulation and tariffs | | | | | | | |
| 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 | No | No | No | | No | Not known | Not known |
| Tariff structure | Yes | Yes | Yes | | Yes | n/a | No |
| Tariffs promulgated | Yes | Yes | Yes | | Yes | n/a | No |
| Infrastructure development (projects) | | | | | | | |
| Mechanisms to undertake project feasibility studies | Yes | Yes | Yes | Yes | Yes | n/a | No |
| Criteria for prioritising projects | | | | | | | |
| Mechanisms to assess and approve project business | | | | | | | |
| Mechanisms for selecting, contracting, managing and monitoring implementing agents | | | | | | | |
| Mechanisms to monitor project implementation | | | | | | | |

Functions and Output (Continue)

| 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 | | |
| | | | | | | | |
| Water conservation and demand management strategy | | | | | | | |
| Water conservation and demand management strategy | No | No | Yes | Yes | No | In Process | Yes |
| Performance management and monitoring | | | | | | | |
| 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 |
| WSDP | | | | | | | |
| WSDP information system | Yes | Yes | n.a yet | Yes | Yes | n/a | No |
| Mechanisms for stakeholder participation | | | | | | | |
| Mechanisms to monitor and report on WSDP implementation | | | | | | | |
| WSP institutional arrangements | | | | | | | |
| Criteria to select appropriate WSP's | Yes | Yes | n.a yet | Yes | Yes | n/a | No |
| Mechanisms to contract, manage and monitor WSP's | | | | | | | |
| Mechanisms to approve WSP business plans | | | | | | | |
| WSA overall capacity | | | | | | | |
| Sufficient staff and systems to fulfil all WSA functions | No | | | | | With entire municipality | Yes |

8.2 WSA Capacity Development

Training and awareness development is continuously promoted by the BVM 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 25: 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 practises. | Yes | Yes | Ongoing | Annual costs vary and are continuous |
| Staff Skills Development | Yes | Yes | Ongoing | R15000 per person |

8.3 By laws affecting water services

The by-laws for the provision of water and sewer is in place for the Breede Valley Municipality.

Table 26: 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) | No | n.a | n.a | n.a |
| Sanitation promotion agent | No | n.a | n.a | n.a |
| Support service contracts | No | n.a | n.a | n.a |
| Water service institutions | No | 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 | No | n.a | No | No |

8.4 Water services providers (retail water) – current year

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

The Breede Valley Municipality is the only Water Service Provider for sanitation in all the areas in the Breede Valley Municipality. The following tables represent the information on staffing levels for the provision of water and sanitation services.

Table 27: 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 | | 5 | 14 | 21 |
| Civil Works - Water | 1 | 2 | 1 | 4 | 41 | 56 |
| Civil Works - Sewer | 1 | 3 | 1 | 5 | 14 | 24 |
| Bulk Sewage | 1 | 2 | 1 | 5 | 36 | 45 |

8.5 Municipal Strategic Self-Assessment (MuSSA)

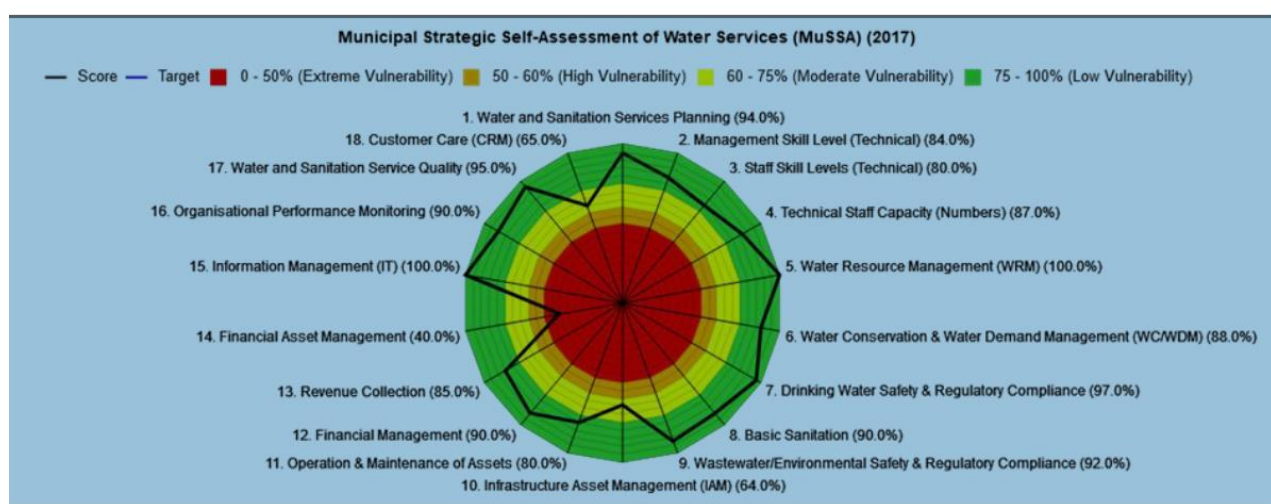
The Department of Water and Sanitation has overseen the annual use of the MuSSA to survey and assess the overall “business health” of a Municipality when fulfilling its water services function. The MuSSA asks senior municipal financial and technical managers 5 clear and relatively simple “essence” questions 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.

Vulnerability Index: 0.22



8.6: Customer Service Requirements

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 28: 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 24 hours |
| Attend to burst main water pipe | Within 48 hours |
| Investigate the quality of drinking water - colour or smell or taste | Within 5 working days |
| Attend to a blockage in leiwater system resulting in reduced or no flow | Within 5 working days |
| Attend to a serious overflowing sewer manhole | Within 4 hours |
| A pump station is not working and resulting in sewer spill from manholes | Within 4 hours |
| A main sewer blocked | Within 24 hours. |
| A blocked sewer on a private property | A private plumber should preferably be used. |

8.7 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

8.8 Education and pollution awareness

BVM 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. Add hoc initiatives are currently being done.

8.9 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 Municipality developed its first Water Services Development Plan in June 2011 for the period to June 2016. A new Water Service Development Plan was developed and adopted in March 2018 for the period to 2023.

Table 29 WSDP- and reporting reference

| Nr | WSDP Title and Reference | Status | Date | WSDP Year | Financial Year | Reporting year |
|----|---|-----------------|------------|-----------|----------------|----------------|
| 1 | Breede Valley Municipality Water Services Development Plan (WSDP) 2018 - 2023 | Drafted: | March 2018 | Year 1 | FY2014 | Year -4 |
| | | Comment submit: | | Year 2 | FY2015 | Year -3 |
| | | Finalised: | | Year 3 | FY2016 | Year -2 |
| | | Adopted: | | Year 4 | FY2017 | Year -1 |
| | | Published: | | Year 5 | FY2018 | Year 0 |

Section C: Water Services Existing Needs Perspective

The existing needs perspective as presented below was developed through a systematic and comprehensive review of the water services function in terms of the WSDP Guide Framework. The output from this process is presented below and includes compliance assessment in terms of:

- The intervention required to address the gap;
- The proposed solution to address the gap; and the
- The Future plan / identified project that would meet the requirement.

The water services situation analysis prompted the development of problem statements which formed the input for the development of the water services objectives and strategies which follows in Section D.

Existing Needs Perspective and Problem Statements

| Topic 1 - Settlement Demographics & Public Amenities | | | | | | |
|--|-----------------------|---|---|---|--|----------------------------------|
| Section | Intervention Required | % | Solution description as identified by Master Plan | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| 1.1 Settlements Summary | No | | | | | 100% |
| 1.2 Summary by Settlement Group | No | | | | | 100% |
| 1.3 Assessment Score by Settlement Type | No | | | | | 100% |
| 1.4 Amenities Summary | No | | | | | 100% |

| Topic 2 - Service Levels Profile | | | | | | |
|--|------------------------|---|---|---|--|----------------------------------|
| Section | Intervention Required? | % | Solution description as defined by topic situation assessment | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| Direct Backlog Water | No | | | | Yes | 90% |
| Direct Backlog Sanitation | No | | | | Yes | 90% |
| Water Services Infrastructure Supply Level Profile | No | | | | Yes | 90% |
| Water Reliability Profile | No | | | | Yes | 90% |
| Sanitation Service Infrastructure Supply Level Profile | No | | | | Yes | 90% |
| Sanitation Reliability Profile | No | | | | Yes | 90% |
| Water Services: Education | No | | | | No | 90% |
| Water Services: Health | No | | | | No | 90% |
| Sanitation Services: Education | No | | | | No | 90% |
| Sanitation Services: Health | No | | | | No | 90% |
| Health and Educational Facilities | No | | | | No | 90% |

| Topic 3 - Water Services Asset Management | | | | | | |
|---|------------------------|---|---|---|--|----------------------------------|
| Section | Intervention Required? | % | Solution description as defined by topic situation assessment | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| 3.1 General Information | No | | | | Yes | 90% |
| 3.2 Operation | No | | | | Yes | 90% |
| 3.3 Functionality Observation | No | | | | Yes | 90% |
| 3.4 Asset Assessment Spectrum | No | | | | Yes | 90% |
| 3.5 Water and Sanitation schemes | No | | | | Yes | 90% |

| Topic 4 - Water Services O&M | | | | | | |
|---|------------------------|---|---|---|--|----------------------------------|
| Section | Intervention Required? | % | Solution description as defined by topic situation assessment | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| 4.1 Operation & Maintenance Plan | No | | | | Yes | 80% |
| 4.1.1 Is There an Operation and Maintenance Plan? | Yes | | | | Yes | 80% |
| 4.2 Resources | No | | | | Yes | 70% |
| 4.3 Information | No | | | | Yes | 80% |
| 4.4 Activity Control & Management | No | | | | Yes | 80% |

| Topic 5.1 - Conservation & Demand Management - Water Resource Management | | | | | | |
|---|------------------------|---|---|---|--|----------------------------------|
| Section | Intervention Required? | % | Solution description as defined by topic situation assessment | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| 5.1 Reducing unaccounted water and water inefficiencies | No | | | | Yes | 90% |
| 5.2 Leak and meter repair programmes. | No | | | | Yes | 90% |
| 5.3 Consumer/end-use demand management: Public Information & Education Programmes | No | | | | Yes | 90% |
| 5.4: Conjunctive use of surface - and groundwater | No | | | | Yes | 90% |
| 5.5 Working for Water | No | | | | Yes | 90% |

| Topic 5.2 - Conservation & Demand Management - Water Balance | | | | | | |
|--|------------------------|---|---|---|--|----------------------------------|
| Section | Intervention Required? | % | Solution description as defined by topic situation assessment | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| 5.2 Water Balance | No | | | | Yes | 100% |

| Topic 6 - Water Resource | | | | | | |
|------------------------------------|------------------------|---|--|---|--|----------------------------------|
| Section | Intervention Required? | % | Solution description as defined by topic situation assessment | % | Is there an Existing project/activity addressing this problem? | Current Demand Overall Scoring % |
| 6.1.2 Additional Sources Available | Yes | | Shortage of Funding for the Augmentation of the Stetynskloof dam | | Yes | 80% |
| 6.2 Monitoring | No | | | | Yes | 90% |
| 6.3 Water Quality | No | | | | Yes | 90% |
| 6.4 Operation | No | | | | Yes | 90% |

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 2017/18. The link to the National and NDP objectives are also indicated in the table below.

Table D1: Water Services Strategic Objectives

| National Outcome | Strategic Objective | National KPA | NDP Objectives | Municipal KPI | Unit of Measurement | Performance Standard | Annual Target |
|---|--|--|--|--|---|--|---------------|
| A responsive and accountable, effective and efficient local government system | Assure a sustainable future through sound financial management, continuous revenue growth corporate governance and risk management practices | Municipal Financial Viability and Management | Developing a capable and Development State | Submit monthly reports to the Director by the 15th of each month that include the following: Progress on OH&S, priority risk areas, procurement plan , Collab items, scheduled maintenance programs, OPEX expenditure, security measures and incidents, RPM/BLEU/ GREEN/NO DROP and positions filled | Number of reports submitted | 12 | 12 |
| 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 | Complete 90% of the scheduled maintenance programme as per the maintenance schedule captured on Onkey system | % 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 | Submit a status report at the end of December of licenses of all the WTW and WWTW | Annual Status report submitted by the end of December | Annual status report in December | 1 |
| An effective, competitive and | To ensure a safe, healthy, clean and sustainable external | Basic Service Delivery | Economy and Development | Conduct monthly monitoring of ambient air quality | Monthly report | 12 Per annum | 12 |

| National Outcome | Strategic Objective | National KPA | NDP Objectives | Municipal KPI | Unit of Measurement | Performance Standard | Annual Target |
|---|--|--|--|--|---------------------------------------|--------------------------|---------------|
| responsive economic infrastructure network | environment for all Breede Valley's people | | | | | | |
| A responsive and accountable, effective and efficient local government system | Provide democratic, accountable government for local communities and encourage involvement of communities and community organizations in the matters of local government | Good Governance and Public Participation | Developing a capable and Development State | Attend to Collaborator inbox items within 30 days of receipt | % of items attended to within 30 days | Within 30 days | 100% |
| A responsive and accountable, effective and efficient local government system | Provide democratic, accountable government for local communities and encourage involvement of communities and community organizations in the matters of local government | Good Governance and Public Participation | Developing a capable and Development State | Hold monthly meetings with staff | Number of meetings held | Monthly meetings held | 10 |
| A responsive and accountable, effective and efficient local government system | Provide democratic, accountable government for local communities and encourage involvement of communities and | Good Governance and Public Participation | Developing a capable and Development State | Conduct bi-weekly site inspections of division operations | Number of site inspections | Regular site inspections | 24 |

| National Outcome | Strategic Objective | National KPA | NDP Objectives | Municipal KPI | Unit of Measurement | Performance Standard | Annual Target |
|--|--|------------------------|---|--|------------------------------------|-------------------------------------|---------------|
| | community organizations in the matters of local government | | | | | | |
| 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 2017/18 financial year | % water quality level | Achieve Top Layer kpi's for 2017/18 | 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 | Environmental Sustainability and Resilience | Compile a new 5 year Water Service Development Plan (WSDP) and submit to MayCo for approval by 31 December 2017 | WSDP submitted by 31 December 2017 | Achieve Top Layer kpi's for 2017/18 | 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 {(Number of sewerage samples that comply with SANS/Number of sewerage samples tested)x100} during the 2017/18 financial year | % of sewerage samples compliant | Achieve Top Layer kpi's for 2017/18 | 80% |

Section E: Water Services MTREF Projects

The following Provisional Water and Sewer projects are provided for the 2017/18, 2018/19 and 2019/20 financial years. The proposed budget is dependant of the approval of the final budget by Council.

| | PROJECT FUNDING: LOAN & RESERVES | Approved Budget 2017/2018 (Approved May 2016) | Funded veriments/ Additional funding (Draft) | Funded virements / Additional funding (March 2017) | Total Funded Budget 2017/18 | Approved Budget 2018/2019 | Funded veriments/ Additional funding | Total Budget 2018/19 | Draft Budget 2019/2020 | Requests 2019/20 | Total Budget 2019/20 |
|-------------|---|--|---|---|--|--------------------------------------|---|---------------------------------|-----------------------------------|-----------------------------|---------------------------------|
| 1.0 | EXTERNAL LOAN | | | | | | | | | | |
| 1.1 | Projects New | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.2 | Projects (B/F) (R51m) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.3 | Projects (B/F) (R21.5m) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1.4 | Projects (B/F) (R38.5m) | 0 | 5,000,000 | 0 | 5,000,000 | 0 | 5,000,000 | 5,000,000 | 8,000,000 | 8,000,000 | 8,000,000 |
| | TOTAL EXTERNAL LOAN | 0 | 5,000,000 | 0 | 5,000,000 | 0 | 5,000,000 | 5,000,000 | 8,000,000 | 8,000,000 | 8,000,000 |
| 3 | CAPITAL REPLACEMENT RESERVE | | | | | | | | | | |
| 3.0 | Projects New | 0 | 2,350,000 | -600,000 | 1,750,000 | 0 | 4,550,000 | 4,550,000 | 2,350,000 | 2,350,000 | 2,350,000 |
| 3.1 | Projects (B/F) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.2 | Projects (MIG Counter Funding) | 4,500,000 | -2,500,000 | -2,000,000 | 0 | 0 | 11,226,777 | 11,226,777 | 8,000,000 | 8,000,000 | 8,000,000 |
| 3.3 | CRR Connections (Public Contr) | 346,100 | 0 | 0 | 346,100 | 366,900 | 0 | 366,900 | 388,914 | 388,914 | 388,914 |
| 4.0 | Furniture and Equipment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL CRR | 4,846,100 | -150,000 | -2,600,000 | 2,096,100 | 366,900 | 15,776,777 | 16,143,677 | 10,738,914 | 10,738,914 | 10,738,914 |
| | INSURANCE RESERVE | | | | | | | | | | |
| 12.0 | Insurance Reserve | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL INSURANCE RESERVE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | TOTAL BASIC CAPITAL | 4,846,100 | 4,850,000 | -2,600,000 | 7,096,100 | 366,900 | 20,776,777 | 21,143,677 | 18,738,914 | 18,738,914 | 18,738,914 |
| | CAPITAL: GRANT FUNDING | | | | | | | | | | |
| 5.0 | District Municipality | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6.0 | PAWC: Proclaimed roads | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6.1 | PAWC: Libraries | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6.2 | PAWC: Transport | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6.3 | PAWC: Sport | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6.4 | PAWC: RSEP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8.0 | National Government: MIG (DORA) | 25,990,772 | 3,105,435 | -5,654,564 | 23,441,643 | 32,046,561 | -4,798,076 | 27,248,485 | 32,876,678 | 32,876,678 | 32,876,678 |
| 8.1 | National Government: RBIG (DORA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8.2 | National Government: INEP (DORA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8.3 | National Government: MSIG (DORA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8.4 | National Government: ACIP (DORA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8.5 | National Government: DOE (DORA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10.0 | Contributions Developers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11.0 | Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20.0 | PAWC: Housing (Services) | 0 | 0 | 30,000,000 | 30,000,000 | 0 | 20,200,000 | 20,200,000 | 0 | 0 | 0 |
| | TOTAL : GRANT FUNDING | 25,990,772 | 3,105,435 | 24,345,436 | 53,441,643 | 32,046,561 | 15,401,924 | 47,448,485 | 32,876,678 | 32,876,678 | 32,876,678 |
| | TOTAL FUNDING | 30,836,872 | 7,955,435 | 21,745,436 | 60,537,743 | 32,413,461 | 36,178,701 | 68,592,162 | 51,615,592 | 51,615,592 | 51,615,592 |
| 99.0 | UNFUNDED NEW REQUESTS | 0 | 0 | 0 | 0 | 0 | 27,567,328 | 27,567,328 | 25,864,524 | 25,864,524 | 25,864,524 |
| | TOTAL | 30,836,872 | 7,955,435 | 21,745,436 | 60,537,743 | 32,413,461 | 63,746,029 | 96,159,490 | 77,480,115 | 77,480,115 | 77,480,115 |

Section F: WSDP Projects

Table F.1 below presents the municipality's water services projects with the focus on the projects which were implemented in the 2018/2019 financial year.

Table F.1: Water Services projects status and performance

| No. | Project Title and Description | Inclusion | | Total Project Cost R'000 | Year 0 Performance - FY2018/19 | | | Funding Source(s) | Project Category / Type | Planned Period | | Project Status | Actual Completion Year |
|-----|---|-----------|-----|-----------------------------|--------------------------------|-------------------|------|-------------------|-------------------------|----------------|-------|----------------|------------------------|
| | | WSDP | IDP | | FY Budget R'000 | Expended R'000 | % | | | From FY | To FY | | |
| 2 | Transhex Sewer Pump Station and Rising Main | √ | √ | R 25 011 | R 25 011 | R 24 237 | 97% | Own Funds | Bulk Sewer | 2016 | 2018 | Completed | 2018 |
| 3 | 20ML Langerug Reservoir | √ | √ | R 25 170 | R 25 170 | R 25 088 | 100% | Own Funds | Bulk Water | 2016 | 2018 | In progress | 2019 |
| 4 | Replacement of Water Network | √ | √ | R 1 548 | R 1 548 | R 1 548 | 100% | Own Funds | Water | 2016 | 2018 | Completed | 2018 |
| 5 | Replacement of Sewer Network | √ | √ | R 1 735 | R 1 735 | R 1 735 | 100% | Own Funds | Sewer | 2016 | 2018 | Completed | 2018 |
| | Worcester WWTW Belt presses | √ | √ | R 440 | R 440 | R 440 | 100% | MIG | Sewer | 2016 | 2018 | Completed | 2018 |
| | Total | | | R 53 904 | R 53 904 | R 53 048 | | | | | | | |