RODENT CONTROL STRATEGY POLICY

Item B-HSD (01-2011)) MC 19/10/2011	**RONDENT CONTROL STRATEGY POLICY**

RESOLVED:

1. **That** the contents of the report of the Rodent Control Strategy Ekurhuleni Metropolitan Municipality **BE NOTED**.

2. **That** the Ekurhuleni Metropolitan Municipality Rodent Control Strategy attached to the report as Annexure **"A" BE APPROVED** for implementation within the Ekurhuleni Metropolitan Municipality area of jurisdiction, subject thereto that the mentioned approval **EXCLUDES** the budget attached to the strategy document.

EKURHULENI METROPOLITAN MUNICIPALITY

Ekurhuleni
METROPOLITAN MUNICIPALITY

HEALTH AND SOCIAL DEVELOPMENT DEPARTMENT

RODENT CONTROL STRATEGY

2011-2015

Date compiled: June 2011

CONTENTS

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EXECUTIVE SUMMARY

Poor service delivery resulting in poor sanitation, unkempt open spaces, unmaintained drains, illegal dumping and poor hygiene on private property is impacting on the increased rodent infestation in the Ekurhuleni Metropolitan Municipality (EMM). In order to effectively deal with this problem, an integrated Pest Management approach is adopted by the EMM. The priority areas for the 2010 – 2011 periods as part of the clean and green programme are Katlehong, Germiston, Wattville, Kwa-Thema and Tembisa. It is particularly in these areas that department will be working in partnership with communities in dealing with the rodent infestation problem.

The aim of the programme is to integrate service delivery and reduce the rate of infestation in the priority areas from 90% to less than 30% by 2015.

Key results areas will include the establishment of stakeholders' forum for each priority areas which will ensure co-ordination of service delivery and the involvement of the community. There will be intervention that are aimed at bringing down the rodent population down to acceptable levels through a number of pest control measures such as baiting and trapping. Communities will be educated in block meetings and through Ward Councillor meetings. At a later stage there will be law enforcement by the various departments under the leadership of the Metro Police.

The key results metric include improved service delivery, which means improved refuse collection, reduced illegal dumping and maintenance of drains. There will be a reduction of environmental deficiencies in premises following inspections that will be done during premises surveys. This is because residents will be educated on control measures to take control of their environments and where there is no cooperation; use will be made of private contractor and costs be recovered from the owners. The last key results matrix is an increased suppression of rodent infestation which will be maintained as a result of departments' ongoing maintenance programmes.

In terms of the implementation plan for the 2010 – 2011 period the ultimate outcome is to achieve a 10% reduction of the rate of infestation for the priority areas

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1. INTRODUCTION

This document presents the Ekurhuleni Metropolitan Municipality (EMM) rodent control strategy. It begins by providing a situation analysis followed by a discussion of the problem statement, the purpose, the approach or methodology of the strategy and the urban rodent control programme. The discussion continues with an overview of the key results areas, the results matrix, implementation plan and the budget summary.

2. SITUATIONAL ANALYSIS AND PROBLEM IDENTIFICATION AND DESCRIPTION

The Ekurhuleni Metropolitan Municipality has a population of about 2.7 million, over an area of 1 928 square kilometers. There are 896 117 households with about 112 informal settlements. In terms of the Health Act 63 of 1977, section 20, it is the responsibility of the municipality to keep its area of jurisdiction in an environment that is free of any health nuisance or health hazard. Rodents are known to be carriers of disease that can affect the health of the public.

There are about over thirty human diseases that can be transmitted by commensal rodents. These include bacterial diseases such as Leptospirosis; Listeriosis; Salmonellosis; other ectoparasites; endoparasites and viruses diseases. These diseases pose a health risk to the community and needs to be prevented through adequate rodent control measures.

An analysis of the rodent infestation problem has been identified to be found in open spaces; on pavements; households whether developed areas such as central business districts or the former black townships. However there seems to be a more concentration in the less developed areas such as the Kathorus areas; Kwa Thema; Wattville and Tembisa.

Factors that have been found to contribute to the growth of rodent populations are the amount of harborages that are provided and the availability of food as a result of poor sanitation as well as the lack of implementation of adequate control measures in an integrated approach. The problem statement is therefore as follows:

Poor service delivery results in poor sanitation, unkempt open spaces, unmaintained storm water drain, illegal dumping and poor environmental hygiene on private property impacting on increased rodent harborages.

PROJECTS ON RODENTS

The Directorate was involved in a project of catching rodents with cages where over 50 000 rodents were caught and killed during the period 2004 to 2009. This project involved a cooperative called Hlokomela who initiated the project in the areas of Katlehong and was subsequently moved to other areas of the Metro. The Hlokomela group was provided with cages by the EMM and engaged volunteers from the community to take the cages to the household for baiting over night. On the next day in the morning the Pest Control Team took the cages for gassing and killing of the rodents and returned the cages to the volunteers.

Owls

Owls were bought from the company called Eco-solutions. This company brought the owl chicks to about four schools in the area of Katlehong and Thokoza. School children were educated about the owls and would feed them until they were ready to be released in about four week's time. After they were released three of the schools reported that the owls were killed the same day they were released. Only one of the schools reported that they assisted in reducing the infestation rate.

Bucket

The bucket system was tested in Tembisa in the Phomolong section. It involves halve filling of a twenty liters bucket with water. Sunflower seeds are then placed into the water and a string tied to the bucket to allow rodents to use it to get to the sunflower seeds.

Once in the water they would swim in an attempt to get out until they drown. This project was not successful since most of the members of the community were not well informed about the project.

Private Service providers on Pest Control were used in the Vukuzenzele Informal Settlement and Lindelani Informal Settlement. The rodents were killed using poison baits and some success was reported though it did not last long since recent reports of infestation have been reported.

An evaluation of the projects revealed that these projects, though some had successes and some failures, the problem was reoccurring because they were targeting the killing of rodents without emphasizing on the removal of the actual causes of the problem. It has therefore been necessary that we apply a holistic and more comprehensive approach based on the Integrated Pest Management approach.

Date compiled: June 2011

3. PURPOSE OF THE STRATEGY

The purpose of the rodent control strategy is to provide a plan that outlines the importance of an integrated approach in dealing with the problem of rodent infestation. It is to outline the roles of the stakeholders that are required in order to prevent, suppress and even eradicate this problem in the area of jurisdiction of the EMM. Furthermore, the purpose of the strategy is to highlight the use of a combination of methods of control in order to ensure effectiveness in combating the high infestation of rodents.

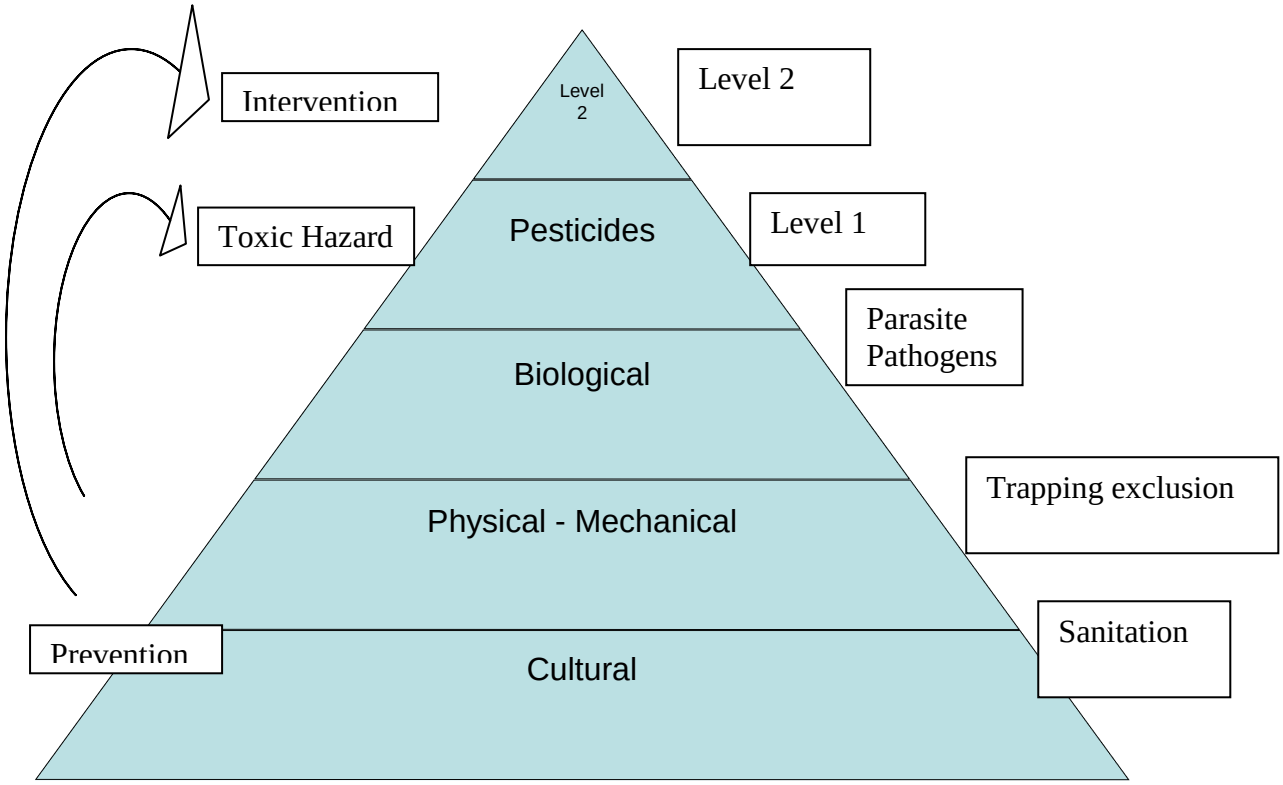
4. APPROACH OR METHODOLOGY

The Environmental Health Directorate is using the Integrated Pest Control Management approach in its strategy in managing pests. This approach of pest management is defined as a strategy of pest containment that seeks to maximise the effectiveness of biological and cultural control factors, utilising chemicals only as needed and with a minimal application. It has preventative and reactive components. It is further defined as an ecologically based system in which all available techniques are evaluated and consolidated into a unified programme to manage pest populations so that economic damage is avoided and adverse side effects on the environment are minimised.

The Integrated Pest Management (IPM) approach as defined above implies multiple techniques are used to suppress or prevent pest in a particular area. Even though this strategic approach puts emphasis on none chemical strategies chemical approach may be an option used in conjunction with other methods.

There are four basic principles in the definition which underpin IPM approach. These are cultural, physical, mechanical and biological factors that must be considered in their order of hierarchy as outlined below when managing pests.

IPM HIERACHY OF ACTIONS



Cultural Control
Cultural control requires a method of controlling factors in the environment to suppress or eliminate pest. It refers to issues of elimination of availability of food water or shelter that supports the growth of the pests.

Mechanical and Physical Control
This refers to a method of controlling pests, making use of traps or exclusion of pest from entering building e.g. glue traps or filling voids.

Biological Control
In this method of control, use is made of predators or disease organisms to control populations. An example is the use of parasitic wasps that kills other developmental stages of the pest. This method requires to be combined with other methods to be effective. Another example is the use of owls in the control of rats and mice.

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Chemical Control
The chemical method of control involves the use of pesticides which was a method that was once considered the most effective method of control. Pest resistance rendered a number of pesticides ineffective. However chemical control needs to be one of the methods to be used though emphasis being put on non-chemical control.

5. URBAN RODENT MANAGEMENT

An urban rodent management programme has four key components which include surveys, tolerance limits, interventions and evaluation.

Surveys

The surveys are done to determine the extent of the pest problem in order to identify its causative factors and the plan of action that must be implemented. Surveys are done targeting blocks of houses making use of survey forms that are completed by the Environmental Health Practitioners. However in view of the staff shortage, it is proposed that volunteers be trained and work under the guidance of the qualified Environmental Health Practitioners.

Threshold levels

This means the level that the pest population reached which requires that action must be taken in order to control and prevent the pest from causing injury or harm.

These threshold levels differ for the different pests. In the case of rodents the threshold level is that action needs to be taken even on seeing one rat. According to the Integrated Pest Management approach for rodent control, the goal is to reduce the rodent population to a level that they no longer cause an adverse effect on the community and the environment. The criteria for a community area that is in a block of houses is as follows:

Types of Major exterior Deficiencies Threshold Levels

Table 1

Category	Premises %	Colour on map
1. Rodent Infestation		
1.1. Active Rodent Sign	None in a block	Blue
	2% or less	Green
	2% - 25%	Yellow
	26% - 100%	Red
2. Rodent Food		
2.1. Unapproved refuse storage	None in a block	Blue
	30% or less	Green
	30% - 60%	Yellow
	61% - 100%	Red
2.2. Exposed Garbage	None in a block	Blue
	15% - less	Green
	15% - 30%	Yellow
	31% - 100%	Red

(Source: Centre for Disease Control; USA)

The rate of infestation is calculated as the number of premises with active rodent signs divided by the number of premises on a block times 100.

The rate of unapproved refuse storage is calculated by the number of premises with unapproved refuse storage divided by the total number of premises on a block times 100.

The exposed garbage is calculated as the number of premises with exposed garbage divided by the total number of premises in a block times 100.

Date compiled: June 2011

Interventions

These refer to measures that are taken following reports obtained from the surveys. They could take the form of education and awareness, habitat modification, mechanical controls or the application of pesticides.

Evaluation

The success of the urban rodent management programme depends on periodic surveys as a means of evaluating the programme. Premises inspections comprising of first and second inspection are key in this programme. These will be done by EHP's together with volunteers as their assistants.

6. OVERVIEW OF THE KEY RESULT AREAS

6.1 STAKEHOLDERS INVOLVEMENT

It is important that key stakeholders activities be coordinated in order to ensure synergy in the processes involved in the control of rodents. These stakeholders are the councilors with their ward committee members, representatives from various departments such as Solid Waste, Environmental Health Practitioners, Parks and Cemeteries, Roads Transport and Civil Works, City Development, Housing and Ekurhuleni Metropolitan Municipality Police Department (EMPD).

The involvement of members of ward committees will be through the ward councilors who will assist in advising officials on gaining community mobilization and support. Solid Waste Directorate will assist with issues relating to cleaning/waste removal, which is one of the factors that contribute food supply to the rodents as well as harborage.

The Parks and Cemeteries Directorate is important as they are responsible for addressing the problem of overgrown grass which cause rodent harborages. They will also assist in the development of mini parks for greening purposes. Roads, Transport and Civil Works Department will assist in clearing of storm water drains which is where rodents harbor.

The Housing department will assist with the issue of reducing overcrowding on premises as it has an impact on the provision of infrastructure including the availability of refuse bins. Back yard sharks on premises are not usually provided with their own refuse bins resulting in refuse being improperly stored and thus encouraging feeding of rodents.

It is common for people to operate businesses from their homes without having gone through the route of obtaining the necessary consent use from town planning. In such cases when the business has health implications and health requirements has to be set, it becomes wrong for the Health Department to set requirements since the business is not permitted in terms of town planning legislation. It is therefore important and necessary that the City Development Department be involved in the rodent control programme, so that there will be coordination in the implementation of legislation of the various departments.

In order to ensure an effective implementation of law enforcement as part of the rodent control programme, the Ekurhuleni Metropolitan Municipality Police Department is required to assist in this regard.

6.2 Reduction and elimination of the rodent population

This strategic intervention deals with catching of rodents using cages, poison of rodents in rodent burrows in the outside periphery of wards and poisoning on council vacant premises, etc. For highly infested areas, service providers are employed to eradicate rodents. Households must be surveyed by the Environmental Health Practitioners to identify factors that cause the infestations. Owners of the properties are educated on the steps to be taken in the control of the infestations.

6.3 Cleaning of Public and Private property

The strategic intervention involve clean up campaigns driven by the Ward Councilors, ward committees and other stakeholders mentioned under 6.1 including community members.

6.4 Education and Awareness campaigns

Involve addressing community members at Ward Committee meetings and educating them on signs and symptoms of rodent infestations, causes of infestation and how to control rodents. Pamphlets on rodent control are also distributed to households. Schools within wards and media articles are also used to reach out to community members. In addition road shows are done involving artists and theatre groups to attract and educate members of communities on rodent management matters.

6.5 Law Enforcement

This is implemented as the last resort after all the first four strategic interventions failed. This strategic intervention involves issuing spot fines for illegal dumping and other related contraventions.

7. KEY RESULTS MATRIX

7.1 IMPROVED SERVICE DELIVERY

Rodent infestation is as a result of many contributing factors in the environment some of which need the intervention of other departments. This therefore calls for an intersectoral approach in dealing with these factors such that there is an improvement in service delivery as a whole. It requires that issues of illegal dumping, refuse removal, blocked storm water drains, grass cutting, overcrowding in premises etc. must be improved in order to realize a positive impact in the reduction of rodents.

There is also a need to have an appropriate targeted response to the reduction of rodent infestation which will be achieved through the appropriate use of pesticides where applicable combined with other interventions such as public education and awareness on how to prevent and control rodents.

7.2 REDUCED ENVIRONMENTAL DEFICIENCIES

- Environmental deficiencies refer particularly to those factors in the environment that cause rodent harborage, feeding, breeding and proliferation. These are issues of derelict vehicles in private property, accumulation of scrap items, poor storage facilities for garbage and refuse as well as leaking water pipes. In order to address these issues premises surveys will need to be conducted by the Environmental Health Practitioners. The surveys are done in order to identify these factors and to educate the community on the prevention and control measures required in this regard.

The main objective of reducing the environmental deficiencies is to ensure that communities maintain good housekeeping so that there are no conditions that encourage rodent harborages and breeding, thus ensuring a reduction in the rate of infestation on premises.

7.3 INCREASED SUPPRESSION OF RODENT INFESTATION

The suppression of the infestation implies that there needs to be a significant reduction in the level of the rodent population. Currently there is a high rate of infestation which is estimated at about 90% in the affected areas. Therefore there is a need to bring down the levels of infestation and in order to do so; there will have to be an increase in the rate of baiting and trapping the rodents. A tender has been advertised for private pest control company service that will be appointed to be used on privately owned stands for the baiting of rodents.

This will be done after the owners failed to comply with notices served by the Environmental Health Practitioners. It will be done in conjunction with the house surveys that will continue on a biannual basis, thus ensuring sustained level of suppression of the rodent infestation. Below is Table 2 providing the strategic results framework.

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Table 2: Strategic Results Framework

Problem Statement	Strategic Thrust	Strategic Goal	Strategic objective	Intervention
Poor service delivery results in poor sanitation, unkempt open spaces, unmaintained storm water drainage, illegal dumping and poor hygiene on private property impacting on increased rodent infestation	Implement proactive Service delivery	Reduced rodent infestation	Improved Service delivery	Improved functional of inter-sectoral stakeholder forum
Inadequate control measures are in place on municipal and private owned property results in increased rate of rodent infestation	Educational and awareness of communities		Reduced environmental deficiencies	Increased appropriate targeted response to reduce rodent infestation
	Implement proactive adequate and regular control measures			Increased awareness by communities on strategies to reduce rodent infestation
			Increased suppression of rodent infestation	Improved hygiene levels in communities
				Increased implementation of adequate control measures
				Improved law enforcement in respect of environmental health issues
				Increased maintenance of prevention and suppression programmes