INTEGRATED WASTE MANAGEMENT PLAN (IWMP)

22 February 2016

Thabazimbi Local Municipality

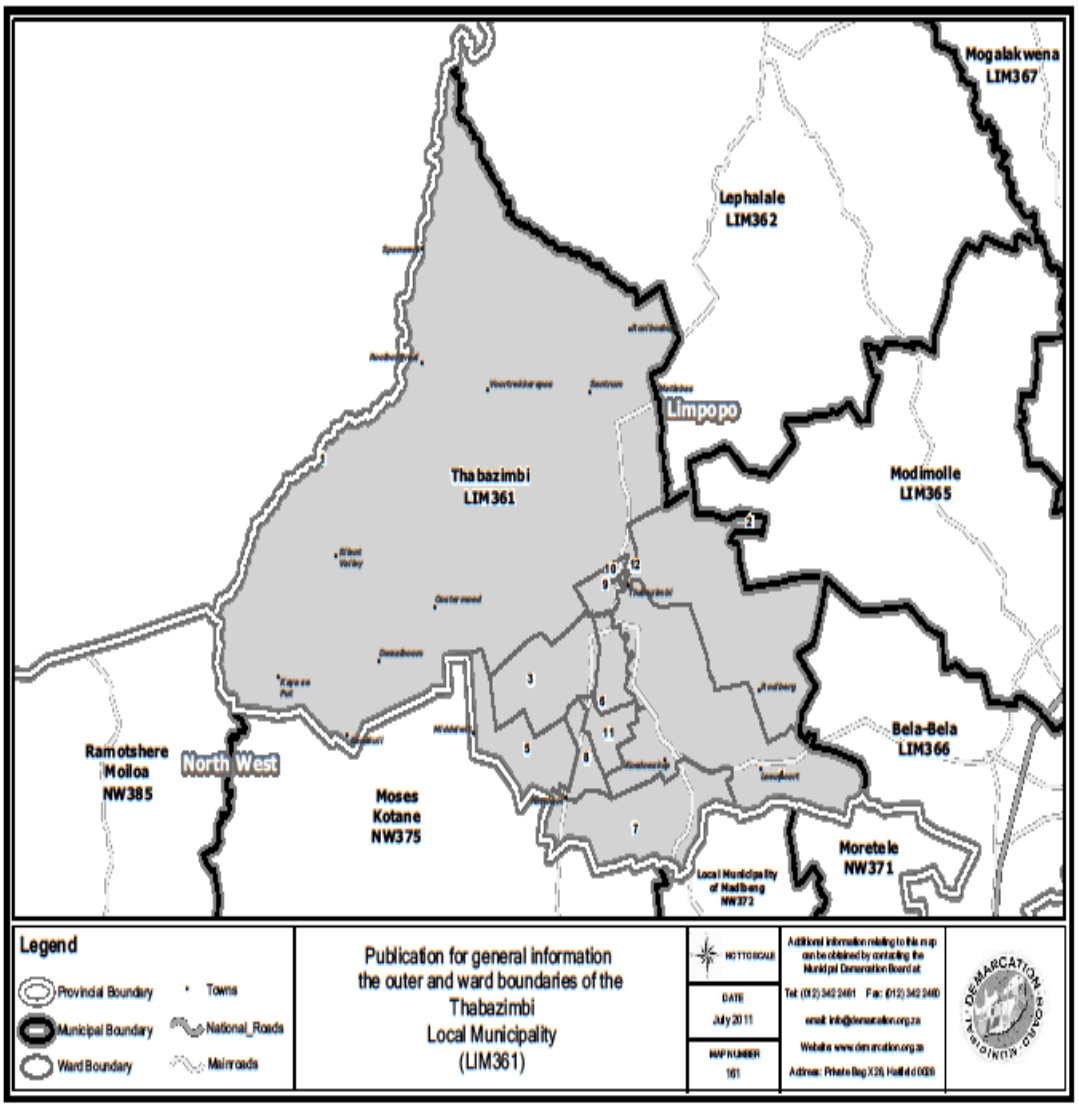
CONTENTS

1. Defining the geographical area

Thabazimbi Municipality is located in the South-western part of the Limpopo Province and has Botswana as its international neighbour and a mere two (2) hour drive from Tshwane. Thabazimbi is known as “mountain of iron” which is the Tswana name for this peaceful productive town, referring to the highly lucrative iron ore reef first discovered in the Municipality in 1919. The Municipality has Marakele National Park, which is a subsidiary of National Parks Board, and in the same standard as the Kruger National Park and Mapungube.The game lodges scattered around the area helps to promote the issue of environmental sustainability.

It was mined since the 1930’s when iron and steel production started. The town was proclaimed in 1953. Today Arcelor Mittal Steel (Arcelor Mittal South Africa) in Vanderbijlpark still draw much of their raw material from Thabazimbi Kumba Iron Ore mine. Apart from Iron Ore the Thabazimbi Local Municipality is surrounded by Platinum producing areas such as: Northam Platinum mine, Anglo, i.e. Amandelbult and Swartklip mines. Other minerals produced in the area include Andalusite, which is mined by Rhino Mine and limestone for the production of cement by Pretoria Portland Cement (PPC). Boundaries of Thabazimbi Local Municipality include areas such as: Thabazimbi, Northam, Leeupoort, Rooiberg and Dwaalboom. The Municipal area falls within the Waterberg District Municipal area, very peaceful place to live in and a malaria free Municipality. The size of the Municipal area is 986 264, 85 ha. Thabazimbi Local Municipality has demonstrated to be one of the sectors in depicting tremendous growth and will continue to do so. Given the potential to grasp opportunities within these sectors is therefore paramount. The mining sector has huge potential to absorb lot of skills within the municipality. There is also a need to establish mining opportunities in the small scale mining sector. We believe however, that in partnership with relevant stakeholders, we can leverage our society to tap into this major sector of the economy.

Thabazimbi is absolutely one of the country’s most sought tourism attraction point wherein tourists can be granted harmonious moment. Agriculture has also proven, in addition to mining, to be the strong economic sector in our municipality. Agricultural commodities produced wheat, beans and maize. We are growing our economy not in isolation; however, our goals are seamlessly aligned within those Limpopo Economic Growth and Development Plan in Limpopo. The alignment will ensure that our growth trajectory bears fruits and that we address the objective of poverty eradication through job creation and business opportunity stimulation.



Change the Map: Use Coloured Map

HELP TEXT FOR THIS SECTION

Prior to developing a situation analysis, a municipality must define the geographical area to which the plan relates. This involves describing the total area in square meters, the municipalities under the municipality in a case of a district municipality or towns in a case of a local municipality, available infrastructure such as roads as well as brief information about the socio-economic status of the area i.e. it is predominantly rural, with very high levels of un-employment and poverty, the major economic activities include agriculture and mining etc. Wards under the municipality should also be indicated. Where possible a map depicting the areas described under this section should be included.

Click here to read more in the IWMP guideline online.

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2. Situation analysis

2.1. DEMOGRAPHICS (POPULATION AND DEVELOPMENT PROFILES)

2.1.1. High income, low density settlement

Population growth	
Base population	150.00
Current growth estimates per annum	158.00
Future population estimates	158.00
Population distribution	
Age:	
Youth	0
Middle age	0
Old age	0
Gender:	
Male	0
Female	0
Education:	
Primary	0
Secondary	0
Tertiary	0
Employment:	
Employed	0
Unemployed	0

Population distribution graphs:

Graph 1 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.	Graph 2 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

Graph 3 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.	Graph 4 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

2.1.2. Middle income, middle density settlement

Population growth	
Base population	3517.00
Current growth estimates per annum	4836.00
Future population estimates	4836.00
Population distribution	
Age:	
Youth	53768
Middle age	29060
Old age	2061
Gender:	
Male	49630
Female	35253
Education:	
Primary	15790
Secondary	35446
Tertiary	4548
Employment:	
Employed	29605
Unemployed	7304

Population distribution graphs:

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Graph 7 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.	Graph 8 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

2.1.3. Low Income, High Density (Including Informal Settlements)

Population growth	
Base population	17465.00
Current growth estimates per annum	38259.80
Future population estimates	38259.80
Population distribution	
Age:	
Youth	0
Middle age	0
Old age	0
Gender:	
Male	0
Female	0
Education:	
Primary	0
Secondary	0
Tertiary	0
Employment:	
Employed	0
Unemployed	0

Population distribution graphs:

Graph 9 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.	Graph 10 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

Graph 11 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.	Graph 12 If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

2.2. DETERMINING CURRENT WASTE GENERATION AND ESTIMATING FUTURE WASTE GENERATION RATES AND QUANTITIES

2.2.1. High income, low density

Population growth	
Base population	150.00
Current growth estimates per annum	158.00
Future population estimates	158.00
Current waste generation and estimated future waste generation	
Current domestic waste generation rates per capita	0.00
Future domestic waste generation rates per capita (in 10 years)	0.00

2.2.2. Middle income, middle density

Population growth	
Base population	3517.00
Current growth estimates per annum	158.00
Future population estimates	4836.00
Current waste generation and estimated future waste generation	
Current domestic waste generation rates per capita	0.00
Future domestic waste generation rates per capita (in 10 years)	0.00

2.2.3. Low income, high density (including Informal settlement)

Population growth	
Base population	17465.00
Current growth estimates per annum	38259.80
Future population estimates	38259.80
Current waste generation and estimated future waste generation	
Current domestic waste generation rates per capita	0.00
Future domestic waste generation rates per capita (in 10 years)	0.00

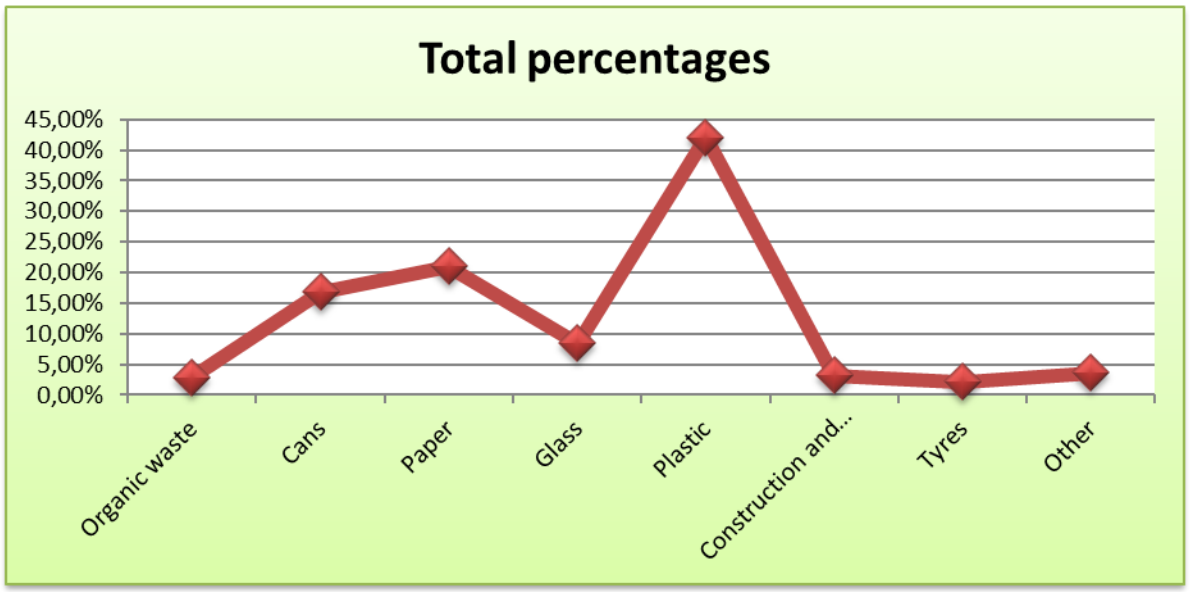
1.2. WASTE QUANTITIES AND TYPES

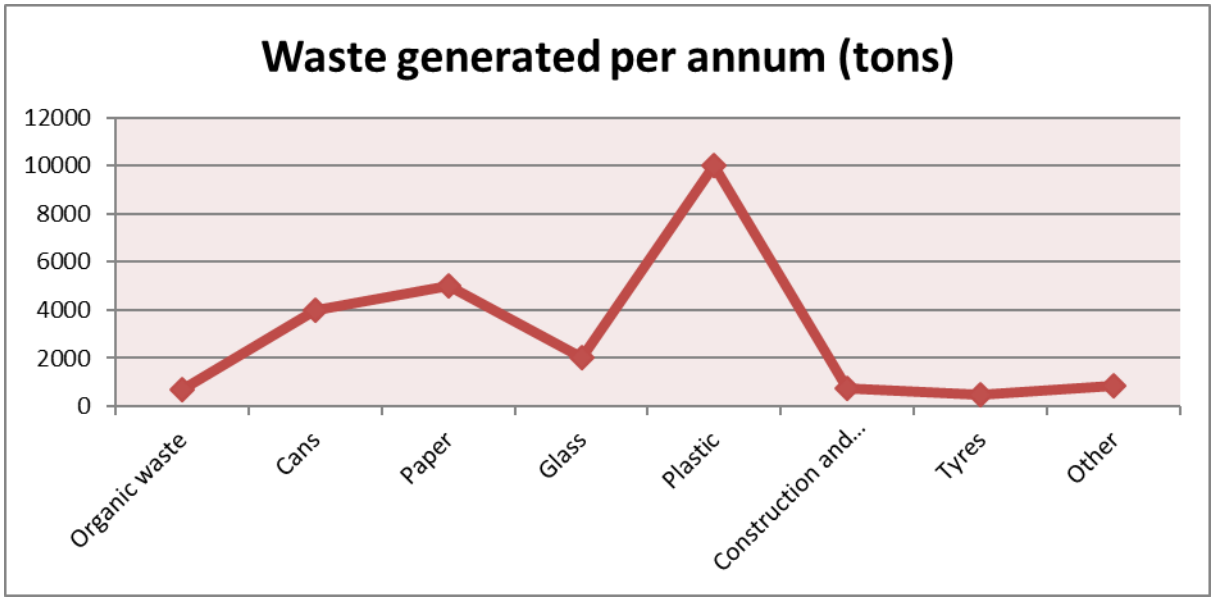
1.2.1. Weighbridge

The weigh-bridge has been purchased and installed, however it is not yet functional. The municipality is therefore planning to start using the weigh-bridge in the near future to quantify the volume of waste entering the landfill site. The Department of Environmental Affairs through the Environmental Protection and Infrastructure Programme, Youth Jobs in Waste has provided the Municipality with a weigh pad. The weigh-pad is functional.

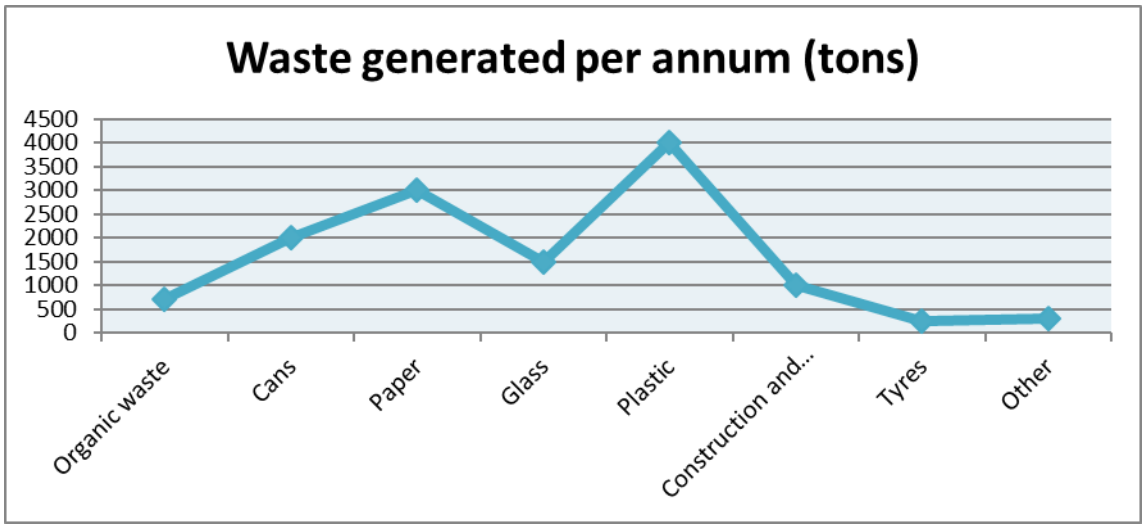
2.3.2. Volume density estimation system

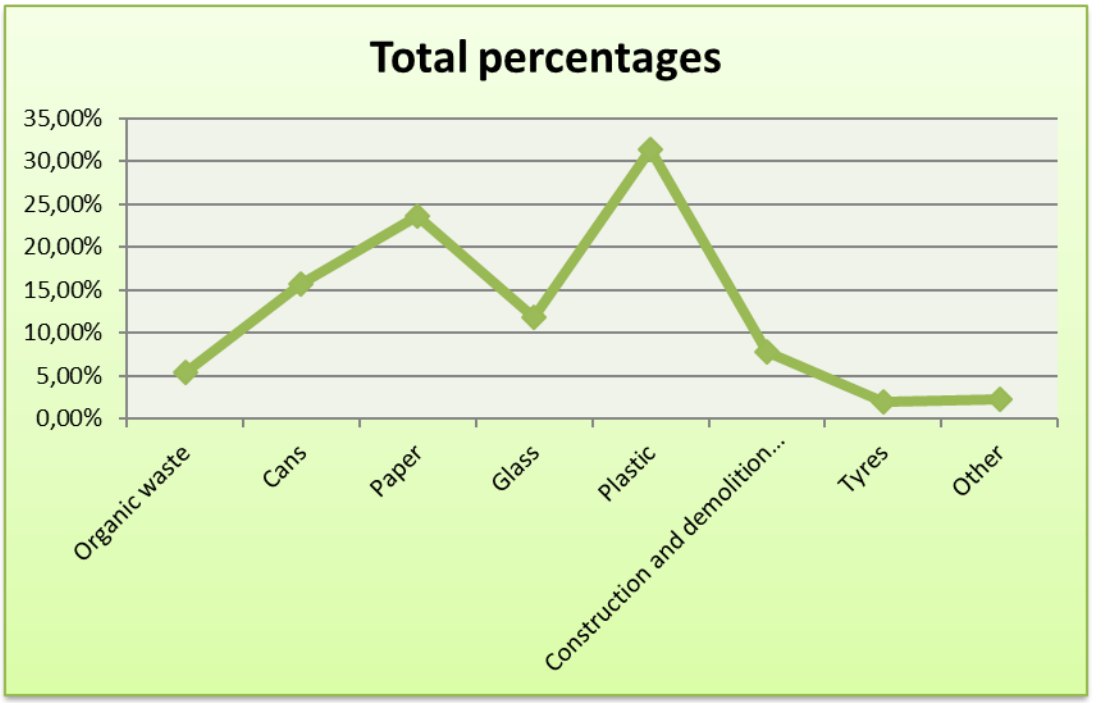
Thabazimbi landfill		
Waste type/streams	**Waste generated per annum (tons)**	**Total percentages**
Organic waste	683.00	2.87 %
Cans	4000.00	16.80 %
Paper	5000.00	21.00 %
Glass	2000.00	8.40 %
Plastic	10000.00	42.01 %
Construction and demolition waste	761.00	3.20 %
Tyres	500.00	2.10 %
Other	860.00	3.61 %
Total	**23804.00**	**100.00 %**





Northam Landfill site		
Waste type/streams	**Waste generated per annum (tons)**	**Total percentages**
Organic waste	697.00	5.47 %
Cans	2000.00	15.69 %
Paper	3000.00	23.54 %
Glass	1500.00	11.77 %
Plastic	4000.00	31.38 %
Construction and demolition waste	1000.00	7.84 %
Tyres	250.00	1.96 %
Other	300.00	2.35 %
Total	**12747.00**	**100.00 %**




Total percentages
35,00%
30,00%
25,00%
20,00%
15,00%
10,00%
5,00%
0,00%
Organic waste
Cans
Paper
Glass
Plastic
Construction and demolition...
Tyres
Other

2.3.2. Waste stream analysis

2.3.2.1. Waste Generation Areas

Waste generation sources can broadly be divided into the following areas:

- Residential areas including garden
- Businesses, Commercial activities, institutions and offices
- Mining industry and light industrial
- Small farms, small agricultural producers and animal keeping, game farms
- Health care facilities

2.3.2.1.1. Households

The two figures below give an indication of a typical waste streams from rural poor households and middle income urban households. It is interesting to note market reduction in the percentage of recyclables in waste from poorer households compared to middle income households. Poorer households also tend to produce a much higher percentage of organics. Poorer people typically generate between 0.25 to 0.5kg of waste per day while middle income people generate about 1 to 2kg of waste per day. The likely waste streams from different areas influence the waste management strategy that should be adopted. For example, the viability of recycling initiatives as well as the potential for composting will be greatly influenced by both the quantity and composition of waste stream.

GRAPHS

2.3.2.1.2. Businesses

Business areas have a different waste generation profile. They are significant waste generators but with a proportionately higher percentage of packaging material in the waste. The composition of business waste can vary significantly between different types of businesses. Business waste in general has a higher potential for recycling owing to the fact that waste materials are more homogeneous or exist in higher concentrations within the waste stream, as compared to, for example, what can be found in household waste. Most businesses generate what is classified as a general waste originally from offices, common areas and lounges and service areas. If this waste is properly managed by being separated at source, businesses can contribute to a sustainable solution for waste management.

Waste from the informal business sector is often problematic, particularly where trading is concentrated, as littering and illegal dumping often occurs. The workshops in these business areas often produce hazardous waste by way of old batteries and waste oil. These hazardous wastes need to be disposed off properly, because of the high risk of improper disposal resulting in ground water pollution.

2.3.2.1.3. Industry/Mining

All mining activities have some adverse environmental impact that has to be managed. In terms of waste production the mines contribute substantially to the waste stream generated both in quantity and diversity of general and hazardous class. The day to day management of waste from mines is not the direct responsibility of TLM as the mines themselves are responsible for this task. Most mines in the area have residences and canteens to house and feed their employees and produce domestic waste. Most of this waste is disposed off at the municipal landfill sites.

Three main categories of waste emanate from mining activities, namely:

- Industrial waste (mainly scrap metal, rubber, plastic pipes, wood, mixed inert materials)
- General waste (household, including garden waste, office waste)
- Hazardous waste (oil and greases, filters, chemicals, explosives and others

2.3.2.1.4. Farming Activities

Agricultural producers and farms generate a variety of waste including some hazardous waste through the use of additives like fertilizers and pesticides. Workers resident on farms have a waste generating profile similar to those in rural settlements but are effectively on private land and might not be covered by the municipal administration. The relative contribution of agricultural activity is small compared to the other activities in the area and no separate records have been kept for waste arising thereof. Some of the farms now incorporate other activities more aligned to the hospitality industry to secure additional revenue from tourists. These include game lodges,

game farms and bed and breakfast establishments. This has an impact on the waste profile emanating from these areas in particular the increase in general waste.

2.3.2.1.5. Health Care Waste

Both Private and public Clinics and hospitals have a potential to generate health care risk waste (HCRW), which is by definition hazardous and has to be treated in a specific way. Due to the lack of appropriate HCRW treatment facilities, , these generation points represent a critical pollution spot. All public clinics and hospitals are under the control of the respective Provincial Department of Health. The Contract for the collection and incineration of medical waste is currently with Buhle Waste Management (Pty) Ltd. Medical waste is taken to Johannesburg for incineration.

Environmental Health Practitioners, who are stationed at hospitals, are responsible for the control of waste management in hospitals and clinics, being under the supervision of a Chief Environmental Health Practitioner. Parallel Infection Control Officers are responsible for appropriate waste handling including staff training.

In accordance with the United Nations Regulations of Dangerous Goods and the South African National Standards (SANS) No. 10248, hazardous waste is divided into nine different classes, some of which are further subdivided. The classes found in the waste depend on the treatment level of the health care facilities. Hazardous health care waste which can be found in every healthcare facility is the infectious waste – including sharp waste. This kind of waste is classified as a Class 6 waste (toxic and infectious) with the division 6.2 (Infectious substances).

Additionally, SANS 10248 classifies waste streams within healthcare facilities in different Hazardous Ratings (HR 1-4) and in different waste streams. These streams are supposed to be packaged, labeled, handled, stored and treated in accordance to their level of hazard in order to create a safe and environmental sound health care waste management:

- Human or anatomical waste
- Infectious human anatomical waste (colour code RED – labeling Class 6.2)
- Infectious animal anatomical waste (colour code ORANGE – labeling Class 6.2)
- Non-infectious animal anatomical waste (colour code BLUE)
- Infectious non-anatomical waste (colour code RED – labeling Class 6.2)
- Sharps (colour code YELLOW – labeling Class 6.2)
- Chemical waste including pharmaceutical waste
- Pharmaceutical or chemical waste (colour code GREEN – labeling different hazardous classes)
- Cytotoxic pharmaceutical waste (colour code GREEN - labeling specific sign: red triangle on black background with bold letters: CYTOTOXIC)
- Radioactive waste (labeling Class 7: Radioactive material)
- General Healthcare waste (colour code BLACK)

According to the World Health Organisation (WHO), the proportions of the hazardous components within the healthcare waste are:

- Infectious waste (15% to 25% of total healthcare waste) among which sharp waste compose (1%)
- Body part or anatomical waste (1%)
- Chemical or pharmaceutical waste (3%)
- Radioactive and cytotoxic waste or broken thermometers (1%)

Sharp wastes, although produced in small quantities, are highly infectious. Poorly managed, they expose healthcare workers, waste handlers and the community to infections. Contaminated needles and syringes represent a particular threat and may be scavenged from waste areas and dump sites and re-used. There is no information on the general relation of these fractions in the waste stream of hospitals and clinics. General waste can be found in the HCRW stream as a result of poor segregation at source.

Thabazimbi Local Municipality has a Draft Waste Removal By-law which has been approved by council and it is awaiting promulgation.

2.3.2.1.6.

2.4 WASTE RECYCLING, TREATMENT AND DISPOSAL

1.1.1 Status Quo of Waste Disposal Facilities

Thabazimbi/ Donkerpoort Landfill site	
Status	Licensed
Total capacity	22.08
Existing capacity	7.40
Available airspace	14.68

Northam Landfill site	
Status	Licensed
Total capacity	1.00
Existing capacity	0.90
Available airspace	0.10

2.4.3. Status Quo of Waste Recyclers

As mentioned previously, the Polokwane Declaration intent aims at dramatically reducing waste to landfill of the next 12 years. Part of this will be a dramatic increase in recycling. The current and common practice of simply removing waste to landfill sites is fast becoming a serious challenge to authorities as airspace on landfill sites runs out. Not only is the practice of disposal damaging to the environment but it is flawed as large volumes of valuable resources are discarded rather than being re-used or recycled. Not only is this of great importance from and environmental perspective but there are also a number of social benefits associated with recycling and re-use. The main benefits are the opportunities for entrepreneurs and the subsequent empowerments of often marginalized individuals.

Waste recovery or recycling has been identified as one on the main objectives of the 1999 National Waste Management Strategy. The objectives were listed as follows:

- Increasing and extending waste recycling in selected pilot areas
- Identification of new waste streams for recycling
- Expansion of the existing recycling initiatives and improvement as well as implementation of new recycling initiatives
- Identification and development of appropriate mechanisms to promote sustainable recycling by all members of the recycling chain

The efficiency of waste reduction can only be determined through the implementation of a waste information system (WIS). This system tracks the quality and quantity of recyclables recovered and compost produced. Public awareness and education campaigns are also critical to ensure the much needed support of the general public.

GEM Recycling Company recycles bottles and cans in TLM. Mogwase Waste Management Primary Co-operative Limited collects all recyclables in Northam and submits monthly reports to the Municipality. Siza Bantu Waste Management services recyclers in Northam accept mainly steel. RECLAM in an internationally acclaimed company dealing mainly with steel recyclables and it is based in Thabazimbi. Twenty three waste pickers were identified at the Donkerpoort (Thabazimbi) Landfill site and Seventeen pickers were present at the Northam Landfill Site during the site visit on 05 March 2014. Waste pickers are primarily trying to recover scrap metals, glass and plastic

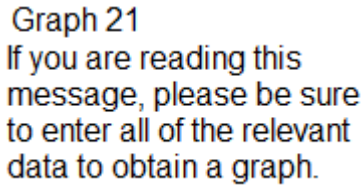
The landfill permits do not allow waste pickers to work on the landfill sites. It is therefore likely that as the landfills are better managed in the future, no waste pickers will be allowed on sites.

2.5. STATUS OF WASTE COLLECTION SERVICES

2.5.1. High income, low density settlement

Item	Total number
Households	5107
Serviced households	5107
Unserviced households	0
Indigent households	2
Unserviced indigent households	0

Waste collection services graph:



2.5.2. Middle income, middle density settlement

Item	Total number
Households	12618
Serviced households	12618
Unserviced households	0
Indigent households	0
Unserviced indigent households	0

Waste collection services graph:

Graph 22
If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

2.5.3. Low Income, High Density (Including Informal Settlements)

Item	Total number
Households	6974
Serviced households	6974
Unserviced households	0
Indigent households	264
Unserviced indigent households	0

Waste collection services graph:

Graph 23
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2.5.4. Rural Settlements

Item	Total number
Households	0
Serviced households	0
Unserviced households	0
Indigent households	0
Unserviced indigent households	0

Waste collection services graph:

Graph 24
If you are reading this message, please be sure to enter all of the relevant data to obtain a graph.

2.6. FINANCING OF WASTE MANAGEMENT

2.6.1. Budget: Income and expenditure

Item	Amount
Collection	
Transportation	R 0.00
Capex-purchase (vehicles)	R 2000000.00
Maintenance	R 0.00
Fuel	R 0.00
Receptacles	R 0.00
General	R 0.00
	R 0.00
Subtotal	**R 2000000.00**
Governance	
Staff (remuneration)	R 0.00
Education and awareness	R 0.00
IWMPS	R 0.00
By-laws	R 0.00
	R 0.00
Subtotal	**R 0.00**
Disposal	
Transfer station	R 0.00
Disposal sites	R 19000000.00
Acquisition of land, equipment	R 1800000.00
Regulatory compliance, EIA's and licence	R 0.00
	R 0.00
Subtotal	**R 20800000.00**
Total	**R 22800000.00**

Budget graph:

Graph 25
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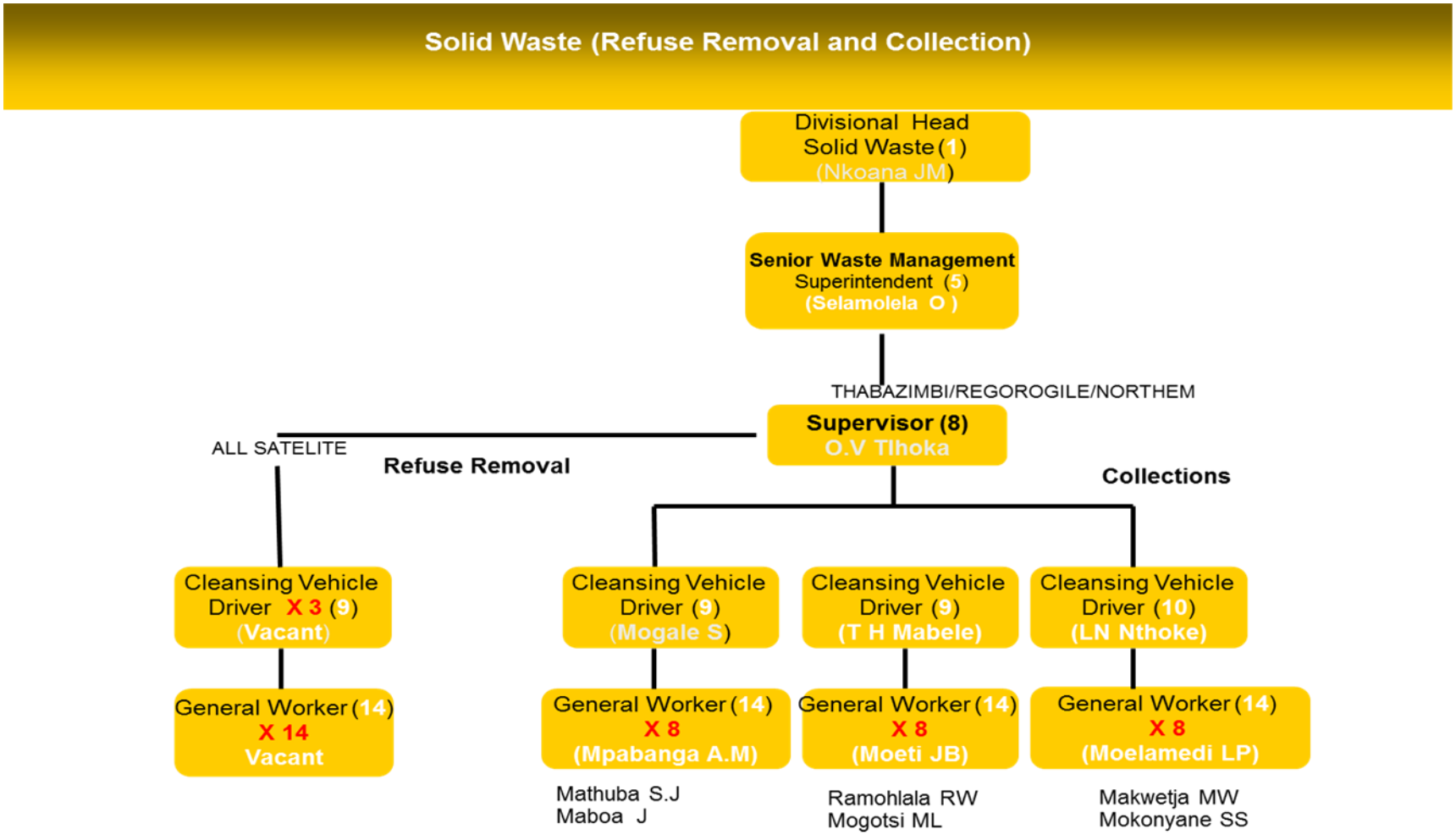
2.6.2. Revenue sources

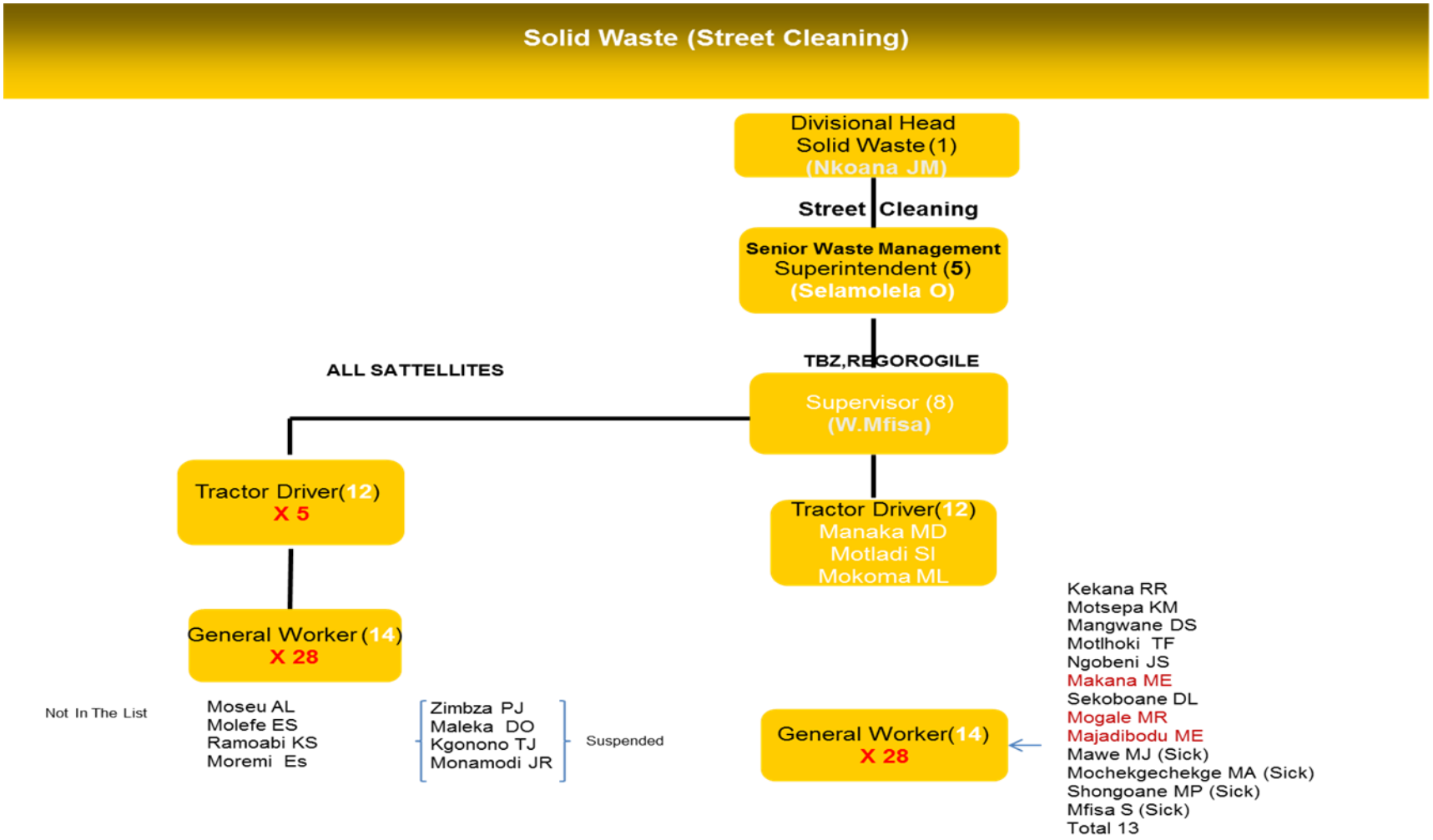
Source	Amount
Funding sources (DEA)	R
MIG Funding	R 0.00
Equitable share funding	R 0.00
Revenue from waste disposal fees	R 0.00
	R 0.00
Total	**R 0.00**

2.6.3.

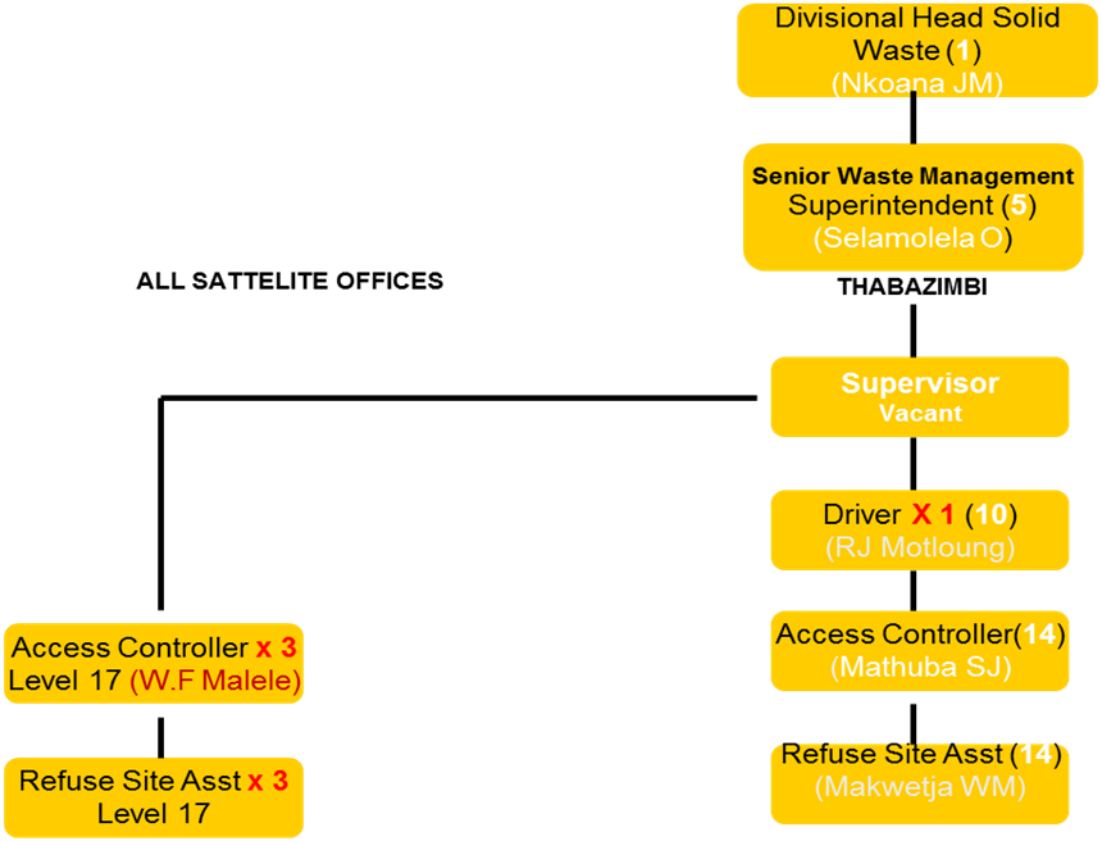
2.6.4. Organisational and institutional matters

Organogram:




Solid Waste (Street Cleaning)
Divisional Head
Solid Waste (1)
(Nkoana JM)
Street Cleaning
Senior Waste Management
Superintendent (5)
(Selamolela O)
TBZ,REGOROGILE
ALL SATTELLITES
Supervisor (8)
(W.Mfisa)
Tractor Driver(12)
X 5
Tractor Driver(12)
Manaka MD
Motladi SI
Mokoma ML
General Worker (14)
X 28
Not In The List
Moseu AL
Molefe ES
Ramoabi KS
Moremi Es
Zimbza PJ
Maleka DO
Kgonono TJ
Monamodi JR
Suspended
General Worker(14)
X 28
Kekana RR
Motsepa KM
Mangwane DS
Motlhoki TF
Ngobeni JS
Makana ME
Sekoboane DL
Mogale MR
Majadibodu ME
Mawe MJ (Sick)
Mochekgechekge MA (Sick)
Shongoane MP (Sick)
Mfisa S (Sick)
Total 13

Solid Waste (Refuse Dump Site)



3. Desired end state

3.1. SETTING STRATEGIC GOALS, TARGETS AND INDICATORS

HELP TEXT FOR THIS SECTION

The desired end state entails identifying priorities and goals that a municipality wishes to attain with regards to waste management. Using the information collected on the historical and present waste management situation, strategic goals for the IWMP should be developed. These should aim to address the gaps and the needs of the community and more importantly should respond to the Waste Act requirements. A program on how these will be attained is developed as an implementation plan. The strategic goals must be set based on the relevant waste legislation, regulations and policies and should be guided by the waste management hierarchy principles. Further, it should also include the setting of targets for waste management services such as collection, recycling, recovery and disposal. The setting of goals, objectives and targets must also take into consideration the municipal response to the goals and targets set in the National Waste Management Strategy.

The National Waste Management Strategy provides a set of goals that municipalities must achieve in the next five years in order to give effect to the Waste Act. It contains an action plan with various targets to be achieved by municipalities in the next five years until 2016. It is important that there should be a target date by which municipal strategic goals and targets are to be attained within the 5 years from the date the IWMP has been approved.

Click here to read more in the IWMP guideline online.

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Goal 1: Promote recycling and recovery of waste			
Objectives	**Targets**	**Activities**	**Timeframe**
Create an enabling environment that seeks to promote recycling activities within the municipal jurisdiction	23 872 Households	• Education and Awareness • Establishment of community recycling projects • Support of recycling initiatives through engagement with relevant sectors. • Provision of two way bin system to encourage separation at source.	2016/17
Establishment of recycling storage facility in Thabazimbi	01	• Sourcing of funds • Application of Recycling license • Construction of Recycling/ Sorting facilities for the community • Project Handover	2016-18 Financial Year

Goal 2: Ensure the effective and efficient delivery of waste services			
Objectives	**Targets**	**Activities**	**Timeframe**
To ensure sustainable and proper access to waste management services to 23 872 households within the municipal jurisdiction in a year	23 872 Households	• Purchasing of a proper fleet for effective waste removal and disposal, such as 22m³ Compactor Truck, 4 Tractors with telecons, TLB, 4 x Trailers and Tipper Truck	2015-2021 Financial Year

Ensure safe disposal of waste at licensed landfill sites.	All landfill sites within the Municipality to be licensed Ensure Compliance with the license conditions	Application for licenses for outstanding waste disposal facilities	2014-2018 Financial Year

Goal 3: Growing the contribution of the waste sector to the green economy			
Objectives	**Targets**	**Activities**	**Timeframe**
Stimulate job creation in the waste sector.	300 jobs to be created in the waste sector		2016
Broaden participation by SMEs and marginalised communities in the waste sector	12 SMEs/ Cooperatives created	Establishment of SMEs/Cooperatives Promotion of SMEs/Cooperatives	2016

Goal 4: Education and awareness			
Objectives	**Targets**	**Activities**	**Timeframe**
Ensure that information on proper waste management reaches all its intended audience within the Municipal jurisdiction in a year, through education and awareness campaigns	4 awareness campaigns	• Development of TBZ Environmental Forum • Coordination of eco-schools programme • Community education	
Promote education and awareness within the jurisdiction of the municipality in line with the objective of the IWMP			

Goal 5: Achieve integrated Waste Management Planning			
Objectives	**Targets**	**Activities**	**Timeframe**
Establish an effective system of IWMP	By 2016, municipal IWMP should be integrated into the Municipal IDP. Municipality to meet the targets set in the IWMP	Monitoring of performance on the implementation of IWMP Annual Review of IWMP	2016-2021
Establish and maintain an information base on waste flows	All waste management facilities required to report to SAWIS have waste quantification systems that report information to Waste Information System	Construction of weigh bridge/Weigh-Pad at the Donkerpoort Landfill	2015-2016
Ensure that waste disposal facilities within the municipality are licensed and licensing conditions are complied to, for safe and proper disposal of waste.	4 landfills	• Appointment of Service Providers for the Operation and Maintenance of Landfill sites • Licensing of Rooiberg Landfill Site • Licensing of a new Northam Landfill site and rehabilitation of the existing site.	

Goal 6: Sound budgeting and financing of waste management services			
Objectives	**Targets**	**Activities**	**Timeframe**
Ensure full-cost accounting for waste management services	Conducted full-cost accounting for waste services	Conduct full-cost accounting	2016-2021
Implement cost reflective and volumetric tariff	Implementation of cost-effective tariffs for waste services	• Conducting public participation before implementation	2017

Goal 7: Compliance and enforcement			
Objectives	**Targets**	**Activities**	**Timeframe**
EMI training to enhance enforcement of the waste by-laws	Appointment of EMIs x 1	Training by Accredited Institution	2016/2017
Ensure that user friendly tools, Plans, and systems are developed in line	1	IWMP By-laws	2016/2017

4. Identify, evaluate and select alternatives

4.1. STRATEGIC GOALS, TARGETS, TIMEFRAME, BUDGET

HELP TEXT FOR THIS SECTION

Under this section a municipality must undertake to identify the different alternatives that can be employed to achieve the desired end state and it should indicate the different approaches to achieve the targets. It is crucial to explore different approaches that can be employed for all aspects to waste management. A municipality must indicate the best possible way of attaining the goals by weighing the costs vs the benefits of each.

A municipality is required to critically look at all the requirements and should decide based on its available capacity and financial resources, which of the requirements will be attained in the short-medium to long term and what the implications would be if no action is taken. During the consultation phase of the development of an IWMP, it is important to make stakeholders aware of the requirements in terms of the Waste Act, in order that if there are tradeoffs to be made, they too can be involved in prioritising the services to be delivered.

Click here to read more in the IWMP guideline online.

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Goal 1: Promote recycling and recovery of waste			
Objectives	**Targets**	**Alternatives**	**Budget**

Goal 2: Ensure the effective and efficient delivery of waste services			
Objectives	**Targets**	**Alternatives**	**Budget**

Goal 3: Ensure that legislative tools are developed to deliver on the Waste Act and other applicable legislation			
Objectives	**Targets**	**Alternatives**	**Budget**

Goal 4: Sound budgeting and financing of waste management services			
Objectives	**Targets**	**Alternatives**	**Budget**

Goal 5: Ensure the safe and proper disposal of waste			
Objectives	**Targets**	**Alternatives**	**Budget**

Goal 6: Education and awareness			
Objectives	**Targets**	**Alternatives**	**Budget**

Goal 7: Compliance and enforcement			
Objectives	**Targets**	**Alternatives**	**Budget**

5. Communication and Stakeholder Participation

5.1. CONSULTATION PROCESS SUMMARY

HELP TEXT FOR THIS SECTION

Under the Waste Act, Chapter 3, section 11 (7b) states that. “A municipality must, before finalising its integrated waste management plan, follow a consultative process contemplated in section 29 of the Municipal System Act, either as a separate process or as part of the consultative process relating to its IDP contemplated in that section”.

Apart from the Waste Act calling for community/stakeholder participation, Chapter 4 of the Municipal systems Act encourages municipalities to conduct community participation when developing their IWMP and it provides different mechanisms by which this could be done.

Click here to read more in the IWMP guideline online.

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Stakeholder	Issues raised/ Concerns	Municipality’s response	General comments

6. Implementation Instruments

6.1. PARTNERSHIPS

HELP TEXT FOR THIS SECTION

The development of partnerships as a mechanism for providing the services and facilities required for Integrated Waste Management should be considered. The categories of partnerships that should be considered include:

- **Public-public partnerships:** this can be a partnership (between a District municipality and local municipalities) for collaborating on waste services such as on the establishment of a regional waste disposal facility or in instances where local municipalities have limited capacity to provide the delivery of waste services,
- **Public-private partnerships (PPP):** for collaborating on financial assistance for waste services, establishment of waste management facilities, establishment of separation at source and other waste management initiatives i.e. development and management of waste disposal facilities, establishment and management of MRFs, transfer stations, and recycling facilities.
- **NGO/Community based organisations (CBO's):** partnership with the municipality in order that they may participate or carryout awareness and education campaigns and programs.

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6.2. LEGISLATIVE INSTRUMENTS: DEVELOPMENT AND ENFORCEMENT OF BY-LAWS

5. COMMUNICATION AND STAKEHOLDER PARTICIPATION

5.1 Consultation Process Summary (to be edited after public consultation)

Several communication actions are needed to raise awareness about integrated waste management actions. These actions include communications between government departments, within government departments, between the government and industry/businesses, and between the government and the public. Communication should be such that every person understands the importance of responsible waste management and is empowered to take part in initiatives with confidence. Chapter 3 of the Constitution places an obligation on all spheres of government and organs of state to comply with the principles of co-operative governance. This implies that certain levels of communication and consultation is needed between different spheres of government to enhance the understanding of roles and responsibilities towards integrated waste management. Ultimately, such an understanding will lead to co-operation towards the implementation of all waste management strategies, as well as reaching waste management targets. Through consultative processes, members of the public have the right to take part in the decision making (Sections 72 and 73 of NEMWA). Therefore, it is the responsibility of the municipal council to create an enabling environment for community participation in municipal decision-making processes.

- ### 5.1.1 PUBLIC PARTICIPATION

Communication is a two-way process. Information needs to go from the Mogalakwena Municipality to the public, but simultaneously the public must receive the opportunity to comment on all proposed Mogalakwena Municipality decisions. Examples of participatory initiatives that create awareness include:

- Ward meetings: regular public meetings between municipal officials and municipal residents
- Community projects: While there is merit in the traditional cleaning up campaigns,
- Community projects to create a sense of pride in their environment as well as the will to take responsibility for their immediate surroundings and the environment.
- This will only be achieved if the Mogalakwena Municipality shows a serious drive towards e.g. combating illegal dumping and ensuring a clean environment for all municipal residents. Through community projects, unsightly areas prone to illegal dumping can be turned into gardens, play parks or recreation areas.
- Targeted door-to-door education campaigns could add value as a two-way communication method to create buy-in in areas where waste management can be improved
- Reporting of incidents: Providing a mechanism to report bad waste management practices, including e.g. poor service delivery and illegal dumping, will give the public a sense of responsibility, and pride, in their immediate environment.

• 6.1.2 INFORMATION TRANSFER

Examples of information transfer include the dissemination of relevant information via the following communication channels:

- Bill boards
- Local newspapers, e.g. regular informative articles
- Local radio stations, e.g. talk shows and advertisements
- Newsletters, including electronic newsletters
- Flyers
- Educational material in collaboration with the Department of Education
- Presentations and hands-on shows at schools, e.g. a positive preventative message will make learners aware of how the environment should be protected and conserved.

- Discussions with businesses and industry to create win-win situations related to waste management

Stakeholder	Issues raised/ Concerns	Municipality's response	General comments

6. IMPLEMENTATION INSTRUMENTS

6.1 Partnerships

Mogalakwena Local Municipality will make partnerships with other public sector entities and departments to build capacity and reduce the financial burden of equipment and salaries in relation to waste management. Several opportunities exist in relation to the Department of Environmental Affairs, including funding job creation projects involving waste through the department's Environmental Protection and Infrastructure Programme (EPIP), which is used to implement Extended Public Works Projects.

Partnerships with community based SMMEs and cooperatives around composting and recycling represent important opportunities for diverting waste from landfill and stimulating the waste economy. The municipality can play an important role in facilitating finance and partnering with private companies. These partnerships can provide an alternative to uncontrolled and unhygienic scavenging on landfill sites.

6.2 Legislative instruments: Development and enforcement of by-laws

The following is a short summary of all the relevant legislation pertaining to waste management that need to be considered in parallel to the development of an IWMP.
The South African Constitution, 1996 (Act No. 108 of 1996) is the supreme law of the land. All laws, including environmental Waste Management Planning must comply with the Constitution.

The Constitution states that the people of South Africa have the right to an environment that is not detrimental to human health, and imposes a duty on the state to promulgate legislation and to implement policies to ensure that this right is upheld. All departments of state or administration in the national, provincial or local levels of government have similar obligations. The principles of cooperative governance are also set out in the Constitution and the roles and responsibilities of the three levels of government are defined.

According to the Constitution, responsibility for waste management functions is to be

devolved to the lowest possible level of government. Local Government is therefore assigned the responsibility for refuse removal, refuse dumps and solid waste disposal. Provincial Government has the exclusive responsibility to ensure that local government carries out these functions effectively.

In addition to the Constitution, a number of government policies and statutes are relevant to waste management at the Local Government Level, which includes but is not limited to, the following:

- National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) [NEMWA]; add nem waste amendment act,2014(act no 26 of 2014)
- National Environmental Management Act, 1998 (Act No. 107 of 1998) [NEMA];
- Municipal Demarcation Act, 1998 (Act No. 27 of 1998);
- Municipal Finance Management Act, 2003 (Act No.56 of 2003) [MFMA]
- Municipal Structures Act, 1998 (Act No. 117 of 1998);
- Municipal Systems Act, 2000 (Act No. 32 of 2000);
- The Development Facilitation Act, 1995 (Act No. 67 of 1995);
- Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965);
- National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) [NEMAQA];
- National Water Act, 1998 (Act No. 36 of 1998);
- Health Act, 1977 (Act No. 63 of 1977);
- White Paper on Environmental Management Notice 749 of 1998;
- White Paper on Integrated Pollution and Waste Management for South Africa, Notice 227 of 2000;
- Minimum Requirements for Waste Disposal by Landfill, 2nd edition, 1998
- Minimum Requirements for the Handling and Disposal of Hazardous Waste, 2nd Edition, 1998;
- Minimum Requirements for Water Monitoring at Waste Management Facilities, 2nd edition, 1998; 28 Strategic Environmental Focus (Pty) Ltd WRDM: IWMP- 502664
- National Waste Management Strategy and Action Plans;
- Relevant Provincial Legislation;
- Local Government By-Laws on waste management; and Relevant International

Treaties and Declarations (Johannesburg Plan of Implementation, Millennium Development Goals, etc). Acts, such as the National Road Traffic Act, 1996 (Act No. 93 of 1996) under section 54 for transportation of dangerous goods, and the Nuclear Energy Regulator Act, 1999 (Act No. 46 of 1999) also impact on waste management, especially where mines are involved.

6.2.1 National Environmental Management: Waste Act, 2008 (act no. 59 of 2008) [NEMWA]

NEMWA came into effect on 01 July 2009. NEMWA aims to consolidate most of the previous waste legislation into one framework Act. NEMWA has been developed as part of the law reform process enacted through the White Paper on Integrated Pollution and Waste Management and the National Waste Management Strategy (NWMS). However, current legislation will have to be complied with, especially when implementing the IWMP. The underlying government policy driving NEMWA is the NWMS (currently under review) with the general aim of complying with the following requirements:

- Provide waste management services and the management of waste disposal facilities;
- Compile and implement integrated waste management plans;
- Compile and implement a waste management policy as part of the IDP; and Develop and implement by-laws and ordinances in line with the national waste management policy and within provincial legislation and policies The objectives of the Act are:

a) to protect health, well-being and the environment by providing reasonable measures for—

(i) Minimizing the consumption of natural resources;
(ii) Avoiding and minimizing the generation of waste;
(iii) Reducing, re-using, recycling and recovering waste;
(iv) Treating and safely disposing of waste as a last resort;
(v) Preventing pollution and ecological degradation;
(vi) Securing ecologically sustainable development while promoting

justifiable economic and social development;

(vii) Promoting and ensuring the effective delivery of waste services;

(viii) Remediating land where contamination presents, or may present, a significant risk of harm to health or the environment: and

(ix) Achieving integrated waste management reporting and planning;

b) to ensure that people are aware of the impact of waste on their health, well-being and the environment;

c) to provide for compliance with the measures set out in paragraph (a); and

d) generally, to give effect to section 24 of the Constitution in order to secure an environment that is not harmful to health and well-being.

- **6.2.2 National Environmental Management Act, 1998 (Act no. 107 of 1998) [NEMA]**

NEMA provides for co-operative governance by establishing principles and procedures for decision-makers on matters affecting the environment. An important function of the Act is to serve as an enabling Act for the promulgation of legislation to effectively address integrated environmental management. Some of the principles in the Act are accountability; affordability; cradle to grave management; equity; integration; open information; polluter pays; subsidiary; waste avoidance and minimisation; co-operative governance; sustainable development; and environmental protection and justice.

Chapter 2 of NEMA makes provision for the establishment of the Committee for Environmental Co-ordination (CEC). The objective of the committee is to promote the integration and co-ordination of environmental functions by the relevant Organs of State and in particular to promote the achievement of the purpose and objectives of environmental implementation plans and environmental management plans.

Chapter 3 requires that national government departments, which have waste management responsibilities, as well as every province, develop Environmental Implementation Plans (EIPs) every four years and an Environmental Management Plan (EMP). Local Government is obliged to exercise its responsibilities in accordance with these plans and to report annually within four months from the end

of its financial year on implementation of the EMP or EIP. Provincial Government must ensure that municipalities adhere to the relevant EIP and EMPs within its province, as well as the principles in the preparation of any policy, programmer or plan, including the establishment of IDPs and Land Development Objectives (LDOs).

Chapter 7 imposes a duty of care in respect of pollution and environmental degradation. Any person who has caused significant pollution or degradation of the environment must take steps to stop or minimize the pollution. Where an incident occurs that is potentially detrimental to the environment, the person who is responsible for the incident or the employer must, within 14 days of the incident, report to the Director-General, Provincial Head of Department and relevant municipality. The relevant municipality may specify measures to address the problem and remediate the area within 7 days. The Act also attach consequences for breaching the duty of care, namely that government authorities are empowered to issue directions and to remediate the situation and recover costs where the directions are not complied with.

Chapter 8 provides that the Minister and every MEC and municipality may enter into an environmental management cooperation agreement with any person or community for the purpose of promoting compliance with the principals laid down in NEMA. Environmental Cooperation Agreements may contain an undertaking by the person or community concerned to improve the standards laid down by law for the protection of the environment and a set of measurable targets and a timeframe for fulfilling the undertaking.

Chapter 9 allows the Minister to make model By-Laws aimed at establishing measures for the management of environmental impacts of any development within the jurisdiction of the municipality, which may be adopted by the Municipality as By-Laws. Any municipality may request the Director-General to assist it with its preparation of By-Laws on matters affecting the environment and the Director-General may not unreasonably refuse such a request. The Director-General may institute programmes to assist municipalities with the preparation of By- Laws for the purposes of implementing this Act.

- **6.2.3 Municipal Demarcation Act, 1998 (Act no. 27 of 1998)**

The Municipal Demarcation Act provides criteria and procedures for the determination of municipal boundaries by an independent authority. In terms of the Act, the Municipal Demarcation Board is established to determine municipal boundaries.

Section 24 provides that when demarcating a municipal boundary, the Board must aim to establish an area that would enable the municipality to fulfil its Constitutional obligations, including the provision of services in an equitable and sustainable manner, the promotion of social and economic development and the promotion of a safe and healthy environment. The tax base must also be as inclusive as possible of users of municipal services in the municipality.

- **6.2.4 Organised Local Government act, 1997 (Act no. 52 of 1997)**

The Organised Local Government Act provides for the recognition of national and provincial organizations representing the different categories of municipalities and determines various procedures concerning local government, including procedures by which local government may consult with national and provincial government.

- **6.2.5 Municipal Structures Act, 1998 (Act no. 117 of 1998)**

The main object of this Act is to provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality and to provide for an appropriate division of functions and powers between categories of municipality.

This Act forms part of the legislation that is aimed at the transformation of local government into a more financially sustainable and performance orientated sphere of government. The Act is aimed at creating the permanent structures mandated by the Constitution, which will replace the transitional structures created by the Local Government Transition Act, 1993 (Act 209 of 1993). Municipalities are categorized either as A, B1, B2 or C. depending on the level of development. Chapter 5 sets out the functions and powers of the municipalities in accordance with the Constitution.

- **6.2.6 Municipal Systems Act, 2000 (Act no. 32 of 2000)**

The Municipal Systems Act describes the core principles, mechanisms, and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of communities and ensure access to services that are affordable to all. Its focus is primarily on the internal systems and administration of the municipality.

The Act enables the process of decentralization of functions through assigning powers of general competence to Local Government. Municipal By-Laws are regulated to achieve harmony with national and provincial legislation.

As service authorities, municipalities remain responsible for the effective delivery of services and must provide an appropriate policy and regulatory framework. This can be achieved through the most appropriate service provider, ranging from internal departmental delivery to corporatisation and joint ventures to private sector delivery options.

Performance management systems are to be developed to measure and evaluate performance in priority areas, which are to be reported annually to citizens and other spheres of government.

Furthermore, the process to be followed in planning, drafting and adopting the IDP is set out in this Act.

• 6.2.7 Atmospheric Pollution Prevention Act, 1965 (Act no. 45 of 1965) [APPA]

The purpose of the APPA is to provide for the prevention of the pollution of the atmosphere.

Part II of the Act sets out the procedure for the permitting of Scheduled Processes, which includes waste incineration processes. A registration certificate is a mandatory requirement and the Act prohibits any person from carrying on a Scheduled Process unless that person is the holder of a current registration certificate.

A current registration certificate is granted after compliance with the conditions of a provisional registration certificate and the requirements of DEAT to whom this power has been delegated. The current registration certificate also is issued subject to

conditions. These include the condition that all appliances used for preventing or reducing to a minimum the escape into the atmosphere of noxious or offensive gases shall be properly operated and maintained and that the best practice means for achieving this are implemented.

Part III of the Act provides for the control and regulation of smoke pollution arising from any fuel-burning appliance. **Part IV** of the Act deals with dust control. Whenever dust originating on any land in a dust controlled area is causing a nuisance to persons residing or present in the vicinity of that land, the owner or occupier may be required to take the prescribed steps or adopt the "best practicable means" for the abatement the dust.

• 6.2.8 National Environment Management: Air Quality Act, 2004 (Act no. 39 of 2004) [NEMAQA]

On the 1st of April 2010 the NEMAQA came into full effect and the Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965) (APPA) was repealed. The object of this Act is to protect the environment by providing reasonable measures for:

- The protection and enhancement of the quality of air in the Republic;
- The prevention of air pollution and ecological degradation; and
- Securing ecologically sustainable development while promoting justifiable economic and social development. The Act further will generally give effect to Section 24(b) of the Constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.

The Act also requires the minister or MEC to identify and publish activities which result in atmospheric emissions that requires an Atmospheric Emission Licence (AEL) before they can operate. 1 April 2010 also marked the date when the new list of activities requiring AELs to operate were to be promulgated and, with this, the leveling of the atmospheric emission "playing field" through the setting of minimum emissions standards for all these listed activities.

• 6.2.9 National Water Act, 1998 (Act no. 36 of 1998) [NWA]

The NWA contains a number of provisions that impact on waste management, including the disposing of waste in a manner, which detrimentally impacts on a water resource and the discharge of waste into a water resource. The Act allows the Minister to make regulations for:

- Prescribing waste standards, which specify the quantity, quality and temperature of waste that may be discharged or deposited into or allowed to enter a water resource;
- Prescribe the outcome or effect, which must be achieved through management practices for the treatment of waste before it is discharged or deposited into or allowed to enter a water resource; and
- Requiring that waste discharged or deposited into or allowed to enter a water resource be monitored and analyzed according to prescribed mechanisms.

• 6.2.10 HEALTH ACT, 1977(ACT NO.63 OF 1977) AMENDED IN 2000(WRITE THE NEW HEALTH ACT

The Act provides measures for the promotion of health, for the rendering of health services and defines duties of certain authorities which render health services in the Republic. **Section 20** sets out the duties and powers of LMs. It provides that every Local Government is obliged to take measures to maintain its municipality in a clean and hygienic condition and to prevent the occurrence of any nuisance, unhygienic or offensive condition or any other condition, which could be of danger to the health of any person. A “nuisance” includes any accumulation of refuse or other matter that is offensive or is injurious or dangerous to health. The local government is obliged to abate the nuisance or remedy the condition and to prevent the pollution of any water intended for the use of the inhabitants of its municipality. Draft regulations for the control of environmental conditions constituting a danger to health or a nuisance were published in Government Notice Regulation 21 of 14 January 2000. In terms of the proposed regulations, registration is required for: concerns that to carry out a scheduled trade, including waste incineration, waste (including Health Care Risk Waste) disposal sites and waste collecting, sorting, treating or processing sites.

- **6.2.11 White Paper on Environmental Management Notice 749 of 1998**

This policy sets out government's objectives in relation to environmental management, how it intends to achieve its objectives, and to guide government agencies and organs of state in developing strategies to meet their objectives.

The policy document is an overarching policy framework that refers to all government institutions and to all activities that impact on the environment. The policy states that government will allocate functions to the institutions and spheres of government that can most effectively achieve the objectives of sustainable development and integrated environmental management. This would include the allocation of certain functions to the municipal sphere of government. Where appropriate, Provincial and Local Government are to develop their own legislation and implementation strategies in order to address their specific needs and conditions within the policy framework.

- **6.2.12 White Paper on Integrated Pollution and Waste Management for South Africa, Notice 227 of 2000**

This White Paper represents formal government policy regarding integrated pollution and waste management. Integrated pollution and waste management is defined as a holistic and integrated system and process of management aimed at pollution prevention and Minimisation at source, managing the impact of pollution and waste on the receiving environment and remediating damaged environments. Waste management is to be implemented in a holistic and integrated manner and extend over the entire waste cycle from cradle-to-grave and will include the generation, storage, collection, transportation, treatment and disposal of waste.

The overarching goal reflected in the policy is integrated pollution and waste management, with the intention being to move away from fragmented and uncoordinated pollution control and waste management towards integrated pollution and waste management as well as waste minimisation. Within this framework of the overarching goal, the following strategic goals apply:

- Effective institutional framework and legislation;
- Pollution and waste minimisation, impact management and remediation; and

- Holistic and integrated planning - the intention is to develop mechanisms to ensure that integrated pollution and waste management considerations are integrated into the development of government policies, strategies and programmes as well as all spatial and economic development planning processes and in all economic activity. The strategic mechanisms include the following:
    - The incorporation of integrated environmental management principles and methodologies in spatial development planning as it relates to pollution and waste management;
    - Making timely and appropriate provision for adequate waste disposal facilities;
    - Developing management instruments and mechanisms for the integration of pollution and waste management concerns in development planning and land allocation;
    - Developing appropriate, and agreed upon, indicators to measure performance for inclusion in EIPs and EMPs as provided for in NEMA;
    - Participation and partnerships in integrated pollution and waste management governance; and
    - Empowerment and education in integrated pollution and waste management, information management, and international co-operation.

• 6.2.13 Department of Water Affairs and Forestry Minimum Requirements for Waste Disposal by Landfill, 2nd Edition, 1998

The DWAF Minimum Requirements provide applicable waste management standards or specifications that must be met, as well as providing a point of departure against which environmentally acceptable waste disposal practices can be assessed. The objectives of setting Minimum Requirements are to:

- Prevent water pollution and to ensure sustained fitness for use of South Africa's water resources;

- Attain and maintain minimum waste management standards in order to protect human health and the environment from the possible harmful effects caused by the handling, treatment, storage and disposal of waste;

- Effectively administer and provide a systematic and nationally uniform approach to the waste disposal process;

- Endeavour to make South African waste management practices internationally acceptable; and

- Before a waste disposal site permit is issued, adherence to the Minimum Requirement conditions will be required from the permit applicant. The Minimum Requirements promote the hierarchical approach to waste management, as well as a holistic approach to the environment.

• 6.2.14 National Waste Management Strategy (NWMS) and Action Plans

The overall objective of this strategy is to reduce the generation of waste and the environmental impact of all forms of waste and thereby ensure that the socio-economic development of South Africa, the health of the people and the quality of its environmental resources are no longer adversely affected by uncontrolled and uncoordinated waste management.

The internationally accepted waste hierarchical approach was adopted of waste prevention/minimisation, recycle/reuse, treatment and finally disposal. The strategy outlines the functions and responsibilities of the three levels of government and where possible, firm plans and targets are specified. During the development of the strategy a number of priority strategic initiatives were identified which were categorised into short-term (by the year 2004), medium-term (by the year 2008) and long-term (by the year 2012) initiatives.

Action plans have been developed for the short-term initiatives for integrated waste management planning, a waste information system, waste minimisation and recycling, general waste collection, waste treatment and disposal, and capacity building, education, awareness and communication. A logical framework analysis approach was adopted to develop the Action Plans that analysed the problems, stakeholders, and the risks to successful implementation followed by the

development of outputs, activities, inputs and assumptions, as well as a proposed allocation of functions, roles, and responsibilities of the three levels of government.

The roles and responsibilities in terms of the NWMS for local government include:

- Integrated waste management planning: Local Government will be responsible for the compilation of general waste management plans for submission to Provincial Government; and
- Waste information system: Local Government will be responsible for data collection. The NWMS is currently under review and it is expected that the strategy will be amended.

7. Funding mechanisms

The implementation of the IWMP would require sufficient funds for the recruitment and training of staff, procurement of facilities and machinery, closure Licenses and application for new landfill sites Licenses, among others. The implementation of the IWMP should be done in a phased manner, taking into cognisance the MLM priorities at the time. Additional sources of funding must be investigated, particularly with, *inter alia*, the following institutions: MIG, Development Bank of Southern Africa, DEA and other donor funding.

Tariff structure: The MLM must ensure that the tariff structure takes into consideration the

(1) Current situation in the municipality, (2) self-sufficiency and (3) continued feasibility. The structure must be reviewed at regular intervals and updated if necessary. The allocation of waste related funds must go to waste projects and infrastructure.

7.1 Implementation Plan (Summary of an IWMP Planning Process)

sired state als)	Targets	15/16	16/17	17/18	18/19	19/20	Selected alternatives	(Implementation mechanism	
								Human Resource (HR)	Equipmen (EQP)
mote ycling overy of ste	Establish the blue/clear bag system within the municipality(middle and low income areas).Specify the area	X e.g Mah weler eng zone 1	Zone 2	Zone 3			Continually roll out separation at source to other areas in order to achieve the set targets.	2 additional personnel (remuneration)	Waste receptacle
sure the ctive cient very of ste vices	Increase the roll out of waste collection services to 70% of households (including indigents)		Cant you atleast extend waste collection service during the second year of the IWMP ?			X	Labour intensive collection model/ approach	2 additional personnel (remuneration)	Establish a transfer station in rural areas and inform settlement

HELP TEXT FOR THIS SECTION

Appropriate economic instruments should be evaluated and implemented.

A critical precondition for the successful implementation of IWMPs is access to sufficient funding to carry out the plan. Funding will be required for inter-alia: building capacity within the municipality; the development and implementation of by-laws; development and implementation of IWMP; development, operation and maintenance costs of waste management facilities; and the design and commissioning of new waste management facilities.

Different sources that a municipality could potentially obtain funding from could include Equitable Share Funding, grant allocation, revenue from rates and tariffs, revenue from fines. For once off projects, funding sources could include the Municipal Infrastructure Grant (MIG) funding for infrastructure related projects, donor funding to fund certain aspects to the delivery of waste services.

It must be noted that not all funding sources are sustainable, for example donor funding is sometimes only available for a limited period.

In order for municipalities to have sustainable sources of revenue, a full cost accounting of how much it realistically costs them to deliver waste management services should be developed. Once developed, municipalities will then be able to charge tariffs that are reflective of the cost of rendering waste management services and will generate accurate revenue for the waste services rendered. Municipalities will also be able to determine whether there is under-recovery of waste collection revenue from its customers or not.

Click here to read more in the IWMP guideline online.

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6.3. FUNDING MECHANISMS

6.4. IMPLEMENTATION PLAN (SUMMARY OF AN IWMP PLANNING PROCESS)

HELP TEXT FOR THIS SECTION

A municipality must develop an implementation plan which details how the targets set in the goals will be attained as well as what resources will be required to attain the targets in the next five years. In this instance, the implementation plan has been developed in a manner that summarises the entire IWMP planning process in order to demonstrate how each of the steps fit into each other.

Click here to read more in the IWMP guideline online.

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Situation Analysis	Desired end state (Goals)	Targets	Y1	Y2	Y3	Y4	Y5	Selected alternatives	(Implementation mechanisms) Resources

									Human Resource (HR)	Equipment (EQP)	Finance (HR+EQP)

7. Reporting on Monitoring

HELP TEXT FOR THIS SECTION

A framework by which the plan will be monitored should be developed. This should identify the tasks/ targets and roles and responsibilities in order to ensure implementation. This could comprise the following:

- **Strategic issues**: delivery on the goals and objectives; measuring delivery with regards to attaining the short-medium and long term goals and objectives
- **Performance**: how the municipality is doing in relation to the implementation of the entire IWMP including financial matters?
- **Public accountability**: Are the stakeholders kept abreast on the development of the plan? (Has there been awareness on the IWMP, awareness campaigns, information transfer and public participation?).

An institutional and organisational plan should be formulated; this is intended to guide institutional transformation and re-organisation of support structures for carrying out the IWMP and delivering on the waste management strategic objectives. This plan should include the following:
Make provision for human resource development, and the additional staff required.

The **communication and public participation plan** should detail the communication and public participation process to ensure that the necessary arrangements are in place for stakeholders to be informed about progress and to feedback into the process for the implementation of the IWMP.

The **financial plan** should reflect the waste management priorities identified in the development of the IWMP. The annual budget should be based on the medium-term financial and institutional plans in order to direct and manage resources in a focused way, to achieve the goals of the planning process. A plan for raising the revenue to support the implementation should be developed.

The **waste management implementation programme** should detail the activities to be undertaken, delivery targets and delivery milestones. It will also provide information on project management, responsibilities of officials responsible for the implementation of the IWMP and schedules for project implementation.

Click here to read more in the IWMP guideline online.

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7.1. STRATEGIC ISSUES

7.2. PERFORMANCE

7.3. PUBLIC ACCOUNTABILITY

7.4. COMMUNICATION AND PUBLIC PARTICIPATION PLAN

7.5. FINANCIAL PLAN

7.6. WASTE MANAGEMENT IMPLEMENTATION PROGRAMME

ANNEXURE OR REFERENCES (OPTIONAL)