Western Cape Government
Environmental Affairs & Development Planning

# 2018

# Annual Report

## State of Waste Management

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# SCHEDULE OF ACRONYMS

| | |
|---|---|
| **2W2W** | 2Wise2Waste |
| **CCT** | City of Cape Town |
| **CKDM** | Central Karoo District Municipality |
| **CWDM** | Cape Winelands District Municipality |
| **CSIR** | Council for Scientific and Industrial Research |
| **DEA** | Department of Environmental Affairs |
| **DEA&DP** | Department of Environmental Affairs and Development Planning |
| **DM** | District Municipality |
| **GRDM** | Garden Route District Municipality |
| **EPIP** | Environmental Protection and Infrastructure Programmes |
| **EPWP** | Extended Public Works Programme |
| **HCRW** | Health Care Risk Waste |
| **HCRWMR** | Health Care Risk Waste Management Regulations |
| **HCWMA** | Health Care Waste Management Act |
| **HCWMAA** | Health Care Waste Management Act Amendment |
| **HHW** | Household Hazardous Waste |
| **IDP** | Integrated Development Plan |
| **IndWMPs** | Industry Waste Management Plan |
| **IPWIS** | Integrated Pollutant and Waste Information System |
| **IPWM** | Integrated Pollution and Waste Management |
| **IIWMTMP** | Integrated Industry Waste Tyre Management Plan |
| **IWMPs** | Integrated Waste Management Plans |
| **MEC** | Member of Executive Council |
| **MRF** | Materials Recovery Facility |
| **MTREF** | Medium Term Revenue and Expenditure Framework |
| **MSA** | Municipal Systems Act (Act 32 of 2000) |
| **NEMA** | National Environmental Management Act, 107 of 1998 |
| **NEMWA** | National Environmental Management: Waste Act, 59 of 2008 |

| | |
|---|---|
| **NWMS** | National Waste Management Strategy |
| **ODM** | Overberg District Municipality |
| **SAWIS** | South African Waste Information System |
| **SoWR** | State of Waste Report |
| **WDF** | Waste Disposal Facility |
| **WMF** | Waste Management Facility |
| **WMO** | Waste Management Officer |
| **WC IWMP** | Western Cape Integrated Waste Management Plan |
| **WCDM** | West Coast District Municipality |
| **WCG** | Western Cape Government |

# EXECUTIVE SUMMARY

A sizeable portion the waste generated in the Western Cape ends up at waste disposal sites. The province is running out of landfill airspace at a rate that is becoming difficult to keep up with and the pressure on existing waste infrastructure is growing daily. Soon, most landfills in the province, will be reaching the end of their expected lifespan. Waste streams are constantly changing and becoming complex to manage and requires new ways to manage the waste efficiently. Regionalisation of waste disposal facilities seem to be the short-term solution for municipalities and requires all municipalities to partake in the funding of it. The longer-term solution seems to be the regionalisation of the waste management services as whole to share resources and to improve efficiencies of the municipal service delivery.

Legislation is key in ensuring that waste and resources are managed efficiently. The waste legislation in South Africa is constantly changing and improving to ensure that it is relevant to today's environment. This was especially the case with the National Pricing Strategy for Waste Management (NPSWM), which aims at creating a framework for waste management incentives and disincentives in South Africa. Waste management pricing must correct market failures and needs to come into effect to ensure that South Africans are not totally reliant on disposing their waste at landfills sites. Waste diversion is essential in extending the lifespans of waste disposal facilities, thereby also creating opportunities for alternative treatment solutions and beneficiation. Steady progress has been made in the promoting and utilisation of alternative waste treatment in the province. The governance structures such as the Western Cape Waste Officers Forum, Western Cape Recycling Action Group and the Industry Waste Management Forum is growing from strength to strength and is a catalyst in improving integrated waste management in the province and is building municipal capacity in the province.

The Western Cape Government's intervention to deal with the landfill airspace crisis which is contained in the 2nd generation Western Cape Integrated Waste Management Plan, such as the regionalisation of waste management services, setting of aggressive diversion targets for priority waste stream, recognition of waste as a resource, assistance to waste preneurs and promotion of separation of waste at source, seems to be having a positive impact on waste management in the Western Cape.

Good progress has been made in promoting separation of waste at source and waste diversion in the Western Cape. Waste diversion is impacted by the availability of limited integrated municipal waste infrastructure. It is hoped that the funds which will be generated from the implementation of the industry waste management plans, will make more funds available to improve the infrastructure. Limited municipal capacity and the high cost of national waste management service standards, results in the low level of compliance against its environmental authorisations, which needs urgent attention. Illegal dumping and littering is still rife and impacting negatively on our water resources and the environment, requiring constant intervention.

The interventions implemented by the Department to improve the overall waste management services within the Province is done viz. municipal support programmes, ministerial interventions and operational activities. These activities had a positive and is reflected in the table below.

# 2018 AT A GLANCE

## GOVERNANCE MECHANISMS

- **Pro-active legislation changes** in the waste activities and waste sector;
- 3 x Waste Management Officer's Forum (average attendance rate 76.53 by WMO's);
- 2 x Recycling Action Group sessions in Garden Route and Cape Winelands District Municipalities; and
- 1 x Industry Waste Management Forum.

**Municipal Support:**

- DEA&DP conducted 2 **Waste Characterisation workshops** in Worcester and Grabouw;
- 2 x Compliance visits to industry conducted;
- Increase and ongoing training to municipalities regarding IPWIS waste reporting; and
- **Finalisation of Model By-law** for Municipalities.

## WASTE MINIMISATION AND POLICY

- 3 x Waste Minimisation Training workshops;
- 2Wise2Waste – **Organic waste impact on Greenhouse Gas Emissions (GHG) at landfill;**
- Organic waste initiatives in Western Cape Government buildings;
- **10 Benefited** from the Waste Support Programme for **SMME's**; and
- 2 x Separation at Source workshops conducted.

## WASTE MANAGEMENT PLANNING

- Quality of IWMPS has improved (**4 IWMPS assessed**);
- **21** WMO's are designated;
- **Update on Provincial IWMP activities**; and
- Household Hazardous Waste Status Quo report developed.

## WASTE INFORMATION MANAGEMENT

- **1 710 838** tonnes waste disposed (5% decrease);
- 684 953 tonnes diverted and a diversion rate of **29%** WC 2018;
- Overstrand Municipality diverted **51%** of their waste;

- City of Cape Town's diversion rate is **31%** but the total largest tonnage of waste diverted **480 097** tonnes; and
- **Increased** accuracy of municipal waste reporting.

## FUNDING FOR WASTE MANAGEMENT SERVICES

**Provincial:**

- 35 posts filled in Directorate: Waste Management; and
- Total Waste Management Budget R21 159 580 (**3.54% increase**);

**Municipalities:**

- Operational R1 972 838 000 and capital R243 275 000.

## WASTE STREAMS OF SPECIAL INTEREST

- **Organic waste ban** 50% by 2022;
- Plastics make up 3% generated annually;
- 322 000 tonnes e-waste produced;
- 232 813 tonnes hazardous waste generated; and
- CCT generated 200 0233 tonnes Health Care Risk Waste.

## WASTE COLLECTION

- Waste tariffs are a key source for municipal revenues.
- CCT provides 100% household waste collection service.

## COMPLAINTS

- DEA&DP investigated **31** complaints;
- Number of complaints reported **decreased** in 2018

## WASTE DISPOSAL MANAGEMENT

- **55 operational** WDFs;
- **109 WDFs licensed for closure;**
- **73 audits** conducted (62% non-compliant);
- average compliance rating **54.62%.**
- Terms of Reference (ToR) for service providers developed;
- **Landfill airspace determination tool;**

# 1. INTRODUCTION

The Western Cape faces a huge burden to develop and implement the integrated waste management infrastructure, policies and response to the current waste issues targeting municipalities and generators of waste, alike. With a rapid increase in urban population comes an increase in waste, making it difficult to collect and dispose it efficiently. Mismanagement and noncompliance with the relevant waste legislation are hindering obstacles, that are prevalent and damaging to the environment and society. In so saying, legislation is needed and required. New and changing national and provincial legislation will streamline methods and procedures for alternative waste treatment technologies and activities. To this end, the Department has implemented organic waste diversion targets, which aims to divert 50% of organic waste from landfill by 2022, and 100% by 2027. To this end, the Department has implemented a waste management licence variation process for landfills to align with national and provincial waste diversion targets for operating waste disposal facilities. Compliance with these legislative requirements has financial implications for the municipalities and the entire waste sector but it will also strengthen the waste economy, created jobs, reduce the environmental impact of waste divert waste from landfill. Municipalities and private sectors are feeling the impact of new and more demanding environmental legislation in South Africa, particularly in light of potentially severe financial implications and a scarcity of technical expertise.

A greater awareness of relevant legislation and requirements has seen a continual increase in various industries (waste generators, transporters, treaters and disposers) enquiring about the legislative requirements for registration and reporting of waste quantities to the Department. There is still a challenge in municipal waste reporting, who have their own internal challenges, but these challenges however, are still affecting the flow and accuracy of information submitted to the Department. The latter question the accuracy of the data received as estimated quantities are provided to the Department by municipalities. The Department has conducted waste data audits at various facilities during 2018 to verify the accuracy of data and record keeping processes to improve the quality of the waste information in the province.

Total system planning, which involves considering a total waste system, and then developing the most appropriate mix of infrastructure and services to manage that waste stream, is an effective way of ensuring that waste management solutions are comprehensive, practical and encompass the wide variety of processes involved in each waste stream. It is therefore vital that municipalities conduct annual waste characterisation studies to determine waste streams and quantities. In addition, provision must be made for the procurement of quantification systems and accurate accounting of waste quantities to measure waste generation, diversion and disposal as per the National Waste Information Regulations, 2012. Municipalities need to review and repeal existing bylaws or develop new integrated waste management bylaws that do not hamper the growth of the waste economy and essentially, is aligned to the National Environmental Management: Waste

Act (Act 59 of 2008) and related waste regulations. The Department has developed a Model Waste Management Bylaw to assist municipalities and will be finalised in due course.

The Department is currently developing a tool that can assist municipalities to conduct landfill airspace studies, thereby determining the availability of remaining airspace at waste management facilities and simultaneously, the application of the waste hierarchy must be vigorously applied. This tool will assist in improving waste planning in the province.

## 1.1 PURPOSE OF THE STATE OF WASTE REPORT (SOWR)

The State of Waste Report (SoWR) provides an overview of the status of waste management within the Western Cape Province. This report focuses on key issues and challenges faced by the province in terms of waste management during the 2018 calendar year. It also highlights the programs and initiatives developed and implemented by the Department and municipalities to facilitate integrated waste management. The analysis of this information will influence interventions and measures the effectiveness of the interventions.

# 2. GOVERNANCE MECHANISMS

- **Pro-active legislation changes - waste activities and waste sector;**
- **Department Forums with various stakeholders;**
- **Waste Characterisation;**
- **Compliance visits to industry conducted;**
- **Increased municipal reporting; and**
- **Finalisation of Model By-law Municipalities.**

## 2.1 THE LEGISLATIVE FRAMEWORK FOR WASTE MANAGEMENT IN SOUTH AFRICA

The most pertinent and important legislative requirements in terms of waste management are contained in a number of statutes and national policies. South Africa has international obligations in terms of hazardous substances and waste and has ratified four key international Multilateral Environment Agreements. Various national and provincial legislation and international obligations are listed as follows:

### 2.1.1 National legislation

- Constitution of the Republic of South Africa Act, No. 108 of 1996
- Municipal Structures Act, No. 117 of 1998
- Municipal Systems Act, No. 32 of 2000
- National Environmental Management Act, No. 107 of 1998
- National Environment Management: Waste Act, No. 59 of 2008
- National Environmental Management: Waste Amendment Act, No. 26 of 2014
- National Waste Management Strategy, 2011
- White Paper on Integrated Pollution and Waste Management for South Africa, 2000 (GG No. 20978 GN. No. 227)
- Hazardous Substances Act, No. 5 of 1973
- National Health Act, No. 61 of 2003
- Health Care Waste Management Amendment Act, No. 6 of 2010
- Environment Conservation Act, No. 73 of 1989
- National Water Act, No. 36 of 1998
- National Environment Management: Air Quality Act, No. 39 of 2004
- National Domestic Waste Collection Standards, 2011 (GG No. 33935 GN. No. 21)
- Waste Classification and Management Regulations, 2013 (GG No. 36784 GN. No. R. 634)
- National Norms and Standards for the Assessment of Waste for Landfill Disposal, 2013 (GG No. 36784 GN. No. R. 635)

- National Norms and Standards for Disposal of Waste to Landfill, 2013 (GG No. 36784 GN. No. 636)
- National Norms and Standards for the Storage of Waste, 2013 (GG No. 37088 GN No. 926)
- National Norms and Standards for the Scrapping or Recovery of Motor Vehicles, 2013 (GG No. 37087 GN No. 925)
- List of Waste Management Activities, 2013 (GG No. 37083 GN. No. 921)
- National Waste Information Regulations, 2012 (GG No. 35583 GN. No. R. 625)
- Integrated Tyre Waste Management Plan, 2012 (GG No. 35927)
- Waste Tyre Regulations (GN 1064 of 2017)
- Plastic Carrier Bag and Plastic Flat Bag Regulations, 2003 (GG No. 24831 GN. No. R. 625)
- National Environment Management: Waste Act, No. 59 of 2008: Waste Management Plans for Approval, 2015 (GG No. 39018 GN. No. 736)
- National Environment Management: Waste Act, No. 59 of 2008: Industry Waste Management Plans, 2013 (P.N. 365/2013)
- National Environment Management: Waste Act, No. 59 of 2008: National Pricing Strategy for Waste Management, 2016 (GG No. 40200 GN No. 904)
- National Environment Management: Waste Act, No. 59 of 2008: National Domestic Waste Collection Standards, 2011 (GG No. 33935 GN No. 21)
- National Policy for provision of Basic Refuse Removal Services to Indigent Households, 2011 (GG No. 34385 GN. No. 413)

### 2.1.2 Provincial legislation

- Constitution of the Western Cape, Act No. 1 of 1998;
- Western Cape Health Care Waste Management Act, No. 7 of 2007; and
- Western Cape Health Care Risk Waste Management Regulations, 2013

### 2.1.3 Notices for comments in 2018

- National Environmental Management Waste Act 59 of 2008 – Gen Notice 463 in GG 41601 of 30 April 2018 – National Health Care Risk Waste Management Regulations.
- National Environmental Management Waste Act 59 of 2008 – Gen Notice 464 in GG 41601 of 30 April 2018 - National Norms and Standards for validation of the treatment efficacy and operation of non-combustion treatment technology used to treat health care risk waste.
- National Environmental Management: Waste Act 59 of 2008 - GN 463 in GG 41601 of 30 April 2018 - Proposed National Health Care Risk Waste Management Regulations, 2018.
- National Environmental Management: Waste Act 59 of 2008 - GN 464 in GG 41601 of 30 April 2018 - Proposed National Norms and Standards for Validation of the Treatment

Efficacy and Operation of a Non-Combustion Treatment Technology Used to Treat Health Care Risk Waste.

- National Environmental Management: Waste Act 59 of 2008 - GN 472 in GG 41612 of 7 May 2018 - for comment of and public hearings on proposed Industry Waste Tyre Management Plans.
- National Environmental Management: Waste Act 59 of 2008 - GN 701 in GG 41760 of 6 July 2018 - Proposed amendments to the National Waste Information Regulations, 2012.
- National Environmental Management: Waste Act 59 of 2008 - GN 715 in GG 41777 of 18 July 2018 - Waste Exclusion Regulations, 2018.
- National Environmental Management: Waste Act 59 of 2008 - GN 990 in GG 41920 of 21 September 2018 - Regulations regarding the Planning and Management of Residue Stockpiles and Residue Deposits Amendment Regulations, 2018.
- National Environmental Management: Waste Act 59 of 2008 - GN 989 in GG 41920 of 21 September 2018 - Notice of publication for comment of proposed revised Industry Waste Tyre Management Plans.

## 2.2 WASTE MANAGEMENT GOVERNANCE PLATFORMS

The Waste Directorate established governance platforms to interact with various stakeholders in the waste management industry within the province. These governance platforms are:

- Western Cape Waste Management Officers Forum (WC WMOF);
- Western Cape Recycling Action Group (WC RAG); and
- Western Cape Industry Waste Management Forum (WC IWMF).

### 2.2.1 The Western Cape Waste Management Officer's Forum

The aim of the Forum is to coordinate and improve waste management governance in the Western Cape Province.

Three Forum meetings were conducted during the period (1 January 2018 and 31 December 2018), one of which was held in Mossel Bay (8 & 9 March 2018), the second was held in Worcester (2 & 3 August 2018), and the third held in Bredasdorp (15 &16 November 2018).

The percentage attendance of the Forum from the municipalities were as follows: during the forum in Mossel Bay 66.6 % (20 of the 30), Worcester 80 % (24 of the 30) and in Bredasdorp 83 % (25 of the 30) of the invited municipalities attended. There was a 76.53 attendance rate for 2018 and thus, a **14.5%** decrease in the overall attendance from 2017.

The Forum is a platform for the Department to engage with municipalities, to share best practice in waste management and inform municipal officials on matters pertaining to various integrated waste management matters at a Provincial and National level, including the Provincial Strategic Goal 4 feedback, Working Group 9 feedback and regional waste management forums.

Specific topics covered by guest speakers included **as topics**: -

- Unpacking municipal waste management contracts (Advocate Venter);
- Presentation on small scale anaerobic digester plants (Horst Untleger);
- Presentation on C &D waste beneficiation (Agrreg8);
- Decision Support Tool (GreenCape);
- How local government deal with waste innovatively while also creating jobs;
- Development of waste functional infrastructure for municipalities (Department of Environmental Affairs); and
- Recycling economy enterprise development (Department of Environmental Affairs).

### 2.2.2 The Western Cape Recycling Action Group

In 2010, a Waste Minimisation Summit brought about a resolution to initiate the Western Cape Recycling Action Group The main aim being to address issues pertinent to the growth of recycling, key challenges in the sector and to coordinate various collaborative initiatives within the recycling industry bodies.

### 2.2.3 The Western Cape Industry Waste Management Forum

The Department hosted the Western Cape Industry Waste Management Forum at the Tygerberg Nature Reserve on 19 September 2018. The theme of the forum was "Beneficiation of Waste" with the purpose of the forum being to:

- provide a platform for industry and government to engage on waste related matters;
- discuss waste management legislation and reforms;
- identify challenges and opportunities within the waste sector; and
- promote and share new technologies and innovation for dealing with hazardous waste;

The National Department of Environmental Affairs (DEA) and GreenCape presented on Industry Waste Management plans (IndWMPs) for waste tyres, waste electrical and electronic equipment, lighting as well as paper and packaging, as well as the Western Cape Industrial Symbiosis Programme (WISP). Presentations were done by members of industry on their success with beneficiation of waste using pyrolysis technology and solvent recovery. To sum up, the forum was well attended and reference was made of future themes for the forum.

## 2.3 SUPPORT TO MUNICIPALITIES AND INDUSTRY DURING 2018

### 2.3.1 Waste Characterisation with Municipalities

Waste characterisation information assists in waste reduction, set up recycling programs and conserve money and resources. It's used to estimate the amount of certain material in the waste stream and this information is crucial for the development and implementation of municipal Integrated Waste Management Plans (IWMPs). It provides decision-makers with real data of current and expected (future) solid waste generation trends, among different demographic and socio-economic categories.

In 2018, the Department conducted 2 workshops with municipal representatives in Worcester and Grabouw. The Bergrivier, Breede Valley, Cape Agulhas, Cederberg, Overstrand, Swartland and Theewaterskloof municipalities attended the sessions. The Theewaterskloof Municipality requested additional training for its staff after attending the Worcester workshop. Both workshops were attended by Waste Management Officers (WMOs), technical staff and general workers. The workshops were very successful as the officials were able to complete the workshop exercises with minimal assistance from the facilitators.

### 2.3.2 Compliance Visits to Industry

Two (2) compliance monitoring and two (2) compliance promotion visits were planned for the 2018/19 financial year. The Department keeps and continuously updates a database of companies who trigger the [1]Norms and Standards for Storage. For the compliance visits, companies were selected from this database to partake in the compliance monitoring visits. An audit template was designed and implemented to cover key areas to be addressed and visits were conducted at for two (2) Pick and Pay shopping sites viz. Table view and N1 City.

### 2.3.3 Waste Data Audits at Municipalities

During 2018, the Department continued conducting waste data verification audits at various municipal facilities. The aim of the audits was to verify the submitted waste data supplied by municipalities via the Integrated Pollutant and Waste Information System (IPWIS) and subsequently the South African Waste Information System (SAWIS). The audit was conducted in terms of regulations 9(1) & (2) and 10(1) of the National Waste Information Regulations, 2012. See **Table 1**

1 The new norms and standards published under NEMA (Government Gazette of 11 October 2017) lay down the requirements for waste facilities that sort, shred, grind, crush, screen, chip or bale general waste. The amendments reduce the requirements for certain waste management activities that would otherwise have required waste management licences. This will reduce the costs and delays (8 to 16 months to comply with regulations) for the general waste sector

displaying **twenty-three (23)** waste management facilities audited during 2018. Facilities were randomly selected and informed in writing of the audit and the activity type to be audited. The correspondence further addressed the information to be audited such as the waste records or documents for the audit period of January to December 2017. The Department has provided guidance to the facilities concerning areas of non-compliance and municipalities were then able to amend the data.

Where insufficient and inconsistent waste reporting has taken place, the Department has liaised and corresponded via emails, telephonic calls and letters to Municipalities in this regard.

**Table 1: IPWIS waste data verification audits 2018**

| MUNICIPALITY | NAME OF FACILITY | IPWIS ACTIVITY | YEARAUDITED |
|---|---|---|---|
| BITOU | Bitou WDF | General Waste Disposal | 2017 |
| BEAUFORT WEST | Vaalkoppies WDF | General Waste Disposal | 2017 |
| BERGRIVIER | Velddrift Materials Recovery Facility | General Waste Recovery | 2017 |
| BREEDE VALLEY | Worcester WDF | General Waste Disposal | 2017 |
| CAPE AGULHAS | Bredasdorp WDF | General Waste Disposal | 2017 |
| CEDERBERG | Citrusdal WDF | General Waste Disposal | 2017 |
| CITY OF CAPE TOWN | Kraaifontein Integrated Waste Management Facility | General Waste Recovery | 2017 |
| DRAKENSTEIN | Wellington WDF | General Waste Disposal | 2017 |
| GEORGE | George WDF | General Waste Disposal | 2017 |
| HESSEQUA | Riversdal WDF | General Waste Disposal | 2017 |
| KANNALAND | Ladismith WDF | General Waste Disposal | 2017 |
| KNYSNA | Sedgefield Garden Waste Treatment Facility | General Waste Treatment | 2017 |
| KNYSNA | Knysna Recycling Centre | General Waste Recovery | 2017 |
| LAINGSBURG | Laingsburg Landfill | General Waste Disposal | 2017 |

| MUNICIPALITY | NAME OF FACILITY | IPWIS ACTIVITY | YEARAUDITED |
|---|---|---|---|
| LANGEBERG | Robertson Composting | General Waste Treatment | 2017 |
| MOSSEL BAY | Great Brak WDF | General Waste Disposal | 2017 |
| OVERSTRAND | Karwyderskraal WDF | General Waste Disposal | 2017 |
| PRINS ALBERT | Prins Albert WDF | General Waste Disposal | 2017 |
| SALDANHA BAY | Vredenburg WDF | General Waste Disposal | 2017 |
| SWARTLAND | Highlands WDF | General Waste Disposal | 2017 |
| STELLENBOSCH | Stellenbosch WDF | General Waste Disposal | 2017 |
| THEEWATERSKLOOF | Caledon WDF | General Waste Disposal | 2017 |
| WITZENBERG | Tulbagh WDF | General Waste Disposal | 2017 |

Training sessions and discussions were held with respective municipalities to address challenges with the IPWIS registration and online reporting to ensure compliance with the SAWIS requirements. The Department provides on-going support and assistance to municipalities such as training new data capturers employed or contracted by the municipalities on the IPWIS functionality and the waste quantification

Follow up waste data verification audits were conducted once the corrections have been made on the IPWIS. During the audits, common errors were highlighted such as insufficient record keeping and quality assurance. In order for municipalities to eliminate these errors, facilities need to develop and implement Standard Operating Procedures for recording keeping and in-house verification measures need to be conducted.

### 2.3.4 IPWIS Capacity Building

The Department hosted an IPWIS capacity building workshop with municipalities and industry regarding waste reporting, where the stakeholders had access to a Wi-Fi venue to access the IPWIS and capture their data online, with the assistance of the IPWIS team. The workshop took place in September 2018 and was well attended by a variety of stakeholders from various industries, generating both general and hazardous waste. The aim of the workshop was to capacitate stakeholders who were using the IPWIS for the first time and inform them of the waste information requirements in terms of the Waste Information System regulations, as well as enhancements made to the IPWIS to improve the users' experience.

As a result of the IPWIS workshop, a request for an additional capacity building session was arranged at Caledon Hospital, with the Overberg District Emergency Medical Services, where their data capturers were trained on waste reporting, with particular focus on health care risk waste generated by road accidents. Additional waste reporting training has been arranged with municipal officials from Bitou, Prins Albert during January 2019, to train their newly appointed data capturers on IPWIS.

### 2.3.5 Waste Minimisation Training

The Department provides waste minimisation support to municipalities in the Western Cape to strengthen municipal capacity to divert waste from landfill and maximise recovery of recyclables to ensure that Provincial and National diversion targets are met. The training supports the waste management hierarchy principles by encouraging waste reduction, reuse and recycling. The number of training interventions is limited to requests received and the Departments capacity to provide the training. This year, four (4) training workshops were hosted. **Table 2** below provides an indication of the training that has been successfully completed.

**Table 2: Waste Minimisation Training**

| ORGANISATION | DATE | AREA | NO. OF PARTICIPANTS |
|---|---|---|---|
| SWELLENDAM MUNICIPALITY | 24 May 2018 | Swellendam | 80 municipal staff |
| DRAKENSTEIN MUNICIPALITY | 9 November 2018 | Paarl | 52 informal workers |
| CAPE NATURE | 12 September 2018 | Stellenbosch | 30 YES programme participants;[2] |
| | 22 November 2018 | George | 27 YES programme participants |

The expected outcomes that stem from providing waste minimisation training for participants is increased knowledge and understanding of waste minimization and the implementation of a suitable waste minimisation awareness strategy for the municipality as in **Figure 1**. The training

2 Youth Environmental Services (YES)

programme can consist of the five (5) key elements indicated in **Figure 2,** as the training sessions are adapted to the knowledge and skill levels of respective target audiences.

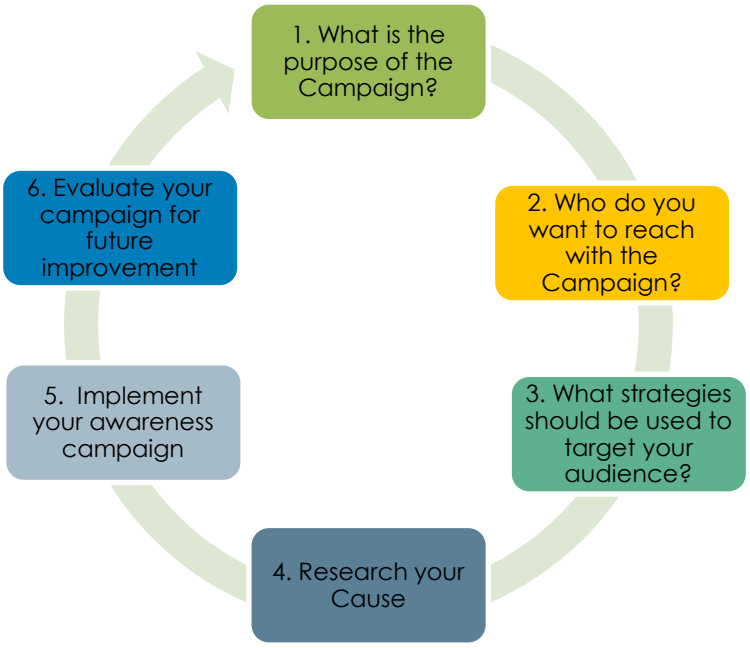



**Figure 1: Key Elements of a Waste Awareness Strategy**

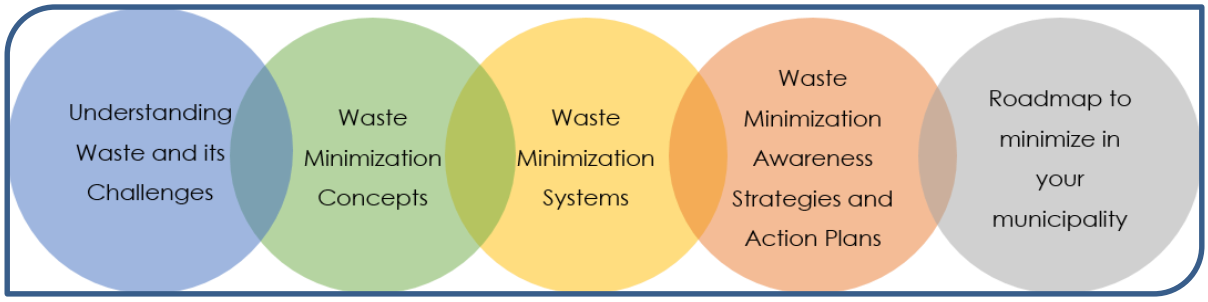



**Figure 2: Key Elements of Waste Minimisation Training**

#### *2.3.5.1 Waste minimisation support to Swellendam Municipality*

The DEA&DP partnered with Swellendam Municipality to host a training session with municipal staff, Expanded Public Works Programme (EPWP) and Community Development Workers (CDW) employed by the Swellendam Municipality. The training conducted followed the key elements as stated above in order to work towards the development of a waste awareness strategy and action plan. Group work ensured the collation of data that would contribute towards the development of a waste awareness strategy for the area with the key elements in **Figure 3.**

**Figure 3: Swellendam Municipal staff - Group work activities**

#### *2.3.5.2 Waste minimisation support to Drakenstein Municipality*

Training was conducted with informal salvages whose daily activities consists of reclaiming waste from the Wellington waste disposal facility (**Figure 4**). Modules presented at the workshop included understanding waste and its challenges; health and safety; adding value to waste; improving efficiencies during the collection process and opportunities in waste. All participants enthusiastically participated in the workshop discussion and in arts & crafts activities presented to them. All participants received a certificate of recognition as part of the training.

**Figure 4: Arts and Crafts activities for participants**

#### *2.3.5.3 Waste minimisation support to Cape Nature*

Two (2) of the four (4) workshops were hosted in collaboration with Cape Nature to train Youth Environmental Services (YES) programme participants on waste challenges, waste minimisation

concepts and implementing waste minimisation systems within municipalities and communities (**Figure 5**). The workshops also focussed on waste awareness as well as opportunities in waste. Key outcomes of the workshop were:

- Participants are equipped with a good understanding of general waste management challenges and waste minimisation concepts and the necessary tools to implement waste awareness campaigns as part of the YES programme.
- Participants are motivated to be agents of change within their respective communities hereby improving their immediate and extended environments with respect to waste management, waste minimization and resource efficiency.
- Participants are made aware of opportunities in waste as a career option to be considered when they exit the programme.

The YES programme, funded by the Department of Environmental Affairs (DEA), addresses the ever growing challenges of youth unemployment through skills development training, the funding will empower two hundred and seventy-two (272) youths over two (2) years from communities in dire need. An additional workshop with the YES programme is planned for March 2019.

**Figure 5: Cape Nature YES programme participants**

# 3. WASTE MINIMISATION AND POLICY

- **Waste Minimisation Training workshops;**
- **Organic waste impact on Greenhouse Gas Emissions (GHG) at landfill; initiatives in WCG buildings;**
- **Waste Support Programme for SMME's to 10 beneficiaries; and**
- **2 x Separation at Source workshops conducted.**

## 3.1 STATUS OF WASTE MINIMISATION IN THE WESTERN CAPE

Increased waste generation is generally associated with an increase in economic growth, with the subsequent reduction in landfill airspace. While temporary slumps in the economy can reduce the amount of waste generated, it does not detract from the critical need to reduce waste to landfill to save on the limited amount of landfill airspace left in the Western Cape. Natural disasters like the water crisis and the frequency of major fires in 2018, have placed municipalities under extreme pressure to provide basic services to their citizens.

Waste is seldom regarded as important when competing with these priorities, which will exacerbate the looming waste volumes and limited landfill airspace, should effective strategies to reduce waste not be addressed. Despite these challenges, the municipalities in the Western Cape still perform better than most municipalities in the country in terms of SA Stats surveys conducted.

To successfully implement waste diversion, waste holders must be creative, while contending with limited budgets and resources. The Western Cape Government (WCG) recognises that the low hanging fruit to achieving waste minimisation targets would be to prioritise the diversion of organics from landfills, due to the high fraction thereof in the waste stream. This approach is in line with the organic waste ban of 50% by 2022 and a total ban by 2027. An important aspect of achieving this target would be to ensure that separation at source systems, coupled with the required infrastructure, are implemented by municipalities. **Table 3** below thus provides information on the current status of waste minimisation initiatives driven by municipalities in the Western Cape.

Table 3: Waste Minimisation within Municipalities for 2018

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| BEAUFORT WEST | No | No | Yes | No | No | No | No | The Municipality is investing in recycling partnerships. |
| BERGRIVIER | Yes | Yes | Yes | No | No | No | Yes | Recycling Contractors were appointed in Piketberg and Velddrif (at the Transfer Stations). All refuse from the other towns are transported to Piketberg and Velddrif, thereafter transported to landfill sites outside the boundaries of Bergrivier Municipality. Clear bags (recyclables) are collected at all households in residential areas. All other residents (farms) and business waives any dumping cost, if discarded at recycling |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | facilities. When removed to a drop off and transfer station, the disposal tariff is used. |
| BITOU | No | No | Yes | No | No | Yes | Yes | The Municipality achieved a15% recycling rate through the municipality Matzikama Trading and Julian Recycling are private recyclers in the area. A waste characterisation study indicated that on average 778.35 tonnes of waste is transported to PetroSA p/m, of which, 353.53 tonnes is recyclable material. |
| BREEDE VALLEY | Yes | No | Yes | Yes | No | No | Yes | There is curb side collection for recyclables. |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| CAPE AGULHAS | Yes | No | Yes | Yes | No | No | No | The Municipality has a limited recycling programme – there are community drop off facilities in selected towns. Awareness campaigns at schools, local mall and door-to-door projects was done. They conducted a feasibility study for a regional site and the waste by-laws to follow. |
| CEDERBERG | No | No | No | No | No | No | Yes | Public bins are serviced daily. Business and commercial waste collection have a fixed increased tariff. There is limited funding to implement the regional waste management facility, as the current landfill sites are nearing its capacity. |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| DRAKENSTEIN | Yes | Yes | No | Yes | No | No | Yes | Clear bags are provided to households to promote recycling. Recycling projects are operated by selected schools and community groups in area. Challenges include continuous illegal dumping, insufficient budget for projects and upgrading infrastructure. |
| GEORGE | No | No | Yes | No | No | No | No | There are two (2) service providers conducting recycling i.e. Greens Recycling and Henque Waste. A waste characterisation study conducted by the Garden Route District Municipality GRDM revealed that |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | approximately 1 340 tonnes of waste could be recycled. |
| HESSEQUA | No | Yes | Yes | No | Yes | Yes | Yes | Henque Waste conducts recycling in the area. A waste characterisation study conducted by the GRDM revealed that approximately 677.60 tonnes can be diverted from landfill. |
| KANNALAND | No | No | No | No | No | No | No | A private collector, Retain, Reuse & Recycle does collections in the area. A waste characterisation study still to be completed. |
| KNYSNA | Yes | Yes | Yes | Yes | No | Yes | Yes | The Municipality achieved 7% recycling. A waste characterisation study conducted by the GRDM |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | shows that 533.37 tonnes of material can be recycled. |
| LAINGSBURG | No | No | Yes | No | No | No | No | Relaunched the two-bag system to improve participation rates and quality of recyclables. |
| LANGEBERG | Yes | Yes | Yes | No | No | No | Yes | Recycling igloos are strategically placed at schools and CBD. The Municipality has a clean MRF at Ashton WDF, receiving recyclables from the two-bag system. Chipping of green waste takes place at the Robertson Drop-off Facility, as the municipality has a three-year tender in place. The Municipality operates a |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | composting plant in Robertson. |
| MATZIKAMA | No | Yes | No | No | No | No | No | No formal recycling is taking place in the Matzikama municipality. Split bag system to be implemented in January 2019 in Ward 5 in Vredendal. A new contractor was appointed mid November 2018 for waste separation at the MRF. |
| MOSSEL BAY | Yes | No | Yes | Yes | No | Yes | Yes | The Municipality achieved 8% recycling. Greens Recycling is a private recycler available in the area. A waste characterisation study was conducted by the GRDM indicates that 986.02 tonnes |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | of waste can be diverted from landfill. |
| OUDTSHOORN | No | No | No | No | No | No | No | A private recycler named Retain, Reuse & Recycle conducts collections. New project with the waste pickers at the Grootkop WDF is underway.<br>Oudtshoorn Municipality indicated the waste pickers collect an estimated 8700 tonnes per year. The waste characterisation conducted by the GRDM indicates that 335.41 tonnes of waste can be recycled and diverted from landfills. |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| OVERSTRAND | Yes | Yes | Yes | Yes | No | Yes | Yes | While these municipal waste recovery facilities were available, the municipality's entire recovery system has unfortunately come to a complete standstill due to violent protests and arson. The Municipality used marketing tools to make people aware of minimising and recycling waste, e.g. pamphlets showing how recycling works to households and children were taught how to take care of the environment through play. |
| PRINS ALBERT | Yes | Yes | No | No | No | No | Yes | Prins Albert Municipality has a recycling programme that has not been rolled out to all |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | communities, called "Pick a Piece". |
| SALDANHA BAY | Yes | Yes | Yes | Yes | No | No | Yes | Initiated a recycling project and received a Silver Award at the Eco-Logic National Environmental Awards for separation at source award, for recycling. [3]The recycling and participation rate is being monitored. Builders rubble is being used as cover material and recyclable waste reused back into manufacturing. |

3 http://www.sbm.gov.za/pages/campaign/press_3.html

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| STELLENBOSCH | No | No | No | No | No | No | No | The Municipality has a fixed increase tariff for waste removal services to all farms. Black bags will be replaced with wheelie bins. |
| SWARTLAND | Yes | Yes | No | Yes | No | No | No | The waste volume has been reduced by 30%. Seventy-seven (77) recycling igloos has been allocated to schools and within the towns. The municipality accepts waste from Piketberg and Porterville.<br>DNA (Rustfontein) Composting and SWACO provides an organic waste management service to citizens of the municipality and are not contracted to work for municipality. |

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| SWELLENDAM | No | No | No | No | No | No | No | Bontebok WDF has no recordkeeping system for waste. Garden waste and builder's rubble is not separated. There are no waste minimisation programmes/projects. |
| THEEWATERSKLOOF | No | No | Yes | Yes | No | No | Yes | The Municipality has no recycling programme. There is limited recycling carried out by private companies who require the support of the municipality. |
| WITZENBERG | No | No | Yes | No | No | No | Yes | The Municipality has a [4]Youth development programme, for awareness |

4 http://witzenberg.gov.za/sites/default/files/documents/Witzenberg%20Municipality%20-%20Draft%20IDP%20-%202017-2022%20-%20To%20Council%20-%2029-03-2017.pdf

| MUNICIPALITY | DROP OFFS | MRF | 2BAG SYSTEM | SUPPORT SWOP SHOPS | SUPPORT BUY BACK CENTRES | E-WASTE INITIATIVES | ORGANIC WASTE INITIATIVES | STATUS OF RECYCLING AND OTHER WASTE MINIMISATION INITIATIVES |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | and environmental projects were implemented, as well as upgrading open spaces. Two hundred and fifty thousand (€250 000) euros will be used over a five-year period to assist in constructing a MRF & drop off points in each town. |

## 3.2 WASTE MINIMISATION INTERVENTIONS IN 2018

### 3.2.1 Waste Minimisation Training

The Department provides waste minimization training and advice to a variety of stakeholders in the Western Cape, in order to strengthen the province's capacity to minimize waste, ensuring provincial and national waste diversion targets are met. Municipalities are the primary beneficiaries of the training programmes and the Department hosted three (3) workshops in 2018. A waste minimization training workshop was hosted with municipal staff and recyclers in the Kannaland Municipal area, where twenty-one (21) participants were trained.

The training consisted of educating participants on topics such as:

- An introduction to waste management;
- What is recycling?
- Business aspects of recycling;
- Value adding to waste as a resource;
- Waste minimisation systems and awareness; and
- Aspects of the WAME programme to assist the Environmental Protection and Infrastructure Programmes (EPIP) workers with their waste awareness lessons aimed at primary schools.

### 3.2.2 The Western Cape Recycling Action Group

The Western Cape Recycling Action Group aims to address issues pertinent to the growth of the recycling sector in the Western Cape. Interventions for the 2018/2019 financial year consisted of two themed meetings (an update on legislation and the development of IndWMPs in addition to two (2) recycling Roadshows which took place in the Garden Route and Cape Winelands District Municipalities respectively. The goals of the Recycling Roadshow were:

- To support local recycling initiatives;
- To build and strengthen relationships within the sector;
- Information sharing; and
- Understanding issues on compliance.

Various recycling support agencies (both government and the private) were co-opted in the roadshows to present their support offerings to SMME's. Good practice models were also presented to delegates. The dedicated network sessions allowed an opportunity for stakeholders to engage with each other as well as the presenters to establish contacts and further networking opportunities, see **Figure 6 and Figure 7**. The dedicated network sessions allowed an opportunity for stakeholders to engage with each other, as well as the presenters, to establish contacts.

Figure 6: DEA&DP presentation to stakeholders, George Conference Centre

Figure 7: DEA&DP presentation to stakeholders, Agricultural building, Stellenbosch

### 3.2.3 2Wise2Waste in 2018

The 2Wise2Waste programme aims to create awareness amongst WCG official on resource efficiency with the view of changing the behaviour of staff, in a manner that reduces the environmental footprint of WCG operations. The focus in 2018 was creating awareness on the impact of organic waste on Greenhouse Gas (GHG) emissions at landfills and how best to reduce and beneficiate food waste. This was in line with the WCG policy to divert organic waste to landfill by 50% in 2022 and a total ban in 2027.

### 3.2.4 Waste collection and recovery

In 2018, the waste collection and recovery project had an estimated 61.76 tonnes of waste recovered for recycling, while 570.281 tonnes was disposed of at landfill. While only 10% of the total

waste generated was recycled, it must be noted that seven (7) of the twenty-four (24) WCG buildings in the CBD, currently divert waste as part of this project (**Figure 8**). The recyclables consist of glass, metal, plastic and paper. This recycling information is made up of 87% waste paper, 8% plastic, 3% glass and 2% metal (**Figure 9**). These numbers are extremely low and there is room for improvement. It is assumed that staff do not use the supplied waste bins correctly and therefore there is a low recovery rate, as waste is most likely contaminated and unable to be recovered for recycling. Organic waste was previously collected and sent to "New Horizons" anaerobic digestion plant, but unfortunately, the facility has stopped accepting waste and has since closed down, thereby resulting in no organic waste data being reported for this year.

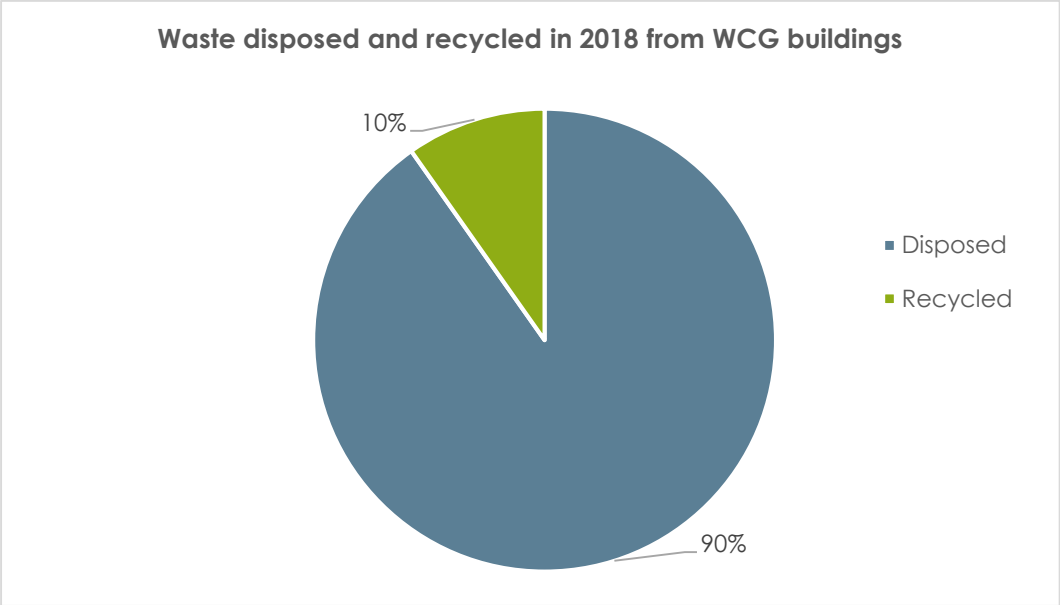



**Figure 8: Waste generated and recovered in the CBD for 2018**

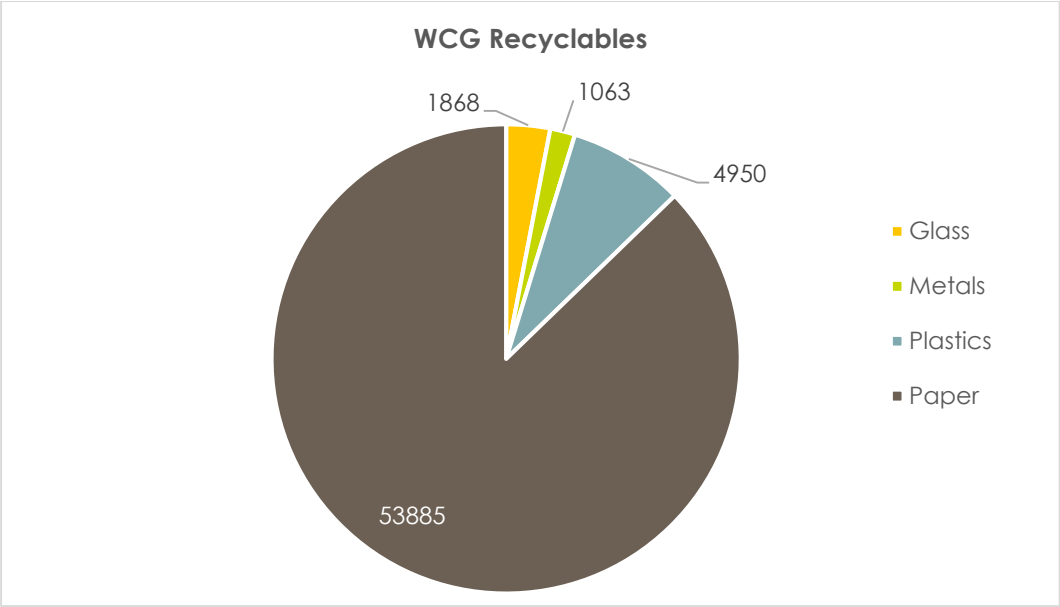



Figure 9: WCG recyclables waste stream

### 3.2.5 Food Waste Interventions

Food waste has been estimated to make up 40% of the total waste generated in the Western Cape, subsequent to large economic, social and environmental implications (GreenCape, 2018). A food waste survey was conducted with six (6) food outlets neighbouring the WCG buildings, to determine current food waste management practices (**Table 4**). While current practice is to discard of waste, all respondents who partook in the survey indicated a willingness to manage their waste better.

Table 4: Food survey

| FOOD OUTLET | WASTE GENERATED | TYPES OF FOOD WASTE GENERATED | WASTE MANAGEMENT PRACTICES |
|---|---|---|---|
| TAKEAWAY/AL LA CARTE (X3) | 1kg – $2^{1/2}$ black bags | Cooked foods | • Purchasing enough for the day to avoid waste.<br>• Using a thorough food tracking system.<br>• Repurposing chicken into chicken-mayo for sandwiches.<br>• Expired dairy products are used for scones & doughnuts. |
| TAKEAWAY (X3) | 2 kg – 110L bin full | Raw fruit / vegetables, including skins, oil & dairy products | |

| | | | |
|---|---|---|---|
| | | | • Last minute left over foods are provided to the needy in the area.<br>• Leftovers used in other cooking processes or made into other eats. |

In addition, a Food Waste exhibition themed "Food for Thought" was held in 2018, to create awareness amongst WCG staff. The exhibition aimed to inform and sensitize officials on food wastage and how best to avoid it. An opportunity was given to staff and the public to interact with exhibitors that ranged from 3D printing using food waste, as well as, taste testers from a distributor of surplus food. The exhibitors provided innovative and exciting ways in which to limit food wastage and creating awareness to improve food waste management, in the office environment. The exhibition was a success and was well received by all (**Figure 10**).

**Figure 10: DEA&DP Food waste exhibition**

### 3.2.6 Cleaning Contractor Training

Two (2) cleaning contractors working in the WCG buildings were trained in an attempt to augment the current recycling system and ensure that all new contractors are familiar with the WCG waste system, as well as be acquainted with the needs and goals of the WCG. Eighteen (18) individuals were trained, who now services two (2) departments, with the aid of the Waste Collection and Recovery Programme. A total of nineteen (19) workers were trained.

### 3.2.7 Waste Support programme for Small Medium and Micro (SMME's) entrepreneurs in the Western Cape

Recognising the contribution of small and micro waste enterprises to the Green Economy in the Western Cape and their potential for job creation and diverting waste from overstretched landfill sites, the Department) has embarked on a support programme for small and micro waste enterprises in the Western Cape for a period of two years. Support entails conducting business diagnostics and onsite business mentorship and support; entrepreneurial skills training, facilitating access to industry support and funding; compliance promotion etc.

A pilot involving 15 small and micro waste entrepreneurs was conducted in the 2016/17 and support to these enterprises was extended into the 2017/18 financial year. Ten (10) new beneficiaries were recruited in the Eden region in 2017 and the programme was rolled out to 10 additional beneficiaries located in West coast and surrounds in 2018. Support for these "wastepreneurs" is ongoing and will extend until the end of 2019. **Table 5** below provides the breakdown of SMME support per region

**Table 5: SMME support per region**

| YEAR | REGION | NO. OF BENEFICIARIES |
|---|---|---|
| 2016 | Municipalities within 150km of metro(pilot) | 15 |
| 2017 | Garden Route | 10 |
| 2018 | West Coast and Cape Winelands | 10 |

## 3.3 WASTE POLICY INTERVENTIONS IN 2018

### 3.3.1 Waste Awareness

Knowledge and awareness on sustainable waste management practices and the impacts of waste on health, well-being and the environment, is not widespread in all communities and business sectors, as is evidenced by the low waste diversion rates and littering in the province. A key element in building a resource-efficient society, is instilling the change in behaviour within all the different sectors of society, through increased awareness (**Figure 11**), capacity-building and education. In addressing the problem, the Department has developed a Provincial Waste Awareness Strategy Report. The overarching objective of the strategy is to identify a set of practical initiatives to be aligned to three (3) national themes of anti-litter, waste minimisation and creating jobs in waste. The strategy aims to empower and support municipalities, industries, and

the public, in exercising their roles and responsibilities throughout the entire waste management hierarchy.

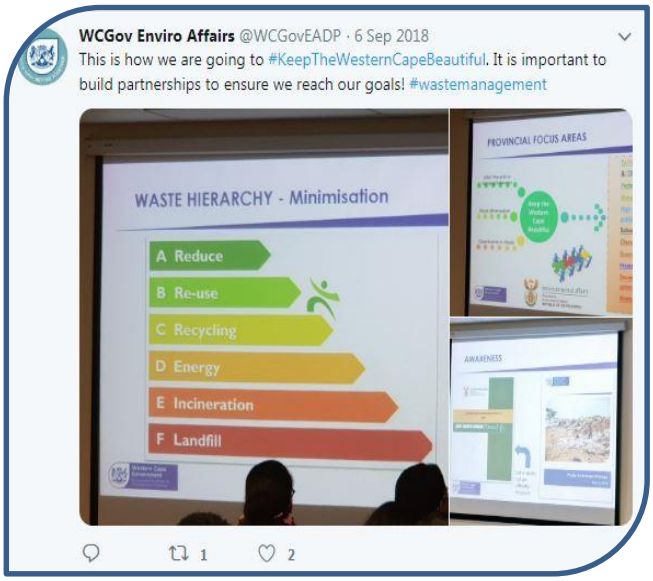



**Figure 11: Example of Social Media use in awareness raising**

The strategy will assist various sectors to implement their own waste awareness strategies by providing them with a guideline that demonstrates steps to be considered, when formulating an efficient user-friendly waste awareness strategy. In addition, the Department hosted a Western Cape Municipal Awareness Strategy Workshop for municipalities to equip themselves with information, to conduct successful waste awareness initiatives. Through the workshop, municipalities were fully equipped to identify awareness needs, to conduct their own successful and sustainable waste awareness campaigns in their towns and communities, with the aim to bring about behavioural change and awareness.

### 3.3.2 Separation at Source

The Separation at Source (S@S) project developed a guideline with systems to support current practices within municipalities in the Western Cape. The project evaluated the current practices within municipalities and presented a variety of options and opportunities for the implementation of additional practices, programmes and systems. Furthermore, the project aims to mainstream the separation of waste at source in municipalities, to ensure the national and provincial priorities and targets can be met and to improve waste diversion. Two (2) stakeholder engagements were held with municipal waste managers, industry and national stakeholders during the development of the guideline (**Figure 12**). The first workshop (September 2018) focused on the current knowledge gained from research completed on S@S. Presentations were presented by various stakeholders, including Stellenbosch and Overstrand Municipality.

Figure 12: Separation at source - Stakeholder engagement

The DEA presented on its Separation at Source Status Quo Report, the CSIR SASCOST Model (cost effective collection system), Green Edge on Saldanha Bay's Awareness Programme as part of their S@S programme and the Paper Manufacturers Association of South Africa (PAMSA) on a Paper Recycling Programme of the City of Ekurhuleni. The draft S@S document was distributed to all delegate for comment. The final document was presented and distributed at the second S@S workshop in March 2019.

### 3.3.3 Status of the Western Cape Model Waste By-law

The model waste by-law was developed for municipalities in the Western Cape to adopt in full or in part, with the aim to create an effective mechanism to streamline all waste related by-laws in the Western Cape. Local municipalities may choose to regulate how waste is managed within their boundaries by passing a by-law focused on waste management. This will ensure municipal waste by-laws are aligned to national legislation and that it impacts positively on the growth of the waste economy, and in so doing, creates an enabling environment for stimulating public and private waste sector growth and job creation.

These by-laws often provide obligations for both waste generators and waste handlers. The City of Cape Town's (CCT) by-law, for example, requires that any (juristic) person intending to perform recycling, reuse or recovery activities, or the sorting of waste, must register for accreditation with CCT before commencing such activities. To be accredited, the person must also submit an integrated waste management plan to a CCT waste management officer (GreenCape, 2018).

The information reflected in **Table 6** informed the development of the draft by-law that would ensure that regulatory requirements for waste management does not hamper economic development.

Table 6: Status of Waste Model By-laws at Municipalities

| MUNICIPALITY | BY-LAW: YES/NO | YEAR PUBLISHED | ALIGNED TO THE WASTE ACT? | BY-LAW NAME |
|---|---|---|---|---|
| CAPE WINELANDS DISTRICT | No | N/A | N/A | N/A |
| BREEDE VALLEY | Yes | 2008 | Partially | Solid Waste Disposal By-law |
| DRAKENSTEIN | Yes | 2013 | Aligned | Integrated Waste Management By-law |
| LANGEBERG | No | 2015 | Aligned | Draft Integrated Waste Management by- law |
| STELLENBOSCH | No | N/A | N/A | N/A |
| WITZENBERG | Yes | 2005 | Not aligned | By-Law Relating to Refuse Removal |
| WITZENBERG | Yes | 2006 | Not aligned | By-law Relating to the Control of Disposal Sites |
| CENTRAL KAROO DISTRICT | No | N/A | N/A | N/A |
| BEAUFORT WEST | Yes | 2005 | Not aligned | By-law relating to Refuse Removal |
| PRINS ALBERT | No | N/A | N/A | N/A |

| MUNICIPALITY | BY-LAW: YES/NO | YEAR PUBLISHED | ALIGNED TO THE WASTE ACT? | BY-LAW NAME |
|---|---|---|---|---|
| LAINGSBURG | No | N/A | N/A | N/A |
| CITY OF CAPE TOWN | Yes | 2009<br>2010 | Aligned | Integrated Waste Management By-Law |
| GARDEN ROUTE | No | 2016 | Aligned | Draft Waste Management By-Law |
| BITOU | Yes | 2009 | Not aligned | Solid Waste Disposal |
| GEORGE | Yes | 2010 | Not aligned | Solid Waste Disposal |
| HESSEQUA | Yes | 2008 | Not aligned | Solid Waste Disposal By-law |
| KNYSNA | Yes | 2006 | Not aligned | By-Law Relating to Control over Refuse Removal and Disposal Sites |
| MOSSEL BAY | Yes | 2010 | Partially | Refuse Removal by-law |
| OUDTSHOORN | Yes | 2009 | Not aligned | Solid Waste Disposal By-law |
| KANNALAND | Yes | 2013 | Aligned | Integrated Waste |

| MUNICIPALITY | BY-LAW: YES/NO | YEAR PUBLISHED | ALIGNED TO THE WASTE ACT? | BY-LAW NAME |
|---|---|---|---|---|
| | | | | Management By-law |
| OVERBERG DISTRICT | No | N/A | N/A | N/A |
| CAPE AGULHAS | Yes | 2005 | Not aligned | Refuse Removal By-Law |
| OVERSTRAND | Yes | 2013 | Aligned | Integrated Waste Management By-law |
| THEEWATERSKLOOF | Yes | 2015 | Aligned | By-Law Relating to Refuse Removal |
| SWELLENDAM | Yes | 2015 | Aligned | Refuse removal, refuse dumps and Solid Waste Disposal by-law |
| WEST COAST DISTRICT | No | N/A | N/A | N/A |
| CEDERBERG | Yes | 2004 | Not aligned | By-law Relating to Refuse Removal |
| MATZIKAMA | Yes | 2010 | Not aligned | Solid Waste Disposal By-Law |
| SALDANHA BAY | Yes | 2018 | Aligned | Integrated Waste Management By-law |

| MUNICIPALITY | BY-LAW: YES/NO | YEAR PUBLISHED | ALIGNED TO THE WASTE ACT? | BY-LAW NAME |
|---|---|---|---|---|
| SWARTLAND | Yes | 2011 | Aligned | Swartland Waste Management By-Law |
| BERGRIVIER | Yes | 2009 | Not aligned | Solid Waste Disposal By-Law |

### 3.3.4 The Greenest Municipality Competition

The Integrated Waste Management Evaluation (IWME) is the evaluation of the waste section and forms part of the Greenest Municipality Competition (GMC). An executive decision was made for the GMC to be evaluated biannually instead of annually, to afford municipalities the opportunity to include more comprehensive projects for the evaluation. It also promotes the efficient use of financial resources for both spheres of government. The evaluation of the GMC is rather labour intensive as all municipal Portfolios of Evidence (POE) need to be verified.

There is a need to address the challenges identified to evaluate the GMC more effectively and efficiently. In 2018, the IWME focussed on streamlining the evaluation to include current legislative mandates and goals, by amending the competition questionnaires, developing a guideline to increase the rate of participation and to streamline the evaluation process for greater effectivity.

The following key deliverables were identified and completed to achieve the objectives below:

- A Guideline for participation in the Greenest Municipality Competition;
- The Amendment of the Greenest Municipality Competition Questionnaire;
- The GMC Evaluation Strategy; and
- WMOF Presentation.

# 4. WASTE MANAGEMENT PLANNING

- **Quality of IWMPS has improved (4 IWMPS assessed);**
- **21 WMO's are designated;**
- **Update on Provincial IWMP activities; and**
- **Household Hazardous Waste Status Quo report developed.**

## 4.1 WASTE MANAGEMENT PLANNING

The objective of waste management planning is to:

- Identify and plan for future waste management needs and requirements;
- Minimize waste management costs, the adverse social and environmental impacts and the amount of waste generated;
- Promote the use of waste as a resource; and
- Ensure that waste is managed in accordance with the principles of NEMA.

### 4.1.1 Municipal Integrated Waste Management Plans

The Waste Act requires municipalities to submit Integrated Waste Management Plans (IWMPs) to the Member of the Executive Council (MEC) for Environment Affairs and Development Planning (DEA& DP) for endorsement in terms of section 11(4)(a)(i). Section 12 of the NEM: WA specifies the minimum contents of IWMPs, which must provide details of how the municipal IWMP will address the delivery of waste management services to residential premises. The IWMPs must be aligned with the Integrated Development Plans (IDPs) in terms of section 11 (4)(a)(ii) of the NEM: WA; IDPs which are a requirement of chapter 5 of the Municipal Systems Act, 2000 (Act 32 of 2000) (MSA).

The Department assesses IWMPs as and when they are submitted by municipalities. In the 2018 calendar year, the following municipalities submitted their IWMPs for assessment and endorsement, see

**Table** 7:

**Note**: Where Municipalities achieved an assessment score above seventy-five percent (75%), the IWMP is regarded as "Endorsable".

Table 7: Integrated Waste Management Plans submitted in 2018

| MUNICIPALITY | IWMP | ASSESSED PLANS | | SCORES | DESCRIPTION | ENDORSABLE (75% and above) |
|---|---|---|---|---|---|---|
| | | YES | NO | (%) | | |
| OVERBERG DISTRICT | 3rd | X | | 81 | Good | Yes |
| THEEWATERSKLOOF | 3rd | X | | 64 | Poor | No |
| MATZIKAMA | 3rd | X | | 71 | Good | No |
| LANGEBERG | 3rd | X | | 86 | Good | Yes |

### 4.1.2 Waste Management Officers

Currently twenty-one (21) Waste Management Officers are designated including the Western Cape Provincial Government. Ten (10) municipalities have never designated a Waste Management Officer. See **Table 8** for the updated list.

Table 8: Status of Waste Management Officers in the Western Cape - 2018

| MUNICIPALITY | WMO | WMO DESIGNATION | |
|---|---|---|---|
| | | YES | NO |
| DEA&DP: WASTE MANAGEMENT DIRECTORATE | Eduard Hanekom | X | |
| CAPE WINELANDS DISTRICT | Christo Swart | X | |
| BREEDE VALLEY | Sheldon Visagie (awaiting designation letter) | | X |
| DRAKENSTEIN | Thys Serfontein | X | |
| LANGEBERG | Glenn Slingers | X | |
| STELLENBOSCH | Saliem Haider | X | |
| WITZENBERG | Johnny Jacobs | X | |
| WEST COAST DISTRICT | Henk Matthee | | X |

| MUNICIPALITY | WMO | WMO DESIGNATION | |
|---|---|---|---|
| | | YES | NO |
| BERGRIVIER | Jaco Breunissen | X | |
| CEDERBERG | Jacob Klaaste | X | |
| MATZIKAMA | Riaan Basson | X | |
| SALDANHA BAY | David Wright | X | |
| SWARTLAND | Vacant (to be appointed and designated) | | X |
| OVERBERG DISTRICT | Francois Kotze | X | |
| CAPE AGULHAS | Walter Linnert | X | |
| OVERSTRAND | Craig Mitchell (awaiting designation letter) | | X |
| SWELLENDAM | Bartho Burger (awaiting designation letter) | | X |
| THEEWATERSKLOOF | Marthinus Hegans | X | |
| CENTRAL KAROO DISTRICT | Leon Crafford | X | |
| BEAUFORT WEST | Vuyokasi Ruiters | X | |
| PRINS ALBERT | Ashley America | X | |
| LAINGSBURG | Johan Mouton | X | |
| GARDEN ROUTE DISTRICT | Morton Hubbe | X | |
| OUDTSHOORN | Rodwell Witbooi (awaiting designation letter) | | X |
| HESSEQUA | Harold Basson | X | |
| BITOU | Douglas Baartman (awaiting designation letter) | | X |
| GEORGE | Janine Fernold | | X |
| KNYSNA | Randall Bower | | X |
| MOSSEL BAY | Sivuyile Mtila | X | |

| MUNICIPALITY | WMO | WMO DESIGNATION | |
|---|---|---|---|
| | | YES | NO |
| KANNALAND | Vacant (to be appointed and designated) | | X |
| CCT | Keraan Rustim | X | |

### 4.1.3 Provincial Integrated Waste Management Plan

The WC IWMP provides strategic direction for integrated waste management in the province over the short, medium and long term, aimed at provincial government, local government, industry, commerce and civil society. The plan provides four strategic goal, each with objectives, indicators and activities to be undertaken. The goals and strategic objectives guide the activities included in the implementation plan, over the short- (2017-2022), medium- (2022-2027) and long- (2027-2032) term.

The activities for 2018 are included in **APPENDICES: Table 20** and indicate the Waste Management Directorate's projects and operational activities. The National Department of Environmental Affairs (DEA) has endorsed the WC IWMP in 2018 and it will be reviewed and updated every five years.

### 4.1.4 Industry Waste Management Plans (IndWMPs)

The late Minister of Environmental Affairs, Edna Molewa, called on the Paper and Packaging Industry, Electrical and Electronic Equipment Industry and Lighting Industry to prepare and submit their IndWMPs for approval. Thirteen (13) plans were submitted on the 6 September 2018 - four (4) plans for WEE, two (2) for Lighting and seven (7) for Paper and Packaging. Evaluation of these plans are ongoing and the way forward will be directed by DEA.

The Minister published government notice 41213 on 30 October 2017, requesting the tyre industry to prepare and submit industry waste tyre management plans for approval. Waste tyres have been identified as a priority waste stream based on the threat that their indiscriminate disposal poses to the environment, but it has since been withdrawn. Minister Molewa subsequently published notice 41612 on 7 May 2018 giving notice of her intention to consider four Industry Waste Tyre Management Plan submitted to the Department. [5]"The broad policy direction is to reduce

5http://www.engineeringnews.co.za/article/molewa-invites-public-comment-on-waste-tyre-management-plans-2018-05-11

the environmental externalities associated with waste tyres, by diverting waste tyres away from landfill and maximising the value extracted from waste tyres as a resource by encouraging reuse, recycling and waste-to-energy" (Arnoldi, Molewa invites public comment on waste tyre management plans, 2018). DEA provided comments and requested that certain aspects/concerns of the plans be addressed and re-submitted. Based on this, only two (2) of the four (4) original organisations submitted revised plans. Evaluation of these plans have not been concluded yet and another consultation process will be required.

### 4.1.5 Hazardous Waste Interventions

#### *4.1.5.1 Household Hazardous Waste Status Quo Report*

The Provincial Integrated Waste Management Plan 2017-2022 includes Household Hazardous Waste (HHW) activities for implementation i.e. development of a Household Hazardous Waste Guideline and the setting of HHW diversion targets. Since information regarding HHW is limited, the Department compiled a Household Hazardous Waste Status Quo Report during 2018/2019, which aims to provide a basis for future work with respect to this waste type.

South African legislation does not provide a definition for HHW, however the following definition is provided by the US EPA; "*leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients*" (US EPA, 2007). Examples of HHW include leftover household products such as paints, cleaners, oils, batteries, fluorescent lighting, pesticides and leftover medication. Although HHW only constitutes a small percentage of the total household waste generated, it is identified as a concern because of its toxic, chemical and physical properties. Currently, the majority of HHW is disposed of along with other general waste.

In addition to an internal Western Cape Government (WCG) employee survey undertaken, questionnaires were sent to municipalities as well as pharmacies and retailers to obtain more information about HHW management interventions and the challenges faced. Municipal IWMPs were also reviewed to determine to what extent HHW has been incorporated into municipal planning. Municipalities are required to develop IWMPs setting out waste planning goals and activities over the short- medium- and long-term. It was found that more than half of municipalities (district and local) have highlighted HHW in their IWMPs and provided actions on how they plan to manage this waste type. Other municipalities however make limited mention of HHW with some not including HHW management to any extent.

Levels of infrastructure provision for HHW collection, HHW collection day events and HHW awareness-raising vary greatly amongst municipalities e.g. most local municipalities located within the Cape Winelands District Municipality (CWDM) have public drop-off facilities which allow members of the public to drop off their HHW. In comparison, local municipalities located within the Central Karoo District Municipality (CKDM) have none. The results of the internal WCG

employee survey indicate that 71% of respondents have never used municipal waste drop-off facilities to drop off their HHW. The key reason cited is that respondents were not aware where that these facilities existed, see **Figure 13**.

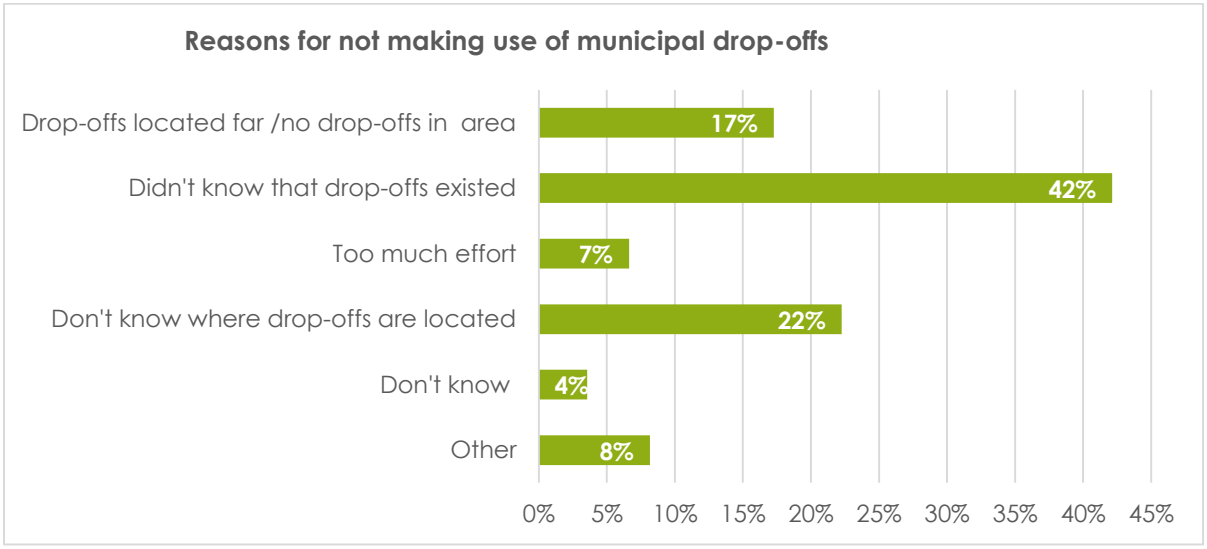



**Figure 13: Reasons provided for not making use of municipal drop-off facilities**

In summary, about **55%** of municipalities provide HHW drop-off facilities for either all or specific HHW types, 19% of municipalities host HHW collection day events and **43%** undertake awareness-raising with a specific focus on HHW. Municipalities face many challenges relating to HHW management, most of these are as a result of limited financial resources for HHW infrastructure provision, transportation, disposal costs, the rolling out of awareness-raising programmes and staff. Hazardous waste disposal costs alone are considered significant as waste disposal facilities have to comply with strict legislative requirements. Certain HHW types also prove especially problematic e.g. in the CCT the HHW public drop-off facility at the Athlone Refuse Transfer Station receives a large volume of asbestos waste compared to other HHW types. Furthermore, asbestos brought to the drop-off facility is often not appropriately handled by the public prior to bringing it to the facility. The disposal of medical waste along with other household waste was also identified as problematic e.g. if sharps are not separated from other household waste, it poses a health risk to those handling the waste.

Pharmacies provide take back systems where the public can bring their expired and unwanted medication and sharps. It was noted that sometimes large volumes of medical waste are brought in at one time, which impacts on disposal costs. Furthermore, medical waste is often not brought back in a desirable state e.g. various ointments and medication are often mixed together. Various retailers also provide collection bins in their stores for e-waste e.g. compact fluorescent lightbulbs, non-rechargeable batteries, fluorescent tubes. However, these facilities are often not widely used

by the public. The results of the internal WCG employee survey indicate that 59% of respondents have never used retail collection facilities to drop off their HHW. The key reason for not making use retail waste collection facilities is that respondents were not aware of the existence of these facilities, see **Figure 14**.

**Figure 14: Reasons provided for not making use of retail waste collection bins**

Based on the findings of the report, the following activities were recommended:

- When municipalities review/develop their IWMPs, it should be ensured that HHW management is incorporated and that sufficient resources are set aside including budgets for infrastructure;
- Municipalities should use various platforms including social media to create public awareness around HHW; this can be done in conjunction with existing awareness-raising programmes or as a stand-alone initiative;
- Municipalities to engage with Department on hazardous waste classification and proper disposal;
- Municipalities to engage with Department to provide support for HHW collection day events;
- Municipalities to review waste by-laws to ensure that HHW management is sufficiently addressed;
- Department to develop a HHW Management Guideline aimed at assisting municipalities with the management of this waste type;
- The Department to provide guidance to municipalities in sourcing local and international funding for HHW management interventions;
- Retailers to increase public awareness about the availability of waste collection sites as these are currently not well utilised; and

- Pharmacies to inform the public on the condition that medical waste must be brought to the facility.

# 5. WASTE INFORMATION MANAGEMENT

- **1 710 838 tonnes' general waste disposed;**
- **29% waste diversion for the Western Cape;**
- **Overstrand Municipality diverted 51%;**
- **CCT contributed 70% to the Provincial diversion rate; and**
- **Increased accuracy of municipal waste reporting.**

## 5.1 GENERAL WASTE IN 2018

The Provincial IPWIS was established in terms of Section 60 of the Waste Act and National Environmental Management: Waste Act and the National Waste Information Regulations, (referred to as the WIS regulations), 2013. The IPWIS feeds provincial waste information to the National South African Waste Information System. This ensures compliance with the requirements of the WIS regulations, in terms of waste registration and reporting.

As most waste management facilities do not have weighbridges nor scales to record the waste, the Waste Calculator tool, is used by municipalities to record their waste in the absence of weighbridges. The tool assists municipalities to quantify and capture their waste, in tonnages and report it on the IPWIS. IPWIS further allows municipalities to capture their waste diversion and identify opportunities in waste streams for diversion. The primary data sources that have been used to compile this section, were taken from the monthly waste management reports submitted to the IPWIS and the Waste Calculators, by the local municipalities. The Department reviews the submitted data with the supporting documents (waste calculators and weighbridge reports), the municipal waste flows and verifying the IPWIS waste activity registrations with that of the current operations at the Waste Management Facilities (WMFs). It is crucial for municipalities to reports their waste quantities to the IPWIS as this data is representative of the current waste management activities of the Western Cape.

The Departmental waste data audits have highlighted the inconsistencies in waste reporting and diversion data. Most of the waste audits conducted for 2018 at municipal WDFs are unsatisfactory, in that data was captured and reported incorrectly. Most municipalities have challenges that have resulted in diminished waste reporting by municipalities, due to various reasons such as high staff turnover and new staff being appointed who are not proficient with the waste reporting procedures. Irregular waste reporting and incorrect data capturing skews the data, over a period of time and does not reflect the reality. In short, municipal waste reporting has not improved much since 2017 as most waste data audits conducted in 2018 were deemed unsatisfactory, due to

inaccuracies in data and therefore, must be corrected by the municipalities. Ongoing efforts have been and were made by the Department, to assist municipalities to report their waste quantities.

GreenCape states that a number of municipalities will need waste related infrastructure development / expansion / maintenance over the next three years. They include CCT, Garden Route District, Drakenstein, Knysna, Langeberg, Saldanha and Stellenbosch local municipalities (GreenCape, 2018). The Department's view is that there is a very strong need now, to address the aging infrastructure and plan for the immediate future. Municipalities need to plan and ring fence financial budgets to develop, expand and maintain the relevant waste infrastructure.

The following sections below depict the management and record keeping of general waste at the municipal waste management facilities. All data reflected in the sections below are based on information submitted to the Department during the 2018 calendar year either via waste calculators or to the IPWIS.

### 5.1.1 Trans-boundary movement of General Waste

There is an increasing need to intensify diversion efforts considering the unavailability of landfill airspace in the Western Cape, as the airspace limitation has become a reality to some municipalities. This results in municipalities relying on trans-boundary movement of waste to neighbouring WDFs for disposal.

A proportion of general waste disposed in the Western Cape is managed by a state-owned enterprise, namely PetroSA Waste Disposal Facility (Gourikwa) and by a privately-owned enterprise, [6]Vissershok Waste Management Pty Ltd.

These waste disposal facilities play a pivotal role in the waste management cycle of the Western Cape. In 2018, PetroSA disposed of **86 302 tonnes** of general waste by four (4) of the seven (7) municipalities in the GRDM. Vissershok Waste Management Pty Ltd renders services to all sectors in terms of general and hazardous waste streams. A total amount of **394 743 tonnes' general waste** has been disposed by Vissershok Waste Management Pty Ltd, in 2018. The consists of commercial and industrial waste, organic waste, construction and demolition waste and other waste types. Highlands WDF and Vredenburg WDF in the WCDM collectively renders a waste disposal service to Bergrivier Municipality. Similarly, Karwyderskraal WDF, in the Overstrand Municipality renders a waste disposal service to Theewaterskloof Municipality. A total amount of **105 216 tonnes** of municipal waste has been disposed of through transboundary movement of waste. This value can be used in forecasting and planning for the regionalisation process.

[6] Averda and Enviroserv jointly own the only private landfill in Cape Town (GreenCape, 2018).

## 5.2 GENERAL WASTE SUMMARY FOR THE WESTERN CAPE

Waste disposal in the Western Cape remains high despite a decrease in the amount of waste disposed between 2017 and 2018. In 2018, **1 710 838 tonnes' general waste** was disposed and in **Figure 15**, equating to **71%.** The largest contributor is the CCT and the largest contributing District Municipality (DM) is the CWDM. The waste diversion rate for the province is [7]**29%,** with **684 953 tonnes'** waste diverted for 2018**.** Therefore, the Province has met the national waste diversion target of 25% waste diverted by 2019. Based on the waste information provided to the Department by the municipalities, **2 395 791 tonnes' general waste** has been generated in the Western Cape Province.

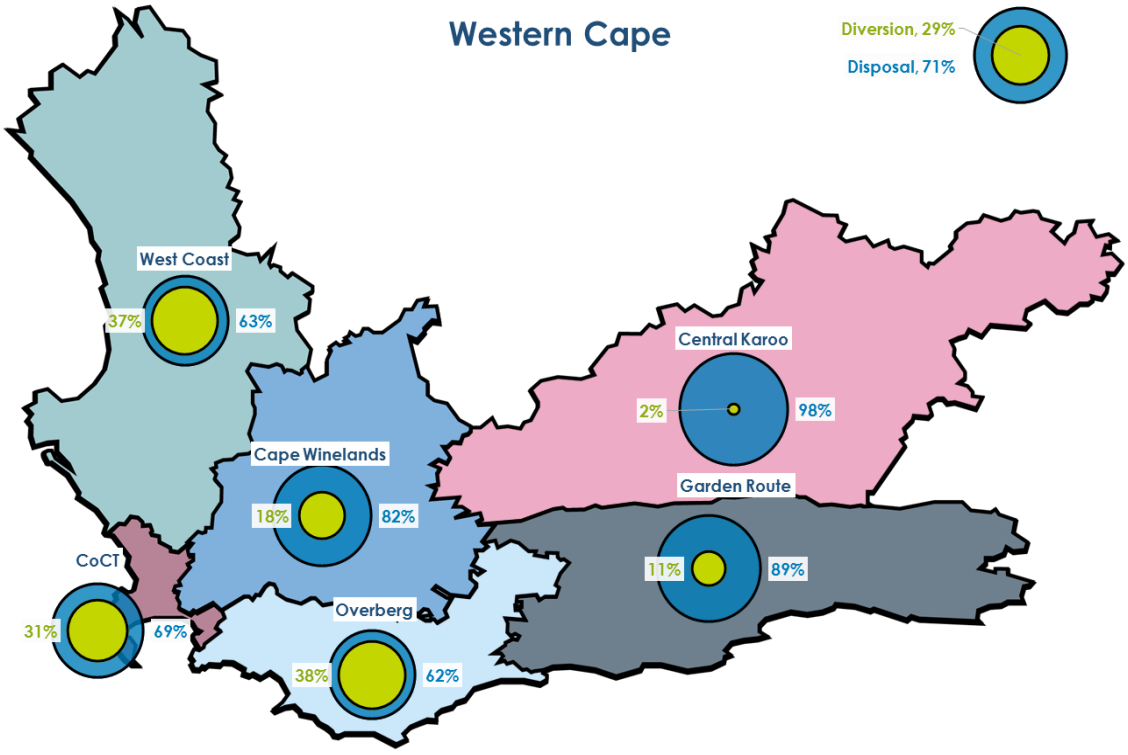



Figure 15: Waste activities in the Western Cape 2018

[7] The Western Cape diversion rate of 29% was calculated using the percentage (%) of municipal waste diverted reported, based on the waste generated in the municipality, in 2018.

**Table 9** provides a summary of all the diversion rates that contributed to the waste diverted in the Western Cape (29%). The rates range from 1% to 70%, with the least diversion taking place in the Central Karoo District.

[8]Table 9: Municipal waste diversion contribution to the Western Cape diversion rate (29%) - 2018

| MUNICIPALITIES | WC DIVERSION CONTRIBUTION (T) 2018 | WC DIVERSION CONTRIBUTION (%) 2018 |
|---|---|---|
| OVERBERG DISTRICT | 56 041 | 8 |
| WEST COAST DISTRICT | 73 989 | 11 |
| CITY OF CAPE TOWN | 480 097 | 70 |
| CAPE WINELANDS DISTRICT | 57 987 | 9 |
| GARDEN ROUTE DISTRICT | 16 766 | 2 |
| CENTRAL KAROO DISTRICT | 73 | 0 |

### 5.2.1 General waste summary for Overberg District Municipality (ODM)

The ODM has one (1) waste disposal facility namely Karwyderskraal WDF. The waste reporting for these facilities is being administrated by the Overstrand Municipality for Karwyderskraal WDF (2018). It should also be noted that the calculations for Karwyderskraal WDF, is also included for Overstrand, as they are currently managing the facility and accepts waste from other municipalities. In 2019, waste reporting for Karwyderskraal WDF will revert back to the ODM.

Theewaterskloof and Overstrand dispose at Karwyderskraal WDF, where **8 247 tonnes' municipal waste** disposed, was generated in the Theewaterskloof Municipality.

[8] This table represents the municipal waste diversion contribution per district municipality to the overall Western Cape diversion rate of 29%.

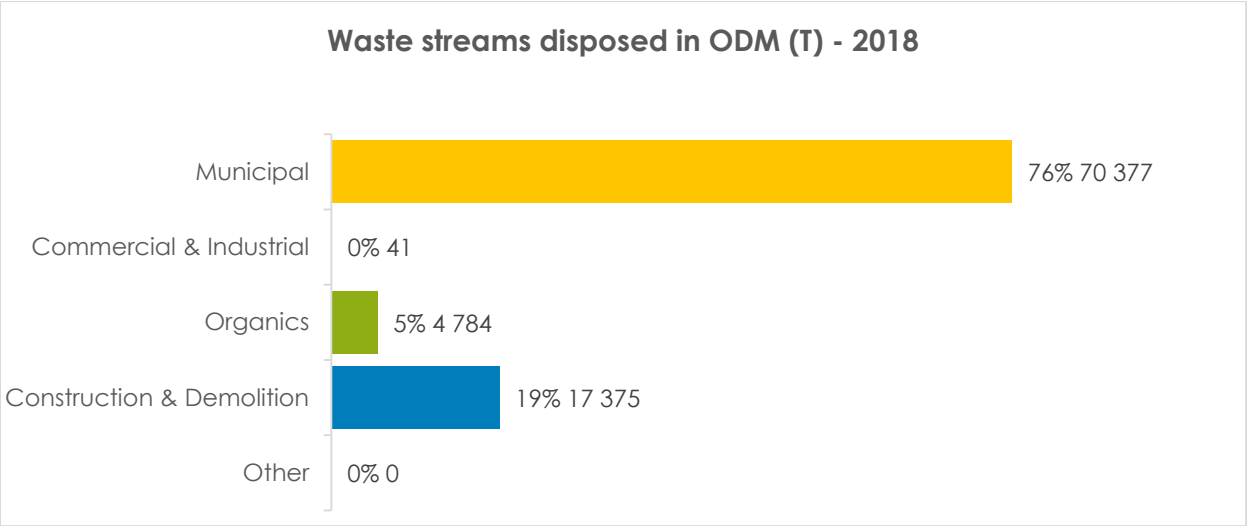



**Figure 16: Waste disposed in ODM – 2018**

The District has a reporting rate of [9]97% for the year. ODM had an expected population of 299 661 for 2018, where **92 576 tonnes' general waste** was disposed and **56 041 tonnes** diverted. Of these totals, 62% and 38% of waste generated in the ODM was disposed and diverted, respectively. The total waste disposed includes municipal, construction, commercial and organic waste types in **Figure 16**. Municipal waste contributed towards **70 377 tonnes** (76%) of the waste disposed.

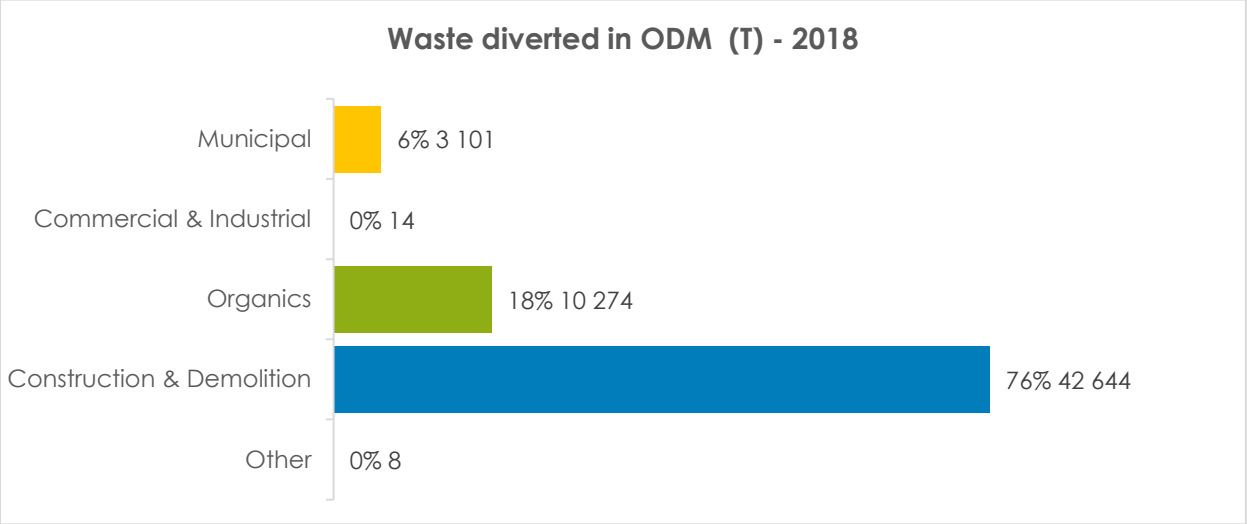



**Figure 17: Waste diverted in ODM - 2018**

9 The Departmental reporting rates for waste information is based on the required frequency and submission of waste reports and supporting documentation via IPWIS and the Waste Calculators, over a calendar year and represented as a percentage.

Construction and Demolition Waste contributed towards **76%** and organics, **18%**, of the waste diverted in the ODM, see **Figure 17**. The highest waste diversion contribution for a municipality in the ODM is from Overstrand, with **51%,** of which **78%** is attributed to cover material. Swellendam Municipality only records waste collected by municipal refuse vehicles and thus low values can be attributed to the omission of waste disposed by public drop off and businesses in the area.

Overstrand, as an urban area, generates proportionally more organic waste than Cape Agulhas but most of this is diverted from landfill through chipping or composting facilities. The Overstrand Municipality has diverted **54 005 tonnes** and still contributes the most waste to the District, followed by Cape Agulhas Municipality with **1 293 tonnes,** see **Figure 18 .**

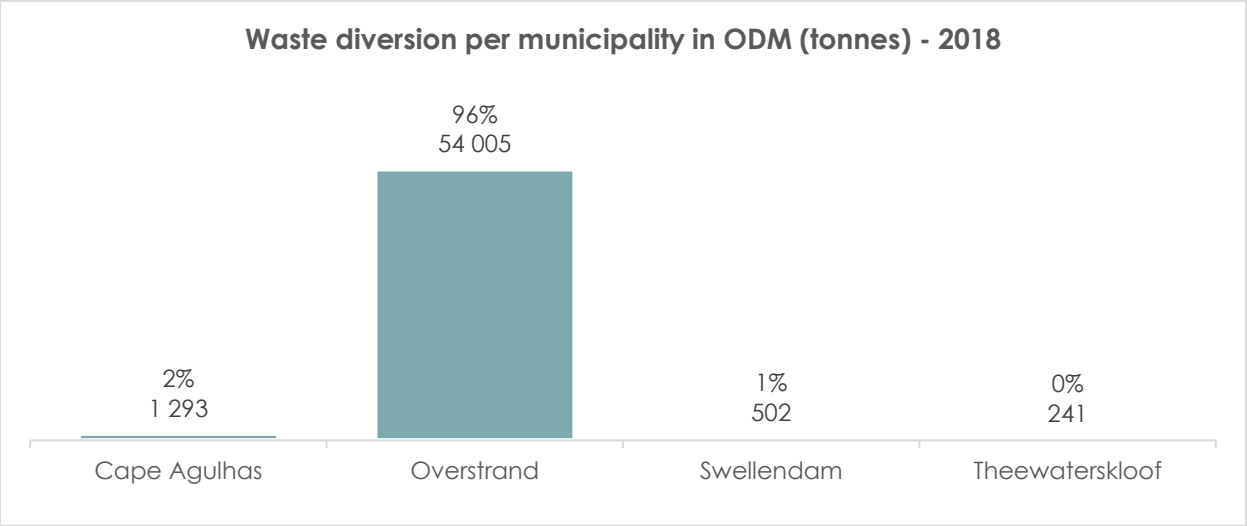



**Figure 18: Waste diversion in the Overberg DM – 2018**

### 5.2.2 General waste summary for West Coast District Municipality (WCDM)

The WCDM has a reporting rate of 91% for the year. The expected population for West Coast DM for 2018 is 456 530 and the total waste disposed was **125 881 tonnes.** Of these totals, 63% was disposed and 37% diverted in the district. In **Figure 19,** Municipal waste disposal contributed to **70%**, followed by Construction and demolition waste with **20%.**

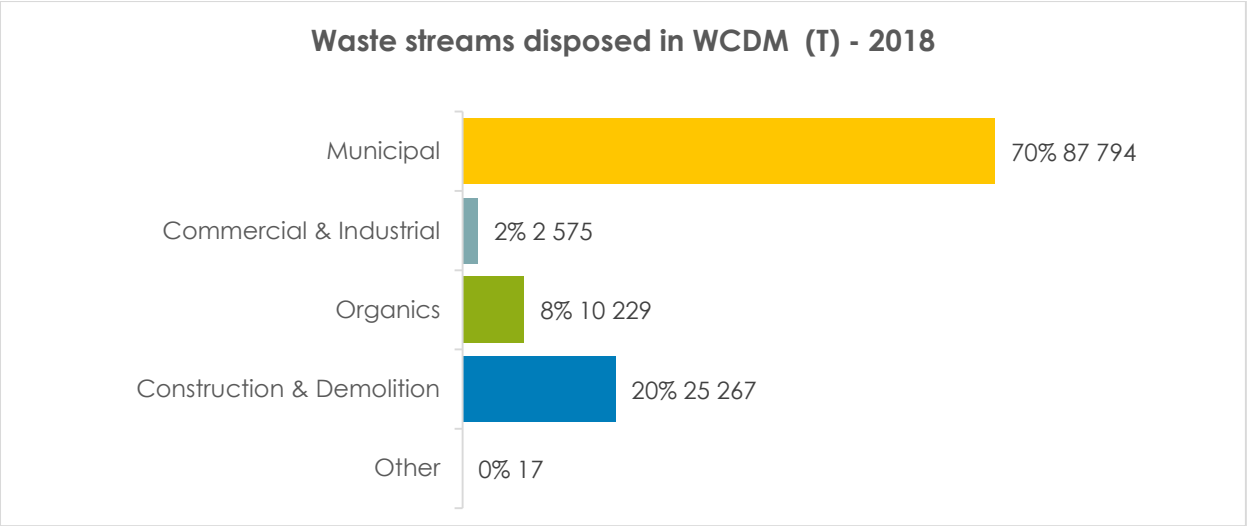



**Figure 19: Waste disposed in WCDM - 2018**

Furthermore, Swartland and Saldanha Bay Municipalities' waste disposal quantities includes municipal waste from the local municipality and quantities of waste generated in Bergrivier Municipality. Waste disposal trends for Swartland and Saldanha Bay Municipalities' shows a similar distribution, however, their waste diversion values differ significantly. In 2018, Saldanha Bay Municipality diverted **55 540 tonnes** compared to **12 128 tonnes** by Swartland Municipality in **Figure 20**. Saldanha Bay Municipality diverted **46%,** whereas Swartland diverted **22%** of their waste generated. The WCDM contributed towards **11%** of the waste diverted for the Province (**Table 9**).

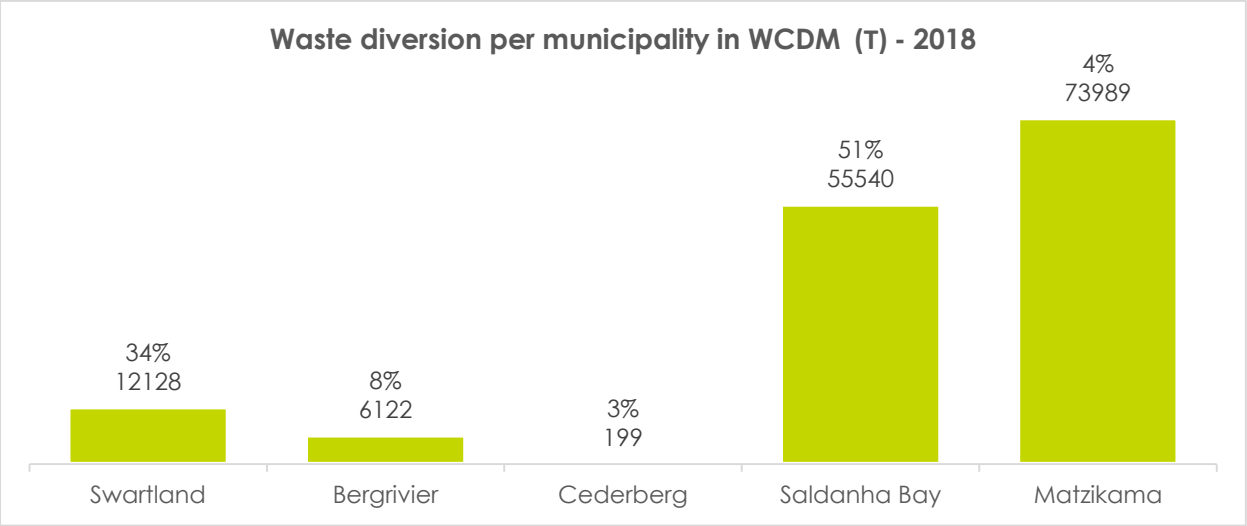



**Figure 20: Waste diversion in the West Coast DM – 2018**

Waste disposal trends for Cederberg and Matzikama Municipalities' shows it is similarly distributed. Matzikama Municipality has not reported any waste diversion for 2018.Vredenburg WDF and Vredenburg MRF are located on the same premises where municipal waste is recovered at the

MRF and the remaining waste is disposed. Bergrivier Municipality disposed of **10 667 tonnes' municipal waste** in Swartland and Saldanha Bay Municipality. Recycling is very active within the Bergrivier Municipality, as they have no WDFs and thus actively pursue waste reduction, as this decreased the waste management cost for the municipality. Construction and demolition waste contributed to **67 010 tonnes** diverted, with the CCT diverting the highest tonnage of construction waste, see **Figure 21**.

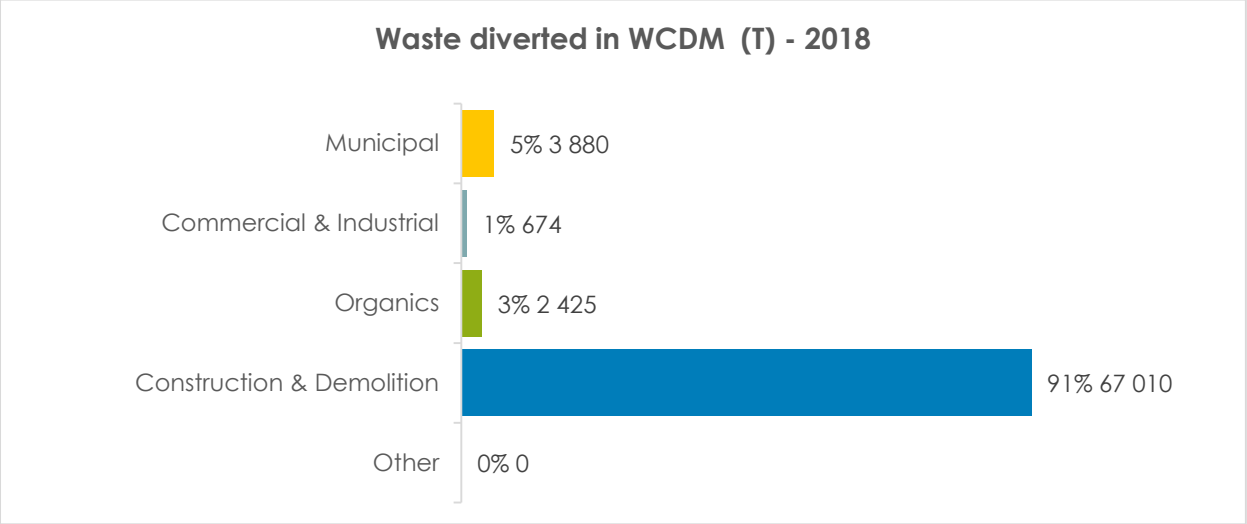



**Figure 21: Waste diverted per Municipality -2018**

### 5.2.3 General waste summary for City of Cape Town (CCT)

The City of Cape Town has an expected population of 4 119 566 and disposed **1 089 233 tonnes' waste** in the CCT in 2018. The CCT currently operates thirty (30) waste management facilities within the Metropole area. The City of Cape Town Metropolitan Municipality has a 100% reporting rate. They have disposed **69%** of the waste generated, where all the waste disposed was municipal waste **(100%),** see **Figure 22.** The CCT is currently diverting **31%** of the waste generated, mostly attributed to construction and demolition waste and organics in **Figure 23**. The highest percentage of waste diversion took place by the CCT, who contributed towards **70%** of the waste diverted in the Province, for 2018.

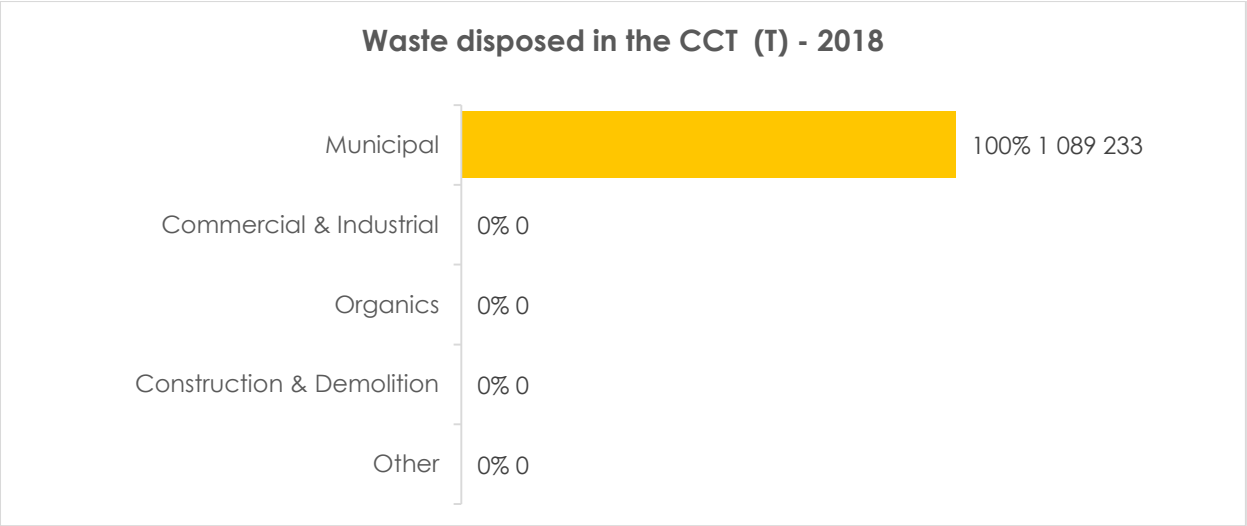



**Figure 22: Waste disposed in the City - 2018**

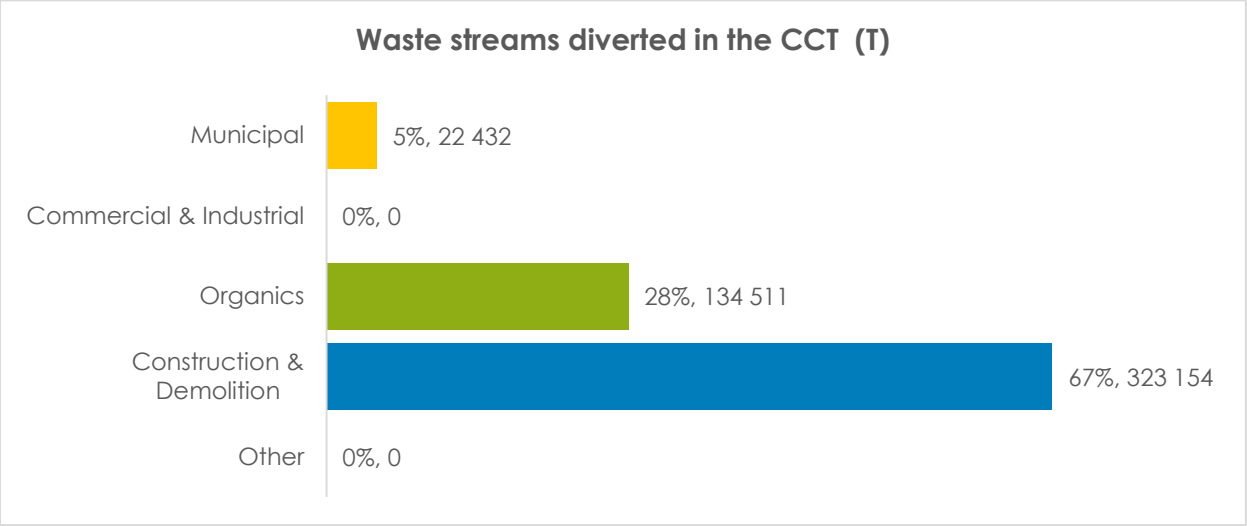



**Figure 23: Waste diverted in the City – 2018**

### 5.2.4 General waste summary for Cape Winelands District Municipality (CWDM)

There are five (5) local municipalities in the District namely Drakenstein, Stellenbosch, Langeberg, Breede Valley and Witzenberg. The Cape Winelands DM has a 99% reporting rate. A total of **257 096 tonnes' general waste** has been disposed in 2018.

The proportion of waste disposed and diverted is 82% and 18%, respectively. The diversion rate for the CWDM is **18%.** In **Figure 24**, an amount of **127 184 tonnes' municipal waste** was disposed and **34 592 tonnes** was diverted was due to cover and fill material (crushing), see **Figure 25**. The supply of and demand for builders' rubble as an alternative to virgin material is growing. There is a strong focus by municipalities to divert rubble from landfill. The private sector is starting to consider builders' rubble as an alternative, in the context of rising virgin material costs. Crushing contracts

in Stellenbosch, green procurement by the private sector, and red tape reduction are further unlocking reuse potential of builders' rubble (GreenCape, 2018).

Stellenbosch Municipality contributed the most in terms of waste disposed and diverted in tonnage. Stellenbosch have increased their diversion declaration and efforts from 24 511 tonnes in 2017 to **38 382 tonnes** in 2018.

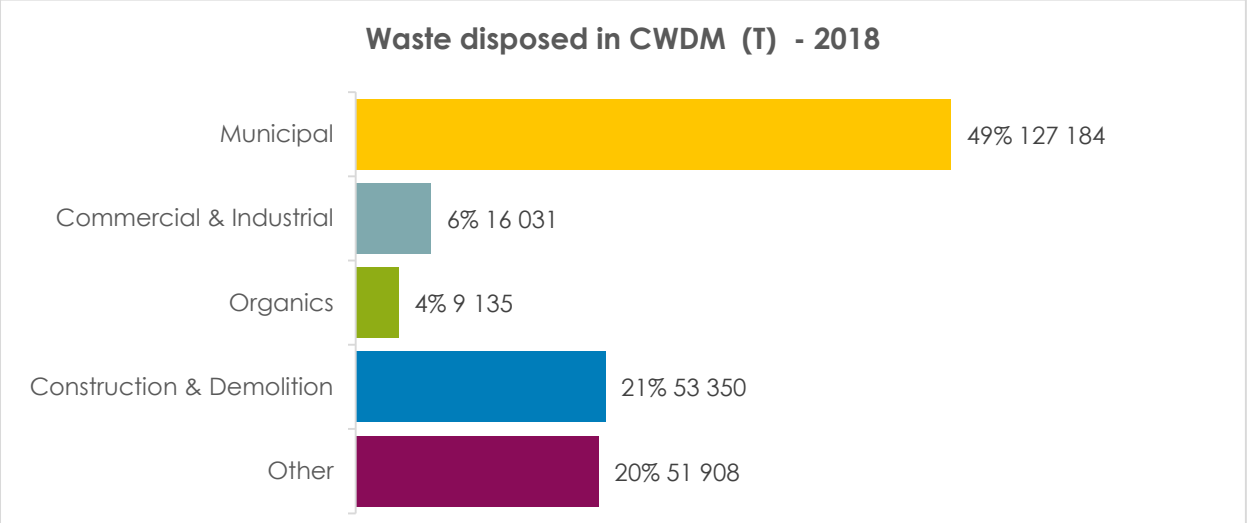



**Figure 24: Waste disposed in CWDM - 2018**

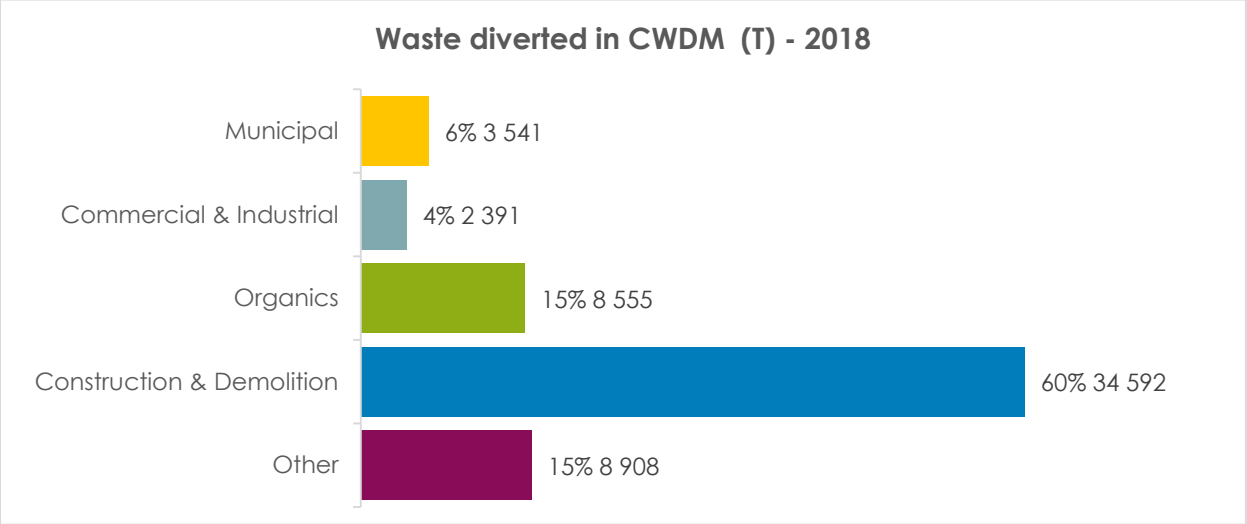



**Figure 25: CWDM waste diverted in 2018**

In **Figure 26**, Stellenbosch Municipality has embarked on an aggressive waste diversion exercise whilst efforts were made by Drakenstein Municipality. For the remaining municipalities there has been little or no reporting on waste diverted from landfill and in some cases waste minimization efforts do take place, on a very small scale, and is this might result in under reporting.

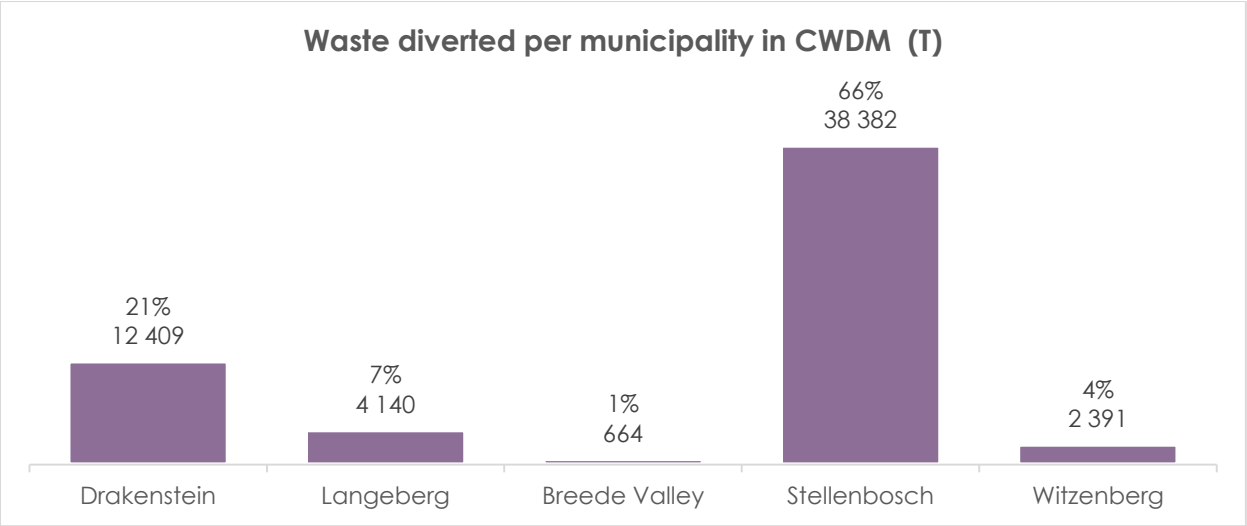



Figure 26: Waste diversion rates for CWDM – 2018

### 5.2.5 General waste summary for Garden Route District Municipality (GRDM)

There are six (6) local municipalities namely Kannaland, Mossel Bay, Knysna, Bitou, George and Oudtshoorn. PetroSA in Mossel Bay has a waste disposal facility that renders a service to certain municipalities within the GRDM, for general waste. However, PetroSA has prohibited green waste from entering its facility. No waste w disposal was reported for Oudtshoorn Municipality via the IPWIS nor the Waste Calculators. Therefore, the totals discussed in this section only represents five (5) of six (6) municipalities in the district. The GRDM has a reporting rate of 79% for the year.

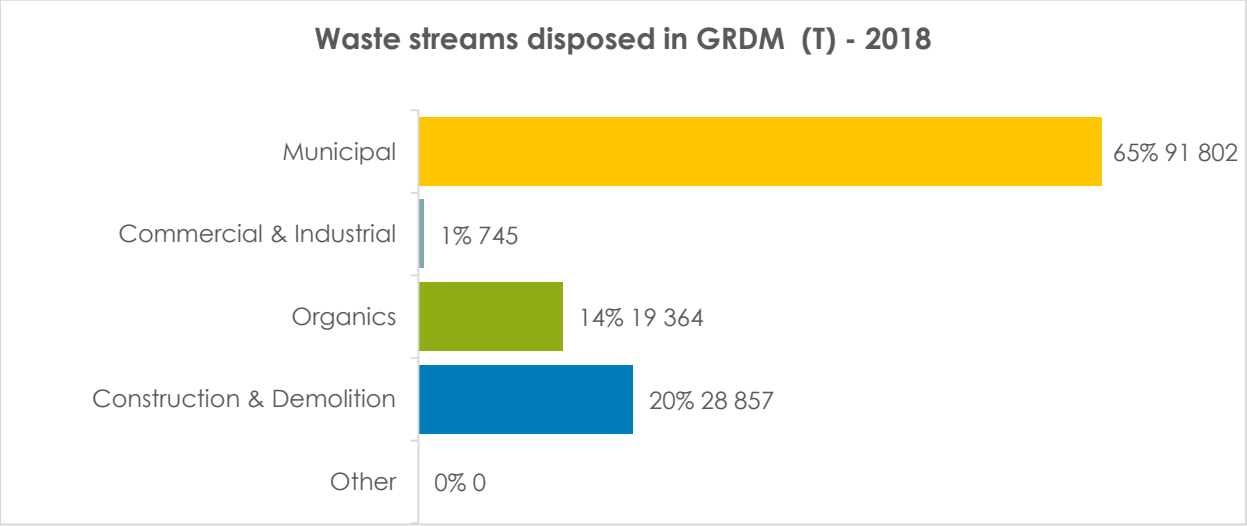



Figure 27: Waste disposed in Garden Route District - 2018

In **Figure 27, 91 802 tonnes' municipal waste** was disposed, followed by construction and demolition waste with 28 857 tonnes. Mossel Bay Municipality is still the biggest contributor of municipal waste disposed with **28 974 tonnes** for the year, of which **20 518 tonnes** is construction

and demolition waste. The GRDM has a waste diversion rate of 11%, where most of the waste diverted was attributed to municipal waste **(60%),** see **Figure 28**.

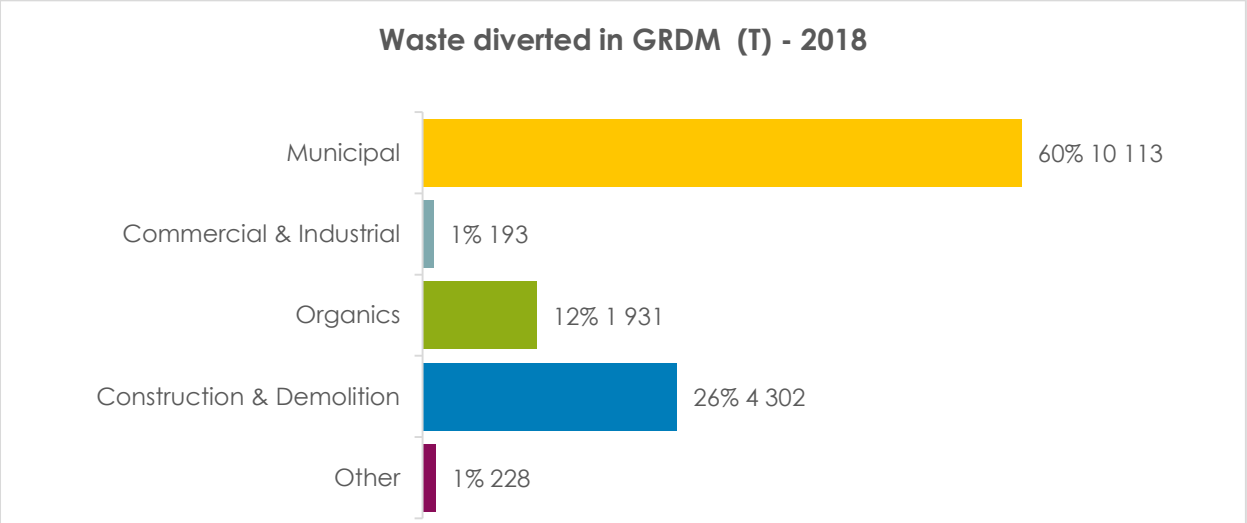



**Figure 28: Waste diverted in Garden Route District - 2017**

All municipalities in the district are reporting on waste disposed and diverted except Oudtshoorn and Kannaland Municipalities, see **Figure 29**.

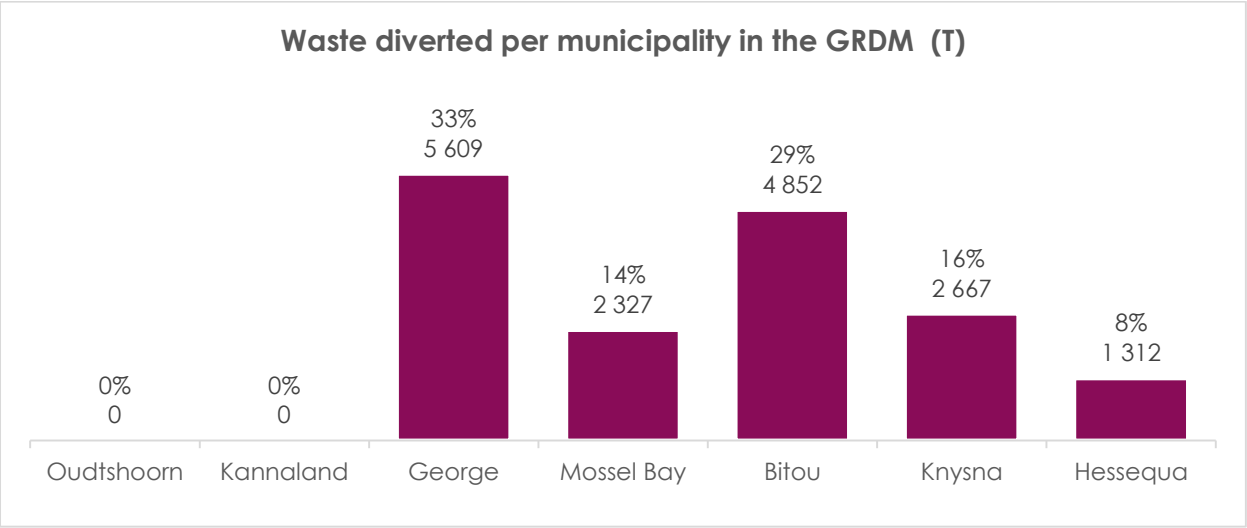



**Figure 29: Waste diversion rates for GRDM – 2018**

### 5.2.6 General waste summary for Central Karoo District Municipality (CKDM)

The CKDM has an expected population of 75 619 with a total disposal of **4 770 tonnes** in 2018. They have disposed 98% of the tonnage generated and is currently diverting 2% for the district. The most waste diverted was municipal waste with **2 212 tonnes**, see **Figure 30**. This is indicative that diversion

efforts may be from business in the area. Beaufort West Municipality with **2 690 tonnes,** with the highest tonnage on the district.

Beaufort West Municipality has increased the frequency of their reporting for the two (2) facilities, namely Beaufort West Recycling and Vaalkoppies Landfill. Municipal reporting is still falling short from waste management facilities situated on the outskirts such as Nelspoort, Murraysburg, and Merweville.

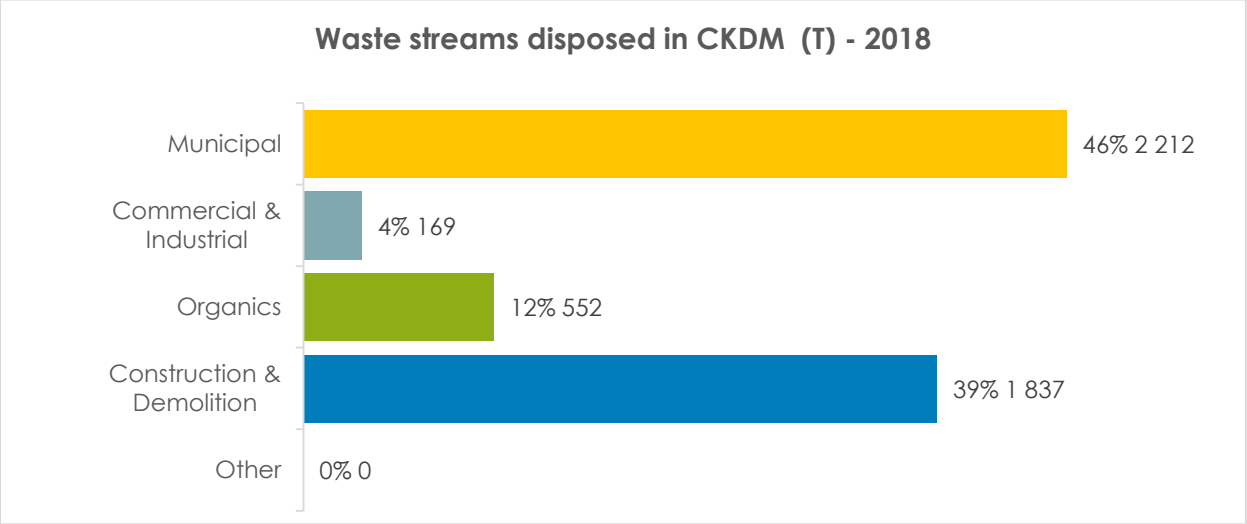



**Figure 30: Waste disposed in CKDM - 2018**

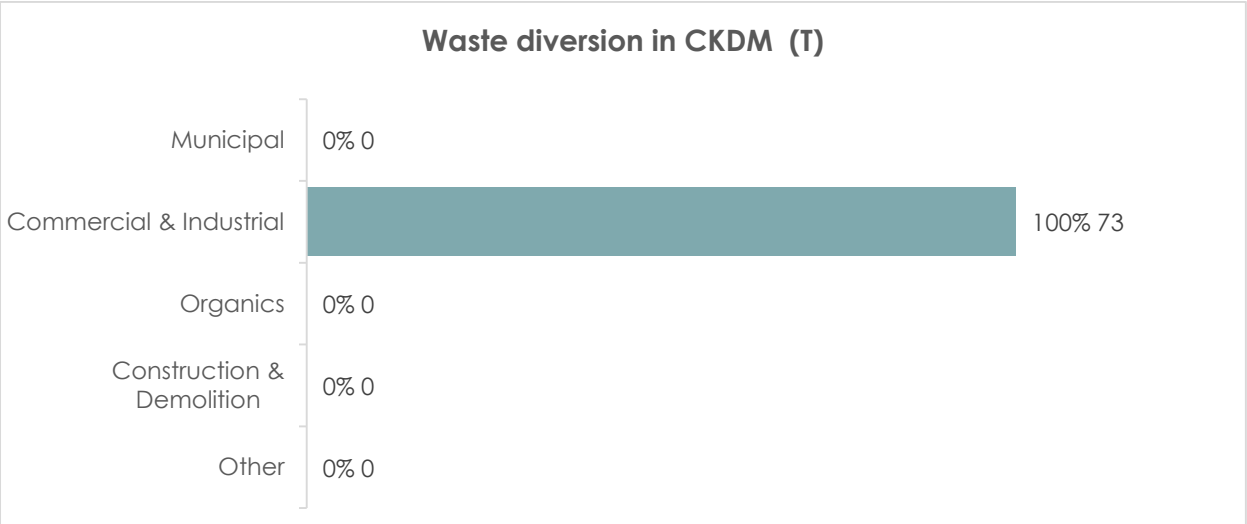



**Figure 31: Waste composition for CKDM - 2017**

Beaufort West Municipality was the only municipality reporting on waste diversion for 2018, with **73 tonnes** diverted for commercial and demolition waste, see **Figure 31** and **Figure 32.** The overall reporting rate and low percentage diversion is an indication that municipalities are heavily challenged in meeting their reporting obligations in terms of IPWIS. Challenges experiences are

staff shortages linked to limited financial and human resources, dedicated data capturers and lack of access control at WDFs.

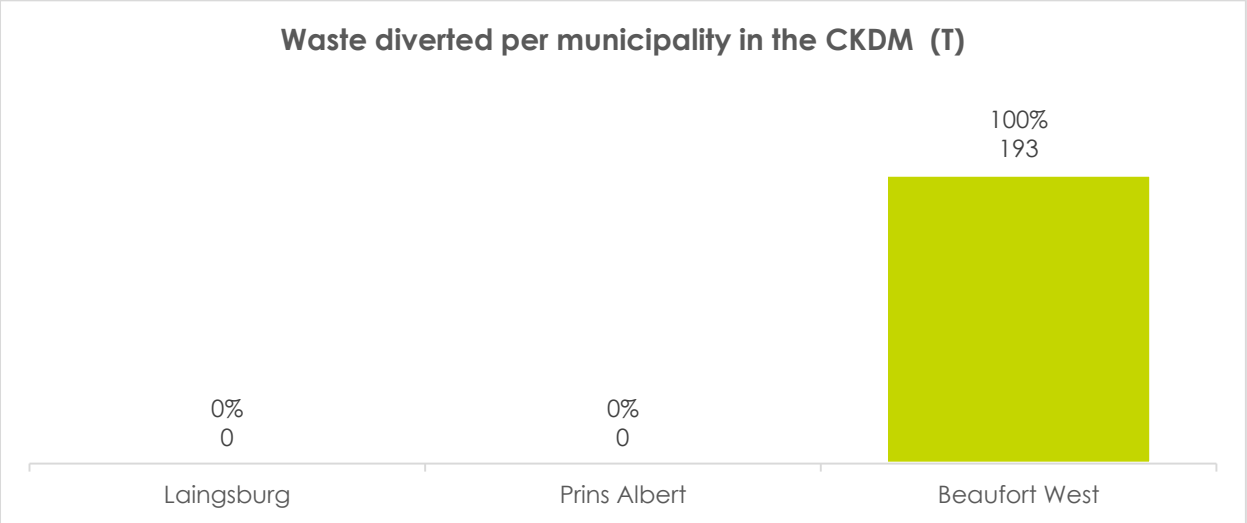



**Figure 32: Waste diversion rates for CKDM – 2018**

# 6. FUNDING FOR WASTE MANAGEMENT SERVICES

- **35 posts filled in Waste Management;**
- **Total Waste Management Budget R21 159 580 (3.54% increase);**
- **OPEX: R1 972 838 000; and**
- **CAPEX: R243 275 000**

## 6.1 COST OF PROVINCIAL WASTE MANAGEMENT SERVICES

**Table 10** below reflect the cost of Waste Management for the DEA&DP in the 2018 calendar year.

Table 10: Operational cost for Directorate Waste Management

| TYPE OF EXPENDITURE | AMOUNTS |
|---|---|
| Compensation of employees | R18 403 715.10 |
| Goods and services | R2 377 743.55 |
| Transfers and subsidies | R21 063.27 |
| Capital assets | R357 058.77 |
| **GRAND TOTAL** | **R21 159 580.69** |

Together with the cost for projects, total cost of Waste Management to the Provincial Government is **R 21 159 580.69,** a **3.54%** increase from 2017. In 2018, the Waste Directorate had 58 posts, of which 35 posts were filled, a **6%** increase since 2017.

## 6.2 COST OF MUNICIPAL WASTE MANAGEMENT SERVICES

Municipalities are legally required to submit revenue and expenditure statistics, which is then aggregated from the annual budgets by National Treasury and the relevant provincial treasury. This information is presented for the 2018/19 financial year, over the medium-term period. The Department obtained the financial OPEX and CAPEX (audited) for all local municipalities from Provincial Treasury relating to financial summaries allocated towards waste management services in 2018.

[10]Total municipal expenditure in 2018/19 is estimated to be R441.6 billion, increasing to R467.9 billion in 2019/20 and R495 billion in 2020/21. Expenditure for 2018/19 is 5.7 per cent higher than the 2017/18 MTREF. Municipal operating expenditure on the trading services consisting of water, electricity, waste water management and waste management is budgeted to increase from R174.7 billion in 2017/18 to R184.3 billion in 2018/19. In 2018/19 this equates to half of the total operating expenditure of municipalities. Capital expenditure has increased by 3.9 per cent compared to the 2017/18 MTREF. Of the overall budget of municipalities, capital expenditure in aggregate represents 16.6 per cent in 2018/19, 15.9 per cent in 2019/20 and 15.2 per cent in 2020/21. Total capital expenditure for 2018/19 is R73.4 billion and comprises R33.6 billion for trading services (electricity, water, waste water management and waste management). Expenditure on the four trading services will increase to R36.5 billion and to R37.2 billion in the outer years of the MTREF.

**Table 11** represents the total municipal operational and capital expenditure for 2018 as **R1 972 838 000** and **R243 275 000** respectively.

**Table 11: Opex and Capex for 2018**

| MUNICIPALITIES | OPEX | CAPEX |
|---|---|---|
| CITY OF CAPE TOWN | R1 363 780 000 | R158 953 000 |
| BREEDE VALLEY | R34 397 000 | R9 775 000 |
| CAPE WINELANDS DISTRICT | R0 | R274 000 |
| DRAKENSTEIN | R66 243 000 | R5 744 000 |
| LANGEBERG | R24 188 000 | R976 000 |
| STELLENBOSCH | R38 904 000 | R7 669 000 |
| WITZENBERG | R32 499 000 | R3 635 000 |
| BEAUFORT WEST | R11 986 000 | R0 |
| CENTRAL KAROO DISTRICT | R0 | R0 |
| LAINGSBURG | R902 000 | R0 |
| PRINS ALBERT | R1 334 000 | R1 344 000 |

10http://www.treasury.gov.za/comm_media/press/2018/2018111501%20Media%20Statement%20%20-%202018%20MTREF%20for%20SA%20municipalities.pdf

| MUNICIPALITIES | OPEX | CAPEX |
|---|---|---|
| BITOU | R20 566 000 | R174 000 |
| GARDEN ROUTE DISTRICT | R0 | R0 |
| GEORGE | R62 340 000 | R8 052 000 |
| HESSEQUA | R18 514 000 | R1 387 000 |
| KANNALAND | R5 251 000 | R0 |
| KNYSNA | R32 491 000 | R5 335 000 |
| MOSSEL BAY | R31 417 000 | R828 000 |
| OUDTSHOORN | R16 907 000 | R858 000 |
| CAPE AGULHAS | R9 408 000 | R1 922 000 |
| OVERBERG DISTRICT | R1 018 000 | R7 328 000 |
| OVERSTRAND | R49 324 000 | R1 485 000 |
| SWELLENDAM | R6 264 000 | R12 000 |
| THEEWATERSKLOOF | R28 126 000 | R1 207 000 |
| BERGRIVIER | R13 110 000 | R2 715 000 |
| CEDERBERG | R10 093 000 | R21 000 |
| MATZIKAMA | R14 953 000 | R147 000 |
| SALDANHA BAY | R54 411 000 | R17 650 000 |
| SWARTLAND | R24 412 000 | R5 784 000 |
| WEST COAST DISTRICT | R0 | R0 |

**Note**: All the municipalities have spent budgets on operational requirements however, at the time the data was requested and extracted, "R0" results were obtained for certain municipalities and might not be an accurate representation of the Opex and Capex for 2018.

# 7. WASTE STREAMS OF SPECIAL INTEREST TO DEA&DP

- **Plastics make up 3% of waste generated annually;**
- **322 000 T E-waste produced per year; and**
- **232 813 T hazardous waste generated in 2018**

## 7.1 ORGANIC WASTE

The Department has implemented a diversion plan to ban 50 % of organics to landfill by 2022 and a total ban of organics to landfill by 2027. The diversion on organics will also ensure that national targets are met and negate the need for municipalities to comply with stricter landfill design, as these have financial implications for municipalities. The plan will however, require municipalities to set annual targets and identify mechanisms to meet these targets, thereby extending the lifespan of landfills.

The provincial position is therefore to maximise the diversion of organics from landfills towards value adding opportunities. The Department had various engagements between the organic beneficiation technology owners and generators of problematic organic waste types, such as abattoir and green waste. These engagements were very fruitful as it created awareness within the sector, opportunities to divert organic waste from landfill and improved compliance. The Department conducted status quo studies on organic waste and produced guidelines for the management of abattoir and green waste, to be used at stakeholder engagements.

To ensure the implementation of the ban a roadmap to minimise organic waste from landfill was developed and presented at two engagements in the Garden Route and Cape Winelands District Municipalities respectively. Through these workshops, municipalities would be fully equipped to identify their needs and to develop their own organic waste diversion plan for their areas and successfully implement projects and meet the waste diversion targets that have been set.

**Figure 33** shows the total amount and sources of organic waste, i.e. waste of biological origin in the Western Cape, in relation to other waste streams indicated in grey shade (GreenCape, 2018).

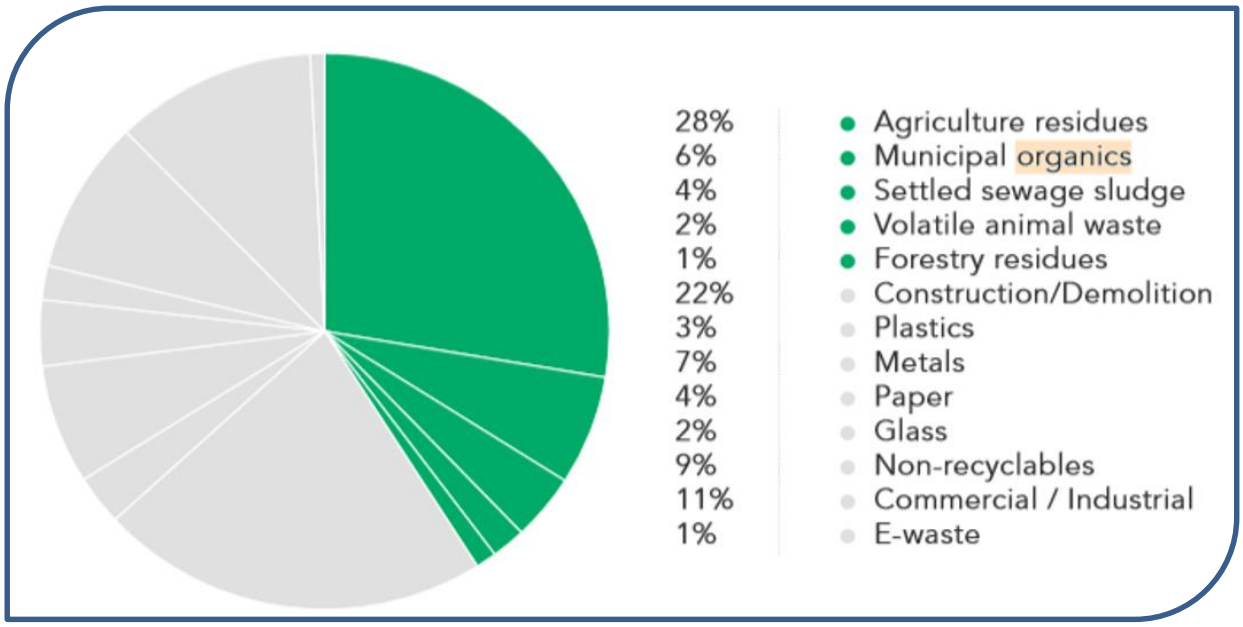



**Figure 33: Proportion of organics waste vs Total waste generated in the Western Cape.**

Source: (DEDAT, 2016)

## 7.2 PLASTICS

Plastics are currently taking centre stage in the world due to increased awareness of the impacts of these items on the world's oceans, ocean life and more recently, the ground. As in **Figure 34**, plastic makes up 3% (222 600 tonnes per year) of all waste generated in the Western Cape Province (DEDAT, 2016). The impacts of micro plastics are also being uncovered and have increased public awareness of the issue. Awareness around plastics has also increased locally resulting in various pressures for action to be taken. "Government wants everyday plastic products like earbuds banned. Plastic straws are being phased out and are being replaced by paper ones" (Felix, 2018). This indicates that government is looking at alternatives to plastics that are feasible and that won't unneccesarily skew the markets.

Internationally the circular economy is being adopted which results in products being designed with the aim to be reused and recycled again, thereby reducing the generation of waste that is generated. The forcus on plastic will start with problematic single-use plastics (straws, stirrers, earbuds), such as plastic bags. Any ban or provincial legislative intervention will necessitate a regulatory impact assessment to be completed which will identify a way forward for the Province.

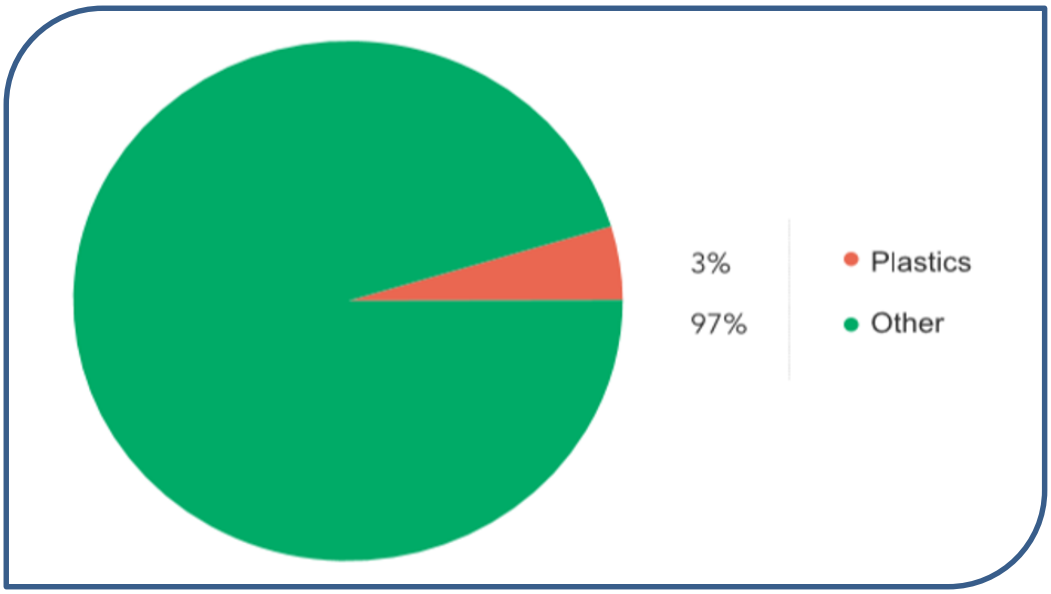



**Figure 34: Proportion of plastic waste relative to total waste generated in the Western Cape**

Source: (DEDAT, 2016)

## 7.3 CONSTRUCTION AND DEMOLITION WASTE

Construction and demolition waste. Is also referred to as Builders' rubble and makes up a large percentage of the waste generated in the Western Cape. Builders' rubble is still generally treated as a waste stream and sent to landfill or illegally dumped, despite its reuse potential as a secondary material. As of July 2017, the CCT has amassed an estimated 40 157 $m^3$ of clean builders' rubble at its three landfills. At a value of around R140/ $m^3$, the total value of the stockpiles is estimated at R5.6 million. CCT has awarded a three-year crushing contract at its three landfills (GreenCape, 2018).

[11]Operation Phakisa is an initiative by government to fast track the implementation of solutions on critical development issues under the National Development Plan. One of the 20 initiatives highlighted at the Phakisa is construction and demolition waste, with builders' rubble included as the largest component (GreenCape, 2018). The DEA has since proposed that both government and private sector procurement tender policies specify that new buildings and roads include 30% recycled construction material. In the Western Cape, approximately 1.7 million tonnes of builders' rubble are generated annually, with 1.1 million tonnes (64%) generated in the CCT alone (DEDAT, 2016).

11 Operation Phakisa - The DEA hosted a five-week chemical and waste economy Phakisa between July and August 2017 to discuss the state of waste in the country and to identify key work areas. The participation by business, government and civil society identified 20 key initiatives across four work streams

In 2018, the Department drafted a Construction and Demolition Waste (C&DW) Management Guideline. There was a need to assist municipalities with the management, diversion and beneficial use of this specific waste stream. The guideline includes a policy and legislative overview of C&DW and highlights key concepts applicable to reusing/recycling waste. It provides an overview of the benefits of and barriers to C&DW recycling in the province and proposes mechanisms for facilitating recovery and increasing diversion.

## 7.4 ELECTRONIC WASTE (E-WASTE)

The greatest challenge facing the e-waste sector is access to e-waste. The actual tonnages of e-waste produced in South Africa are uncertain, and the methods used to provide estimates vary. This will ensure access to feedstock, and support demand for recovered constituents. [12]DEDAT (2016) reported that the Western Cape generated an estimated 62 300 tonnes of e-waste in 2015 with the CCT generating an estimated 43 600 tonnes (70%). This has the potential to create between 1500 and 1800 jobs, assuming the sector accesses all available e-waste in the Western Cape. (GreenCape, 2018).

According to the e-Waste Association of South Africa (Ewasa), approximately **322 000 tonnes** of electronic waste is produced per year. Further, that e-waste recycling is in its infancy in South Africa and relatively immature in terms of the emerging enterprises and entrants into the market. There is a need for local beneficiation of e-waste fractions to create new enterprises, jobs and growth within this emerging sector in the green economy. As part of efforts to curb the export of e-waste,

Ewasa has embarked on a programme that is coupled to the outcomes of the Operation Phakisa on Chemicals and Waste Economy of South Africa and with the Industry Waste Management Plan for e-waste. (Arnoldi, 2018). It is anticipated that the e-waste IndWMP will include a national collection scheme to assist with financing the development of collection infrastructure. [13]Both the Waste Act and the National Environmental Management Act of 1998, provide guidelines for how e-waste should be managed. The section 28 notice indicates that the manufacturer will be responsible for managing a product from the beginning to the end of its life.

In 2017, DEA&DP drafted a Status Quo Report on e-Waste and conducted meetings with key stakeholders to identify any possible overlapping of efforts and ensure outputs contributed to the e-waste sector.

12 The Western Cape Waste Economy Business Case: Gap Analysis developed by Department of Economic Development and Tourism.

13 https://mg.co.za/article/2018-03-16-00-south-africans-are-drowning-in-e-waste

## 7.5 HAZARDOUS WASTE

The DEA&DP drafted a Hazardous Waste Status Quo Report in 2017 and highlights the hazardous waste streams that require attention. The recommendations of the Hazardous Waste Status Quo Report are incorporated into the WC IWMP implementation plan. There are only two (2) waste disposal facilities within the Western Cape Province that are authorized and capable of accepting hazardous waste for disposal namely the City of Cape Town's Vissershok Landfill site and the privately owned, Vissershok Pty Ltd, Enviroserv/Averda Landfill site. **Figure 35** represents a comparison of the hazardous waste received and disposed at these 2 premises.

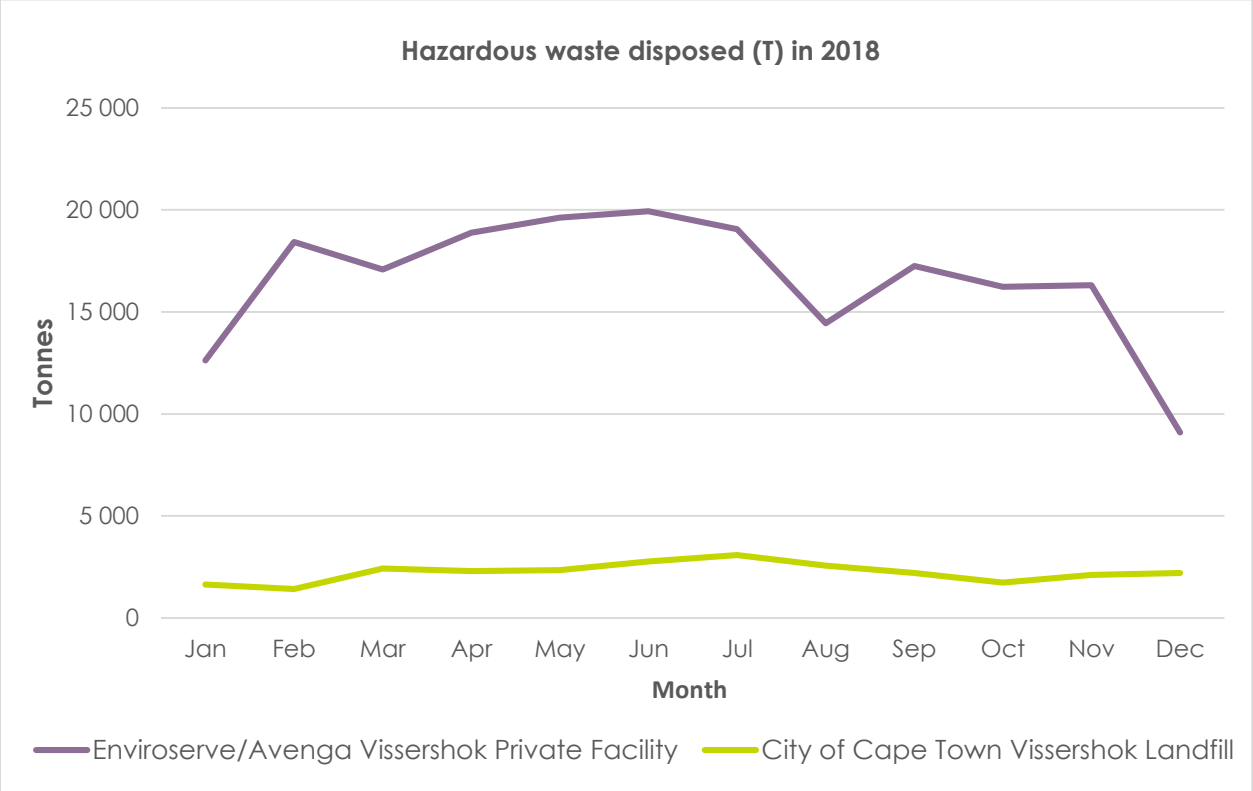



**Figure 35: Hazardous waste disposed at the CCT and Enviroserv/Averda**

A total amount of **232 813.23 tonnes** of hazardous waste was disposed during 2018 in Western Cape.

Inspection of data provided for 2018 from Vissershok Pty Ltd hazardous waste management facility has shown that inorganic hazardous waste and sewage sludge, contribute the majority of the waste that is disposed, see **Table 12.**

Table 12: Various waste streams disposed at Vissershok Pty Ltd Hazardous WMF- 2018

| WASTE TYPES | SAWIS CODES | 2018 (T) |
|---|---|---|
| MERCURY CONTAINING WASTE | HW02 | 0.2 |
| INORGANIC WASTE | HW05 | 107 266 |
| ASBESTOS CONTAINING WASTE | HW06 | 6 683.72 |
| WASTE OILS | HW07 | 1 636.18 |
| OTHER ORGANIC WASTE WITHOUT HALOGEN OR SULPHUR | HW11 | 1 2837.5 |
| TARRY & BITUMINOUS WASTE | HW12 | 162.09 |
| BOTTOM ASH | HW15 | 103.72 |
| MINERAL WASTE | HW17 | 1095.5 |
| HEALTH CARE RISK WASTE | HW19 | 151.86 |
| SEWAGE SLUDGE | HW20 | 54 590 |
| MISCELLANEOUS | HW99 | 15 062.4 |

### 7.5.1 Health Care Risk Waste

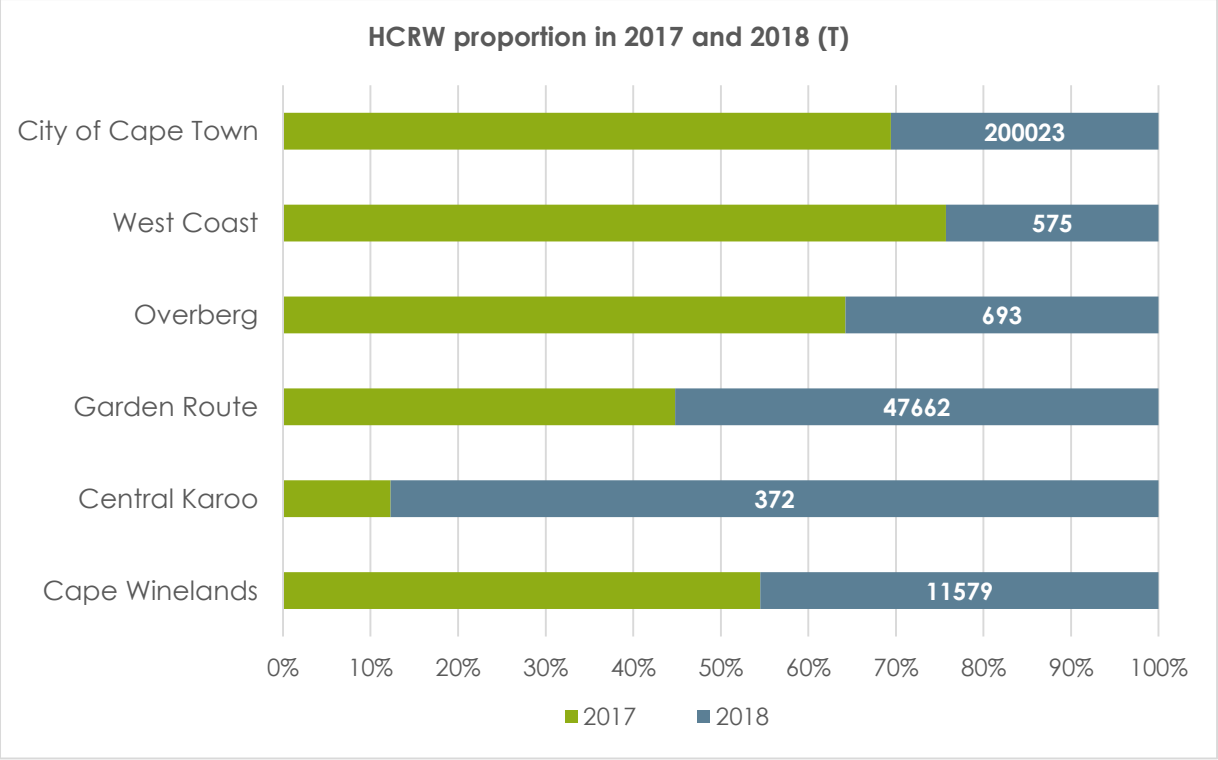



Figure 36: HCRW comparison since 2017

Health Care Risk Waste (HCRW), being a category of Hazardous waste, generated and reported has decreased by **49%** since 2017, see **Figure 36**.

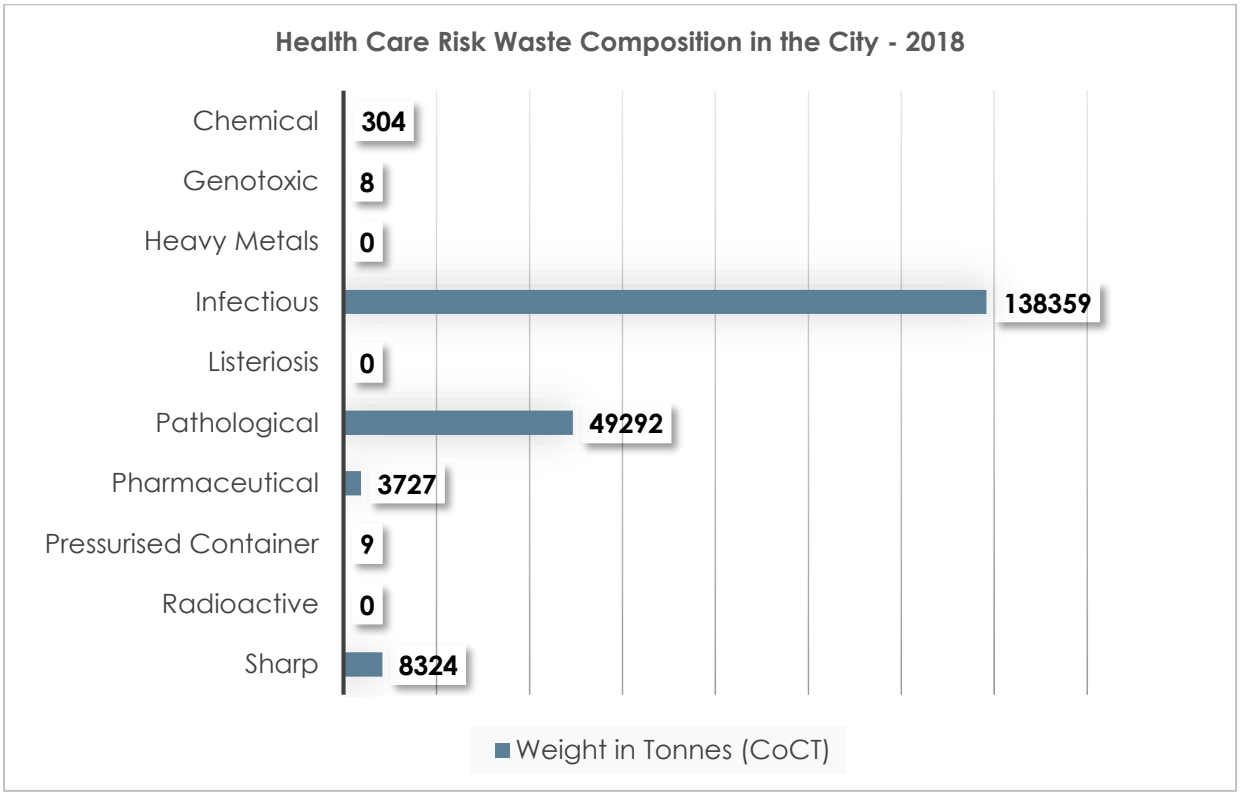



**Figure 37: Western Cape HCRW generation for 2018**

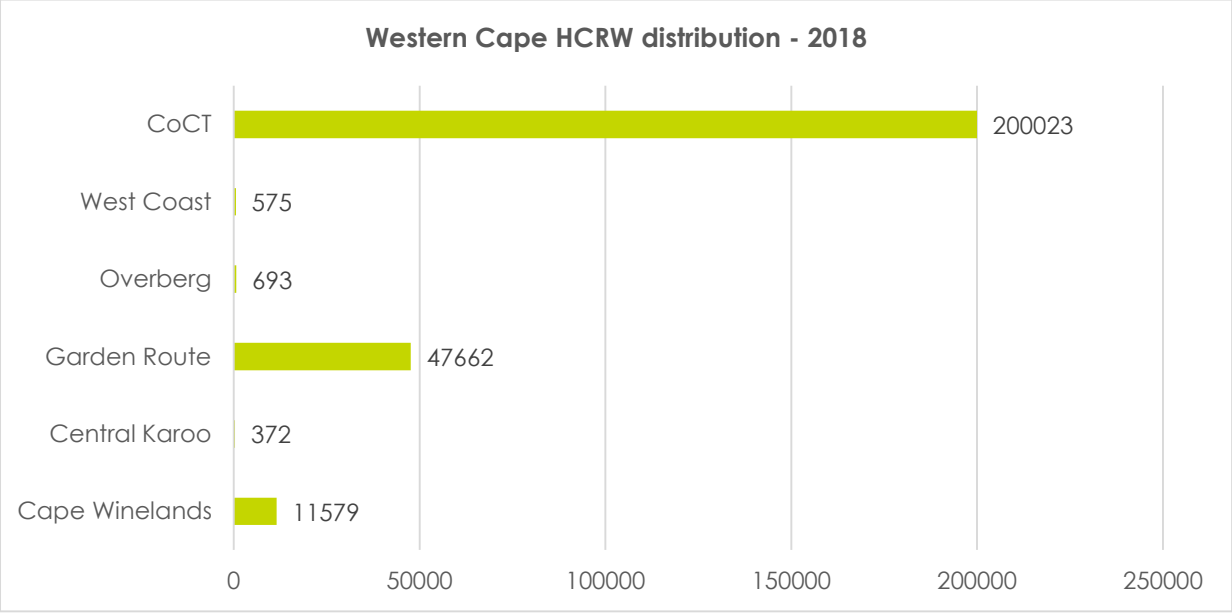



**Figure 38: HCRW generated in the Western Cape – 2018**

In **Figure 37** and **Figure 38** , the CCT generated **200 0233 tonnes** of HCRW in the Province, mostly due to Infectious and Pathological waste. while the least was generated in the CKDM area with 372 tonnes.

The implementation of the Western Cape's health care waste management legislation is critical for the responsible management of health care risk waste in the Province. The designation of Inspectors under the Health Care Waste Management Act (HCWMA) (Act No. 7 of 2007) helps the province to adequately manage the inherent risks involved. Subsequent to the making and the promulgation of the Act, challenges were experienced in the enforcement of the Health Care Risk Waste Management Regulations (HCRWMR) because the designation of Health Care Waste Inspectors was not addressed in the Act and the Regulations.

For the Department to monitor and play an oversight role in this sector, inspectors were required to be appointed. A policy was developed which set out the process to be followed by the Department in order to appoint Inspectors to perform an oversight role through inspections.

There has since been thirty -two (32) officers designated under the Act and Regulations, as prescribed in the policy. The status on appointed health care waste inspectors in the Western Cape are as seen in **Table 13**

Table 13: Status of Health Care Waste Inspectors in the Western Cape

| MUNICIPALITY | NUMBER OF EHPs | NUMBER OF DESIGNATED HEALTH CARE WASTE INSPECTORS | STATUS |
|---|---|---|---|
| DEA&DP | - | 32 | Formal designation |
| CCT | 140 | 140 | Formal designation |
| OVERBERG DISTRICT | 17 | 17 | Automatic designation (as per Western Cape Health Care Waste Management Act), National Health Act S80, Environmental Health By-law |
| GARDEN ROUTE DISTRICT | 44 | - | Perform inspections at facilities that generate health care waste as per National Health Act appointment. |
| CENTRAL KAROO DISTRICT | 5 | - | Perform inspections at facilities that generate health care waste as per National Health Act appointment. |
| CAPE WINELANDS DISTRICT | 51 (46 operational; 7 management) | - | Perform inspections at facilities that generate health care waste as per National Health Act appointment. |
| WEST COAST DISTRICT | 29 | - | Perform inspections at facilities that generate health care waste as per National Health Act appointment. |

# 8. WASTE COLLECTION

- **Waste tariffs are a key source for municipal revenues; and**
- **CCT provides 100% household waste collection service.**

## 8.1 MUNICIPAL WASTE COLLECTION - 2018

The GMC Integrated Waste Management Evaluation for 2017 included the evaluation of waste collection systems available and implemented for business and commercial properties, as well as farms, by the Municipality. As the GMC was not evaluated in 2018, information from the previous financial year was being used. The GMC will take place every second year and the information updated accordingly. Municipal waste collection standards determine the waste minimisation interventions to be implemented. It also determines whether the current tariff system applied is relevant to the real cost of waste disposal. **Appendices: Table 21 – 30** represents the municipal waste collection service and waste tariffs of municipalities, participating in the Greenest Municipality Competition.

Tariffs provide one of the most significant sources of revenue for a municipality, as it seeks to recover the costs for waste collection services provided to the community. In terms of the Constitution and the Municipal Systems Act (No. 32 of2000) (MSA), municipalities are responsible for ensuring that adequate waste collection and disposal facilities are available to meet the need within their municipal area. Seventeen (17) out of the 25 municipalities, including the CCT, provide households with 100% to solid waste removal services, where the lowest service level being Kannaland with 69%. **Table 14** represents the information obtained from the 2016/17 Municipal Annual Reports. In addition, tariffs offer a unique opportunity for municipalities to inform, educate and influence their customers and to establish a communication which is transparent, accurate and customer-oriented. By communicating how tariffs are calculated and which strategic decisions the municipality is making around its finances, consumers' willingness to pay may be affected. Municipal tariff systems are important as they encourage the implementation of programmes that will extend the lifespan of waste disposal facilities. It also demonstrates the importance of the availability of effective waste collection systems for households, business, commercial entities and farms.

Table 14: Waste Removal Services

| MUNICIPALITIES | BASIC SERVICES |
|---|---|
| CCT | 100 |
| MATZIKAMA | 100 |
| CEDERBERG | 100 |
| SALDANHA BAY | 100 |
| BERGRIVIER | 100 |
| SWARTLAND | 99 |
| STELLENBOSCH | 79 |
| DRAKENSTEIN | 100 |
| WITZENBERG | 100 |
| LANGEBERG | 79 |
| BREEDE VALLEY | 100 |
| SWELLENDAM | 99 |
| CAPE AGULHAS | 100 |
| OVERSTRAND | 100 |
| THEEWATERSKLOOF | 100 |
| HESSEQUA | 79 |
| KANNALAND | 69 |
| MOSSEL BAY | 98 |
| GEORGE | 100 |
| KNYSNA | 93 |
| BITOU | 100 |
| OUDTSHOORN | 100 |
| BEAUFORT WEST | 100 |
| PRINCE ALBERT | 100 |
| LAINGSBURG | 100 |

# 9. COMPLAINTS

- **DEA&DP investigated 31 complaints; and**
- **Number of complaints reported decreased in 2018**

## 9.1 COMPLAINTS RECEIVED BY THE DEPARTMENT - 2018

The Department has a waste regulatory function to handle waste management complaints associated with waste management facilities and the general public. Members of the public frequently report on the illegal disposal of waste to land or the mismanagement of both unlicensed and licensed waste management facilities. The Sub-Directorate: Waste Management Licensing has dealt with thirty-one **(31)** complaints during the period January to December 2018. This has decreased since 2016, as can be seen in **Figure 39.** In 2018, most of the complaints received by the Department were based within the CCT Metropole and Cape Winelands Municipal District. These complaints related to the operations of waste management facilities and storage of waste. All the complaints were investigated and resolved through correspondences and the submission of corrective action plans by responsible entities.

The Department received the majority of complaints within the City regarding dumping of waste, including general waste and inert builders' rubble or construction and demolition waste. As the City is continuously growing through new developments, the disposal of construction and demolition waste becomes more of a challenge, particularly in areas where hauling construction waste is expensive. Other complaints were due to increased burning incidents and waste management facilities operational issues, resulting in nuisances.

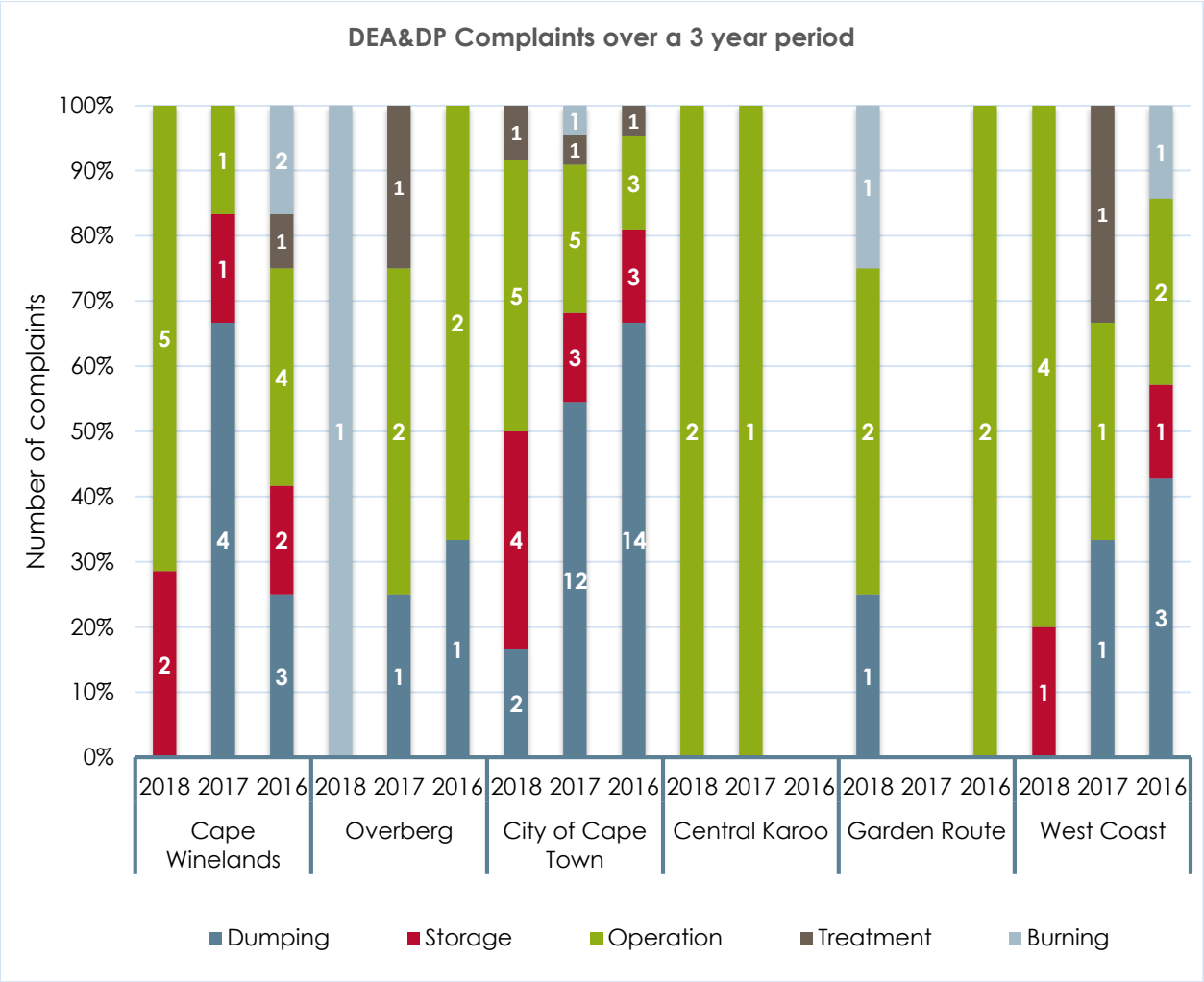



**Figure 39: DEA&DP Complaints in 2018**

Most of the complaints become the responsibility of the municipalities to clean up, which places undue pressure on financial and operational resources. It further depletes the landfill airspace capacity of the municipalities and can cause bigger environmental impacts. The municipalities must be encouraged to provide waste management facilities such as drop off points and regularly servicing and collecting waste to avoid further illegal dumping. The municipalities should also focus on utilising and/or enclosing the open spaces within the municipal areas to avoid opportunities for illegal dumping. The municipalities should also increase awareness around waste management as well as penalties.

# 10. STATE OF WASTE DISPOSAL MANAGEMENT

- 55 operational WDFs;
- 109 WDFs licensed for closure;
- 73 audits conducted (62% non-compliant);
- Average compliance rating 54.62%.
- ToR for service providers developed; and
- Landfill airspace determination tool;

## 10.1 STATE OF WASTE DISPOSAL FACILITIES IN THE PROVINCE

There are **fifty-five (55) operational Waste Disposal facilities (WDFs)** in the Western Cape. **Figure 40** depicts the percentage of operational WDFs per municipality.

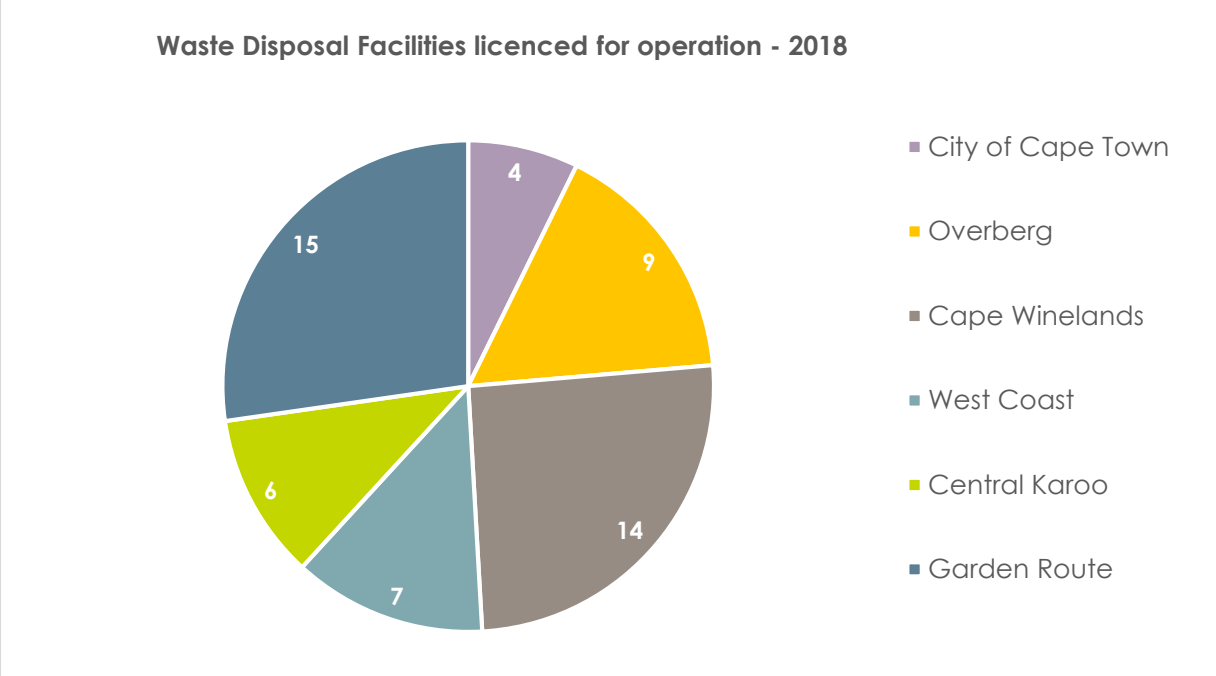



Figure 40: Operational WDFs in the Western Cape - 2018

The WCDM has seven (7) licensed operational WDFs. CKDM has six (6) licensed operational WDFs and ODM has nine (9). CWDM has fourteen (14) licensed operational WDFs. Within the CCT's municipal area, there are four (4) operational WDFs of which one (1) WDF is privately owned, while GRDM has fifteen (15) operational WDFs. The CCT has closed most of their operational facilities as they moved towards regionalization of waste management services.

There are **one hundred and nine (109) WDFs licensed for closure** in the Western Cape. Within the WCDM there are 34, ODM has 20, GRDM has 15, CCT has 23, CKDM has 1 and CWDM has 16 WDFs

licensed for closure. In some instances, municipalities opt to close smaller landfill facilities and combine resources to fund both the licensing and operation of a regional waste management disposal facility. This approach has the benefit that municipalities can combine funding to cover the costs incurred by the licensing and operation of the regional facility, thereby decreasing the individual municipal waste management facility costs. However, large distances between the areas where waste are generated and the regional waste management facilities can incur very high transportation costs. The costs of decommissioning and closing smaller municipal waste disposal facilities can also be very high. These required waste disposal facilities also have the benefits of economics of scale. The funding of the construction and operation of these facilities is complex since multi parties are involved in the project.

## 10.2 LICENSING OF WASTE MANAGEMENT FACILITIES

Chapter 5 of NEMWA, as amended, makes provision for the licensing authority to issue a waste management license upon receipt of an application with the associated Basic Assessment/Scoping and Environmental Impact Reporting processes. The licensing process is governed by the NEMA Environmental Impact Assessment Regulations, 2014 (Government Notice (GN) No. R. 982 of 4 December 2014). Activities that require a waste license are listed in GN No. 921 of 29 November 2013. Eight (8) waste management licences were issued for the period 1 January 2018 to 22 January 2019, see **Table 15** below. Two (2) waste management licences (WMLs) were new applications and one (1) was a substantive amendment (variation).

**Table 15: Waste Management Licences and Decisions- 2018**

| MUNICIPALITY | APPLICATION TYPE | LICENCE HOLDER | DATE OF ISSUE | TYPE OF WMF |
|---|---|---|---|---|
| BITOU | General WDF | Ukhana Group | 16 February 2018 | C&D Waste Crushing Facility |
| HESSEQUA | Compost | Riversdale Piggery Pty Ltd | 23 April 2018 | Composting Facility |
| HESSEQUA | Variation of the WML | SS Transport | 02 May 2018 | Composting Facility |
| CCT | Variation of the WML | CCT | 24 July 2018 | WDF |
| BREEDE VALLEY | WML | Trigen Group | 01 August 2018 | Treatment Facility |
| WEST COAST | WML | WCDM | 08 October 2018 | Regional WMF/WDF |

| | | | | |
|---|---|---|---|---|
| **CCT** | WML | Smartmatta Pty Ltd | 19 October 2018 | Recycling Facility |
| **SALDANHA BAY** | Surrender WML Decision | Saldanha Bay | 11 January 2019 | WDF |

### 10.2.1 Variation of existing Waste Management Licences

The Department is completing the Waste Management Licence Amendment Project which conducted a review of selected Permits/WMLs, as per section 53 (1) of the Waste Act, as amended and states that:

"*A licensing authority must review a waste management licence at intervals specified in the licence, or when circumstances demand that a review is necessary*".

The proposed variation was in line with section 54 (1)(a) and (d) of the Waste Act, which states that:

"*(1) A licensing authority may, by written notice to the holder of a waste management licence, vary the licence-*

*(a) if it is necessary or desirable to prevent pollution; (and)*

*(d) to make a non-substantive amendment*".

The WMLAP conducted the review and amendment of all operating WDF Permits/Licences to align the conditions with current waste legislation and to achieve the Provincial targets for the diversion of organic waste from WDF, i.e. 50% organic waste diversion by year 2022, and 100% by year 2027. As seen in **APPENDICES: Table 28**, there were eighty-two (82) WMLs issued for operating WDFs in the period 1 January 2018 to 31 December 2018.

### 10.2.2 Departmental Compliance Audits of Waste Management Facilities

The Department developed an auditing protocol for permitted/licenced waste facilities within the Western Cape.It adopts a uniform auditing approach by both the regulator (DEA&DP) and the waste management facility Permit/Licence Holders. It allows data recorded to be evaluated and reported in the same manner by both the DEA&DP and the Permit/Licence Holders.

Licence Holders are able to conduct internal audit regulation and align their auditing process to the DEA&DP requirements. Internal audit templates have also been for Composting and Material Recover Facilities.The licensed waste management facilities within the Western Cape are audited against the conditions of their environmental authorisations.

**Table 16** highlights the waste management facilities that were audited for the 2018 year.

Table 16: Facilities Audited in 2018

| FACILITY | TYPE | DISTRICT MUNICIPALITY | INSPECTION DATE | PREVIOUS COMPLIANCE RATING | CURRENT COMPLIANCE RATING | ASSESSMENT |
|---|---|---|---|---|---|---|
| BARRYDALE | WDF | Garden Route | 10-Jan-18 | 15.63% | 15.63% | 0.00% |
| BONTEBOK | WDF | Garden Route | 10-Jan-18 | 51.52% | 65.00% | 13.48% |
| CLANWILLIAM | WDF | West Coast | 26-Jan-18 | 27.05% | 27.50% | 0.45% |
| ELANDS BAY | WDF | West Coast | 25-Jan-18 | 18.50% | 29.30% | 10.80% |
| GREAT BRAK | WDF | Garden Route | 18-Jan-18 | 88.00% | 90.90% | 2.90% |
| GWAING | WDF | Garden Route | 19-Jan-18 | 23.91% | 47.83% | 23.92% |
| LAMBERTS BAY | WDF | West Coast | 26-Jan-18 | 45.76% | 52.54% | 6.78% |
| MELKHOUTFONTEIN | WDF | Garden Route | 18-Jan-18 | 53.51% | 47.32% | -6.19% |
| MOORREESBURG | WDF | West Coast | 25-Jan-18 | 85.71% | 68.75% | -16.96% |
| PLETTENBERG BAY | WDF | Garden Route | 19-Jan-18 | 50.00% | 68.20% | 18.20% |
| PRINCE ALFRED'S HAMLET | WDF | Cape Winelands | 26-Jan-18 | 64.00% | 43.75% | -20.25% |
| RIEBEEK WEST | WDF | West Coast | 15-Jan-18 | 49.40% | 55.56% | 6.16% |
| RIVIERSONDEREND | WDF | Overberg | 10-Jan-18 | 50.00% | 51.92% | 1.92% |
| SEDGEFIELD | RF | Garden Route | 19-Jan-18 | 52.94% | 31.25% | -21.69% |
| SLANGRIVIER | WDF | Garden Route | 11-Jan-18 | 41.07% | 59.62% | 18.55% |
| UITSIG | WDF | Garden Route | 11-Jan-18 | 19.64% | 23.08% | 3.44% |
| WITSAND (SCARBOROUGH) | WDF | CCT | 24-Jan-18 | | 81.67% | 1st Audit |
| ZANDAM | AD | CCT (Private) | 25-Jan-18 | | 88.10% | 1st Audit |
| AURORA | WDF | West Coast | 24-Apr-18 | | 34.00% | 1st Audit |
| CALITZDORP | WDF | Garden Route | 8-May-18 | 7.97% | 22.22% | 14.25% |
| DROEKLOOF | WDF | Garden Route | 19-Apr-18 | 69.64% | 48.39% | -21.25% |
| EBENHAEZER | WDF | West Coast | 25-Apr-18 | | 13.64% | 1st Audit |
| GENADENDAL | WDF | Overberg | 18-Apr-18 | | 50.00% | 1st Audit |
| GEORGE WMF | RTS | Garden Route | 19-Apr-18 | 27.59% | 65.38% | 37.79% |
| GREYTON | WDF | Overberg | 18-Apr-18 | | 55.00% | 1st Audit |

| FACILITY | TYPE | DISTRICT MUNICIPALITY | INSPECTION DATE | PREVIOUS COMPLIANCE RATING | CURRENT COMPLIANCE RATING | ASSESSMENT |
|---|---|---|---|---|---|---|
| GROOTKOP | WDF | Garden Route | 20-Apr-18 | 39.28% | 41.94% | 2.66% |
| JONGENSFONTEIN | WDF | Garden Route | 20-Apr-18 | 84.78% | 81.25% | -3.53% |
| KLAWER | WDF | West Coast | 25-Apr-18 | | 35.53% | 1st Audit |
| LADISMITH | WDF | Garden Route | 7-May-18 | 54.30% | 65.91% | 11.61% |
| REDELINGHUYS | WDF | West Coast | 24-Apr-18 | | 30.00% | 1st Audit |
| SUURBRAAK | WDF | Overberg | 19-Apr-18 | 30.00% | 38.71% | 8.71% |
| VAN RHYNSDORP | WDF | West Coast | 25-Apr-18 | 58.92% | 46.55% | -12.37% |
| VAN WYKSDORP | WDF | Garden Route | 8-May-18 | 16.07% | 25.00% | 8.93% |
| VREDENDAL | WDF | West Coast | 26-Apr-18 | | 46.15% | 1st Audit |
| WELLINGTON | WDF | Cape Winelands | 25-May-18 | | 70.27% | 1st Audit |
| ZOAR | WDF | Garden Route | 7-May-18 | 29.31% | 43.48% | 14.17% |
| ASHTON | WDF | Cape Winelands | 20-Aug-18 | 46.90% | 65.12% | 18.22% |
| MONTAGU (BESSIEKOP) | WDF | Cape Winelands | 21-Aug-18 | 77.59% | 79.63% | 2.04% |
| BITTERFONTEIN | RTS | West Coast | 5-Jul-18 | | 22.83% | 1st Audit |
| BONNIEVALE | WDF | Cape Winelands | 21-Aug-18 | 83.00% | 85.00% | 2.00% |
| BREDASDORP | WDF | Overberg | 30-Aug-18 | 59.09% | 58.33% | -0.76% |
| CITRUSDAL | WDF | West Coast | 4-Jul-18 | 66.66% | 52.00% | -14.66% |
| DE RUST | WDF | Garden Route | 7-Sep-18 | 6.25% | 6.48% | 0.23% |
| DYSSELSDORP | WDF | Garden Route | 7-Sep-18 | 5.60% | 7.84% | 2.24% |
| ELIM | WDF | Overberg | 30-Aug-18 | 48.12% | 42.31% | -5.81% |
| GANSBAAI | WDF | Overberg | 3-Sep-18 | | 98.21% | 1st Audit |
| KLAPMUTS | RTS | Cape Winelands | 4-Sep-18 | 95.80% | 86.00% | -9.80% |
| LEEU GAMKA | WDF | Central Karoo | 28-Aug-18 | | 43.75% | 1st Audit |
| LUTZVILLE | WDF | West Coast | 6-Jul-18 | | 44.12% | 44.12% |
| MCGREGOR | WDF | Cape Winelands | 20-Aug-18 | 28.41% | 55.60% | 27.19% |
| MURRAYSBURG | WDF | Central Karoo | 28-Aug-18 | | 46.15% | 1st Audit |
| OP DIE BERG | WDF | Cape Winelands | 4-Jul-18 | 82.69% | 88.00% | 5.31% |
| PRINCE ALBERT | WDF | Central Karoo | 29-Aug-18 | 43.75% | 94.00% | 50.25% |
| RIETPOORT | WDF | West Coast | 5-Jul-18 | | 26.56% | 1st Audit |
| ROBERTSON | WDF | Cape Winelands | 20-Aug-18 | 40.00% | 73.81% | 33.81% |

| FACILITY | TYPE | DISTRICT MUNICIPALITY | INSPECTION DATE | PREVIOUS COMPLIANCE RATING | CURRENT COMPLIANCE RATING | ASSESSMENT |
|---|---|---|---|---|---|---|
| ALBERTINIA | WDF | Garden Route | 13-Nov-18 | 50.86% | 62.00% | 11.14% |
| BRENTON-ON-SEA | WDF | Garden Route | 1-Nov-18 | 45.31% | 67.14% | 21.83% |
| CALEDON | WDF | Overberg | 14-Nov-18 | 60.00% | 73.25% | 13.25% |
| DE DOORNS | WDF | Cape Winelands | 16-Oct-18 | 19.81% | 43.35% | 23.54% |
| DEVON VALLEY | WDF | Cape Winelands | 14-Nov-18 | 86.00% | 73.00% | -13.00% |
| GOURITSMOND | WDF | Garden Route | 12-Nov-18 | 42.11% | 57.02% | 14.91% |
| KARWYDERSKRAAL | WDF | Overberg | 13-Nov-18 | 94.00% | 99.19% | 5.19% |
| KLEINMOND | RTS | Overberg | 13-Nov-18 | 88.46% | 96.67% | 8.21% |
| LAINGSBURG | WDF | Central Karoo | 15-Oct-18 | 71.47% | 72.62% | 1.15% |
| MALGAS | WDF | Overberg | 13-Nov-18 | | 21.59% | 1st Audit |
| STEYNSKLOOF (RIVERSDALE) | WDF | Garden Route | 13-Nov-18 | 62.50% | 69.81% | 7.31% |
| TOUWS RIVER | WDF | Cape Winelands | 15-Oct-18 | 4.10% | 41.46% | 37.36% |
| TULBAGH | WDF | Cape Winelands | 18-Oct-18 | 57.76% | 78.17% | 20.41% |
| UNIONDALE | WDF | Garden Route | 31-Oct-18 | 27.14% | 50.00% | 22.86% |
| VREDENBURG | WDF | West Coast | 18-Oct-18 | 78.70% | 78.13% | -0.57% |
| WORCESTER | WDF | Cape Winelands | 16-Oct-18 | 65.62% | 79.09% | 13.47% |
| WUPPERTHAL | WDF | West Coast | 19-Oct-18 | | 24.24% | 1st Audit |
| OLD PLACE (KNYSNA) | WDF | Garden Route | 1-Nov-18 | 22.41% | 63.75% | 41.34% |

Table 17: Compliance Range of Facilities Audited

| OVERALL COMPLIANCE RATING | STATUS INDICATOR | | ACTION | CRITERIA | NO. | % OF FACS |
|---|---|---|---|---|---|---|
| 85 – 100 % | Green | X | Minor improvements required | 84.5 ≤ X ≤ 100% | 9 | 12% |
| 65 – 84 % | Amber | X | Improvements required | 64.5% ≤ X < 84.5% | 19 | 26% |
| 0 – 64 % | Red | X | Major improvements required | < 64.5% | 45 | 62% |
| TOTAL | | | | | **73** | **100%** |

From **Figure 41** it is evident that, of the seventy-three (73) WMFs audited, nine (9) (12%) were compliant, nineteen (19) (26%) were partially compliant and forty-five (45) (62%) were non-compliant.

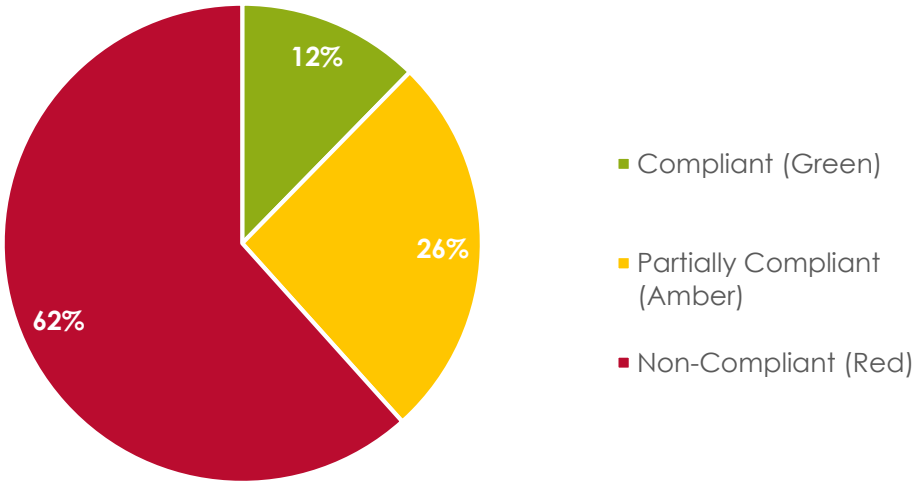



Figure 41: Compliance Range of Facilities Audited

Departmental audits are conducted at facilities to address the non-compliances to licence conditions. A detailed action plan must be submitted by the license holder indicating timeframes, the responsible persons and financial resources to become compliant. The majority of compliance audits are conducted on WDFs, however, this also includes other waste management facilities such as transfer stations and composting facilities within the Western Cape. The targets associated

with the number of facilities audited are based on the Department's as well as the associated Departmental Strategic Planning targets.

**Table 18: Average Compliance Ratings of Facilities Audited**

| DISTRICT MUNICIPALITY | AUDITS | AVERAGE COMPLIANCE |
|---|---|---|
| CAPE WINELANDS | 14 | 68.73% |
| CCT | 1 | 81.67% |
| CCT (PRIVATE) | 1 | 88.10% |
| CENTRAL KAROO | 4 | 64.13% |
| GARDEN ROUTE | 25 | 49.06% |
| OVERBERG | 11 | 62.29% |
| WEST COAST | 17 | 40.44% |
| WEST COAST (PRIVATE) | 0 | No audits done in this area in this period |
| **AVERAGE COMPLIANCE LEVEL** | **73** | **54.62%** |

**Table 18** depicts the average compliance rating of all the WMFs that audited in 2018 was **54.62%.** Therefore, the average compliance ratings for the West Coast Municipal District and the Garden Route Municipal District was below the average compliance rating of all the WMFs that audited in 2018.

The Witsand WDF located in Scarborough, in the City of Cape Town, was audited by the Department, due to its location on the coast. The outcome of the audit confirmed that the facility was partially compliant with the WML conditions, with an 81.67% compliance rating. Even though this was the only facility audited in within the CCT area, the CCT maintained a reasonably high average compliance level compared to the previous year. The average compliance rating in the West Coast Municipal District, where 17 WMFs were audited, was 40.44%. Within the Cape Winelands Municipal District, 14 WMFs were audited, an average compliance rating of 68.73% was found. The average compliance rating was slightly less in the Central Karoo Municipal District, where 4 WMFs were audited, which resulted in an average compliance rating of 64.13%. Within the Overberg Municipal District, where 11 WMFs were audited, an average compliance rating of 62.29% was found. The average compliance rating in the Garden Route Municipal District, where 25 WMFs were audited, was 49.06%.

#### *10.2.2.1 Adherence to licence conditions*

Most WMFs audited complied with conditions relating to maintenance of access roads, placement of signage, acceptance and handling of permissible waste, recordkeeping and reporting of waste volumes.

The more challenging conditions complied with were related to access control as many WMFs having broken fences, resulting in forced entry. Limited access at the main entrances results in unauthorised entry to the WMFs and informal salvaging of various waste types and burning waste. Other challenging conditions relates to windblown litter that is not covered daily as a result of limited cover material and dust. Some WMFs still have rudimentary or no storm water management systems in place, for both the diversion of clean storm water and contaminated runoff from the WMFs. The most challenging conditions to comply with were apparently the implementation of water quality monitoring protocols, due to licence and Permit Holders not having any boreholes installed. Many Licence and Permit Holders are not conducting airspace assessments, through land/topographical surveys of the WDFs and completed by a professionally registered civil engineer. Similarly, external auditing of the WMFs are not being conducted at all WMFs. The airspace assessments and external audit reports are not completed due lack of municipal funds.

### 10.2.3 Terms of Reference (TOR) to appoint external auditors

The Department has finalised a template for a Terms of Reference (TOR) for Municipalities to appoint external auditors. The municipalities have the option to use the TOR and to ensure that the requirements of audit meet the conditions, in relation to the waste management licences/permits and those pertaining to NEM: Environmental Impact Assessment Regulations, 2014. The Directorate: Waste Management has the mandate to monitor compliance with the Waste Act and hence strongly encourages and recommends licence and Permit Holders to use the TOR. This will facilitate the improvement in the compliance rating of the WMFs, whereas municipalities still struggle to comply with the conditions of operation included in the Waste Management Licences and Waste Management Permits, authorised by the Department of Water and Sanitation, who imposed the conditions initially.

### 10.2.4 Landfill gas monitoring

The Department determines baseline data for landfill gas at WDFs in the Western Cape, where preliminary methane specific determination is done, to assist municipalities to investigate or implement mitigation measures. Methane (CH4) is a colourless, odourless asphyxiant, flammable, non-toxic gas that is lighter than air with a vapour density of 0.6. CH4 is explosive between the concentrations of 5% - 15% by volume in air, as per the Department of Water Affairs, Minimum Requirements for Waste Disposal by Landfill, Second Edition, 1998. This concentration range is referred to as the explosive range with the two extremes being referred to as the lower explosive limit (LEL) and upper (UEL) explosive limit respectively. CH4 levels at WDFs are determined by selecting measuring points in and around the waste body for the measurement of methane gas concentration. The measuring points are determined by establishing where older waste was disposed of, particularly in areas where the decomposition of the solid waste has already begun.

The results of the landfill gas monitoring exercise were compiled into a Landfill Gas Report and the findings communicated to the relevant municipality.

Methane gas levels, as an average per facility, did not increase in 2018 compared to levels in 2017. Most facilities produced no measurable methane gas. **Table 19** displays the landfill gas monitoring conducted at the following facilities during the January to June 2018, where the Department has a quarterly target of eight (8) gas monitoring reports. The sites producing methane of notable levels are in bold text.

**Table 19: Methane gas levels -2018**

| QUARTER | FACILITY | TYPE | DATE | MAX. CH4 (BY VOLUME) LEVEL DETECTED |
|---|---|---|---|---|
| JANUARY – MARCH 2018 | Barrydale | WDF | 16 March 2018 | 0 % |
| | Elands Bay | WDF | 19 March 2018 | 0 % |
| | Great Brak | WDF | 07 March 2018 | 0 % |
| | Lambert's Bay | WDF | 07 March 2018 | 0 % |
| | Moorreesburg | WDF | 07 March 2018 | 0 % |
| | Plettenberg Bay | WDF | 05 March 2018 | 0 % |
| | Prince Alfreds Hamlet | WDF | 22 March 2018 | 0 % |
| | Uitsig | WDF | 16 March 2018 | 0 % |
| APRIL – JUNE 2018 | Droekloof | WDF | 22 June 2018 | 0 % |
| | Genadendal | WDF | 14 June 2018 | 0 % |
| | Ladismith | WDF | 22 June 2018 | 0 % |
| | Clanwilliam | WDF | 14 June 2018 | 0 % |
| | Van Rhynsdorp | WDF | 25 May 2018 | 0 % |
| | Vredendal | WDF | 25 May 2018 | 0 % |
| | Zoar | WDF | 22 June 2018 | 0 % |
| | Wellington | WDF | 28 June 2018 | 0 % |

| QUARTER | FACILITY | TYPE | DATE | MAX. CH4 (BY VOLUME) LEVEL DETECTED |
|---|---|---|---|---|
| JULY – SEPTEMBER 2018 | Citrusdal | WDF | 4 July 2018 | 0 % |
| | Op-die-Berg | WDF | 4 July 2018 | 0 % |
| | Bitterfontein | WDF | 5 July 2018 | 0 % |
| | Ashton | WDF | 20 August 2018 | 0 % |
| | Montagu | WDF | 21 August 2018 | 0 % |
| | Murraysburg | WDF | 28 August 2018 | 0 % |
| | Gansbaai | WDF | 3 September 2018 | 0.313 % |
| | Dysselsdorp | WDF | 7 September 2018 | 0 % |
| OCTOBER – DECEMBER 2018 | Vredenburg | WDF | 01 November 2018 | 0 % |
| | Brenton on Sea | WDF | 12 November 2018 | 0 % |
| | Laingsburg | WDF | 28 November 2018 | 0 % |
| | De Doorns | WDF | 28 November 2018 | 0 % |
| | Worcester | WDF | 28 November 2018 | 0 % |
| | Albertinia | WDF | 28 November 2018 | 0 % |
| | Caledon | WDF | 28 November 2018 | 0.025 % |
| | Tulbagh | WDF | 18 October 2018 | 0.825 % |
| | Karwyderskraal | WDF | 4 December 2018 | 0.034 % |

### 10.2.5 Departmental landfill airspace determination tool

In 2018, the Department set out to review the landfill airspace determination tool. The mechanics, complicity and applicability of the tool was reviewed to gain an understanding of how to implement its capabilities practically. The tool focuses on an integrated approach in terms of waste management, minimizing and/or diverting waste and compaction, to calculate the remaining landfill airspace at municipal WDFs. The review process compared the practicality of the current tool with that of other landfill airspace calculating methods, used internationally and with local service providers. The tool's attributes are in line with the Department's various waste management initiatives and current strategies to implement the waste hierarchy and essentially, to save on landfill airspace. The tool does have some dependencies and information needs from

the licence holders to function optimally, but with good co-operation, the tool could be used to manage remaining landfill airspace.

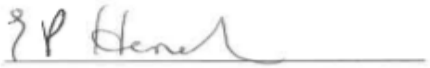
### 10.2.6 Green Economy Support Programme (GreenCape)

GreenCape, was appointed by the Department to establish a Waste Economy Support Programme (WESP). The primary goal of the WESP was to support the DEA&DP with the implementation of a *Technical Guide on Alternative Waste Treatment Technologies (AWTT),* in at least three (3) municipalities of the Western Cape. The intention of developing the AWTT was to aid the DEA&DP to fulfil the goals of the Western Cape's 2nd Generation Integrated Waste Management Plan (IWMP).

The project was intended to undertake a training workshop for DEA&DP officials, using the technical guide and engage with three (3) case study municipalities. The purpose of the technical guide was to assist municipalities in developing IWMPs, by providing guidelines for selecting (i.e. identifying and screening) technology options for the range of waste streams that the municipality manages. The core focus was on piloting the technical guide and assisting the municipalities in the development of an implementable IWMP.

# 11. SIGN OFF

I, Eddie Hanekom, hereby approve the Annual State of Waste report for 2018.



Director: Waste Management

Date

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# 13. NOTE ON DATA

Municipal Solid waste data should be considered with a degree of caution due to inconsistencies in definitions, data collection methodologies, corrections made by municipalities on IPWIS and completeness of data

# 14. APPENDICES

## 14.1 IMPLEMENTATION PLAN FOR THE PROVINCIAL IWMP

The implementation plan includes output indicators, which will be used to assist with monitoring progress. It must be highlighted that although the State of Waste Report is applicable to the calendar year i.e. 1 January 2018 to 31 December 2018, projects indicated run over the financial year i.e. 1 April 2018 to 31 March 2019. As such, the completion of current projects is only expected at the end of March 2019. Consequently, budgets spent only indicate expenditure until end of December 2018, prior to project completion dates. Furthermore, projects that commenced in 2017 and were finalised by the end of March 2018 are also indicated, however only budgets for the period 1 January to 30 March 2018 are shown.

Table 20: Implementation of Integrated Waste Management Plan

| GOAL 1: STRENGTHENED EDUCATION, CAPACITY AND ADVOCACY TOWARDS INTEGRATED WASTE MANAGEMENT | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBJECTIVES | OUTPUT INDICATOR | ACTIVITY | TIMEFRAMES | | | RESPONSIBILITY | PROJECT DESCRIPTION | PROJECTS FOR 2017/2018 (1 JAN 2018 - 30 MAR 2018) | | | PROJECTS FOR 2018/2019 (1 APR - 31 DEC 2018) | | |
| | | | 2017 - 2022 | 2022 - 2027 | 2027 - 2032 | | | TOTAL PROJECT BUDGET | PROJECT STATUS | 2018 EXPENDITURE | TOTAL PROJECT BUDGET | PROJECT PROGRESS | ACTUAL EXPENDITURE |
| OBJECTIVE 1: FACILITATE CONSUMER AND INDUSTRY RESPONSIBILITY IN INTEGRATED WASTE MANAGEMENT. | Engagements on integrated waste management responsibility. | USE VARIOUS PLATFORMS TO PROMOTE RESPONSIBLE INTEGRATED WASTE MANAGEMENT. | X | X | X | DEA&DP/Industry/ DEA/consumers | 1) Industry Waste Forum - "Beneficiation of waste", 19 September 2018 | | | | R9 500 | Completed | R5 613 |
| | | | | | | | 2) IWMOF | R15 000 | Completed | R13 050 | R30 000 | Completed | R21 830 |
| | | | | | | | 1) GMC Competition | Operational Budget | Completed | Operational Budget | | | |
| | | | | | | | 2) GMC Competition Review | | | | Operational Budget | Ongoing | Operational Budget |

| GOAL 1: STRENGTHENED EDUCATION, CAPACITY AND ADVOCACY TOWARDS INTEGRATED WASTE MANAGEMENT | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 3) Draft Waste By-law | Operational Budget | Ongoing | Operational Budget | Operational Budget | Ongoing | Operational Budget |
| | An industry rewards recognition programme on integrated waste management. | **ROLL OUT AN INDUSTRY REWARDS RECOGNITION PROGRAMME ON INTEGRATED WASTE MANAGEMENT.** | X | X | X | DEA&DP | 1) No projects have been initiated. | | | | | | |
| | 2wise2waste awareness and training engagements. | **IMPLEMENT INTERNAL 2WISE2WASTE AWARENESS AND TRAINING.** | X | X | X | DEA&DP | 1) Completed 5 Waste Minimisation Training sessions with cleaning contractors | R33 000 | Ongoing | R4 500 | | | |
| | | | | | | | 1) Completed 4 Waste Minimisation Training sessions with cleaning contractors.<br>2)Hosted a food waste exhibition aimed at WCG officials and the public. | | | | R26 818 | Ongoing | R30 745 |
| **OBJECTIVE 2: PROMOTE AND ENSURE AWARENESS AND EDUCATION OF INTEGRATED WASTE MANAGEMENT.** | A waste education and awareness strategy. | **DEVELOP A WASTE EDUCATION AND AWARENESS STRATEGY FOR THE PROVINCE.** | X | | | DEA&DP | 1) Departmental Waste Awareness Document. | Operational Budget | Completed | Operational Budget | | | |
| | | | | | | | 2) Municipal Waste Awareness stakeholder engagement - 6 September 2018. | | | | R3 800 | Completed | R3 800 |
| | Collaborations with Education and Training institutions. | **MAINSTREAM INTEGRATED WASTE MANAGEMENT IN** | X | | | DEA&DP/Western Cape Department of | 1) No request from the Western Cape Education | | | | | | |

| GOAL 1: STRENGTHENED EDUCATION, CAPACITY AND ADVOCACY TOWARDS INTEGRATED WASTE MANAGEMENT | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SCHOOLS AND TRAINING INSTITUTIONS. | | | | Education (WCED)/Basic and Higher Education Departments (National). | Department to conduct WAME training. | | | | | | |
| OBJECTIVE 3: BUILD AND STRENGTHEN WASTE MANAGEMENT CAPACITY. | Training sessions conducted on specific waste management aspects (e.g. 5 day IWM workshop). | FACILITATE CAPACITY-BUILDING IN MUNICIPALITIES ON SPECIFIC WASTE MANAGEMENT ASPECTS SUCH AS: FULL-COST ACCOUNTING AND ALTERNATIVE REVENUE SOURCES/CO-FUNDING; AUDITING AND OPERATION OF WMFS; PLANNING FOR INFORMALITY; LONG-TERM FINANCIAL PLANNING; WASTE LICENSING PROCESS; WASTE MANAGEMENT PLANNING AND INFORMATION MANAGEMENT; MANAGEMENT OF SPECIFIC WASTE STREAMS; WASTE CHARACTERISATION; RECOVERY AND USE OF WASTE MATERIAL AS A RESOURCE;WASTE MINIMISATION; AND ENTREPRENEURIAL TRAINING ETC. | X | X | X | DEA&DP/South African Local Government Association (SALGA)/DEA/ tertiary institutions/ Institute of Waste Management /Industry | 1) Hosted two waste characterisation workshops: (i) Worcester - 28 February 2018 (ii) Grabouw - 21 August 2018. | R4 500 | Completed | R4 400 | R13 498 | Completed | R1 819 |
| | | | | | | | 2) Conducted Waste Calculator training in the Garden Route DM with gate controllers. | Operational Budget | Completed | Operational Budget | Completed | Operational Budget | Completed |
| | | | | | | | 3) Licensing process and operations at waste management facilities. | Operational Budget | Ongoing | Operational Budget | Operational Budget | Ongoing | Operational Budget |
| | | | | | | | 4) Separation of Waste at Source Stakeholder | | | | R14 000 | Ongoing | R6 000 |

| GOAL 1: STRENGTHENED EDUCATION, CAPACITY AND ADVOCACY TOWARDS INTEGRATED WASTE MANAGEMENT | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Engagement - 7 September 2018 | | | | | | |
| | | **ADDRESS SKILLS DEVELOPMENT ON INTEGRATED WASTE MANAGEMENT.** | X | | | DEA&DP/SALGA /Institute of Waste Management/ Training institutions/municipalities/industry | 1) Conducted waste minimisation training with 26 municipal staff in Beaufort West and 21 municipal staff in the Kannaland area. | R35 234 | Completed | R6 130 | | | |
| | | | | | | | 2) Conducted waste minimisation training with 80 municipal staff in Swellendam Municipality, 52 informal workers in Drakenstein Municipality, 109 YES programme workers of Cape Nature and 11 informal workers from the iThemba Labantu project. | | | | R34 000 | Ongoing | R25 431 |
| | Minimum appointment criteria for municipal waste management officials. | **INITIATE THE ESTABLISHMENT OF MINIMUM APPOINTMENT CRITERIA FOR MUNICIPAL WASTE MANAGEMENT OFFICIALS.** | X | | | DEA&DP/SALGA/Institute of Waste Management/municipalities | 1) No projects have been initiated. | | | | | | |

| GOAL 2: IMPROVED INTEGRATED WASTE MANAGEMENT PLANNING AND IMPLEMENTATION FOR EFFICIENT WASTE SERVICES AND INFRASTRUCTURE | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBJECTIVES | OUTPUT INDICATOR | ACTIVITY | TIMEFRAMES | | | RESPONSIBILITY | PROJECT DESCRIPTION | PROJECTS FOR 2017/2018 (1 JAN 2018 - 30 MAR 2018) | | | PROJECTS FOR 2018/2019 (1 APR - 31 DEC 2018) | | |
| | | | 2017 - 2022 | 2022 - 2027 | 2027 - 2032 | | | TOTAL PROJECT BUDGET | PROJECT STATUS | 2018 EXPENDITURE | TOTAL PROJECT BUDGET | PROJECT PROGRESS | ACTUAL EXPENDITURE |
| OBJECTIVE 1: FACILITATE MUNICIPAL WASTE MANAGEMENT PLANNING. | Assessed and endorsed municipal IWMPs. | SUPPORT MUNICIPALITIES WITH REGARD TO IWMPS. | X | X | X | DEA&DP/ municipalities | 1) No municipalities were assisted with the development of their IWMPs in the 2018 calendar year. | | | | | | |
| | | ASSESS MUNICIPAL IWMPS. | X | X | X | DEA&DP/ municipalities | 1) Assessed the following municipal IWMPs: Overberg District Municipality; Theewaterskloof Local Municipality; Matzikama Local Municipality and Langeberg Local Municipality | Operational Budget | Completed | Operational Budget | | | |
| | Reviewed Municipal Annual Reports. | MONITOR THE IMPLEMENTATION OF MUNICIPAL IWMPS. | X | X | X | DEA&DP/ municipalities | 1) Commented on the Langeberg Annual Report | Operational Budget | Completed | Operational Budget | | | |
| OBJECTIVE 2: PROMOTE INDUSTRY WASTE MANAGEMENT PLANNING | Engagements with industry and industry bodies regarding waste management planning. | ENCOURAGE INDUSTRY WASTE MANAGEMENT PLANNING IN TARGETED INDUSTRY SECTORS. | X | X | X | DEA&DP/industry | 1) The department provided comments on DEAs industry waste management plans. | Operational Budget | Completed | Operational Budget | | | |

| GOAL 2: IMPROVED INTEGRATED WASTE MANAGEMENT PLANNING AND IMPLEMENTATION FOR EFFICIENT WASTE SERVICES AND INFRASTRUCTURE | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Engagements with GreenCape and the National Cleaner Production Centre. | **ENGAGE WITH GREENCAPE AND NATIONAL CLEANER PRODUCTION CENTRE TO MAXIMISE SUPPORT TO HAZARDOUS WASTE GENERATORS BY LOOKING AT SUITABLE ALTERNATIVES.** | X | X | X | DEA&DP/ GreenCape/ National Cleaner Production Centre | 1) Alternative Waste Treatment technologies decision making tool was initiated. | Departmental funding (Transfer) | Ongoing | Departmental funding (Transfer) | | | |
| | A Status Quo Report on e-waste management. | **DEVELOP A STATUS QUO ON E-WASTE.** | X | | | DEA&DP | 1) Developed an E-Waste Status Quo report - March 2018. | Operational Budget | Completed | Operational Budget | | | |
| | Guidelines on hazardous waste management. | **DEVELOP A GUIDELINE ON THE BENEFICIATION OF TREATED SEWAGE SLUDGE.** | X | | | DEA&DP | 1) No projects have been initiated. | | | | | | |
| | | **DEVELOP A GUIDELINE FOR E-WASTE MANAGEMENT.** | X | | | DEA&DP | 1) No projects have been initiated. | | | | | | |
| | A Status Quo Report on safe disposal and management of waste chemicals, containers and packaging. | **ASSESS THE STATUS OF CHEMICAL (PESTICIDES, HERBICIDES, SCHOOL CHEMICALS) DISPOSAL AND MANAGEMENT OF CONTAINERS AND PACKAGING.** | X | | | DEA&DP/ municipalities/ Western Cape (WC) Department of Agriculture/WCED | 1) No projects have been initiated. | | | | | | |
| **OBJECTIVE 3: PROMOTE THE ESTABLISHMENT OF INTEGRATED WASTE MANAGEMENT INFRASTRUCTURE AND SERVICES** | Engagements with key stakeholders with regard to the prioritisation, funding and establishment of Integrated Waste Management Infrastructure and services. | **FACILITATE THE PRIORITISATION, ESTABLISHMENT AND MONITORING OF INTEGRATED WASTE MANAGEMENT INFRASTRUCTURE AND SERVICES.** | X | | | DEA&DP/ municipalities /private sector/ WC Department of Health / WC Department of Transport and Public Works (DTPW) | 1) No projects have been initiated. | | | | | | |
| | | **FACILITATE FUNDING FOR THE ESTABLISHMENT OF** | X | X | X | DEA&DP/ municipalities/ | 1) DEA&DP facilitates the | Operational Budget | Ongoing | Operational Budget | | | |

| GOAL 2: IMPROVED INTEGRATED WASTE MANAGEMENT PLANNING AND IMPLEMENTATION FOR EFFICIENT WASTE SERVICES AND INFRASTRUCTURE | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **INTEGRATED WASTE MANAGEMENT INFRASTRUCTURE AND SERVICES.** | | | | private sector/ WC Department of Health | allocation of MIG funding for waste management infrastructure projects. | | | | | | |
| | | **FACILITATE REGIONAL/FUNCTIONAL AREA PLANNING OF INTEGRATED WASTE MANAGEMENT INFRASTRUCTURE AND SERVICES.** | X | X | X | DEA&DP/ municipalities/ private sector | 1) The DEA&DP facilitated the proposed establishment of the Garden Route, West Coast, Overberg and Cape Winelands Districts' Regional WDFs | Operational Budget | Ongoing | Operational Budget | | | |
| | Engagements with municipalities which have low levels of waste removal services. | **MONITOR THE PROVISION OF MUNICIPAL WASTE REMOVAL SERVICES.** | X | X | X | DEA&DP/ municipalities | 1) Obtained basic refuse removal data from 2016/17 municipal annual reports | Operational Budget | Ongoing | Operational Budget | | | |
| | | **FACILITATE DISCUSSIONS WITH THE DEPARTMENT OF HUMAN SETTLEMENTS (DOHS) REGARDING FUNDING FOR WASTE MANAGEMENT INFRASTRUCTURE IN PUBLIC HOUSING PROJECTS.** | X | X | X | DEA&DP/WC DoHS/ municipalities | 1) DEA&DP engaged with the Department of Human Settlements. | Operational Budget | Ongoing | Operational Budget | | | |
| **OBJECTIVE 4: ENSURE EFFECTIVE AND EFFICIENT WASTE INFORMATION MANAGEMENT.** | Quarterly reports on waste registration and reporting. | **ENSURE THAT THE REGULATED COMMUNITY IS REGISTERED AND REPORTS TO IPWIS.** | X | X | X | DEA&DP | 1) Municipalities are required to submit monthly reports to IPWIS and all registrations are captured on IPWIS. DEA&DP submits quarterly data reports to the | R417 499 | Ongoing | R417 499 | R833 333 | Ongoing | R833 333 |

| GOAL 2: IMPROVED INTEGRATED WASTE MANAGEMENT PLANNING AND IMPLEMENTATION FOR EFFICIENT WASTE SERVICES AND INFRASTRUCTURE | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | National DEA, via the South African Waste Information System (SAWIS). | | | | | | |
| | Verification of reported waste information. | **ENSURE REPORTED INFORMATION IS ACCURATE AND CREDIBLE.** | X | X | X | DEA&DP | 1) The Department conducted 24 waste data verifications (audits) for 2018. | R15 152 | Completed | R15 152 | R28 372 | Completed | R28 372 |
| | An Annual state of waste report. | **ASSESS, INTERPRET AND DISSEMINATE WASTE MANAGEMENT INFORMATION.** | X | X | X | DEA&DP | 1) Developed an Annual State of Waste report for March 2017 and initiated the drafting of the SoWR for 2018. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | An enhanced IPWIS system. | **MAINTAIN AND ENHANCE IPWIS.** | X | X | X | DEA&DP/Centre for e-Innovation / municipalities | 1) The Complaints module was designed in IPWIS and is aligned to the business processes of the Department. | R417 499 | Ongoing | R417 499 | R833 333 | Ongoing | R833 333 |

| GOAL 3: EFFECTIVE AND EFFICIENT UTILISATION OF RESOURCES | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBJECTIVES | OUTPUT INDICATOR | ACTIVITY | TIMEFRAMES | | | RESPONSIBILITY | PROJECT DESCRIPTION | PROJECTS FOR 2017/2018 (1 JAN 2018 - 30 MAR 2018) | | | PROJECTS FOR 2018/2019 (1 APR - 31 DEC 2018) | | |
| | | | 2017 - 2022 | 2022 - 2027 | 2027 - 2032 | | | TOTAL PROJECT BUDGET | PROJECT STATUS | 2018 EXPENDITURE | TOTAL PROJECT BUDGET | PROJECT PROGRESS | ACTUAL EXPENDITURE |
| OBJECTIVE 1: MINIMISE THE CONSUMPTION OF NATURAL RESOURCES. | A guideline for using waste as a resource. | COMPILE A GUIDELINE FOR MUNICIPAL CONSTRUCTION AND DEMOLITION WASTE. | X | | | DEA&DP | 1) Developed a Construction and Demolition Waste Management Guideline for Municipalities - March 2018 | Operational Budget | Completed | Operational Budget | | | |
| | | COMPILE A GUIDELINE ON BEST PRACTICE FOR THE MANAGEMENT OF GREEN/ORGANIC WASTE. | X | | | DEA&DP | 1) Hosted 2 workshops to promote the guideline for Abattoir Waste in the CCT and West Coast District. | R52 846 | Completed | R4 208 | | | |
| | | | | | | | 2) Host 2 workshops on the development of generic Organic Waste diversion plans for municipalities in the Garden Route and West Coast Districts. | | | | R45 000 | Ongoing | R40 834 |
| | | | | | | | 3) Hosted a Green Waste Management | | | | R11 200 | Completed | R6 000 |

| GOAL 3: EFFECTIVE AND EFFICIENT UTILISATION OF RESOURCES | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Stakeholder engagement on 8 March 2018. | | | | | | |
| | Specifications for recycled construction and demolition waste aggregate. | **ENGAGE WITH INDUSTRY AND PARTNERS ON THE DEVELOPMENT OF SPECIFICATIONS FOR RECYCLED CONSTRUCTION AND DEMOLITION WASTE AGGREGATE.** | X | | | DEA&DP/ City of Cape Town (CCT)/ DTPW Works/ GreenCape | 1) Attended meetings with the Recovered Materials Committee (RECMAT) | Operational Budget | Ongoing | Operational Budget | | | |
| | Engagements with targeted sectors. | **ADVOCATE THE USE OF WASTE AS A SECONDARY MATERIAL E.G. INDUSTRIAL SYMBIOSIS.** | X | | | DEA&DP/DEA/industry sectors/ WC Department of Economic Development and Tourism (DEDAT)/ GreenCape | 1) No projects have been initiated. | | | | | | |
| **OBJECTIVE 2: STIMULATE JOB CREATION WITHIN THE WASTE ECONOMY** | A business case for the waste economy. | **ASSIST WITH THE DEVELOPMENT OF PROJECTS FOR THE WASTE ECONOMY BUSINESS CASES.** | X | | | DEA&DP/DEA/ Industry sectors/ DEDAT/ GreenCape | 1) No projects have been initiated. | | | | | | |
| | Engagements with SMME's in order to provide entrepreneurial support. | **PROVIDE ENTREPRENEURIAL SUPPORT TO SMME'S TO IMPROVE WASTE REUSE, RECOVERY AND/OR RECYCLING.** | X | X | X | DEA&DP/DEDAT /GreenCape | 1) Provided support to 10 SMME's in the Garden Route District | R486 660 | Ongoing | R169 800 | | | |
| | | | | | | | 2) Provided support to 10 SMME's in the West Coast and Cape Winelands Districts. | | | | R405 000 | Completed | R382 000 |
| | Engagements with targeted sectors regarding | **STIMULATE THE WASTE ECONOMY THROUGH THE PROMOTION OF ALTERNATIVE** | X | X | X | DEA&DP/DEDAT/ GreenCape/ | 1) No projects have been initiated. | | | | | | |

| GOAL 3: EFFECTIVE AND EFFICIENT UTILISATION OF RESOURCES | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | alternative waste treatment. | WASTE TREATMENT TECHNOLOGIES. | | | | private sector or industry | | | | | | | |
| OBJECTIVE 3: INCREASE WASTE DIVERSION THROUGH REUSE, RECOVERY AND RECYCLING | Waste diversion targets set for different waste streams.<br>50% diversion of organic waste by 2022.<br>100% diversion of organic waste by 2027.<br>20% diversion of recyclables by 2019 (National MTSF Outcome 10 target). | SET WASTE DIVERSION TARGETS THROUGH STAKEHOLDER ENGAGEMENTS, SPECIFICALLY, ON THESE WASTE STREAMS: CONSTRUCTION AND DEMOLITION WASTE, PACKAGING WASTE, E-WASTE, HOUSEHOLD HAZARDOUS WASTE | X | X | X | DEA&DP | 1) Targets set in the varied waste management licences | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |

| GOAL 4: IMPROVED COMPLIANCE WITH ENVIRONMENTAL REGULATORY FRAMEWORK | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBJECTIVES | OUTPUT INDICATOR | ACTIVITY | TIMEFRAMES | | | RESPONSIBILITY TOTAL PROJECT BUDGET | PROJECT DESCRIPTION PROJECT STATUS | PROJECTS FOR 2017/2018 (1 JAN 2018 - 30 MAR 2018) | | | PROJECTS FOR 2018/2019 (1 APR - 31 DEC 2018) | | |
| | | | 2017 - 2022 | 2022 - 2027 | 2027 - 2032 | | | TOTAL PROJECT BUDGET | PROJECT STATUS | 2018 EXPENDITURE | TOTAL PROJECT BUDGET | PROJECT PROGRESS | ACTUAL EXPENDITURE |
| OBJECTIVE 1: STRENGTHEN COMPLIANCE | Compliance reports for targeted industries. (facilities) | CONDUCT TARGETED COMPLIANCE PROMOTION ACTIVITIES. | X | X | X | DEA&DP | 1) Four (4) compliance visits conducted and reports drafted. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |

| GOAL 4: IMPROVED COMPLIANCE WITH ENVIRONMENTAL REGULATORY FRAMEWORK | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONITORING AND ENFORCEMENT. | A number of enforcement actions conducted. | ENFORCE COMPLIANCE WITH WASTE LEGISLATION. | X | X | X | DEA&DP/ municipalities | 1) Thirty-one (31) complaints were dealt with by DEA&DP. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | Updated waste licensing standard operating procedure(s). | UPDATE AND MAINTAIN WASTE LICENSING STANDARD OPERATING PROCEDURE(S). | X | X | X | DEA&DP | 1) Updated waste licensing standard operating procedure(s). | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | Updated waste licensing audit protocol. | UPDATE THE WASTE LICENSING AUDIT PROTOCOL. | X | X | X | DEA&DP | 1) Updated waste licensing audit protocol. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | Audit reports of regulated waste management facilities. | AUDIT REGULATED WASTE MANAGEMENT FACILITIES. | X | X | X | DEA&DP/ municipalities/ industry | 1) Seventy-three (73) audit reports drafted of regulated waste management facilities. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | Waste management facility licenses with diversion targets. | USE WASTE MANAGEMENT LICENSES TO SET DIVERSION TARGETS FOR WASTE STREAMS. | X | X | X | DEA&DP | 1) Waste diversion targets were set in the Variation licence Project. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | Gas monitoring reports. | MONITOR LANDFILL GAS AT WASTE DISPOSAL FACILITIES AND ADVISE ON LANDFILL GAS MANAGEMENT. | X | X | X | DEA&DP/ municipalities/ industry | 1) Gas monitoring reports. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| | Varied/amended Waste management facility authorisations. | IDENTIFY WASTE MANAGEMENT FACILITY AUTHORISATIONS, WHICH NEED TO BE VARIED / AMENDED. | X | X | X | DEA&DP | 1)Varied/ amended Waste management facility authorisations. | Operational Budget | Completed | Operational Budget | Operational Budget | Completed | Operational Budget |
| OBJECTIVE 2: REMEDIATE AND REHABILITATE | A number of industries engaged with and monitored for compliance to | ENGAGE AND MONITOR INDUSTRY FOR COMPLIANCE TO PART 8 OF CHAPTER 4 OF THE NEMWA. | X | X | X | DEA&DP | 1) No projects have been initiated. | | | | | | |

| GOAL 4: IMPROVED COMPLIANCE WITH ENVIRONMENTAL REGULATORY FRAMEWORK | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONTAMINATED LAND | Part 8 of Chapter 4 of NEMWA. | | | | | | | | | | | | |
| | An assessment report of contaminated land in the Western Cape. | CONDUCT AN ASSESSMENT OF CONTAMINATED LAND IN THE WESTERN CAPE. | X | | | DEA&DP | 1) No projects have been initiated. | | | | | | |
| | A business case for the management of contaminated land in the Western Cape. | BUILD A BUSINESS CASE FOR THE MANAGEMENT OF CONTAMINATED LAND IN THE WESTERN CAPE. | X | | | DEA&DP | 1) No projects have been initiated. | | | | | | |
| OBJECTIVE 3: FACILITATE THE DEVELOPMENT OF WASTE POLICY INSTRUMENTS | A number of waste-related norms and standards developed. | DEVELOP WASTE-RELATED NORMS AND STANDARDS FOR WASTE MANAGEMENT FACILITIES AND SERVICES. | X | X | X | DEA&DP | 1) No projects have been initiated. | | | | | | |
| | | | | | | | 2) Initiate the development of a model waste bylaw for municipalities | Operational Budget | Ongoing | Operational Budget | Operational Budget | Ongoing | Operational Budget |
| | A number of waste stream guidelines developed. | DEVELOP WASTE STREAM GUIDELINES E.G. HOUSEHOLD HAZARDOUS WASTE GUIDELINE. | X | X | X | DEA&DP | 1) Initiated the development of the Household Hazardous Waste Guideline | Operational Budget | Ongoing | Operational Budget | Operational Budget | Ongoing | Operational Budget |
| | | | | | | | 2) Hosted 2 workshops to promote the guideline for Abattoir Waste in the CCT and the West Coast District. | R52 846 | Completed | R4 208 | | | |

| GOAL 4: IMPROVED COMPLIANCE WITH ENVIRONMENTAL REGULATORY FRAMEWORK | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 3) Host 2 workshops on the development of generic Organic Waste diversion plans for municipalities in the Garden Route and West Coast District. | | | | R45 000 | Ongoing | R40 834 |
| | | | | | | | 4) Hosted a Green Waste Management Stakeholder engagement - 8 March 2018. | | | | R11 200 | Completed | R6 000 |
| | A guideline for the regionalisation of waste management infrastructure and services. | **COMPILE A GUIDELINE ON THE REGIONALISATION OF WASTE MANAGEMENT INFRASTRUCTURE AND SERVICES.** | X | | | DEA&DP | 1) No projects have been initiated | | | | | | |
| | Engagements with stakeholders to influence the development of a risk-based methodology for waste management facilities. | **FACILITATE THE DEVELOPMENT OF A RISK-BASED METHODOLOGY FOR WASTE MANAGEMENT FACILITIES TO INFORM THE DEVELOPMENT OF NORMS AND STANDARDS.** | X | X | X | DEA&DP/DEA/ municipalities/ industry/SALGA | 1) Engagements with stakeholders to influence the development of a risk-based methodology for WMFs. | Operational Budget | Ongoing | Operational Budget | Operational Budget | Ongoing | Operational Budget |
| **OBJECTIVE 4: PROMOTE SELF/CO-REGULATORY MEASURES** | A number of Industry Waste Management Plans developed in targeted sectors. | **PROMOTE THE DEVELOPMENT OF INDUSTRY WASTE MANAGEMENT PLANS IN TARGETED INDUSTRY SECTORS.** | X | X | X | DEA&DP | 1) No projects have been initiated. | | | | | | |

## 14.2 MUNICIPAL WASTE COLLECTION SERVICES

Please refer to **Municipal Waste Collection - 2018**, Page **76**

**Table 21:Western Cape municipal waste collection service - 2018**

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| **MOSSEL BAY**<br><br>**NOTE:** INCREASE IN THE NUMBER OF BUSINESSES PROVIDING BUILDERS' RUBBLE REMOVAL. | Weekly waste collection service is provided. | A kerbside collection service is provided to all residences.<br>Skip collection of household general waste for informal residential areas.<br>Garden waste collection (small amounts) on domestic refuse removal days.<br>Open days for collection of household hazardous waste.<br>Drop-off facilities available for collection of household hazardous waste, (including waste oil and e-waste). | Once per week as a set service.<br>Additional services are available at request. | Kerbside collections for residences at a set tariff.<br>Kerbside collections for businesses with a fixed increased tariff for once a week collections.<br>Additional services are available at request and additional cost. | Onsite collection of general waste for farms in certain areas e.g. Herbertsdale.<br>Skip collection of household general waste.<br>Drop-off service available at Kwanonqaba and Sonskynvallei. |
| **KNYSNA** | Provision of weekly kerbside collection for formal residences and a door-to-door service to informal residential areas. | Bags are provided to informal residential area households for waste collection services.<br>Garden waste collection is provided at kerbside. Two (2) bags of garden waste are allowed for weekly kerbside collection. | A daily waste collection service is provided at events.<br>A twice per week service is provided to businesses in the CBD – one (1) collection during the week and one collection on Sundays.<br>Additional collection services are provided on a pre-arranged basis. | Kerbside and door-to-door collection is provided to residences – formal and informal.<br>Onsite /kerbside collection is provided to businesses.<br>Onsite collection is done at events.<br>A drop-off service is available at the Refuse Transfer Station to farms operated as business/commercial/industrial properties. | Most of the farms are operated as commercial or industrial properties.<br>Private waste collectors are utilised. A drop-off service is provided to them at a pay-as-you-throw rate. |

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| HESSEQUA | A weekly service provided to households.<br>Residents must supply their own refuse bags.<br>Builders' rubble collection service is done on pre-arrangement.<br>E-waste open days are arranged for the collection of e-waste. | A kerbside collection service is provided to all residences. | Waste collection is done twice weekly.<br>Daily collection is done in some cases (unspecified). | Kerbside collection services are provided. | Weekly collection services are provided to farms and located on nine (9) main roads in the Municipality.<br>Drop-off services are available at waste disposal facilities. |
| GEORGE | A weekly service provided to households. | A kerbside collection service is provided to all residences.<br>Garden waste, builders' rubble and hazardous waste collection services are available. | Services are provided once a week. | Kerbside waste collection takes place at the business premises. A fixed increased tariff is charged. | Farms receive a weekly waste collection service. |
| BITOU | A weekly service provided to households. | A kerbside collection service is provided to all residential areas. A garden waste collection service is available at request for which a specified tariff applies. | Services are provided weekly. | A kerbside collection is provided as a "pay-as-you-throw" tariff. | A collection route was implemented for the farming area in Harkerville and around the airport.<br>A drop-off service is provided at the Refuse Transfer Station or WDF.<br>A waste collection service covers most farms in the Municipality.<br>A pay-as-you-throw tariff is implemented. |
| OVERSTRAND<br>**NOTE:** INTERNATIONAL EXPORT REQUIREMENTS FORCES FARMERS TO DISPOSE OF WASTE IN A RESPONSIBLE MANNER, AT A LICENSED WASTE DISPOSAL FACILITY. | A weekly service is provided to households.<br>Skips in the informal residential area are collected on a daily basis. | Garden waste collection is allowed for kerbside collection for one (1) bag per week.<br>A Drop-off service is available for clean builders' rubble. Mixed builders' rubble disposal is allowed and charged per tonnes. | Services are provided weekly. | Kerbside/onsite collection at a fixed tariff for office general waste.<br>Drop-off facilities are available for industrial waste drop-off. The service is available free of charge for ≤1 ton.<br>Kerbside collection of recyclables is a free service. | A drop-off service is available to farms. The service is free for ≤1 ton of general waste. |

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| | | A drop-off service is allowed for hazardous waste (including lightbulbs, waste oil and e-waste). | | Collection service is charged on a "pay-as-you-throw" system. | |
| BREEDE VALLEY | A weekly service is provided to households. | A kerbside collection service is provided to all residences.<br>Waste can be disposed in skips are placed in residential areas for community.<br>Garden waste and builders' rubble collection service is available. | "Pay as you throw" system is implemented.<br>A free of charge service is implemented for recyclable material. Collection is done separately from normal household waste collection through a contractor. | Kerbside/onsite collection for business premises. | Drop-off services are available at no cost to farms to dispose at Touwsrivier Refuse Transfer Station, De Doorns and Worcester waste disposal facilities. |
| STELLENBOSCH | A weekly service is provided to households. | A kerbside collection service is provided to all residences.<br>Skips are provided to and removed from informal residential areas. Hazardous waste collection services are available for residents on specific collection days by the Municipality. This project has been implemented in the Franschhoek area.<br>Garden waste can be dropped off at the WDF. | Waste collection services are provided thrice per week. Availability of the service extends to five times per week at request.<br>A fixed increased tariff applies.<br>A pilot project was initiated at twenty (20) at 20 restaurants for organic waste for 5 days per week. | Kerbside collection services are provided. | A service is provided weekly to farms.<br>A fixed increased tariff applies.<br>A drop-off service is available at Stellenbosch WDF. |
| DRAKENSTEIN | A weekly service is provided to households. | A kerbside collection service is provided to all residences.<br>Skips are provided to and removed from informal residential areas. Garden waste collection services are available on request. | Waste collection services are provided to businesses, as per their requirements.<br>A fixed increased tariff applies. | Kerbside collection services are provided. | Onsite collection services are provided as per agreement with skips or wheelie bins.<br>A drop-off service is also provided at Wellington WDF to farms. |

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| LANGEBERG | A weekly service is provided to households. | A kerbside collection service is provided to all residences.<br>Skips are provided to and removed from informal residential areas.<br>Garden waste removal services are available. | Collection services are provided once a week interval but is available twice or thrice per week at request. | Kerbside collection services are provided.<br>Bulk waste removal services are available at request. | No collection services are provided to farms.<br>Drop-off services are available and utilised by farms. |
| CEDERBERG | A weekly service is provided to households. | All residential areas receive a weekly kerbside collection service.<br>Garden waste and builders' rubble collection services are available. | The Municipality provides a weekly service to businesses. | A kerbside collection service is provided to businesses. | No collection services are provided to farms. |
| SALDANHA BAY | A weekly service is provided to households. | Skips are provided to and removed from informal residential areas.<br>A weekly kerbside collection service is provided to formal residential areas.<br>Garden waste is allowed into the refuse bin collected at kerbside.<br>A skip collection service is provided for builders' rubble.<br>A drop-off service for hazardous waste is available at the Vredenburg MRF for residents. | Businesses indicated the frequency of waste removal and billed according (fixed tariff system). | A kerbside collection service is provided by means of wheelie refuse bins and skips. | A weekly kerbside collection is provided to farms as per the regular refuse removal route.<br>A drop-off service is available and utilised by farms who do not receive a kerbside service. This service is available at the Refuse Transfer Station and WDFs. |

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| SWARTLAND | A weekly service is provided to households and includes garden waste. | Kerbside collection services are provided to all residents.<br>Garden waste removal services are provided to Moorreesburg on Tuesdays.<br>Five (5) bags are provided per month to equitable share homes.<br>Skips are provided to and removed from informal residential areas. | A waste collection service of up to five (5) times per week, is provided.<br>A fixed increased tariff applies and if businesses recover waste for recycling, the tariff can decrease according to the "pay-as-you-throw" system. | Kerbside waste collection services are provided. | A drop-off service is provided at a "pay-as-you-throw" tariff.<br>A drop-off service is available for recyclables, free of charge.<br>Farms on the main routes can request a collection service. |
| WITZENBERG | A weekly collection service is provided for Formal and informal residential areas as well as business/commercial areas. | Residential areas receive a kerbside service by means of a black bag.<br>Informal residential also receives a kerbside service by means of a black bag.<br>Business areas receive a kerbside service by means of a bin.<br>Skips are placed in residential areas for the collection of garden waste respectively. This skip is removed twice per week. | A weekly service is provided for business/commercial areas | A kerbside collection service is provided to business and commercial areas. | Farms are allowed to do own disposal at Tulbagh WDF at R134. |
| SWELLENDAM | A weekly collection service is provided to households. | A kerbside collection service is provided by means of a wheelie bin. | A weekly service is provided to business and commercial areas. | A kerbside collection service is provided by means of a wheelie bin. | Farms can dispose independently at the WDF. |

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| THEEWATERSKLOOF | A weekly collection service is provided to formal and informal residential area residents. | A kerbside collection is provided to formal residential areas by means of a wheelie bin. | A weekly service is provided to business and commercial areas. | A kerbside collection service is provided. | Farms needs to apply for the service, in order for the finance department to make a cost calculation. |
| CAPE AGULHAS | A weekly collection service is provided to formal and informal residential areas. | A kerbside collection service is provided to both formal and informal residential areas | A weekly collection service is provided to business/commercial areas. | A kerbside collection service is provided. | Wine farms in the municipality recover recyclables and discard of waste at landfill. Domestic refuse removal tariff applies = R172.50.<br>Minimal requests have been received for collection services. Self-disposal takes place which eliminates the transportation cost. |
| KANNALAND | A weekly collection service is provided to formal and informal residential areas. | A kerbside service is provided with a black bag. | A weekly collection service is provided to business and commercial areas. | A kerbside collection service is provided to business and commercial areas. | Farms can dispose of waste at the municipal WDF. |
| PRINS ALBERT | A weekly collection service is provided to formal and informal residential areas. | A kerbside collection service is provided to formal and informal residential areas by means of a black bag.<br>Green waste collection services are only done for households upon request. | A weekly collection service is provided to business and commercial areas. | A kerbside collection service is provided to business and commercial areas. | No collection service is provided and has not been requested to date. |
| BEAUFORT WEST | A weekly collection service is provided to residential areas. | Formal and informal residential areas receive a service by means of a black bag | Business area receive a service on a once per week basis. | Household waste<br>Business waste | No collection service is provided |

| MUNICIPALITY | FREQUENCY OF COLLECTION FOR RESIDENTIAL AREAS | TYPE OF COLLECTION SERVICES FOR RESIDENCES | FREQUENCY FOR BUSINESSES AND COMMERCIAL | TYPE OF COLLECTIONS SERVICES | FARMS |
|---|---|---|---|---|---|
| LAINGSBURG | A once per week service is provided | A kerbside collection service is provided by means of a black bag. | A once per week service is provided | Kerbside services are provided to businesses | No collection service is provided |
| OUDTSHOORN | A once per week weekly service is provided | A kerbside service is provided by means of black bags | A weekly service is provided | A kerbside service is provided by means of a black bag | No collection service is provided |
| BERGRIVIER | Waste collection services are provided on a once per week basis. | A kerbside collection service is provided by means of a black bag.<br>A two-bag system is provided to higher income residential areas.<br>Bags are provided by the municipality for green waste which are removed at kerbside. Only two bags of clean green waste will be removed per household. | A weekly collection service is provided to businesses. | A kerbside collection service is provided. | Recyclables can be delivered to municipal facilities at no charge.<br>Varied rates applies for waste disposed and is measured and charged for per truck load = R156 per half load. |
| MATZIKAMA | A once per week weekly service is provided | A kerbside service is provided by means of black bags | A weekly service is provided | A kerbside service is provided by means of a black bag | No collection service is provided. |

## 14.3 WESTERN CAPE WASTE REMOVAL TARIFFS - 2018

Please refer to **Municipal Waste Collection - 2018**, Page **76** that refers to Municipal waste removal tariffs in the Western Cape for 2018.

Table 22: CCT refuse removal tariffs - 2018

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2015/2016 | TARIFF 2016/2017 | TARIFF 2017/2018 |
|---|---|---|---|---|---|---|
| CCT | Property owner with property valued from R1 up to and including R100 000 (100% rebate) | 240L bin | 1 | 118.5 | 137.39 | **145.26** |
| | Property value between R100 001 up to and including R150 000 (75% rebate | | | 88.9 | 102.99 | **108.84** |
| | Property value between R150 001 up to and including R350 000 (50% rebate) | | | 59.3 | 68.7 | **72** |
| | Property value between R350 001 up to and including R400 000 (25% rebate) | | | 29.6 | 34.39 | **36** |
| | Hostels, Flats, Retirement villages - excluding Single Residential | 240L bin | 3 | 355.3 | | |
| | Residential and non-residential | 85L bin | 1 | Free | Free | **Free** |

Table 23: Cape Winelands DM refuse removal tariffs - 2018

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| DRAKENSTEIN | | 240L bin | 1 | 2,347.81 | 2,575.55 | **2825.37** | | 9.70% |
| | | | 2 | 6,399.40 | 7,020.14 | **7558.58** | | |
| | | | 3 | 10,824.08 | 11,874.02 | **12883.31** | | |
| | | | 5 | 18,267.73 | 20,039.70 | | | |
| | | 770L bin | 1 | 8,029.39 | 8,808.24 | **9512.89** | | |
| | | | 2 | 21,889.33 | 24,012.60 | | | |
| | | | 3 | 37,018.90 | 40,609.73 | | | |
| WITZENBERG | Res. Prop. ≤ 100 000 | 2 refuse bags or less | | | 157.09 | **168.1** | 179.9 | 6%—7.01%—7.02% |

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| | Res. prop > 100 000 ≤ 150 000 | | | | 169.18 | **181** | 193.7 | 6%—6.99%—7.02% |
| | Res. prop > 150 000 ≤ 200 000 | | | | 181.26 | **193.9** | 207.5 | 6%—6.97%—7.01% |
| | Res. Prop > 200 000 ≤ 500 000 | | | | 193.34 | **206.9** | 221.4 | 6%—7.01%—7.01% |
| | Res. prop > 500 000 ≤ 800 000 | | | | 210.26 | **225** | 240.8 | 6%—7.01%—7.02% |
| | Res. prop > 800 000 ≤ 1 000 000 | | | | 217.51 | **232.7** | 249 | 6%—6.98%—7% |
| | Res. prop > 1 000 000 | | | | 241.68 | **258.6** | 276.7 | 6%—7%—7% |
| | Other properties | 240L bin | 1 | | 302.1 | **323.25** | 349.11 | 6%—7%—8% |
| | | | 2 | | 604.2 | **646.49** | 698.21 | |
| | | | 3 | | 906.3 | **969.74** | 1047.32 | |
| | | 770L bin | 1 | | 725.04 | **775.79** | 837.86 | 6%—7%—8% |
| | | | 2 | | 1450.08 | **1551.59** | 1675.71 | |
| | | | 3 | | 2175.12 | **2327.38** | 2513.57 | |
| **STELLENBOSCH** | Indigent household (250 m²) and max. value R200 000 | 3 closed bags | 1 | R 98.25 | 107.09 | **116.73** | | |
| | Basic residential collection | 3 closed bags or 240L bin | 1 | R 127.20 | 138.65 | **151.13** | | |
| | Hostels, flats, old age/retirement villages | Blue lid 240L bin | 3 | R 451.33 | 491.95 | **536.23** | | |
| | Business and commercial | 3 standard refuse bags or 240L bin | 1 | R 150.44 | 163.98 | **178.74** | | |
| | | 3 standard refuse bags or 240L bin | | R 451.33 | 491.95 | **536.23** | | |
| | | 240L bin | | R 752.20 | 819.9 | **893.69** | | |
| | Restaurant (food waste only) | | 5 | R 370.00 | 403 | **439.6** | | |
| **BREEDE VALLEY** | household/Flat | 240L bin or 3 Black bags | 1 | 145.61 | 177 | **190** | | 6.63% |
| | Hostels | | | 120.18 | 146 | **157** | | 6.57% |

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| | Residential homes used for home industries/businesses or career practices | | | 185.96 | 225 | **241** | | 6.13% |
| | Commercial | | 1 | 2 689.47 | 3 254.00 | **3480** | | 6.13% |
| | | | 2 | 4 495.61 | 5 438 | **6960** | | 6.11% |
| | | | 3 | 6 285.09 | 7 603.00 | **10440** | | |
| | | | 4 | 8 083.77 | 9 778.00 | **13920** | | 6.10% |
| | | | 5 | 9 874.56 | 11 944.00 | **17400** | | |
| | | | 6 | 11 663.16 | 14 108.00 | | | 6.11% |
| | | | 7 | 13 537.72 | 16 375.00 | | | 6.10% |
| | Sport clubs, educational (crèche's, schools and colleges), institutions and old age homes, churches | | 1 | 989.47 | 1 197.00 | **1280** | | 6.12% |
| | | | 2 | 1 593.86 | 1 928.00 | **2560** | | 6.11% |
| | | | 3 | 3 188.60 | 3 857.00 | **3840** | | |
| | | | 4 | 4 250.88 | 5 142.00 | **5120** | | |
| | | | 5 | 5 290.35 | 6 399.00 | **6400** | | 6.10% |
| | | | 6 | 6 346.49 | 7 677.00 | | | 6.11% |
| | | | 7 | 7 405.26 | 8 957.00 | | | 6.10% |
| | Municipal (departmental) | | | 1 773.68 | 2 146.00 | **2295** | | 6.13% |
| LANGEBERG | **General**: informal housing and indigent tariff | | 1, 2 or 3 | 108.55 | 121.58 | **137.38** | | 8.40%-12% |
| | **General**: bulk removal and perishable products | | | 859.36 | 962.49 | **1087.61** | | |
| | **Mega industries**: Langeberg & Ashton foods | | | 15 652.89 | 17 531.24 | **19810.3** | | |
| | Langeberg & Ashton foods | | | 12 298.72 | 13 774.36 | **15565.25** | | |
| | Fruits packers | | | 1 613.18 | 1806.76 | **2041.64** | | |
| | Parmalat | | | 3 015.27 | 3 377.10 | **5065.65** | | |
| | All wine cellars | | | 1 507.64 | 1688.55 | **1908.07** | | |

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| | Small cheese factories | | | | | **1908.07** | | |
| | Moreson | | | 1 085.51 | 1 215.77 | **1373.82** | | |
| | Sport ground | | | 98 | 109.76 | **124.03** | | |
| | **Rejected material**: Robertson Abattoir | | | 10 221.79 | 11 448.41 | | | |
| | Robertson Abattoir (manure) | | | 6 663.76 | 7 463.41 | | | |
| | Excull | | | | | | | |
| | Bonnievale abattoir | | | 4 839.52 | 5420.26 | | | |
| | Delgado fishery | | | 3 663.56 | 4103.19 | | | |
| | Parmalat | | | 12 905.38 | 14 454.02 | | | |
| | **Municipal departments** | | 1 | 108.55 | 121.58 | **137.38** | | |
| | | | 2 or 3 | 437.23 | 489.7 | **553.36** | | |

Table 24: Central Karoo DM refuse removal tariffs - 2018

| MUNICIPALITIES | PLACE/TYPE OF WASTE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| LAINGSBURG | Household | | | 83 | 103 | **96** | 101 | 8.86—6.25—5.94 |
| | Businesses and offices | | | 392 | 482 | **449** | 475 | 7.86—6.19—5.90 |
| | Garden refuse | | | 137.6 | 170 | **158.4** | 167.7 | 8.37—6.22—5.87 |
| | Compost bins | | | | | | | |
| | | Garbage bags | | 2.3 | 2.85 | **2.7** | 2.9 | 7.28—6.20— 5.90 |
| PRINS ALBERT | | | | | | | | |
| BEAUFORT WEST | | | | | | | | |

Table 25: Garden Route DM refuse removal tariffs -2018

| MUNICIPALITIES | TARIFF CODE | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|---|
| MOSSEL BAY | | Households, crèches, churches | 1 bag | 1 | 135.16 | 155.43 | **190.31** | | |
| | | Old age home, hospitals, clinics and schools | | | 67.58 | 77.71 | | | |
| GEORGE | 2713, 2715, 2717, 2726 | Hotels, hospitals | 2*240L bin | 3 | 10 878 | | **1198.85** | | |
| | 2703, 2713 | Guest houses | 7 black refuse bags or 240L bin | 1 | 2 831 | | **311.95** | | |
| | 2707, 2713 | Caravan parks | 240L bin | 1 a week/site | 140 | | **15.43** | | |
| | 2703, 2705, 2713 | Industries | 2*240L bin | 1 | 5 661 | | **623.9** | | |
| | 2718, 2719, 2720 | Schools / school hostels | 2*240L bin | 3 | 10 878 | | **1198.85** | | |
| | 2713 | | Bulk (1700 litre) | 3 | 26 250 | | **2892.97** | | |
| | 2708, 2713 | Churches and church halls | 7 black refuse bags or 240L bin | | 2 831 | | **311.95** | | |
| | 2704, 2713 | Holiday chalets | 240L bin | 1 a week/chalet | 577 | | **63.6** | | |
| | 2702, 2709, 2710 | Uniondale / Haarlem: Res. | 7 black refuse bags | 1 | 42 | | **55.55** | | |
| | | Uniondale / Haarlem: Bus. | Refuse bags | 2 | 90 | | **119.03** | | |
| | 2711 | To all vacant Erven | | | 1 729 | | **165.69** | | |
| | 2703 | Botanical Garden | 240L bin | 1 | 2 831 | | **311.95** | | |
| | 2701, 2706, 2713, 2725, 2727 | Residences, flats | 7 black refuse bags or 240L bin | 1 | 1 729 | | **190.56** | | |
| BITOU | | Domestic/ churches/crèches | 110L bin | 1 | 2 388 | 2 567 | **2865** | | 7.5—7.52—7.5 |
| | | | | 2 | 4 775 | 5 133 | **5728** | | 7.5 |
| | | Domestic | 240L bin | 1 | 2 502 | 2693 | | | 7.5—7.51—7.5 |
| | | | | 2 | 5 010 | 5 386 | | | 7.52—7.51—7.5 |
| | | Group housing | | | 2 388 | 2 567 | **2731** | | 7.5—7.52—7.5 |
| | | Business/ commercial | 110L bin | 1 | 3 106 | 3 339 | **3960** | | 7.52—7.51—7.5 |
| | | | | 2 | 6 211 | 6 677 | **7811** | | 7.52—7.49—7.5 |
| | | | | 3 | 9 317 | 10 016 | **11717** | | 7.52—7.5—7.5 |

| MUNICIPALITIES | TARIFF CODE | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Daily removal | 15 528 | 16 693 | **19528** | | 7.52—7.5—7.5 |
| | | | 240L bin | 1 | 3 415 | 3 671 | | | 7.51—7.49—7.5 |
| | | | | 2 | 6 831 | 7 343 | | | 7.51—7.51—7.5 |
| | | | | 3 | 10 246 | 11 014 | | | |
| | | | | Daily removal | 17 076 | 18 357 | | | |
| | | PDI Areas | 110L bin | 1 | 1 552 | 1 668 | | | 7.52—7.48—7.47 |
| | | | 240L bin | 1 | 1 708 | 1 836 | | | 7.51—7.49—7.49 |
| | | Garden refuse | Up to half load | | 422 | 454 | **482** | | 7.38—7.38—7.58 |
| | | | Full Load | | 847 | 911 | **969** | | 7.50—7.49—7.56 |
| | | | Plastic Bag | | 199 | 214 | **228** | | 7.56—7.57—7.54 |
| | | | Up to half Load - Sub-economic | | 213 | 229 | | | 7.61—7.58—7.51 |
| KNYSNA | | Accommodation | 170L bin | 1 | 1 568 | 1 717 | **1 880** | | 9.5 |
| | | Commercial | | | 8 801 | 9 637 | **10 553** | | |
| | | Light Industry | | | 1 050 | 1 150 | **1 259** | | |
| | | Government: general | | | 913 | 1 000 | **1 095** | | |
| | | Government: schools | | | 777 | 850 | **931** | | |
| | | Priv: Domestic | | | 425 | 465 | **509** | | |
| | | School/education | | | 673 | 737 | **807** | | |
| | | Sport Organisation | | | 801 | 878 | **961** | | |
| | | Church | | | 9 | 10 | **11** | | |
| | | Domestic residential | | | 937 | 1 026 | **1 123** | | |
| | | Old age homes | | | 1 867 | 2 044 | **2 238** | | |
| | | Business and other properties | 1 wheelie bin per premises | | 1 755 | 1 922 | **2 105** | | |
| | | | 2-3 wheelie bin per premises | | 10 504 | 11 502 | **12 595** | | |
| | | | 4-5 wheelie bin per premises | | 21 010 | 23 006 | **25 191** | | |
| | | | 6-7 wheelie bin per premises | | 31 514 | 34 508 | **37 786** | | |

| MUNICIPALITIES | TARIFF CODE | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | 8-9 wheelie bin per premises | | 42 020 | 46 011 | **50 382** | | |
| | | | 10-11 wheelie bin per premises | | 52 524 | 57 514 | **62,977** | | |
| | | | 12-13 wheelie bin per premises | | 63 029 | 69 017 | **75 574** | | |
| | | | 14-15 wheelie bin per premises | | 73 535 | 80 521 | **88 170** | | |
| | | | 16-18 wheelie bin per premises | | 94 544 | 103 526 | **113 361** | | |
| | | | 19- 20 wheelie bin per premises | | 105 049 | 115 028 | **125 956** | | |
| | | | 21-28 wheelie bin per premises | | 147 068 | 161 040 | **176 339** | | |
| | | | 29-30 wheelie bin per premises | | 157 574 | 172 543 | **188 935** | | |
| | | | 31-47 wheelie bin per premises | | 159 326 | 174 462 | **191 036** | | |
| | | | 48-49 wheelie bin per premises | | 260 887 | 285 671 | **312 810** | | |
| **KANNALAND** | | Residential | 4 Black bags | 1 | 163.51 | 179.92 | **190.74** | | |
| | | Small Businesses | 7 Black bags | | 202.47 | 222.8 | **236.16** | | |
| | | Hotels B&B's and self-Catering | | | 204.38 | 224.89 | **238.39** | | |
| | | Old Age Homes and Frail Care centres | | | 163.51 | 179.92 | **190.71** | | |
| | | Residential and Small Business | | 1/fortnight | 85.36 | 93.93 | **99.56** | | |
| **HESSEQUA** | | | | | | | | | |
| **OUDTSHOORN** | | Residential | | | 1303 | 1438.5 | | | |
| | | Business per 85dm³ | | | 11,80 | 13 | | | |
| | | Garden refuse by owner | | | no charge | no charge | | | |

| MUNICIPALITIES | TARIFF CODE | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | Garden refuse by Contractor | | | | 50 | | | |
| | | Building Rubble removed by owner | | | | no charge | | | |
| | | Building Rubble removed by Contractor | | | | | | | |
| | | Building Rubble removed by Municipality | | | | 570 | | | |
| | | Removal and Cleaning of refuse after function | | | | 1140 | | | |

Table 26: Overberg DM refuse removal tariffs - 2018

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| OVERSTRAND | Household | | 1 | 166.74 | 176.74 | **164.34** | 174.2 | 6% |
| THEEWATERSKLOOF | Domestic refuse and sport clubs | 3 standard refuse bags/ wheel bin | 1 | | 163.2 | | | |
| | Catering premises | standard container | 3 | | 638.4 | | | |
| | Non- catering premises and hospitals | standard container | 2 | | 437.5 | | | |
| | | Bulky refuse except industries | 1 | | 1 758.40 | | | |
| | | | 2 | | 3 516.80 | | | |
| | | | 3 | | 5 275.20 | | | |
| | | | 4 | | 7 033.60 | | | |
| | | | 5 | | 8 792.00 | | | |
| | | | Special Removals on weekends (Sun & Sat) | | 2 227.50 | | | |
| CAPE AGULHAS | Residential | | | | | **138** | | |

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 | INCREASE/ DECREASE (%) |
|---|---|---|---|---|---|---|---|---|
| SWELLENDAM | Agricultural properties | | Removal service per service per month | 5 5.21 | 67.97 | **74.06** | | |
| | Industries | | | 3 23.37 | 398.13 | **433.76** | | |
| | Residential | | | 1 10.56 | 136.12 | **148.3** | | |
| | Deviant/consent consumers/small businesses | | | 1 33.45 | 164.3 | **179** | | |
| | Cafes/supermarkets/ grocery/liquor stores/hotels | | | 228.73 | 247.03 | **306.81** | | |
| | Hotels/hospitals/clinics | | | 1 64.83 | 202.94 | **221.1** | | |
| | Medium big businesses | | | 2 086.17 | 2 568.49 | **2798.3** | | |
| | Large businesses (malls)/large industrial businesses | | | 6 376.79 | 7 851.10 | **8553.57** | | |

Table 27: West Coast DM refuse removal tariffs - 2018

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2015/2016 | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 |
|---|---|---|---|---|---|---|---|---|
| SWARTLAND | Household/business | Black bags or 240L bin/ (2*85L drum) | | | 122.19 | 129.52 | **130.78** | |
| SALDANHA BAY | Single residential sites, small holdings & residential accommodation businesses | 240L bin | 1 | | | 176.23 | **193.83** | |
| | Business and industrial premises | 240L bin | 1 | | | 180 | **198** | |
| | | | 2 | | | 271 | **299.13** | |
| | | | 3 | | | 359 | **394.96** | |
| | | 6 m³ skip | | | | 1 632.28 | **1795.48** | |
| | Special and Expired food removals | 240L bin | | | | 359.04 | **394.96** | |

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2015/2016 | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 |
|---|---|---|---|---|---|---|---|---|
| | Removal and disposal of cats | | | | | 9.47 | **10.43** | |
| | Removal and disposal of dogs | | | | | 18.95 | **20.87** | |
| | Removal of larger animals | | | | | 142.11 | **156.35** | |
| | Amusement parks, circuses and similar entertainment businesses | 240L bin | | | | 359.04 | **394.96** | |
| | | 6 m³ skip | | | | 1 713.77 | **1885.13** | |
| | Schools, churches, and charity events | 240L bin | | | | 107.98 | **118.78** | |
| | | 6 m³ skip | | | | 514.39 | **565.83** | |
| | Building rubble | 6 m³ skip | | | | 1 632.28 | **1795.48** | |
| **MATZIKAMA** | Residential/small offices/hair saloon | | 1 | 129.56 | 141.22 | 150 | **159.34** | |
| | Churches/schools /residences/old age home | | | 178.08 | 194.11 | 207 | **220** | |
| | home stores | | | 265 | 288.85 | 307 | **500** | |
| | Previous DMA Management Area | | | 57.39 | 62.56 | 67 | **71** | |
| | hospital | | | 6 973.70 | 7 601.33 | 8 088.00 | **8591** | |
| **CEDERBERG** | Basic charge: Households | | 1 | | | 81.93 | **94.22** | 108.35 |
| | Businesses | | 1 | | | 91.29 | **104.98** | 120.72 |
| | | | 2 | | | 167.58 | **178.3** | 189.71 |
| | | | 3 | | | 255.44 | **271.78** | 289.18 |
| | | | 4 | | | 346.42 | **368.59** | 392.18 |
| | | | > 4 | | | 440.56 | **468.75** | 498.75 |
| | Schools | | | | | 168.68 | **179.48** | 190.96 |
| | Hospital | | | | | 252.36 | **268.51** | 285.69 |
| | School residences | | | | | | | |
| | Church and halls | | | | | 85.02 | **90.46** | 96.24 |
| | Nursery schools | | | | | | | |
| | Old age homes | | | | | 499.33 | **531.28** | 565.28 |
| **BERGRIVIER** | Household | | 1 | 180 | 191 | 202 | **214** | |

| MUNICIPALITIES | PLACE | VOLUME | FREQUENCY/WEEK | TARIFF 2015/2016 | TARIFF 2016/2017 | TARIFF 2017/2018 | TARIFF 2018/2019 | TARRIF 2019/2020 |
|---|---|---|---|---|---|---|---|---|
| | Businesses | 2 bags | 1 | 628 | 666 | 706 | **748** | |
| | Garden refuse | By cargo or part thereof | | 160 | 170 | 180 | **191** | |
| | | Garbage bag per pack of 25 | | 37 | 39 | 41 | **43** | |
| | | Rubble by cargo or part thereof | | 332 | 352 | 373 | **395** | |
| | | | | | | | | |

## 14.4 WASTE MANAGEMENT LICENCES ISSUED - 2018

Please refer to **Variation of existing Waste Management Licences,** Page **82**.

**Table 28: Waste Management Licences issued for 2018**

| NO. | APPLICATION TYPE | LICENCE HOLDER (MUNICIPALITY) | DATE OF ISSUE | TYPE OF WMF |
|---|---|---|---|---|
| 1 | VARIATION | BEAUFORT WEST | 08 January 2018 | WDF |
| 2 | VARIATION | HESSEQUA | 08 January 2018 | WDF |
| 3 | VARIATION | DRAKENSTEIN | 08 January 2018 | WDF |
| 5 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 6 | VARIATION | CEDERBERG | 12 February 2018 | WDF |
| 7 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 8 | VARIATION | CEDERBERG | 16 February 2018 | WDF |
| 9 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 10 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 11 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 12 | VARIATION | OVERBERG | 12 February 2018 | WDF |
| 13 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 14 | VARIATION | MATZIKAMA | 12 February 2018 | WDF |
| 15 | VARIATION | MATZIKAMA | 16 February 2018 | WDF |
| 16 | VARIATION | MATZIKAMA | 16 February 2018 | WDF |
| 17 | VARIATION | MATZIKAMA | 16 February 2018 | WDF |
| 18 | VARIATION | CEDERBERG | 26 February 2018 | WDF |
| 19 | VARIATION | CEDERBERG | 16 February 2018 | WDF |
| 20 | VARIATION | SALDANHA BAY | 19 March 2018 | WDF |
| 21 | VARIATION | CEDERBERG | 02 March 2018 | WDF |
| 22 | VARIATION | CEDERBERG | 02 March 2018 | WDF |
| 23 | VARIATION | SALDANHA BAY | 02 March 2018 | WDF |

| NO. | APPLICATION TYPE | LICENCE HOLDER (MUNICIPALITY) | DATE OF ISSUE | TYPE OF WMF |
|---|---|---|---|---|
| 24 | VARIATION | BITOU | 02 March 2018 | WDF |
| 25 | VARIATION | BERGRIVIER | 09 April 2018 | WDF |
| 26 | VARIATION | GEORGE | 16 April 2018 | WDF |
| 27 | VARIATION | SWARTLAND | 17 April 2018 | WDF |
| 28 | VARIATION | CAPE AGULHAS | 17 April 2018 | WDF |
| 29 | VARIATION | BERGRIVIER | 17 April 2018 | WDF |
| 30 | VARIATION | BERGRIVIER | 17 April 2018 | WDF |
| 31 | VARIATION | THEEWATERSKLOOF | 17 April 2018 | WDF |
| 32 | VARIATION | CAPE AGULHAS | 17 April 2018 | WDF |
| 33 | VARIATION | BERGRIVIER | 17 April 2018 | WDF |
| 34 | VARIATION | HESSEQUA | 08 June 2018 | WDF |
| 35 | VARIATION | HESSEQUA | 11 June 2018 | WDF |
| 36 | VARIATION | SWELLENDAM | 20 June 2018 | WDF |
| 37 | VARIATION | SWELLENDAM | 06 July 2018 | WDF |
| 38 | VARIATION | SWARTLAND | 11 July 2018 | WDF |
| 39 | VARIATION | WITZENBERG | 12 July 2018 | WDF |
| 40 | VARIATION | BREEDE VALLEY | 12 July 2018 | WDF |
| 41 | VARIATION | KNYSNA | 13 July 2018 | WDF |
| 42 | VARIATION | KANNALAND | 24 July 2018 | WDF |
| 43 | VARIATION | OVERSTRAND | 30 July 2018 | WDF |
| 44 | VARIATION | BREEDE VALLEY | 01 August 2018 | WDF |
| 45 | VARIATION | HESSEQUA | 01 August 2018 | WDF |
| 46 | VARIATION | SWELLENDAM | 01 August 2018 | WDF |
| 47 | VARIATION | HESSEQUA | 01 August 2018 | WDF |
| 48 | VARIATION | PRINCE ALBERT | 01 August 2018 | WDF |
| 49 | VARIATION | HESSEQUA | 01 August 2018 | WDF |

| NO. | APPLICATION TYPE | LICENCE HOLDER (MUNICIPALITY) | DATE OF ISSUE | TYPE OF WMF |
|---|---|---|---|---|
| 50 | VARIATION | SWARTLAND | 01 August 2018 | WDF |
| 51 | VARIATION | HESSEQUA | 01 August 2018 | WDF |
| 52 | VARIATION | KNYSNA | 01 August 2018 | WDF |
| 52 | VARIATION | CAPE AGULHUS | 22 August 2018 | WDF |
| 53 | VARIATION | BREEDE VALLEY | 22 August 2018 | WDF |
| 54 | VARIATION | WITZENBERG | 22 August 2018 | WDF |
| 55 | VARIATION | GEORGE | 22 August 2018 | WDF |
| 56 | VARIATION | OUDSTHOORN | 28 August 2018 | WDF |
| 57 | VARIATION | CEDERBERG | 28 August 2018 | WDF |
| 58 | VARIATION | DRAKENSTEIN | 30 August 2018 | WDF |
| 59 | VARIATION | THEEWATERSKLOOF | 31 August 2018 | WDF |
| 60 | VARIATION | LANGEBERG | 31 August 2018 | WDF |
| 61 | VARIATION | LANGEBERG | 31 August 2018 | WDF |
| 62 | VARIATION | LANGEBERG | 31 August 2018 | WDF |
| 63 | VARIATION | DRAKENSTEIN | 31 August 2018 | WDF |
| 64 | VARIATION | THEEWATERSKLOOF | 06 September 2018 | WDF |
| 65 | VARIATION | THEEWATERSKLOOF | 06 September 2018 | WDF |
| 66 | VARIATION | KANNALAND | 07 September 2018 | WDF |
| 67 | VARIATION | HESSEQUA | 07 September 2018 | WDF |
| 68 | VARIATION | KANNALAND | 07 September 2018 | WDF |
| 69 | VARIATION | OVERBERG | 07 September 2018 | WDF |
| 70 | VARIATION | OUDSTHOORN | 07 September 2018 | WDF |
| 71 | VARIATION | SWELLENDAM | 07 September 2018 | WDF |
| 72 | VARIATION | CAPE AGULHAS | 07 September 2018 | WDF |
| 73 | VARIATION | MOSSEL BAY | 07 September 2018 | WDF |
| 74 | VARIATION | THEEWATERSKLOOF | 07 September 2018 | WDF |

| NO. | APPLICATION TYPE | LICENCE HOLDER (MUNICIPALITY) | DATE OF ISSUE | TYPE OF WMF |
|---|---|---|---|---|
| 75 | VARIATION | MOSSEL BAY | 07 September 2018 | WDF |
| 76 | VARIATION | MOSSEL BAY | 07 September 2018 | WDF |
| 77 | VARIATION | KANNALAND | 07 September 2018 | WDF |
| 78 | VARIATION | CCT | 07 September 2018 | WDF |
| 79 | VARIATION | STELLENBOSCH | 13 September 2018 | WDF |
| 80 | VARIATION | MATZIKAMA | 29 June 2018 | WDF |
| 81 | VARIATION | BEAUFORT WEST | 29 June 2018 | WDF |
| 82 | VARIATION | BERGRIVIER | 10 December 2018 | WDF |

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