SALDANHA BAY MUNICIPALITY

WATER SERVICES DEVELOPMENT PLAN

FOR 2017-2022

EXECUTIVE SUMMARY

JUNE 2019

Issued by :
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1 INTRODUCTION

In accordance with the Water Services Act (Act No 108 of 1997) clause 11 *"Every water services authority has a duty to all consumers or potential consumers in its area of jurisdiction to progressively ensure efficient, affordable, economical and sustainable access to water services."*

Clauses 12 and 13 of the Water Services Act (Act No 108 of 1997) place a duty on WSAs to prepare and maintain a WSDP. The DWS has developed an online WSDP system to assist WSAs with the WSDP process and to provide a framework for the capturing of the data. The topics included in the online system which are addressed in detail in the Chapters of SBM's WSDP are as follows:

- Administration
- Demographics Profile
- Service Levels Profile
- Socio Economic Background Profile
- Water Services Infrastructure Profile
- Operation and Maintenance Profile
- Associated Services Profile
- Water Resources Profile
- Conservation and Demand Management Profile
- Financial Profile
- Institutional Arrangements Profile
- Social and Customer Service Requirements Profile
- Needs Development Plan

This WSDP for the 2017-2022 financial years and is an update of SBM's 2011/2012 WSDP. The WSDP is aligned with the 2016/2017 IDP public participation and consultation processes.

The 2017-2022 WSDP consists of the following documents:

- Executive Summary document (For Council approval and Public Participation Process)
- WSDP Report
- Chapter 1 : Implementation Activity Chart (Generated by the Online system) of current MTEF projects
- Chapter 2: Water Services Status Quo Knowledge Interpretation (Generated by Online System)
- Chapter 3: Strategic Development Business Implementation Plans .

The Executive Summary of the WSDP was compiled to be provide a shorter synopsis which could be easily submitted to Council for approval and issued to the public for their comment.

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

The progressive development of the WSDP is two-phased. Firstly it involves updating of the information content on which to base latest planning initiatives. Secondly the structure and functionality of the framework itself will progressively be enhanced and improved.

The current online system guideline introduces a strategic theme to each of the business elements in order to determine the following:

- Does the WSA have information/data of its Water Service business (database information system)
  - Know its customers/needs/service levels
  - All existing infrastructure data/status/condition
  - Operation and Maintenance/needs/activities/status
  - Water Resource Conservation Demand Management/usage/availability
- Is the WSA able to interpret the data into knowledge with regards to: (Master Plans)
  - What is the existing status of service delivery related to reliable supply?
  - Where is the WSA suppose to be now?
  - What is the gap of the existing situation to fix the WSA's existing problem?
  - What should the WSA have in place with regards to strategies/projects in year 1 –5
    - Fixing my existing problem
    - Providing for growth and new development
    - Upgrading/refurbish/replace existing/old infrastructure
- The WSA has to pro-actively schedule/prioritize appropriate activities/projects/systems to align with budget/grants (implementation strategy)
- To provide a Project Database aligning project milestones with actual need
- The WSA is able to measure every rand spend in relation to the enhancement of service provision reliability/backlog eradication (effective monitoring system/Audit report)

This report is to aims to summarize WSDP inputs for incorporation into SBM's IDP process and is structured as follows:

- Section A: Status Quo Overview: Providing a summarised overview of the status quo in terms of the WSA's business elements as aligned to the WSDP framework.
- Section B: State of Water Services Planning: Summarizes the status of planning for the water services in the WSA.
- Section C: Water Services Existing Needs Perspective: Provides an overview of the WSA's need of its water services, with specific focus on problem areas.
- Section D: Water Services Objectives and Strategies: Provides 5-year water services objectives and strategies developed in the WSDP process for incorporation in the IDP, aligned to the water services functional business elements.
- Section E: Water Services MTEF Projects: Providing water services projects for the medium-term expenditure framework including funding sources proposed.
- Section F: WSDP Projects: Presents the projects identified during the WSDP process in order to meet the WSA strategies

2 SECTION A : STATUS QUO OVERVIEW

2.1 Business Element 1: Administration

2.1.1 WSA Role players

The role players in SBM with regards to the WSDP are as follows:

Table 1: Role Players Contact Details

Position	Person	Tel	Fax	Cell	Email
Municipal Manager	Mr Heinrich Mettler	022 701 7000			mun@sbm.gov.za
Executive Mayor	Mr Marius Koen	022 701 7025			
Water Services Councilor	Mr Andre Kruger	022 701 7006		073 6640 506	Andre.Kruger@sbm.gov.za
WSDP Contact	Mr G Williams/ Mr J Minnaar	022 701 7047 / 022 701 7091	022 715 1304	073 209 4175 / 071 8608 029	Gavin.Williams@sbm.gov.za / Junius.Minnaar@sbm.gov.za
IDP Co-Ordinator	Mr Q Jordaan	022 701 7064	022 715 1818	082 680 2962	Quentin.Jordaan@sbm.gov.za
PIMSS Senior Planner	N/A				
Technical Services	Mr G Smith	022 701 7112	022 715 1304	071 8565 788	Gerrit.Smith@sbm.gov.za
Treasurer	N/A				
WSDP Data Custodian	Mr G Williams/ Mr J Minnaar	022 701 7047 / 022 701 7091	022 715 1304	073 209 4175 / 071 8608 029	Gavin.Williams@sbm.gov.za / Junius.Minnaar@sbm.gov.za
WSDP Custodian	Mr G Williams/ Mr J Minnaar	022 701 7047 / 022 701 7091	022 715 1304	073 209 4175 / 071 8608 029	Gavin.Williams@sbm.gov.za / Junius.Minnaar@sbm.gov.za
Data Official	N/A				
PMU Manager	Mr L Khuselo	022 701 7043	022 715 1304	083 284 7847	Luvuyo.Khuselo@sbm.gov.za
Chief Financial Officer	Mr Stefan Vorster	022 701 6977		079 179 2882	Stefan.Vorster@sbm.gov.za
Housing	Mr Ryan Groenewald	022 701 6826		084 8347 553	Ryan.Groenewald@sbm.gov.za
Environmental	Ms Nazeema Duarte	022 701 7116		081 024 7311	Nazeema.Duarte@sbm.gov.za
Infrastructure	Mr G Williams/ Mr J Minnaar	022 701 7047 / 022 701 7091	022 715 1304	073 209 4175 / 071 8608 029	Gavin.Williams@sbm.gov.za / Junius.Minnaar@sbm.gov.za

2.2 Business Element 2: Demographics

2.2.1 WSA Locality

SBM is approximately 140 km north of Cape Town and located within the Berg-Olifants Water Management Area (WMA) which is located within the West Coast District Municipality within the Western Cape Province. The SBM area encompasses several towns which includes:

- Vredenburg
- Saldanha
- Langebaan & Langebaan weg
- St Helena Bay
- Jacobs Bay
- Paternoster
- Hopefield

SBM has been classified as a high capacity and Category 'B' municipality. A category 'B' municipality shares municipal executive and legislative authority with a category 'C' or district municipality within whose areas it falls, in this case the West Coast District Municipality (DC1).

2.2.2 Overview of WSA supply systems

SBM consists of 13 electoral wards. SBM is not the only WSA in the area as the WCDM also supplies some farms in the area with potable water from the Withoogte Scheme. SBM's Management Area includes the following towns and ***Water Distribution Systems***:

- The main town of Vredenburg which also supplies the town of Jacobs Bay – **Vredenburg System.**

  Vredenburg is supplied with potable water from the WCDM Withoogte Scheme which provides water the to Vredenburg Booster Pump Station. Water is then pumped to the Vredenburg Reservoir and distributed from there. Water is also received from the WCDM Bezaansklip reservoir and pumped with pump stations to Vredenburg and Louwville reservoir. Jacobs Bay is supplied from the Hospital Reservoir in Vredenburg. A schematic layout of the system is shown below:

- Paternoster – **Paternoster System.**

  Paternoster receives water from Vredenburg through a gravity feed system (see the figure above). Some farmers along the pipeline also receive potable water from this system.

- Saldanha – **Saldanha System.**

  Saldanha is supplied with potable water from the WCDM Withoogte Scheme which provides water the to the Saldanha Steel Reservoir, the Saldanha Klein 1 & 2 Reservoirs and the Kalkrug Reservoir. Water is then pumped to several smaller reservoirs and towers and distributed from there. A schematic layout is shown below:

- Langebaan – **Langebaan System.**

  Langebaan is supplied with potable water from the WCDM Withoogte Scheme which provides water the to the Olifantskop Reservoir, the Club Mykonos Reservoir and the Country Club Middle Reservoir. Water is then pumped or gravitates to several smaller reservoirs and towers and distributed from there.

- Hopefield – **Hopefield System.**

  The small town of Hopefield is supplied from both boreholes and the WCDM Withoogte Scheme. Borehole water is chlorinated prior to conveyance to the same reservoirs to which the WCDM Withoogte scheme feeds.

- The small towns of Brittania Bay, Shelly Point, Stompneus Bay, St Helena Bay and Laingville – **St Helena Bay System.**

  These small towns are supplied with potable water from the WCDM Withoogte Scheme which provides water various small booster pump stations pumping to supply reservoirs with the exception of Laingville Low reservoir which is fed directly from the Withoogte Scheme.

- Rural & Farming System

  There are several rural villages such as Churchhaven, Stofbergsfontein, Geelbek and Donkergat which are "off-grid" towns which with their own water and sanitation provision. Further to this form houses with the municipality also form part of this category.

Some of these towns could be described as holiday towns as they receive large influxes of people during holiday periods. Towns such as Paternoster, Brittania Bay, Shelly Point, Stompneus Bay, St Helena Bay and Jacobs Bay typically could be classified as holiday towns.

2.2.3 Environment

Global Warming

The risk of global warming that is likely to strike the Western Cape poses threats in rainfall amounts and changing seasonality of rain. Future projections of climate show that there is going to be fewer strong or deeper low-pressure systems in winter months (June, July and August) resulting in less rainfall. In addition to predicted decline in rainfall, increased temperatures in the Western Cape would further result in increased evaporation and an increase in irrigation requirement. Although this has no impact on current water requirement estimates, the impact of climate change must be taken into consideration when developing planning scenarios for future water requirements.

Shortage of rain or changing seasonal patterns will not only affect dam levels, but will also severely hamper agricultural production as crops currently produced are based on the current season of rain.

Floods

One of the climate change threats in some parts of the Western Cape is the likelihood of floods with greater intensity and longer-term impacts. There is likely to be increases in the severity and unpredictability of weather patterns. Flooding and storms are predicted which could have devastating effects on agricultural production.

Natural Environment

The natural beauty of the SBM is its most important asset. The combination of its distinctive coastline with its beautiful beaches, as well as its moderate climate, makes the area increasingly attractive as a residential area and a tourist destination.

The potential economic benefits of tourism which can be realized from the natural source base are unlimited should these resources be managed on a sustainable basis. Yet the threat of climate change is likely to impact negatively on SBM's natural beauty if adaptation strategies are not implemented. SBM's emphasis should be to secure future environmental sustainability through a planning process in line with a number of objectives for each of the three different types of environments, being:

- Terrestrial ecosystems;
- Special habitats; and
- Aquatic ecosystems

Furthermore, SBM should recognize that environmental integrity constitutes a fundamental ingredient towards its growth.

2.2.4 Economic

The most important economic asset of the municipal area, is undoubtedly, Saldanha Port as well as its transport links (rail, road and air), and its pristine coastline (Langebaan and St Helena Bay to Jacobs Bay). The region's potential to create more sustainable jobs as well as to expand its business activity should, thus, be closely linked to industrial development and the tourist opportunities the coastline offer.

The Saldanha Port is strategically positioned to contribute to the economic growth of the municipal area. The port crates opportunities for exporting of local products (i.e. steel, agricultural products etc.). Besides Cape Town, the Saldanha Port is the only deep-water harbor in the Western Cape. The Saldanha Port can deliver a complimentary service to the Cape Town Port, and thereby the municipal area could become globally competitive.

The industrial tourism and agricultural sectors are seen as the primary economic drivers in the Saldanha Bay Municipal area's economy. However, due to increased mechanization in the agricultural sector, farm workers lose their employment and migrate to urban areas in search of employment opportunities. The natural environment is the main attraction for tourists to the western of the municipal area. Therefore, industrial development should take place in such a way that the natural environment and tourism attractions are not affected negatively. There are various economic opportunities for SMME in the tourism industry.

Vredenburg can be seen as the commercial and administrative node in the SBM Area. However, there is no clearly defined functional hierarchy for the towns in the municipal area. In order to promote local economic development in the municipal area, the role and function of each core urban area must be defined. Economic development should be promoted according to the identified function of each core urban area (e.g. Vredenburg: administrative, Langebaan: tourism, Hopefield: agricultural service centre, Saldanha: port, industrial etc.).

Due to the high volumes of tourists that visit the area and especially the local towns (i.e. Langebaan, St Helena Bay and Paternoster), it is important to provide business facilities to fulfil in the needs of the seasonal tourists as well as the local communities.

It is important to promote the development of SMME's and support existing SMME's in the municipal area. The economic drivers of the local economy should be targeted for SMME involvement. SMME development can be stimulated through linkages from existing industries and networks formed in the private sector.

2.2.5 Social

The development of bulk water supplies and the construction of sewer systems and other infrastructure works are an essential part of the social and economic assets of a community. While the costs of installing infrastructure can be high their value needs to be assessed against the efficiency gains they bring – higher levels of mobility, enhanced productivity, lower health risks and expenditure, and improvements in well-being, to mention but a few.

The experienced of advanced industrial societies demonstrates that adequate levels of hard infrastructure lead to substantial improvements in adult and infant mortality rates and in conferring a range of intangible benefits to a population such as overcoming feelings of inferiority and backwardness.

Drug related crime and burglary are the most troubling crimes in SBM

Table 2: Socio-Economic Indicators

Socio-economic indicators:	Saldanha Bay	West Coast District
GDRP growth rate 2005 - 2015	**2.95%**	**3.0%**
Unemployment rate 2011	**17%**	**25%**
Number of unemployed 2011	**23206**	**109101**
Percentage of Households with no income 2016	**10.7%**	**14.1%**
Percentage of Households with low income 2016 (R50k Annually)	**51.4%**	**48.6%**
Education:		
Number of schools (Primary & High)	**23**	**125**
Percentage of persons having completed Grade 9 or higher	**72.2%**	**66.8%**
Educator – learner ratio	**48.38**	**31.9**
Crime measures (reported crime):		
Number of murders (2016) (per 100 0000)	**26**	**32**
Drug related crimes (2016) (per 100 0000)	**815**	**1348**
Number of sexual assault cases (2016) (per 100 0000)	**93**	**136**
Residential Burglaries (2016) (per 100 0000)	**1173**	**736**
Driving Under the influence (2016) (per 100 000)	**117**	**115**
Strengths	**Challenges**	
Investment and economic development potential	Growing unemployment and crime	
Regional export hub	No FET colleges to support growing industrial development	
Potential for further investment opportunities	High health-care workload	
Western growth node	Housing backlog and low quality of life	
Economic diversification		

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2.2.6 Housing Backlog

Housing is the primary use of urban land. It is therefore imperative that SBM applies effective land use management policies to ensure that the social and market related needs of housing for all income groups is effectively addressed. The existing need for subsidized housing (Based on SBM's Human Settlements Plan and the SBM SDF housing waiting list 2014) is as follows:

- Vredenburg 2 854 units
- Saldanha 1 787 units
- Langebaan 628 units
- St Helena Bay 1 497 units
- Hopefield 741 units
- Paternoster 376 units

Total 7 883 units

This is a significant amount which amounts to approximately 22.17% of the total number of households in the municipality (Community Survey 2016).

2.3 Business Element 3: Service Levels

2.3.1 Service Levels

Every WSA has a duty to ensure that at least a basic water supply and sanitation service is provided to every household within its area of jurisdiction. The definition of basic water supply and sanitation services are summarized in the table below.

Table 3: Definition of Minimum Levels of Service for Water & Sanitation

Term	Definition
Basic water supply facility	The infrastructure necessary to supply 25 litres of potable water per person per day supplied within 200 meters of a household and with a minimum flow of 10 litres per minute (in the case of communal water points) or 6000 litres of potable water supplied per formal connection per month (in case of yard or house connections).
Basic water supply services	The provision of a basic water supply facility, the sustainable operation of the facility (available for at least 350 days per year and not interrupted for more than 48 consecutive hours per incident) and the communication of good water-use, hygiene and related practices.
Basic sanitation facility	The infrastructure necessary to provide a sanitation facility which is safe, reliable, private, protected from the weather and ventilated, keeps smells to the minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease carrying flies and pests, and enables safe and appropriate treatment and/or removal of human wastewater in an environmentally sound manner.
Basic sanitations service	The provision of a basic sanitation facility which is easy accessible to a household, the sustainable operation of the facility, including the safe removal of human waste and wastewater from the premises where this is appropriate and necessary, and the communication of good sanitation, hygiene and related practices.

In general access to both water and sewer services are high with only some of the informal areas in Vredenburg requiring additional infrastructure. The tables below give an overview of the projected population and permanent number of households and the water and sanitation service levels in SBM's Management Area.

Table 4: Water Services Overview

Settlement Type	2 011		2017/18		Water category									
	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														
Formal Town					**Adequate**			**Below RDP**					**None**	
Vredenburg	12 041	38 405	12264	41 656	X		X							
Jacobs Bay	85	498	301	600	X		X							
Paternoster	683	1 971	870	2237	X		X							
Saldanha	8 074	31 097	6796	30 364	X		X							
Langebaan	3 264	9 246	5776	10 862	X		X							
Hopefield	2 136	6 449	1973	7268	X		X							
St Helena Bay/Laingville	3 607	11 527	6039	12 554	X		X							
Sub-Total	**29 890**	**99 193**	**34 019**	**105 541**	**7**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Townships														
					Adequate			**Below RDP**					**None**	
Middelpos Informal	0	0	673	3138						X				
Rustfontein Informal	0	0	95	349	**0**	**0**	**0**	**0**	**0**	X	**0**	**0**	**0**	**0**
Sub-Total	**0**	**0**	**768**	**3 487**										
Sub-Total: (Urban)	**29 890**	**99 193**	**34 787**	**109 028**	**7**	**0**	**7**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
RURAL										**2**				
Rural Small Village					**Adequate**			**Below RDP**					**None**	
Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Rural Scattered					**Adequate**			**Below RDP**					**None**	
Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Working towns & service centers					**Adequate**			**Below RDP**					**None**	
	0	0												
Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Farming					**Adequate**			**Below RDP**					**None**	
Farms			763	2145	X		X							
Sub-Total	**0**	**0**	**763**	**2145**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Sub-Total (Rural)	**0**	**0**	**35550**	**111 173**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	**29 890**	**99 193**	**35 550**	**111 173**	**8**	**0**	**8**	**0**	**0**	**2**	**0**	**0**	**0**	**0**

Table 5: Sewer Services Overview

Settlement Type	2 011		2017/18		Sewer category									
	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														
Formal Town					**Adequate**			**Below RDP**					**None**	
Vredenburg	12 041	38 405	11 095	37 342	X		X							
Jacobs Bay	85	498	301	600	X		X							
Paternoster	683	1 971	870	2237	X		X							
Saldanha	8 074	31 097	3930	16 992	X		X							
Langebaan	3 264	9 246	5776	10 862	X		X							
Hopefield	2 136	6 449	1973	7268	X		X							
St Helena Bay/Laingville	3 607	11 527	5787	11 832	X		X							
Sub-Total	**29 890**	**99 193**	**29 732**	**87 133**	**7**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Townships														
					Adequate			**Below RDP**					**None**	
Middelpos Informal	0	0	3539	16 510						X				
Rustfontein			1264	4663						X				
St Helena - Laingville			252	722						X				
Sub-Total	**0**	**0**	**5055**	**21 895**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**
Sub-Total: (Urban)	**29 890**	**99 193**	**34 787**	**109 028**	**7**	**0**	**7**	**0**	**0**	**3**	**0**	**0**	**0**	**0**
RURAL														
Rural Small Village					**Adequate**			**Below RDP**					**None**	
Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Rural Scattered					**Adequate**			**Below RDP**					**None**	
Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Working towns & service centers					**Adequate**			**Below RDP**					**None**	
	0	0												
Sub-Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Farming					**Adequate**			**Below RDP**					**None**	
Farms			763	2145	X		X							
Sub-Total	**0**	**0**	**763**	**2145**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Sub-Total (Rural)	**0**	**0**	**35 550**	**111 173**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL	**29 890**	**99 193**	**35 550**	**111 173**	**8**	**0**	**8**	**0**	**0**	**3**	**0**	**0**	**0**	**0**

The water service delivery profile is used to indicate the variety of end users that are served by the Municipality. The services delivery profile includes both potable water services as well as sanitation services and typically indicates the number and nature of connections for which the Municipality is responsible for servicing, either by supplying potable water or by receiving waste water.

2.3.2 User Connection Profile

The total number of connections in the 2017/18 Financial year amounts to 27 827. The figures indicate the percentage distribution of connections to which the Municipality supplies potable water. The connections are also grouped according to the following categories: Residential, Government & Institutions, Health, Industrial, Commercial and Mining. Certain connections that did not fall in any of the groups are also illustrated under the category of 'Other'.

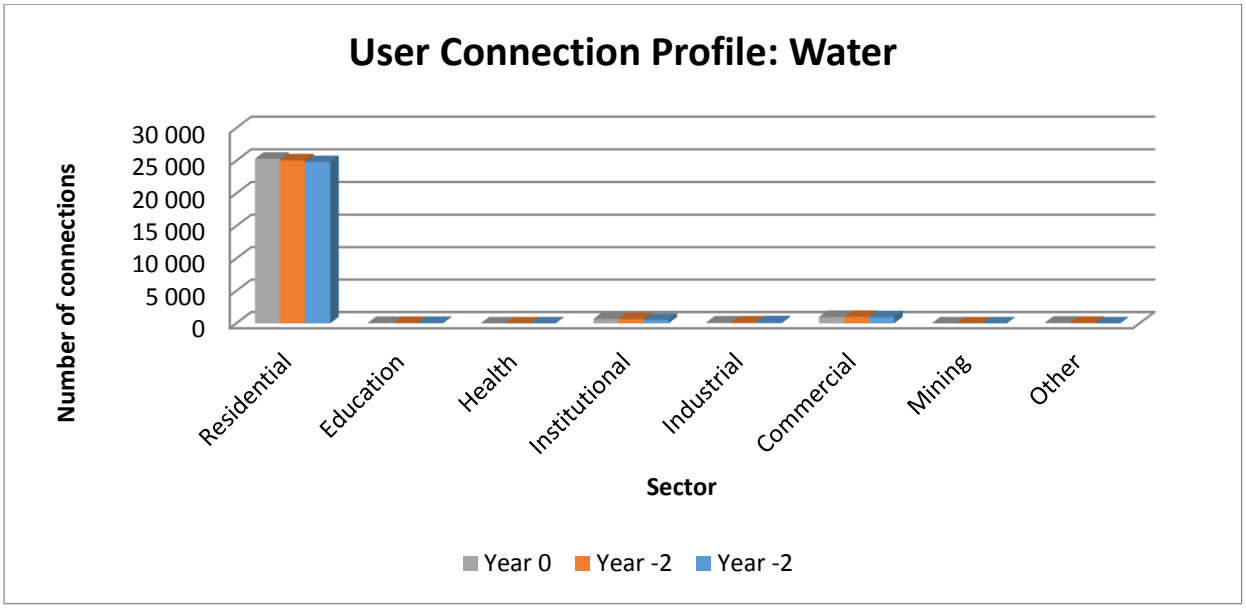


Figure 1 : User Connection Profile Water

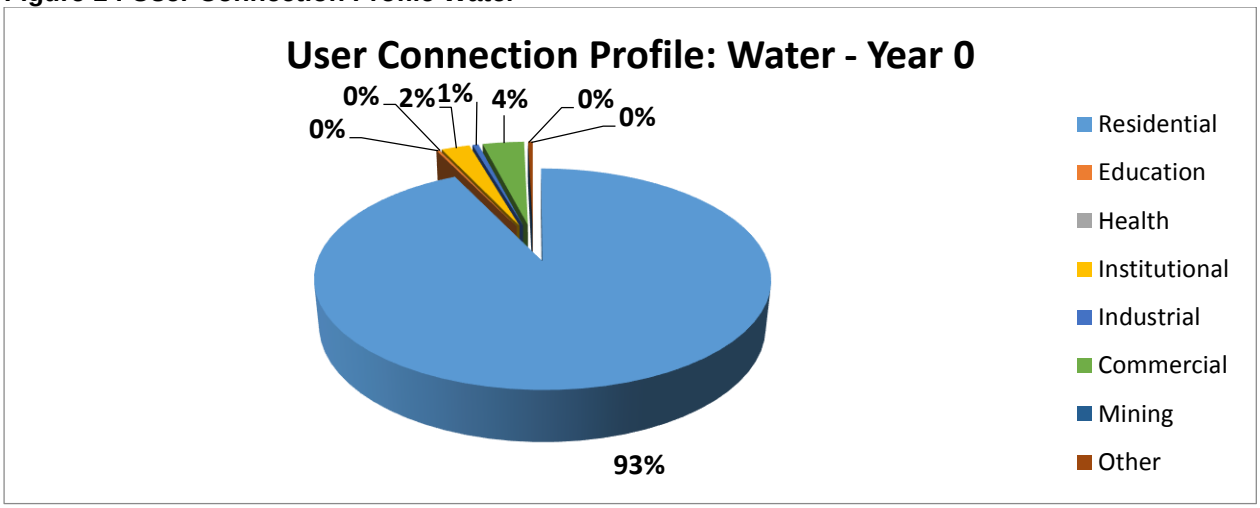


Figure 2: User connection distribution for water – Year 2016/2017

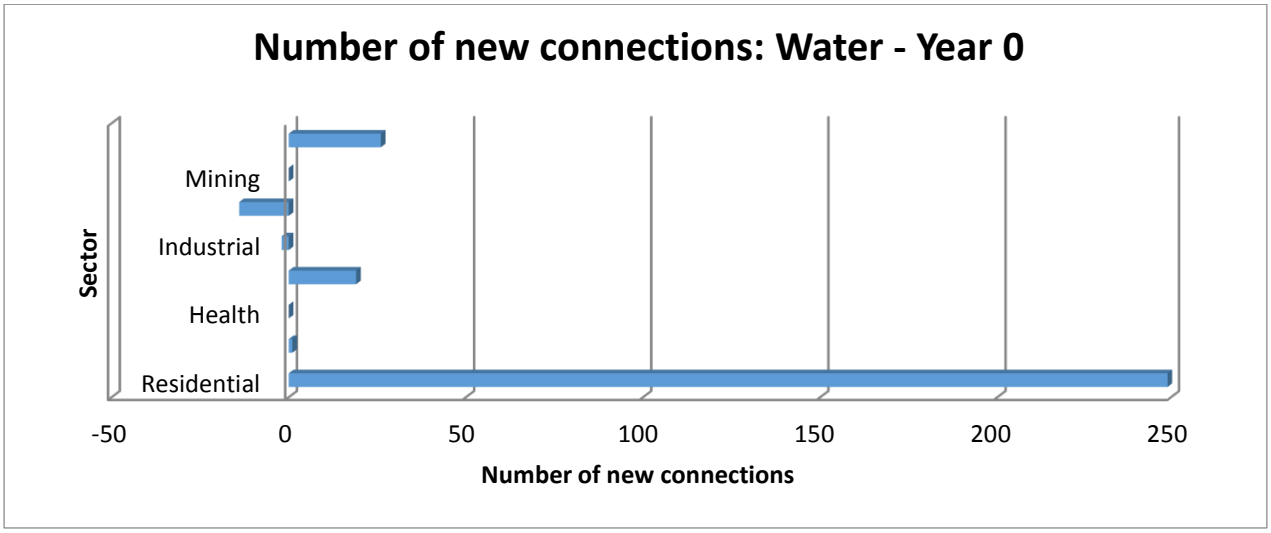


Figure 3: Number of new water connections provided during 2017/2018

The total number of sewer connections amounts to 32 335. The following figures also indicate the percentage distribution of connections from which the Municipality receives waste water. The connections are also grouped according to the following categories: Residential, Education, Health, Industrial, Commercial and Mining. Certain connections that did not fall in any of the groups are also illustrated under the category of 'Other'.

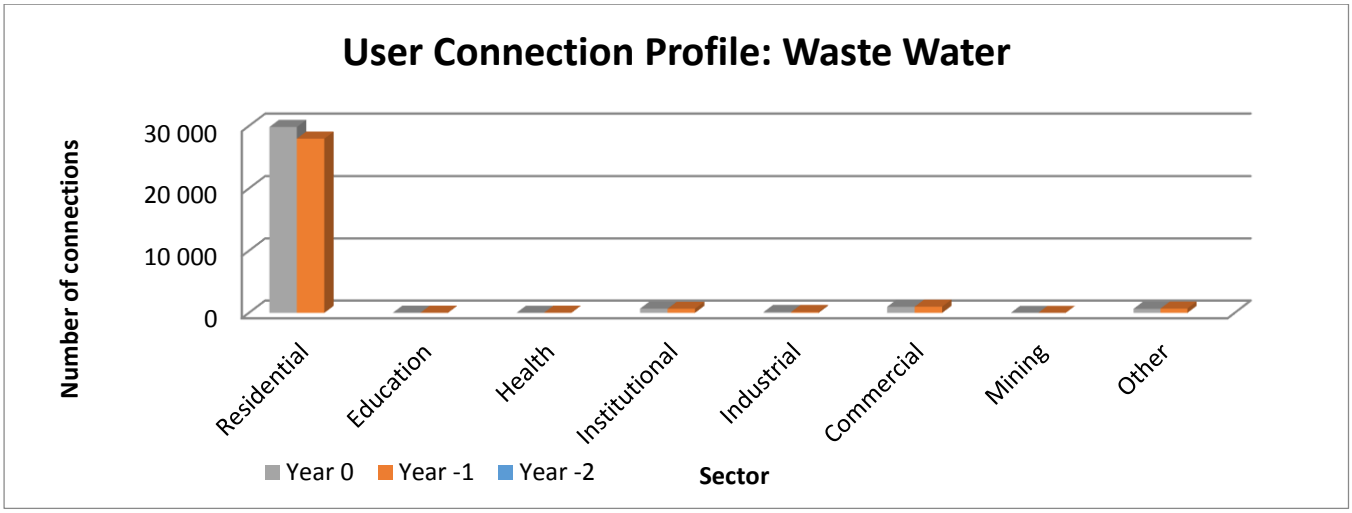


Figure 4 : User Connection Profile Sewer

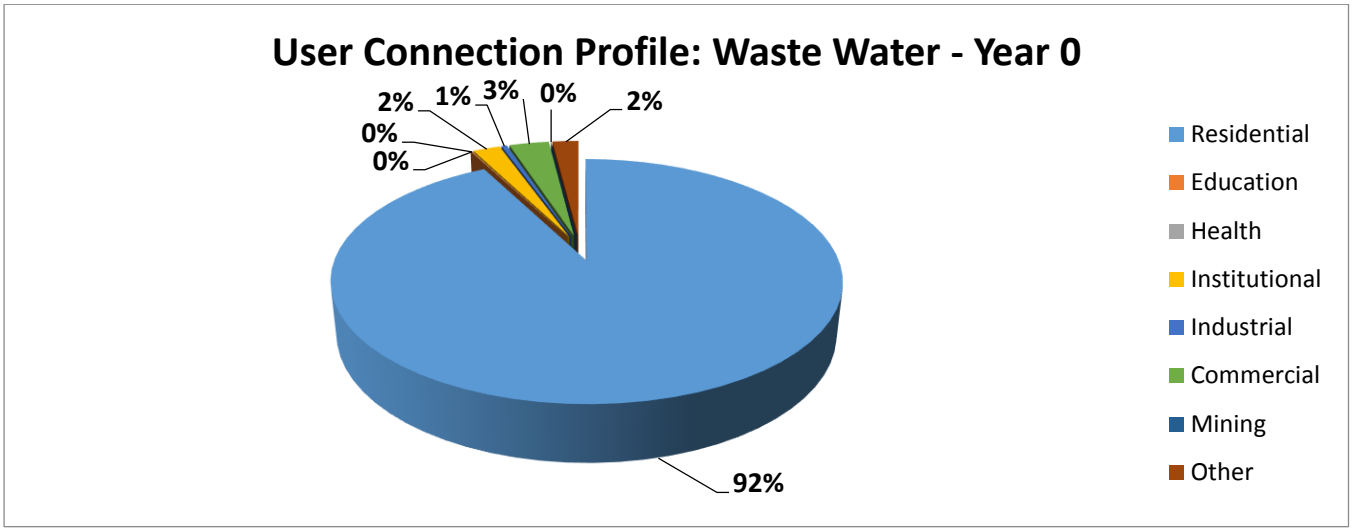


Figure 5 : User connection distribution for Sewer – Year 2016/2017

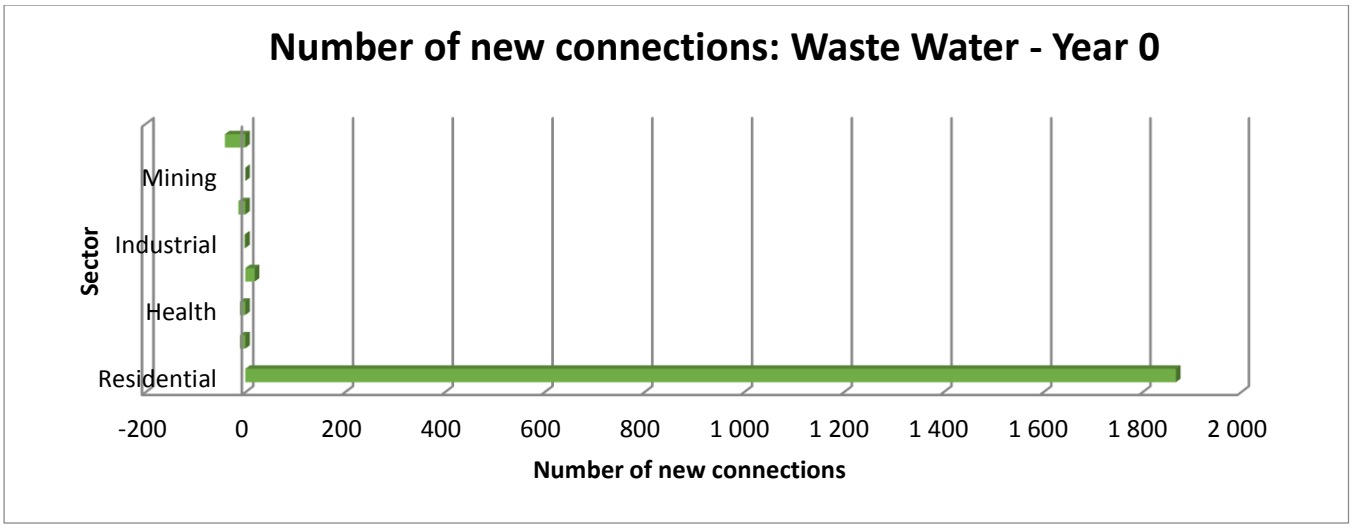


Figure 6 : Number of new water connections provided during 2017/2018

From the above figures it can be seen that the majority (more than 90%) of the services delivered by the Municipality are for residential users.

Since the Municipality provides the majority of it's service to residential users, this section of the report is dedicated to describe the access profile of the services delivered to the residential users specifically. The residential water service delivery access profile is presented below and is aligned with the format proposed for the municipality annual report as contemplated by the MFMA.

The following table illustrates information obtained from the 2016 Community Survey and the 2011 Census with regard to the water services provided to residential users by the Municipality.

Table 6: Residential water services delivery access profile: Water

Census Category	Description	Year 0 FY2017/18		Year -1 FY2016/17		Year -6 FY2011/12	
		Nr	%	Nr	%	Nr	%
	WATER (ABOVE MIN LEVEL)						
Piped (tap) water inside dwelling/institution	House connections	28 201	74.5%	26 597	74.5%	23 382	78.5%
Piped (tap) water inside yard	Yard connections	3 779	10.0%	3 564	10.0%	5 564	18.7%
Piped (tap) water on community stand: distance less than 200m from dwelling/institution	Standpipe connection < 200 m	4 769	12.6%	4 498	12.6%	537	1.8%
	Sub-Total: Minimum Service Level and Above	**36 749**	**97.0%**	**34 659**	**97.0%**	**29 483**	**99.0%**
	WATER (BELOW MIN LEVEL)						
Piped (tap) water on community stand: distance between 200m and 500m from dwelling/institution	Standpipe connection: > 200 m < 500 m	894	2.4%	843	2.4%	89	0.3%
Piped (tap) water on community stand: distance between 500m and 1000m (1km) from dwelling /institution	Standpipe connection: > 500 m < 1 000 m	29	0.1%	27	0.1%	16	0.1%
Piped (tap) water on community stand: distance greater than 1000m (1km) from dwelling/institution	Standpipe connection: > 1 000 m	0	0.0%	0	0.0%	6	0.0%
No access to piped (tap) water	No services	198	0.5%	187	0.5%	179	0.6%
	Sub-Total: Below Minimum Service Level	**1 121**	**3.0%**	**1 057**	**3.0%**	**290**	1.0%
	Total number of households	**37 869**	**100.0%**	**35 716**	**100.0%**	**29 773**	**100.0%**

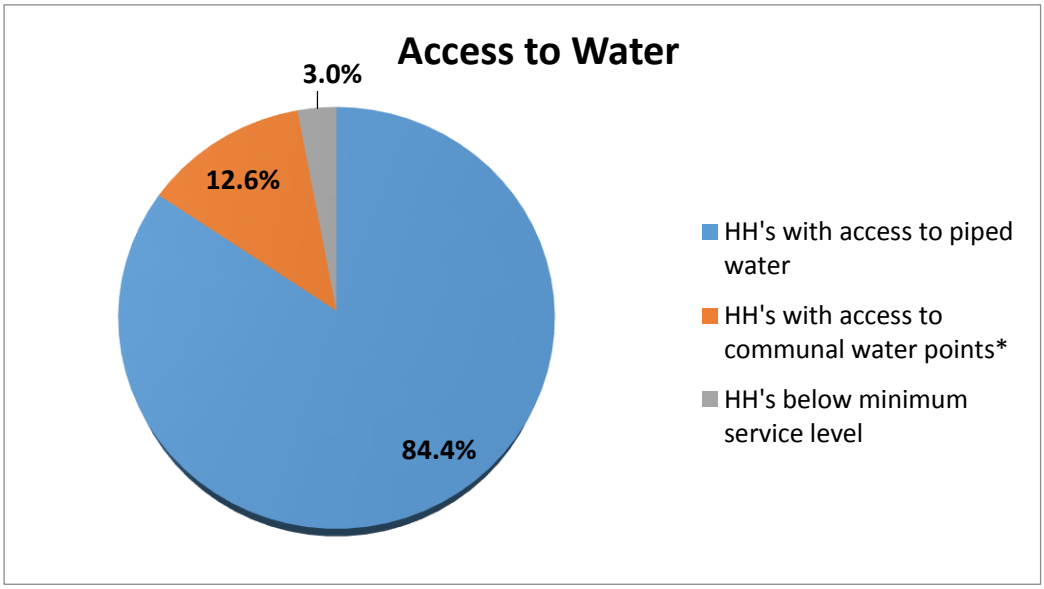


Figure 7 : Household water access profile 2017/18

Similarly, to the water services above the sanitation services profile is also shown below:

Table 7: Residential water services delivery access profile: Sanitation

Census Category	Description	Year 0 FY2017/18		Year -1 FY2016/17		Year -6 FY2011/12	
		Nr	%	Nr	%	Nr	%
	SANITATION (ABOVE MIN LEVEL)						
Flush toilet (connected to sewerage system)	Waterborne	31 144	82.6%	29 373	82.6%	27 505	92.0%
	Waterborne: Low Flush	0	0.0%	0	0.0%	0	0.0%
Flush toilet (with septic tank)	Septic tanks / Conservancy	1 163	3.1%	1 097	3.1%	1 088	3.6%
Chemical toilet	Non-waterborne (above min. service level)	29	0.1%	26	0.1%	19	0.1%
Pit toilet with ventilation (VIP)		30	0.1%	27	0.1%	33	0.1%
Other		0	0.0%	40	0.1%	116	0.4%
	Sub-Total: Minimum Service Level and Above	**32 365**	**85.9%**	**30 525**	**86.0%**	**28 761**	**96.2%**
	SANITATION (BELOW MIN LEVEL)						
Pit toilet without ventilation	Pit toilet	0	0.0%	0	0.0%	22	0.1%
Bucket toilet	Bucket toilet	4 358	11.6%	4 110	11.6%	289	1.0%
Other toilet provision (below min. service level	Other	348	0.9%	287	0.8%	249	0.8%
No toilet provisions	No services	627	1.7%	598	1.7%	568	1.9%
	Sub-Total: Below Minimum Service Level	**5 332**	**14.1%**	**5 029**	**14.0%**	**1 128**	**3.8%**
	Total number of households	**37 698**	**100.0%**	**35 554**	**100.0%**	**29 889**	**100.0%**

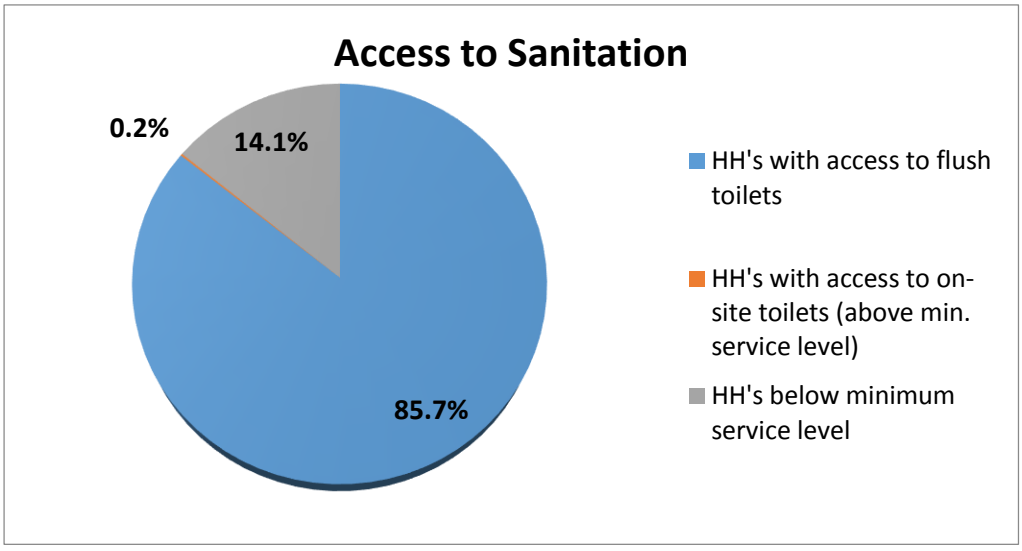


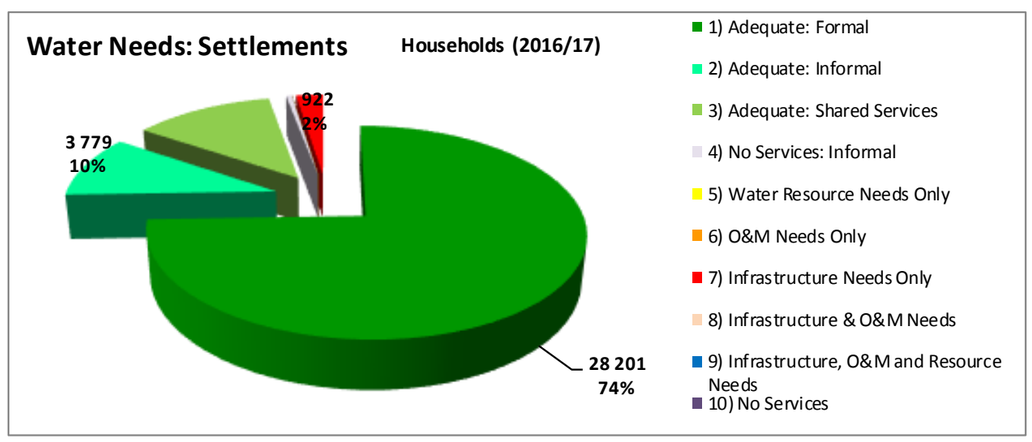
Figure 8: Household sanitation access profile 2016/17

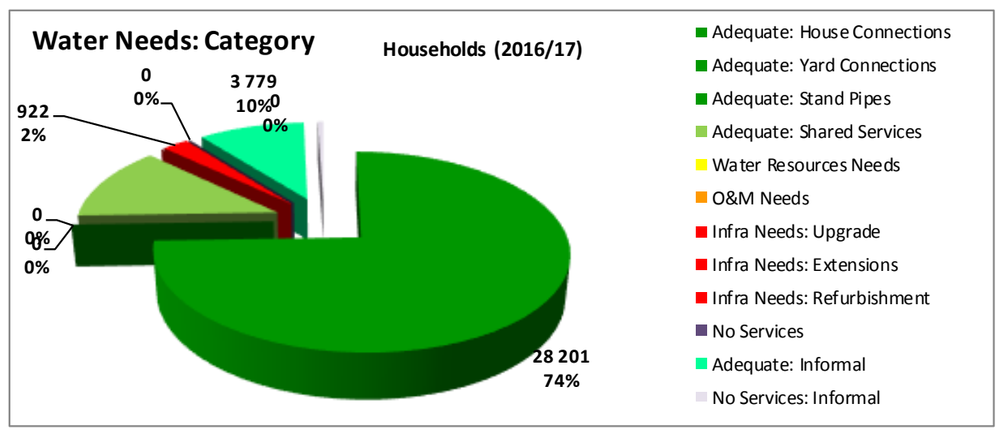
2.3.3 Residential Water Services Delivery Access Profile

The existing residential water service levels are estimated as follows:

Table 8: 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	%	HH	%
1	8	28 201	100%																						
2	3																					3 779	100%		
3	0							4 769	100%																
4	1																							198	100%
5	0																								
6	0																								
7	2															922	100%								
8	0																								
9	0																								
10	0																								
Total Household Interventions required		28 201		0		0		4 769		0		0		0		922		0		0		3 779		198	





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

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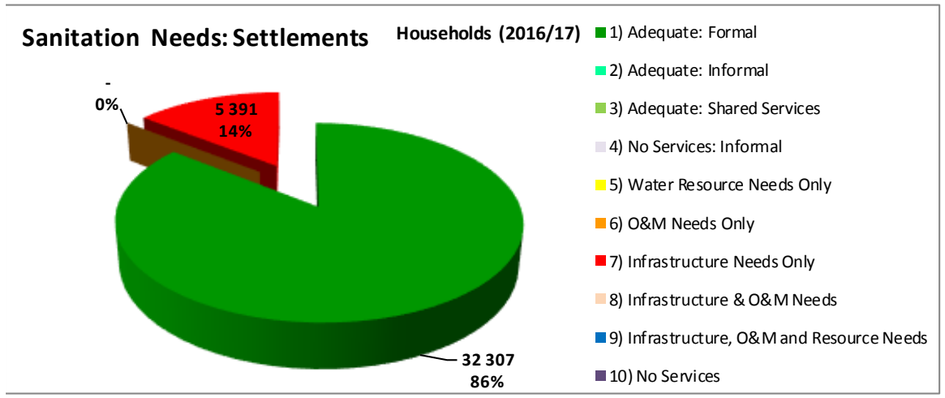
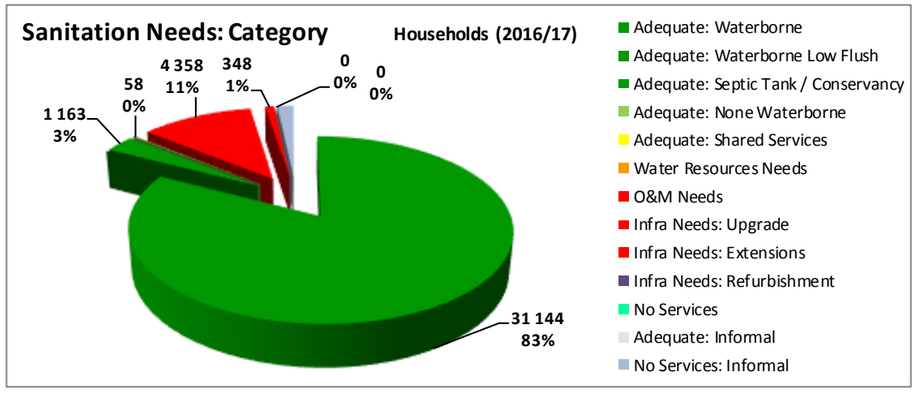
2.3.4 Residential Sewer Services Delivery Adequacy Profile

The existing residential water service levels are estimated as follows:

Table 9: Residential water services delivery adequacy profile (Sanitation)

Water Categorization	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	%	HH	%	HH	%	HH	%	HH	%
1	8	31 144	100%			1 163	100%																				
2	3																										
3	0																										
4	1																										
5	0																										
6	0																										
7	2							58	100%							4 358	100%	348	100%							627	100%
8	0																										
9	0																										
10	0																										
Total Household Interventions required		31 144		0		1 163		58		0		0		0		4 358		348		0		0		0		627	





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

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2.4 Business Element 4: Socio Economic

2.4.1 Total Population & Number of Households

Population statistics for each town was obtained from STAT SA and are summarized below:

Table 10: Population Growth Calculation

Town	Census 2001 Population	Census 2011 Population	Total Growth (2001 - 11)	Average Annual Growth (2001 - 11)	Community Survey 2016	Total Growth (2011 - 16)	Average Annual Growth (2011 - 16)
Vredenburg	27089	38382	41.69%	3.546%	42005	9.44%	2.281%
Jacobs Bay	138	498	260.87%	13.693%	600	20.48%	4.768%
Paternoster	1445	1971	36.40%	3.153%	2237	13.50%	3.215%
Saldanha	21636	28135	f30.04%	2.661%	33502	19.08%	4.461%
Langebaan	3428	9246	169.72%	10.431%	10862	17.48%	4.109%
Hopefield	4739	6449	36.08%	3.129%	7268	12.70%	3.034%
St Helena Bay & Laingville	8102	11527	42.27%	3.589%	12554	8.91%	2.157%
Farms	3861	2962	-23.28%	-2.616%	2145	-27.58%	-7.751%
Total / Average	**70438**	**99170**	**40.79%**	**3.480%**	**111173**	**12.10%**	**2.897%**

Unfortunately the Community Survey of 2016 did not drill down into households at a ward level. This implies that the total number of households are known but their distribution in each town is unknown. For the purposes of this WSDP the 2016 household numbers have been estimated using GIS data and aerial photographs and a summary is provided below.

Table 11: Household Growth Calculation

Town	Census 2001 Households	Census 2011 Households	Total Growth	Average Annual Growth 2001 - 11	Estimated 2016 Households	Estimated Growth (2011 - 16)	Estimated Average Annual Growth (2011 - 16)
Vredenburg	6794	9099	33.93%	2.964%	12359	35.83%	7.956%
Jacobs Bay	41	265	546.34%	20.516%	301	13.58%	3.236%
Paternoster	378	659	74.34%	5.716%	870	32.02%	7.191%
Saldanha	6067	6969	14.87%	1.396%	7469	7.17%	1.747%
Langebaan	1106	4336	292.04%	14.639%	5776	33.21%	7.432%
Hopefield	1154	1650	42.98%	3.640%	1973	19.58%	4.571%
St Helena Bay & Laingville	2108	4252	101.71%	7.269%	6039	42.03%	9.167%
Farms	1245	898	-27.87%	-3.214%	763	-15.03%	-3.991%
Total / Average	**18893**	**28128**	**48.88%**	**4.060%**	**35550**	**26.39%**	**6.029%**

The 2011 Census survey shows a relatively robust population growth in the Municipal Area from the previous Census in 2001. The population figure for SBM in 2001 was 70 436. This figure increased to 99 193 in 2011 (from 18893 households in 2001 to 29,888 households in 2011) at an average annual population growth rate of 3,483 % per annum for population (and 4.694% for households).

The average household size in 2001 was 3.73 and in 2011 this decreased to 3.32 in 2011. Of particular note is the high growth experienced in the Langebaan, Hopefield and Jacobs Bay areas respectively. This could be due to influx of workforce employed at Saldanha IDZ in the 10 years between the census counts.

The Community Survey of 2016 completed by STAS SA estimates the population for SBM at 111 173 persons and the permanent households at 35 550, at an average house hold size of 3.13

persons per household. The age cohorts for male and female populations in SBM is indicated in the table below:

Table 12: Age Cohorts of SBM

Sex	Age			
	0 - 14	15 - 64	65+	Total
Male	14341	38634	2928	**55903**
Female	14083	38042	3845	**55970**
Total				**111873**

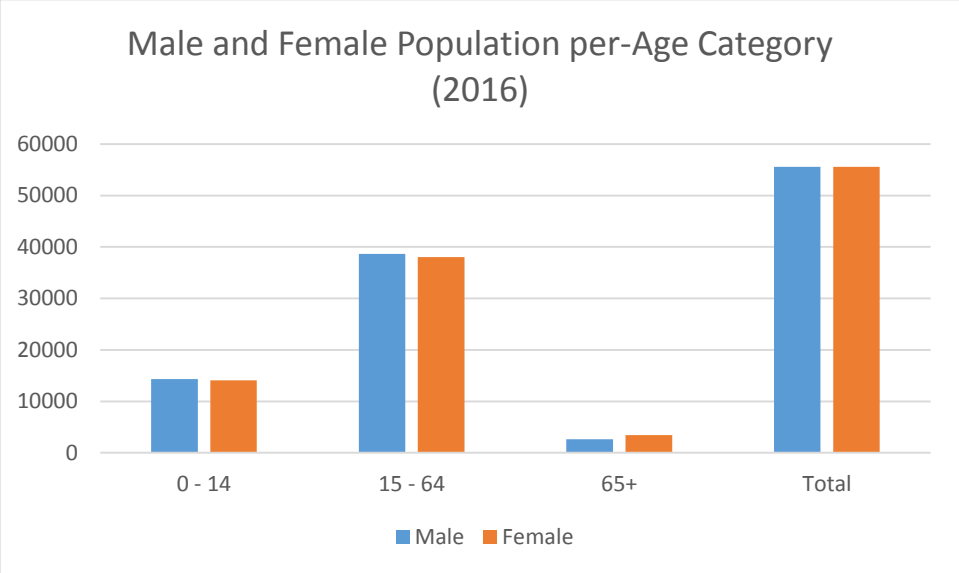

Figure 9 : Age Cohorts for SBM

The graph below indicates the distribution of population per age group for SBM:

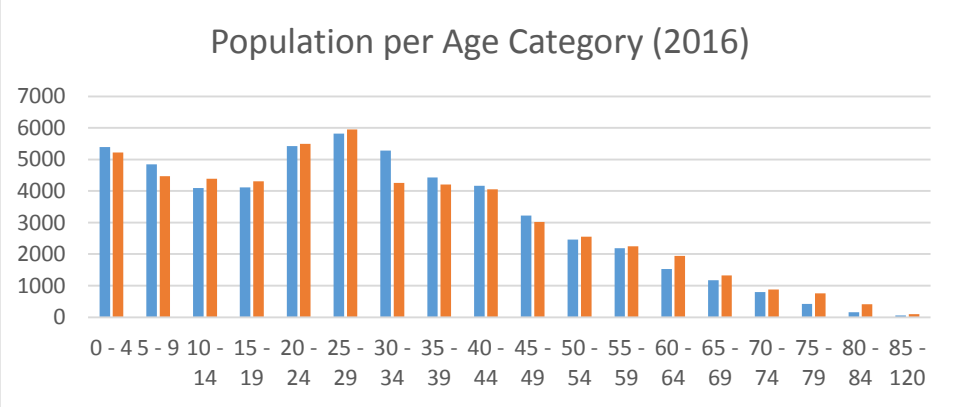

Figure 10 : Age Cohorts for SBM

The increase in the working population aged 20-24 compared to those aged 0-14 may be an indication of immigration of workers looking for jobs in the area. This could be due to the investment in the Saldanha Industrial Development Zone.

Based on the above data the dependency ratio in SBM can be calculated. This ratio expresses the dependency of people who are part of the workforce (age 15 - 65) and those, who are depending on them (children and seniors). A higher dependency ratio means a higher pressure on social systems

and the delivery of basic services. The child and senior dependency ratio of SBM for 2016 was 25.6% and 5.5% respectively. The total dependency ratio for SBM was therefore 31.1%. In relation to the Age Distribution within the Drakenstein Municipality, the Working Age segment of the population accounts for 69.2%, while 25.6% is attributable to the "Children" category and 5.2% making up the "Aged" category in 2011.

2.4.2 Average Household Size

The estimated household size in each town and suburb is shown in the table below:

Table 13: Estimated number of households per distribution system

Town	Suburb / sub-town	Community Survey 2016 Population	Number of Households Census 2011	Estimated number of households 2016	Calculated Household size 2016
Vredenburg	Witteklip	2521	686	932	2.705
	Louwville	15716	3210	4360	3.605
	Vredenberg	2106	534	725	2.905
	Tierkloof	1885	466	633	2.978
	Rusfontein	18781	4004	5439	3.453
	Rusfontein-Informal	996	199	270	3.689
Jacobs Bay	Swartriet	104	15	17	6.118
	Jacobsbaai	496	250	284	1.746
Paternoster	Paternoster	2237	659	870	2.571
Saldanha	Diazville	7782	1243	1332	5.842
	Diazville RDP	5482	907	972	5.640
	Saldanha Harbour	94	29	31	3.032
	White City	3976	550	589	6.750
	Middelpos	3711	1124	1205	3.080
	Parker's Town	774	194	208	3.721
	Blouwaterbaai	746	246	264	2.826
	Saldanha	5299	1472	1578	3.358
	Middelpos-Informal	4595	919	985	4.665
	Milnavair	66	18	19	3.474
	Moreson	103	31	33	3.121
	Noordbaai	45	12	13	3.462
	De Brug	244	9	10	24.400
Saldanha Rural	LM Saldanha Bay Rural	2145	898	763	2.811
	Langebaan Weg	504	189	203	2.483
	Namakwa Sands	52	18	19	2.737
	Saldanha Steel	29	8	9	3.222
Langebaan	Panorama	1997	941	1254	1.593
	Langebaan	8714	3345	4456	1.956
Hopefield	Hopefield	3855	868	1038	3.714
	Elandslaagte	3413	782	935	3.650
St Helena Bay - Laingville	Golden Mile	185	217	308	0.601
	Brittania Bay	319	393	558	0.572
	Shelly Point	162	410	582	0.278
	Hannasbaai	40	65	92	0.435
	Laingville	8945	2198	3122	2.865
	Stompneusbaai	852	192	273	3.121
	St Helenabaai	1998	753	1069	1.869
	Vioolbaai	53	24	34	1.559
Churchhaven	Churchhaven	29	4	5	5.800
Stofbergsfontein	Stofbergsfontein	105	32	43	2.442
Geelbek	Geelbek	13	3	3	4.333
Donkergat	Donkergat	4	11	15	0.267
Total / Average		**111173**	**28128**	**35550**	**3.127**

2.4.3 Settlement Type (Urban & Rural)

The latest WSDP system provides for the following description of settlement types

- Rural Small Village <= 5000
- Rural Dense Village > 5000
- Rural Scattered
- Rural Scattered Very Low Density
- Rural Scattered Low Density
- Urban Informal Settlement
- Farming
- Urban – Formal Town.
- Squater Camp – Rural
- Rural Scattered Dense
- Urban Fringe – Ex Homeland Towns (Formal Towns)
- Working Towns and Service Centres - Mines, Prisons etc.

Each of the settlements identified above were classified according to the WSDP system and is summarized below:

Table 14: Settlement Type

Urban/Rural	Settlement Type	Number of Settlements	Population per Settlement type
Rural	Rural - Small Village <= 5000	4	251
	Rural Dense Village > 5000	0	0
	Rural Scattered	0	0
	Rural Scattered Very Low Density	0	0
	Rural Scattered Low Density	0	0
	Squater Camp – Rural	0	0
	Rural Scattered Dense	0	0
	Farming	1	2145
Urban	Urban - Informal Settlements (Squatter Camp)	2	5591
	Urban - Formal Town	27	102139
	Urban Fringe – Ex Homeland Towns (Formal Towns)	0	0
	Working Towns and Service Centres - Mines, Prisons etc.	8	1047
Total		**42**	**111173**

The designated core urban areas are existing settlement of Vredenburg, Saldanha, Langebaan, St Helena Bay, Hopefield, Paternoster and Jacobs Bay. As a result of the different and complex historical, locational, socio-cultural and economic factors influencing the growth of these settlements they each display a unique character, and use mix and development form

2.4.4 Economics

The Saldanha Bay municipal area is the largest economy within the WCD, with economic activities focusing on manufacturing as well as tertiary sector activities. Over the last five years, the Saldanha Bay economy has grown at an average annual rate of 2.2 per cent. This municipal area managed to achieve a positive growth rate in 2016, while the District GDPR contracted with 0.6 per cent. The table below indicates the Saldanha Bay municipal area's GDPR performance per sector.

Table 15: SBM GDP (From Socio Economic Profile 2017 from WCPG)

Saldanha Bay GDPR performance per sector, 2005 - 2016										
Sector	Contribution to GDPR (%) 2015	R million value 2015	Trend		Real GDPR growth (%)					
			2005 - 2015	2010 - 2015	2011	2012	2013	2014	2015	2016e
Primary Sector	**15.4**	**1 185.1**	**2.3**	**3.7**	**6.3**	**2.0**	**5.2**	**5.1**	**0.0**	**-2.7**
Agriculture, forestry and fishing	14.9	1 149.2	2.5	3.8	6.6	2.1	5.4	5.1	0.0	-2.5
Mining and quarrying	0.5	35.9	-2.2	0.5	0.4	-1.1	0.7	4.4	-1.6	-8.5
Secondary Sector	**29.1**	**2 239.9**	**1.0**	**-0.1**	**0.4**	**-1.0**	**0.3**	**0.3**	**-0.6**	**-1.1**
Manufacturing	22.7	1 747.7	0.6	-0.4	1.0	-1.6	-0.3	-0.4	-0.7	-1.4
Electricity, gas and water	1.2	94.5	-0.3	-0.3	2.5	-0.3	-1.4	-1.3	-1.1	-6.5
Construction	5.2	397.7	4.8	1.8	-3.6	2.4	4.8	5.1	0.2	1.7
Tertiary Sector	**55.5**	**4 273.5**	**3.3**	**3.1**	**4.2**	**3.5**	**3.2**	**2.6**	**1.9**	**1.5**
Wholesale and retail trade, catering and accommodation	14.9	1 143.9	3.6	3.5	5.0	4.7	3.2	2.5	2.4	2.1
Transport, storage and communication	9.2	711.7	-0.3	-0.2	1.1	-0.2	0.1	0.8	-2.8	-3.1
Finance, insurance, real estate and business services	15.0	1 155.4	4.8	3.9	4.2	4.1	3.6	3.4	4.2	3.0
General government	10.2	783.2	3.6	3.5	5.8	3.3	4.6	3.1	0.9	1.5
Community, social and personal services	6.2	479.3	3.5	3.2	4.0	4.5	3.8	2.0	1.8	1.6
Total Saldanha Bay	**100**	**7 698.5**	**2.4**	**2.2**	**3.4**	**1.9**	**2.7**	**2.3**	**0.9**	**0.1**

Source: Quantec Research, 2017 (e denotes estimate)

The manufacturing sector (22.%) contributes the most towards the local economy's GDPR, however it only contributes 10.8% to employment - indicating a high level of mechanization within the manufacturing sector. Over the last 10 years, more than 800 jobs were lost in the manufacturing sector, which is a result of the contracting sector in terms of GDPR.

The agriculture, forestry and fishing sector and the wholesale and retail trade, catering and accommodation sector collectively contribute 48.8% to employment. Employment in the agriculture, forestry and fishing sector is volatile. However, over the last five years, this sector has employed an additional 3 366 people. The wholesale and retail trade, catering and accommodation sector had a net increase of 1 273 jobs over the last five years.

In 2016 the following sectors all shed jobs: the agriculture, forestry and fishing (97); transport, storage and communication (95); mining and quarrying (2); and the manufacturing sector (1), while employment growth in other sectors was generally slow when compared to employment in other years.

2.5 Business Element 5: Water Services Infrastructure Management (Infrastructure)

2.5.1 Major Infrastructure Overview

The table below gives an overview of the major water infrastructure components, for the various distribution systems, in Saldanha Bay Municipality's Management Area.

Table 16: Existing Water Services Information

Water Distribution System	Network Bulk and Reticulation (km)		Number of Water Pump Stations		Total Res Storage number and capacities (Mℓ)	
	Bulk	Retic	Raw water	Potable Water	No.	Mℓ
Vredenburg	35.0	197.2	0	5	6	16.750
Jacobs Bay	0.0	16.6	0	0	1	1.000
Paternoster	0.0	15.6	0	0	2	1.300
Saldanha	22.2	111.3	0	3	6	14.100
Langebaan	0.6	132.4	0	5	7	10.100
Hopefield	1.2	37.6	0	3	2	5.200
St Helena Bay	6.3	150.7	0	8	9	13.202
Total	**65.3**	**661.4**	**0**	**24**	**33**	**61.652**

The table below gives an overview of the major sewerage infrastructure components, for the various drainage systems, in Saldanha Bay Municipality Management Area.

Table 17: Existing main sewerage infrastructure

Sewer Drainage Systems	Sewer Drainage Network (km)		Number of Sewer PS	WWTW (Capacity in Mℓ/d)
	Gravity	Rising Mains		
Vredenburg	148.7	2.3	3	5
Jacobs Bay	2.9	0.5	3	N/A(1)
Paternoster	14.6	3.3	11	0.10
Saldanha	110.3	21.8	26	5
Langebaan	103.6	15.3	32	1.4
Hopefield	23.5	2.6	4	0.904
St Helena Bay	105.9	18.3	26	1.456(2)
Total	**509.5**	**64.1**	**103**	**13.86**

(1) Jacobs Bay mostly has conservancy tanks
(2) Laingville and Shelly Point combined

2.5.2 Asset Register

SBM keeps an Asset Register for both Water and Sanitation Assets up to date. The capital replacement cost and remaining useful life distribution for their assets are shown in the tables below.

Table 18: CRC & RUL of Water Assets

Asset Type	GIS ID	CRC	RUL				
			0-5 years	6-10 Years	11-15 Years	16-20 years	>20 Year
PUBLIC CONVENIENCES	1PUBC	R 0	R 0	R 0	R 0	R 0	R 0
WORKSHOPS	1WRKS	R 0	R 0	R 0	R 0	R 0	R 0
COMPUTER SOFTWARE	COMSW	R 0	R 0	R 0	R 0	R 0	R 0
GENERAL PLANT	GENPL	R 0	R 0	R 0	R 0	R 0	R 0
BULK WATER PIPES	MAINW	R 75 013	R 0	R 0	R 0	R 634	R 75 013
WATER METERS	METW	R 2 435	R 0	R 0	R 2 435	R 0	R 0
PARKS	PARKS	R 0	R 0	R 0	R 0	R 0	R 0
WATER PUMP STATIONS	PUMPW	R 8 631	R 0	R 0	R 6 250	R 1 831	R 2 381
SECURITY FENCING - SEWERAGE	SEFEN	R 0	R 0	R 0	R 0	R 0	R 0
WATER SUPPLY & RETICULATION	SUPRW	R 178 746	R 0	R 0	R 1 064	R 1 449	R 177 683
RESERVOIRS/WATER TANKS	TANKW	R 125 533	R 0	R 0	R 702	R 18 835	R 124 831
VACANT LAND	VACLA	R 0	R 0	R 0	R 0	R 0	R 0
SECURITY FENCING - WATER	WAFEN	R 2 794	R 0	R 791	R 1 531	R 345	R 161
PUMP CONTROL PANEL	WCONP	R 4 760	R 0	R 0	R 2 080	R 373	R 2 307
WATER PUMP HOUSE	WPHSE	R 3 438	R 0	R 0	R 0	R 0	R 3 438
WATER PUMPS	WPUMP	R 12 397	R 0	R 0	R 6 035	R 5 499	R 4 165
NETWORK PIPES	PIPE	R 19 637	R 0	R 0	R 359	R 10 465	R 19 278
WATER PURIFICATION WORKS	PURWK	R 124	R 0	R 0	R 0	R 0	R 124
	WCHLE	R 516	R 0	R 0	R 516	R 0	R 0
	WCHLH	R 296	R 0	R 0	R 0	R 0	R 296
WATER CONNECTIONS	WCON	R 616	R 0	R 0	R 0	R 0	R 616
WATER TELEMETRY	WTELE	R 1 272	R 0	R 0	R 357	R 555	R 360
TOTAL		**R 436 207**	**R 0**	**R 791**	**R 21 328**	**R 39 987**	**R 410 652**

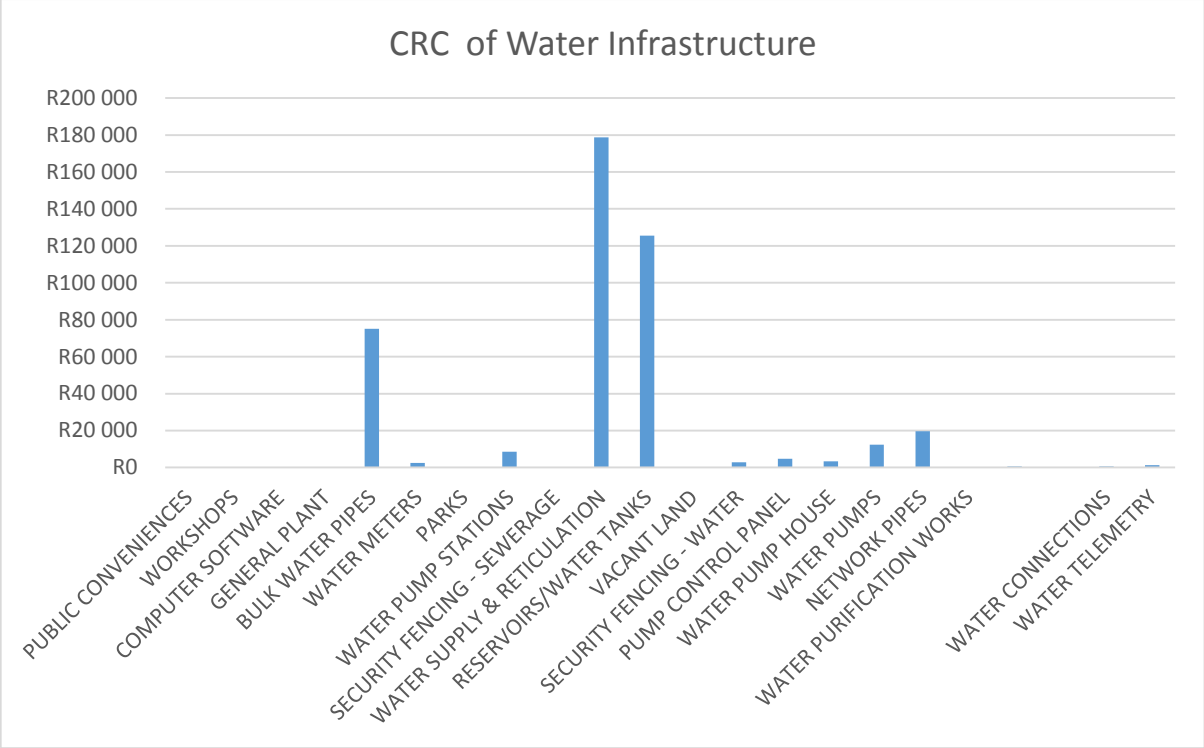

Figure 11 : Chart of CRC of Water Infrastructure

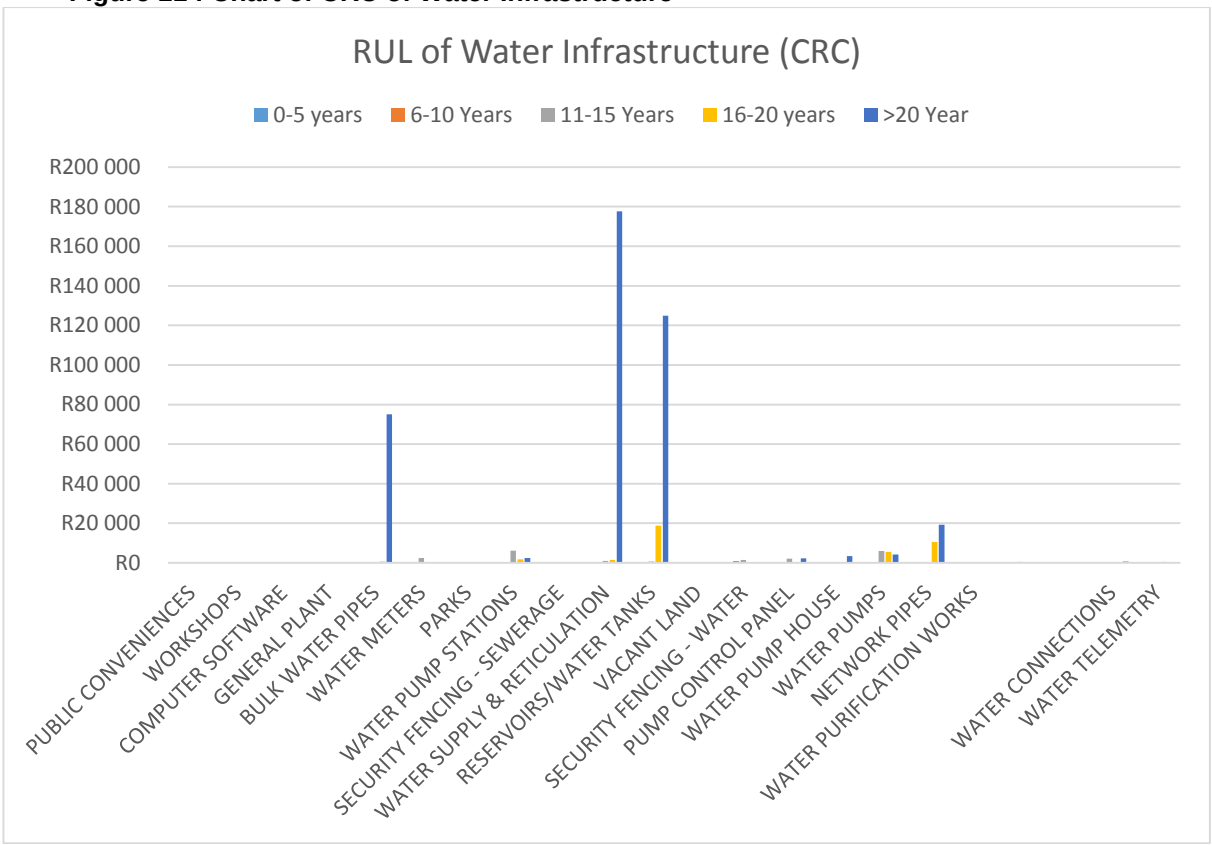

Figure 12 : Chart of RUL of Water Infrastructure

Table 19: CRC & RUL of Sanitation Assets

Asset Type	GIS ID	CRC (R'000)	RUL (R'000)				
			0-5 years	6-10 Years	11-15 Years	16-20 years	>20 Year
CLEANSING STRUCTURES	CLSTR	R 166	R 0	R 0	R 0	R 0	R 166
KERBING	KERBS	R 0	R 0	R 0	R 0	R 0	R 0
OUTFALL SEWERS	OUTFL	R 13 674	R 0	R 0	R 0	R 3 399	R 10 275
PAVING	PAVE	R 0	R 0	R 0	R 0	R 0	R 0
PIPES (WATER)	PIPE	R 21	R 0	R 0	R 0	R 21	R 0
PURIFICATION WORKS	PURWK	R 130 360	R 0	R 411	R 5 140	R 26 051	R 98 757
SEWERAGE CONNECTION	SCON	R 250	R 0	R 0	R 0	R 0	R 250
SECURITY FENCING – SEWERAGE	SEFEN	R 4 987	R 0	R 1 745	R 2 595	R 567	R 0
SEWERAGE ELECTRICAL EQUIPMENT	SELEC	R 9 255	R 0	R 0	R 4 270	R 2 742	R 2 244
SEWERS	SEWER	R 314 945	R 0	R 0	R 282	R 74 746	R 239 917
SEWERAGE RISING MAIN	SEWRM	R 28 650	R 0	R 0	R 73	R 819	R 27 758
MECHANICAL EQUIPMENT	SMACH	R 955	R 0	R 0	R 955	R 0	R 0
PUMP STATION STRUCTURES	SPSTR	R 16 776	R 0	R 0	R 67	R 0	R 16 709
SEWERAGE PUMPS	SPUMP	R 28 133	R 0	R 0	R 16 854	R 5 665	R 5 614
TREATMENT STRUCTURES	STSTR	R 1 823	R 0	R 0	R 0	R 0	R 1 823
STORMWATER CHANNEL	SWCHA	R 87	R 0	R 0	R 0	R 0	R 87
STORMWATER CULVERTS	SWCUL	R 3	R 0	R 0	R 0	R 0	R 3
WATER TREATMENT STRUCTURE	WTREA	R 527	R 0	R 0	R 0	R 0	R 527
TOTALS		**R 550 613**	**R 0**	**R 2 156**	**R 30 236**	**R 114 010**	**R 404 131**

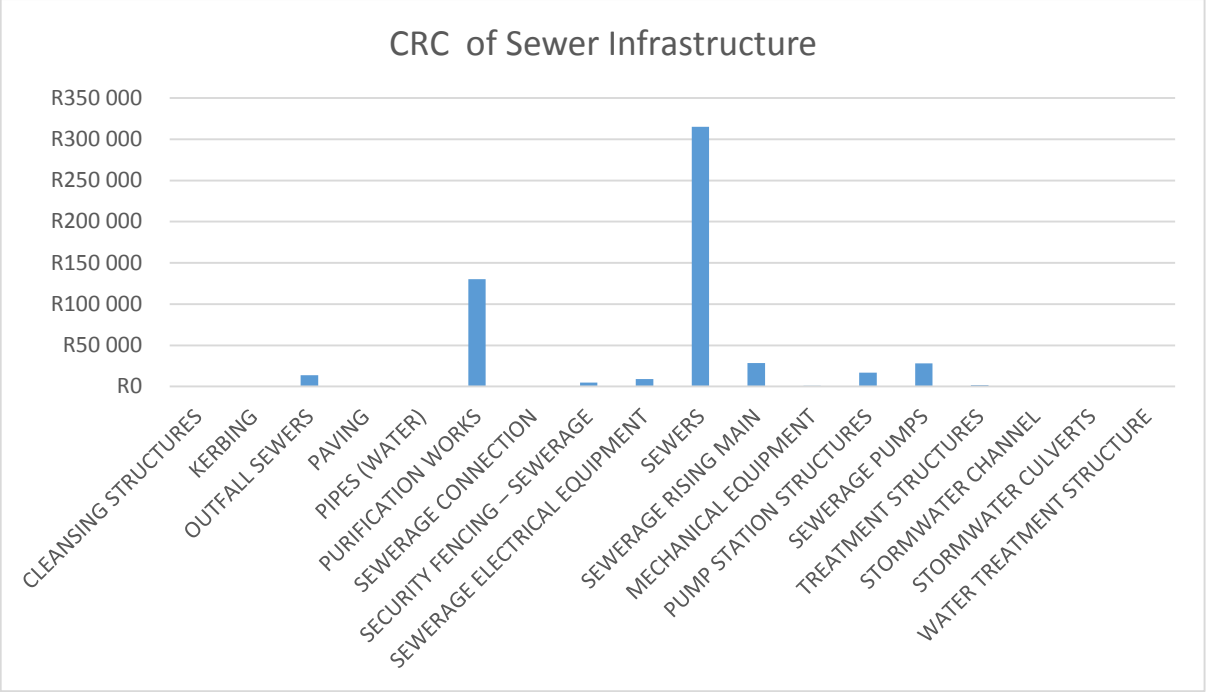

Figure 13 : Chart of CRC of Sewer Infrastructure

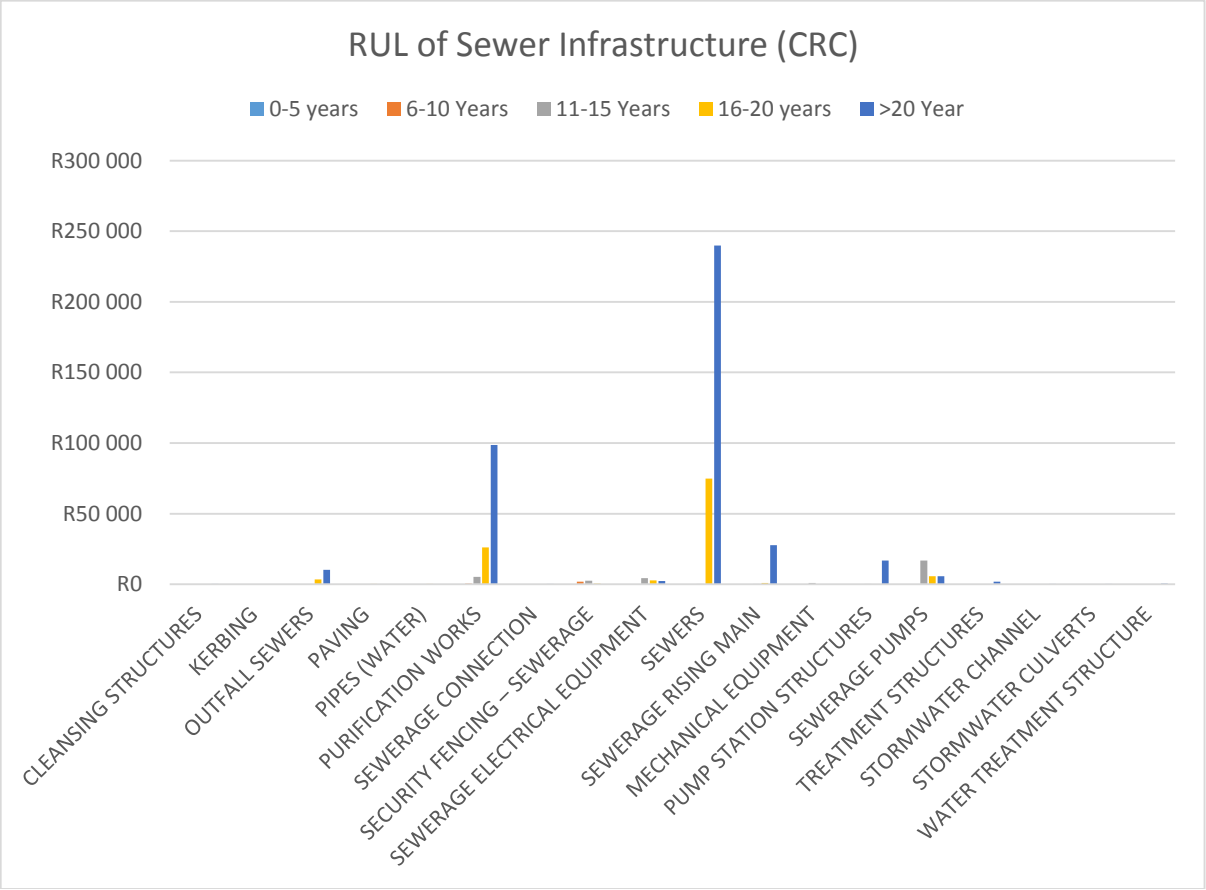

Figure 14 : Chart of RUL of Sewer Infrastructure

The asset registers show that most of the water and sanitation assets have a RUL of more than 10 years.

The recently completed sewer and water masterplans however calculate the asset replacement costs for sewer services to be approximately R 1.317 billion (excluding WWTW's) and for water services to be approximately R 1.215 billion. There is therefore a large discrepancy between the sewer and water current replacement costs indicated in the Asset Register and the Water and Sewer Masterplans.

2.6 Business Element 6: Water Services Infrastructure Management (O&M)

2.6.1 Water Safety Plan

A Water Safety Plan is in place for SBM and was compiled in conjunction with WCDM.. A detailed risk assessment was executed as part of the process and the existing control measures implemented by SBM were evaluated as part of the Water Safety Plan process.

2.6.2 Operational Monitoring

Sampling Programme

Operational and final effluent compliance sampling monitoring programmes are implemented. Operational Alert Levels were also developed for the various WWTWs in order to ensure that the various unit processes in the plant performs optimally. If these pre-determined Alert Levels are exceeded at any of the control points where samples are taken for operational purposes, specific actions are taken to bring the operational parameters back to within the target ranges.
SBM has a compliance testing programme that complies with the requirements of DWS which includes sampling at the following points.

Table 20: Drinking Water Quality Monitoring Points

Distribution System	Description	Bacteriological	Chemical
Vredenburg	Van Enckhuizen Reservoir	X	
	Kerkstreet Reservoir	X	
	Private Hospital	X	
	Vredenburg Prov. Hospital Old Section Kitchen	X	
	Vredenburg Prov. Hospital New Section Gents	X	
	Health Department	X	
	Vredenburg Booster Pump Station	X	
	Weskusnessie		X
	Albatros Crescent		X
Jacobs Bay	Jacobs Bay Reservoir	X	
	Crayfish Factory	X	
Paternoster	Paternoster Reservoir		X
	Paternoster Fisheries	X	
	Strondloper	X	
	Jacobsklip		X
	St Augustine		X
Saldanha	Kalkrug Reservoir	X	
	Diazville Clinic	X	
	Sea Harvest	X	
	Cartol Abattoir	X	
	Iron Ore Terminal	X	
	Skipper	X	
	Protea Hotel		X
	Parker		X
Langebaan	Mykonos	X	
	Langebaan Clinic	X	
	Mykonos		X
	Harpuisbos		X
	Langebaan WWTW		X
Hopefield	Oudekraal Sports Grounds	X	
	Municipal Offices	X	
	Municipal Offices		X
	Hopefiled WWTW		X
St Helena Bay	Hannasbaai Reservoir	X	
	Laingville Reservoir	X	
	St Helena Bay Fishing	X	
	Shelly Point		X
	Municipal Offices		X
	Laingville		X

The following table indicates the minimum number of samples taken of the final effluent of the different WWTW that fall under the jurisdiction of the Municipality.

Table 21: Sampling Programme for Waste Water Effluent Quality

Registered Sites		Active	Determinants per Category	Frequency (days)
		Year 0		Year 0
#	Name	FY2016/17		FY2016/17
1	Saldanha WWTW	Yes	pH at 25 degrees C	12
2	Vredenburg WWTW	Yes	Settleable Solids	12
3	Paternoster WWTW	Yes	Conductivity	12
4	Hopefield WWTW	Yes	Faecal coliform	12
5	Langebaan WWTW	Yes	Chemical Oxygen demand	12
6	Laingville WWTW	Yes	Total Kjedahl Nitrogen	12
7	Shelly Point WWTW	Yes	Ammonia Nitrogen	12
			Nitrate nitrogen	12
			Dissolved Oxygen	12
			Total suspended solids	12
			Volatile suspended solids	12
			Total phosphorus	12
			Sludge Volume index	
			Diluted Sludge Volume	
			Free chlorine	12
			Total Chlorine	12
			Calcium	12
			Magnesium	12
			Sodium	12
			Dissolved lead	
			Dissolved copper	
			Dissolved iron	
			Mercury	

The municipality also makes use of a fully integrated telemetry system for the operation and monitoring of the entire water distribution network.

Operations Teams

The water department consists of the following operational teams who are responsible for the day to day operational requirements of the area. Teams are available 24 hours a day/365 days of the year.

2.6.3 Disaster Management Plan

A Disaster Management Plan for the SBM was compiles, which confirms the arrangements for managing disaster risk and for preparing for- and responding to disasters within the West Coast District Municipality as required by the Disaster Management Act. The Disaster Management Plan clearly specifies responsibilities for coordinating measures to be taken, a communication plan to alert and inform users of the drinking-water supply and practical plans for providing and distributing emergency supplies of drinking-water and plans to clean and remediate spillages to the receiving environment or water resource.

2.6.4 W2RAP

SBM recently completed individual W2RAPs for each of their WWTWs. The W2RAP is an all-inclusive risk analysis tool by which risks associated with the management of collection, treatment and disposal of wastewater, are identified and rated (quantified). The identified risks can then be managed according to its potential impacts on the receiving environment / community / resource.

2.6.5 Operational & Maintenance Manuals

Comprehensive Operational and Maintenance Manuals are in place for all the WTWs and WWTWs.

2.6.6 DWS's Blue Drop & Green Drop Process

The blue drop performance of SBM is summarized as follows in the DWS's 2014 Blue Drop Report:

Table 22: Blue Drop Performance and Score

Blue Drop Performance of the Municipality (DWS's 2014 Blue Drop Report)	
Performance Area **(Water Service Provide)r**	**Saldanha** **(West Coast District Municipality)**
Water Safety Planning (35%)	17.85
Treatment Process Management (8%)	6.00
DWQ Compliance (30%)	23.85
Management, Accountability (10%)	8.35
Asset Management (14%)	8.51
Use Efficiency, Loss Management (3%)	0.9
Bonus Scores	4.92
Penalties	1.00
Blue Drop Score (2014)	69.38%
Blue Drop Score (2012)	95.4%
Blue Drop Score (2011)	87.7%
System Design Capacity (Mℓ/d)	73.3
Operational Capacity(% i.t.o. Design)	63%
Average daily consumption (ℓ/p/d)	300
Microbiological Compliance(%)	99.6%
Chemical Compliance (%)	98.3%

**Regulatory Impression (From Blue Drop Report) : "*A significant and substantial decrease has been observed in the Municipal Blue Drop score in this assessment, losing the Municipality its Blue Drop status awarded in 2012. As noted and discussed during the assessment, one key reason for this decline in compliance is the limited understanding of the requirements of risk based water quality management through a comprehensive water safety planning process. Although the Water Safety Plan for the distribution network has been reviewed by the Municipality, this has not been informed by a water quality risk assessment. In addition, evidence could not be presented of engagement with the West Coast District Municipality that provides bulk water services, regarding updating and alignment of safety plans. Records could not be provided of a formal water safety plan review process by the bulk water service provider. The lack of alignment between the WSA and WSP with regard to risk identification and mitigation was highlighted in the previous Blue Drop report.*

The WSA and WSP are reminded that they are required to regularly assess and review risks to producing drinking water of an acceptable standard and to implement corrective actions. The Water Safety Plan should be informed by the recommendations of a process audit and any water quality risks identified through the SANS 241 analysis of the catchment, treatment, and reticulated water or water quality failures. The incident management protocol should also be informed by the Risk Assessment which defines alert levels and response times to guide all role players with regard to the response and corrective actions when water does not comply with the required quality standards. This must be formally communicated to municipal officials to ensure a common understanding of the protocol and its proper implementation.

Risk based monitoring that is informed by the risk assessment should be implemented. Monitoring should comply with the requirements of SANS 241 with regard to sampling points, frequency of analyses and the determinants that are analysed. Only three chemical determinants are currently analysed in the reticulation network so potential health impacts are not fully monitored. The Municipality is encouraged to review and verify the accuracy of the water balance data presented to assess compliance with the No Drop. In addition, the Water Demand Strategy compiled during 2012/13 should be finalised and funding allocated to ensure implementation and a reduction in non-revenue water. The inspector noted that the water safety management team demonstrated competence and dedication to ensuring excellence in water quality. It is anticipated that with the necessary management support that the team will once again show an improvement in Blue Drop compliance at the next assessment.."

Further to this the Blue Drop Risk Rating for the municipality was also determined and is shown in the table below.

Table 23: Blue Drop Risk Rating

Blue Drop Risk Rating (Blue Drop Report 2014)			
Municipal Blue Drop Risk Rating			**34%**
Risk Rating (From Blue Drop Report) : "*The overall 2014 Risk Rating for Saldanha Bay is 34% which translates into the 6th best performance in the Western Cape. Note that this value is based on the 3 specific areas indicated below and shows no concerns (medium to critical risks) for Process Control (which risks reflect compliance in terms of draft Regulation 813), Drinking Water Quality and Risk Management."*			
Saldanha			
Assessment Area	**2012**	**2013**	**2014**
A: Process Control RR	**31.0%**	**33.3%**	**47.6%**
B: Drink Water Quality RR	**11.1%**	**11.1%**	**40.7%**
C: Risk Management RR	**17.4%**	**13.0%**	**30.4%**

The results of the last Green Drop Certification in 2013 is given below:

"*The Saldanha Bay municipality delivered one of the most progressive upwards movement in Green Drop scores in the country. The municipal Green Drop score of 80.5% increased from 39.1% in 2011, due to the robust and highly committed team. Three (3) of the 7 systems have >80% and 5 treatment plants reside in low risk positions, the remainder in moderate risk. This improvement is no small feat and the municipality is congratulated.*

Particular points of strength is seen in the risk abatement process which is informed by process assessment and network inspections, and in turn again inform planning reports and budget. The use of bylaws is impressive, as is the cross pollination initiatives and the publication of results to keep stakeholder informed. Areas that need to be addressed to move towards Green Drop Certification in 2014/15 include: effluent quality (focus on Paternoster), Regulation 17 compliance, asset register, ringfenced costing, and incident management protocol. The Regulator acknowledge the performance and best practice displayed by Saldanha and look forward to see the business improvements in the next GWSA cycle."

The findings of the Green Drop report were as follows:

- Registration and compliance according to Regulation 17 is not in place for any of the 7 systems
- Two O&M manuals and one operational logbook across the 7 systems are not in place
- One plant is approaching hydraulic design capacity and planning need to align to future needs
- None of the systems could present comprehensive asset registers, or ringfenced unit costs, the CFO involvement going forward will make a difference
- Focus on energy demand-supply management, water loss management and sludge management will be a wise investment going forward.

2.6.7 Water Demand per person

The estimated water demand per capita is shown below:

Table 24: Estimated Water Demand per capita

System	Average residential daily consumption (l/p/d)			
	2016 Annual Demand (Mℓ/a)	Average Daily Consumption (kℓ/d)	Estimated Population	Average Daily Consumption (l/p/d)
Vredenburg & Louwville	2731.295	7483	42005	178.15
Jacobs Bay	159.87	438	600	730.00
Paternoster	238.71	654	2237	292.36
Saldanha	5888.545	16133	35647	452.58
Langebaan	1518.4	4160	10862	382.99
Hopefield	269.735	739	7268	101.68
St Helena Bay	1933.04	5296	12554	421.86
Total / Average	**12739.595**	**34903**	**111173**	**365.66**

The total average compares well to that stated in the Blue Drop report.

2.7 Business Element 7: Associated Services

All schools within the SBM area are provided with sufficient water and sanitation services.

Table 25: Service Levels At Schools

Associated Services Facility	No of Facilities	Water			Sanitation		
		Having Adequate Services	Having no Services	Having Inadequate services	Having Adequate Services	Having no Services	Having Inadequate services
Schools	23	23	0	0	23	0	0

SBM also provides water and sanitation services to Medical Facilities within its jurisdiction.

The table below provides an overview of the level of services at these facilities

Table 26:Service Levels at Medical Facilities

Associated Services Facility	No of Facilities	Water			Sanitation		
		Having Adequate Services	Having no Services	Having Inadequate services	Having Adequate Services	Having no Services	Having Inadequate services
Hospitals	**2**	**2**			**2**		
Community Day Centers	**0**	**0**			**0**		
Clinics	**8**	**8**			**8**		
Satellite Clinics	**0**	**0**			**0**		
Mobile Clinics	**4**	**4**			**4**		

2.8 Business Element 8: Conservation and Demand Management

2.8.1 Non-Revenue Water

As indicated in the Blue Drop report the reduction in non-revenue water within the municipality is problematic. To this end SBM has appointed a service provider (JOAT Consulting) to implement a Management Plan to Reduce Non-Revenue Water. A.

The total non-revenue water is summarized in the table below:

Table 27 :: Non-Revenue Water in SBM

Saldanha Bay Municpality Water Balance (kℓ) - July '18 to March '19					
System Input Volume	Authorized Consumption	Billed Authorized Consumption			Revenue Water
7 729 464	6 533 619	6 456 324	Billed Metered Consumption	6 456 324	6 456 324
			Billed Unmetered Consumption		
			Free Basic Water/Indigent Consumption		
		Unbilled Authorized Consumption			Non-Revenue Water
		77 295	Unbilled Metered Consumption		1 273 140
			Unbilled Unmetered Consumption	77 295	
	Water Losses				
	1 195 845	Apparent Losses			
		548 788	Illegal Consumption	258 253	
			Metering Inaccuracies	290 535	
		Real Losses			
		647 058	Mains Leakage	128 511	
			Reservoir Overflows	4 503	
			Service Connection Leakage	514 044	
Assumptions:	*Illegal consumption %* = 4.0% *Metering Inaccuracies %* = 4.5%			**NRW%**	**16.47%**

The non-revenue water percentage is relatively high. As part of the management plan the following interventions/ recommendations were proposed:

- Investigate Top Consumers per sub-system of supply to ensure that connection meters are properly installed, registered in Billing System and the meters are read accurately and regularly on a monthly basis.
- All unmetered connections, including all currently unmetered standpipes, must be metered and registered as connections as a matter of urgency. Ensure every standpipe is metered in clusters and meters read regularly for billing to relevant government/municipal department.
- Appropriate metering, illegal connection and real loss reduction policies need to be developed and implemented.
- Water mains replacement has not been addressed in detail in the present study. Nevertheless, from information gathered from the Technical Department, this will be an important part of any future program, although this may be addressed under Asset Management. A burst frequency analysis should be conducted as a matter of urgency to identify critical areas for pipe replacement and pressure management.
- The largest impact on NRW volumes is resolving the unregistered consumers in the billing database, unmetered connections, and implementing pressure management.
- Consumers with high internal leak levels should be identified and a forced repair programme should be immediately implemented.
- New design standards must be formalised and implemented (new pressure regimes, pipe material, etc.), with the most urgent of these being the reduction of maximum operating system pressure to 45m per reservoir zone.
- Commence and continue an active leak detection program to reduce the real losses occurring within the SBM supply-system.
- The recommendations as contained in this Management Plan for the roll-out of the NRW reduction interventions be approved for implementation.

2.8.2 Meter Replacement Programme

SBM has appointed service providers to replace old water meters within the municipality on a continuous basis. The table below indicates the meters replaced between Jul 2018 and September 2018

Table 28: Meter Replacements Jul 18 to Sep 18

AREAS	JOBS GIVEN	JOBS COMPLETED	TO BE COMPLETED
Diazville	23	21	2
Farms and rural areas	9	0	9
Hopefield	54	38	16
Langebaan	76	64	12
Jacobsbaai	17	12	5
Laingville	0	56	0
Louwville	64	63	1
Malmsbury Rd	22	0	22
Middelpos	13	12	1
Ongegund	15	14	1
Paternoster	52	0	52
Saldanha	172	99	73
St Helena Bay	149	29	120
Vredenburg	247	206	41
White City	1	0	1
Nuwerus	1	0	1
TOTAL	**915**	**614**	**301**

2.9 Business Element 9: Water Resources

2.9.1 Water Sources

Saldanha Bay Municipality receives water from Withoogte Water Treatment Works situated in Mooreesburg. Raw water is abstracted from the Berg River and conveyed to the raw water storage dam (Misverstand Dam) at Withoogte Treatment Works via. a pump station and rising main. Withoogte is situated approximately 17km from the abstraction point in the Berg River. Treated water is conveyed from Withoogte via a 1200mm dia. Steel pipe to the 63 Mℓ storage reservoir (Besaansklip) in Vredenburg. Water is then conveyed from this central point to all areas in the Saldanha Bay system through a series of pump stations and gravity mains.

A borehole field also currently exists at Hopefield which provides water to the settlement and development of another larger borehole field is underway at Langebaan Weg which will also be used to augment water supply. In the past seawater was desalinated at Shelly Point but this system has fallen into disrepair.

The total water supply to the various towns for the last 5 years is indicted in the table below:

Table 29: Bulk Water Supply to Towns

Distribution System	Supply	Bulk Water Supply to Towns Recorded Prior (Mℓ/a)					
		2016/17 Demand	2015/16 Demand	2014/15 Demand	2013/14 Demand	2012/13 Demand	2011/12 Demand
Vredenburg	West Coast DM (Misverstand System)	2156.968	3108.226	2847.758	2582.932	2717.257	2680.609
Jacobs Bay							
Paternoster							
Louwville		591.474	763.554	1256.038	1388.703	1319.788	1395.991
Saldanha		6209.094	4914.611	5735.637	5939.041	5487.838	5718.767
Langebaan & Langebaan Weg		1385.863	1860.714	1738.509	1689.816	1595.826	1512.288
Hopefield		423.860	511.340	453.490	390.240	377.300	365.040
St Helena Bay		2001.200	2233.490	2160.250	2067.536	1910.040	1832.500
Total		**12768.459**	**13391.935**	**14191.682**	**14058.268**	**13408.049**	**13505.195**

2.9.2 Water Quality

Water Quality Compliance samples taken at the sampling points mentioned in the preceding sections are taken by an accredited external Laboratory (AL Abbott and Associates). The water quality compliance sample results are loaded onto DWS's Blue Drop System (BDS) via the internet. Once entered the water quality data is automatically compared to SANS:241 :2015. This real-time system allows for immediate intervention to rectify any problems.

The overall percentage of compliance of the water quality samples for the 2017/18 financial year is summarised in the table below:

Table 30: Overview of Water Quality Compliance

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 0 FY2017/18				
			Microbial	Chemical	Physical	Operational	Aesthetic
	Results per the Blue Drop System						
n/a	Analysis compliance	Total	231	680		723	1875
n/a		Nr Failures	16	17		17	50
n/a		Compliance %	93.1%	97.5%		97.6%	97.3%
n/a	Samples frequency	Total	231	680		723	1875
n/a		Nr Failures	0	0		0	0
n/a		Compliance %	100%	100%		100%	100%
n/a	Sites compliance	Total	23	17		35	18
n/a		Nr Failures	16	0		17	0
n/a		Compliance %		100%			100%
6.3	**Water Supply and Quality**						
6.3.6	Blue Drop Status	certified per BDS	69.3% Rating Achieved Blue Drop 2014				
9.3	**Water Quality**						
9.3.10	% Time (days) within SANS 241 standards per year	Average of sites compliance %	93%				

The items shown in Yellow are measured by WCDM and not necessarily completed by SBM

The following table illustrates the compliance of the final effluent discharged to the environment by the Municipality with regard to the Green Drop Programme that was established by the DWS.

Table 31: Overview of Waste Water Quality Compliance

Measurable / Enabling Factor	Unit	Year 0 FY2017/18			
		Microbial	Chemical	Physical	Operational
Results per the Green Drop System					
Regulatory compliance	Total	137			
	Nr Failures	47			
	Compliance %	67.2%	53.9%	53.0%	
Operational compliance	Total				
	Nr Failures				
	Compliance %				
Monitoring and Sample Failure					
Average % of sample failure	Failure %	34.21%			
Water Supply and Quality					
Green Drop Status	certified per GDS	64.7% measured by 2013 Green Drop Report			

The items shown in Yellow where not available

Incident Management

Apart from the sampling and quality of the water and wastewater, it is also important to ensure the reliability of these services. It is therefore of great importance that the Municipality be capable of delivering the services even during times of crisis. Incident Management Plans or Protocols are documents that provide guidance to the employees of the Municipality with regard to certain actions that should be taken when unexpected and unwelcome events take place that impact the performance of the water and final effluent quality.

The following table illustrates to what extent the water supply and waste water treatment systems have the correct documentation available to their need.

Table 32: Incident Management and Reporting Overview

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 0 FY2017/18
6.3	**Water Supply and Quality**		
6.3.1	Incident Management Protocol in place	yes/total schemes in %	100%
6.3.5	Failure Response Management in place	yes/total schemes in %	100%
6.4	**Waste Water Supply and Quality**		
6.4.1	Incident Management Protocol in place	yes/total schemes in %	100%
6.4.5	Failure Response Management in place	yes/total schemes in %	100%

The health oriented water quality incident reporting compliance can be seen in the following table.

Table 33: Water Quality Incident Reporting Compliance (Health Orientated)

Measurable / Enabling Factor	Unit	Year 0 FY2017/18			
		Acute Health - 1 Microbiological	Acute Health - 1 Chemical	Acute Health - 2 Microbiological	Chronic Health
Failures in terms of Analysis	Total nr	231	680		511
	Nr of failures	16	17		0
	Failure %	6.9%	2.5%		0%
	Nr reported				
	Reported % of failure				
Failures in terms of Samples	Total	231	680		511
	Nr of failures	0	0		0
	Failure %	0	0%		0%
	Nr reported				
	Reported % of failure				
Failures in terms of Sites	Total	23	17		18
	Nr of failures	16	0		0
	Failure %	69%	0%		0%
	Nr reported				
	Reported % of failure				

2.10 Business Element 10: Financial

2.10.1 Capital Budget

During the 2017/18 financial year the following key projects were completed:

- Successful completion and commissioning of Pressure Reduction System in Saldanha and Nuwerus.
- Start with the roll out of new smart water meter installations in some areas of Vredenburg, Nuwerus and Laingville.
- New Langebaanweg boreholes project, includes new boreholes, distribution lines and pumping station
- Completion of the first phase of upgrades to the Langebaan Watse Water Treatment plant. Upgrades include a new aeration basin and sludge drying beds.
- Completion of the installation of the new 3.4km sewer rising main in Langebaan
- Completion of intermediate phases of upgrades to Vredenburg and Laingville watse water treatment plants. Next phases start in the 2018/19 financial year.

Challenges that are experienced:

- Dry summer seasons, the relatively slow storage capacity of the reservoirs and the rising levels of demand/consumption (due to population growth), watter supply to the municipality area may be a problem.
- The seasonal impact on the quality of water in the municipal area, high concentrations of chloriede during winter months. This has also extended beyond the winter months.
- Lower rainfalls currently being experienced, very low dam levels. Water restrictions.
- Vandalism at water and sewer pumping stations, cable theft. Security measures are being improved to address these problems
- Unused treated effluent discharged from the Langebaan WWTW during winter months may no longer be discharged into the MPA. The municipality is looking at alternative measures to re-use this effluent during winter months. A. Feasibility study is underway.
- Sludge handeling and sludge disposal is a problem experienced at most of the plants.
- Availability of skilled staff is also a problem. Most of the plants are run by personnel with lots of years working experience operating the plant, but do not poses the required process controller qualifications. They are busy with an extensive process getting all the operators classed as process controllers.

A summary of the water services projects and their status is given in the table below:

Table 34:Water Services projects status and performance

No	Project Title and Description	Inclusion		Total Project Cost R'000	Year 0 Performance - FY2016/17			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		
1	REPLACE BAKKIE D69	No	No	R 1 013	R 1 013	R 939	93%	ANN	Sew Distrib.	17/18	17/18	In Progress	
2	ST HELEN LAINGVILLE UISP SEWERAGE	Yes	Yes	R 562	R 562	R 562	100%	K	Sew Distrib.	17/18	17/18	Completed	
3	ONGEGUND IRDP 28 UNITS SEWERAGE	Yes	No	R 132	R 132	R 0	0%	K	Sew Distrib.	17/18	17/18	Not Started	2018
4	LANGEBAAN SEWAGE PIPELINE	Yes	Yes	R 8 750	R 8 750	R 8730	100%	CRR	Sew Distrib.	17/18	17/18	Completed	
5	SERVICES EMERGENCY HOUSING SEWAGE	Yes	Yes	R 4 400	R 4 400	R 4 035	92%	CRR	Sew Distrib.	17/18	17/18	In Progress	
6	HOPEFIELD IRDP 62 UNITS SEWERAGE	Yes	Yes	R 0	R 0	R 39	100%	K	Sew Distrib.	17/18	17/18	Completed	
7	LOUWVILLE RDP HOUSES 200 UNITS SEWERAGE	Yes	Yes	R 76	R 76	R 0	0%	K	Sew Distrib.	17/18	17/18	Not Started	
8	UPGR SEWER NETWORK MIDDELPOS	Yes	Yes	R 0	R 0	R 0	0%	CRR	Sew Distrib.	17/18	17/18	Not Started	
9	UPGRADE NETWORKS SALDANHA	Yes	Yes	R 118	R 118	R 0	0%	ANN	Sew Distrib.	17/18	17/18	Not Started	
10	INVEST&UPGR VBURG MAIN SEWERAGE	Yes	Yes	R 184	R 184	R 183	100%	CRR	Sew Distrib.	17/18	17/18	Completed	2018
11	INVEST&UPGR VBURG MAIN SEWERAGE	Yes	Yes	R 2 275	R 2 275	R 1 184	52%	ANN	Sew Distrib.	17/18	17/18	In Progress	2018
12	UPGRAELANGEBAAN PHASE IV	Yes	Yes	R 2 595	R 2 595	R 1 737	67%	ANN	Sew Distrib.	17/18	17/18	In Progress	2018
13	UPGR ST HELEN SEWER NETWORK INTERNAL BRITT	Yes	Yes	R 1 213	R 1 213	R 0	0%	ANN	Sew Distrib.	17/18	17/18	Not Started	
14	SEWER CONN V/BURG URBN REVIT PROJECT	Yes	Yes	R 500	R 500	R 0	0%	VURG	Sew Distrib.	17/18	17/18	Not Started	
15	SERVICES EMERGENCY HOUSING SEWAGE	Yes	Yes	R 2 000	R 2 000	R 245	12%	WSIG	Sew Distrib.	17/18	17/18	In Progress	
16	SERVICES EMERGENCY HOUSING SEWAGE	Yes	Yes	R 400	R 400	R 283	71%	MSDCB	Sew Distrib.	17/18	17/18	In Progress	
17	TOOLS AND EQUIPMENT	No	Yes	R 0	R 0	R 38	0%	ANN	Sew Distrib.	17/18	17/18	Completed	
18	INVEST & DESIGN SEWERBRITTANI	Yes	Yes	R 677	R 677	R 133	20%	CRR	Sew: Purif	17/18	17/18	In Progress	2018
19	UPGRADE LANGEB SEWERAGE WORKS	Yes	Yes	R 0	R 0	R 0	0%	CRR	Sew: Purif	17/18	17/18	Completed	
20	INVEST & DESIGN JACOBSBAAI SEW	Yes	Yes	R 194	R 194	R 194	100%	CRR	Sew: Purif	17/18	17/18	Completed	
21	UPGRADE VREDENB.SEWE Provision	Yes	Yes	R 2 500	R 2 500	R 53.79	2.15%	CRR	Sew: Purif	17/18	17/18	Completed	
22	UPGRADE VRED SEWERAG Provision	Yes	Yes	R 227	R 227	R 0	0%	ANN	Sew: Purif	17/18	17/18	Not Started	
23	UPGR.LANGEB SEWERAGE Provision	Yes	Yes	R 3 631	R 3 631	R 3104	85%	CRR	Sew: Purif	17/18	17/18	In Progress	
24	UPGR.LANGEB SEWERAGE Provision	Yes	Yes	R 4 085	R 4 085	R 4 141	101%	ANN	Sew: Purif	17/18	17/18	Completed	2018
25	LAINGVIL.UPGR.& SLUDGETREATM.	Yes	Yes	R 3 882	R 3 882	R 3 712	96%	CRR	Sew: Purif	16/17	16/17	Completed	
26	LAINGVILLE UPGRADE & SLUDGE TR	Yes	Yes	R .796	R .796	R 0	0%	ANN	Sew: Purif	17/18	17/18	Not Started	
27	UPGRADE SALDANHA SEWERAGE WORKS	Yes	Yes	R 2 392	R 2 392	R 0	0%	CRR	Sew: Purif	17/18	17/18	Not Started	
28	UPGRADE VDB SEWERAGE WORKS PHASE 3	Yes	Yes	R 0	R 0	R 2 584	0%	CRR	Sew: Purif	17/18	17/18	Completed	
29	WEEDEETERS Provisional Capital	No	No	R 5.26	R 5.26	R 5.26	100%	CRR	Sew: Purif	17/18	17/18	Completed	
30	KUDU MOVERS Provisional Capita	No	No	R 25	R 25	R 25	100%	CRR	Sew: Purif	17/18	17/18	Completed	
31	PATERNOSTER WATER PIPELINE	Yes	Yes	R 250	R 250	R 250	100%	CRR	Water	17/18	17/18	Completed	
32	LOUWVILLE RDP HOUSES 200 UNITS WATER	Yes	Yes	R 76	R 76	R 0	0%	K	Water	17/18	17/18	Not Started	
33	ST. HELE LAINGVILLE UISP WATER	Yes	Yes	R 1 037	R 1 037	R 0	0%	K	Water	17/18	17/18	Not Started	
34	ONGEGUND IRDP 28 UNITS WATER	Yes	Yes	R 132	R 132	R 0	0%	K	Water	17/18	17/18	Not Started	
35	SERVICES EMERGENCY HOUSING WATER	Yes	Yes	R 576	R 576	R 567	98%	CRR	Water	17/18	17/18	Completed	
36	NEW 10ML KALKRUG RESERVIOR	Yes	Yes	R 0	R 0	R 0	0%	CRR	Water	17/18	17/18	Not Started	
37	PATERNOSTER WATER RESERVIOR 3ML	Yes	Yes	R 0	R 0	R 0	0%	CRR	Water	17/18	17/18	Not Started	
38	BULK SUPPLY NETWORK IMPROV	Yes	Yes	R 3 805	R 3 805	R 3 795	100%	CRR	Water	17/18	17/18	Completed	
39	LBN ROAD AQUIFER WFIELD2(1)	Yes	Yes	R 18 952	R 18 952	R 9 765	52%	CRR	Water	17/18	17/18	In Progress	
40	ELANDSFONTEIN AQUIFER	Yes	Yes	R 0	R 0	R 0	0%	MDRG	Water	17/18	17/18	Not Started	
41	REFURBISH SHELLY POINT DESAL PLANT	Yes	Yes	R 2 500	R 2 500	R 1 961	78%	CRR	Water	17/18	17/18	In Progress	
42	MANAGEMENT OF MISVERSTAND DAM CAP AND ABSTR	Yes	Yes	R 1 289	R 1 289	R 1 281	99%	CRR	Water	17/18	17/18	Completed	
43	LBN ROAD AQUIFER WFIELD 1	Yes	Yes	R 20 000	R 20 000	R 20 210	101%	CRR	Water	17/18	17/18	Completed	
44	RENEW HOOGLAND PUMPSTATION	Yes	Yes	R 419	R 419	R 419	0%	CRR	Water	17/18	17/18	Not Started	
45	BESAANSKLIP RESERVOIR	Yes	Yes	R 33 627	R 33 672	R 32 953	98%	IDZ	Water	17/18	17/18	Completed	
46	LBN ROAD AQUIFER WFIELD 1	Yes	Yes	R 21 310	R 21 310	R 0	0%	MDRG	Water	17/18	17/18	Not Started	
47	ELANDSFONTEIN AQUIFER	Yes	Yes	R 0	R 0	R 0	0%	AIG	Water	17/18	17/18	Not Started	
48	NEW LBN ROAD BOREHOLES	Yes	Yes	R 0	R 0	R 0	0%	MDRG	Water	17/18	17/18	Not Started	
49	REFURBISH REV OSMOSIS PLANT	Yes	Yes	R 0	R 0	R 0	0%	MDRG	Water	17/18	17/18	Not Started	
50	FURN & EQUIP	No	Yes	R 30	R 30	R 28	93%	CRR	Water	17/18	17/18	In Progress	
51	REFURBISH SHELLY POINT DESAL PLANT	Yes	Yes	R 2 000	R 2 000	R 441	22%	MDRG	Water	17/18	17/18	In Progress	
	Total			**R 147 840**	**R 147 855**	**R 103 597**	**70%**						

It can be noted from the previous table that the Municipality spent only 70% on their water and sewerage capital budgets over the last financial.

2.10.2 Operational Budget

SBM's Operational Budget for water and sanitation for the 2016/17 and 2015/16 financial years is shown below:

Table 35:Summary of Operational Budget : Water & Sanitation

Service	Expenditure / Income	Year 0	Year - 1	Year - 2
		FY2017/18	FY2016/17	FY2015/16
		R'000	R'000	R'000
Water	Expenditure	R 108 590	R 97 340	R 135 456
	Income	R -180 985	R -163 868	R -152 524
	Surplus / Deficit	**R -72 395**	**R -66 528**	**R -17 068**
Sanitation	Expenditure	R 46 789	R 61 635	R 44 877
	Income	R -70 051	R -69 959	R -76 694
	Surplus / Deficit	**R -23 262**	**R -8 324**	**R -31 817**

2.10.3 Tariffs and Charges

In the past, the first ten six (6) kl of water is provided free to all residential consumers. From 2017/18 onwards a minimal charge of R 8.60 / kℓ (VAT Included) for water up to 6 kℓ is levied.

SBM's tariffs tries to support the viability and sustainability of water supply services to the poor through cross-subsidies (where feasible) while balancing the need to levy water usage especially during the drought..

Free basic water and sanitation services are linked to SBM's Indigent Policy and all indigent households therefore receive free (or very low cost) basic water and sanitation services. This implies that either the equitable share is used to cover this cost, or higher consumption blocks are charged at a rate greater than the cost in order to generate a surplus to cross-subsidies consumers who use up to six (6) kilolitres per month.

SBM current has a five (5) block step tariff system discourages the wasteful or inefficient use of water. It is expected that this tariff structure will continue to be applied in the future. The sustainable supply of potable water is becoming an ever increasing challenge. This scarce commodity has to be optimally managed. The current drought situation and the continued increase in the price of electricity and chemicals for purification has contributed to the cost of delivering the service. The water usage block tariff has been structured for a basic affordable tariff for up to 40 kl per household per month. Punitive tariffs are in place for excessive water consumption.

2.10.4 Revenue Collection and Cost Recovery

The table below gives an overview of the SBM revenue collection and cost recovery.

Table 36: Overview of Water Services Revenue Collection and Cost Recovery

Regulations Ref. #	Description	Year 0	Year - 1	Year - 2
		FY2017/18	FY2016/17	FY2015/16
	INCOME	**R'000**	**R'000**	**R'000**
	Billed			
	Water reticulation / provision - Basic	R 156 720	R 21 299	R 15 136
	Water reticulation / provision - Consumption		R 112 751	R 108 186
	Sewerage / wastewater	R 54 259	R 54 243	R 56 313
	Sub-Total: Billed	**R 210 979**	**R 188 293**	**R 179 636**
	Collections			
	Water reticulation / provision - Basic	R 134 801	R 19 622	R 14 153
	Water reticulation / provision - Consumption		R 103 874	R 102 705
	Sewerage / wastewater	R 50 258	R 52 657	R 51 400
	Sub-Total: Collections	**R 185 059**	**R 176 153**	**R 168 257**
	Equitable share income			
	Water reticulation / provision	R 46 184	R 40 372	R 35 666
	Sewerage / wastewater	R 19 793	R 17 302	R 15 286
	Sub-Total: Equitable share income	**R 65 977**	**R 57 674**	**R 50 952**
	EXPENDITURE (O&M)	**R'000**	**R'000**	**R'000**
	Water services	R 108 590	R 97 340	R 135 456
	Sewerage / wastewater services	R 46 789	R 61 635	R 44 877
	Total: Water Services O&M	**R 155 379**	**R 158 975**	**R 180 333**
	COST RECOVERY ANALYSIS / RATIO'S	**%**	**%**	**%**
10.2 (d) (ii)	**Billed as % of Cost**			
	Water	144%	116%	80%
	Sewerage	116%	88%	125%
	Total	**136%**	**118%**	**100%**
10.2 (d) (iii)	**Unrecovered as % of Cost**			
	Water services	20%	96%	69%
	Sewerage / wastewater services	9%	3%	11%
	Total	**17%**	**8%**	**6%**

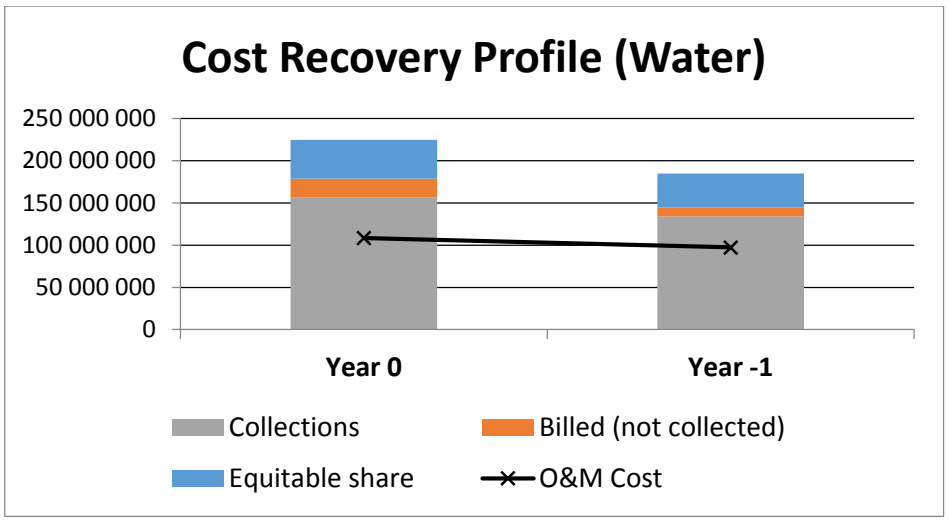

Figure 15 : Revenue Collection and Cost Recovery Profile (Water)

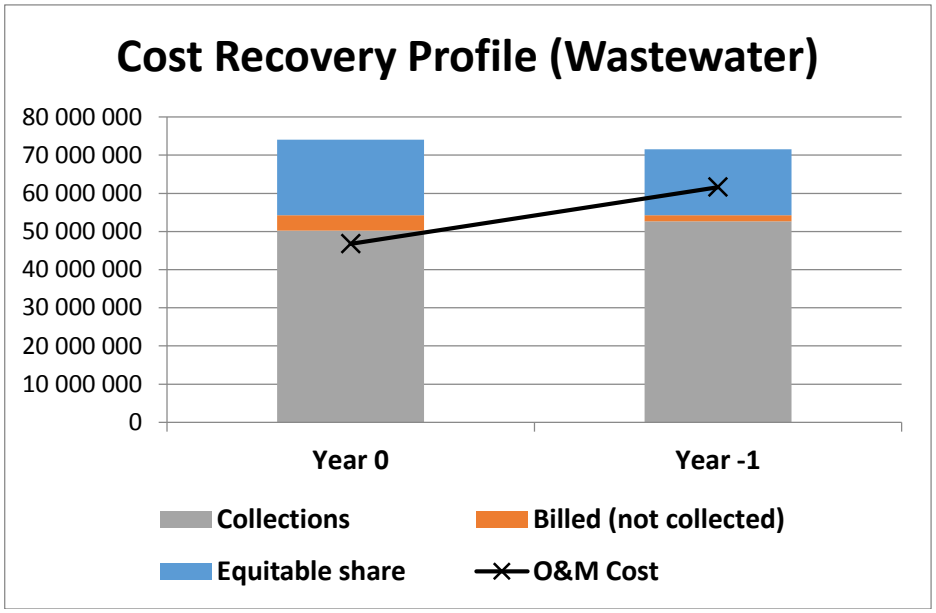

Figure 16 : Revenue Collection and Cost Recovery (Sanitation)

2.11 Business Element 11: Water Services Institutional Arrangements

2.11.1 Service Level Agreements

SBM is both WSA and WSP to the consumers in their Municipal Management Area and therefore does not manage other WSPs. As most of the water used by the municipality is supplied by the West Coast DM, a formal WSP contracts (or service delivery agreement) is in place between several smaller municipalities and West Coast DM. This agreement with the to provide bulk potable water to these municipalities through their bulk water distribution networks. The service delivery agreement is available from SBM's website.

The previous WSDP for the 2011/2012 financial year was approved by the Executive Mayoral Committee in the August 2012. WSDP Performance- and Water Services Audit Reports were also compiled for the last number of years, which were taken to Council with the Annual Reports.

The existing water services bylaws were promulgated in 1996. They cover the provision of services for water supply, sanitation and industrial effluent. It may be time to update the by-laws.

2.11.2 IDP and SDBIP Preformance

The table below gives an overview of the Municipality's performance on the water and sanitation objectives and strategies per WSDP topic for the previous financial years.

Table 37:Performance of Water Services Objectives and Strategies per WSDP Topic

Nr	Objective / Strategy	Key Performance Indicator	Inclusion (yes/no)		WSDP Year 1		WSDP Year 2		WSDP Year 3		WSDP Year 4		WSDP Year 5	
					FY	2013/2014	FY	2014/2015	FY	2015/2016	FY	2016/2017	FY	2017/2018
			WSDP	IDP	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
WSDP Topic 1: Administration														
	Ensure proactive water services development planning and regulatory compliance													
1.1	Develop and adopt a new WSDP every 5 years	New WSDP every 5 years	Yes	Yes	Not Required		Not Required		Not Required		100%	Service prov not yet appointed	100%	Submitted November 2018
1.2	Compile and submit annual WSDP implementation- and water services audit report	Date submitted	Yes	No	October every year	not achieved	October every year	not achieved	October every year	not achieved	October every year	This Report	October every year	Extension granted until end of November 2018
WSDP Topic 2: Demographics														
WSDP Topic 3: Service levels														
	To maintain and expand basic infrastructure as a catalyst for economic development													
TL1	Number of formal residential properties that receive piped water (credit and prepaid water) that is connected to the municipal water infrastructure network and which are billed for water or have pre paid meters as at 30 June 2017	No of Properties which are billed for water or have pre paid meters	Yes	Yes	22600	26297	22600	23573	22600	24599	22600	25098	25000	*25 644*
TL3	Number of formal residential properties connected to the municipal waste water sanitation/sewerage network for sewerage service, irrespective of the number of water closets (toilets) which are billed for sewerage as at 30 June 2017	Number of residential properties which are billed for sewerage	Yes	Yes	20400	23102	20400	23097	20400	23577	20400	23426	25000	*26892*
	To ensure compliance with the tenets of good governance as prescribed by legislation and best practice													
TL5	Provide free basic water to indigent households	No of indigent households receiving free basic water	Yes	Yes	7000	7207	7000	7316	7000	7585	7000	6482	6500	*6442*
TL7	Provide free basic sanitation to indigent households	No of indigent households receiving free basic sanitation	Yes	Yes	5400	5618	5400	5903	5400	6497	7000	3047	5600	*5972*
WSDP Topic 4: Socio economic														
WSDP Topic 5.1: Water Services Infrastructure management														
	To develop safe, integrated and sustainable neighbourhoods													
	Service sites in terms of the housing plan	Number of sites serviced	Yes	Yes	355	354	443	473	Not Included	Not Included	62	62	N/A	*Not Measured in this SDBIP*
	To maintain and expand basic infrastructure as a catalyst for economic development													
TL45	80% of the water maintenance budget spent {(Actual expenditure on maintenance divided by the total approved maintenance budget)x100}	% of the water maintenance budget spent	Yes	Yes	95%	87.10%	95%	90.90%	80%	84.25%	80%	91.20%	80%	*53.07%*
WSDP Topic 5.2: Sewer Services Infrastructure management														
	To develop safe, integrated and sustainable neighbourhoods													
	Service sites in terms of the housing plan	Number of sites serviced	Yes	Yes	355	354	443	473	Not Included	Not Included	62	62	N/A	*Not Measured in this SDBIP*
	To maintain and expand basic infrastructure as a catalyst for economic development													
TL41	80% of the sewerage maintenance budget spent {(Actual expenditure on maintenance divided by the total approved maintenance budget)x100}	% of the sewerage maintenance budget spent	Yes	Yes	95%	87.10%	95%	90.04%	80%	93.28%	80%	88.92%	80	*65.84%*
WSDP Topic 6: Associated services														
WSDP Topic 7.1: Conservation and Demand management (Water Resource Management)														

Table 37:Performance of Water Services Objectives and Strategies per WSDP Topic (Continued)

Nr	Objective / Strategy	Key Performance Indicator	Inclusion (yes/no)		WSDP Year 1		WSDP Year 2		WSDP Year 3		WSDP Year 4		WSDP Year 5	
					FY	2013/2014	FY	2014/2015	FY	2015/2016	FY	2016/2017	FY	2017/2018
			WSDP	IDP	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
WSDP Topic 7.2: Conservation and Demand management (Water Balance)														
	To maintain and expand basic infrastructure as a catalyst for economic development													
TL27	Limit unaccounted for water to less than 15% {(Number of Kilolitres Water Purchased or Purified - Number of Kilolitres Water Sold (incl free basic water) / Number of Kilolitres Water Purchased or Purified x 100}	% unaccounted water	Yes	Yes	10%	16.66%	15%	14.45%	15%	14.39%	15%	13.90%	15%	*7.62%*
WSDP Topic 8: Water Resources														
	To maintain and expand basic infrastructure as a catalyst for economic development													
TL28	95% water quality level obtained as per SANS 241 physical and micro parameters	% water quality level	Yes	Yes	95%	100%	95%	100%	95%	100%	95%	100%	95%	*95.50%*
WSDP Topic 9: Financial profile														
	To maintain and expand basic infrastructure as a catalyst for economic development													
TL40	95% of the sewerage capital budget spent {(Actual capital expenditure divided by the total approved capital budget)x100}	% of the sewerage capital budget	Yes	Yes	95%	78.33%	95%	69.38%	95%	54.48%	95%	85.03%	95%	*76.59%*
TL44	95% of the water capital budget spent {(Actual capital expenditure divided by the total approved capital budget)x100}	% of the water capital budget spent	Yes	Yes	95%	86.66%	95%	90%	95%	54.29%	95%	89.77%	95%	*87.53%*
	An effective, efficient and sustainable developmental oriented municipal administration													
TL14	Financial viability measured in terms of the outstanding service debtors	Service debtors to revenue	Yes	Yes	18%	16.14%	18%	15.01%	18%	14.35%	18%	13.71%	18%	*13.69%*
WSDP Topic 10: Institutional Arrangements profile														
	To maintain and expand basic infrastructure as a catalyst for economic development													
	Update the Water and Sewerage Master Plan and submit to council	Water and Sewerage Master Plan updated and submitted to council	Yes	Yes	Not Included	Not Included	Not Included	Not Included	Not Included	Not Included	Submitted	Not Completed	Completed	*Final submission end of November 2018*
WSDP Topic 11: Social and Customer service requirements														
	To ensure compliance with the tenets of good governance as prescribed by legislation and best practice													
	Develop a Service Charter and submit to council	Service Charter developed and submitted to council	Yes	Yes	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted	*Submitted*

2.11.3 Staffing, Vacancies and Training

The total number of approved posts is 1079 and SBM employed 984 employees at the end of June 2018, which results in a vacancy rate of 8.8% for the Municipality. The Water Services Section has a vacancy rate of 8% in terms of the approved organogram. The Wastewater Section has a vacancy rate of 10% in terms of the approved organogram. These low vacancy rates bode well for service delivery in SBM.

At a technical, operations and management level, municipal staff is continuously exposed to training opportunities, skills development and capacity building in an effort to create a more efficient overall service to the users.

All the WTWs and WWTWs in SBM's Management Area are also registered with the DWS. A skills audit is conducted during each year, which leads to various training programmes in order to wipe out skills shortages and to provide employees with the necessary capacity. Workplace Skills Plan is compiled every year and the specific training needs of the personnel, with regard to water and wastewater management are determined annually. The table below gives an overview of the training provided during the 2017/2018 financial year for the Municipal personnel, as taken from the Workplace Skills Plan.

Table 38: Training provided during 2017/18 year (Workplace Skills Plan)

Management Level	Gender	No of Employees Identified for Training at start of year	No of Employees that received training
MM and S57	Female	0	0
	Male	2	0
Legislators, Senior Officials & Managers	Female	10	9
	Male	29	16
Associate Professionals & Technicians	Female	1	5
	Male	51	90
Professionals	Female	13	3
	Male	5	2
Clerks	Female	28	43
	Male	10	9
Service and Sales Workers	Female	5	25
	Male	9	26
Plant and Machine Operators and Assemblers	Female	0	3
	Male	26	48
Elementary occupations	Female	28	64
	Male	109	233
Subtotals	**Female**	**85**	**152**
	Male	**241**	**424**
Total		**326**	**576**

2.11.4 Municipal Strategic Self-Assessment

The SBM Municipal Strategic Self-Assessment (MuSSA) overseen by the DWS conveys an overall business health of municipal water business and serves as a key source of information around municipal performance. The MuSSA also identifies key municipal vulnerabilities that are strategically important to DWS, the Department of Cooperative Government (DCoG), National Treasury, the planning Commission/Office of the Presidency, the South African Local Government Association (SALGA) and the municipalities themselves.

The MuSSA team continues to engage (1) DWS directorates and their associated programmes (e.g. Water Services Development Plan, Water Services Regulation), and (2) other sector departments and their associated programmes (e.g. LGTAS, MISA) to minimize duplication and ensure alignment. Through the tracking of current and likely future performance, the key areas of vulnerability identified, allow municipalities to effectively plan and direct appropriate resources that will also enable DWS and the sector to provide more effective support.

The Spider Diagram below effectively indicates the vulnerability levels of SBM across the sixteen key service areas, as identified through the Municipal Strategic Self-Assessment of Water Services process.

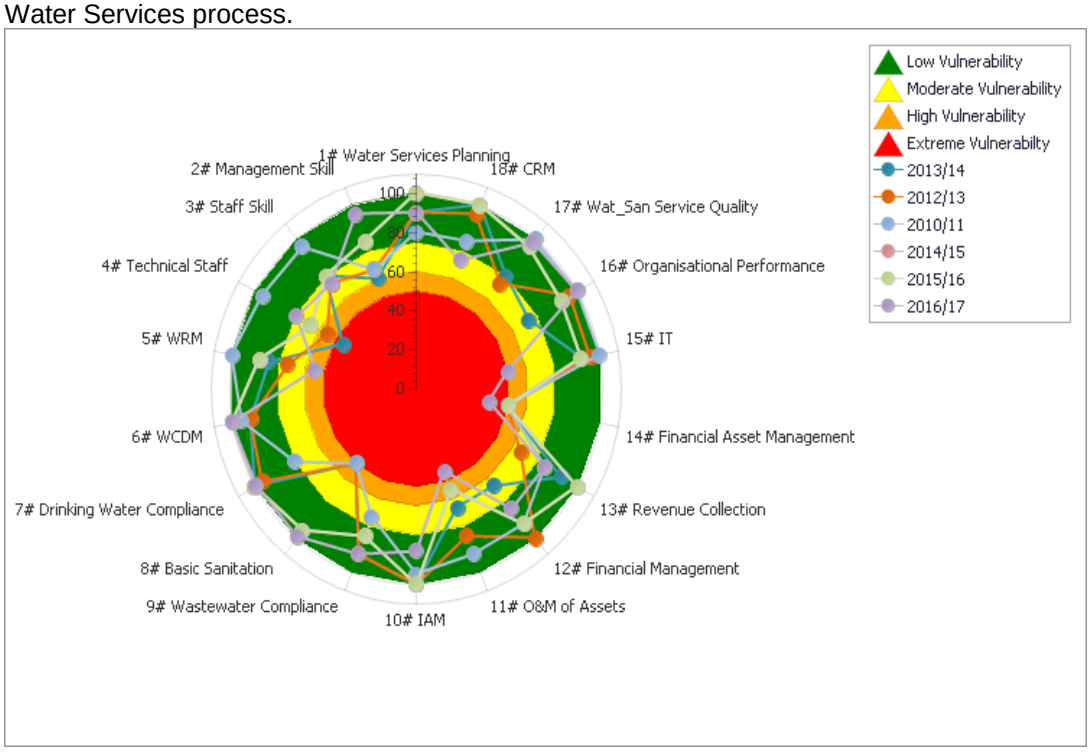

Figure 17 :Spider Diagram of Vulnerability Levels in SBM

2.12 Business Element 12: Social and Customer Service Requirements

A comprehensive Customer Services and Complaints system is in place and the Municipality has maintained relatively high and consistent levels of service to its urban water consumers.

A Consumer Charter for Water Services does not exist for the Municipality and it is recommended that a charter be drafted and adopted.

3 SECTION B : STATE OF WATER SERVICES PLANNING

3.1.1 WDSP Status

SBM's Previous WSDP is in its final year of validity. The table below gives an overview of the SBMs previous WSDP status.

Table 39: WSDP- and reporting reference

Nr	WSDP Title and Reference	Status	Date	WSDP Year	Financial Year	Reporting year
1	SBM: WSDP 2011/2012	Drafted: December 2011		Year 1	**2012/2013**	-4
		Comment submit: March 2012		Year 2	**2013/2014**	-3
		Finalized: May 2012		Year 3	**2014/2015**	-2
		Adopted: August 2012		Year 4	**2015/2016**	-1
		Published: 20 September 2012		Year 5	**2016/2017**	0
		New WSDP not yet approved		Year 6	**2017/2018**	+1

Legend:

- Past Financial Years
- Previous Financial Year (financial year of reporting)
- Future Years

The WSDP aims to update the previous WSDP for the next 5 years.

3.1.2 Master Planning and Other studies

Integration between the WSDP and other sectoral plans is important in order to coordinate the needs of those sectoral plans as applicable into the WSDP. The following sectoral plans were consulted or integrated.

Table 40: Sectoral Plan Integration

Sector Plan	Sector Interaction	Area	WSA
Final 4th Generation IDP 2017-2022	**Good**	**All Settlements in SBM**	**SBM**
Management Plan to Reduce Non-Revenue Water in the Saldanha Bay Municipality	**Good**	**All Settlements in SBM**	**SBM**
Water Safety Plan	**Good**	**All Settlements in SBM**	**SBM**
SBM Sewer Master Plan 2006	**Good**	**All Settlements in SBM**	**SBM**
SBM Water Master Plan 2006	**Good**	**All Settlements in SBM**	**SBM**
SBM Sewer Master Plan Update 2012	**Good**	**All Settlements in SBM**	**SBM**
SBM Water Master Plan Update 2012	**Good**	**All Settlements in SBM**	**SBM**
SBM Municipal Spatial Development Framework	**Good**	**All Settlements in SBM**	**SBM**
SBM Sewer Master Plan 2018/19	**Good**	**All Settlements in SBM**	**SBM**

SBM Water Master Plan 2018/19	**Good**	**All Settlements in SBM**	**SBM**

3.1.3 Sewer and Water Master Plans

The Sewer and Water Master Plans were updated in 2019 and the plans identified the upgrades, extension required which can be referenced in the plan and are not repeated in this executive summary. The top priority projects for both water and sewer are referenced in sections to follow:

4 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:

- • Quality: Assessment current status against compliancy requirements.
- • Quantity: An indication of the representation of the total area to address the issue.
- • Future plan assessment: Degree in which future demand has been established.
- • Strategy assessment: Whether a Strategy is in place to address the need.

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.

4.1 Business Element 1: Administration

Table 41: Needs Analysis Business Element 1 : Administration

Business Element 1: Administration (Topic 1)					
Overview of Topic	**Status Quo and Knowledge Interpretation Statistics**				
This topic provides knowledge on the status of the WSA's 5-year WSDP as well as with the contact particulars of the key role-players which have contributed to the development of the WSDP.	**Item**	**Quality (%} an indication of assessment of current status against compliancy requirements**	**Quantity (%} an indication of the representation of total area to address the issue**	**Future Plan Assessment**	**Strategy Assessment**
	n/a	**n/a**	**n/a**	**n/a**	**n/a**
	TOTAL for Topic	**n/a**	**n/a**	**n/a**	**n/a**

Problem Definition Statements		
Nr	**Statements – Short Comings**	**Possible Improvement / Project**
BE1.1	**The WSDP must revised and approved every year**	**Appoint a service provider on a long term tender to assist with updates to the WSDP**
BE1.2	**Key issues raised in the WSDP need to be taken to the IDP**	**Ensure Executive Summary of WSDP (WSDP-IDP Water Sector Input Report) is included in the IDP**

4.2 Business Element 2: Demographics

Table 42: Needs Analysis Business Element 2 : Demographics

Business Element 2: Demographics (Topic 2)					
Overview of Topic	**Status Quo and Knowledge Interpretation Statistics**				
This topic provides an overview of demographics of the WSA as sourced from the National Geo-Referenced Database, aligned to Census figures as well as the number of public amenities and private facilities within the jurisdictional area of the WSA.	**Item**	**Quality (%} assessment of current status against compliancy requirements**	**Quantity (%} an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategy Assessment**
	Settlement Types (Urban, Rural, Farming)	**Scores will be determined from the new eWSDP website as soon as it is activated by the DWS**			
	Public Amenities Consumer types				
	TOTAL for Topic				
Problem Definition Statements					

Nr	Statements – Short Comings	Possible Improvement / Project
BE2.1	**Conservative approach is followed regarding the management of water sources, due to the possible impact of climate change.**	**All resources, especially surface water resources, need to be re-evaluated, especially where demand is close to the safe one in twenty year yields. Establish assurance of supply levels of all water sources. Implement the recent developed Climate Change Adaptation Plan.**
BE2.2	**The potential long-term impacts of climate change comprise key overarching informants to the SDF. It recognized the need to act on and enable the reduction in Greenhouse Gas emissions and adapt to global climate change. The risk of increased intensity of extreme weather events, such as flooding, changes in weather patterns and the potential impacts on agriculture crop futures places additional risk to human lives and health. These events are likely to impact on the tourism, infrastructure and insurance sectors of the economy into the future.**	**The six themes of the SDF are in line with the National Climate Change Response Policy and are informed by a two-pronged approach to addressing climate change:** **• Mitigation: Contribute to national and global efforts to significantly reduce CHG emissions and build a sustainable low carbon economy, which simultaneously addresses the need for economic growth, job creation and improving socio-economic conditions; and** **• Adaptation: Reduce climate vulnerability and develop the adaptive capacity of the Wester Cape's economy, its people, its ecosystems and its critical infrastructure in a manner that simultaneously addresses the province's socio-economic and environmental goals.**
BE2.3	**The integrity of the environmental and cultural / historic heritage is under pressure. The quality of the natural environment is under threat due to the ongoing loss of bio-diversity and decay of essential ecological systems due to poor land use management practices, unsustainable resource utilisation and general environmental decay. The area has some unique and healthy natural environmental habitats that are at risk if not properly managed. There is also an awareness of and justified need to address the integrity of the cultural /historic heritage.**	**Actively implement the Environmental Management Policy and Environmental Management System (EMS), which protects the integrity of the environment. The EMS integrates environmental functions of all sections and ensures compliance with Environmental Legislation and will be reviewed and updated as an on-going process**
BE2.4	**Municipality needs to evaluate all land use planning applications against the broad SDF principles before recommendations for decision making are made.**	**The SDF has been adopted and sets out broad principles to give direction to future developments, as well as where such developments can take place within the demarcated urban edges of all towns and in the rural areas.**
BE2.5	**Eradicate the housing backlog. There has been a steady increase in housing requirement within the municipality**	**The housing backlog has grown from below 1000 to over 7500 in the last 5 years. This may be due to various reasons including migration for work, urbanization of farm workers, etc. Housing projects in line with the Integrated Sustainable Human Settlement Plan (ISHSP) and the Integrated Housing Plan (IHP) must be identified to address the issue.**
BE2.6	**Ensure the required bulk water and sewerage infrastructure are in place before housing projects are implemented.**	**Ensure that the provision of bulk water and sewerage infrastructure are aligned with the ISHSP and the IHP and that housing projects only continue once the required bulk water and sewerage infrastructure are in place.**

4.3 Business Element 2: Service Levels

Table 43: Needs Analysis Business Element 3 : Service Levels

Business Element 3: Service Levels (Topic 3)					
Overview of Topic	**Status Quo and Knowledge Interpretation Statistics**				
Topic 3 information is presented in terms of the Department of Water and Sanitations' service level classification which considers the adequacy of services in establishing the service level profile. The profile is presented in terms of settlements, population and households.	**Item**	**Quality (%} assessment of current status against compliancy requirements**	**Quantity (%} an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategy Assessment**
	Water - Below : No Services (Formal)	Scores will be determined from the new eWSDP website as soon as it is activated by the DWS			
	Water - Below : Infra. Needs				
	Water - Below ; O&M Needs				
	Water - Below No Services (Informal)				
	Sanitation – Below: No Services (Formal)				
	Sanitation – Below: Infra. Needs				
	Sanitation – Below: O&M Needs				
	Sanitation - Below No Services (Informal)				
	Residential, Public Institutions and Industries Amenities				
	TOTAL for Topic				

Problem Definition Statements		
Nr	**Statements – Short Comings**	**Possible Improvement / Project**
BE3.1	There are still a number of households in informal areas where the ratios of the number of households per toilet and the number of households per tap are above the targets of 5 and 25.	Continue with the provision of communal services in informal areas in order to ensure that the ratio of number of households per facility complies with the target of 5 or less households per toilet facility and 25 or less households per tap.
BE3.2	Number of informal structures in the informal settlements needs to be verified.	Number of informal structures in the informal settlements needs to be re-determined / updated and the growth rate of the informal structures on an annual basis needs to be determined with greater accuracy.
BE3.3	Number of backyard dwellers needs to be verified.	Conduct a survey to confirm the number of backyard structures and their information and whether they are included on the municipal housing waiting list.

4.4 Business Element 4: Socio Economic

Table 44: Needs Analysis Business Element 4 : Socio Economic

Business Element 4: Economic (Topic 4)						
Overview of Topic	**Status Quo and Knowledge Interpretation Statistics**					
The socio-economic information contained in the WSDP provides a broad overview of the socio-economic status of the municipality in terms of population growth rates, age and gender profile, employment profile, migration patterns, household income and economics. The topic also contains a quick reference to water services affordability by expressing the typical monthly water bill in terms of average monthly water bill in terms of average monthly income in the municipal area.	**Item**	**Quality (%} assessment of current status against compliancy requirements**	**Quantity (%} an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategy Assessment**
	General	**Scores will be determined from the new eWSDP website as soon as it is activated by the DWS**			
	Age and gender profile				
	Employment profile				
	Demographic trends and irrigation patterns				
	Household Income				
	Water Affordability				
	Sanitation Affordability				
	Economics				
	TOTAL for Topic				
Problem Definition Statements					
Nr	**Statements – Short Comings**	**Possible Improvement / Project**			
BE4.1	**Limited funding to address needs in communities. People living below the household subsistence level. Maximization of job creation through the execution of the Council budget.**	**Collaborating with department of Social Development and CBO's to address challenges of food and nutrition. Partnership agreement has been concluded with the Department of Social Development to support the food and nutrition centres in Municipal area. Engagement with other spheres of government. Job creation initiatives by the Municipality. Ensuring more projects is implemented in terms of the EPWP Guidelines to make the projects more labour intensive.**			
BE4.2	**Gender, Elderly, Youth and Disabled issues, which include limited funding, unemployment within youth sector and fragmented youth structures.**	**The Municipality is committed to follow an integrated approach to youth development. Partnership initiative with other sectors to be developed to provide skills training to access job opportunities. The establishment of FET colleges specifically geared to industries in the IDZ must be investigated. Youth structures to be encouraged to work with ward committees.**			
BE4.3	**Challenges of poverty in the Management Area.**	**Continue with the alleviation of poverty by means of indigent support, Local Labour Promotion Projects, LED projects and the use of Supply Chain Management Policy as an instrument to enforce the maximum use of local labour. Continue with the two programmes that provide short term work opportunities to unemployed people are the Expanded Public Works Programme and the Community Work Programme.**			
BE4.4	**Commission a skills audit and gap assessment within the communities.**	**SBM needs to collaborate with the private sector and local non-profit organizations to provide needed skills at all levels and a skills development exercise focusing on specific priorities such as the development of the IDZ.**			
BE4.5	**Growth and investment promotion challenges, which include decline in growth, excessive red tape, regulation and promotion of informal trading, lack of formal economic development opportunities, lack of informal trading infrastructure and overall reliance on the sustainability of the agricultural sector.**	**Implement Business Retention and Expansion Strategy for existing sectors. Assist in the establishment of Special Rating Areas in key industrial areas such as the IDZ. Inter-Governmental partnerships to implement a Red Tape Reduction programme to reduce the administrative burden to do business in SBM. Develop an Economic Development Strategy. Identify land for local economic development initiatives. Allow use of residential and agricultural premises for occupational practice, business and tourism uses. Identify informal trading areas. Set up frameworks for the use of public land by communities in the creation of jobs, the job market and environment. Reskilling of people with skills required by the job market and environment. Implementation of measures to reduce pollution in the Berg River.**			

4.5 Business Element 5: Water Services Infrastructure Management (Infrastructure)

Table 45: Needs Analysis Business Element 5 : Water Services Infrastructure

Business Element 5 : Water Services Infrastructure (Topic 5)					
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**			
Topic 5.1 provides an overview of the extent, functionality and asset status of the municipality's water services infrastructure. It also provides an overview of the municipality's compliance in terms of legislation- and regulations concerning asset management, disaster management, water quality management, water resource licensing, etc. It should be emphasized that the topic does not provide the detail per infrastructure element but provides an overview per each main water services infrastructure component.	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**
	General information	Scores will be determined from the new eWSDP website as soon as it is activated by the DWS			
	Operation				
	Monitoring and sample failure				
	Functionality				
	Institutional status				
	Asset assessment spectrum				
	Type and capacity				
	TOTAL for Topic				

Problem Definition Statements		
Nr	**Statements - Short Comings**	**Possible Improvement / Project**
BE5.1	Update the Water and Sewer Masterplans	The Water and Sewer Masterplans must be updated as soon as possible. Furthermore a service provider must be appointed for regular updates to the masterplans (at least every 2 years) to ensure that the masterplans are relevant and do not require lengthy update periods due to long periods between updates.
BE5.2	Ensure adequate reservoir storage capacity for the various towns	Provide additional reservoir storage capacity to the towns with inadequate storage capacity, as identified through the WSDP and Water Master Plan items stated earlier in this report.
BE5.3	Inadequate capacities of water pump stations and reticulation networks.	Upgrade existing water pump stations and provide new pump stations for specific areas, as identified in the Water Master Plan. Upgrade sections of the reticulation network as proposed in the Water Master Plan items stated earlier in this report.
BE5.4	Negotiate the take over West Coast DM infrastructure which can be effectively incorporated into the SBM systems	Where appropriate infrastructure currently owned by West Coast DM could be taken over to expand the client base or service new areas. Should such a takeover be contemplated, remaining useful life and maintenance costs must be considered.
BE5.5	Inadequate capacities of sewer pump stations and sewer drainage networks.	Upgrade existing sewer pump stations and provide new sewer pump stations for specific areas, as identified in the Sewer Master Plan. Upgrade sections of the drainage network as proposed in the Sewer Master Plan items stated earlier in this report.
BE5.6	Priority should be given to rehabilitating existing infrastructure as this generally makes best use of financial resources and can achieve an increased in (operational) services level coverage's most rapidly.	The preparation of maintenance plans and the allocation of sufficient funding for maintenance are required to prevent the development of a large condition backlog.
BE5.7	Ensure that an appropriate and rehabilitation plan is developed and implemented.	Develop an Asset Management Plan (AMP) from the updated Asset Register. This plan must be based on the principle of preventative maintenance in order to ensure that, as far as this is practical, damage to assets is prevented before it occurs.
BE5.8	Although the remaining useful life of most of SBM's assets is more than 10 years, the O&M budget allocated to repairs and maintenance may be low and additional budget should be allocated to address amongst other tasks the replacement of malfunctioning and old water and sewerage infrastructure.	Increase O&M budget for repairs and maintenance of infrastructure. A budget of approximately 2% of the total asset value per annum should be allocated towards the replacement of existing infrastructure. In the case of operations and maintenance of the system, a budget of approximately 1% to 2% of the value of the system is typically required to ensure that the system remains in good condition.
BE5.9	Ensure that all the water and sewer assets are included in the Asset Register.	Update the Asset Register to include all the water and sewerage infrastructure assets.
BE5.10	Capacities of WTWs and WWTWs are not adequate to meet future treatment requirements.	Continue with the upgrading of the WTWs and WWTWs as proposed by the WTW and WWTW Master Plans items stated earlier in this report (Feasibility Studies).

4.6 Business Element 6: Water Services Infrastructure Management (O&M)

Table 46: Needs Analysis Business Element 6 : Water Services Operation & Maintenance

Business Element 6 : Operation and Maintenance (Topic 6)						
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**				
This topic provides an overview of the sufficiency of resources and processes in place to effectively operate and maintain the water services. It reflects whether the municipality has an Operation and Maintenance Plan in place. The topic also illustrates whether the WSA has implemented good practice as directed in the Blue- and Green Drop certification processes.	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**
	Operation & Maintenance Plan	**Scores will be determined from the new eWSDP website as soon as it is activated by the DWS**			
	Resources				
	Information				
	Activity Control & Management				
	Water Supply & Quality				
	Waste Water Supply & Quality				
	TOTAL for Topic				

Problem Definition Statements		
Nr	**Statements - Short Comings**	**Possible Improvement / Project**
BE6.1	**It is important for SBM to classify all the treatment works and operators in accordance with the regulations by establishing a programme for certification of works, operators, technicians and managers. The process will include reviewing the skills needed and aligning resources to these needs as well as reviewing total staff number necessary to meet all the objectives in the National Water Act.**	**Establish a mentoring role for operators ensuring an adequately trained and classified workforce with dedicated training programmes for supervisors and operators. Establish budgets to address the shortfall of skilled staff, re-think methods to retain qualified personnel and plan for succession and clear career paths for experienced staff. With such a program a source of specific resources of skilled operators, technicians and managers will be established.**
BE6.2	**The Occupational Health and Safety Act contain provisions directing employers to maintain a safe workplace and to minimize the exposure of employees and the public to workplace hazards. SBM must compile a Legal Compliance Audit of all their WTWs and WWTWs, which will determine whether the Municipality is in compliance with the legislation or not.**	**Compile an Occupational Health and Safety Audit at all the WTWs and WWTWs. The recommendations and shortcomings identified through the chlorine audits, which were carried out at all the disinfection plants, need to be implemented and addressed.**
BE6.3	**All incidents need to be recorded and the specific Incident Management Protocols need to be followed.**	**All incidents at the WTWs and WWTWs and on the water reticulation networks and sewer drainage networks need to be recorded and the Incident Management Protocols, as included in the Water Safety Plan and W_2RAP_s, need to be followed.**
BE6.4	**Shortcomings were identified as part of the Water Safety Plan and W_2RAP_s.**	**Implement Improvement / Upgrade Plans of the Water Safety Plan and W_2RAP_s.**
BE6.5	**All operational manuals of treatment unit processes such as chemical dosing, coagulation sedimentation, filtration, disinfection etc. should contain operational limits, monitoring programmes, verification procedures and pre-determined corrective actions. Corrective actions identified for each control measure need to be adhered to as soon as critical limits have been exceeded. The corrective actions are an important component of the management aspects of the Water Safety Ran and W_2RAP_s and should be effective in restoring performance to acceptable levels when critical limits are exceeded.**	**The Process Controllers at each WTWs and WWTWs need to ensure that operational limits, monitoring programmes, verification procedures and pre-determined corrective actions are in place for all the WTW and WWTW treatment processes. The Process Controllers also need to be monitored with regard to their compliance with regard hereto.**

4.7 Business Element 7: Associated Services

Table 47: Needs Analysis Business Element 7 : Associated Services

<table>
<tr><th colspan="7">Business Element 7 : Associated Services (Topic 7)</th></tr>
<tr><th colspan="2">Overview of Topic</th><th colspan="5">Status Quo and Knowledge Interpretation Statistics</th></tr>
<tr><td rowspan="10" colspan="2">The topic has been established to ensure adequate focus on the water services levels and needs of educational and health facilities. The water services planner will use this information to establish short-term solutions and to prioritize water services infrastructure projects to educational and health facilities.</td><td>Item</td><td>Quality (%) assessment of current status against compliancy requirements</td><td>Quantity (%) an indication of the representation of the total area to address the issue</td><td>Future Plan Assessment</td><td>Strategic Assessment</td></tr>
<tr><td>Water services - Education</td><td colspan="4" rowspan="8">Scores will be determined from the new eWSDP website as soon as it is activated by the DWS</td></tr>
<tr><td>Water services - Hospitals</td></tr>
<tr><td>Water services – Health Centres</td></tr>
<tr><td>Water services - Clinics</td></tr>
<tr><td>Sanitation - Education</td></tr>
<tr><td>Sanitation - Hospitals</td></tr>
<tr><td>Sanitation – Health Centres</td></tr>
<tr><td>Sanitation - Clinics</td></tr>
<tr><td>TOTAL for Topic</td><td></td><td></td><td></td><td></td></tr>
<tr><th colspan="7">Problem Definition Statements</th></tr>
<tr><th>Nr</th><th colspan="2">Statements - Short Comings</th><th colspan="4">Possible Improvement / Project</th></tr>
<tr><td>BE7.1</td><td colspan="2">The level of service at Hospitals and schools are estimated and must be confirmed</td><td colspan="4">A audit of the level of service at each facility must be performed and the data input to the WSDP system.</td></tr>
</table>

4.8 Business Element 8: Conservation and Demand Management

Table 48: Needs Analysis Business Element 8 : Conservation and Demand Management

Business Element 8 : Conservation and Demand Management (Topic 8.1)						
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**				
The topic provides an overview of the activities pursued by the WSA in the past financial year towards water conservation and demand management. It also contains an overview of the water sources of the WSA.	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**	
	Reducing unaccounted water and water inefficiencies	Scores will be determined from the new eWSDP website as soon as it is activated by the DWS.				
	Reducing high pressures for residential consumers					
	Leak and meter repair programmes					
	Consumer/end-use demand management					
	TOTAL for Topic					

Problem Definition Statements		
Nr	**Statements - Short Comings**	**Possible Improvement / Project**
BE8.1	Meter Record data is questionable and does not report on unmetered connections.	Investigate Top Consumers per sub-system of supply to ensure that connection meters are properly installed, registered in Billing System and the meters are read accurately and regularly on a monthly basis. All unmetered connections, including all currently unmetered standpipes, must be metered and registered as connections as a matter of urgency. Ensure every standpipe is metered in clusters and meters read regularly for billing to relevant government/municipal department. Appropriate metering, illegal connection and real loss reduction policies need to be developed and implemented. The largest impact on NRW volumes will be resolving the unregistered consumers in the billing database and unmetered connections
BE8.2	It is suspected that a large amount of water losses is from leaking pipes (due to age) as well as relatively high static pressures in the systems.	Water mains replacement has not been addressed in detail in the NRW report. Nevertheless, from information gathered from the Technical Department, this will be an important part of any future program, although this may be addressed under Asset Management above. A burst frequency analysis should be conducted as a matter of urgency to identify critical areas for pipe replacement and pressure management.
BE8.3	Indigent users with high water usage have been identified.	Indigent consumers with high internal leak levels should be identified and a forced repair programme should be immediately implemented. Water stewards could be appointed to perform inspections on the users and identify the problems
BE8.4	The design standards are not in line with current best practices in terms of WC/WDM and still state high working pressure requirements for zones.	New design standards must be formalised and implemented (new pressure regimes, pipe material, etc.), with the most urgent of these being the reduction of maximum operating system pressure to 45m per reservoir zone.
BE8.5	It is difficult to pin-point problem areas where water losses are high due to the lack of zonal meters which divides the larger water supply systems into smaller zones.	Commence and continue an active leak detection program including zone bulk meter installations to isolate high loss areas and to reduce the real losses occurring within the SBM supply-system.

4.9 Business Element 9: Water Resources

Table 49: Needs Analysis Business Element 9 : Water Resources

Business Element 9 : Water Resources (Topic 9)						
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**				
The volumes and sources of raw water supply to the WSA are presented in this topic, which also presents the status of the WSA's abstraction licenses and future needs. An overview of the WSA's monitoring programme for its raw water sources is presented. The topic also outlines the degree of industrial and 'raw 'water use and effluent discharge within the WSA.	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**	
	Sources and Volumes	**Scores will be determined from the new eWSDP website as soon as it is activated by the DWS.**				
	Monitoring					
	Water Quality					
	Wet Industries					
	Raw Water consumers					
	Industrial Consumer Units					
	Permitted effluent releases					
	TOTAL for Topic					
Problem Definition Statements						
Nr	**Statements - Short Comings**	**Possible Improvement / Project**				
BE9.1	**Augmentation of the Municipality's own water resources for supply.**	**Investigate / Implement alternative water source projects such as:** **- Desalination at Saldanha Bay** **- Refurbishing the Desalination at Shelly Point** **- Developing additional boreholes at Hopefield / Langebaan Weg**				
BE9.2	**The Misverstand System is currently under pressure to meet future requirements and the next augmentation schemes need to be implemented.**	**Update the Service Level Agreements between the SBM and the West Coast DM to include the specific volumes that can be supplied by the bulk water services providers. It will enable SBM to better plan for the possible augmentation of these two town's water resources.**				
BE9.3	**Industrial effluent monitoring (Quality and quantity) must occur.**	**The current approach adopted by SBM in which the various parameters at all industrial consumers are monitored should be continued, as well as volumetric monitoring at the larger users. Adaptation of the current procedures must be undertaken in accordance with any changes to the wastewater discharge criteria set by DWS. It will also be necessary to consider limits above which volumetric monitoring will be necessary at new industries and existing smaller industries, where expansion is likely to take place.**				
BE9.4	**Re-use of Effluent for industrial or other purposes**	**Re-use of water is becoming more acceptable and feasible because of increasing water shortages, improved purification technology and decreasing treatment costs. An investigation into the feasibility of reclaimed effluent should be launched**				

Water balance models for each supply system were compiled as per the DWS standard. The projected future water demands for each distribution system and the graphs of total water requirements are as follows:

Table 50:Project Future Water Demands

System	Projected Future Water Demand (Mℓ/a)				
	2016 Demand	2021 Demand	2026 Demand	2031 Demand	2036 Demand
Vredenburg Jacobs Bay Paternoster	2156.968	2440.411	2761.101	3123.933	3534.443
Louwville	702.387	794.686	899.115	1017.266	1150.943
Saldanha	6209.094	7025.020	7948.165	8992.619	10174.324
Langebaan	1385.175	1567.198	1773.141	2006.146	2269.771
Hopefield	423.860	479.559	542.577	613.876	694.544
St Helena Bay	2233.490	2526.989	2859.056	3234.759	3659.833
Total / Average	**13110.974**	**14833.864**	**16783.155**	**18988.600**	**21483.858**
Total Allocation from WCDM	11173.000	11173.000	11173.000	11173.000	11173.000
Total Ground Water Sources	3066.000	5986.000	5986.000	5986.000	5986.000
Future Desalination	0.000	0.000	3102.500	9307.500	9307.500
Total Source	**14239.000**	**17159.000**	**20261.500**	**26466.500**	**26466.500**
Surplus (+) / Deficit (-)	**1128.026**	**2325.136**	**3478.345**	**7477.900**	**4982.642**

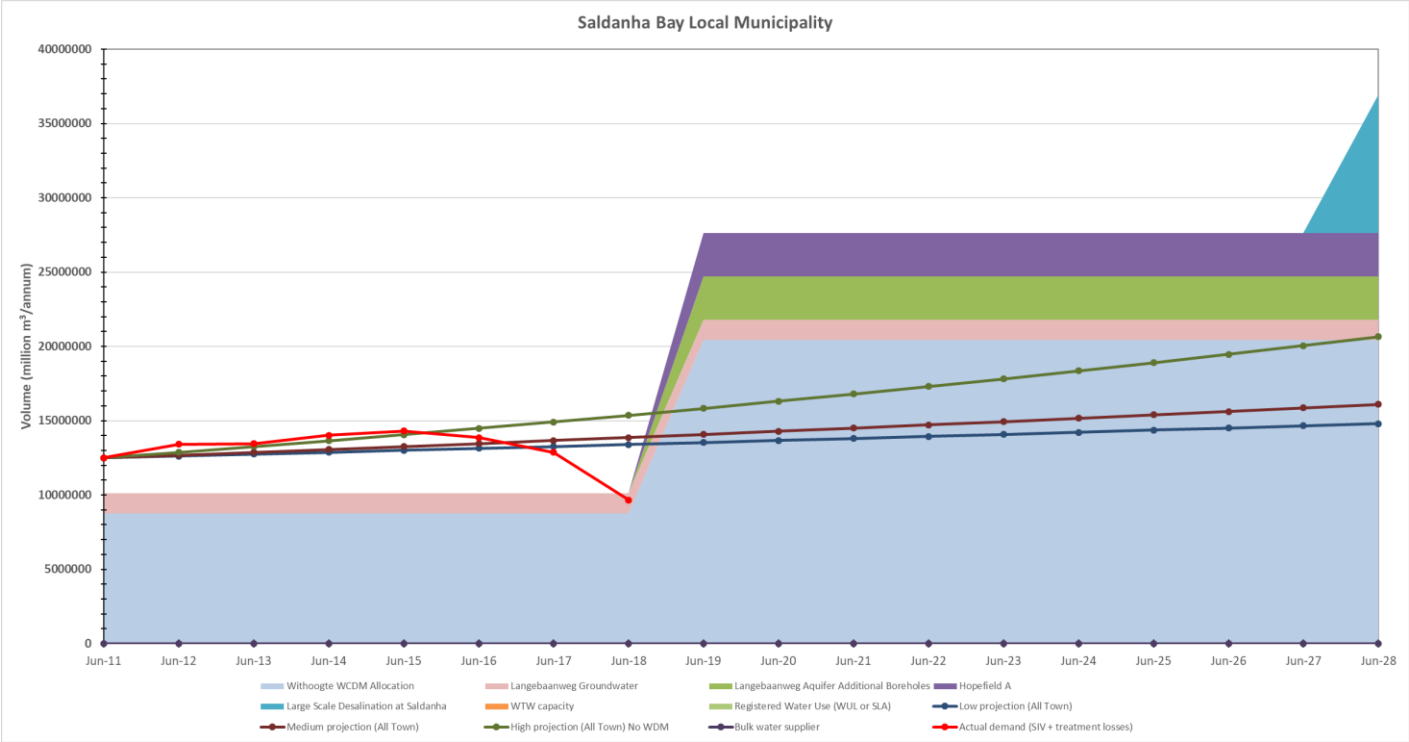

Figure 18 : Project Future Water Demands

4.10 Business Element 10: Financial

Table 51: Needs Analysis Business Element 10 : Financial Profile

Business Element 10 : Financial Profile (Topic 10)						
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**				
The financial profile is aligned with the Water Services Standard Chart of Accounts [SCOA] which addresses the expenditure, revenue & capex for the water services function.	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**	
	Capital Expenditure	Scores will be determined from the new eWSDP website as soon as it is activated by the DWS.				
	Operating and Maintenance Budget					
	Tariff & Charges					
	Free Basic Services					
	Metering, Billing, Income and Sales					
	TOTAL for Topic					

Problem Definition Statements		
Nr	**Statements - Short Comings**	**Possible Improvement / Project**
BE10.1	Maintenance activities have been increasingly focused on reactive maintenance as a result of the progressive deterioration and failure of old infrastructure. Consequently, there has been dilution of preventative maintenance of other infrastructure. Expenditure on repairs and maintenance does not keep track with the increase in asset values as well as the ageing of the infrastructure.	SBM needs to continue with the implementation of their Asset Management Policy, which optimizes maintenance activities, appropriate to its specific needs and the local environment, and identifies the systems and resources required to support this. A regime of planned preventative maintenance should be established for all Infrastructure assets classified as critical and important in the Asset Register. Consideration should be given to the establishment of a maintenance management system to enable SBM to better manage its risks , and more effectively plan and prioritize the wave of renewals that are going to be required over the next 20 years.
BE10.2	Consumer debt and the ability of the Council to finance the capital programme from internally-generated funds remains big challenges.	SBM must continue with their Revenue Enhancement Programme, which will look at closing off any revenue leakages to ensure the collection of revenue that was not collected before in order to increase the revenue base of Council. The continued efficient and effective management of expenditure will also be improved in order to limit the spending on unnecessary items.
BE10.3	The replacement value of the water infrastructure that is expected to come to the end of its useful life over the next 20 years is around R62.1 million (an average of R3.11 million per year) and for sewerage infrastructure the value is R146.4 million (an average of R 7.324 million per year). The renewals burden is set to continue to increase sharply over the next 15 years, as is currently the case.	Council must continue with their current commitment towards capital renewal programmes and must increase the budgets allocated to preventative maintenance and rehabilitation of existing infrastructure

4.11 Business Element 11: Water Services Institutional Arrangements

Table 52: Needs Analysis Business Element 11 :Water Services Institutional Arrangements

Business Element 11 :Water Services Institutional Arrangements (Topic 11)						
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**				
The institutional arrangements profiles presents an overview of the WSA's compliance with respect to water services regulations and policy and as aligned also with the Regulatory Performance Monitoring System. It also provides an overview of the water services provider arrangements which are in place, including the WSA's perception of sufficiency of WSP staffing levels	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**	
	Policy Development	**Scores will be determined from the new eWSDP website as soon as it is activated by the DWS.**				
	Regulation and Tariffs					
	Infrastructure Development (Projects)					
	Performance Management and Monitoring					
	WSDP					
	Bulk and Retail functions					
	TOTAL for Topic					
Problem Definition Statements						
Nr	**Statements - Short Comings**	**Possible Improvement / Project**				
BE11.1	**The updated Service Level Agreement between the SBM and the West Coast DM needs to be finalized**	**Finalize the updated Service Level Agreement between the SBM and the West Coast DM for the provision of additional bulk potable water to the municipality. Ensure the updated Service Level Agreement comply with DWS's requirements.**				
BE11.2	**Update Water and Sanitation By-Laws**	**The water and sanitation by-laws are very old and outdated (1996). The by-laws must be updated and brought in line with the current situation and WC/WDM practices.**				
BE11.3	**SBM must continue to actively focus on Training through their workplace skills plan to ensure retention of highly skilled staff.**	**The Workplace Skills plan must be compiled each year and relevant training identified.**				

4.12 Business Element 12: Social and Customer Service Requirements

Table 53: Needs Analysis Business Element 12 :Social and Customer Service Requirements

Business Element 12 :Social and Customer Service Requirements (Topic 12)						
Overview of Topic		**Status Quo and Knowledge Interpretation Statistics**				
This topic provides an overview of the quality of the water services provision function when considered from a customer perspective including the summary of the WSA's responsiveness to customer complaints and queries.	**Item**	**Quality (%) assessment of current status against compliancy requirements**	**Quantity (%) an indication of the representation of the total area to address the issue**	**Future Plan Assessment**	**Strategic Assessment**	
	Resources available to perform this function	Scores will be determined from the new eWSDP website as soon as it is activated by the DWS.				
	Attending to Complaints for Water					
	Attending to complaints for Sanitation: Discharge to treatment works					
	Attending to complaints for Sanitation: Pt / Tank Pumping					
	TOTAL for Topic					
Problem Definition Statements						
Nr	**Statements - Short Comings**	**Possible Improvement / Project**				
BE12.1	SBM must record and monitor on a monthly basis all critical water and sanitation stats (Number of complaints; pipe breakages; sewer blockages; meters tested, replaced and repaired; septic tanks pumped, etc.)	Ensure all water and sanitation stats are kept up to date and included in the monthly reports..				
BE12.2	A Customer Charter must be drafted and accepted	A Customer Charter is required in order for customers to become aware of what they will get from the WSA and how they need to participate in ensuring water services.				
BE12.3	SBM must continue to actively focus on Training through their workplace skills plan to ensure retention of highly skilled staff.	The Workplace Skills plan must be compiled each year and relevant training identified.				

5 SECTION D : WATER SERVICES OBJECTIVES AND STRATEGIES

The recommended objectives, strategies and projects for each of the WSDP Business Elements were also discussed under Section C "Water Services Existing Needs Perspective" of this WSDP and are therefore not repeated under this Section.

The water services objectives and strategies presented below are however a summary of the KPIs developed from the water services situational analysis as summarised under Section C "Water Services Existing Needs Perspective" and as taken from the Municipality's approved SDBIP and presents the 5-year Water Services Objectives and Strategies as established in the WSA's WSDP.

Table 54: Water Services Objectives and Strategies per WSDP Topic

WSDP WSD	Objective / Strategy	Key Performance Indicator	Inclusion (yes/no)		WSDP Year 1	WSDP Year 2	WSDP Year 3	WSDP Year 4	WSDP Year 5
					FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
			WSDP	IDP	Target	Target	Target	Target	Target
WSDP Topic 1: Administration									
TL51	Develop and adopt a new WSDP every 5 years	New WSDP every 5 years	Yes	Yes	WSDP compiled and adopted by council	Not Required	Not Required	Not Required	Not Required
TL51 & BE1.1 & BE1.2	Take full ownership of the WSDP	Compile an updated WSDP (eWSDP)	Yes	No	- Update the eWSDP as every year as necessary - Update the WSDP-IDP Water Sector Input Report and take Council with the updated IDP.	- Update the eWSDP as every year as necessary - Update the WSDP-IDP Water Sector Input Report and take Council with the updated IDP.	- Update the eWSDP as every year as necessary - Update the WSDP-IDP Water Sector Input Report and take Council with the updated IDP.	- Update the eWSDP as every year as necessary - Update the WSDP-IDP Water Sector Input Report and take Council with the updated IDP.	- Update the eWSDP as every year as necessary - Update the WSDP-IDP Water Sector Input Report and take Council with the updated IDP.
1.2	Compile and submit annual WSDP implementation- and water services audit report	WSDP Performance- ans Water Services Audit report approved by Council	Yes	Yes	WSAR approved by council by end January	WSAR approved by council by end January	WSAR approved by council by end January	WSAR approved by council by end January	WSAR approved by council by end January
WSDP Topic 2: Demographics									
TL30, BE2.1 to BE 2.4	Update the SDF, Takning into account the findings of the WSDP and submit the draft	Spatial Development Framework updated and submitted to the Portfolio Committee	Yes	Yes	SDF submitted by 31 March	SDF submitted by 31 March	SDF submitted by 31 March	SDF submitted by 31 March	SDF submitted by 31 March
TL54. BE 2.5 & BE2.6	Eradicate Housing backlog and ensure Bulk Water and sewer services are in place for housing projects to be implememented	Review and submit the Human Settlement Strategy	Yes	Yes	Human Settlement Plan to include bulk services requirements	Human Settlement Plan to include bulk services requirements	Human Settlement Plan to include bulk services requirements	Human Settlement Plan to include bulk services requirements	Human Settlement Plan to include bulk services requirements
WSDP Topic 3: Service levels									
TL1	Number of formal residential properties that receive piped water (credit and prepaid water) that is connected to the municipal water infrastructure network and which are billed for water or have pre paid meters as at 30 June	No of Properties which are billed for water or have pre paid meters	Yes	Yes	25000	95% of Formal Properties	95% of Formal Properties	95% of Formal Properties	95% of Formal Properties
TL3	Number of formal residential properties connected to the municipal waste water sanitation/sewerage network for sewerage service, irrespective of the number of water closets (toilets) which are billed for sewerage as at 30 June	Number of residential properties which are billed for sewerage	Yes	Yes	25000	95% of Formal Properties	95% of Formal Properties	95% of Formal Properties	95% of Formal Properties
TL5	Provide free basic water to indigent households	No of indigent households receiving free basic water	Yes	Yes	6500	95% of Registered Indigent Households	95% of Registered Indigent Households	95% of Registered Indigent Households	95% of Registered Indigent Households
TL7	Provide free basic sanitation to indigent households	No of indigent households receiving free basic sanitation	Yes	Yes	6500	95% of Registered Indigent Households	95% of Registered Indigent Households	95% of Registered Indigent Households	95% of Registered Indigent Households
TL58 & BE3.1	Number of communial water service points (communal taps) available in informal settlements as at 30 June 2	Number of communial water service points (communal taps) in informal settlements as at 30 June	Yes	Yes	56	Ensure Ratio of households in informal areas to stand pipes is 25 HH/ tap or less	Ensure Ratio of households in informal areas to stand pipes is 25 HH/ tap or less	Ensure Ratio of households in informal areas to stand pipes is 25 HH/ tap or less	Ensure Ratio of households in informal areas to stand pipes is 25 HH/ tap or less
TL59	Number of dwellings in informal settlements with individual water service points (individual connections) as at 30 June	Number of dwellings in informal settlements with individual water service points (individual connections) as at 30 June	Yes	Yes	1180	25% of Informal Settlement Erven	40% of Informal Settlement Erven	50% of Informal Settlement Erven	60% of Informal Settlement Erven
BE3.2 & BE3.3	Number of informal structures and back yard dwellers must be determined	Audit performed every 2 years	Yes	No	Audit performed	N/A	Audit performed	N/A	Audit performed
WSDP Topic 4: Socio economic									
TL10 & BE 4.1 - BE4.3	Create temporary jobs - FTE's in terms of EPWP by 30 June	Number of FTE's created by 30 June	Yes	Yes	159	175	200	225	250
TL22 & BE 4.3	Review the LED Strategy and submit to the Portfolio Committee by 31 March	Reviewed LED Strategy submitted to the Portfolio Committee	Yes	Yes	LED Strategy Submitted by 31 March	LED Strategy Submitted by 31 March	LED Strategy Submitted by 31 March	LED Strategy Submitted by 31 March	LED Strategy Submitted by 31 March

WSDP WSD	Objective / Strategy	Key Performance Indicator	Inclusion (yes/no)		WSDP Year 1 FY 2017/18	WSDP Year 2 FY 2018/19	WSDP Year 3 FY 2019/20	WSDP Year 4 FY 2020/21	WSDP Year 5 FY 2021/22
			WSDP	IDP	Target	Target	Target	Target	Target
TL32 & BE4.5	Develop an implementation plan for the West Coast Industrial Plan	Implementation plan for the West Coast Industrial Plan developed and submitted to council by 31 March	Yes	Yes	Plan Submitted by 31 March	N/A	N/A	N/A	N/A
WSDP Topic 5: Water Services Infrastructure management									
BE5.1	Update the Water and Sewer Masterplans	Master Plans Updated every 2 years	Yes	No	Masterplans Updated	N/A	Masterplans Updated	N/A	Masterplans Updated
TL40 & BE5.5 & BE5.10	95% of the Water Management capital budget spent {(Actual capital expenditure divided by the total approved capital budget)x100}	% of the water capital budget spent	Yes	Tes	95%	95%	95%	95%	95%
TL41 & BE5.6, BE5.7 & BE5.8 & BE5.9	80% of the sewerage maintenance budget spent {(Actual expenditure on maintenance divided by the total approved maintenance budget)x100}	% of the sewerage maintenance budget spent	Yes	Yes	80%	80%	85%	90%	90%
TL44 & BE5.2 & BE5.3	95% of the Water Management capital budget spent {(Actual capital expenditure divided by the total approved capital budget)x100}	% of the water capital budget spent	Yes	Tes	95%	95%	95%	95%	95%
TL45 & BE5.6, BE5.7 & BE5.8	80% of the water maintenance budget spent {(Actual expenditure on maintenance divided by the total approved maintenance budget)x100}	% of the water maintenance budget spent	Yes	Yes	80%	80%	85%	90%	90%
TL45	80% of the water maintenance budget spent {(Actual expenditure on maintenance divided by the total approved maintenance budget)x100}	% of the water maintenance budget spent	Yes	Yes	80%	80%	85%	90%	90%
WSDP Topic 6: Operation and Maintenance									
(New) BE6.2	Perform OSH Act Audit at all WTW & WWTW for compppliance	Audit Report submitted to Council Every 5 years	Yes	No	Audit Report submitted to Council	N/A	N/A	N/A	Audit Report submitted to Council
WSDP Topic 7: Associated Services									
(New) BE7.1	Perform Audit of level of service at hospitals and schools	Audit Report submitted to Council Every 5 years	Yes	No	Audit Report submitted to Council	N/A	N/A	N/A	Audit Report submitted to Council
WSDP Topic 8: Water Consevation and Demand Management									
TL27 & BE8.1 to BE8.5	Limit unaccounted for water to less than 15% by 30 June	% unaccounted water by 30 June	Yes	Yes	15%	15%	15%	15%	15%
WSDP Topic 9: Water Resources									
(New) BE9.1	Investigate Alternative Water sources	Investigation Report on Alternative Water Sources	Yes	Yes		Report Submitted to Council	N/A	N/A	N/A
(New) BE9.2	Implement the Langebaan Weg Borehole Field Project	Project Completed and supplying water	Yes	No		Project Completed			
(New) BE9.4	Investigate Re-Use of Effluent (possibly for industrial use)	Investigation Report on Re-use of Effluent)	Yes	Yes		Report Submitted to Council	N/A	N/A	N/A
WSDP Topic 10: Financial Profile									
(New) BE10.1	Allow for Replacement of Water and sewer Infrastructure	Budget Allowed for Replacement	Yes	No	R 11 Million	2% of Assets less than 50 year RUL	2% of Assets less than 50 year RUL	2% of Assets less than 50 year RUL	2% of Assets less than 50 year RUL
TL16 & BE10.2	Achieve a payment percentage of above 96% by 30 June	((Gross Debtors Opening Balance + Billed Revenue - Gross Debtors Closing Balance - Bad Debts Written Off)/Billed Revenue) x 100)	Yes	Yes	96%	96%	96%	96%	96%

WSDP WSD	Objective / Strategy	Key Performance Indicator	Inclusion (yes/no)		WSDP Year 1		WSDP Year 2		WSDP Year 3		WSDP Year 4		WSDP Year 5	
					FY	2017/18	FY	2018/19	FY	2019/20	FY	2020/21	FY	2021/22
			WSDP	IDP	Target		Target		Target		Target		Target	
WSDP Topic 11: Water Services Institutional Arrangements														
(New) BE11.1	Update the Service Delivery Agreement between SBM and West Coast DM regarding water allocations	Signed Service Delivery Agreement	Yes	No	N/A		N/A		Signed Agreement		N/A		N/A	
(New) BE11.2	Update the Water and Sanitation By-Laws	By-Laws updated and Accepted by Council	Yes	No	N/A		N/A		Updated and Accepted by Council		N/A		N/A	
(New) BE11.2	Update the Water and Sanitation By-Laws	By-Laws updated and Accepted by Council	Yes	No	N/A		N/A		Updated and Accepted by Council		N/A		N/A	
TL12 & BE11.3	Percentage of municipality's personnel budget actually spent on implementing its workplace skills plan measured as at 30 June	((Total Actual Training Expenditure/ Total personnel Budget)x100))	Yes	Yes	0.46%		0.46%		0.46%		0.46%		0.46%	
WSDP Topic 12: Social and Customer Service Requirements														
(New) BE12.1	Keep Records of Water and Sewer Complaints and attent to complaints within a reasonable time	Complaints address within 72h	Yes	Yes	90%		90%		90%		90%		90%	
(New) BE12.1	A Customer Charter must be drafted and accepted by Council	Customer Charter Accepted by Council	Yes	No	N/A		N/A		Charter Drafted and Accepted by Council					

6 SECTION E : WATER SERVICES MTEF PROJECTS

The Water Services Medium-Term Expenditure Framework (MTEF) projects are presented below and outline the water services projects which are funded for implementation within the next year.

Table 55: Water Services MTEF Projects for 2017/18

Department	Directorate	Ward	Account Code	New Vote NR	Funding	Detailed Funding	Dept Name	Description	Budget Current Year
370	3	3	906080	370906080	CGRPR	k	Sewerage: Distribution	WHITE CITY(24 UNITS):SEWERAGE	120 000
370	3	7	906086	370906086	CGRPR	k	Sewerage: Distribution	HOPEFIELD:IRDP 62 UNITS:SEWER	310 000
370	3	6	906095	370906095	ANN	ANN	Sewerage: Distribution	UPGRADE:LANGEBAAN:PHASE IV Pro	2 940 000
370	3	11	906101	370906101	ANN	ANN	Sewerage: Distribution	UPGR.STHELEN.SEWER NETWORK Pro	1 500 000
370	3	10	906107	370906107	CGRNT	MIG	Sewerage: Distribution	INVEST/UPGR VRED MAI Provision	1 497 559
370	3	99	906110	370906110	CRR	CRR	Sewerage: Distribution	GEDORE TOOLSETS X 6 Provisiona	40 000
370	3	99	906113	370906113	CRR	CRR	Sewerage: Distribution	NEW LDV PUMPSTATIONS (NORTH) P	350 000
370	3	99	906122	370906122	CRR	CRR	Sewerage: Distribution	SERVICES EMERGENCY HOUSING - S	1 000 000
370	3	5	906125	370906125	ANN	ANN	Sewerage: Distribution	UPGRADE NETWORKS SAL Provision	-
370	3	10	906131	370906131	CRR	CRR	Sewerage: Distribution	INVEST&UPGRADE VBURG Provision	-
370	3	10	906134	370906134	ANN	ANN	Sewerage: Distribution	INVEST&UPGR VBURG MA Provision	4 000 000
370	3	6	906137	370906137	CRR	CRR	Sewerage: Distribution	LANGEBAAN SEWAGE PIPELINE Prov	15 500 000
370	3	13	906143	370906143	CGRPR	VURG	Sewerage: Distribution	SEWER CONNECTION: VBGURBAN Pro	-
370	3	99	907216	370907216	CRR	CRR	Sewerage: Distribution	1TON 4X4 LDV	-
370	3	99	907217	370907217	CRR	CRR	Sewerage: Distribution	1TON 4X4 LDV	-
370	3	6	906096	370906096	CRR	CRR	Sewerage: Distribution	UPGRADE:LANGEBAAN:PHASE IV Cap	-
376	3	11	906146	376906146	CRR	CRR	Sewerage: Purification	INVEST & DESIGN SEWERBRITTANI	600 000
376	3	6	906149	376906149	CRR	CRR	Sewerage: Purification	UPGRADE LANGEB SEWERAGE WORKS	1 800 000
376	3	5	906152	376906152	CRR	CRR	Sewerage: Purification	INVEST & DESIGN JACOBSBAAI SEW	150 000
376	3	8	906158	376906158	CRR	CRR	Sewerage: Purification	UPGRADE VREDENB.SEWE Provision	5 359 000
376	3	8	906161	376906161	ANN	ANN	Sewerage: Purification	UPGRADE VRED SEWERAG Provision	2 000 000
376	3	6	906164	376906164	CRR	CRR	Sewerage: Purification	UPGR.LANGEB SEWERAGE Provision	1 300 000
376	3	6	906167	376906167	ANN	ANN	Sewerage: Purification	UPGR.LANGEB SEWERAGE Provision	3 500 000
376	3	12	906170	376906170	CRR	CRR	Sewerage: Purification	LAINGVIL.UPGR.& SLUDGETREATM.	2 000 000
376	3	12	906173	376906173	ANN	ANN	Sewerage: Purification	LAINGVILLE UPGRADE & SLUDGE TR	6 350 000
376	3	99	906182	376906182	CRR	CRR	Sewerage: Purification	HIGH PRESSURE CLEANERX 3 Provi	60 000
376	3	6	906194	376906194	ANN	ANN	Sewerage: Purification	LANGE.EFFLUENT DISPOS./RE USE	2 500 000
376	3	8	906197	376906197	CRR	CRR	Sewerage: Purification	WEEDEETERS Provisional Capital	10 000
376	3	8	906200	376906200	CRR	CRR	Sewerage: Purification	KUDU MOVERS Provisional Capita	20 000
390	3	3	906581	390906581	CGRPR	k	Water	WHITE CITY(24 UNITS):WATER Pro	120 000
390	3	99	906584	390906584	CRR	CRR	Water	BULK SUPPLY NETWORK Provisiona	500 000
390	3	7	906587	390906587	CGRPR	k	Water	HOPFIELD: IRDP 62 UNITS:WATER	310 000
390	3	8	906599	390906599	CRR	CRR	Water	VBG NETWORK UPGR: ST Provision	-
390	3	99	906608	390906608	CRR	CRR	Water	SER EMERGENCY HOUSING Provisio	576 143
390	3	10	906611	390906611	CGRPR	k	Water	ADDITIONAL 5.0ML RES Provision	-
390	3	10	906614	390906614	CRR	CRR	Water	BULK SUPPLY LOUWV RE Provision	-
390	3	99	906617	390906617	CRR	CRR	Water	TOOS & EQUIPMENT Provisional C	127 000
390	3	99	907208	390907208	CGRPR	ACIP	Water	UPGRADE LOUWVILLE WATER PUMP S	-
390	3	9	907209	390907209	CGRPR	k	Water	GEORGE KERRIDGE 252 SERVICE SI	-
390	3	11	907211	390907211	CRR	CRR	Water	PATERNOSTER WATER PIPELINE	-
390	3	1	907210	390907210	CGRPR	k	Water	MIDDELPOS 551 SERVICE SITES	-

7 SECTION F : WSDP PROJECTS

The identification of projects necessary to ensure the provision of adequate levels of water and sanitation services is based primarily on the findings of the Water and Sewer Master Plans. Master Planning is typically based on a forward planning horizon of 20 years, but is usually updated every three to five years, taking into account improved water demand estimates and subsequent infrastructure developments which may have taken place. The recommended projects from the 2019 Master Plans were incorporated into the WSDP.

Recommended infrastructure projects for implementation in the future will be based on the following plans and processes:

- Water and Sewer Master Plans for the internal water reticulation and sewer drainage networks and Water
- and Waste Water Treatment Works Master Plans and Process Audits.
- Infrastructure replacement needs (Asset Register)
- Budget proposals
- Asset Management Plans

SBM's key capital water and sewerage infrastructure projects for the next three years are as follows:

Table 56: Key Capital Water Projects

Priority	Town	Project no.	Description	Time frame	Estimated cost * (R-yr 2018/19 value)
1	Saldanha	PRJ-SDW-001	Water demand management: Mnet reservoir network alterations	2020 - 2025	2 104 000
2	Langebaan	PRJ-LBW-001	Additional reservoir capacity at Meeuklip reservoir site	2 019	9 912 000
3	St Helena	PRJ-SHW-001	St Helena Bay bulk supply augmentation - phase 1 (isolate network & bulk supply)	2 020	1 138 000
4	Vredenburg	PRJ-VBW-001	Louwville res & PRV zones network upgrades	2019 - 2025	15 103 500
5	Vredenburg	PRJ-PRW-001	Augmentation of bulk supply to Paternoster	2 019	39 651 000
6	Saldanha	PRJ-SDW-002	Implement M-Net PRV zone (after project PRJ-SDW-001 is implemented))	2 020	411 600
7	Langebaan	PRJ-LBW-002	Sunburd Street pipeline & associated works	2 020	4 535 000
8	Paternoster	PRJ-PRW-002	Additional reservoir storage capacity for Paternoster	2 020	9 912 000
9	Vredenburg	PRJ-VBW-002	Development related infrastructure: Louwville	2025 - 2035	9 149 000
10	Saldanha	PRJ-SDW-003	Saldanha Diazville network upgrades Phase 1	2019 - 2025	2 654 400
11	Langebaan	PRJ-LBW-003	Meeuklip reservoir zone network upgrades	2020 - 2025	2 947 900
12	St Helena Bay	PRJ-SHW-003	Laingville bulk & network upgrades (required to accommodate housing developments) phase 1	2019 - 2020	9 123 000
13	St Helena Bay	PRJ-SHW-002	St Helena Bay bulk supply augmentation - phase 2 (booster pump stations)	2020 - 2035	7 105 200
14	Vredenburg	PRJ-VBW-003	Hospital res zone network upgrades	2 025	6 034 800
15	Saldanha	PRJ-SDW-004	Saldanha Diazville network upgrades Phase 2	2019 - 2025	6 111 600
16	St Helena	PRJ-SHW-004	Additional storage capacity at Laingville reservoir site	2 020	17 259 700
17	Vredenburg	PRJ-VBW-004	Development related infrastructure: Hospital res zone	2 030	365 100
18	Hopefield	PRJ-HFW-001	Hopefield network upgrades	2 025	3 424 200
19	Hopefield	PRJ-HFW-002	Additional reservoir storage capacity for Hopefield	2 025	7 476 000
20	Saldanha	PRJ-SDW-005	Augmentation of M-Net bulk supply	2 020	2 887 900
TOTAL - SALDANHA BAY MUNICIPALITY					**157 305 900**

Table 57: Key Capital Sewer Projects

Priority	Town	Project no.	Description	Time frame	Estimated cost * (R-yr 2018/19 value)
1	Saldanha	PRJ-SSS-002	Saldanha Main PS: Upgrade pumping station and rising main	2030	15 751 000
2	Vredenburg	PRJ-SVS-002	Upgrade Vredenburg main outfall sewer - phase 3	2020 - 2040	9 147 000
3	St Helana Bay	PRJ-SStS-001	Bulk infrastructure from Shelley Point WWTP to the proposed Brittania Bay WWTP	2020 - 2030	8 726 000
4	Langebaan	PRJ-SLS-009	North PS: New pumping station, rising main and collector sewer	2019	7 286 000
5	Langebaan	PRJ-SLS-005	Freepoint PS A: Upgrade gravity main, pumping station and rising main	2020	2 096 000
6	Paternoster	PRJ-SPS-002	Paternoster Main PS: Upgrade PS and rising main	2020 - 2033	46 000
7	Saldanha	PRJ-SSS-004	Upgrade existing capacity: Catrol PS drainage area	2020 - 2030	9 679 000
8	St Helana Bay	PRJ-SStS-009	Laingville PS: Upgrade main sewer, pumping station and rising main	2020	7 929 000
9	Langebaan	PRJ-SLS-010	Abandon existing North pumping station	2020	995 000
10	Langebaan	PRJ-SLS-006	Upgrade existing capacity: Freepoint PS A - phase 1	2021	1 514 000
11	Saldanha	PRJ-SSS-005	Upgrade existing capacity: Pepper Bay PS drainage area	2020	809 000
12	St Helana Bay	PRJ-SStS-002	Service existing erven	2021 - 2030	9 808 000
13	Jacobsbaai	PRJ-SJS-001	Service existing erven ph1	2020	5 243 000
14	Hopefield	PRJ-SHS-001	Service existing erven	2023 - 2033	9 866 000
15	Vredenburg	PRJ-SVS-001	Gravity sewer to service existing erven	2020	4 053 000
TOTAL - SALDANHA BAY MUNICIPALITY					**92 948 000**