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County Waste Management Policy

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Nakuru County Waste Management Policy

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Chapter 1

Background and Situational Analysis

1.1. Introduction

Waste management remains one of the critical development challenges globally, nationally and at the county level. Waste is inevitable due to ordinary human activities such as industrial production, consumption at household level, construction and commercial processes among others. However, accumulation of waste has environmental, health, social and economic implications in the long term. Consequently, public interventions in waste management coupled with engagement with private actors are required in order to achieve optimal results.

This policy provides for the guiding framework for Waste management in Nakuru County. The policy shall guide the county waste management actors providing effective, efficient and sustainable services while utilizing waste as an economic resource.

1.2. Policy development process

This policy was developed through a consultative process. The key policy actors in waste management in the county were engaged during the preparation process. Specifically national and county departments involved in waste management included National Environment Management Authority (NEMA), county departments in charge of public health; public works and trade were consulted. In addition, private actors in waste management such as waste

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collectors and transporters, resident associations, waste sorters and recyclers participated in the process.

1.3. Geographic location and size

The county is located in the rift valley region of Kenya. It covers an area of 7,495.1 Km², with an arable area of 5,274 km². Geographically, the county is located between Latitude 0 ° 13 and 1° 10' South and Longitude 35 ° 28' and 35° 36' east. Its headquarters is Nakuru Municipality, one of the fastest growing urban centers in East Africa region. The County is bordered by other counties namely; Kericho and Bomet to the west, Baringo and Laikipia to the North, Nyandarua to the east, Narok to the south-west and Kajiado and Kiambu to the south.

1.4. Administrative structure

The county is divided into eleven administrative Sub-Counties namely; Molo Njoro, Naivasha Gilgil, Kuresoi South, Kuresoi North, Subukia, Rongai, Bahati, Nakuru West and Nakuru East. Each ward is represented by a member of the county assembly.

1.5. Social and economic context

1.5.1. Social context

a) Poverty index

The county population that lives in poverty is estimated to be 29.1 percent. The Human Poverty Index is a composite measure of poverty that combines several basic factors affecting the quality of life. The major component included in the

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HPI survey includes longevity of life, knowledge acquisition, economic status and social inclusion. According to the 2009, Kenya Human Development report, Nakuru County's HPI is 24.6% compared to the National average of 29.1%.

b) Human Development Index

The Human Development Index (HDI) is a summary measure of average achievements in key dimensions of human development, a long and healthy life (life expectancy at birth), knowledge (expected years of schooling) and a decent standard of living (Gross National Index Per Capita). The HDI of less than 0.550 signifies a low human development, 0.550 – 0.699 signifies medium human development, 0.700 – 0.799 for high human development and 0.800 or greater for very high human development.

Nakuru County has a Human Development Index of 0.5558. This implies extent to which the county population meets the 3 criteria of HDI a long and healthy life, knowledge and a decent standard of living. From the HDI categorization, the county has a medium human development level.

c) Education

According to KNBS 2014, the literacy level of Nakuru County was 76.7% while the Kenya national literacy level was 87.38 % and 80.59 % in 2010 and 2012, respectively. Nakuru County literacy level is lower than the global average, which was estimated at 83.95% and 86.29% in 2010 and 2012, respectively, and the national average. The literacy rate has improved over the years and this is attributed to FPE and the promotion of adult and continuous education. However, there are disparities between rural and urban areas, with rural areas having lower levels than urban areas.

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d) Demographic context

In 2009, the county population was 1,603,325. The Kenya National Bureau of Statistics (KNBS) projected that the population would be 2,176,581 in 2018 and 2,479,311 in 2022. The population comprises of 48% male and 52% female, with 74% of the population being persons below the age of 34 years.

The county has an estimated population density of 214 persons per Km².

1.5.2. Economic context

The main forms of economic activities (industrial and trade) in the county are Agriculture, Livestock, Commerce, Industries, Tourism, Mining, Co-operatives, Trade, and Fisheries. The economic activities that have high generation of waste in the county are Commerce, Industries in industrial area, Nakuru, Trade. The table below summarizes the number of economic activities and the number of entities.

Economic activity	Number of entities
Manufacturers	105
Wholesale outlets	7,486
Retail outlets	50,159
Financial institutions	20
Retail food or agricultural markets	3
Livestock markets	5
Hotels	220

The population of the county that is employed in the formal sector is 38% while 62% is in the informal sector. The informal sector is the main employer in the county.

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1.5.3. Urbanization

The county may be classified as urban and rural. It is estimated that 45.8% of county population resides in towns and other urban areas. The main towns and urban areas in the county are Nakuru town, Naivasha, Gilgil, Mai Mahiu, Molo, Subukia, Mau Narok, Olenguruone, Njoro, Rongai, Dundori, Bahati,, Kikopey, Total/Kamara, Keringet, and Kampiya Moto . The rising urbanization in the county results in increase in the quantities of waste produced. This has resulted in increase in demand for waste management services. Consequently, the county has to strategically plan for the development of sustainable waste management.

1.6. Waste management conceptual framework

Waste emanates as a result of human activities. The term “waste” in common terms implies something that has no value and that should be discarded. Management of waste is a public issue that has health, environment, economic and social effects at household, local, national and international level. The level of waste generation is directly related to population size, human behavior such as production (including production processes) and consumption patterns and management, recovery or utilization of waste products at the point of production or intermediate level. Waste generated at one point may be raw materials for another production process.

1.6.1. Waste streams and sources

Waste management is based on identifiable waste streams from the various identifiable sources. Waste is ordinarily classified according to the waste streams for purposes of effective management. A waste source may produce different

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waste streams e.g. a household may produce food and kitchen waste, agricultural waste, papers and e-waste. There are different methods of collecting, recovering, processing, treating and disposing the various waste streams. The common waste streams are outlined in table 1–

Table 1: Waste Streams

Waste Streams	
▪ Food, kitchen and garden waste	▪ Ferrous metals (iron and steel)
▪ Automotive waste (oil, tyres, end of life vehicles (or vehicle parts)	▪ Non-ferrous metals (aluminum, copper, lead)
▪ Paper and cardboard	▪ Construction and demolition waste
▪ Agricultural waste	▪ Special health care waste
▪ Textiles	▪ Sewage sludge
▪ Mining waste	▪ Batteries
▪ Electrical and electronic waste (e-waste)	▪ Expired chemicals and pharmaceuticals

The most common waste sources are outlined in table 2 below–

Table 2: Waste Sources

Waste Sources	
▪ Households	▪ Fishing and fish processing facilities
▪ Offices	▪ Forestry operations
▪ Cafes and restaurants, hotels, food stalls	▪ Building sites
▪ Schools, universities, laboratories	▪ Manufacturing facilities
	▪ Water treatment and sewage

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- | | |
|---|--|
| <ul style="list-style-type: none">▪ Retail operations (e.g. shops, supermarkets, warehouses)▪ Markets▪ Public facilities (sports grounds, street sweeping and cleaning)▪ Hospitals and other health care facilities▪ Mines and mineral processing facilities▪ Agriculture and food processing facilities | <ul style="list-style-type: none">treatment facilities▪ Land transport facilities (e.g. truck depots, bus and train stations and terminals)▪ Car yards and car repair shops▪ Ships, boats and aircraft (airports, ports, marinas) |
|---|--|

Whereas there are different waste streams, waste is normally divided into hazardous and non-hazardous waste. The manner of managing the two types of waste is very different due to the potential health risks and hazards. Waste may in addition be classified broadly as municipal waste or industrial waste and post-consumer waste.

One of the key concepts in waste management is municipal waste. Municipal waste is regarded as waste generated by households and waste of similar nature generated by commercial and industrial premises, institutions such as schools, hospitals and other facilities inhabited by people, construction and demolition of buildings, and from public spaces such as streets, markets, slaughter houses, public toilets, bus stops, parks and gardens.

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1.6.2. Functional elements of a waste management system

Functional elements of a waste management system describe the value chain in the core functions of a waste management system. Regulatory and management system for waste management is mainly based on the functional elements. Table 3 below describes the functional elements of a waste management system–

Table 3: Functional Elements of a Waste Management System (or waste elements system)

Functional element	Description
Waste generation	Encompasses activities in which materials are identified as no longer being of value and are either thrown away or gathered together for disposal
Waste handling and separation, storage and processing at source	Involves activities associated with managing wastes until they are placed in storage containers for collection. Handling also entails the movement of loaded containers to the point of collection. Separation of waste components at source facilitates effective handling and storage of waste, particularly for recycling and reuse purposes.
Collection	Includes gathering of wastes and recyclable materials and the transport of these materials, after collection, to the location where the collection vehicle is emptied, such as materials-processing facility, a transfer station, or a landfill
Transfer and transport	Involves two steps (a) transfer of wastes from the smaller collection vehicle to the larger transport equipment (b) subsequent transport of wastes, usually over long distances to a processing or disposal site. Transfer normally takes place at a

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	transfer station
Separation, processing and transformation of waste	Entails separation of waste and recovery or processing of waste materials, which had been separated at source. This takes place at materials recovery facilities, transfer stations, combustion facilities and disposal sites. Transformation processes are used to reduce the volume and weight requiring disposal and to recover conversion products and energy. Combustion (to produce energy) and composting are some of the most common transformation processes.
Disposal	Disposal by landfill or land spreading is the ultimate destination of waste whether its waste collected and transported from source or from transformation facilities (e.g. residues of composting or combustion). The best practice is to dispose waste through sanitary landfill which prevents public health hazards and nuisances

Source: Kieth and Tchobanoglous (2002), *Handbook of Waste Management*, McGraw-Hill, USA.

1.6.3. Integrated Waste Management (ISWM)

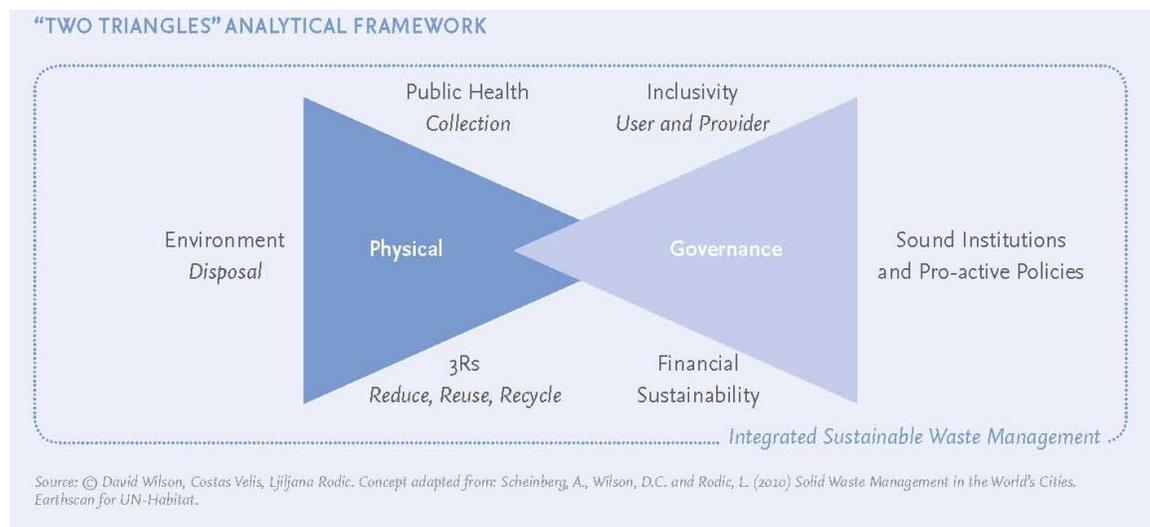
The modern approach to effective and sustainable waste management is what has come to be commonly referred to as the Integrated Waste Management (IWM). This integrated approach has been advanced by United Nations Environment Programme (UNEP) and the UN-Habitat. The approach may be viewed from different analytical frameworks. The UNEP and UN-Habitat have developed 2 complementary analytical frameworks on IWM. The analytical frameworks are the “two-triangles” IWM analytical framework advanced by UN-Habitat and the Waste Management Hierarchy advanced by UNEP.

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a) "Two-triangles" ISWM analytical framework

The "Two triangles" analytical framework categorizes waste management system into two pillars (triangles) i.e. the physical elements and governance features. Table 4 below outlines the "Two-triangles" analytical framework.

Figure 1: "Two triangles" Analytical Framework



The first triangle comprises the three key physical elements of the ISWM system, which are–

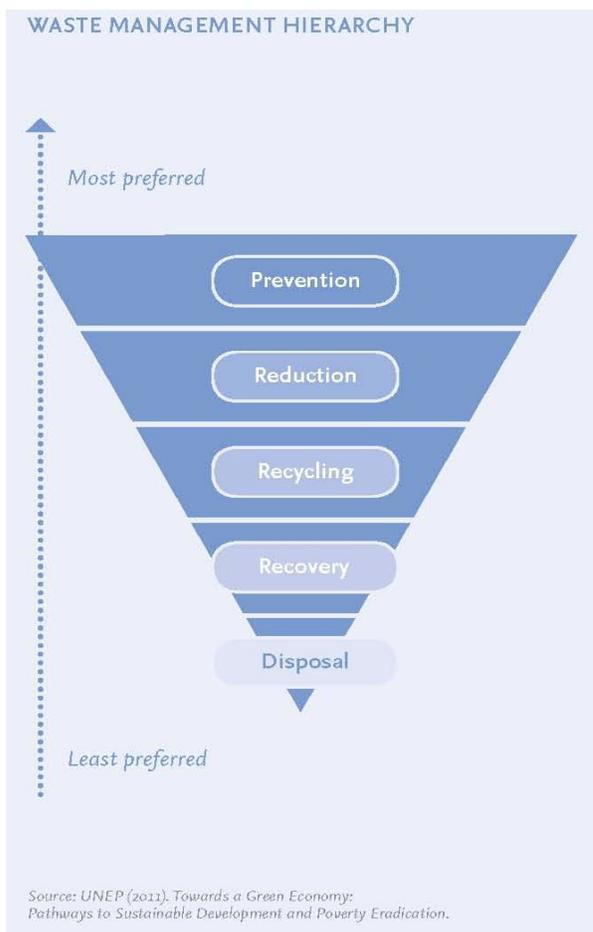
- i) **public health** which entails maintaining healthy conditions in cities and urban areas through a good waste collection service
- ii) **environment** which entails protection of environment throughout the waste chain, especially during treatment and disposal
- iii) **resource management** which may be described as 'closing the loop' since it entails returning both materials and nutrients to beneficial use, through preventing waste and striving for high rates of organics recovery, reuse and recycling.

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The second triangle comprises of the governance features of the ISWM system, which supports sustenance of the first triangle. The governance features entail a system that–

- i) is **inclusive**, providing transparent spaces for stakeholders to contribute as users, providers and enablers
- ii) is **financially sustainable**, which implies cost-effective and affordable waste management system
- iii) rest on a base of **sound institutions and pro-active policies**

Figure 2: Waste Management Hierarchy



b) Waste Management Hierarchy IWM analytical framework

The waste management hierarchy indicates an order of preference for action to reduce and manage waste. The waste hierarchy is presented as an inverted pyramid with the most preferred action being prevention of waste generation followed by reduction of waste generation (e.g. through re-use), followed by recycling (including composting or anaerobic digestion), followed by

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material recovery and waste-energy processes such as combustion and pyrolysis and the final action being disposal either in landfills or through incineration without energy recovery for waste that was not prevented, diverted or recovered. The IWM system forms a good foundation for waste management policy framework and strategy development.

1.7. Policy and legislative framework on waste management

The policy and legislative framework for county waste management consist of the constitution of Kenya and various statutes, sessional papers and sectoral plans among others. This part highlights the laws and policies that relate to waste management at county level.

1.7.1. Constitution of Kenya

Article 10 entrenches sustainable development as one of the national values. waste management is one of the key drivers of sustainable development.

Article 43 guarantees the right to highest attainable standard of health, reasonable standards of sanitation and clean and safe water. Waste is a major contributor to prevalence of risk factors to communicable and noncommunicable diseases and conditions. Consequently, effective, efficient and sustainable management of waste especially in urban areas has will drastically reduce incidences of communicable or noncommunicable diseases and conditions and related health care burden as well as reduce associated public nuisance of unmanaged waste.

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Article 69 of the Constitution provides for encouragement of public participation in the management, protection and conservation of the environment; establishment of systems of environmental impact assessment, environmental audit and monitoring of the environment; elimination of processes and activities that are likely to endanger the environment.

Section 2 (g) of the Fourth Schedule assigns to the county government the function of refuse removal, refuse dumps and waste disposal.

1.7.2. The Environmental Management and Co-ordination Act (Cap 387)

The Environmental Management and Co-ordination Act, Cap 387 including subsidiary legislation is the main national statute that governs environment protection, conservation and management, which includes waste management.

In regard to waste management, the Act provides among others for–

- a) development of county environment action plans which provide for environment management systems
- b) the standards of waste including issues such as handling, storage, transportation, segregation and destruction of any waste
- c) prohibition of handling dangerous waste
- d) classification and management of hazardous and toxic waste

The Environmental Management and Coordination (Waste Management) Regulations, 2006, and Environmental (Prevention of Pollution in Coastal Zone and Other Segments of the Environment) Regulations, 2003 seek to implement the statutory requirements on waste management.

1.7.3. National Environment Policy, 2013

The policy provides for governance framework for environment management. In regard to waste management, the policy recognizes inefficient production

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processes, low durability of goods and unsustainable consumption and production patterns lead to excessive waste generation. In order to address these challenges, the policy provides for development of an integrated national waste management strategy, promotion of use of economic incentives to manage waste and promotion of establishment of facilities and incentives for cleaner production waste recovery, recycling and re-use.

1.7.4. Integrated Coastal Zone Management (ICZM) Policy

In regard to waste management, the Integrated Coastal Zone Management (ICZM) Policy, Sessional Paper No. 14 of 2014 provides for pollution control and waste management practices. The policy seeks to improve the management of municipal waste through empowerment of county governments to effectively manage urban waste, promotion of public private partnership in waste management, strengthening of county governments to enforce laws for regulating municipal waste and enforcement of Environmental Management and Coordination (Waste Management) Regulations, 2006.

1.7.5. Kenya Vision 2030

The Kenya Vision 2030 lays the foundation for social and economic development in Kenya. In regard to waste management, Kenya Vision 2030 provides for development of waste management systems in at least 5 municipalities, and in the proposed economic zones, regulation on use of plastic bags, development and enforcement of mechanisms targeting pollution and waste management regulations, strengthening of institutional capacities of multi-sectoral planning and strengthening linkages between institutions of planning and environment management, development of national waste management system and use of market-based environment instruments for providing incentives or disincentives

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in waste management and establishment of initiative to clean the Nairobi River as well as rivers and water fronts in Kisumu, Mombasa and Nakuru.

1.7.6. The National Waste Management Strategy, 2015

The National Waste Management Strategy, 2015 is anchored on the Kenya Vision 2030. It lays the foundation for strategic management of waste in Kenya.

The strategy provides for among others for–

- a) definitions and classification of waste
- b) the national context and status on waste management
- c) the common waste management practices in Kenya
- d) the challenges facing waste management in Kenya
- e) integrated waste management
- f) the waste management cycle and ideal approaches applicable to Kenya

The national strategy sets the foundation for development and adoption of county waste management policies and strategies.

1.7.7. Global Policy Related to Waste Management

The global policy related to waste management is mainly contained in the United Nations conventions and policies that provide for framework for waste management and which have implications on county waste management policies and laws. They include–

- a) United Nations Convention on Climate Change. Article 4 on commitments provides for promotion and cooperation in development, application and diffusion including transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases in sector such as waste management sectors

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- b) The Kyoto Protocol to the United Nations Convention on Climate Change. Article 1 (viii) provides for States' obligation to limitation or and reduction of methane emissions through recovery and use of waste management. The Protocol obligates States to formulate and implement waste management programmes that are intended to mitigate climate change
- c) The Basel convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposals. However, the control of international movement of hazardous waste is a mandate of national government
- d) The Rio Declaration on Environment and Development (Agenda 21-Global Programme of Action on Sustainable Development). Chapter 7 provides for sustainable human settlements which includes provision of basic services such as waste collection, Chapter 20 provides for managing hazardous wastes and Chapter 22 provides for managing wastes and sewage which encourages waste minimization and increase reuse and recycling

In addition, the United Nations' Sustainable Development Goals (SDGs) establishes a global framework and commitment for sustainable development. Specifically, key SDGs that have direct implications on waste management and which shall be integrated in the county model policy shall include –

- a) Goal 3: Ensure healthy lives and promote wellbeing for all at all ages
- b) Goal 6: Ensure availability and sustainable management of water and sanitation for all
- c) Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

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- d) Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- e) Goal 12: Ensure sustainable consumption and production patterns

1.7.8. Other policies and laws with implications on county waste management policies and laws

There are other national policies and laws that have implications on county waste management (or the process and institutional frameworks for county policies and laws). These include–

- a) **County Governments Act, No. 17 of 2012**, which provides for the governance and management system and process in the county including development planning, decentralization, citizen participation and policy development among others
- b) **Public Finance Management Act, Cap 412 C**, which provides for financial planning and management at the national and county levels including linkage of development planning, budgeting and public expenditure
- c) **Urban Areas and Cities Act, Cap 275**, which provides for integrated development planning in urban areas. The Act provides for development of urban integrated development plans for urban areas and cities which includes planning for waste management
- d) **Physical Planning Act, No. 6 of 1996**, which provides for physical planning and development control in Kenya, which is mainly a county function. Integrated Waste Management System requires functioning and effective spatial planning, zoning and land laws.

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- e) **Legal Notice No. 137 on Transfer of Functions to County Governments, 2013**, which provides for unbundling of county functions stipulated under Part2 of the Fourth Schedule to the Constitution
- f) **Mombasa County Vision 2035**, which envisages a scenario of a developed integrated waste management facility, enacted waste segregation at source, a recycling rate of 50%, and restricted illegal dumping and open burning of waste.

1.8. County context on waste management

waste management remains a major challenge to the county. The most common forms of waste generated in the county is the organic waste which is mainly generated at household level and agricultural produce/food markets, hotels and restaurants.

Waste category	KG	Percentage	Mean	High	Low
Paper	179.6	7.1%	7.3%	9.9%	3.9%
Cardboard	45.5	1.8%	1.7%	2.5%	0.0%
HDPE	27.5	1.1%	1.2%	3.4%	0.0%
PET	44.0	1.7%	1.7%	4.2%	0.0%
Other Plastics	263.6	10.4%	10.3%	12.9%	4.1%
Glass	97.5	3.9%	3.9%	12.1%	0.0%
Textiles	72.0	2.8%	3.3%	10.7%	0.0%
Organic Food	1439.4	56.9%	56.6%	82.4%	39.1%
Organic Garden	0.0	0.0%	0.0%	0.0%	0.0%
Ferrous	31.2	1.2%	1.2%	1.6%	0.6%
Non-ferrous	10.5	0.4%	0.4%	1.1%	0.0%
Hazardous	3.0	0.1%	0.1%	0.6%	0.0%

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WEEE	0.0	0.0%	0.0%	0.0%	0.0%
Hard Plastics	29.5	1.2%	0.9%	5.6%	0.0%
Misc. Combustibles	27.0	1.1%	1.1%	3.2%	0.0%
Nappies	46.0	1.8%	1.7%	4.7%	0.0%
Fines	212.5	8.4%	8.7%	12.4%	3.2%
TOTAL	2528.7	100%			

Source: Mott MacDonald Waste Nakuru Composition Study 2017

Figures on PET have decreased drastically as a result of its recovery (recycling).

The subcounties with industrial activities include Nakuru Town East, Nakuru Town West, Naivasha, Gilgil, Molo, Njoro, and Rongai respectively.

waste generated in the rural parts of the county is disposed within the households mainly through disposal in pits or open burning. Most of biodegradable waste such as agricultural or human food waste is reused as food for farm animals or its composted to produce manure for agricultural production. Non-biodegradable waste such as containers are reused for other house hold uses such as storage. Urban areas in the county generate most of the municipal and industrial waste in substantial quantities. Nakuru Town East, Nakuru Town West, Naivasha, towns generate most of the waste due to high population density.

Most of the waste generated in urban areas is disposed in county designated disposal sites at Gioto–Nakuru Town West, Naivasha and Mai Mahiu respectively. Most waste is disposed in the same form as it was generated without being recycled or reused or recovered. Open disposal of waste has

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continuously posed negative environmental health impact through leachate and direct flow into water sources. In addition, the disposal methods in the county have been a contributor to public nuisance. There is limited investment in waste recycling and recovery systems in the county. Currently, there is a lot of integrated waste management practices ongoing eg recycling and composting, thus reducing the amount of waste going to the disposal sites.

Collection and transportation of waste generated at household, commercial and industrial level in the county is mainly undertaken by private sector. The county government provides waste collection and transportation services from the public areas. The county government has put in place light waste collection bins and waste collection containers in strategic places in urban areas. All these improvements are geared towards attainment of NEMA's ten minimum points as per the National Waste Management strategy 2015. This however is below the desired optimal level. The county government manages the 3 No. waste disposal sites namely Goto, Naivasha, and Mai Mahiu. The waste disposal sites are currently undergoing major improvement/rehabilitation i.e. through opening up access roads to enable its access, demarcation of tipping areas, embankment has been put in place to curb waste spillages from the disposal sites to the nearby roads, Trees and flowers have been planted for aesthetic value improvement and reinforcement of the embankment. The county government has made budgetary allocation for waste management e.g. procurement of refuse skips and skip loaders, fencing of Goto, and improvements of access roads, but the allocations have been inadequate to meet the desired financial investment for waste management.

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1.9. Policy rationale

The county government seeks to establish an effective, efficient and sustainable waste management in order to facilitate realization of its development goals. This waste management policy will be instrumental in advancing county social and economic development. This policy is therefore developed in order to –

- a) provide for a policy mechanism for implementing county functions related to waste management as assigned under the Constitution of Kenya
- b) provide for adoption of Integrated Waste Management system and processes in the county
- c) facilitate adoption and compliance with relevant international and national standards for waste management in the county
- d) facilitate the realization of Kenya Vision 2030 as it relates to waste management

Chapter 2

Policy Framework

2.1. Introduction

In order to comprehensively address waste management, a framework setting the policy direction to be pursued by the county government and other stakeholders is essential. This chapter describes the policy framework consisting of the core policy measures to be pursued. In addition, the chapter lay out the policy vision, mission and guisin principles.

2.2. Policy Goal

To minimize waste generation and promote re-use, recovery and recycling of waste materialsandsustainable waste disposal.

2.3. Policy mission

To promote a sustainable, effective and integrated waste management system

2.4. Policy objectives

The policy shall pursue the following objectives–

- a) Delivering a waste management system that is effective, equitable, responsive and sustainable under the prevailing conditions

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- b) Provision of public services (e.g. waste collection, transport, treatment and disposal) suited to the needs of and affordable for local users
- c) Protection of public and occupational health and the environment
- d) Contributing to sustainable use of natural resources, e.g. through materials recovery and recycling, soil improvement, energy generation
- e) Contributing to economic development, including through fostering resource efficient production and developing waste recovery and recycling operations
- f) Providing employment and enterprise development opportunities
- g) Deploying technologies appropriate to prevailing conditions
- h) Building the capacities of those forming part of the waste management system
- i) Encouraging and inviting research and development into technologies and governance approaches for sustainable resource and waste management

2.5. Policy principles

The following shall be the guiding principles for the waste management policy–

- a) ***Proximity principle*** which implies that waste should be managed close to where it is generated
- b) ***Self-sufficiency principle*** which implies that where possible and practical, each urban area or zone should manage its own waste
- c) ***Polluter pays principle*** whereby those who generate waste should bear the cost of managing the waste to minimize risk to human health and the environment

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- d) ***Precautionary principle*** whereby appropriate policy measures may be taken in order to safeguard human health and environment. Even if scientific evidence is not conclusive it would be essential to adopt precautionary approach
- e) ***Sustainable development*** which is development that meets the needs of the present without compromising the ability of future generations to meet their own needs
- f) ***Inter-generational equity*** which implies that waste should not be managed in a way that bequeaths legacy problems to subsequent generations
- g) ***Intra-generational equity*** which implies that waste management resources and services should be equitably accessible to all citizens or residents in the same generation. All interested parties should have equitable possibilities to provide services and equitable burden-sharing in terms of waste management facilities (environmental justice)
- h) ***Extended producer responsibility***

2.6. Policy measures

The county shall adopt an integrated approach to waste management as described in chapter 1 as well as the principles of waste management that form the foundation of this policy. The policy measures shall be based on a combination and integration of the functional elements in waste management, waste management hierarchy and the two-triangle framework both of which form

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the integrated waste management system. This part shall prescribe the policy measures that the government shall pursue. The policy measures shall be in the form of policy statements, which prescribe the appropriate policy instruments in waste management. In addition, the policy measures are based on the constitutional functional assignment of county governments as well as constitutional provisions.

2.6.1. Zoning for Waste Management

In order to comprehensively address waste management issues in Nakuru County, the department shall ensure that the entire county is zoned into waste operational zones. Private waste service providers in partnership with the county shall service the zones. They shall be engaged as per the waste management guidelines see appendix 1 to ensure efficient service delivery.

2.6.2. waste generation

Context

Generation of waste depends on product demands, production processes, consumption demands, behaviour and patterns among others. Waste generation has implications on resources used for production of products, which result in varying levels of waste generation. Waste generation exists throughout the product lifecycle.

Most waste generated in the county consists of municipal waste, which emanates from consumption of processed products at household, commercial and industrial levels. Some processes or activities such as industrial ones contribute to high waste generation. Whereas, the county government has no legal mandate to regulate production processes, which would reduce amount of waste generated, it has a duty to promote appropriate production processes, change in

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consumption behavior and patterns. The aim is to prevent generation of waste where possible through appropriate means.

Policy measures

In order to promote and facilitate prevention of waste generation through sustainable waste generation processes, the county department responsible for waste management shall –

- a) Promote prevention of waste generation among product users through awareness creation on behavior change, consumer choices and consumption practices to reduce excessive consumption or use and waste of diverse products
- b) Collaborate and coordinate with national government and other stakeholders in adopting measures for promoting resource conservation and management to prevent or avoid excessive utilization of resources which lead to excess generation of waste
- c) Establish partnership and collaboration with manufacturers wholesalers and retailers in adopting appropriate measures and strategies for preventing waste generation
- d) Engage with national government to adopt appropriate measures for preventing waste in the product value chain and life-cycle such as product and packaging design, manufacture, distribution and product use
- e) Promote in collaboration with national government and relevant stakeholders the adoption of modern technology in product manufacture so as to reduce excessive generation of waste

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- f) In collaboration with other relevant public and private stakeholders, promote reuse of products or materials e.g. containers or packaging materials in order to reduce generation of waste
- g) The department responsible for waste management shall establish an inventory for all the waste streams which shall be disaggregated according to the respective sources

2.6.3. waste handling and separation, storage and processing at source

Context

Waste handling and storage before collection and transport determines the effectiveness of the rest of waste management system. Waste handling and storage at point of generation requires adoption of public and environmental health standards. In order to facilitate reduction, recycling and recovery of waste, waste separation or segregation at source is essential. Currently, the county experiences poor waste handling, storage and separation at the sources. This is mostly common in the urban areas due to high population density and low awareness of sustainable waste handling, separation and storage processes. Other challenges faced by the county include storage of organic and inorganic waste in the same containers, open storage of waste or disposal of waste in outdoor open places directly from the source/point of generation or storage of waste in open spaces within premises which is a threat to public and environment health.

Policy measures

In order to ensure effective and appropriate waste handling, storage and separation, the following policy measures shall be adopted–

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- a) The department responsible for waste management shall in collaboration with relevant stakeholders carryout awareness creation and capacity development to waste generators on handling, storage and processing of waste at source
- b) waste shall be segregated or separated at source or point of generation into dry (recyclables) and wet waste (food waste and organic matter), which shall be further segregated and stored under each of the two categories into different forms of waste in accordance with the standards and stored in appropriate receptacles in accordance with the prescribed guidelines and standards
- c) The department responsible for waste management shall in collaboration and coordination with national government, generators of waste and relevant stakeholders develop and adopt strategies, measures and standards to promote and facilitate segregation of waste at source or point of generation
- d) In accordance with the building code and development control laws and policies, owners or occupiers or residential, commercial or industrial premises shall install appropriate containers and spaces for waste handling and storage within the premises for purposes of ease of collection and which meet public and environment health standards for purposes of ease of collection
- e) Waste generated from any premises or source shall be separated and stored within the premises before being collected and transported for recovery and final disposal.

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- f) The department responsible for waste management shall ensure adoption of appropriate measures and processes for waste segregation at the point of generation
- g) Disposal of waste in open grounds or in non designated collection points by a waste generator shall be prohibited

2.6.4. Waste collection

Context

Waste collection is the collection of waste from the point of generation or production (residential, industrial, commercial or institutional) to the point of treatment, recovery or disposal. Waste collection methods are determined by the location of waste generation (i.e. public places, residential, commercial, industrial or commercial). Uncollected waste leads to public and environmental health hazards such as diseases and health conditions, public nuisance, and blockage of drainage system, seepage of waste into water and soil among others.

The waste collection process is required to be efficient and carried out through appropriate means. Waste collection services in the county especially for urban areas are provided by the private sector. However, waste collection services for public areas are carried out through municipal services provided by the county government. Waste in the county is characterized with disposal of waste in open areas before collection (open dumping) and inefficient and inadequate waste collection services in both public and private places. Some localities in urban areas where there lacks organized waste collection services experience environmental and health challenges associated with open disposal of waste.

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Other challenges include inadequate waste collection points and containers or bins as appropriate and low funding of waste collection services.

Policy measures

In order to address challenges associated with waste collection, the following policy measures shall be adopted–

- a) The department responsible for waste management shall in collaboration with other relevant public and private actors establish an efficient, responsive and coordinated countywide waste collection services system which shall among others include stakeholder consultation, mobilization and participation, compliance with public and environment health standards and collection of waste from public and private places and maintenance of clean public streets and places
- b) The department responsible for waste management shall in consultation with National Environment Management Authority and other relevant stakeholders designate, gazette and develop waste collection points in each ward according to the waste management spatial map
- c) The department responsible for waste management shall in consultation with respective local residents representing residential, commercial, institutional and industrial areas, place or install appropriate waste collection containers, receptacles and bins in strategic public places for purpose of collection of waste
- d) All institutions such as schools or health facilities shall place or install appropriate waste collection containers, receptacles and bins in strategic places within the facilities for purpose of collection of waste which shall conform to the prescribed standards

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- e) waste collection services provided by public or private actors shall comply with the prescribed standards and operating procedures
- f) waste collection services from households, commercial, institutional or industrial premises shall be carried out by private sector service providers in accordance with prescribed standards and guidelines, [unless in areas where there are no established private sector service providers for waste collection](#)
- g) The department responsible for waste management shall establish a system for collecting waste in informal settlements which do not have access to private sector provision of waste collection services
- h) A waste generator shall deposit any waste generated to the appropriate waste collection point located within the geographical locality of the waste generator and in the appropriate waste segregation or separation collection receptacles
- i) There shall be established a system of registration of waste collectors including waste pickers for the purposes on coordinating waste collection, facilitating stakeholder capacity development and ensuring compliance with prescribed guidelines and standards
- j) The department responsible for waste management shall in consultation and collaboration with National Environment Management Authority and other relevant stakeholder designate, gazette and develop waste transfer stations according to the waste management spatial map and prescribed standards. The department may establish or facilitate establishment of specialized transfer stations for specific types of waste
- k) The department responsible for waste management shall promote and facilitate establishment of intermediary community based waste sorting

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- centres which shall be integrated with the county waste management system
- l) The department responsible for waste management shall in collaboration with the department responsible for public health maintain waste collection points in conformity with prescribed public and environment health standards
 - m) The department responsible for waste management shall in collaboration with the department (s) responsible for women, youth, persons with disabilities or other vulnerable groups and county treasury develop initiatives for the groups to participate in co-management of waste collection points and waste collection services for purposes of promoting economic empowerment of the groups
 - n) The county government shall initiate and develop public private partnership programmes for sustainable waste collection services
 - o) In accordance with Access to Government Procurement Opportunities Policy, the county government shall provide preferential treatment to youth, women and persons with disabilities in accessing thirty percent of county government contracts for waste collection services
 - p) In procuring services for provision of waste collection services, the county government shall consider a supplier's integration of service delivery with youth, women and persons with disabilities empowerment

2.6.5. waste transfer and transportation

Context

Waste transfer and transportation is directly related to waste collection. Waste is generally collected for the purposes of transfer or transportation to the next point

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of waste management system. waste in the county is normally transported from collection points directly to the final disposal sites or landfills. This has meant that there has been limited intermediate waste processing such as recovery, recycling and composting. The common mode of waste transportation is through trucks or hard carts for transfer of waste from households or premises to waste collection points. Most of the trucks are open which leads to waste dropping off during transportation.

Policy measures

In order to address challenges associated with waste transfer, the following policy measures shall be adopted–

- a) Save for biomedical and hazardous waste, all waste shall be transferred or transported to waste transfer stations or to [material recovery facilities](#) for sorting and separation or processing after which waste shall be transported to the appropriate landfill for final disposal as appropriate. However, Construction and demolition waste may be transported to specific areas approved by the county department responsible for waste management in accordance with the standards
- b) All waste transporters shall be registered and licensed by the county government as prescribed
- c) waste transportation services including plant and equipment shall conform to the prescribed standards
- d) The department responsible for waste management shall in collaboration with other public and private stakeholders establish market linkages between waste transporters and women, youth, persons with disabilities or other vulnerable groups involved in co-management of waste collection

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- and for purposes of economic empowerment of the groups and effective service delivery
- e) In accordance with Access to Government Procurement Policy, the county government shall provide preferential treatment to youth, women and persons with disabilities in accessing thirty percent of county government contracts for transfer and transportation of waste
 - f) In granting contracts for provision of waste transfer and transportation services, the county government shall consider a supplier's integration of service delivery with youth, women and persons with disabilities empowerment
 - g) waste transfer and transportation services from households, commercial, institutional or industrial premises shall be carried out by private sector service providers in accordance with prescribed standards and guidelines
 - h) The department responsible for waste management shall establish a system for transfer and transportation waste in informal settlements which do not have access to private sector provision of waste collection services
 - i) The department responsible for waste in collaboration with the departments responsible for physical planning and transport and National Environment Management Authority and in consultation with waste transportation service providers, designate specific routes and time schedule to be followed in transfer and transportation of waste

2.6.6. waste separation, processing and transformation

Context

Sustainable management of waste leads to processing and transformation of waste into economic value. As a result very minimal waste is actually disposed in

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the final landfill. Waste separation entails separating waste according to potential use such as recycling or recovery. Waste is separated into for example organics and recyclables (which are further separated into for example e-waste, plastics, metals, papers and junks such as wood among others). Waste processing and transformation entails material recovery processes such as composting, combustion and recycling of materials to make useful products.

The county lacks a structured system of separation, processing and transformation of waste into useful materials that may be utilized for other purposes. Most of the waste generated, which comes from urban areas, is disposed through open dumping in dumpsites. The county lacks a coordinated system for separation of waste and recycling. However, there are few to initiatives for collection of recyclable materials especially metal and plastics.

Policy measures

In order to address the problem of poor waste separation, processing and transformation, the following policy measures shall be adopted–

- a) The department responsible for waste management shall in collaboration with other relevant stakeholders mobilize local communities and neighbourhoods to promote and facilitate collection and separation of recyclable waste
- b) The county government shall set aside such land as may be appropriate, in a single or multiple lots for purposes of materials recovery and processing

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- c) The department responsible for waste management shall in collaboration with national government and other relevant stakeholders establish a system for facilitating and promoting waste separation, processing and transformation (material recovery and recycling) which shall among others include facilitation of enterprises involved in waste processing and transformation to access waste placed in transfer stations, technology acquisition, technical assistance and capacity development.
- d) Final waste separation shall be undertaken at the transfer stations. Other waste processing and transformation processes may take place at a transfer station
- e) The county government shall adopt appropriate economic incentives to promote private sector participation in waste separation, processing and transformation such as reduced fees, charges and levies for enterprises involved in waste processing and transformation
- f) The county government shall in collaboration and coordination with national government and relevant stakeholders promote investment in waste processing and transformation and establishment of wholesale and retail outlets for sale of recycled products or recovered materials
- g) The county government shall in accordance with the Public Procurement and Disposal Act undertake purchase of appropriate products produced from processed and transformed waste in order to promote market development in waste management
- h) The department responsible for waste management shall in collaboration with national government entities and relevant stakeholders develop and adopt guidelines, standards and operating procedures for separation, processing and transformation applicable to each waste stream in

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accordance with the established standards and best practices. All waste generators shall comply with the established guidelines

- i) Where there is no capacity to recycle any waste stream or type of waste, the county government shall promote and facilitate market linkages between local and external investors for purposes of supply chain management
- j) The department responsible for waste management shall, in collaboration with relevant stakeholders establish technology and innovation hubs for development of waste management technology

2.6.7. waste disposal

Context

waste disposal is the final stage in the process of discarding waste. Any material that cannot be recycled or recovered is disposed mainly in the landfills or through incineration especially for biomedical waste. A sustainable waste management system is where few materials of waste are finally disposed.

However, most of the waste generated in the county is disposed through dumping in the landfills which or open grounds in public places. This, as noted earlier poses a threat to public and environmental health. The landfills in the county are poorly sited especially in relation to residential areas and do not meet the appropriate standards. The county has no sanitary landfill hence the waste disposed in the open grounds has direct negative impact on the environment and water resources. The ultimate goal is to have zero waste to landfills.

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Policy measures

In order to address challenges associated to waste disposal, the following policy measures shall be adopted–

- a) The department responsible for waste management shall in collaboration with the department responsible for physical planning, National Environment Management Authority, residents in the potential areas for siting landfills and other relevant stakeholders designate, gazette and develop controlled sanitary landfills in accordance with the waste spatial plan and the county spatial plan
- b) All the open public places where waste is dumped shall be cleared and placed under the respective intended public use
- c) The department responsible for waste management shall ensure and facilitate waste treatment before final disposal
- d) The department responsible for waste management shall develop a system and standard operating procedures for management of sanitary landfills
- e) For purposes of disposing biomedical waste, the department responsible for health in collaboration with the department responsible for waste management and relevant county and national government agencies shall adopt appropriate modern technology and processes for disposal of biomedical waste and shall ensure that private health facilities dispose biomedical waste in accordance with national standards
- f) The county government may provide services to private health facilities for purposes of managing and disposing biomedical waste

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- g) The county government shall implement and where applicable, enforce national law and policy that prohibits disposal of waste into rivers and water resources
- h) Where the national government has established a landfill, the county government shall utilize the landfill for purposes of disposing the waste designated for disposal in the landfill.
- i) The county government may collaborate with other counties in establishing sanitary landfills

2.6.8. Waste management financing

Context

Provision of sustainable waste management services requires substantial funding. It requires coordinated financial investment from public, private and voluntary sectors. Some of the waste management processes such as processing, transformation, treatment and disposal are capital intensive. Consequently, for the county to achieve intended objectives for waste management, there is need for adoption of diverse funding models and instruments. In addition, cost sharing through user fees and charges are effective mechanisms for sustainable waste management. Currently, there is low funding for waste management in the county. There is low private sector investment in waste management. In addition, public funding in the sector is below the levels required for financing the municipal waste management services.

Policy measures

In order to address the policy challenges in financing waste management, the following policy measures shall be adopted–

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- a) There shall be levied appropriate user fees and charges for waste management. The fees and charges shall be levied in accordance with the tariff policy stipulated under the County Governments Act.
- b) The county government shall provide incentives for promoting waste recycling and waste material recovery which may include reduced fees, levies and charges for enterprises engaged in the two processes
- c) The county government shall in consultation with national government adopt public-private partnership model of financing various processes in waste management. Such partnership shall be based on efficiency, cost effectiveness and sustainability of the model in provision of waste management services
- d) The county government shall facilitate its officers to acquire technical skills and develop competencies for public private partnerships management especially in initiation, development, negotiation, award and management of public private partnerships in waste management
- e) Subject to Public Finance Management Act, at least fifty percent of the user fees and charges collected from waste management services shall be utilized for the purpose of defraying operational costs associated with provision of waste management services
- f) The county government shall subsidize waste management services to low income areas and informal settlements in accordance with the County Governments Act
- g) The county government shall progressively increase budgetary allocations for implementation of this policy and laws related to waste management

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- h) The county government shall mobilize resources in the form of grants and donations from development partners for financing waste management processes

2.6.9. Waste management and informal sector

Context

Informal sector is a key player in waste management. Most informal actors in waste management include waste pickers, community based organizations, self help groups, small and micro enterprises and individual actors such as waste pickers and sorters among others. They play a significant role in the whole waste management value chain. However, their work exposes them to numerous health conditions and diseases especially respiratory ones. In addition, whereas they generate some income from their activities, the incomes are very low. Due to limited access to capital, most of their work is undertaken manually. The county government recognizes the valuable role the informal sector plays in waste management and the strategic need to facilitate their role so as to promote employment creation.

Policy measures

In order to promote participation of informal sector in waste management, the following policy measures shall be adopted in addition to measures described above –

- a) The county government shall facilitate the informal groups or individuals involved in waste management value chain to access affordable capital for waste management enterprise development

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- b) The department responsible for waste management shall initiate capacity development programs for informal sector engaged in waste management as well as facilitate and support the sector to adopt health requirements
- c) The department responsible for waste management shall in collaboration with other relevant stakeholders facilitate and promote market linkage between the informal sector and investors in waste management
- d) The county government shall where appropriate develop service agency agreements with the informal sector in the provision of waste management services

2.6.10. Waste management and land use planning

Context

The quantities of various of waste streams generated depends on the population density of waste generators in a given locality. Different zones produce different types of waste and in various quantities. The location of waste collection points, application of waste collection, transfer and transportation services are based on spatial planning in a given locality. Further, the siting of waste disposal areas is based on physical characteristics of the locality such as soil structure, terrain, population density and impact of the locality to other physical resources such as water resources. Consequently, land use planning has a significant role to play in ensuring sustainable waste management. The county government has no waste management spatial plan to, which guides various interventions in waste management services.

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Policy measures

In order to ensure that there is sustainable waste management, it will be essential to have appropriate and effective zoning for waste management. In this regard–

- 1) The department responsible for spatial planning in collaboration with the department responsible for waste management and other relevant stakeholders, shall–
 - a) carry out waste management survey using Geographical Information System (GIS), which shall consider –
 - (i) land use: topography, drainage and soil
 - (ii) infrastructure (transport, communications, health, education, water and energy)
 - (iii) Economic base of the area (urban informal economic base)
 - (iv) human settlements (density and land use)
 - (v) institutions such as schools and other government institutions, industries and commercial enterprises and non –state organizations
 - b) develop the county waste management spatial plan which shall include details for each sub-county and ward as the core decentralized spatial units
 - c) designate the location of the collection points, transfer stations, composting sites, waste recovery facility and landfills in accordance with the waste management spatial plan

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- d) regulate waste management in accordance with the waste management spatial plan
- 2) The department responsible for waste management shall in collaboration with departments responsible for spatial planning and county administration map the county into waste management zones for purposes of ensuring efficiency in service delivery and coordination of stakeholder participation in waste management
- 3) The county government shall ensure that the county spatial plan designates zoning and setting up of industries that are integrated in terms of use of waste generated in some industries which is utilized as raw materials in other industries

2.6.11. Planning, Partnerships, Participation and Inter-governmental Relations

Context

waste management is complex due to multiplicity of social, economic and environmental determinant factors and stakeholders. There is no single policy measure or stakeholder that can manage waste effectively. There is need for inclusivity of diverse stakeholders in waste management processes. Users and providers of waste management services must partner and collaborate in order to deal with all aspects of waste management. All the stakeholders should be involved in identifying policy options and implementing programmes related to waste management. The county government has a weak stakeholder management process in regard to waste management. Users and non-state providers of waste management services are usually excluded from active participation in the management process.

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Policy measures

In order to ensure inclusion and participation of users and providers of waste management services, the following policy measures shall be adopted–

- a) The department responsible for waste management shall in collaboration with relevant stakeholders prepare a county waste management plan which shall provide a framework for implementing this policy, national policy and any law enacted for purposes of implementing this policy.
- b) The department responsible for waste management shall in collaboration with relevant stakeholders –
 - (i) initiate programmes for mobilizing and creating awareness among residents, local communities and neighbourhoods to participate in sustainable waste management
 - (ii) establish mechanisms to receive and handle complaints related to waste management service delivery from the respective localities
 - (iii) facilitate community or area-based forums for users and providers of waste management services to deliberate on emerging issues in waste management to as to enhance efficiency in service delivery
 - (iv) promote and facilitate stakeholder-led initiatives on waste management
- c) The department responsible for waste management shall consult, inform and coordinate with relevant stakeholders on any matters related to service delivery on waste management

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- d) The county government shall liaise, consult, collaborate and coordinate with the national government and neighbouring counties on matters related to waste management

2.6.12. Information, Education and Communication

Context

Waste management depends on a combination of regulatory, service delivery and information-based tools. Whereas regulatory tools are instrumental command and control instruments in behaviour in matters such as generation, handling and disposal of waste, they cannot be fully effective unless they are complemented by behaviour change by users and providers of waste management services. Sustainable waste management depends on value-based approach by individuals and entities. Strategic communication and messaging on waste management is instrumental in shaping public opinion and support. The county government lacks effective information, education and communication system and processes. There is low awareness on sustainable waste management in the county.

Policy measures

In order to increase awareness and change behavior on waste management, the following policy measures shall be adopted–

- a) The department responsible for waste management shall in collaboration with relevant stakeholders develop and implement information, education and communication system and strategies targeting diverse users and providers of waste management services and shall ensure that such information is available to all stakeholders and county residents

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- b) The department responsible for education and department responsible for waste management shall in collaboration with national government ministry responsible for education and relevant stakeholders develop information, education and communication materials and initiate dissemination, education and awareness creation programmes targeting children and youth on waste management
- c) The department responsible for waste management shall in collaboration with the department responsible for information technology develop technology-based communication strategies on waste management
- d) The department responsible for waste management shall in collaboration with the department responsible for information technology and relevant stakeholders establish a waste information management system

2.6.13. Research and development

Context

Waste generation is dynamic and changes as society develops. The form of waste streams changes as production processes change and new products and packaging emerge. Consequently, there is need for continuous innovation in intervention measures and strategies in waste management. In addition, there is need for evidence-based decision making on waste management. There are minimal research efforts undertaken by the county government in regard to waste management.

Policy measures

In order to address the policy gaps in research and development, the following policy measures shall be adopted–

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- a) The department responsible for waste management shall facilitate a capacity development programme for personnel in research and development
- b) The department responsible for waste management shall establish a research unit to coordinate, promote and undertake research and development related to environment management and governance
- c) The department for waste management shall undertake and collaborate with other relevant research institutions and institutes of higher learning in carrying out research and development in waste management
- d) The department responsible for waste management shall in collaboration with relevant stakeholders disseminate research findings
- e) The department responsible for waste management shall establish a research data management system
- f) The county executive committee shall ensure that evidence generated through research informs decisions related to management

Chapter 3

Policy Implementation, Monitoring and Evaluation

3.1. Introduction

This chapter outlines the mechanisms for implementing, monitoring and evaluating the policy. For intended policy outcomes to be achieved, there is need for effective policy implementation, monitoring and evaluation. This will require strong institutional development, inclusion of stakeholders in governance, legal and administrative reforms and integration with the county performance management system.

3.2. Policy Implementation

3.2.1. Institutional framework

In order to ensure effective and efficient waste management, the following institutions shall embrace multi-sectoral collaborations drawn from lead agencies, private sector, county departments, institutions and other relevant stakeholders. The multi-sectoral collaborations shall hold discussions when need arises.

3.2.2. Planning and Performance Management

Implementation of the policy shall be undertaken through development of environment sectoral plan (or sectoral plan dealing with waste management). In accordance with the County Governments Act, the environment sectoral plan shall be part of the County Integrated Development Plan (CIDP 2018-2022). The county Medium Term Expenditure Framework (MTEF) and the County Fiscal

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Strategy Paper shall adequately cover the strategies and programmes provided under the environment sectoral plan. The sectoral plan shall be implemented annually through the annual development plan

Implementation of this policy shall be integrated with the county performance management system through the sectoral plan. The annual performance contracting and targets for respective departments responsible for implementation of this policy shall be aligned to activities and programmes in the environment sectoral plan so as to ensure complementarity and inter-sectoral approach in implementing this policy. Data related to policy implementation shall be collected on a continuous basis in order to inform decision-making by the county executive and other sector stakeholders.

3.2.3. Legal and Administrative Reforms

In addition to programmes and projects to be designed under the environment sectoral plan (or sectoral plan dealing with waste management), appropriate legal reforms related to waste management shall be undertaken. There shall be prepared for enactment or adoption laws, guidelines, strategies, standards and frameworks. Key among them shall be enactment of County Waste Management Bill.

3.2.4. Collaboration with National Government

As stipulated under Article 6 and 189 of the Constitution, the county government shall institute measures to cooperate, collaborate, consult and partner with the national government in implementing this policy as well as implementing national policies, laws and standards related to waste management . In this regard, the department responsible for waste management shall initiate intergovernmental

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collaboration mechanisms with the national government ministry of environment and other agencies responsible for matters related to environment.

3.2.5. Staff Capacity Development

The department responsible for waste management shall in collaboration with the department responsible for human resource management and the County Public Service Board resource the department as well as other county departments responsible for implementing this policy, with highly qualified professional staff in line with respective policy measures. In addition, the department responsible for waste management and department responsible for human resource management shall develop and facilitate continuous professional and capacity development for all relevant officers in various departments responsible for implementing this policy.

3.3. Policy Monitoring and Evaluation

3.3.1. Design of indicators

In order to ensure effective implementation of this policy, there shall be a continuous monitoring of the results of programmes and activities undertaken to implement this policy. The department responsible for waste management shall in collaboration with national and county stakeholders design the core outcome indicators to be adopted in measuring the results.

3.3.2. Monitoring and evaluation framework and system

This policy shall be evaluated in accordance with overall county monitoring and evaluation framework, standards and system. The following requirements shall apply in regard to policy monitoring and evaluation–

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- a) The department responsible for waste management shall designate staff to be responsible for coordinating monitoring and evaluation of implementation of this policy.
- b) In each period of 3 months, the department responsible for waste management shall prepare a report on the progress made in implementing the policy, which shall be submitted to county executive committee for consideration and decision-making.
- c) There shall be annual policy review, which shall involve all waste management stakeholders. The review shall provide feedback on successes, progress and challenges related to policy implementation and whether policy outcome have been met in each year. The policy review report shall be submitted to county executive committee member for consideration and decision-making
- d) The policy shall be evaluated at the end of each period of 5 years to assess the extent to which policy outcomes have been realized including policy impact
- e) The department responsible for waste management shall disseminate policy evaluation reports to county waste management stakeholders.

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Appendix

COUNTY GOVERNMENT OF NAKURU DEPARTMENT OF ENVIRONMENT, NATURAL RESOURCES, ENERGY AND WATER WASTE MANAGEMENT GUIDELINES

PART 1

The County Government of Nakuru shall involve Private Sector in Waste Management within the areas of jurisdiction.

PART II

- i. The following policy guidelines shall be administered by the County Secretary/County Director of Environment or any other authorized officer.
- ii. Disposal of waste shall be done only in approved designated disposal sites or as may be directed by the Director of Environment.
- iii. All waste producers, handlers, transporters, disposal agents and County Government of Nakuru shall when and where necessary facilitate separation, re-use and recycling of waste shall be directed by the Director of Environment.
- iv. All private operators in waste management shall be licensed in accordance with the stipulated licensing/permit regulations.
- v. All private operators shall appoint qualified managers as approved by the Director of Environment.
- vi. The County Government of Nakuru shall be the overall supervisory and regulatory authority in storage, handling, transportation, separation and disposal of all generated wastes within its jurisdiction.
- vii. Every waste transfer, treatment or disposal site shall be subjected to an environmental impact assessment in accordance with the Environmental Management and Co-ordination Act, 1999 for Special Waste Collection (SWC).
- viii. All hazardous waste shall under-go necessary pre-treatment by the producer or licensed Private Collector before transportation to designated disposal ground or transfer site.
- ix. Any radio-active waste generated handling, transportation, storage or disposal shall be authorized and supervised by the Radiation Authority in the Ministry of Health in liaison with County Government of Nakuru.
- x. Clinical and pathological waste handling and transportation shall be done by specialized companies authorized by County Government of Nakuru and disposal shall be by incineration or by burying in designated and constructed underground pits approved by the County Government of Nakuru.
- xi. All e-waste should be handled as per laid down regulations.

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PART III

LICENCING POLICY AND REGULATIONS

- All companies, individuals enterprises or otherwise shall pay permit fee to the County Government of Nakuru in accordance with their classification and category as approved by the County Director of Environment.
- The contract shall be renewed every three years while permit is renewed yearly subject to performance and meeting other requirements prerequisite.
- The permit fee shall be subject to review from time to time.

Categorization of Waste Collectors

- 1) General Waste Collection (GWC)

To handle domestic, commercial, garden and non-hazardous agricultural waste

- 2) Specialized Waste Collectors (SWC)

To handle clinical

- 3) Toxic, hazardous-industrial.

Authorization & Licensing

In line with provisions of Section 33, 34, & 37 of the Environmental Management By-Laws, written application shall be forwarded to the Director of Environment for consideration and approval.

The application shall provide the following details;

Service provider – Name

- Copy of identification/registration
- Contacts – Telephone, Box number, Office location, email

In addition to one acquiring an authorization letter from County Director of Environment, appropriate business permit from county Director of Environment

Storage

- Wake generator to provide adequate and approved waste receptacles.
- To store waste in approved designated areas accessible
- Bins and the waste storage room(s) should be spacious, well lit and with an impervious wall and floor that is easy to sanitize.
- All measures should be employed not to continue, pollute or be source of nuisance to neighborhoods and Environment.**Sanitization**
 - All tools, equipment's, PPE, stores and transport facilities should be cleaned and sanitized as per usage in order to render them free from dirt, germs and foul smell.
 - Sanitary pads waste to dispose of other than through incineration, should be first sanitized in an appropriate method/procedure as prescribed by County Director of Environment.

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- Method/procedure, equipment's and sanitization materials will be spelt out by service provider and approved and supervised by County Director of Environment or his representative.
- The process of sanitization should be designed and executed in a manner that will not be source of danger to personnel, neighborhood and Environments.

Disposal

- Sanitary pads waste will be disposed of through incineration in an approved licensed facility (Incinerator) or in an approved method and in a designated site.
- In applying for authorization to engage in the sanitary pads waste handling, the applicant shall spelt out disposal method to be employed for consideration and approval.

Records/Reports

- All necessary records and documents required in provision of this service will be well/correctly recorded and kept and always available for perusal by the County Director of Environment or his/her representative and any other authorized Government Officer/authorized person.
 - Customer records
 - Service provision agreement(s)
 - Service provision time table and delivery documents.
 - Quantity of bin per customer and waste collected and dates.
 - Sanitization and or disposal records.
 - Authorization/approval/permits documents/monthly reports to be submitted before 5th of subsequent month, the service provider will submit report of previous month to County Director of Environment.
The report should show the following;
 1. Customers/Institutions served.
 2. Quantity of waste collected, sanitized and or disposed.
 3. Sanitization procedure used – including quantity and date.
 4. Final disposal – records/proof.
 5. Final disposal – records/proof.

GENERAL

1. In addition to above guidelines the service provider must abide by all other laws, regulations and an appropriate practice incidental to sound waste handling, collection, transportation, storage and disposal.
2. The whole process of provision and servicing of sanitary bins will be maintained in hygienic and sound Environment practice.

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3. The County Government of Nakuru remains the sole supervisor and regulator of waste handling and treatment/disposal as per the relevant Acts, Rules and Regulations incidental to the service.
4. The breach of any of these guidelines, policy guidelines in Private Sector involvement in waste Management, relevant laws, by-laws and or instructions from the County Director of Environment will lead to revocation of authorization, permit and or may lead to legal action.
5. That these regulations are subject to review from time to time in view of improving the service, adhering to laid down regulations/laws.
6. The County Government of Nakuru or any of its officers are exonerated from any liability that may arise in course of operation – service provision.
7. The County Government of Nakuru will ensure compliance to thee guidelines in order to ensure the service is carried out in a way that may not compromise health and or Environment sustainability.
8. Before authorization the service provider (individual, organization, firm or company) will sign a declaration form – stating having read and understood the guidelines/rules and that the individual or organization will follow the rules.

DECLARATION TO ABIDE TO GUIDELINES OF WASTE MANAGEMENT SERVICES.

Particulars

Name.....
.....

Organization.....
.....

Registration
Certificate.....

ID card No.....

Address P.O
Box.....Town.....

Telephone/Mobile No.....E-Mail
address.....

Physical
Address.....
.....

Directors:	<u>Name</u>	<u>ID No.</u>	<u>Contacts</u>
.....
.....
.....

Declaration

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I/We.....
.....

Declare that I/We have interest to engage in and or am/we are engaged in waste management Service Provision. I/We have read and have understood the content of the guidelines and pledge to abide to the guidelines, County supervision and direction in incidental to the service provision.

Signed

1.Name.....
.....Position.....

2.Name.....
.....Position.....

3.Name.....
.....Position.....

Permits required

- Service provision permit
- county wastes disposal fee and tipping charges per trip
- refuse removal inspection fee per zone for firms/CBOs per month(GWC)

NOTE: All waste collectors shall register with umbrella organization (body of waste collectors firms) and attend a bi – annual meeting chaired by County Director of Environment.

PART IV

REGULATIONS

- 1) The private waste operator shall be legally registered with the registrar of companies or any other relevant body. Evidence of registration will be availed by the operator who will supply a verified copy to director of Environment.
- 2) Toxic and clinical wastes should be handled by specialized companies, which shall have qualified staff. The operator shall apply special ways and means in collecting, handling, transporting, pre- treating and disposing of the waste. Vehicles transporting such wastes shall be clearly marked “**HAZADOUS WASTE**”
- 3) All waste transportation vehicle shall be suitably covered to avoid spillage on the street during collection and transportation

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- 4) The vehicles and equipment used by the operators for the purpose hereof shall have identification number allocated by the county director of environment and same be clearly and conspicuously mounted on the body of the vehicles
- 5) All vehicles, tools, equipment and other related machinery used by the operators shall be inspected and approved by the director of environment before commencement of operations and there after periodically during operations
- 6) The operator should keep register indicating waste collected and areas covered including evidence of proper disposal of the same for inspection by the director of environment. In addition the operator shall avail to Director of Environment a comprehensive client inventory on monthly basis
- 7) Containers and waste handling facilities used shall have the company logo clearly and bodily inscribed
- 8) The vehicles and equipment's shall be maintained in clean state at all the times
- 9)
 - i) All staff engaged in waste management services shall have appropriate protective gears while on duty
 - ii) The staff should have good conduct and good customer relations quality
- 10) The operator shall dispose of waste at designated sites only or at points approved the county director of environment
- 11) No waste shall be transported or disposed of on weekends and between 4.00 pm and 8.00 am on week days and between 12.00 noon and 8.00 am during weekends and public holidays without written approval from county director of environment or environmental officers
- 12) The operator shall have an office at the zone of operation which shall be used among others things to receive payments and complaints which may emanate from the client served. The office shall be open from Monday to Saturdays
- 13) Every waste operator shall operate promptly (at most 48 hours) to complaints raised by their clients and / or members of the public and council
- 14) The county director of environment shall have the right and access to inspect the various contracts between operator and their clients
- 15) All operations in waste management shall be carried out under the guidance of the county director of environment

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- 16) Each operator shall sign an agreement to adhere to all requirements, specification and standards as may be directed by the county director of environment from time to time
- 17) Each operator shall obtain a permit (s) as required by law and all regulations
- 18) If the private operator is found to be in breach of any of these regulation(s), the county director of environment shall cancel or suspend the operators permit or take any other action he may deem appropriate

PART V

PERSONNEL

All personnel engage in waste collection shall be provided with adequate and appropriate personal protective gears that shall be well maintained and labeled. The protective gear shall be worn at all times during waste collection and transportation

1. The private waste collectors in liaison with the council shall ensure that all the personnel engaged in waste collection shall be well informed of all waste management issues and hazards associated with waste handling
2. PRIVATE waste operators shall engage waste collection managers/ supervisors who shall possess the following qualification or disciplines :-
 - Environmental related courses or Environmental Health Sciences
 - waste management course or reasonable span of experience on waste management level of supervisor from a reputable organization and should be literate
3. All laws, rules and regulations pertaining to labour must be followed and adhered to before engagement of human labour and throughout course of operation

PART VI

VEHICLES, TOOLS AND EQUIPMENT

In addition to manufactures' standard specification, the following shall apply:-

- 1) The vehicle / equipment shall be complete with all fittings and fully operational in every aspect with the requirements of the Traffic Act and any other law in order to run on public highways

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- 2) Vehicles used for the transportation should have a tipping / ejection mechanism or any other mechanism acceptable to the county director of environment
- 3) Capacity recommended for refuse collection vehicles should be 3 ton, 7 ton and 8-10 ton

PART VII

COLLECTION MODE AND FREQUENCY

- 1) Garbage collection shall be at kerb or road reserve well poisoned by garbage producer for ease of collection
- 2) Garbage should be in suitable receptacles supplied by the private waste handler at a fee borne by waste generator
- 3) Where the waste to be collected cannot be placed in waste receptacles provided, the producer shall ensure the waste is well wrapped in any other suitable material such as carton which facilitate easy of collection
- 4) Collection and disposal of waste emanating from rearing of dairy animals, fowls and any other domestic animal shall be by private arrangement made by the producer and shall not be linked to domestic waste collection arrangement
- 5) Collection of waste from households shall be at least once; while from trade premises shall be at least twice a week
- 6) Waste collection time table shall be drawn and approved by the county director of environment before commencement of the services and the same shall be made available to the clients served and the director of environment
- 7) In the event that the time table (of collection) cannot be adhered to for unforeseen circumstances the operator shall undertake to inform and discuss the same with both the county director of environment and the client served
- 8) The private waste operator will be responsible for collection of dead pets without extra charge to the owners (cats, dogs and parrots) and reporting of other dead animals for management by relevant authorities and departments
- 9) Waste collection involve litter management along, road reserves and other public places and removal of illegal dumpings' which fall under zone of operation of the particular waste collector

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- 10) Any cleanup exercise facilitated by well-wishers shall be organized by the county director of environment with liaison with firm collecting garbage in affected zone

PART VIII

COMPLAINS RESPONSE

- 1) The private waste handler / collector shall operate an office within the area of operation which shall be used among other things to receive complaints from clients served and a register of the same maintained
- 2) The private waste collector shall respond promptly to the complaints raised and ensure recurrent of the same does not happen
- 3) Where the private waste collector fail to respond to complaint (s) raised, the matter shall be reported to the county director of environment who will take the necessary action
- 4) Complaint over waste management issue by private waste collectors against a member of the public shall be in written note and where the response is not forthcoming; the private waste handler shall report the matter to the county director of environment who will take appropriate measures

PART IX

FINANCE

- 1) Any private garbage collector before signing an agreement with county shall be required to proof financial ability to engage in refuse collection, transportation and or disposal services
- 2) The private garbage collector shall obtain a license / permit at a cost and conditions stipulated by the county from time to time
- 3) The private garbage collector shall levy and collect charges to all clients within area of jurisdiction as stipulated in the agreement with the county and any review of the same shall be subject to approval by the county

PART V

GENERAL

- 1) The County Government of Nakuru is the sole supervisor and regulator in waste handling (collection, disposal, sorting and recycling)

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- 2) Private waste operator shall sign a contract of three years renewal of the same shall depend on performance and competitive bidding
- 3) The County Government of Nakuru shall take all reasonable and lawful measures including enacting the relevant By – laws aimed at ensuring that the private sector involvement in waste management is successful
- 4) The policy regulations shall be subject to review from time to time

NOTE

The Draft is Subject to Review as Per the Guidance of County Director of Environment, Natural Resources and Energy.