



## UMHLATHUZE INTEGRATED WASTE MANAGEMENT PLAN 2<sup>nd</sup> REVIEW 2019



UMHLATHUZE LOCAL MUNICIPALITY  
PRIVATE BAG X 1004  
RICHARDS BAY  
3900

**Compiled By:**

Waste Management Services

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	VII
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 Background .....	2
<b>2. STATUS QUO OF WASTE MANAGEMENT .....</b>	<b>2</b>
Basic Principles of Waste Management .....	2
2.1. Legislation Framework.....	2
2.2. Study Area.....	17
2.3. UMhlathuze Local Municipality Demographics .....	17
2.4. The Economy.....	21
2.5. Service Delivery (Sanitation) .....	25
2.6. New Developments.....	36
2.7. Waste Quantities and Characteristics.....	36
2.8. Waste Quantities.....	43
2.9. Waste Management Systems.....	45
<b>3. TRENDS AND FORECASTS.....</b>	<b>52</b>
3.1. Population Projections.....	52
3.2. Economic Growth.....	53
3.3. Waste Generated In 2018.....	53
3.4. Waste Generation Forecast Estimates.....	54
<b>4. GAPS AND NEEDS.....</b>	<b>56</b>
4.1. Legislation Basis.....	56
4.2. Waste Management Systems .....	56
4.3. Waste Collection and Service Delivery.....	56
4.4. Waste Minimisation and Recycling.....	56
4.5. Waste Management Campaigns and Awareness.....	56
4.6. Illegal Dumping.....	56
4.7. Management of Landfills.....	57
4.8. Waste Information Systems.....	57
4.9. Waste in Rural Areas .....	57
4.10. Informal Settlement Waste.....	57
4.11. Industrial and Mining Waste.....	57
4.12. Building Rubble.....	57
4.13. Garden Waste.....	57
4.14. Fleet.....	57
4.15. Gaps, Needs and Recommendations .....	58

<b>5.</b>	<b>GOALS AND OBJECTIVES.....</b>	<b>60</b>
5.1.	Disposal Infrastructure Development.....	60
5.2.	Waste Collection Infrastructure.....	60
5.3.	Institutional Capacity and Human Resource.....	60
5.4.	Financial Resources.....	61
5.5.	Dissemination of Information.....	61
5.6.	Illegal Activities.....	61
5.7.	Waste Minimisation.....	61
5.8.	The Goals and Objectives.....	61
<b>6.</b>	<b>IMPLEMENTATION AND BUDGET PLAN.....</b>	<b>64</b>
6.1.	Implementation and Budget Plan.....	64
6.2.	Cost Estimates.....	70
6.3.	Monitoring and Evaluation.....	75
6.4.	Conclusion.....	75

## ANNEXURES

1. ANNEXURE A : FLEET
2. ANNEXURE B : SKIPS
3. ANNEXURE C: TARIFFS
4. ANNEXURE D BYLAWS
5. ANNEXURE E : NATIONAL DOMESTIC WASTE COLLECTION STANDARDS (ACT NO 59 OF 2008)

## ACRONYMS

<b>AP</b>	Action Plan
<b>APIG</b>	Action Plan Implementation Group
<b>CBD</b>	Central Business District
<b>CEC</b>	Committee for Environmental Co-ordination
<b>CONNEPP</b>	Consultative National Environmental Policy Process
<b>DEDTEA</b>	Department of Economic Development, Tourism and Environmental Affairs
<b>DAEARD</b>	Department of Agriculture and Rural Development
<b>DFA</b>	Development Facilitation Act 67 of 1995
<b>DME</b>	Department of Minerals and Energy
<b>DTL</b>	Department Task Leader
<b>DWAF</b>	Department of Water Affairs and Forestry
<b>ECA</b>	Environment Conservation Act, Act No. 73 of 1989
<b>IDP</b>	Integrated Development Plan
<b>IP&amp;WM</b>	Integrated Pollution and Waste Management
<b>IWM</b>	Integrated Waste Management
<b>IWMP</b>	Integrated Waste Management Plan
<b>LDO</b>	Land Development Objectives
<b>LUPO</b>	Land Use Planning Ordinance
<b>LGTA</b>	Local Government Transition Act 209 of 1993
<b>LFA</b>	Logical Framework Analysis
<b>MRF</b>	Material Recovery Facilities
<b>NEAF</b>	National Environmental Advisory Framework
<b>NEMA</b>	National Environmental Management Act, Act No. 107 of 1998
<b>NEMWA</b>	National Environmental Management Waste Act, Act No. 59 of 2008
<b>NWMS</b>	National Waste Management Strategy

<b>OLGA</b>	Organised Local Government Act 52 of 1997
<b>PMG</b>	Project Management Group
<b>PPA</b>	Physical Planning Act 125 of 1991
<b>PSC</b>	Project Steering Committee
<b>SLA</b>	Service Level Agreement

## **EXECUTIVE SUMMARY**

The City of uMhlathuze Municipality has reviewed its Integrated Waste Management Plan (IWMP) for the Waste Management Division of the Municipality. This is the second review and progress on its implementation is reflected under Section 6 of this review.

While reviewing the Plan, the current status of the waste collection systems and existing disposal sites, the service delivery capacity and the needs were analysed.

The current legislation which dictates to Waste Management was also reviewed. Three methodological approaches were applied which included desk top analysis, in depth interviews with Waste Management officials, King Cetshwayo District Municipality officials, Sampled Industries and Mining sector.

The communities of different type of settlements were interviewed by random selection of households. The interviews were not structured but focused on the methods used and general challenges existing with waste collection and disposal, any knowledge of the term “Recycling”.

Observation method was also used especially on the status of illegal dumping sites, transfer stations, material recovery facilities and Regional Landfill.

Conclusions and recommendations were drawn from these findings:

## SECTION 1

### 1. INTRODUCTION

#### 1.1 BACKGROUND

As a requirement of section 11 of the National Environment Waste Act (NEMWA) and the IDP Process all Municipalities are face with the obligation to compile an integrated waste management plan.

The reviewing of the 2005 IWMP was done in line with Section 12 of NEMWA and as well as the Guidelines for the Development of IWMP for Local Governments (DAEA, 2003).

**Section 1** includes the Introduction. This section includes the flow process of the document.

**Section 2** includes the status quo assessment approach. This section includes literature review, in depth interviews, interviews for few selected households in different type of settlements, observations and sanity checks: The following areas were interrogated:

Literature Review of relevant legislation and policies to Waste Management

- Analysis of socioeconomic and demographic data of uMhlathuze Local Municipality
- Waste quantities and characteristics
- Waste management systems
  - ✓ Waste management organisational structure
  - ✓ Waste management infrastructure
  - ✓ The status of landfills and transfer stations
  - ✓ Street cleaning
  - ✓ Illegal dumping

**Section 3** includes population projections and Waste Management forecasts

- Population projections
- Economic growth
- Waste generated in 2017
- Waste generation forecast estimates

**Section 4** includes gaps and needs analysis and alternative recommendations

- Legislation
- By laws
- Waste management systems
- Waste collection services
- Illegal dumping
- Management of landfills
- Waste Management systems
- Rural area
- Informal settlements
- Industrial and mining waste

- Building rubbles
- Garden waste
- Fleet

**Section 5** included Goals and Objectives of:

- Development Disposal Infrastructure
- Waste Collection Infrastructure
- Institutional Capacity and Human Resource
- Financial Resources
- Management of illegal Activities
- Waste minimisation.

**Section 6** includes:

- Implementation Plan
- Cost Estimates
- Monitoring Strategy
- Conclusion

The uMhlathuze Local Municipality has identified five focus points that the IWMP to focus on and these are:

- Illegal dumping
- Human Resource of Waste Management Section
- Waste minimization (Including climate change)
- Waste Management Infrastructure
- Recycling

## **SECTION 2**

### **2. STATUS QUO OF WASTE MANAGEMENT**

#### **2.1 BASIC PRINCIPLES FOR WASTE MANAGEMENT**

The main purpose of an IWMP is to integrate the management of general waste within the municipality in order to:

- Identify and plan for future waste management needs
- Minimise the negative social and environmental impacts related to waste thereby improving the quality of life for the communities
- Minimize costs through effective planning, efficient management of infrastructure, human resource, machinery and equipment.
- Address issues of climate change.

The long term vision of uMhlathuze Local Municipality is “The Port City of uMhlathuze offering a better quality of life for all its citizens through sustainable development and inclusive economic growth” (IDP 2018/19)

The Mission statement that underpins the above vision: (IDP 2018/19)



- Job creation and inclusive economic growth through accelerated economic development and transformation;
- Enhancing industry based skills development and strategic support to education priority programmes;
- Community based initiatives to improve quality of citizen's health and well-being;
- Creating safer city through integrated and community based public safety;
- Planned and accelerated rural development interventions;
- Promotion and maintenance of spatial equity and transformation;
- Optimal management of natural resources and commitment to sustainable environmental management;
- Use of Information, Communication and Technology Systems (ICT) to improve productivity and efficiencies in line with Smart City principles;
- Good governance, capable and developmental municipality; and
- Collaborate and partner with private sector, public sector and NGOs in the environmental programmes.

## 2.2 LEGISLATIVE FRAMEWORK

### 2.2.1 THE NATIONAL ENVIRONMENT MANAGEMENT STRATEGY 2011

The National Department of Environmental Affairs is currently reviewing the National Waste Management Strategy. The main goals and objectives of the current NWMS are detailed below.

Goal	Objectives
1. Securing ecologically sustainable development while promoting justifiable economic and social development	<ul style="list-style-type: none"> <li>• To ensure the protection of the environment through effective waste management measures;</li> <li>• To protect the health and well-being of people by providing an affordable waste collection service;</li> <li>• Grow the contribution of the waste sector to GDP;</li> <li>• Increase the number of jobs within waste services, recycling and recovery sectors;</li> <li>• Promote SMMEs in waste sector</li> </ul>
2. Avoiding and minimising the generation of waste	<ul style="list-style-type: none"> <li>• Ensure the design and manufacture of products that avoid or minimize waste generation;</li> <li>• Discourage waste generation through cost effective and volume based tariffs;</li> <li>• Increase consumer awareness of waste minimisation issues</li> </ul>

3. Reducing, re-using, recycling and recovering waste	<ul style="list-style-type: none"> <li>• Increase re-use and recycling rates of products;</li> <li>• Reduce the percentage (%) of recyclable material to landfill;</li> <li>• Ensure separation at source in all metropolitan and local municipalities;</li> <li>• Encourage the establishments of Material Recovery Facilities (MRFs);</li> <li>• Encourage waste to energy options;</li> <li>• Support the diversion of high calorific waste from landfill to recovery options</li> </ul>
4. Promoting and ensuring the effective delivery of waste services	<ul style="list-style-type: none"> <li>• Facilitate the provision of at least a basic level of waste service to all;</li> <li>• Ensure an efficient and effective solid waste management ;</li> <li>• Implement free basic removal policy for indigent households;</li> <li>• Promote the regionalization of waste management services</li> </ul>
5. Treating and safely disposing of waste as a last resort	<ul style="list-style-type: none"> <li>• Stabilize quantity of waste disposed to landfill then reduce this volume;</li> <li>• Improve landfill management to comply with the legislation;</li> <li>• Increase thermal treatment and conservation of waste energy;</li> <li>• Ensure the diversion of certain waste tyres from landfill</li> </ul>
6. Remediating land where contamination presents a significant risk of harm to health or the environment	<ul style="list-style-type: none"> <li>• Quantify the extent of contaminated land;</li> <li>• Implement contaminated land measures in the Waste Act;</li> <li>• Remediate priority areas of contaminated land;</li> <li>• Clarify extent of state liability for contaminated land</li> </ul>

**In addition to the above, how the overall goals and objectives are met and also being dealt with under some process, goals and objectives will include the following:**

Goals	Objectives
7. Achieving integrated waste management planning	<ul style="list-style-type: none"> <li>• Reliable information of waste flows and an accurate waste management national waste balance;</li> <li>• Establish and implement an effective system of performance based IWMPs at all levels of government;</li> <li>• IWMPs approved for key industrial sectors</li> </ul>
8. Sound budgeting and financial management for waste services	<ul style="list-style-type: none"> <li>• Sound financial planning for waste services;</li> <li>• Full cost accounting for waste services; Cost reflective and volumetric tariffs implemented;</li> <li>• Waste services sustainably financed</li> </ul>

9. Adequate staffing and capacity for waste management	<ul style="list-style-type: none"> <li>• WMOs appointed at all levels of government;</li> <li>• Additional technical capacity developed to deal with norms and standards,</li> <li>• Industry regulation and remediation;</li> <li>• EMI capacity expanded to deal with Waste Act;</li> <li>• Private sector capacity mobilized to support waste service delivery and community based collection models</li> </ul>
10. Effective compliance and enforcement of waste regulations	<ul style="list-style-type: none"> <li>• Conduct systematic monitoring of compliance with regulations and permit conditions;</li> <li>• Create a culture of compliance with Waste Act regulations;</li> <li>• Establishment of a hotline to report non-compliance;</li> <li>• Successful prosecutions to waste offenders</li> </ul>
11. Effective monitoring and reporting on performance with waste functions	<ul style="list-style-type: none"> <li>• Implement systematic monitoring of key performance indicators by each sphere of government;</li> <li>• Reporting on key performance indicators in line with the Waste Act;</li> <li>• Conduct regular evaluation of performance with waste functions and IWMPs</li> </ul>
12. Ensure that people are aware of the impact of waste on their health, well-being and the environment	<ul style="list-style-type: none"> <li>• Develop national and local awareness campaigns on the social importance of waste management;</li> <li>• Promote waste minimization and recycling through education system;</li> <li>• Establish an equivalent to the "Blue Drop" award for waste management by</li> </ul>

The National Environmental Management Act (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 the 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** 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 and Provincial departments that have waste management responsibilities 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 environmental management plan or environmental implementation plan. Provincial government must ensure that municipalities adhere to the relevant environmental implementation and management plans within its province, as well as the principles in the preparation of any policy, programme or plan including the establishment of Integrated Development Plans (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 minimise the pollution. Where an incident occurs that is detrimental to the environment, the responsible person for the incident must within 14 days of the incident report to the Director General, provincial head of department and municipality. The relevant authority may specify measures to address the problem and remediate the area within 7 days. The Acts also attach consequences for breaching the duty of care, namely that government authorities are empowered to issue directions are not complied with.

**Chapter 8** Provides that the Minister and every MEC and municipality may enter into an environmental management co-operation agreement with any person or community for the purpose of promoting compliance with the principles laid down in NEMA. Environmental Co-operation Agreements may contain an undertaking by the person or the 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 laws and 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.

### **2.2.2 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT 59 OF 2008**

The National Environmental Management Waste Act (Act 59 of 2008) was published as No 278 in Government Gazette No. 32000, on 10 March 2009. The Act was signed by the President on 6 March 2009 and published on 10 March 2009. On 1 July 2009 the Waste Act came into operation. The Waste Act repealed Section 20 of the Environment Conservation Act, 1989 (Act 73 of 1989) and introduces new provisions regarding the licensing of waste management activities. Waste activities listed under Schedule 1 in the National Environmental Management Act 2008 as defined in the environmental impact assessment (EIA) regulations made under section 24(5) Of the National Environmental Management Act 2008 (NEMA), should be licensed in terms of section 45 of the National Environment Management: Waste Act 59 of 2008. The license is made subject to a number of conditions, which inter alia pertain to the design, construction, monitoring and closure of a waste disposal site. The DWAF Minimum Requirements Documents still form the basis for the licensing process and may be included as permit conditions, thereby becoming legally binding on the license holder. The license holder is generally required to operate, maintain and attend closure of a waste disposal site in compliance with the license conditions, as well as in accordance with the guidelines set out in the Minimum Requirements Documents.

Environmental Impact Assessment regulations, regarding activities defined under Section 21(1) of the Environment Conservation Act, have been promulgated in Government Notice R1183 of 5 September 1997. An EIA must be conducted prior to the establishment of waste disposal facilities.

The Waste Act entrenches best practices in waste management into law, replacing the out dated and unsustainable “end of pipe” approach with a new, and more environmentally responsible and sustainable approach.

The Act deals with minimising the consumption of natural resources , waste generation, recycling, waste disposal, prevention of pollution, promotion of waste services, remedying land degradation, and achieving integrated waste management reporting and planning.

### **2.2.3 ENVIRONMENT CONSERVATION ACT 73 OF 1989**

The National Environmental Management: Waste Act, 2008 repeals and amends parts of the Environmental Conservation Act and the Environmental Conservation Amendment Act with regard to the management of waste in South Africa and introduces new provisions regarding the authorisation of waste management activities.

### **2.2.4 MUNICIPAL DEMARCATION ACT 27 OF 1998**

The Municipal Demarcation Act 27 of 1998 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 a healthy environment. The tax base must also be as inclusive as possible of users of municipal services in the municipality.

### **2.2.5 NATIONAL DOMESTIC WASTE COLLECTION STANDARDS, JANUARY 2011**

The purpose of the document is to redress past imbalances in the provision of waste collection services, it is imperative that acceptable, affordable and suitable waste collection services be rendered to all South Africans. The provision of waste collection services improves the quality of life of the entire community and ensures a clean and more acceptable place to live and work in. The lack of or poor quality waste collection services can however result in a number of environmental and human health problems.

The National Environment Management Waste Act, 2008 (Act no.59 of 2008) stipulates that standards are required to “give effect to an environment that is not harmful to health and well-being,” and that this right has to be applied “uniformly throughout the Republic”. It is recognized that South Africa is a developing country; the purpose of the setting standards is to ensure service to all while complying with health and safety regulations without unnecessarily changing current creative collection processes as long as they function well and deliver a service of acceptable standards to all households. These National Domestic Waste Collection Standards are therefore applicable to all domestic waste collection services throughout the country.

### **2.2.6 NATIONAL POLICY FOR PROVISION OF BASIC REFUSE REMOVAL SERVICE TO INDIGENT HOUSEHOLDS, JUNE 2011**

The purpose of the National Policy for Provision of Basic Refuse Removal Service to Indigent Households is to ensure those poor (indigent) households have access to at least basic (essential) refuse removal services from the concerned municipality. Meeting this purpose requires aligning the National policy for Provision of Basic Refuse Removal Service to Indigent Households with already existing key relevant legislation i.e.

Indigent Policies for different municipalities, financial management systems while being mindful of the need to ensure that there is uniformity when dealing with various cases of indigent households.

### **2.2.7 KZN WASTE MANAGEMENT POLICY (KZN-WMP) – FINAL VERSION 2003**

This policy represents the efforts of the province to take on its responsibility as previously prescribed in the ECA (Section 24, Act No. 73, 1998) to make regulations with respect to waste management.

The general objectives are;

- Registration of waste generators and handlers;
- Access to information;
- An equitable system of governance for generators and handlers with a view of eliminating illegal practices.

The policy states that this includes the management of waste on site and only where necessary, the transportation to suitable licensed landfill sites. With regards to hazardous and Health Care Risk Waste, the policy states that it is important to identify the need for hazardous and waste disposal sites and address issues like sighting and management “if the need exists”.

### **2.2.8 ORGANISED LOCAL GOVERNMENT ACT 52 OF 1997**

The Organised local Government Act 52 of 1997 provides for the recognition of national and provincial organisations representing the different categories of municipalities which determines various procedures concerning local government, including procedures by which local government may consult with national and provincial government.

### **2.2.9 MUNICIPAL STRUCTURES ACT 117 OF 1998**

The main objective of the Municipal Structures Act 117 of 1998 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 municipalities. It is one of a set of 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. Municipalities are categorised either as A, B or C depending on the level of development.

Chapter 65 sets out the functions and powers of the municipalities in accordance with the Constitution.

### **2.2.10 MUNICIPAL SYSTEMS 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 decentralisation 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 corporation 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.

The process to be followed in planning, drafting and adopting the Integrated Development Plan is set out.

#### **2.2.11 THE DEVELOPMENT FACILITATION ACT 67 OF 1995**

The Development Facilitation Act 67 of 1995 sets out a planning and land development system, which ensures that national, provincial and local government policies are implemented.

Section 28 describes the requirements for Land development Objectives, which must be developed by each local authority. One of the objectives of Land Development is to create a new system that encourages sustained utilisation of the environment, particularly with regard to the environmental encouragement of developments.

Municipalities are encouraged to cooperate in order to develop the capacity of each municipality to exercise its powers and duties and manage its affairs.

#### **2.2.12 THE PHYSICAL PLANNING ACT 125 OF 1991**

The objective of The Physical Planning Act 125 of 1991 is to provide for the division of the country into regions and to promote regional development. Policy plans consist of broad guidelines for the future physical development of the area and restrictions are placed on the use of land in the area to which the plan relates. Local authorities are required to develop urban structure plans for their areas of jurisdiction.

#### **2.2.13 MUNICIPAL SYSTEMS ACT (ACT 32 OF 2000) SERVICE DELIVERY**

The minimum requirements series consists of three pertinent documents that regulate activities around the management of waste.

These include:

- ❖ Minimum Requirements for the Handling Classification and Disposal of Hazardous waste;
- ❖ Minimum Requirements for Waste Disposal by landfill;
- ❖ Minimum Requirements for monitoring Waste Management Facilities

The Minimum Requirements for Waste Disposal by Landfill guides the process of site selection, permitting, investigation, assessment and mitigation of impacts, landfill design, site preparation operation, monitoring, rehabilitation and closure. Upon establishing a preferred site in accordance with the above requirements a “section 20” permit is normally issued. This responsibility has now been developed to the National Department of Environmental Affairs (DEA) from DWA.

The Minimum Requirements for Waste Disposal by Landfill represents the definitive guideline for the establishment of waste disposal sites under the Environmental Conservation Act. In terms of the permitting requirements for waste disposal the procedure is covered in great detail in the document. Particular attention must be paid to the permitting procedure, which must be followed to the letter to avoid falling short of any of the requirements.



Minimum requirements for the Handling Classification and Disposal of Hazardous Waste looks at the principles of good waste management. The document describes a system for the classification of various waste types, treatment for various wastes, the hazard rating for any residues and the prescribed disposal mechanisms.

#### **2.2.14 NATIONAL ENVIRONMENT MANAGEMENT: AIR QUALITY ACT 39 OF 2004**

The purpose of the National Environment Management: Air Quality Act 39 of 2004 is to reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development, to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific quality measures; and for matters incidental thereto.

**Part2** of Chapter 2 of the Act sets out national, provincial and local ambient air quality and emission standards, chapter 3 institutional and planning matters, chapter 4 air quality management measures (priority areas, Listing of activities resulting in atmospheric emissions, controlled emitters, controlled fuels and other emitters).

Chapter 5 describes the procedures to apply for licenses for listed activities, while chapter 7 describes the offences and penalties for non-adherence.

#### **2.2.15 MUNICIPAL SYSTEMS ACT (ACT 32 OF 2000): SERVICE DELIVERY**

A Municipality must give effect to the provisions of the Constitution and give priority to the basic need of the local community; promote the development of the local municipality; and ensure all members of the local community have access to at least a 50 minimum level of basic municipal services. Municipal services must be equitable and accessible. They must be provided in a manner that is conducive to economic development, efficient and effective use of available resources and the improvement of standards of quality over time. Furthermore, the municipal services must be financially and environmentally sustainable and also be regularly reviewed with a view to upgrading, extension and improvement.

The Act provides a broad requirement for service delivery (waste disposal) in local municipalities. In terms of section 75 (1) of the Act a municipality must

- Give priority to basic needs;
- Promote local community development;
- Provide a basic level of service for all community members;

These services must be:

- Equitable and accessible;
- Promote prudent economic and efficient use of municipal resources;
- Sustainability (financially and economically)
- Be subject to review and improvement.

Tariff policy regulated in section 74 of the above Act must apply:

- All people must be treated equally in the application of tariffs;
- The levy for the services must be in proportion to consumption of services;
- Poor households should at least have basic services (investigate subsidies);
- Tariffs must reflect the costs to provide the service ( capital, operating, maintenance, administration and interest);



- Tariffs must be financially sustainable;
- Local economic development can be promoted by setting special charges for industrial and commercial users;
- Any cross subsidies must be fully disclosed;
- Recycling and other principles of environmental management must be promoted for the efficient, effective, and economical use of municipal resources;
- Tariff policies may vary between different users provided these are not unfair or discriminatory.

#### **2.2.16 ATMOSPHERIC POLLUTION PREVENTION ACT 45 OF 1965**

The atmospheric Pollution Act of 1965 is not yet repealed and is added to the list of relevant legislation applicable to waste management. The authorisations issued in terms of this Act will be applicable until regulations have been promulgated in terms of the National Environment Management: Air Quality Act 39 of 2004.

**Part 2** of the Acts 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 the Scheduled Process unless that person is a holder of the original certificate. A current registration certificate is granted after compliance with the conditions of a provisional registration certificate and the requirements of the Department of Environmental Affairs and Tourism to whom the 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.

Part3 of the Atmospheric Pollution Prevention Act provides for the control and regulation of smoke pollution arising from any fuel-burning appliance.

Part4 of the Atmospheric Pollution Prevention Act (APPA) 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.

#### **2.2.17 NATIONAL WATER ACT 36 OF 1998**

The National Water Act contains a number of provisions that impact on the 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.
- ❖ Requiring that waste discharged or deposited into or allowed to enter a water resource be monitored and analysed according to prescribed mechanisms.

### **2.2.18 NATIONAL HEALTH ACT 61 OF 2003**

The National Health Act of 2003 provides a framework for the structured uniform health system within the Republic, taking into account the obligations imposed by the Constitution and the other laws on the national, provincial and local governments with regard to health services; and to provide for matters connected therewith.

Section 32 of Health Act (Act 61 of 2003) requires provincial Health MECs to assign environmental health functions to district and metropolitan municipalities. The definition of these functions in the Health Act includes environmental pollution control, waste management and water quality monitoring.

As a schedule B function in terms of the constitution, municipalities are expected to continue with the funding and provide the expanded definition of municipal health services (RSA 1996). The assignment and delegation of additional environmental health and management functions has led to recognition in the Health Act and the responsibility of the Provincial sphere to contribute towards meeting the additional financial burden. Many district municipalities are having difficulty in restructuring and implementing the new district level arrangements envisaged by the Health Act for the financing and management of environmental health functions. Section 34 of the Health Act makes a provision for transitional arrangements (RSA 2003) in which local municipalities are required to continue providing the services they provided before the Act, and until such time as a Service Level Agreement (SLA) is in place. In a number of districts the EHS devolution process has not yet been finalised. District Municipalities cannot raise income from property rates and do not receive equitable share finance for their given environmental health function. It follows that the Provincial Department of Health is required, through an SLA to assess and make available the resources needed to perform the required environmental health functions. Local municipalities who previously provided environmental health services are expected to continue to provide the finances for these posts which are required to be transferred to the District level. Additional posts to address newly assigned and delegated functions need to be funded in terms of the Health Act through an SLA which (a) describes the services; (b) determines the resources that must be made available by the province and those by the municipality and (c) sets the performance and monitoring standards.

The National Act does not address the disposal of health care risk waste as such.

Draft regulations for the control of environmental conditions constituting a danger to health or a nuisance were published in GNR21 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 disposal sites and waste collecting, sorting, treating or processing sites. (Including Health Care Risk Waste)

### **2.2.19 WHITE PAPER ON ENVIRONMENTAL MANAGEMENT (NOTICE 749 OF 1998)**

The White Paper on Environmental Management was published in 1998. This policy sets out governments 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 activities that impact on the environment. The policy states that the government will allocate functions to the institutions and spheres of government that can effectively achieve the objectives of sustainable development and integrated environmental management. This would include the allocation of certain functions in the municipal sphere of government.

Where appropriate, provincial and local government are to develop their own legislation and implementation strategies to address specific needs and conditions within the framework of the policy.

#### **2.2.20 WHITE PAPER ON INTEGRATED POLLUTION AND WASTE MANAGEMENT FOR SOUTH AFRICA, NOTICE 227 OF 2000**

The White Paper on Integrated Pollution and Waste Management was published in March 2000 and 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 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 the 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 as well as waste minimisation. Within this framework the following strategic goals should be considered:

- ❖ Effective institutional framework and legislation;
- ❖ Pollution and waste minimisation, impact management and remediation;
- ❖ Holistic and integrated planning where the intention is to develop mechanisms to ensure that integrated pollution and waste management considerations are integrated into the developments 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 the pollution and waste management;
- ❖ Making timeous 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 indicators to measure performance for inclusion in EIPs and EMPs as provided for in the National Environmental Management Act;
- ❖ Participation and partnerships in integrated pollution and waste management governance;
- ❖ Empowerment and education in integrated pollution and waste management governance;
- ❖ Information management and International cooperation.

#### **2.2.21 DWAF MINIMUM REQUIREMENTS FOR LANDFILL, SECOND EDITION OF 1998**

The 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 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 environment from the possible harmful effects caused by the handling , treatment, storage and disposal of waste;
- ❖ Administration and provision of a systematic and nationally uniform approach to the waste disposal process;
- ❖ Endeavour to make South African waste management practices globally acceptable;
- ❖ Before a waste disposal site 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.

## **2.2.22 NATIONAL WASTE MANAGEMENT STRATEGY 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 for 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 a 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 a 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 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 the submission of provincial government.
- ❖ Waste Information System: local government to be responsible for data collection.
- ❖ Waste minimisation: Local government will implement and enforce appropriate national waste minimisation initiatives and promote the development of voluntary partnerships with industry.
- ❖ Recycling: Local government to establish recycling centres and/or facilitate community initiatives.
- ❖ Waste collection and transportation: local government to improve service delivery. Private public partnerships to assist service delivery are encouraged.
- ❖ Waste Disposal: local government is to take responsibility for the establishment and management of landfill sites, and to promote development of regionally based facilities. Formalising and controlling of scavenging is the responsibility of the permit holder.

### 2.2.23 POLOKWANE WASTE SUMMIT DECLARATION

In September 2001 a national waste summit was held at Polokwane in the Northern Province. It was attended by all stakeholder groupings in the waste field in order to jointly chart a way forward in terms of waste management of all waste. i.e. domestic, commercial and industrial:

Vision - To implement a waste management system, which contributes to sustainable development and a measurable improvement in the quality of life by harnessing the energy and commitment of all South Africans to the effective reduction of all waste?

Goals – To reduce waste generation and disposal by 25% and 50% respectively by 2012 and develop a plan for zero waste by 2022.

The Polokwane declaration has significant implications for local government and other stakeholders to engage more closely toward the achievement of this goal in a realistic and particular manner. The key actions in the Polokwane Declaration that impact on local government include the following:

- ❖ Implement of the NWMS;
- ❖ Develop and implement legislative and regulatory framework;
- ❖ Waste reduction and recycling;
- ❖ Develop waste information and monitoring systems.

### 2.2.24 MUNICIPAL BY LAWS on WASTE MANAGEMENT

The uMhlathuze Local Municipality has in terms of section 156 of the Constitution, 1996 (Act No 108 of 1996) and the National Environment Management Act, Act 59 of 2008 read in conjunction with section 11 of the Municipal Systems Act, 2000, (Act No 32 of 2000) made the By-Laws.

## 2.3. STUDY AREA

The area of study is the whole of uMhlathuze Local Municipality with 34 Wards  
(See map below)

## 2.4 UMHLATHUZE LOCAL MUNICIPALITY DEMOGRAPHICS

### 2.4.1 CURRENT POPULATION AND HOUSEHOLDS

UMhlathuze local Municipality is situated on the North-East Coast of Kwazulu-Natal in South Africa. It is one of the Local municipalities within King Cetshwayo District Municipality. UMhlathuze Municipality possesses an extensive industrial sector, rich environment and a diverse community. Offices of the Municipality have been established in the towns of Richards Bay, Empangeni, Esikhawini, Ngwelezane, Nseleni and Vulindlela. It also covers Kwa Mkhwanazi Traditional Authority, KwaKhoza Traditional Authority, KwaZungu Traditional Authority and KwaDube Traditional Authority, Somopho (Mthembu), Obuka (Biyela) and Obizo (Cebekhulu).

With the addition of former Ntambanana Municipality wards after Local Government Elections in 2016, Umhlathuze Municipality has increased its wards from 30 to 34 Wards. The population is estimated at 410 456 as per Community Survey 2016, although in terms of Census 2011 the total population was 334 459. The area of operation is shown below, and service is sitting at 68 %.

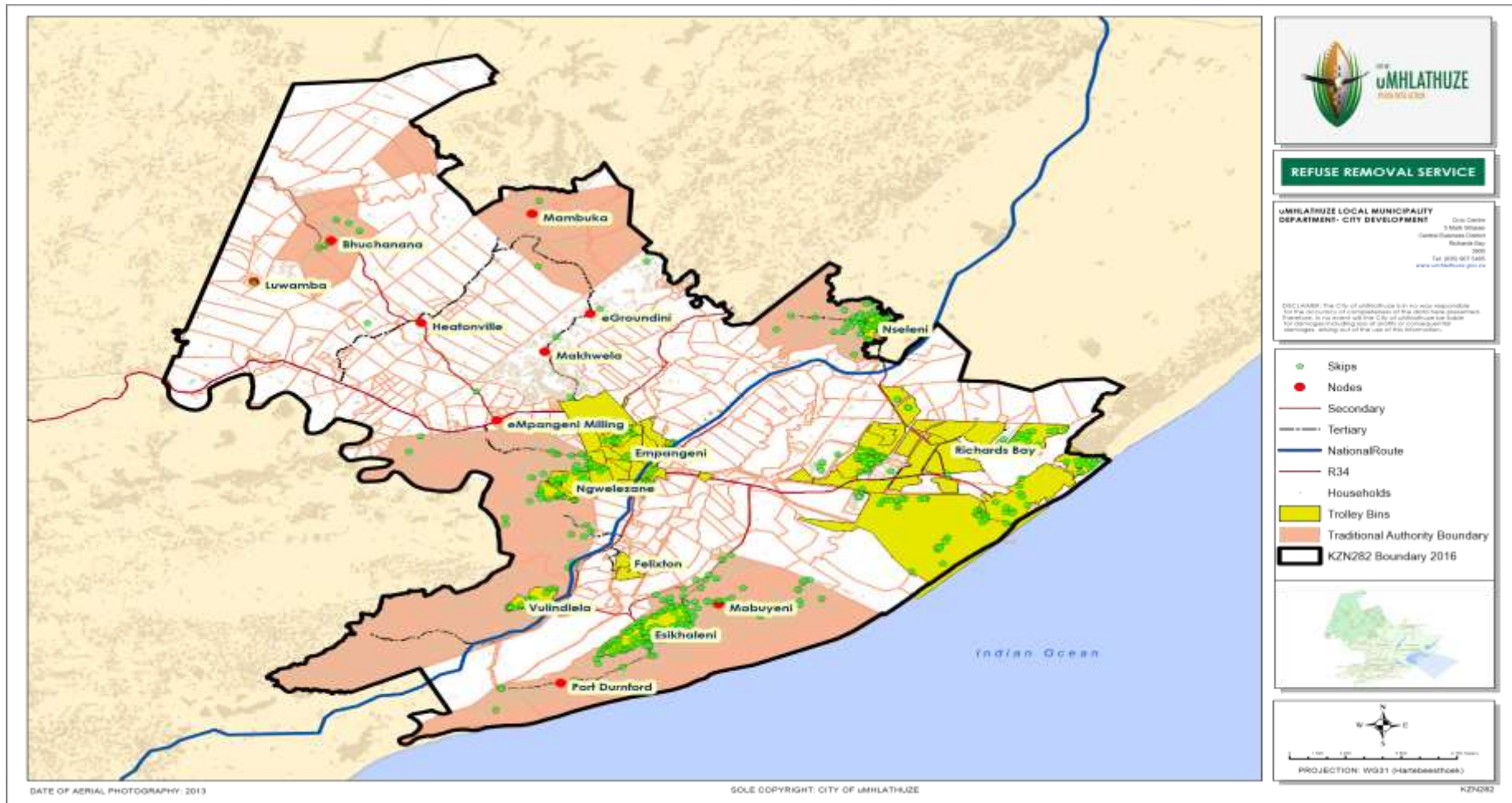
Richards Bay is considered to be the industrial and tourism hub while Empangeni is the commercial hub and Esikhawini the largest township in the uMhlathuze Municipality.

The average household size is 3-6 persons per household according to 2011 population census. (2011 Population census, Statistics South Africa). Of the number of households, 88,3% are formal dwellings. The population density is 422 persons / km<sup>2</sup>. The age group under 15 years was 29,3; 15 to 64 age group were 67,5% and population over 65 years are 3,2%.

The population growth rate was estimated to be 1, 45% per annum. However a higher population growth rate of 2% will also be assumed in the projections considering a high rate of population immigrating to the City of uMhlathuze because of employment opportunities.



## REFUSE REMOVAL SRVICE MAP: AREA OF OPERATION



**TABLE 2.1. Refuse Removal Current Service and Targets**

CITY OF UMHLATHUZE REFUSE REMOVAL									
Objective	Strategies	Performance Indicator	2016/2017	2017/2018	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
			Actual 2016/2017 Baseline	Amended Annual Target incl. 2016 Survey	Actual 2018/2019 Baseline	Annual Target	Annual Target	Annual Target	Annual Target
To improve access to domestic solid waste removal services to the community	Provide a weekly domestic solid waste removal service to the community	% Households with access to waste disposal	79.55%	67.29%	67.74%	69.55%	71.36%	73.17%	74.98%
		Number of Households with access to waste disposal	73356	74356	74856	76856	78856	80856	82856
		Number of new Households with access to waste disposal	6409	1000	1500	2000	2000	2000	2000
		Number of Household with access to free waste removal	29891	30891	31391	33391	35391	37391	39391



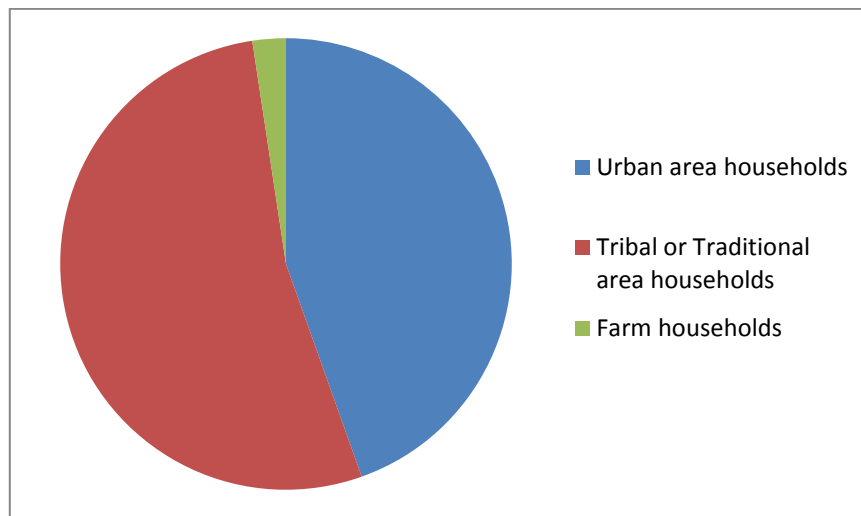
Table 2.2. Population and Households by type of settlement

Ward Number	URBAN AREA		TRIBAL OR TRADITIONAL AREAS		FARMS		TOTAL POPULATION	TOTAL HOUSEHOLDS
	POPULATION	HOUSEHOLDS	POPULATION	HOUSEHOLDS	POPULATION	HOUSEHOLDS		
<b>KZN282: uMhlathuze</b>	<b>131871</b>	<b>38589</b>	<b>192481</b>	<b>45952</b>	<b>10107</b>	<b>2068</b>	<b>334459</b>	<b>86609</b>
52802001 - Ward 1	10573	3057	804	211	768	138	12145	3406
52802002 - Ward 2	12254	3931	-	-	-	-	12254	3931
52802003 - Ward 3	9058	2586	-	-	-	-	9058	2586
52802004 - Ward 4	5617	1588	6855	1352	-	-	12472	2940
52802005 - Ward 5	-	-	13635	3003	1928	388	15563	3390
52802006 - Ward 6	3126	1091	9417	2458	-	-	12543	3549
52802007 - Ward 7	1727	476	4169	1757	-	-	5896	2232
52802008 - Ward 8	3526	1237	1611	579	-	-	5137	1816
52802009 - Ward 9	13558	4317	-	-	-	-	13558	4317
52802010 - Ward 10	-	-	11310	2513	-	-	11310	2513
52802011 - Ward 11	-	-	9131	1513	-	-	9131	1513
52802012 - Ward 12	-	-	8319	1714	255	147	8574	1861
52802013 - Ward 13	-	-	14928	2688	-	-	14928	2688
52802014 - Ward 14	-	-	12315	3262	-	-	12315	3262
52802015 - Ward 15	-	-	12252	3063	-	-	12252	3063
52802016 - Ward 16	2751	728	5049	1150	-	-	7800	1878
52802017 - Ward 17	6326	1720	4137	1626	-	-	10463	3346

52802018 - Ward 18	-	-	14887	2879	-	-	14887	2879
52802019 - Ward 19	6018	1667	5270	1231	731	86	12019	2983
52802020 - Ward 20	6069	1666	2483	823	-	-	8552	2488
52802021 - Ward 21	6950	1930	-	-	-	-	6950	1930
Ward Number	URBAN AREA		TRIBAL OR TRADITIONAL AREAS		FARMS		TOTAL POPULATION	TOTAL HOUSEHOLDS
	POPULATION	HOUSEHOLDS	POPULATION	HOUSEHOLDS	POPULATION	HOUSEHOLDS		
52802022 - Ward 22	2807	755	6373	1206	-	-	9180	1960
52802023 - Ward 23	9780	3149	-	-	923	175	10703	3325
52802024 - Ward 24	5290	1305	7606	1947	5435	1120	18331	4372
52802025 - Ward 25	-	-	13871	3161	-	-	13871	3161
52802026 - Ward 26	11457	2894	-	-	66	14	11523	2908
52802027 - Ward 27	8873	2673	-	-	-	-	8873	2673
52802028 - Ward 28	6110	1821	1329	535	-	-	7439	2356
52802029 - Ward 29	-	-	15367	3367	-	-	15367	3367
52802030 - Ward 30	-	-	11359	3915	-	-	11359	3915
-Ward 31	-	-	9820	2074			9820	2074
-Ward32	-	-	9474	1586			9474	1586

-Ward 33	-	-	10707	1941			10707	1941
-Ward 34								

Graph 2.1. Households by type of settlements



## 2.5 THE ECONOMY

### 2.5.1 ECONOMIC INDICATORS

Unemployment rates by 1996, 2001 and 2011 population censuses (Statistics South Africa).

Table 2.2 Unemployment rate (1996, 2001, 2011)

Year	1996	2001	2011
Unemployment Rates	61,9%	40,6%	31,0%

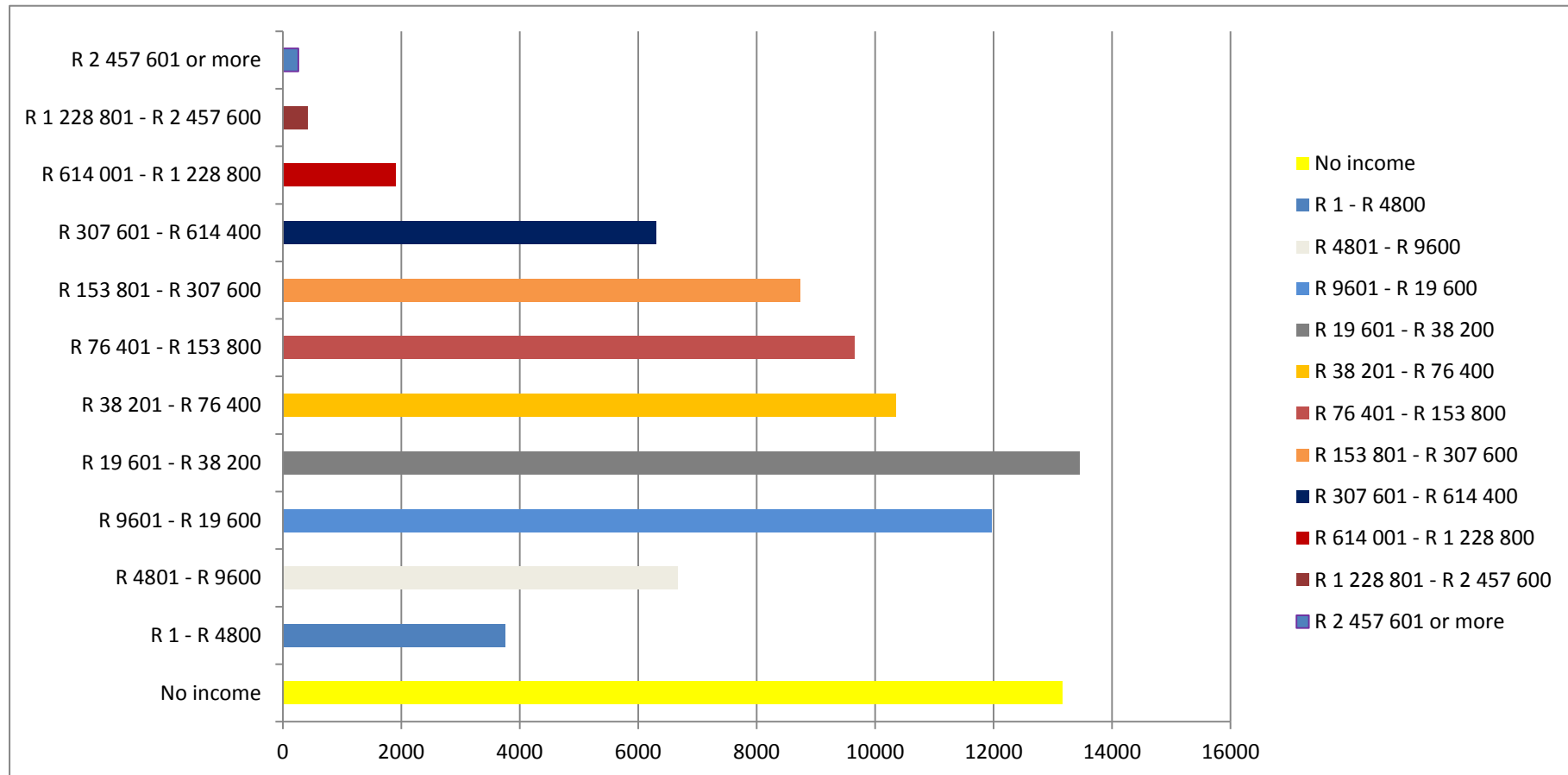
Although the unemployment rate of 31% is still very high, the trends show that there has been an improvement from 1996 to 2011 on the rate of unemployment. Hence more people have improved economically.

In terms of average household income, in 2001 the average was R59 479-00 as compared to R121 177-00 (2001 and 2011 population censuses, Statistics South Africa)

The official unemployment rate was 31% as compared to the youth unemployment rate of 40, 7 %.( 2011 population census, Statistics South Africa)

See graph below showing range of income according to number households in 2011. (2011 population census, Statistics South Africa)

**Graph 2.2 Household Income**



## 2.6. SERVICE DELIVERY

### 2.6.1 REFUSE REMOVAL

The tables below shows the distribution of households by type of refuse in 2011 for Urban areas, Tribal/Traditional and by Farm areas (2011, Population Census, Statistics South Africa)

Table 2.4 Refuse Removal

URBAN AREA						
Ward Number	Removed by local authority/private company at least once a week	Removed by local authority/private company less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Other
<b>KZN282: uMhlathuze</b>	<b>36604</b>	<b>82</b>	<b>359</b>	<b>1378</b>	<b>125</b>	<b>40</b>
52802001: Ward 1	2065	16	48	858	63	7
52802002: Ward 2	3897	7	16	6	1	4
52802003: Ward 3	2570	6	5	5	-	-
52802004: Ward 4	1571	6	3	5	-	3
52802005: Ward 5	-	-	-	-	-	-
52802006: Ward 6	1073	4	3	9	-	2
52802007: Ward 7	474	-	-	2	-	-
52802008: Ward 8	1229	2	-	5	-	1
52802009: Ward 9	4243	9	10	38	13	4
52802010: Ward 10	-	-	-	-	-	-
52802011: Ward 11	-	-	-	-	-	-
52802012: Ward 12	-	-	-	-	-	-
52802013: Ward 13	-	-	-	-	-	-
52802014: Ward 14	-	-	-	-	-	-
52802015: Ward 15	-	-	-	-	-	-
52802016: Ward 16	725	-	2	2	-	-
52802017: Ward 17	1700	-	1	14	-	5
52802018: Ward 18	-	-	-	-	-	-

52802019: Ward 19	1615	-	11	39	1	1
52802020: Ward 20	1644	1	4	11	3	3
52802021: Ward 21	1671	1	189	65	4	-
<b>URBAN AREA</b>						
Ward Number	Removed by local authority/private company at least once a week	Removed by local authority/private company less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Other
52802022: Ward 22	743	2	-	9	-	-
52802023: Ward 23	3103	4	5	22	11	4
52802024: Ward 24	1270	5	3	26	-	-
52802025: Ward 25	-	-	-	-	-	-
52802026: Ward 26	2861	11	1	11	8	3
52802027: Ward 27	2487	5	-	161	19	2
52802028: Ward 28	1663	4	59	90	3	1
52802029: Ward 29	-	-	-	-	-	-
52802030: Ward 30	-	-	-	-	-	-

**TRIBAL OR TRADITIONAL AREA**

Ward Number	Removed by local authority/private company at least once a week	Removed by local authority/private company less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Other
KZN282: uMhlatuze	9068	938	1613	31031	2775	527
52802001: Ward 1	11	3	-	183	10	3
52802002: Ward 2	-	-	-	-	-	-
52802003: Ward 3	-	-	-	-	-	-
52802004: Ward 4	528	89	8	715	6	6
52802005: Ward 5	153	44	123	2501	176	6
52802006: Ward 6	747	47	10	1647	6	2
52802007: Ward 7	714	12	295	693	35	9
52802008: Ward 8	22	3	2	552	-	-
52802009: Ward 9	-	-	-	-	-	-
52802010: Ward 10	70	42	29	2121	85	165

**TRIBAL OR TRADITIONAL AREA**

Ward Number	Removed by local authority/private company at least once a week	Removed by local authority/private company less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Other
52802011: Ward 11	21	5	5	989	470	23
52802012: Ward 12	24	14	44	1628	2	3
52802013: Ward 13	119	33	98	2361	68	9
52802014: Ward 14	1134	16	66	1914	118	13
52802014: Ward 15	984	23	231	1625	60	139
52802016: Ward 16	219	9	180	710	26	4
52802017: Ward 17	1040	110	120	208	136	12
52802018: Ward 18	504	66	33	2045	221	11
52802019: Ward 19	362	9	17	781	54	8
52802020: Ward 20	519	31	116	131	23	1
52802021: Ward 21	-	-	-	-	-	-



52802022: Ward 22	306	81	81	720	17	1
52802023: Ward 23	-	-	-	-	-	-
52802024: Ward 24	56	61	59	1734	32	5
52802025: Ward 25	238	48	18	2001	781	75
52802026: Ward 26	-	-	-	-	-	-
52802027: Ward 27	-	-	-	-	-	-
52802028: Ward 28	49	13	1	465	4	3
52802029: Ward 29	199	55	66	2625	411	12
52802030: Ward 30	1050	124	11	2680	36	14
Ward 31						
Ward 32						
Ward 33						
Ward 34						
<b>FARM</b>						
<b>Ward Number</b>	<b>Removed by local authority/ private company at least once a week</b>	<b>Removed by local authority/ private company less often</b>	<b>Communal refuse dump</b>	<b>Own refuse dump</b>	<b>No rubbish disposal</b>	<b>Other</b>
KZN282: uMhlathuze	654	260	239	837	60	19
52802001: Ward 1	49	3	-	87	-	-
52802002: Ward 2	-	-	-	-	-	-
52802003: Ward 3	-	-	-	-	-	-
52802004: Ward 4	-	-	-	-	-	-
52802005: Ward 5	135	62	12	161	6	11
52802006: Ward 6	-	-	-	-	-	-
52802007: Ward 7	-	-	-	-	-	-
52802008: Ward 8	-	-	-	-	-	-
52802009: Ward 9	-	-	-	-	-	-
52802010: Ward 10	-	-	-	-	-	-
52802011: Ward 11	-	-	-	-	-	-
52802012: Ward 12	7	137	1	2	-	-

52802013: Ward 13	-	-	-	-	-	-
52802014: Ward 14	-	-	-	-	-	-
52802015: Ward 15	-	-	-	-	-	-
52802016: Ward 16	-	-	-	-	-	-
52802017: Ward 17	-	-	-	-	-	-
52802018: Ward 18	-	-	-	-	-	-
52802019: Ward 19	-	1	3	41	40	1
52802020: Ward 20	-	-	-	-	-	-
52802021: Ward 21	-	-	-	-	-	-
52802022: Ward 22	-	-	-	-	-	-
52802023: Ward 23	25	7	42	98	-	4
52802024: Ward 24	425	50	181	447	14	3
<b>FARM</b>						
Ward Number	Removed by local authority/ private company at least once a week	Removed by local authority/ private company less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Other
52802025: Ward 25	-	-	-	-	-	-
52802026: Ward 26	14	-	-	-	-	-
52802027: Ward 27	-	-	-	-	-	-
52802028: Ward 28	-	-	-	-	-	-
52802029: Ward 29	-	-	-	-	-	-
52802030: Ward 30	-	-	-	-	-	-
:Ward 31						
:Ward 32						
:Ward 33						
:Ward 34						

There were 31 391 households with access to free basic service in 2017/18.  
The number of households serviced for Solid Waste were 74 856 in 2017/18.  
They were 74 856 households where refuse was removed at least once a week.

## 2.7 NEW DEVELOPMENTS

### 2.7.1 NEW DEVELOPMENTS

New residential and commercial developments included in 2018/2019 IDP will be included in refuse collection services to be rendered .see table below:

Table 2.7

PROJECT NAME	WARD	NO OF HOUSES
Dumisani Makhaye Village Phase 1-3	9	1180
Dumisani Makhaye Village Phase 5	9 and 23	312
Dumisani Makhaye Village Phase 7	23	501
IDT Area	27	68
KwaDube Rural Housing Khoza/Bhejane Rural Housing	12,13,14,1, 5,6,7,and 8	441
Mkhwanazi Rural Housing	24,25,27,2,8 and 29	952
Madlebe Rural housing	10,11,17,1,8,19,22 and 30	992
Empangeni Mega Housing Phase 1	5,23,24	1 745
Aquadene Housing Phase 1	26	1 115

## 2.8 WASTE QUANTITIES AND CHARACTERISTICS

### 2.8.1 WASTE TYPES

The waste types in uMhlathuze Local Municipality are:

- ❖ Household waste
- ❖ Health Care Risk Waste
- ❖ Building waste
- ❖ Industrial waste
- ❖ Mining waste
- ❖ Commercial waste
- ❖ Garden refuse
- ❖ Illegal dumping
- ❖ Recyclable materials e.g. glass, plastic, paper, cardboards
- ❖ Hazardous waste.

### 2.8.2. WASTE MANAGEMENT ON DIFFERENT TYPES OF SETTLEMENT

UMhlathuze Local Municipality has 34 Wards and the number of households increased from 86 609 in 2011(population census) to 110 503 as per Community Survey 2016 hence it is also noted that there are other wards to be acquired from Ntambanana local municipality based on the new demarcation system. Out of the total households, 74 856 households are serviced .Free basic service is also rendered to 32 578 low income (indigent) households. There are about 275 skips currently dedicated to rural communities. Service delivery is accessible to at least 68% when communal skips servicing rural communities and rural schools are considered.

Table 2.8 below shows different methods of waste management in different types of settlements.

**DIFFERENT METHODS OF WASTE MANAGEMENT IN DIFFERENT TYPES OF SETTLEMENTS.**

AREAS	URBAN SUBURBS	CBD	RURAL AREAS(TRIBAL)	COMMERCIAL FARMS	TOWNSHIPS	INFORMAL SETTLEMENT
<b>Households</b>	Collection is done once a week in urban suburbs. The wheelie bin method of collection is used. There also street bins in some areas.	Both the wheelie bin method and skip method are used. There are also street bins in some areas. Waste is collected every day.	There are about 275 skips currently dedicated to rural communities. Usage of skips in rural areas depends on accessibility as the Waste Management section no longer have a truck allocated for rural areas. However most common method is burning waste and decomposition.	The most common method used is burning and decomposition of the waste. Skips are also provided in some semi-urban areas.	Waste is collected once a week. Both plastic bag system and skips are provided. Waste in skips is only collected when they are full. There are also street bins in some areas.	Informal settlements are serviced by providing skips e.g. those around Esikhawini, Vulindlela and Enseleni.
<b>Health Care Risk Waste</b>	The medical institutions are responsible to dispose their waste by engaging private companies.	The medical institutions are responsible to disposing their waste by engaging private companies.	None	None	The medical institutions are responsible to dispose their waste by engaging private companies.	None
<b>Schools Waste</b>	School waste is handled by Waste Management Section by providing skips and wheelie bins to schools.	School waste is handled by Waste Management Section by providing skips and wheelie bins to schools.	Rural area schools are not serviced by Waste Management Section. However they manage their waste within their premises by burning it or	No schools	School waste is handled by Waste Management Section by providing skips and wheelie bins.	No schools

AREAS	URBAN SUBURBS	CBD	RURAL AREAS(TRIBAL)	COMMERCIAL FARMS	TOWNSHIPS	INFORMAL SETTLEMENT
			decomposition.			
<b>Building Rubbles</b>	The builders request for a skip from Waste management office. Once the skip is full they contact the office again to collect the rubbles.	The builders request for a skip from Waste management office. Once the skip is full they contact the office again to collect the rubbles.	The builders handle their waste and many dump it illegally.	The builders handle their waste.	The builders handle their waste and many dump it illegally.	The builders handle their waste and many dump it illegally.
<b>Industrial Waste</b>	<p>The main industries in Richards Bay are:</p> <ul style="list-style-type: none"> <li>• Portnet</li> <li>• Richards Bay Coal</li> <li>• Bell</li> <li>• Mondi</li> <li>• Foskor</li> <li>• Silva cell</li> <li>• Shincel</li> <li>• CTC</li> <li>• Felixton Sugar Mill</li> </ul> <p>Most of the industries recycle their waste.</p>	None	None	None	None	None
<b>Mining Waste</b>	<p>The main mines are:</p> <ul style="list-style-type: none"> <li>• Ticor Hillendale</li> <li>• Hillside Aluminium</li> <li>• Bayside Aluminium Smelter</li> </ul>	None	None	None	None	None

AREAS	URBAN SUBURBS	CBD	RURAL AREAS(TRIBAL)	COMMERCIAL FARMS	TOWNSHIPS	INFORMAL SETTLEMENT
	<ul style="list-style-type: none"> <li>Tronox Sands</li> </ul> <p>Most of their waste is recycled.</p>					
<b>Commercial Waste</b>	Most of the waste is recycled. However wheelie bins are also provided for Shops. The collection is done one a week.	Some waste is cycled. Skips and street bins are provided. The collection is done every day.	Commercial waste is managed by shop owners by mostly burning it.	Commercial waste is managed by shop owners by mostly burning it.	Skips are provided. The collection is done when skips are full.	Skips are a provided for informal settlements around townships. The collection is done when skips are full.
<b>Garden Waste</b>	The uMhlathuze Local Municipality collects garden refuse. Additional wheelie bins are purchased to place garden refuse into. Garden refuse is transported to King Cetshwayo Regional Landfill in Empangeni. There is a garden refuse transfer station at the Regional Landfill where people can dispose of their garden refuse. This garden refuse transfer station is situated close to the entrance of the Regional Landfill.	The uMhlathuze Local Municipality collects garden refuse. Additional wheelie bins are purchased to place garden refuse into. Garden refuse is transported to King Cetshwayo Regional Landfill in Empangeni. There is a garden refuse transfer station at the Regional Landfill where people can dispose of their garden refuse. This garden refuse transfer station is situated close to the entrance of the Regional Landfill.	Most of garden waste is decomposed.	Most of garden waste is decomposed.	Skips are used for most of garden waste. However a lot of it is legally dumped.	Most garden waste is decomposed or illegally dumped.

AREAS	URBAN SUBURBS	CBD	RURAL AREAS(TRIBAL)	COMMERCIAL FARMS	TOWNSHIPS	INFORMAL SETTLEMENT
	It should be noted that a lot of garden waste is dumped illegally	It should be noted that a lot of garden waste is dumped illegally.				
<b>Illegal Dumped Waste</b>	Illegal dumping occurs in urban suburbs although at a lesser rate. It is mainly for garden waste. The municipality clean up illegally dumped waste also on weekends. Photographs of illegal disposal are shown below. Grab-trucks are used to remove illegal dumped waste in all areas. See photo below table.	Illegal dumping occurs in CBD. The municipality clean up illegally dumped waste also on weekends. It is mainly for garden waste. Photographs of illegal disposal are shown below:	In rural areas, illegal dumping is mainly for garden waste and builders bubbles. However a lot of garden waste is decomposed.	In rural areas, illegal dumping is mainly for garden waste and builders bubbles. However a lot of garden waste is decomposed. Photographs of illegal disposal are shown below table	Illegal dumping occurs in townships and most of it is for garden refuse and builders' rubbles. The municipality clean up illegally dumped waste also on weekends. Photographs of illegal disposal are shown below table.	Illegal dumping occurs in townships and most of it is for garden refuse and builders' rubbles. The municipality clean up illegally dumped waste also on weekends. Photographs of illegal disposal are shown below the table.
<b>Recyclable Materials</b>	The Municipality is managing a recycling project with the aim of increasing recyclable materials recovered from the suburbs. There is Kerb-recycling project in Meerensee. Reusable waste is put into yellow refuse bags supplied by the municipality. The	Some Commercial businesses are recycling their waste. However, waste of some businesses is taken to Alton Transfer Station for separation.	There is few recycling material in rural areas.	Some few farms take their waste for recycling but most waste is garden and livestock waste.	Mzingazi and eNseleni are the only townships that have facilities for recycling at the moment. However there are plans to search for land in eSikhaleni and Ngwelezane to establish two	Informal settlements do not have facilities for recycling. For those informal settlements which have got access to skips, waste is taken to Alton station for separation.

AREAS	URBAN SUBURBS	CBD	RURAL AREAS(TRIBAL)	COMMERCIAL FARMS	TOWNSHIPS	INFORMAL SETTLEMENT
	<p>refuse bags containing reusable materials are collected weekly on Wednesday and Thursday and delivered to Alton Transfer station for sorting into various usable items by unemployed members in Mandlazini and Mzingazi Community.</p> <p>It has been legalised that an entity can get a licence at a cost of R2000.00 to start recycling.</p>				<p>recycling centre stations.</p> <p>In the meantime, some waste can be taken to Alton Transfer Station for separation.</p>	
<b>Hazardous Waste</b>	<p>UMhlathuze Municipality does not have hazardous waste disposal facilities. The Landfill is for general waste. Hence it does not cater for hazardous waste or oil, electrical waste or Health Care Risk Waste. The site for hazardous waste is in Stanger.</p>	<p>uMhlathuze Municipality does not have hazardous waste disposal facilities. The waste is taken to Stranger.</p>	<p>uMhlathuze Municipality does not have hazardous waste disposal facilities. The waste is taken to Stranger.</p>	<p>uMhlathuze Municipality does not have hazardous waste disposal facilities. The waste is taken to Stranger.</p>	<p>uMhlathuze Municipality does not have hazardous waste disposal facilities. The waste is taken to Stranger.</p>	<p>uMhlathuze Municipality does not have hazardous waste disposal facilities. The waste is taken to Stranger.</p>
<b>Street cleaning waste</b>	<p>Street cleaning is done daily.</p>	<p>Street cleaning is done every day using plastic bags. The bags are left on pavements for collection.</p>	<p>There is no street cleaning facilities.</p>	<p>There is no street cleaning facilities.</p>	<p>Street cleaning is done daily.</p>	<p>There are no street cleaning facilities.</p>



**Table 2.9 Volume of the waste generated for the UMhlathuze Local Municipality December 2018 by type of Waste per month**

MONTH	TYPE OF WASTE								AVERAGE TONS PER DAY
	ANIMAL WASTE	ABATTOIR	BUILDERS RUBBLE	DOMESTIC WASTE	GREEN WASTE	SEWER SLUDGE	TYRES	TOTAL MONTHLY TONNAGES IN KG	
January	0	0	155 200	3 488 040	2 592 960	0	0	6 236 200	201.2
February	0	4 120	36 420	2 545 600	2 596 600	0	0	5 182 740	185.1
March	133 620	0	47 400	121 700	3 783 360	0	0	4 086 080	136.2
April	140	0	19 420	3 447 100	288 200	2 340	0	3 757 200	125.2
May	980	0	67 660	3 703 820	347 100	2 960	0	4 122 520	133.0
June	40	0	43 000	3 034 040	437 140	0	0	3 514 180	117.1
July	20	0	53 900	3 413 800	309 480	0	0	3 777 200	121.8
August	220	0	23 580	2 685 420	658 040	2 200	0	3 369 460	108.7
September	20	0	140 240	3 321 020	392 880	0	0	3 854 160	128.5
October	140	860	27 520	3 664 980	425 660	0	0	4 119 160	132.9
November	160	0	101 760	3 546 720	454 780	2 440	0	4 105 860	136.9
December	0	0	4 500	4 113 780	575 700	0	0	4 693 980	151.4
<b>TOTALS</b>	<b>135 340</b>	<b>4 980</b>	<b>720 600</b>	<b>37 086 020</b>	<b>12 861 900</b>	<b>9 940</b>	<b>0</b>	<b>50 818 740</b>	<b>1639.3</b>

**Table 2.10 The quantities of waste disposed and also recycled by the Municipality in 2018:**

<b>GENERAL WASTE RECORDS</b>	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUNE</b>	<b>JULY</b>	<b>AUG</b>	<b>SEPT</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>
Quantities Disposed by Municipality	6 236 200	5 182 740	4 086 080	3 757 200	4 122 520	3 514 180	3 777 200	3 369 460	3 854 160	4 119 160	4 105 860	4 693 980
Waste Quantities Recycled	1 560 488	1 555 213	1 474 067	1 336 102	1 452 828	1 267 728	1 305 273	1 362 994	1 183 049	1 469 726	1 327 728	1 262 137
<b>% Waste Minimization</b>	<b>25.02</b>	<b>30.01</b>	<b>20.00</b>	<b>35.56</b>	<b>35.24</b>	<b>36.07</b>	<b>34.56</b>	<b>40.45</b>	<b>30.70</b>	<b>35.68</b>	<b>32.34</b>	<b>26.89</b>
<b>Annual Average</b>												<b>28.41%</b>

### 2.9.3 COLLECTION OF WASTE BY DAYS AND COLLECTION POINTS

ESIKHAWINI			
Day	Number of vehicles used	Collection Routes	Collection Points
Monday	6 – For trolley bin collection 1 – For skips collection  +/-3 Compactor trucks at workshop/week	Part of Section H2; Mandlankala Skips; Mpembeni Skips; Esikhaleni Skips; Vulindlela Skips; Unizulu Skips; Gobandlovu Skips; J and H Section Bags; Vulindlela Bags	3150
Tuesday		Part of Section H2; Esikhaleni Skips; Mkhobosa Skips; Chibini Skips; Port Dunford Skips; Iniwe Skips; Unizulu Skips; All schools ; All hostels; J and H Section Bags; Esikhaleni Mall Bags; Vulindlela Shopping Centre Bags; Khandisa Road Bags.	400
Wednesday		Part of Section J1; Part of Section J2; Mpembeni Skips; Mkhobosa Skips; Esikhaleni Section H Skips; Vulindlela Skips; J and H Section Bags; Esikhaleni Mall Bags; Vulindlela Bags; Insezi Bags; Police Station Bags.	2871
Thursday		Dlangezwa ; Ntuze Clinic; Part of Section J2; Dlamvuzo; Mkhobosa Skips; Esikhaleni Section H Skips; Vulindlela Skips; Mandlankala Skips; Emadukwini Skips; Unizulu Skips; Iniwe Skips; All schools; All hostels; J and H Section Bags; Esikhaleni Mall Bags; Vulindlela Bags.	389
Friday		Part of Section H2; Part of Section H1; Esikhaleni Skips; Unizulu Skips; Vulindlela schools; Complex Bags; Esikhaleni Mall Bags; Vulindlela Bags.	750

RICHARDS BAY			
Day	Number of vehicles used	Collection Routes	Collection Points
Monday	6 – For trolley bin collection 1 – For skips collection  +/-6 Compactor trucks at workshop/week	Residential Bins: Birdwood, Arboretum, Aquadene, Brackenhams, Insezi, Meerensee 1 and 2, Veldenvlei, Wildenweide. Commercial Skips and Bins: CBD, Taxi Rank, RBM, RBCT, NCT, ZCBF, Bell, Arboretum Spar, Mondi, South 32, Small Craft Harbour, Silvercel, Portnet, All Hotels, Meerensee Shopping Centre, Country Club, Gamula Flats, Alkastrand, Ski-boat Club, Foskor, Gecko Inn, Bay Lodge, YMCA, Dollar Drive, Paseta Parade, Rupee Rif, Airport, The Ridge, Treetop B&B, Green Africa, Meerensee Boat Club.	3357
Tuesday		Residential Bins: CBD, Brackenhams, Aquadene, Enseleni. Commercial Skips and Bins: CBD, Alton, Aquadene, Brackenhams, Insezi, Meerensee Shopping Centre, Premier Hotel.	3991
Wednesday		Residential Bins: CBD, Tuzi Gazi Village, Waterfront, Meerensee 5 and 6, Essenwood Flats, Davidson Lane Flats. Commercial Skips and Bins: CBD, Bell, Mondi, All Hotels, Country Club, Meerensee Shopping Centre, Airport, Bay Lodge, YMCA, Alkastrand, Ski-boat Club, South 32, Foskor, Small Craft Harbour, Scribante, ZCBF, Arboretum Spar, Taxi Rank.	3323
Thursday		Residential Bins: CBD, Arboretum, Birdwood, Meerensee 1 and 2, Gamula Flats. Commercial Skips and Bins: CBD, RBM, RBCT, NCT, Alton, Portnet, Silvercel, Mondi, Premier Hotel, Meerensee Shopping Centre, RBM Ponds, Bell, Meerensee Boat Club, Dollar Drive, Paseta Parade, Rupee Rif.	3264
Friday		Residential Bins: CBD, Birdwood, Arboretum, Gecko Inn, Bay Lodge, Meerensee 1 and 2, Aquadene, Brackenhams, Insezi. Commercial Skips and Bins: CBD, Taxi Rank, Arboretum Spar, All Hotels, Small Craft Harbour, Alkastrand, Ski-boat Club, Meerensee Shopping Centre, Country Club, Alton, Mondi, South 32, Foskor.	3317

EMPANGENI			
Day	Number of vehicles used	Collection Routes	Collection Points
Monday	6 – For trolley bin collection 1 – For skips collection	CBD – Commercial Skips and Bins; Thanduyise Highway; Slovo; Bomvini; Ngwelezane – Bhubesi Rd and Half of Section B; Umhlathuze Village Phase 2; Hillview Village; Noordsig Park.	2374
Tuesday	+/-4 Compactor trucks at workshop/week	CBD – Commercial Skips and Bins; Umhlathuze Village Skips; Ngwelezane Skips; Grantham Park; Tanner Road to Inyanga Motors; Ngwelezane Road, Plantina and Copper Drive.	2170
Wednesday		CBD – Commercial Skips and Bins; Nqutshini Reserve Skips; Ndabayakhe Reserve Skips; Iniwe Reserve Skips; Zidedele Village ; Felixton; Richem; Kildare; uMhlathuze Village Phase 1.	2916
Thursday		CBD – Commercial Skips and Bins; Umhlathuze Village Skips; Ngwelezane Skips; Ngwelezane A Section (Jabulani); Ngwelezane B Section (Phesheya School); Khuleka Industrial Park; Ngwelezane Road and Tanner Road; Nyala Park.	2193
Friday		CBD – Commercial Skips and Bins; Matshana Reserve Skips; Dondolo Reserve Skips; Mevamlhophe Reserve Skips.	2193

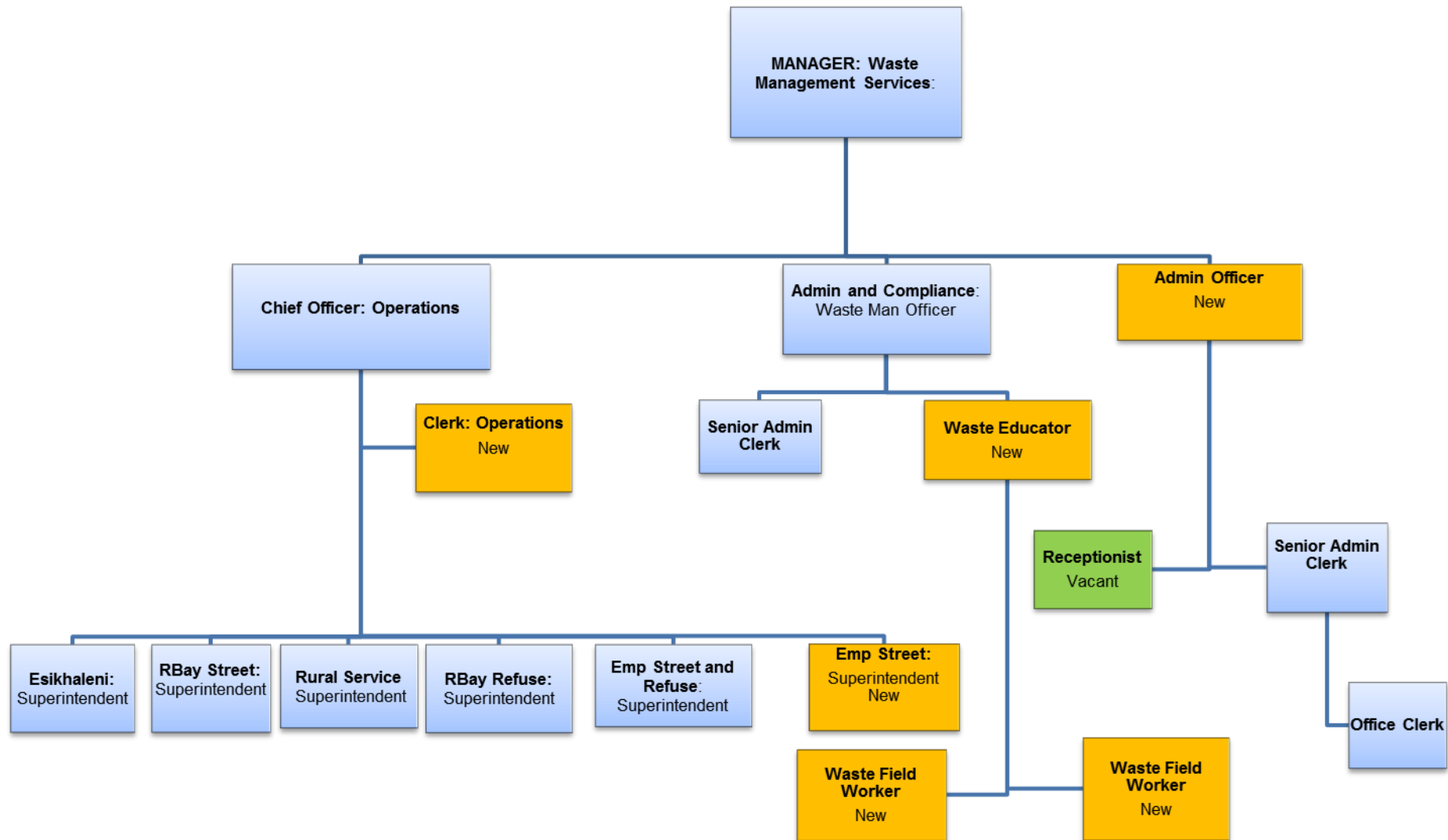
## **2.10 WASTE MANAGEMENT SYSTEMS**

### **2.10.1 WASTE MANAGEMENT ORGANISATIONAL STRUCTURE**

The Waste Management Section is now divided into two divisions:

- Waste Management: Operations
- Waste Management: Administration and Compliance

The Proposed structure of Waste Management Section of uMhlathuze Local Municipality is as follows:



## 2.10.2 FLEET FOR WASTE MANAGEMENT

### 2.10.2.1 FLEET

The vehicles utilised by the uMhlathuze Municipality for waste management can be referred to in Appendix B.

There are challenges of fleet maintenance which often affect the operations as repairs are not attended to timelessly. Besides, there is no arrangement to standby vehicles in case of break down. Based on the assessment, it has been discovered that the minimum amount of vehicles used to manage waste could have a negative impact on the mechanical side of the equipment.

### 2.10.3 EQUIPMENT / MATERIAL

Type of waste	Equipment
Domestic Waste	Refuse bags, Wheelie bins, Skips, Refuse Trucks, Skip Loaders
Commercial waste	Skips, Street bins, Refuse trucks, Pole bins, Wheelie bins
Industrial waste	Skips, Refuse trucks, Grab trucks, Wheelie bins
Institutions waste eg. Hotels, Bread & Breakfast, Shopping malls, Community halls, Schools, Industries, Hospitals, The Harbour, Banks, Diesel depot, Taxi ranks	Skips, Wheelie bins, Refuse trucks, Refuse bags, Pole bins
Illegal waste	Refuse bags, Grab trucks, Refuse trucks
Garden waste	Refuse bags, Refuse trucks
Street waste	Refuse bags, Refuse trucks, Pole bins

See the list of skips in Appendix C



Street bins in Alton



#### 2.10.4 LANDFILLS AND TRANSFER STATIONS

In terms of ownership of equipment, the Regional Landfill at Empangeni acquires the equipment through tendering or hiring.

A weighbridge which records the weight of the waste on a daily basis is also installed at landfill. This helps in keeping records of waste and also in monitoring targets set by the municipality in minimising the amount of waste generated.

See photos of the Regional Landfill:



Regional Landfill



Regional landfill weighbridge

The transfer station at Alton is also used as a recycle centre. A private company, Wild Lands Conservation Trust was appointed through tendering process. Wild Lands collect recyclable waste from the communities while other recyclers transport their own product to the station. Wild Lands has employed 30 people in different categories. There are 6 Permanent and 6 Temporal on site personnel, 6 Collection team also Permanent, 7 Facilitators and 3 Assistant facilitators and 2 on Data management and coordination. This station separate waste in the following categories:

- ❖ Mixed Paper
- ❖ K4
- ❖ PET
- ❖ HDPE
- ❖ Magazine
- ❖ White Paper
- ❖ News Paper
- ❖ Plastics
- ❖ Cans
- ❖ Tetrapak
- ❖ Glass/Bottle
- ❖ Tires

There are 495 “Wastepreneurs” around uMhlathuze municipal area involved in the project each working on individual bases.



Recycle Bins at Alton station



Glass to be recycled in Alton Station



Scale used to measure recycled waste

#### 2.10.5 WASTE MINIMISATION

In addition to Alton Material Recovery Facility and Transfer Station, the Municipality has further developed two Material Recovery Facilities, as per the IWMP. These are

- ❖ eNseleni Material Recovery Facility
- ❖ and
- ❖ Mzingazi Material Recovery Facility.

There is also two drop off points used as mini Material Recovery facilities (MRF), and they are in Meerensee Suburb and Essenwood.

To feed these sites, waste is separated from the source in some suburbs and recyclables are placed in yellow bags, while general waste is placed in trolley bins.

On the day of removal, recyclables placed in yellow bags are removed by bush truck to material recovery facility, while general contaminated waste is removed by compactor truck to landfill site.

Garden refuse is also used for the creation of composite sites especially in rural tribal areas and farms.

## 2.10.6 FINANCE

The main challenge is that there are areas whereby rates and tariffs cannot be imposed especially in rural areas while waste services are being rendered to these communities. This situation affects the financial status of the municipality as well as effective service delivery.

## SECTION 3

### 3. TRENDS AND FORECASTS

Informed decisions and effective planning are based on sound data and inputs. The following demographic, social and economic data; and waste generation were taken into consideration.

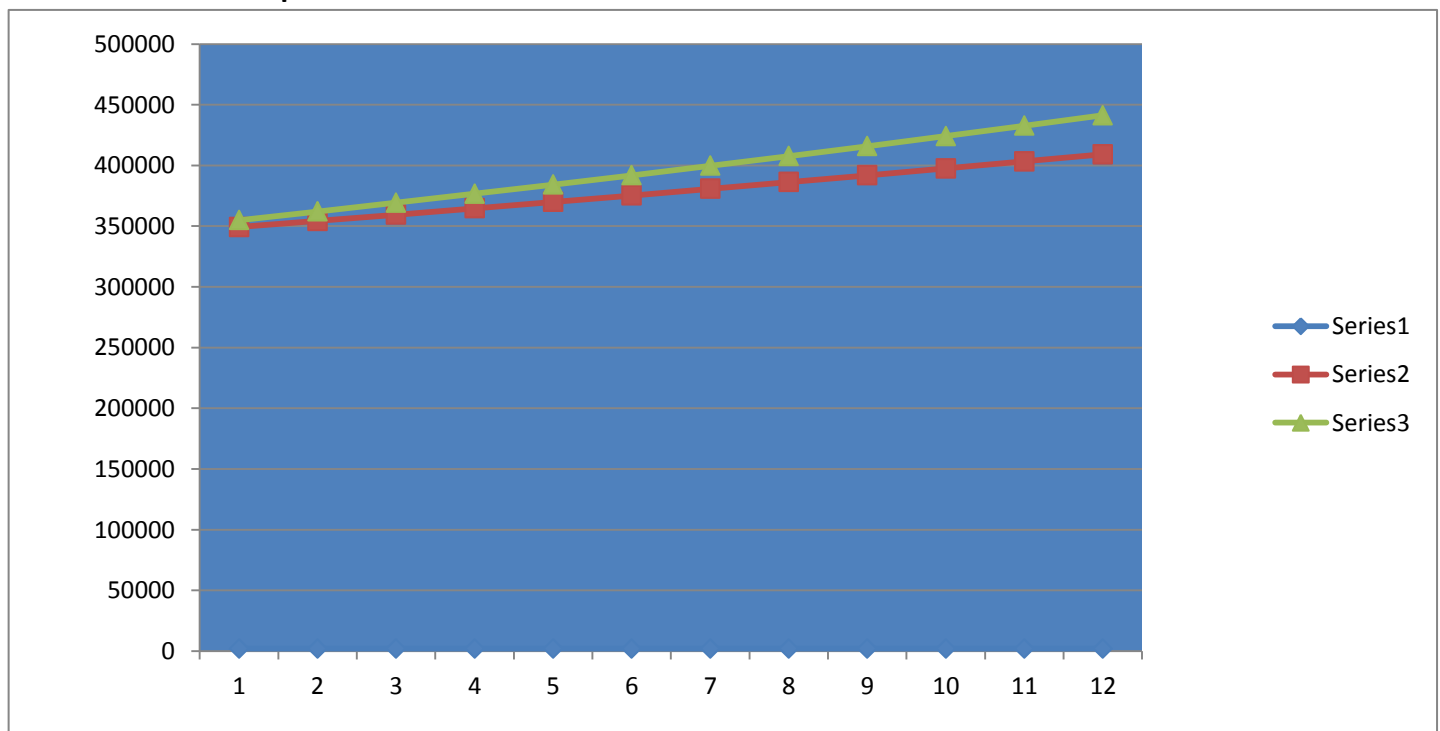
#### 3.1. POPULATION PROJECTIONS

The population within the uMhlathuze Local Municipality was 334 459 according to 2011 population census with a growth rate of 1,45%. Assuming a closed population, a growth of 1.45% per annum will be assumed. Another range of projections assuming a population growth of 2.0% per annum will be generated assuming that at the rate of growth of the City of uMhlathuze, many people will be seeking work in this area.

**Table 3.1 THE POPULATION PROJECTIONS**

Growth Rate	2011	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1.45%	334459	349218	354281	359418	364630	369917	375281	380722	386243	391846	397527	403291	409139
2.0%	334459	354930	362029	369269	376654	384187	391870	399709	407703	415857	424174	432657	441312

**Graph 3.1**



### 3.2 ECONOMIC GROWTH

According to the latest indicators, the seasonally adjusted estimate of the real GDP at market prices for the last two quarters in 2014 were 0.5%(adjusted from 0.6%) and in the second quarter and 1.45% in the third quarter for South Africa as a whole. The negative growth rates translate into a decrease in waste generation growth rate, and the positive growth rates translate into an increase in waste generation growth rate. Hence the trend of the 2014 indicators could indicate increase in the waste generation growth rate for South Africa. However, the increase of the population of higher income groups could also result in an increase of waste generation growth rate. The general trend is for waste generation to increase with a dramatic economic growth or increase in household income. However, there is no direct correlation as many variables could occur.

For uMhlathuze local municipality, in terms of average household income; in 2001 the average was R59 479, 00 as compared to R121 177, 00 in 2011.(2001 and 2011 population census, Statistics South Africa)This trend in household income points to increase in waste generation growth rate and hence the focus on waste disposal ,waste minimisation and recycling.

### 3.3 WASTE GENERATED IN 2017/2018

The waste generation figures in 2018 are given below in Table 5 per quarter and per day. The figures for 2017 are our base year figures on which projections will be based and 2011 population figures are our base year for population projections.

Table 5.Volume of the waste generated for the uMhlathuze Local Municipality in 2014 by type of Waste per month

**Table 3.2 Waste generated in 2018**

MONTH	TOTAL MONTHLY TONNAGES IN KG	AVERAGE TONS PER DAY
January	6 236 200	201.2
February	5 182 740	185.1
March	4 086 080	136.2
April	3 757 200	125.2
May	4 122 520	133.0
June	3 514 180	117.1
July	3 777 200	121.8
August	3 369 460	108.7
September	3 854 160	128.5
October	4 119 160	132.9
November	4 105 860	136.9
December	4 693 980	151.4
<b>TOTAL</b>	<b>50 818 740</b>	<b>1639.3</b>

### 3.4 WASTE GENERATION FORECASTS ESTIMATES

Waste generation growth estimates should take into consideration the economic growth, population wealth as well as the population growth rate. Hence a zero population size increase but a fast growing economy will result in a waste generation growth and vice versa.

The estimated waste generation models will give a prediction until the year 2025. Record keeping of tonnages of waste being disposed of at the King Cetshwayo Regional landfill is done as it is equipped with weighbridge to record accurate records of waste collected and disposed of.

According to the records, the amount of waste generated within the municipal area in 2017 is 45,548,7981 kgs .This includes all types of waste as in table 3.3 Hence the average amount generated per month in 2017 was 3728344 kg .The average waste generated per day was 120 913 per day. Hence the average waste generated per person per day in 2017 is 0.35 kg.

The growth rate used was applied using per Capita Waste Generation Figures as defined in the Minimum Requirements Documents.

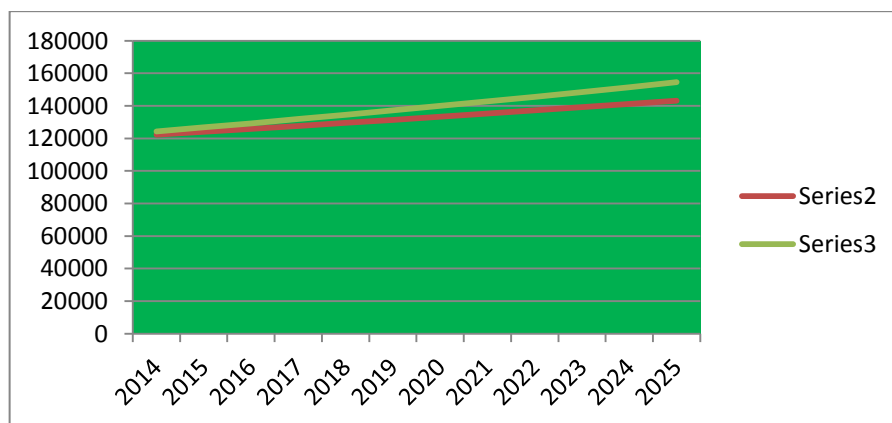
**Table 3.3(a) Estimated Waste Generation for uMhlathuze local Municipality according to Population growth rate of 1.45% per year.**

Waste Generation Rate per day in kgs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
0.35	120913	123998	125796	127621	129471	131348	133253	135185	137146	139134	141152	143199
Forecast of Waste generated per year in tons	43529	45259	45916	46582	472569	47942	48637	49342	50058	50784	51520	52268

**Table 3.3(b) Estimated Waste Generation for uMhlathuze local Municipality according to Population growth rate of 2% per year.**

Waste Generation Rate per day in kgs	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
0.35	120913	1242255	126710	131828	134465	137154	139898	142696	145550	148461	151430	154459
Forecast of Waste generated per year in tons	43529	45342	46249	48117	49078	50061	51062	52084	53126	54188	55308	56377

**Graph 3.2**





Assuming a population growth rate of 1.45%, the projected annual waste generation in 2025 will be 52 268 tons. Assuming a higher population growth rate of 2%, the projected annual waste generation in 2025 will be 56 377 tons. Gaps and needs will be analysed in the next chapter to improve the systems and infrastructure of Waste Management to meet the demand in order to fulfil the service delivery obligations of the Municipality as far as Waste Management is concerned.

## SECTION 4

### 4.1 GAPS, NEEDS AND RECOMMENDATIONS WITH ALTERNATIVES

Table 4.1

GAPS AND NEEDS				
No	ISSUE	GAPS AND NEEDS	RECOMMENDATIONS/ALTERNATIVES	TIMEFRAME
1	By laws	<ul style="list-style-type: none"> <li>Illegal dumping by-laws to be re-enforced</li> <li>Other By-laws out-dated</li> </ul>	<ul style="list-style-type: none"> <li>Re-enforcement of Illegal dumping by-laws</li> <li>Review out-dated by-laws and be approved</li> </ul>	2019/2020
2	Human Resource	<ul style="list-style-type: none"> <li>The Waste Management section needs to employ the following personnel for effective management:</li> <li>Employ Administrator</li> <li>EPWP personnel support as general workers on trucks and they are on contract basis.</li> </ul>	<p>Recommendation to recruit needed staff</p> <ul style="list-style-type: none"> <li>Employ Administrator</li> <li>Employ at least 83 general workers for refuse trucks and litter picking</li> <li>Put in place an additional work shift to focus on areas which are congested during the day e.g. Taxi ranks</li> <li>Devise a system which will cater for eradication of backlog, particular in rural areas.</li> <li>Consider outsourcing the service in rural areas, use of EPWP or co-operatives.</li> </ul>	<p>2017/2018</p> <p>To</p> <p>2019/2020</p>
3	Finance	<ul style="list-style-type: none"> <li>The percentage of residents who pay rates is very low and some residents are in areas which are not supposed to pay rates.</li> <li>This is affecting financial situation of Waste Management.</li> </ul>	<ul style="list-style-type: none"> <li>The uMhlathuze Local Municipality could review the tariff rates</li> <li>Financial controls should be put in place</li> <li>Businesses, schools, government buildings should pay for services.</li> <li>Rural communities who can afford service be billed.</li> <li>Council investigates the proper and affordable system for charging for refuse in rural areas, in general, specifically those who do not fall under indigent.</li> </ul>	2018/2019
5	Waste collection and service delivery	<ul style="list-style-type: none"> <li>Not enough fleet</li> <li>No coordinates to identify where some Skips are located</li> </ul>	<ul style="list-style-type: none"> <li>Buying six refuse trucks</li> <li>Ensure fleet is in good standard at all times.</li> </ul>	2018/2019

6	Waste minimisation and recycling	<ul style="list-style-type: none"> <li>• Lack of education and awareness</li> <li>• Need for more accessible small scale recycling centres</li> <li>• Reduce waste in order to reduce green gases</li> <li>• Coordination between waste management, environmental and renewable energy in terms of integrated strategic plans</li> </ul>	<ul style="list-style-type: none"> <li>• More education and campaigns about recycling through workshops, ward committees and schools through Safe and Clean South Africa – Lend a Hand Campaign participants from National Department of Environmental Affairs</li> <li>• Open more centres for drop offs and recycling centres</li> <li>• Apply climate change strategies</li> <li>• Waste minimisation campaigns and strategies to address climate change</li> <li>• Integrated strategic planning</li> <li>• Engage in a study looking at alternative treatment of waste, rather than landfilling</li> <li>• It be noted that the second phase of the feasibility study will be started again and it has been funded by German Government through Department of Environmental Affairs.</li> <li>• Once study is finalized it will then be tabled to Council and be used as an annexure to IWMP.</li> </ul>	2018/2019  To  2021/2022
7	Waste Management awareness campaigns	<ul style="list-style-type: none"> <li>• Lack of awareness campaigns on waste management issues</li> </ul>	<ul style="list-style-type: none"> <li>• Educate communities through ward committees</li> </ul>	On Going
8	Illegal dumping	<ul style="list-style-type: none"> <li>• Illegal dumping is reported to happen in various areas both in urban and rural areas and it is one of the greatest concerns</li> </ul>	<ul style="list-style-type: none"> <li>• By law on illegal dumping</li> <li>• Education and campaigns</li> <li>• Toll free number where community can report illegal dumping</li> <li>• Engage scouts/peace officers to reinforce the law on illegal dumping</li> <li>• Apply Council reward system policy where a person is given a reward by taking a photo and reporting illegal dumping</li> <li>• Install a 24 hour camera to monitor illegal dumping</li> <li>• There should be a section for illegal dumping</li> <li>• Council forms a team that will focus on illegal dumping.</li> </ul>	2018/2019  To  2020/2021
<b>No</b>	<b>ISSUE</b>	<b>GAPS AND NEEDS</b>	<b>RECOMMENDATIONS/ALTERNATIVES</b>	



9	Management of landfills	<ul style="list-style-type: none"> <li>The Regional Landfill does not have its own equipment but depends on hiring.</li> <li>It has poor compaction rate so space is reduced drastically</li> <li>It does not cater for hazardous waste and Health Care Risk Waste</li> <li>Old Alton landfill was not properly closed. Procedures and processes were not followed</li> </ul>	<ul style="list-style-type: none"> <li>It is recommended that King Cetshwayo should hire or buy equipment</li> <li>A landfill which caters for Health Care Risk Waste and hazardous waste should be put in place</li> <li>A proper landfill closure to be conducted to avoid dangerous gas emissions</li> </ul>	District Municipality
10	Waste information system	<ul style="list-style-type: none"> <li>To update and maintain the Waste Information System</li> </ul>	<ul style="list-style-type: none"> <li>Continuously to update with new technology</li> <li>To continuously train the staff maintaining the Waste Information system.</li> </ul>	On Going
11	Rural area waste	<ul style="list-style-type: none"> <li>Few skips in rural areas</li> </ul>	<ul style="list-style-type: none"> <li>More skips should be distributed in rural areas.</li> <li>Purchase skip loaders and skip trailers</li> </ul>	2018/2019 To 2021/2022
12	Informal settlement waste	<ul style="list-style-type: none"> <li>Some informal settlement do not have skips</li> </ul>	<ul style="list-style-type: none"> <li>The Waste Management section should provide more skips</li> </ul>	2018/2019 To 2021/2022
13	Building Rubbles	<ul style="list-style-type: none"> <li>Most rubbles in townships and informal settlements are illegally dumped</li> </ul>	<ul style="list-style-type: none"> <li>By –law should be put in place for builders to reduce illegal dumping</li> </ul>	2017/2018
14	Industrial Waste	<ul style="list-style-type: none"> <li>Some industries are not recycling sufficiently</li> </ul>	<ul style="list-style-type: none"> <li>Industries should be motivated further on recycling.</li> </ul>	Ongoing
15	Garden waste	<ul style="list-style-type: none"> <li>Some garden waste are illegally dumped</li> </ul>	<ul style="list-style-type: none"> <li>Different measures according to type of settlement should be put in place to minimize illegal dumping and also minimize waste.</li> </ul>	2018/2019 To 2021/2022
16	Fleet	<ul style="list-style-type: none"> <li>Poor Maintenance of vehicles</li> <li>No mitigation plans if vehicles breakdown</li> <li>Not enough vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Waste Management section should own their vehicles and monitor their service</li> <li>Waste Management section should be in a position to hire a vehicle in case of a breakage of its vehicle.</li> <li>To buy 6 trucks; 1 TLB loader and 2 Transporter with a Minibus as a better recommendation</li> </ul>	2017/2018  To  2020/2021

## 5. GOALS AND OBJECTIVES

One of the key challenges of the uMhlathuze Local Municipality is limited access to basic household community services which include waste removal, water, electricity, sanitation and social amenities. These were the services identified by communities according to 2018/2019 IDP.

One of the long term visions of the Municipality is to improve quality of Citizens' health and commitment to sustainable environment. Efficient and effective waste management plays a big part in the success of those two long term visions.

These visions are realigned with the Millennium Development Goals which is Environmental sustainability, the national outcomes of Environmental sustainability and Safe and Healthy living environment.

These visions are also realigned with the provincial key priorities which are Health and Environmental Protection. While also identified in Back to Basics Programme.

In line with the gaps and needs identified, Goals and Objectives will be structured according to government's strategy of waste minimisation. The official hierarchy adopted by international body on Waste Management Strategy is as follows:

GOALS AND OBJECTIVES		
Cleaner Production	Prevention	
	Minimisation	
Recycling	Re-use	
	Recovery	
	Composting	
Treatment	Physical	
	Chemical	
	Destruction	
Disposal	Landfill	

## 5.1 DISPOSAL INFRASTRUCTURE DEVELOPMENT

New infrastructure was identified and needed legalisation.

## 5.2 WASTE COLLECTION INFRASTRUCTURE

Shortage of fleet, skips in rural areas, recycling centres, transfer stations and receptacle placement were identified. Improvement in managing the Regional Landfill was also discussed. Any needed changes in route planning were also identified.

## 5.3 INSTITUTIONAL CAPACITY AND HUMAN RESOURCE

The improvement of the IWMP organisation structure was discussed and alternative improvements were identified.

## 5.4 FINANCIAL RESOURCES

Any financial requirements were identified and some alternatives for funding.

## 5.5 DISSEMINATION OF INFORMATION

The improvements of the Waste Information System and Record keeping were identified

## **5.6 ILLEGAL ACTIVITIES**

This involves identification of illegal dumping sites, penalties, various interventions to address illegal dumping, timely clean up and campaigns on education on illegal dumping. The need for the By-Law on illegal dumping was realised

## **5.7 WASTE MINIMISATION**

This involves identifying waste minimisation strategies e.g. recycling, setting up collection points, decomposition and awareness and education campaigns. To re-align the IWMP with Climate Change Strategy.

This City of uMhlathuze is currently doing a feasibility study on Alternative Treatment of Waste, as part of Waste Diversion of Waste away from Landfill site.

The preliminary report is already available and the second phase of the study will initiate in 2019. This should give clear way forward and time frames in terms of waste minimisation.

Budget for implementation of the plan will be reflected in a report which once submitted by Service Provider will then be tabled to Council.

## 5.8 THE GOALS AND OBJECTIVES ARE AS FOLLOWS:

### DEVELOPMENT DISPOSAL INFRASTRUCTURE

#### GOAL

Develop and improve infrastructure realigned to municipal needs and compliance with legislation

#### OBJECTIVES

- To improve service delivery

### WASTE COLLECTION INFRASTRUCTURE

#### GOAL

To effectively manage Waste collection

#### OBJECTIVES

- To extend services to rural areas
- To effectively maintain the fleet and replace old ones
- To standardise Collection

### INSTITUTIONAL CAPACITY AND HUMAN RESOURCE

#### GOAL

To effectively and efficiently provide quality Waste Management Services

#### OBJECTIVES

- To recruit General Workers for trucks
- To recruit Administration officer

### FINANCIAL RESOURCES

#### GOAL

Provide cost effective but quality waste management services

#### OBJECTIVES

- To ensure that current tariff standards take into account the current financial situation of the municipality
- To improve payment of Service tariffs
- To source for funding in order to cover all rural areas

## DISSEMINATION OF INFORMATION AND COMMUNICATION

### GOAL

Effective information sharing and educated community on issues of Waste Management

### OBJECTIVES

- To effectively maintain of a comprehensive electronic Waste Management system (King Cetshwayo District manages the Waste Information System)
- To improve information sharing for effective informed decision making
- To keep comprehensive records
- To improve community awareness and Education
- To participate in International, national, provincial and Inter municipal Waste Information Workshops

## MANAGEMENT OF ILLEGAL ACTIVITIES

### GOAL

To prevent illegal activities

### OBJECTIVE

- To develop illegal waste management strategy
- To incorporate a section for illegal dumping in Waste Management structure.
- To revise and implement municipal by-laws to address issues of illegal waste depositing
- To Improve removal of illegal dumped waste
- To develop By law on illegal dumping
- To set up education and awareness campaigns through various channels
- To set up Toll free number where community can report illegal dumping
- To engage scouts/peace officers to reinforce the law on illegal dumping
- To apply Council reward system policy where a person is given a reward by taking a photo and reporting illegal dumping
- To Install a 24 hour camera to monitor illegal dumping

## WASTE MINIMISATION

### GOAL

To decrease waste deposited on landfills and collected in skips and transfer stations

### OBJECTIVES

- To educate communities on recycling and waste minimization
- To facilitate recycling activities
- To support companies which are starting recycling businesses especially the youth
- To develop garden refuse strategy
- To reduce waste in order to address Climate Change

## SECTION 6

### 6. IMPLEMENTATION PLAN: REPORTING ON ACHIEVEMENTS AS PER 2<sup>ND</sup> IWMP REVIEW 2019

**TABLE 6.1 IMPLEMENTATION PLAN AND BUDGET FOR: 2015/2016; 2016/2017, 2017/2018, 2018/2019, 2019/2020**

FOCUS AREA	GOAL	OBJECTIVES	ACTIONS/ACTIVITIES	TARGETS	SHORT TERM ACHIEVEMENTS AS PER 2 <sup>ND</sup> IWMP REVIEW 2018/2019			MIDTERM GOALS 2021/2025	LONG TERM 2026/2030 GOALS
							YEARS		
Transfer stations	Develop and improve infrastructure realigned to municipal needs and compliance with Legislation	<ul style="list-style-type: none"> <li>To improve service delivery</li> </ul>	<ul style="list-style-type: none"> <li>To identify land for a transfer station in Ngwelezane Wards</li> </ul>	Extension of service delivery to at least 80% of residents by 2020.	Ngwelezane Material Recovery Facility site is still not available.			Assess operation of transfer stations and Upgrade where necessary	Assess operation of transfer stations and Upgrade where necessary
			<ul style="list-style-type: none"> <li>To identify land for a transfer station in Esikhaleni Wards</li> </ul>		Esikhaleni Material Recovery facility will not be built at this stage due to lack of land.			Assess operation of transfer stations and Upgrade where necessary	Assess operation of transfer stations and Upgrade where necessary
			<ul style="list-style-type: none"> <li>Alton Transfer station capping in Ward 26</li> </ul>		Alton Material Recovery Facility has been established, and is operating. It assists towards diversion of waste away from landfill site, while at the same time provides for economic empowerment. This site has officially been closed as landfill site, but operating as both transfer station and material recovery facility.			Assess operation of Alton transfer station and Upgrade where necessary	Assess operation of Alton transfer station and Upgrade where necessary
Extension of waste collection in rural areas	To effectively manage Waste collection	<ul style="list-style-type: none"> <li>To extend services to rural areas</li> <li>To effectively maintain the fleet and replace old ones</li> </ul>	<ul style="list-style-type: none"> <li>To buy 30 skips for all Wards</li> </ul>	To extend waste collection in all rural areas by 100% by 2020	The percentage was sitting at 82% for City of uMhlathuze Municipality, but taking over of Ntambanana has dropped the number of those with access to 68%. Section still has to work hard and provide resources to decrease backlog.			Assess operational needs and new developments and purchase more skips	Reassess the waste collection strategy and develop new strategies to improve service while taking into

		<ul style="list-style-type: none"> <li>To standardise Collection</li> </ul>	<ul style="list-style-type: none"> <li>To buy 2 skip loader and 3 skip trailers</li> </ul>		Skip Loader to be prioritised in 2020/2021 budget	Assess operational needs and new developments and purchase more skips	consideration population growth, climate change etc
			<ul style="list-style-type: none"> <li>To buy refuse trucks for all wards</li> <li>To buy 6 trucks</li> <li>To buy 1 transporter</li> </ul>		<p>6 Compactor Refuse truck to be procured and will be delivered by December 2019.</p> <p>2 transporters procured and will be delivered by June 2019.</p>	Assess operational needs and new developments and purchase more skips	Assess operational needs and new developments and purchase more skips
Personnel	To effectively and efficiently provide quality Waste Management Services	<ul style="list-style-type: none"> <li>To address human resource needs</li> </ul>	<ul style="list-style-type: none"> <li>To recruit 83 general workers over 3 years</li> <li>To recruit one Administrative officer</li> <li>To recruit one Marketing officer for education and awareness campaigns on waste management</li> </ul>	To recruit 100% of all recommended personnel by 2016/17	<p>Although 83 posts have been approved, but these are not funded at this stage.</p> <p>Still not finalised, working on the matter.</p> <p>Marketing of the section is done by Waste Management Officer. Post is filled and working.</p>	Continuously evaluate human resource needs as compared to new methods of waste management	Continuously evaluate human resource needs as compared to new methods of waste management
			<ul style="list-style-type: none"> <li>To train staff to ensure knowledge of current waste management legislation and current approaches to waste management</li> </ul>		Training is on-going, particular EPWP.	Continuous training on waste management issues	Continuous training on waste management issues
Sound budgeting and	Provide cost effective but	<ul style="list-style-type: none"> <li>To ensure that current tariff</li> </ul>	<ul style="list-style-type: none"> <li>Cost effective tariffs to be implemented</li> </ul>	To ensure that at least 90% of the	Tariffs for Waste Management are reviewed every year, together with budgeting process.	Continuous evaluation of	Continuous evaluation of

financial management for waste management	quality waste management services	standards take into account the current financial situation of the municipality <ul style="list-style-type: none"> <li>To improve payment of Service tariffs</li> <li>To ensure that waste services are sustainably financed</li> </ul>	<ul style="list-style-type: none"> <li>Putting in place measures to ensure that all households pay their rates as required</li> <li>Full cost accounting for waste services <ul style="list-style-type: none"> <li>Ensure that financial policies are adhered too</li> </ul> </li> <li>Ensure that Waste Management addresses all Audit queries</li> </ul>	budget is catered for and to achieve 100% clean audits	More work still needs to be done in terms of costing for refuse removal service.	financial resources and current Municipal Financial Policies	financial resources and current Municipal Financial Policies
Maintenance of a comprehensive electronic Waste Information System	Effective information sharing and educated community on issues of Waste Management	<ul style="list-style-type: none"> <li>To effectively maintain of a comprehensive electronic Waste Management system (King Cetshwayo District manages the Waste Information System).</li> </ul>	<ul style="list-style-type: none"> <li>To update Waste Information System</li> <li>To organise educational workshops and campaign awareness</li> <li>To attend training workshops on Waste Management and Climate change</li> <li>Training of at least two employees on Waste Information system</li> </ul>		Waste Information system is updated by District Municipality, which owns the landfill site.  This is on-going.	Accessible, Effective and updated record keeping as per current technologies	Accessible, Effective and updated record keeping as per current technologies
Curb drastically illegal Waste activities in all types of settlements	To prevent illegal activities	<ul style="list-style-type: none"> <li>To Improve removal of illegal dumped waste</li> </ul>	<ul style="list-style-type: none"> <li>Conduct Customer perspective survey on illegal dumping and Develop Illegal Waste Management Strategy</li> </ul>	The target is 100% legal dumping in all types of settlement by 2021.	Eradication of illegal dumping plan has been approved by Council and is being implemented. Each role play had his/her role clarified.	Continuous compliance as required	Reassess and develop new strategic plan for curbing illegal waste



			<ul style="list-style-type: none"> <li>More signage required for illegal dumping areas</li> </ul>		Signs are being procured and placed on sites. More signs to be procured.		
			<ul style="list-style-type: none"> <li>To revise and implement municipal by-laws to address issues of illegal waste depositing</li> </ul>		Bylaw has been reviewed, awaiting approval.		
			<ul style="list-style-type: none"> <li>To set up education and awareness campaigns through various channels</li> </ul>	Campaigns are already taking place. Clean up campaigns conducted in communities in partnership with National Department of Environmental Affairs.			
			<ul style="list-style-type: none"> <li>To set up Toll free number where community can report illegal dumping</li> </ul>		Council toll free number and whistle blower numbers are used to report dumping. This is yielding good results already.		
			<ul style="list-style-type: none"> <li>To engage at least 50 scouts/peace officers to reinforce the law on illegal dumping</li> </ul>		Two peace Officers within the Section have been trained, over and above Law Enforcement Officers.		
			<ul style="list-style-type: none"> <li>To apply Council reward system policy where a person is given a reward by taking a photo and reporting illegal dumping</li> </ul>		This is still under investigation.		
			<ul style="list-style-type: none"> <li>To Install a 24 hour camera to monitor illegal dumping</li> </ul>		Monitors are still being considered.		
To reinforce a Waste Minimisation Strategy while	To decrease waste deposited on landfills and collected in skips	<ul style="list-style-type: none"> <li>To review Waste Management Strategy</li> </ul>	<ul style="list-style-type: none"> <li>To review Waste Minimisation Strategy</li> </ul>	20% reduction of domestic and commercial waste streams	Council is currently recycling 28% of total waste generated. New Kerb Recycling projects were initiated and were linked to local waste-prenuers.	To enforce Waste Minimisation strategy and	To review the Waste Minimisation strategy

creating jobs especially for the youths	and transfer stations	<ul style="list-style-type: none"> <li>To educate communities on recycling and waste minimization</li> </ul>	<ul style="list-style-type: none"> <li>To support companies which are starting recycling businesses especially the youths</li> </ul>	disposed to Regional Landfill by 2020.	A number of trainings have been carried out, but more still needs to be done due to high turnover of litter pickers.	enforce by-laws	
		<ul style="list-style-type: none"> <li>To set an enabling environment for small companies which needs to start recycling companies</li> </ul>	<ul style="list-style-type: none"> <li>To develop garden refuse strategy</li> </ul>		IWMP does talk to strategy,		
		<ul style="list-style-type: none"> <li>To realign IWMP with Climate Change strategy</li> </ul>	<ul style="list-style-type: none"> <li>Developing and displaying public information boards, pamphlets ,flyers etc.</li> </ul>		Section has started installing billboards and still working on developing pamphlets and flyers.		
			<ul style="list-style-type: none"> <li>Increase 10 compost facilities in rural areas</li> </ul>	5000 Jobs to be created by 2020	This number is being reviewed and considered not being realistic.		
			<ul style="list-style-type: none"> <li>To set up 10 community based collection systems</li> </ul>		About 50 collection sites have been developed, referred to as nodes.		
			<ul style="list-style-type: none"> <li>To support SMMEs which starts reusing recyclables to produce other marketable products e.g. mats, jewellery etc. especially through training needs</li> </ul>		This is considered to be a Local Economic development and therefore still looking at a proper system of implementation. National Department of Environmental Affairs is devising a plan on this.		

## 6.2 MONITORING AND EVALUATION OF THE IMPLEMENTATION PLAN

### 6.2.1 AREAS TO MONITOR

The goal of monitoring this plan is to effectively monitor and report on performance within the waste functions. Every goal in the implementation plan is realigned to activities/actions with SMART targets and timeframe. (Most of these are estimated; hence they should be reassessed again).

Performance and development indicators should be developed during operational planning stage for the two divisions of Waste Management

The monitoring process should focus on short and long terms goals.

The areas to monitor could include:

- Finance-Budget allocations, Tariffs
- Human Resource-Vacancies and training needs
- Maintenance of fleet
- Legislation-amendments, new legislation ,by –laws
- Customer satisfaction through surveys
- Status of illegal dumping in terms of costs and reduction
- Waste minimisation programmes and projects
- Achieved targets
- Annual reports on collection reports
- Reports on reuse and recycling including employment records
- Registration and licencing of waste disposal facilities
- Auditing of waste disposal facilities
- Hazardous waste disposal
- Managing disposal facilities
- Education campaigns on Waste Management

### 6.3.2 EVALUATION AND REVIEW OF IWMP

The IWMP should be reviewed on an on-going basis. The IWMP is realigned with the IDP Hence its review process should be realigned with the IDP process.

Ideally, IWMP should be reviewed every 5 years although some institutions review it annually.

## 6.4 CONCLUSION

Generally the waste management process is an integrated process which involves many stakeholders who include private households, different types of businesses, institutions and government officials.

Its costs are also very high considering the spectrum of customers serviced. Hence forming partnerships is necessary in order to share resources and start businesses which could reduce waste like recycling, obeying the law. Examples of obeying the law include the public not dumping illegally.

Secondly, the legal framework supports the IWMP. On top of the policy, the municipality needs to reinforce by-laws which also allow punitive measures.

In case of uMhlathuze Local Municipality, considering the seriousness of illegal dumping, there is urgency to put in place this by-law. It should also be enforced by including prosecution in cases of non-compliance.

Thirdly, education and awareness campaigns about illegal dumping and littering need to be stepped up drastically. This education could start in all primary schools in the King Cetshwayo District Municipality at a very early age. Information transfer could also be applied e.g. display boards, local radio stations, local newspapers and flyers. Council rewards could also be applied and close monitoring of illegal dumping by 24 hour camera. Fourthly, the municipality should provide enabling environment through ensuring safety at the drop-off centres, call centre operated at 24/7 and providing clearly marked recycle bins for kerb side collection of separated material at source waste.

Roles and responsibilities of all relevant stakeholders should be clearly defined. These roles and responsibilities are directly based on the requirements of the Constitution, other relevant legislation and IWM policy. Since IWMP is an integrated strategy it should include a number of departments directly and indirectly connected to uMhlathuze waste department.