

Victor Khanye Local Municipality



Disaster Management Plan

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1. INTRODUCTION

DISASTER: THE SCENARIO

1.1 BACKGROUND

Ever since the beginning of the history man has struggled against the elemental forces of nature to establish his mastery over the environment. Although, science and technology have made tremendous strides in the present century, the struggle has not ceased. Many regions of the country are vulnerable to natural disasters and are becoming increasingly vulnerable. The past decade has witnessed an extra ordinary increase in the number and extent of natural disasters around the world. The cost of weather related disaster in 1998 exceeded the cost of all such disaster in the decade of 1980's. There were three times as many great natural hazards in the 1990's as in the 1960's while the disaster costs increased more than nine fold in the same period. It is estimated that millions people have perished as a result of natural disasters in the past decades. While ten times more have suffered hardship. Things appear to be getting worse, natural disasters appear to be becoming more frequent and their effects more severe. This does not include disasters other than natural disasters such as epidemics, or manmade disasters.

The poor are most likely to suffer from major disasters and the least likely to be ensured against loss. Is the disaster situation improving over time and do the numbers of disasters show any declining trend over the years? The answer seems to be negative. Severe floods in Mozambique in 2000 and 2001 left approximately 80 000 people homeless and millions of rand damage to infrastructures. A runaway veld fire ravished the Kruger National park in February 2001. In March 2001 an outbreak of Cholera was reported in Kwazulu-Natal, In February 58 000 cases and 122 deaths were already reported, the second largest outbreak since the 1980's when 105 400 people were infected and 340 died.

In September 2002 an oil spill catastrophe unfolded when an Italian freight ship beached on the Eastern coast, endangering millions of wildlife animals. Drought situations were declared since 2002 with increasing magnitude to the state where drought relief for the community and farmers had to be put in place.

On the 1st of May 2003 a Bus full of people plunged into a dam resulting in a death toll of 80 people. The second most tragic bus disaster since the West dines bus disaster. In the early morning hours of 18 January 2004 a fire raged through an informal settlement outside Cape Town leaving 1500 homeless.

Some of these disasters were small in magnitude or might even have been localized, but the impact it brought onto that area is significant. There were also other incidents that were declared a disaster on a local level, one such event that is closer to home was the Typhoid outbreak in November/December 1993, the diarrheal outbreaks of 2005 and in 2007 in Botleng and Delmas.

Another point of serious concern is the rapid population growth, unplanned or poorly planned development or lack of planning in human settlements, the constant use of environment and its resources has inevitably resulted in certain changes in the ecology and with resulting environment changes. The nature and intensity of natural and technological disasters has changed considerably.

1.2 NEED OF THE STUDY

Delmas is, as most of the other Municipalities, vulnerable to disasters. The ever-changing ecology has got its dangers. The fact that Delmas is on the Maputo corridor does not assist in this problem at all.

In order to meet the challenge posed by possible disasters, sufficient planning has to be undertaken. Vulnerable areas have to be identified, short term and long term measures have to be taken; detailed information about the resources must be laid down in order to prevent the loss of live or property to some extent.

All these answers lie at local level, because only by acting locally, we can secure ourselves. The solution of a problem can be handled effectively from utilization of local resources. And as far as disaster management is concerned, the municipal level emerges out as the most viable entity.

Thus the requirement of the success in disaster management is to make the people aware and prepare them to face any disaster, put in place preventative measures to prevent disasters from occurring or to be able to put managing measures in place to manage the threats from escalating into disasters. It also focuses to provide quick relief to the affected sections and areas that will result in less damage to life and property.

1.3 OBJECTIVES

- To prevent loss of human life and property
- To study the disaster cycle, study of disasters and hazard analysis.
- To identify the highly vulnerable areas.
- Preparedness prevention and mitigation of natural and manmade disasters.

1.4 SCOPE AND LIMITATION

This document will help the municipal administration, non-governmental organizations (NGO's), local community etc in raising awareness for disaster reduction at the level of decision-making, public information and transfer of technology. This document also directs the future developmental activities in the municipality. The plan contains preparedness measures, prevention is concerned with the long term aspect, policies and programmes to prevent or eliminate the occurrence of disasters. It is the intention of the disaster management plan to guide the operation of prevention, rescue and relief programs. This will help to reduce the damage of property and loss of human life.

1.5 REGULATORY FRAMEWORK

Disaster Management has been the subject of a completed Green and White Paper process nationally, which formed the foundation on which the Disaster Management Bill of 2001 was based, and also so promulgated in 2002, Act 52 of 2002.

Chapter 5 of the Act relates to Municipal Disaster Management:

- Part 1 : Municipal Disaster Management Framework
- Part 2 : Municipal Disaster Management Centres
- Part 3 : Powers and duties of Municipalities and Municipal entities

This state, as per the definition, that a municipality is referred to as a District or a Metropolitan Municipality. But the above also applied indirectly to local municipalities and are therefore mentioned herein.

Parts of the following legislation also has an impact on the Municipality's obligations pertaining to Disaster Management:

- The Constitution
- The Municipal Systems Act
- The National Environmental Management Act
- The National Water Act
- The Conservation of Agricultural Resources Act
- The National Building Standards Act
- The Development Facilitation Act
- The National Veld and Forest Fire Act
- The Hazardous Substances Act
- The National Health Act
- The Occupational Health and Safety Act
- The South African Weather Service Act

1.6 PREVENTION AND MITIGATION

The worldwide focus of Disaster Management is to prevent or mitigate the impact of disasters. This service provides for the identification of existing problems that need intervention, development of strategies and promotion of the need to reduce the risk of disasters occurring, as well as reducing the scale or significance of a given disaster.

A risk and vulnerability assessment must form part of the feasibility study on all new development, so that prevention and mitigation can be built into the project.

Prevention and mitigation measures include the following aspects:

- Engineering and construction
- Physical planning
- Economic
- Management and institutional
- Societal

1.7 RESPONSE

The preparedness of the Municipality will determine the speed and efficiency of the response. The service includes responding to disasters in accordance with Disaster Plans and ensuring improvements to response actions through evaluation. The key response functions include:

- Evacuation
- Search and rescue
- Safety and security
- Assessment of needs.

1.8 RELIEF

Relief measures are to reduce the suffering of disaster victims, by promoting and supporting community and victim capacity in a manner that promotes independence. To be effective, relief must be:

- Appropriate
- In good condition/of good quality
- In required quantities/at required level
- At the place and time it is needed

1.9 REHABILITATION

Rehabilitation is the action taken in the aftermath of a disaster to enable basic services to resume functioning, assist victims with self-help efforts to repair physical damage and community facilities, revive economic activities and provide psychological and social support to survivors. Rehabilitation must focus on lifeline services and must be needs-driven based on assessment. Lifeline services include:

- Communications
- Water supply
- Power supply
- Roads and transport
- Waste disposal
- Public health

1.10 RECONSTRUCTION

Reconstruction is the full restoration of all services and local infrastructure, replacement of damaged physical structures, the revitalization of the economy and the restoration of social and cultural life.

It is essential that prevention and mitigation are built into reconstruction and that local capacity is improved on.

2. STUDY AREA PROFILE

2.1 LOCATION

Victor Khanye Local Municipality is located in the North Eastern part of the Highveld region. With an area of 2740 sq. Km it is situated between 28° 25' to 29° 05' South Latitude and 25° 45' to 26° 25' east longitude. There are no natural borders.

The municipality is bordering with Gauteng province on the North, West and Southern borders. To the Northwest with Emahlahleni Municipality and to the Southwest with Goven Mbeki Municipality.

This Municipality forms part of the Maputo corridor as the vital N12 cuts through the area. It also plays a vital role as it is close to major infrastructures and is more or less central to large towns/cities.

2.2 ADMINISTRATIVE SETUP

Eloff, Sundra and Botleng towns were merged with the Delmas Municipality and thereafter the rest of the magisterial region, in 2009 the Municipality changed its name from the Delmas Municipality to Victor Khanye Local Municipality. There are administrative offices in Botleng and Sundra with limited functionality. All functions are performed from the Municipal offices situated in Delmas town.

2.2.1. URBAN PROFILE

Urban settlements are found at Sundra, Eloff, Delmas and Botleng. Lesser urbanized areas are also found at Brakfontein, Argent, Arbor, Dryden and Waaikraal. At almost all these settlements there are prominent informal settlements found. Agricultural settlements in the form of small holdings are also found at Sundra (Droogefontein and Rietkol), Eloff, Strydpan and Delmas (Leeupoort). Argent, Arbor and Hawerklip are mostly old railway stations with some settlements around them. Dryden is also a railway settlement, but industrial growth developed there with BME, Afgri and Omnia as the major role players.

Brakfontein is an old mining settlement that still exists. The rest of the area is mostly agricultural settlements with its own workers residences.

2.3 TRANSPORT LINKAGES

The area has good linkages to its surroundings and to the rest of the country through its rail and road network. The rail network is a goods only network and there is no passenger transport available anymore. The National highway, N12 passes through the area in an East-West direction. The road linkages to the other settlements within the municipality are mostly good with most of them tarred. There is a privately driven transport system in place that mostly consists of taxi's that runs within the area and that connects with the neighbouring towns. Private busses are also in operation with limited resources. There are no state transport services operating within the area.

2.4 **PHYSIOGRAPHY**

Mostly plain with some small and rocky hills with meandering river estuaries mark the overall topography of the area. The average elevation is 1520 to 1640 meter above sea level. Area generally declines in height from South to North.

2.5 **CLIMATE**

The climate of Victor Khanye Local Municipality is semi arid, Continental type. Thus, it has warm summers, cool to cold winters and a varying rainy season. The winter season starts towards the latter half of May and extends till about the middle of September followed by summer, which continues till about the end of February, maximum temperature reaches up to 33° C. The rainy season remains between September and March. The climate is ideal for agricultural development, particularly for maize, sunflower, corn and vegetable crops.

2.6 **RAINFALL**

Annual rainfall is about 500 to 700 mm per annum. The rainy season is average from September to March. About 90% of the total rainfall is received during this period. Some amount of rainfall is received from western disturbances during winter season. Due to the rainfall and its short duration the agricultural activities is starting to mostly dependent upon pivot point irrigation.

2.7 **DRAINAGE SYSTEM**

The Victor Khanye Local Municipal area falls within the Limpopo/Olifants catchment, However a small region towards the south tends to form part of the Orange/Vaal catchment. This means that most streams and rivers tend to have a flow direction towards the North. Most rivers have their origin from fountains or where the underground water seeps out. These streams merge to form seasonal rivers. The following rivers are of importance:

2.7.1. **The Bronkhorstspuit river:**

Also mostly a seasonal stream, but have water during the year at places towards the North. The Bronkhorstspuit has its origin at vlei areas. These vlei areas are situated on two farms, Enkelbosch and Cowenburg towards the Southern border. The streams combine and flow in a Northern direction, passing on the eastern side next to Delmas and Botleng, and on towards the Bronkhorstspuit dam in Gauteng. There are numerous connecting canals that feed this river. Two canals that connect to the Bronkhorstspuit have their origin on the farms Middelbult and Strydpan. The Strydpan canal originates from a large vlei area. There are three significant farm dams and one smaller farm dam on this canal. These two canals merge to the South of Delmas and then run through the Town towards Botleng where it merges with the Bronkhorstspuit River to the South east of Botleng.

2.7.2. **The Wilge river:**

This river is also a seasonal river with large areas filled with water during the year. This river's origin is to the South of the Municipal area at the farm Enkelbosh. It flows in a Northern direction, meandering most of its way towards the North, and exits the Municipal area at the farm Dwaalfontein. Blesbokspruit connects to the Wilge river, its origin is to the east and flows into the area at the farm Heuvelfontein. The kromdraai-spruit also flows into the Wilge with its origin towards the South-east, entering the area at the farm Kromdraai. Steenkool spruit also connect to the Wilge and enter the area at the farm Steenkoolspruit. There are also numerous furrows and small streams that flows into the Wilge. On these furrows there are also numerous small farm dams that are used for irrigation.

2.7.3. **Koffiespruit:**

Its origin is in the Rietkol area and flows to the North exiting the area at the Farm Koffiespruit, flowing to connect with the Bronkhorstspruit dam. There are three furrows flowing into the Koffiespruit originating from the farms Rietvallei, Katboshfontein and Yzervarkfontein.

2.8 **HYDROLOGY**

The development of an area largely depends over the quality as well as quantity of ground water. As far Victor Khanye Local Municipality is concerned ground water are available over almost the whole area. At some places the level of groundwater is pushed above ground level and natural ponds are formed.



Figure 1 Rivers and ground water

2.9 **NATURAL VEGETATION**

The vegetation is mostly grassland. The most dominant tree found in the area is the Blue gum and Black Wattle tree.

2.10 **DEMOGRAPHY**

Human capital of an area plays an important role in the development of that region. Development to a large extent is attributed to the quality, quantity, structure and

composition of population of an area. The main characteristics of the population of Victor Khanye Local Municipality are discussed here in detail.

2.10.1 **TREND OF POPULATION**

As per 2001 census, the total population of the Municipality is 53 215 persons. The growth rate between the 1996 and 2001 census indicated a growth of approximately 5636 persons. The indication is that there was an average of 11.75 % growth. The observed tendency is that the estimated population may already be at approximately 60 000 plus people.

2.10.2 **DENSITY OF POPULATION**

Density of population indicates towards the intensity of population on infrastructure and other resources of the region. It also helps to estimate the severity of a calamity if it takes place in a densely populated area. Thus, analysis of density of population has become much important. Using the 2001 Census data, density of Victor Khanye Local Municipality is broken up into the different wards and is indicated as follows;

WARD WISE DENSITY OF POPULATION (2001)

Ward	Population
Ward 1	7253
Ward 2	5012
Ward 3	7220
Ward 4	5762
Ward 5	5249
Ward 6	8264
Ward 7	8691
Ward 8	5764

Source: Census SA

Table no. 2.10.2

2.11 **AGRICULTURE**

The agricultural breakdown of the area is mostly Maize farming. Sunflower, corn and beans are also of the seasonal crops found.

Vegetable farming is also found. In total, approximately 60% of the total area is utilized for some kind of crop production. Agricultural development is still the main source of income in Victor Khanye Local Municipality.

2.12 **LIVESTOCK**

During disasters it is not only the human beings but also the livestock who are affected. In drought situations it is these livestock that are greatly affected. There are a few large cattle farmers as well as dairy farmers and other poultry farms, which mainly concentrate on chickens. Large farms of these are Morgan Beef (Cattle), Daybreak chickens (chicken Runs), Dairy Dale (dairy).

2.13 INDUSTRIES

Ample agricultural resources, availability of skilled labourers, a good network of infrastructure facilities coupled with its close proximity to Gauteng have given good impetus to the new enterprises to establish their industries in the Municipality.

Victor Khanye Local Municipality is roughly centered between large commercial centres like Johannesburg, Pretoria, Emalahleni (Witbank), Secunda, Nigel and Kungwini (Bronkhorstspuit). Mining within the area also provide potential growth to take place. The distribution of industrial activities is, however uneven. The majority of industrial units are concentrated at Delmas only. Some industries are also found at Dryden and in Eloff.

3. HISTORY OF DISASTERS

3.1 INTRODUCTION

The insight in to the history of disasters in the Municipality specifically and the region in general is very important. The history of disasters helps to give a direction to think upon. In short, history of disasters within the Municipality indicates the areas at risk, which needs current attention.

3.2 FLOODS OR HIGH WATER LEVELS

Floods have occurred within the Municipality, The largest flood was in 1956. The other floods that occurred within the Municipality were occasional and isolated due to heavy rainfall and dam wall failures. There are no large rivers running close to urban areas as Victor Khanye Local Municipality is mostly at the beginning of the catchments area.

3.2.1 ECONOMIC LOSS DUE TO FLOODING

There are at present no recorded data indicating significant economical loss related to flooding incidents.

3.2.2 VULNERABLE AREAS

On the basis of past experience, categorization is divided into three categories (shown in map 1 and map 2) as:

- Dangerously Exposed settlements
- Badly Effected settlements
- Moderately Effected settlements

3.2.2.1 DANGEROUSLY EXPOSED AREA

- Delmas Mid town between v.d. Walt street and the Muslim Church (First Avenue)
- Golf Course area at van der Walt street side
- Botleng South Eastern section
- Botleng Eastern section along the river route (Mostly informal settlements)
- Delpark RPD section

3.2.4 MODERATELY EFFECTED AREA

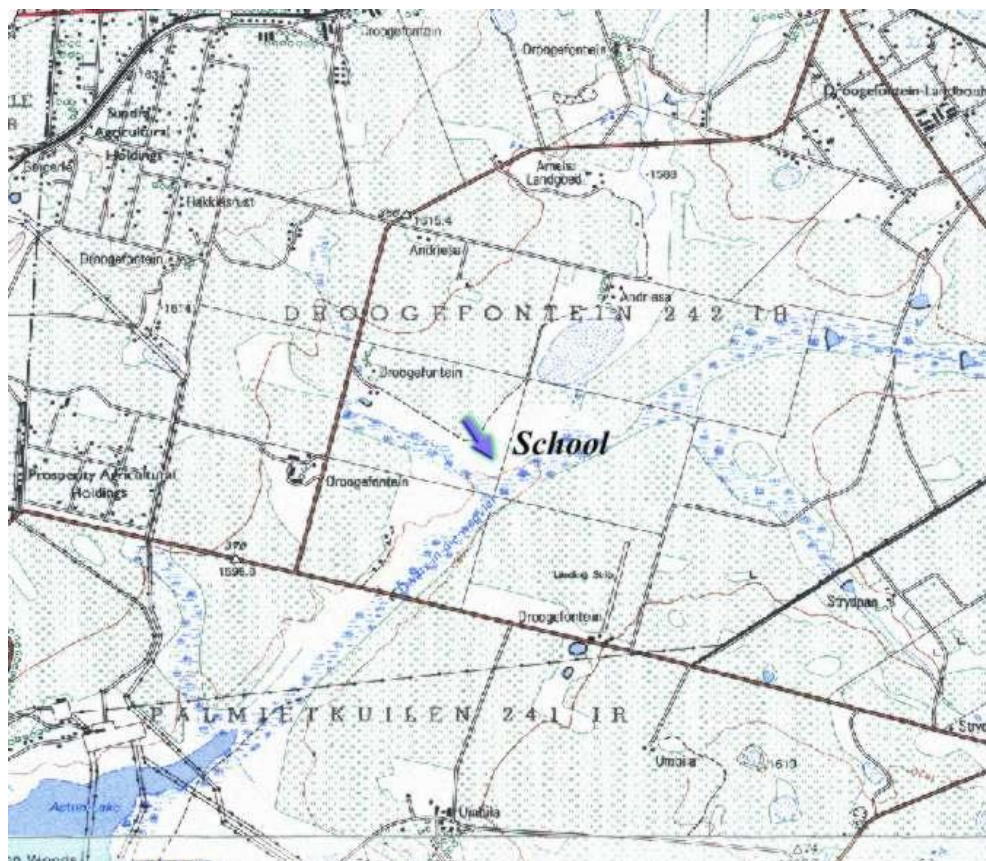
- Droogefontein area South of Sundra
- Farms along the river banks

3.2.5 BADLY EFFECTED AREA

- The informal settlement at Argent



Map 1



Map 2

3.3 EPIDEMICS

Typhoid Fever was the most recent significant occurrence within the Municipality. The occurrence was not classified under a disaster as such, but was treated as one due to the high numbers of affected communities. This occurrence was in November 1993 and a similar occurrence with a lesser impact occurred in 2005 and a diarrheal outbreak in 2007.

3.3.1 ECONOMIC LOSS DUE TO EPIDEMICS

There are no figures recorded in the final reports.

3.3.2 VULNERABLE AREAS

3.3.2.1 EXPOSED AREA

All Informal settlements

Botleng communities along the river flow route.

Delpark RDP section along the river flow route.

4. RISK AND VULNERABILITY ANALYSIS

4.1 INTRODUCTION

Risk is the chance of an event (viz., earthquake, flood or industrial accident) happening that will have negative impact on the society and environment. Risk analysis deals with the systematic use of all available information to determine: (a) how often a specific hazard may occur and (b) the magnitude of their probable consequences. It implies that risk of a disaster is related to: (a) the hazard, (b) the vulnerability of society, structures and the environment to it, and (c) how well the hazards and vulnerabilities are managed.

Risk analysis of an area involves the following steps:

- i. Assess the hazard.
- ii. Vulnerability and Capability Assessment (VCA).
- iii. Quantify the risk.
- iv. Prioritize the actions.

Floods or high water levels and Thunder storms with associated strong winds are considered as the main natural hazard in Victor Khanye Local Municipality. Information on the hazard scenario (chapter 3) in the Municipality is used here to calculate the risk.

4.2 RISK ANALYSIS OF VICTOR KHANYE LOCAL MUNICIPALITY

The steps for analyzing the risk posed due to a hazard as mentioned above has been adopted sequentially for Victor Khanye Local Municipality.

4.2.1 HAZARD ASSESSMENT:

Disaster results from the impact of a hazard, therefore the first step of risk analysis is to assess the hazard. Hazard assessment is concerned with the properties of hazard itself.

The definition of Hazard is: *“A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.”* ISDR Terminology

4.2.1.1 IDENTIFICATION AND DESCRIPTION OF HAZARD

4.2.1.1.1. NATURAL HAZARDS

(i) FLOOD OR HIGH WATER LEVELS

Occasional flooding is a semi seasonal phenomenon in Victor Khanye Local Municipality. The most flood prone areas in the Municipality are situated along river flows. Mostly, informal settlements are affected. There is also the occasional flooding of isolated residences during heavy rains.

(ii) HIGHVELD THUNDER STORMS

During the summer months, September to January, the area is prone to having thunder storms. These storms are usually during the late afternoons or during the night time. These weather cells usually form to the West, South-West of Delmas and travel at counter clockwise movement within its path towards the Eastern boundary. These storms are also associated with intense electrical activity (lightning with continuous ground strikes)(during the 2009 rain season over 2000 ground strike incidents was registered by the SAWS) and in some instances, especially over the Sundra area, with strong winds and hail. There were isolated instances where strong winds within The Delmas and Botleng vicinity caused moderate damages.

The Rainfall season of 2009 was particularly low, but at the turn of the season when rainfall was supposed to subside the area experienced an abnormal amount of rain and ultimately an average of over 900mm rain was recorded for this season. This also included unfamiliar thunder storms for this time of the season for this area.

(iii) STRONG WINDS

During the last part of the winter season, during the months of August and September, the area is burdened with moderate to strong winds. These winds usually blow in a south easterly direction. Some of these winds have been recorded up to 60Km/h (wind gusts of up to 85Km/h were measured during August 2008). During the dry season these winds are conducive to the ignition and spread of runaway wild land fires.

(iv) FIRES

A common occurrence within the area is veld fires. These conditions have a socio-economic impact on the area as crops are lost and the loss of houses and equipment as well as poultry and farm animals occur annually. Losses of up to R 2 000 000.00 have been recorded. Because Victor Khanye Local Municipality is mainly agricultural area, there are vast areas that are susceptible to grass fires. These fires, when becoming uncontrollable can cause devastation over vast areas.

Fires in informal settlements are a point of concern as these residents utilize highly flammable material to construct their houses. Fortunately, these buildings are not built close to each other and therefore, in the event of a fire, only one or two informal houses are involved.

(v) DROUGHT

Victor Khanye Local Municipality was fortunate not to have suffered severely in the past due to drought conditions. However, due to natural phenomena like global warming or the El-Nino Phenomenon, these conditions have changed. Another factor that now presents a burden on water availability is the increase in Pivot-point irrigation on crop farms that withdraw immense

amounts of water from our underground water system. This water is not replenished sufficiently by the current rainfall scenario.

These conditions cause the problem that a lot of communities are suffering from water shortage due to drying boreholes. Even residences that have borehole water now are suffering with those boreholes drying up or collapsing due to the drought conditions that are prevailing.

4.2.1.1.2. **TECHNOLOGICAL HAZARDS**

(i) **ROAD ACCIDENTS**

This type of hazard is common; the average vehicle collisions are in the region of 16 collisions per month and vary from single vehicle to Heavy transport vehicle collisions. These types of hazards are hard to prevent as more and more companies and people are utilizing road transport. These types of collisions also have a higher hazard by means of pollution and hazardous materials spillages. These types of pollutions could have a serious impact on the area as the underground water table is close to the surface. There are also numerous run offs to streams that lead to the rivers. Hydrocarbons such as oil and diesel are here the most common factors of concern.

(ii) **RAIL ACCIDENTS**

As was noted above, the railway line running through the area is mainly a goods line. There is no control on what can be transported by rail, as these transport medium is not so strictly managed like with road transport. In the event of a rail collision or derailment, there is a high possibility of pollution with the associated illnesses due to poisonous gasses being released.

A point of concern is also that the train control have been centralized as from 2006, the smaller stations have been closed down. In the event of an incident relating to rail, the time span for the local emergency services to react has been increased. The Train control stations are now situated at Welgedaght and at Ogies, Both outside the Municipal Jurisdiction. The railway emergency services are situated at Sentrarand, which is approximately 35Km to the North-west of Delmas, in Gauteng. Usually Transnet or Spoornet in particular respond and attend to their own problems. The issue here is the time span from the occurrence of the incident up to their arrival, the immediate intervention is usually done by the local emergency services and upon arrival is handed over to the authority of the Transnet emergency Services.

(iii) **AIRCRAFT ACCIDENTS**

There is a high volume of air traffic within the airspace of the Municipality. Even though all of these flights are either coming to land at one of the major airports in Gauteng or lifting off or just passing to another destination. There is still the possibility of one of these aircraft to have a collision in our area.

When these aircraft have to circle the OR Thambo International Airport for some or other reason, they circle over the Municipality to keep them in line with the outer beacon at Bronkhorstspuit dam.

(iv) **MAJOR HAZARDOUS INCIDENTS**

These incidents are classified as any incident that have a severe impact on the environment and that may cause evacuation of the surrounding areas, or might pose a health hazard to the area.

These incidents can occur at any time and at any place, without warning of such instance. Other incidents can be identified like fixed installations. Some of these incidents or catastrophes may not even be caused by negligence on the part of the responsible company, but might be as a result of a natural occurrence or an unforeseen event.

(v) **SERVICE FAILURE**

The collapse of the delivery of services to the communities is a risk that cannot be overlooked. In example, there are some kind of collapse in the delivery of potable water to communities like what occurs at some. In itself it is not classifiable as a disaster, but why it is sub classified on its own is due to the fact that it is an event that could contribute to the collapse of other critical risks and then cause mass displacement, illness or even death.

Like it is well known, there are periods where there is limited to no water supply to certain parts of the communities for various reasons. This disruption could then lead to the lower income communities that cannot afford to acquire bottled water to flock to the streams that have a risk of being polluted; this will then in turn contribute to the outbreak of epidemics. A more serious case scenario is the dissatisfied communities could turn to unrest situations and cause total disruption of services.

(vi) **ELECTRICITY FAILURE**

Also, a well known fact is that there is a shortage of supply on a national scale. The result thereof was that ESKOM have initiated and may again initiate a process of disrupting power in a scheduled measure. This causes disruption to other services such as water supply and sewer treatment, which may result in other more severe incidents with serious consequences.

Other than this, there are also other factors that could contribute to service failure, such as severe storms that could disrupt electrical power supply for indefinite periods. Criminal activities such as cable theft or sabotage of electrical infrastructure are also common causes of electrical failure.

4.2.1.1.3. **SOCIETAL HAZARDS**

(i) **INTERNALLY DISPLACED PEOPLE**

Occurrences hereof are visible in every urbanized area. Due to the economic pressures and the lay-offs at farms, these affected workers are forced to flock to the urban areas in the hope of employment and better living conditions. These people come together in informal settlements that are not supplied with basic services. Because of the desperation to stay alive and the continuous failure to get proper employment, groups of these people revert to violence and crime to try and survive. Another contributing factor that are on the increase is the use and trafficking of drugs. Also, due to the poor conditions in which they find themselves, the outbreak and spread of disease are often found in these dense communities.

(ii) **STRIKES, UNREST AND TERRORIST ATTACKS**

These categories are linked as their outcomes are more or less the same. In both these categories there is an impact to both the communities affected as well as to the economic, social and infrastructural aspects of society. Damage to equipment, buildings and infrastructure will result in the disruption of vital services to communities. Loss of income could result in businesses laying off employees, even cause death to sole bread winners of poor families putting them in an even more desperate situation.

(iii) **EPIDEMICS**

Widespread illness that affect some or all of a community, or even spread over a vast area causing illness and even death. Some epidemics are spread between individuals, or may spread through contaminated water sources, contaminated food or even between live stock. Recent in our minds are the Typhoid outbreaks of 1993 and the diarrheal outbreaks 2005 and 2007. There are also epidemics that could spread among live stock that are not contagious to humans, but results in other illness or economic loss to a community.

4.2.2 **VULNERABILITY AND CAPABILITY ASSESSMENT (VCA)**

(i) **VULNERABILITY ASSESSMENT:**

Vulnerability is defined as the degree of loss to a given element at risk resulting from a given level of hazard. Vulnerability analysis is a process, which deals with the understanding of the types and levels of exposure of persons, property and the environment (against a hazard) at a particular time. This section deals with who and what are exposed to the Hazard. Hence it is clear that information on certain key parameters is essential in conducting this assessment.

An assessment is currently undertaken for the whole of the Nkangala District. When this assessment is completed the relevant information will be channelled down to the local Municipalities for our attention and inclusion.

What can be noted from the 2004 Assessment is that in the event of a disaster, vulnerable areas are those mentioned within the description of risk areas, which include the informal communities and areas of high concentration of poor and old people. The attention is currently being focused there.

(ii) **SOCIAL VULNERABILITY:**

The same as for (i) above are envisaged here.

4.2.3 CAPABILITY ASSESSMENT (RESILIENCE ASSESSMENT):

(This section can only be fully attended to after the completion of the assessment mentioned above (4.2.2) from the District project)

The following have been completed in the interim to at least provide a guideline to the Plan.

(i) **AWARENESS**

It is observed that the awareness level of the government bodies and general public need to be addressed as it is apparent that no changes to current trends are found. Entities have adopted a reactive stance instead of a proactive or preventative stance.

(ii) **PREVENTION AND MITIGATION MEASURES:**

The areas vulnerable to floods have been identified by experience of previous events. However, more intense attention will have to be given in the prevention of re-occurrence. Mitigation measures will have to be addressed by ways of interaction between ward councillors and the communities at risk.

(iii) **PREPAREDNESS**

At present, due to a shortage of funding the preparedness levels of the emergency services are below standard and need to be addressed as a matter of urgency.

(iv) **RESPONSE CAPABILITY**

Effort has been made to categorize the activities for response. Here also there have been identified that rescue and relief teams are short staffed and ill-equipped. Police control system is in place. Medical relief responsibility and public welfare issues are currently under the authority of the Provincial Government and have been incorporated under their Plans. There is a coordinated response strategy among the concerned departments and public.

The Fire and Rescue services have limited response and relief capabilities due to financial limitations and a low priority during the Budget processes and among the projects of Government.

(v) **PUBLIC, GOVERNMENT AND NGO PARTICIPATION:**

Currently the Status Quo is adapted to the previous Civil Defence system. This system will stay in effect until the District Disaster Management Centre is within capability to have resources for response within the whole District Municipal jurisdiction.

On local level there is active volunteer participation within the Northern region of the Municipality. There is a general willingness within the communities to assist, but the general poverty situation makes these people reluctant to assist if there is no income prospect in the foresight for them.

(vi) **LAWS AND REGULATIONS:**

There exist no hard and fast rules and regulations for management of emergency due to natural disasters. The responsibility lies within the relevant responding agencies to cooperate and integrate their procedures in order to mitigate the situation with the resources at their disposal. The proposal is that a Unified Incident Command System be established and practiced between relevant responding services as well as support services.

4.2.3 **QUANTIFICATION OF RISK:**

A simple quantitative method has been adopted to assess the hazard, vulnerability and manageability in Victor Khanye Local Municipality. The methodology is described as follows:

The process followed was the seven steps of risk analysis, namely;

1. Identification of hazards
2. Identification of vulnerabilities
3. Identification of critical facilities
4. Performing a Societal Analysis
5. Economical Analysis
6. Environmental Analysis
7. What mitigation strategies could be implemented?

HAZARD IDENTIFICATION

A Workshop Meeting was held with Role-players and community in February 2010 invitations was extended to:-

- Community organizations
- Government organizations
- NGO's
- Traditional leaders
- Local Economical Development Forum (Chamber of Business)
- And community members with indigenous knowledge

The outcome was to obtain as much information as possible in order to provide a true reflection of what happened in the past.

All information obtained was noted and additional information was obtained by means of statistics of past occurrences.

An obstruction in the process is the reluctance of organizations to provide the information requested.

The most prominent hazards identified from the meetings;

1. Localized Flooding (Ward 1, 4, 5, 6 and 8)
2. Epidemic Outbreak (Ward 1, 2, 4, 5, 6 and 8)
3. Highveld Thunderstorms (Whole Municipal Area)
4. Sinkhole formation (Ward 3 & 7)
5. Hazardous chemical spillage (Whole Municipal Area)
6. Violence (Strike actions) (Ward 1, 2, 4 and 6)

The Quantification formula

$$\text{Risk} = \text{Hazard} \times \text{Vulnerability}$$

was then applied to the six scenarios.

Scoring criteria used to determine scoring points is as follows;-

For Hazard

1. Not likely to occur or can occur once every 50 Years
2. Can occur once every 20 Years
3. Can occur once every 10 Years
4. Can occur once every 5 Years
5. Can occur once or more than once every year

For Vulnerability

1. Will have little or no impact on communities
2. Light injuries can occur with minor to no disruption of services and minor damage to buildings
3. Multiple, light to serious injuries, discomfort to a community, temporary disruption of services, significant damage to buildings
4. Multiple injuries, displacement of families, total disruption of services for a significant period, severe damage to ecosystem, severe damage to buildings and infrastructure
5. Multiple serious injuries, Death, Permanent displacement of families/communities, Destruction of large ecosystems, Total destruction of buildings and infrastructure. Total disruption of services for a long period of time.

A common risk scoring table (as shown below) was used for all areas within the Municipality.

Risk Scoring Table

Scenario	Hazard Score (H)	Vulnerability Score (V)	H X V Score
<i>Flooding</i>			
<i>Epidemic Outbreak</i>			
<i>High veldt Thunderstorms</i>			
<i>Sinkhole formation</i>			
<i>Hazardous chemical spillage</i>			
<i>Violence (Strike actions)</i>			

Aerial photographs were obtained of the area and it was divided into different sections due to the vast area of coverage. Attention was given to the urban areas as study area due to the fact that these areas will suffer most in the event of a disaster.

The different sections were divided into grids.

Each grid block was scored individually to the defined criteria. This was as follows; (only four scenarios were scored accordingly)

a. Criteria scores for Risk for the seasonal flooding is as follows

- 1 – Area will not flood / high ground
- 2 – Area flood with minor disruption or damage
- 3 – Area flood with damage to houses
- 4 – Area flood with damage to houses and displacement of families and damage to infrastructure
- 5 – Total flooding and destruction of houses and infrastructure

b. Criteria scores for Risk for the Thunder storm effects is as follows

- 1 – No effect will be caused
- 2 – Minor wind damage (roofs loosened, partly blown off) and little to no storm water damage
- 3 – Wind damage to more than one house, Roofs blown off , and/or minor flooding of certain houses due to storm water
- 4 – Serious wind damage/flooding of houses due to storm water / Displacement and/or injuries occurred
- 5 – Severe damage/destruction to houses and/or deaths

c. Criteria scores for Risk for the origin of Epidemic outbreak is as follows:-

- 1 – No possibility for the origin or outbreak of epidemics
- 2 – Area prone to the accumulation of refuse
- 3 – Stagnant water ponds for long periods
- 4 – Periodic accumulation of refuse and the occurrence of sewer water outflow for periods of time but no contact with wetlands or streams
- 5 – Accumulation of refuse and off flow of sewer water into wetlands or streams

d. Criteria scores for Risk for the formation of sinkholes (in accordance to prior occurrences)

- 1 – There are no possibility/records of sinkhole formation
- 2 – Wetland area with no history or evidence of sinkhole formation
- 3 – Area adjacent or close to previous sinkholes
- 4 – Definite evidence of the formation of sinkholes
- 5 – Definite history of sinkholes

After completion all critical facilities were identified, this included the following;

- 1) Shopping facilities
- 2) Schools
- 3) Police stations
- 4) Health facilities
- 5) Municipal services
- 6) Old age homes
- 7) Day care centres
- 8) Water and sanitation facilities
- 9) Public transport facilities
- 10) Main access routes
- 11) Hazardous facilities

All the above data was then added together on one grid. The risks have then been marked according to the overall risk score, the quantification score and the critical facilities in that immediate area.

The outcome thereof indicates the areas where attention to preventative measures is required. These areas are as follows.

Botleng;

- Southern section of Botleng better known as “oubok” close to the stream
- The eastern portion of Botleng, known as Mandela section, close to the stream.
- The informal settlements known as Vukuzenzele, the Western section thereof.

Botleng Extension 3 upwards

- The southern section on the plains of the stream
- The main street, Mandela Drive.
- The informal section known as “wag”

Delmas

- The immediate area around stream that runs through the town area, especially the main street between v.d. Walt Street and First Avenue.
- The southern section of Delmas West from De Wet Avenue up to Retief Avenue. From the veld outside town to the west to Loedolf Avenue.

Delpark

- The total area of the new extension of Delpark that are on the 1 in 100 year flood line.

Eloff and Sundra

- Eloff have no immediate priority areas.
- Sundra urban areas also have low scores.

4.2.4 PRIORITIZE THE ACTIONS:

With reference to the above mentioned risk analysis methodology adopted for calculating the risk, it is recommended that the activities to reduce losses should be prioritized. Damages following a significant incident are primarily due to water damage, high winds or collapsed trees, hence among the activities taken to reduce losses, general maintenance programs, control over building work and proper area analysis of new settlements needs to be taken up as priority. The next priority should be given to further increase the awareness level of the Council, NGOs and community and also to sustain it.

VULNERABILITY

The drainage systems have been designed to sustain water flow according to engineering formulas and data of average rainstorm off flow. The sudden dam wall failure of severe storm has not been accommodated in the past. Therefore town planning have been negligently overseeing the potential of sudden high waters and allowed development under the flood lines. These communities that now find themselves in these areas are the most vulnerable to a vast number of problems in the event of a disaster or sudden significant event. They are also the people that have little to no resilience to these types of events. They stand to lose all they possess.

Another factor that contributes to the increase in vulnerability of communities is poor planning of services, such as with new developments, the provision of sufficient storm water drainage systems, the building of roads to a higher level as the Ervin surrounding them. Improper storm water diversion systems, allowance for building on ground that are not suitable for development, establishing stands and commencing building work before infrastructures are installed also create unnecessary threats of events that could have been prevented if the proper and correct procedures was performed in the first place.

Preventative measures that must be considered is the proper planning of future development, the maintenance and upgrade of existing storm water systems, redesigning of storm water diversion channels, construction of bunds so that storm water are prevented from flowing off into Ervin. The enforcement of “no building” areas, to mention a view.

FUTURE DEVELOPMENT

In reference to the current vulnerabilities and the restricted infrastructure as well as capabilities of the municipality to cope with new developments within the Municipality, it is strongly recommended that no more development be allowed by Council until the infrastructure have been upgraded and developed in the areas where there are no infrastructure, and proper services have been established. Failure to adhere will most definitely result is one or other kind of disaster to occur, affecting mostly those communities currently affected by little or no infrastructure.

Furthermore, Council seriously need to consider the development of all infrastructures at a proposed new development before any dwellings are built. It is therefore imperative that Disaster Management Officials be known in political decisions to develop areas for them to advise on the possible hazards that may be encountered or created within the proposed new development.

5. DISASTER MANAGEMENT STRUCTURES

5.1 MUNICIPAL DISASTER MANAGEMENT STRUCTURE

According to the Disaster Management Act, 2002, The Local Municipalities may establish a disaster Management centre. All Municipalities are required to have a disaster management plan. Also according to this the local municipalities must therefore only have a responsible person for disaster management. Therefore, some of the following sections are informative as they apply only in the event that a disaster management centre is to be established within the municipality of Victor Khanye Local Municipality. It may be noted at this point that the vision of the Nkangala District Municipality is that the local municipalities should establish their own disaster management centre that will be able to interlink with the District Disaster Management Centre. Some functions described may therefore be required at local level even though they are prescribed for Disaster management centres.

5.2 DISASTER MANAGEMENT ADVISORY FORUM

After consultation and upon request from the District Disaster Management the establishment of a local Advisory Forum should be established.

The Municipal Manager will chair the advisory forum during disasters, consisting of the Head of Emergency Services in a coordinating capacity, staff and advisory capacities will be performed by Disaster Management functionaries as part of their normal line function.

The Disaster Management Advisory Forum should consist of the following:

5.2.1 INTERNAL TO THE MUNICIPALITY:

- Municipal Manager
- Portfolio Councillors
- Executive Directors of Finance, Administrative/Corporate Services, Operational Services and Community Services.
- Managers: Internal Audit, Information Technology
- Managers for: Municipal Traffic, Head of Emergency Services/Head of Disaster Management
- Manager: Development and Planning
- Representatives may be added to or deleted from the membership of the Disaster Management Advisory Forum in accordance with the risks identified, with the exception of the Municipal Manager, Portfolio Councillors, Executive Directors, Head of Emergency Services/Head of Disaster Management.

5.2.2 **EXTERNAL BODIES:**

- DDMC: District Disaster Management Centre representative
- Emergency Medical services (both private and provincial)
- SA Police Services Delmas and Sundra
- SA National Defence Force
- Representatives from other bodies as required including NGO's.
- Representatives may be added to or omitted in accordance with the risks identified.

5.3 **VICTOR KHANYE LOCAL MUNICIPALITY: DISASTER MANAGEMENT CENTRE (DMC)**

{This function will only be applicable in the event the Victor Khanye Local Municipality so decides to provide their own functional Disaster Management Centre. Otherwise this section must be disregarded.}

The Disaster Management Centre must specialize in issues concerning disasters and disaster management within the Victor Khanye Local Municipality. In this regard it must promote an integrated approach to the function with special emphasis on prevention and mitigation. The Disaster Management Centre must perform functions and exercise powers as stipulated in the Disaster Management Act, 2002.

It will act as a repository and conduit for information concerning disasters, impending disasters and disaster management in the municipal area. It will also promote the recruitment, training and utilization of volunteers to participate in disaster management in the municipal area. (Section 43)

The Centre will perform its functions –

- (a) Within the National Disaster Management framework;
- (b) Subject to the Municipal IDP and other directions of the Municipal Council;
- (c) In accordance with the administrative instructions of the Municipal Manager.

It will liaise with and co-ordinate its activities with those of the District Centre, the Mpumalanga Provincial Disaster Management Centre as well as the National Disaster Management Centre and render assistance as required in legislation.

5.3.1 **DUTIES AND POWERS OF THE MUNICIPALITY**

- Prepare a Disaster Management Plan for its area according to the circumstances prevailing in the area;
- Coordinate and align the implementation of its plan with those of other organs of state and institutional role players;
- Regularly review and update its plan.

It must annually submit a report to the District, Provincial and National Disaster Management Centres. (Section 47).

Irrespective of whether a local state of disaster has been declared, the municipality is primarily responsible for the coordination and management of local disasters that occurs in its area.

In the event of a local disaster the council of a municipality may declare a local disaster under advisement of the Chief Fire Officer.

5.3.2 FUNDING OF POST DISASTER RECOVERY AND REHABILITATION

This section has reference to Section 16 and 25 of the Public Finance Management Act, 1999, which provides for the release of funds by way of direct charge against the National and Provincial Revenue Funds in the case of emergencies for which funds were not budgeted.

Regional Disaster Management Task Team/Departmental planning committees and the Emergency Control Centre management team will be described in later sections of this document.

5.3.3 RESPONSIBILITIES

The main stakeholders in the Victor Khanye Local Municipality's Disaster Management Plan are listed below, and their specific responsibilities in the disaster prevention / Risk elimination and the Disaster Response scenarios are indicated.

In terms of this plan, the primary objective of each stakeholder must be to prevent the occurrence of emergencies or disasters that threaten life, property, the environment or economic activity in The Victor Khanye Local Municipality. Failing the prevention of emergencies or disasters through the elimination of risk, the secondary objective is to reduce risk and vulnerability and thus lessen the possible impact of emergencies or disasters.

5.4 THE DISASTER MANAGEMENT ADVISORY AND CO-ORDINATING COMMITTEE (DMACC)

It is the responsibility of the Disaster Management Advisory and Coordinating Committee to ensure the compilation and maintenance of disaster management sub plans and Operating procedures, as well as the relevant supportive risk-specific plans.

The Disaster Management Advisory and Coordinating Committee shall be responsible for the review of these plans on an annual basis. It is also responsible to make recommendations for changes that are considered appropriate and the verification of the required support documents, resources, training, and facilities to ensure that the Disaster Management Plan is maintained.

The Disaster Management Advisory and Coordinating Committee will also have the responsibility of assigning project teams to address specific risks and develop risk-specific plans. In order for the Committee to perform its task effectively, it must ensure that the following actions take place:

Risk-reduction phase:

- Risk assessment in the Municipality,
- Assessing capacity of the Municipality to implement emergency response actions,

- Formulate plans and projects to reduce risk.

During emergencies or disasters:

- Assessing risks in the emergency area(s),
- Assessing risks to the remainder of the Municipality.

Recovery and rehabilitation phase

- Ensuring a return to normal functioning of affected communities as soon as possible,
- Disaster prevention or mitigation through risk elimination or reduction.

Disaster Management and Risk Reduction principles must be applied throughout these phases

5.5 DISASTER MANAGEMENT TACTICAL TEAM (INCIDENT COMMAND TEAM)

The Disaster Management Tactical Team, also known as the Incident Command Team will consist of the most senior representatives of the responding services at a major incident; the convener will be the Chief Fire Officer. Participating members will consist of the senior personnel of the Emergency Medical Services (both provincial and private services), Police, Traffic, towing and recovery services (if required) hazardous chemical spillage services, etc.

The Disaster Management Tactical Team shall be established and convened when an emergency has occurred or is likely to occur, in accordance with the following:

- Where the size or seriousness of the emergency seems beyond the capability of a service, in the opinion of the most senior on-duty official of that service, the Disaster Management Officer can be requested to activate the Disaster Management Tactical Team,
- Where the Disaster Management Officer is of the opinion that it is necessary to activate the Disaster Management Tactical Team in order to effectively manage an emergency which has occurred or is likely to occur, the Disaster Management Tactical Team must be activated,
- The activating service shall via the Municipal Disaster Control Room contact the Disaster Management Officer who shall immediately arrange to notify the established members of the Disaster Management Tactical Team,
- The Disaster Management Officer shall request the members to meet at the Municipal Disaster Control Room.
- The Disaster Management Tactical Team will evaluate the situation and advise the Municipal Manager regarding the declaration of a local disaster, as well as the continued activation or standing-down of the Disaster Management Tactical Team.

At this point a Municipal Crisis Group will be established to take over the function of the Disaster Management Tactical Team

5.6 MUNICIPAL CRISIS GROUP (DCG)

An effective disaster management strategy must be supported by a quick decision making process which will include the issues related to warning, conduct evacuation and rescue & relief operations in the event of a disaster. This requires a core team of senior decision-makers having administrative control over the key resource organizations. Therefore, it is of utmost need to constitute a Municipal Crisis Group with the Municipal manager as its leader. The organizational structure for disaster management in the Municipality recommends the Municipal Manager as the nodal officer for control and co-ordination of emergency activities.

The Municipal Crisis Group will include:

- Municipal Manager,
- Superintendent of Police,
- Chief Fire Officer,
- Manager Civil Services,
- Manager Electro technical Services,
- Manager Emergency Medical Services,
- Portfolio Councillors,
- Chief Executive Officer, Mayor.

The Municipal Crisis Group members may be required to reach the affected area for monitoring and co-ordination of the response functions at the site. The Municipal Disaster Control Room will facilitate functioning of the Municipal Crisis Group even when its members may be in the affected area. The members of the Municipal Crisis Group will be provided wireless facilities for interaction with Municipal Disaster Control Room.

During emergencies, the Municipal Manager would act as the focal point for control and co-ordination of all activities. His responsibilities have been identified as follows:

- He will have the authority to requisition resources, materials and equipment from all the Departments / Organizations of the Government and also from the private sector;
- He will have the power to direct the industry to activate their onsite and offsite disaster management plans;
- He will authorize the establishment of transit and / or relief camps, feeding centres and cattle camps;
- He will authorize immediate evacuation, whenever necessary.

Responsibilities of the Municipal Crisis Group

- On the spot decision making;
- Control and co-ordination of response and recovery activities in the Municipality;
- Resource mobilization and replenishment;
- Monitoring of overall response and recovery activities;

5.7 MUNICIPAL DISASTER CONTROL ROOM / JOINT OPERATIONAL CENTRE

A single Municipal Disaster Control Room is proposed with desk arrangements for specific activities during a disaster. Municipal Disaster Control Room will have senior representatives from the key resource organizations to facilitate and co-ordinate response. The Municipal Disaster Control Room will have very limited participation of people to avoid chaos and confusion. Therefore, the non-government agencies, although having a role in the rescue and relief operations will not be represented in the Municipal Disaster Control Room. However, to ensure the utilization of the manpower and material resources of these agencies, the Plan advocates to constitute a Sub-Group comprising of representatives of only non-government agencies, which will be responsible for distribution of relief materials obtained from external sources, and also to support the government's requirement of additional manpower and material.

There seems to be no need to deploy large manpower in the Municipal Disaster Control Room in normal times. The emergency situations in normal times are considered as minor emergencies, which can be handled on a regular day-to-day basis by the local fire department and the health department. There is practically no need to activate the Municipal Disaster Control Room beyond the routine staff for such minor emergencies. It is proposed that this function is activated immediately when a disaster or significant emergency strikes.

During disasters, the Municipality should increase and activate the Municipal Disaster Control Room beyond the routine staff to co-op with what is described as limited emergencies. During such period, the officer present in the Municipal Disaster Control Room should be capable of activating the Municipal Disaster Control Room to its full resource level on receiving the warning or information of a disaster. During this stage, most of the communication links of Municipal Disaster Control Room should be made fully operational. During disasters, the Municipal Manager will have to direct the operations at the affected site; to coordinate at the Municipal headquarters and to interact with the Government spheres to meet the conflicting demands at the time of disaster is the responsibility of the Director Corporate Services and their team. This Plan recommends a Municipal Disaster Control Room to help the Municipal Manager and the Municipal Crisis Group to meet conflicting demands. A well-equipped Municipal Disaster Control Room in terms of manpower and equipment should be established to perform the following functions:

- Collection and compilation of information from the affected area;
- Documentation information flow;
- Decision making regarding resource management;
- Allocation of task to different resource organization;
- Supply of information to relevant Disaster Management Centres.

5.7.1 **DESK ARRANGEMENTS**

It is practically difficult for the Municipal Manager and the Municipal Crisis Group members to be present round the clock in the Municipal Disaster Control Room. Thus, it is proposed that the Municipal Disaster Control Room should have senior representatives in the capacity of Desk Officers from the following key resource agencies:

- Search, Rescue & Evacuation;
- Logistics & Welfare;
- Medical;
- Infrastructure
- Administration;

In case of flood, infrastructure will have a senior representative from Irrigation department but in case of other disasters, a senior representative of the Public Works Department will man the position.

The Municipal Disaster Control Room will also have the necessary support staff to assist the senior representatives designated as Disciplines in the Municipal Disaster Control Room. The Disciplines will maintain a constant contact with the Municipal Crisis Group members and the other Municipal heads, to ensure quick decision-making. They will also be responsible to allocate tasks to concerned staff, resource management and information flow.

5.7.2 **ACTIVITIES OF MUNICIPALITY DISASTER CONTROL ROOM (MDCR)**

Normal time activity

The Chief Fire Officer will be in control of the Municipal Disaster Control Room. He will be responsible for the effective functioning of the Municipal Disaster Control Room. His responsibilities during the normal times will include:

- Ensure all warning and communication systems, instruments are in working condition;
- Information collection on a routine basis from the Municipal departments on the vulnerability of identified areas to disasters;
- Liaison with District Municipal Disaster Management Centre;
- Develop status reports of preparedness and mitigation activities in the Municipality;
- Ensure appropriate implementation of the Municipal Disaster Management Plan
- Maintenance of data banks with regular updating;
- Evaluation & updating of the Municipal Disaster Management Plan.

However, the Municipal Disaster Control Room would keep an account of the amendments and accordingly review its response strategy. The Officer-in-charge of the Municipal Disaster Control Room will be responsible for activating the trigger mechanism in the event of receipt of a warning or occurrence of a disaster.

5.7.3 **ACTIVITIES ON OCCURRENCE OF EMERGENCY ISSUE WARNING / ALERT**

On the basis of the message received from the forecasting agencies, warning has to be issued for the general public and the departments, which play a vital role during emergencies. Issue of correct and timely warning would be one of the prime responsibilities of Municipal Disaster Control Room. For effective dissemination of warning the Municipal Disaster Control Room should have a well-planned line of communication. The Municipal Manager would be the authoritative body to issue warnings. Formulation of warning messages should consider the target group for which it is to be issued. For the warning message to be effective it should be clear, consistent and timely, so that appropriate response time is given to the concerned agencies.

The warning or occurrence of a disaster will also be communicated to:

- Executive officer, Mayor
- Portfolio councillors;
- Local units of Defence Services;

5.7.4 **DESK ARRANGEMENTS**

The occurrence of disaster would essentially bring into force the following:

- The Municipal Disaster Control Room will be on alert stage and can be expanded to include desk arrangements with responsibilities for specific tasks;
- The Municipal Manager will spell out the priorities and policy guidelines, co-ordinate services of various department and agencies including national and international aid agencies, and central government agencies. The Municipal Disaster Control Room, in its expanded form, will continue to operate as long as the need for emergency relief operations continue till the long-term plans for rehabilitation are finalized;
- For managing long-term rehabilitation programs, the responsibilities will be that of the respective line department. As already mentioned, the department sub-committee would be responsible for long-term recovery work. This will enable the Municipal Disaster Control Room to attend to other disaster situations, if required.

The desk arrangements provide for division of tasks, information gathering and record keeping and accountability of the desk official to the Municipal Manager. Each desk has two Desk officials assigned, who would be on duty on rotation. The capacity of various desks to coordinate amongst themselves and with the units to be coordinated will ultimately decide the quality of response. All communication received and sent will be recorded in the *"In and Out Messages and Register"*. Reports and information will be collected and processed according to the formats to be established. The responsibilities and functions of each desk will be determined according to the disaster.

5.7.4.1. **POST-EMERGENCY ACTIVITIES**

After an emergency the main responsibility of a Municipal Disaster Control Room would be:

- Evaluation of relief and rehabilitation activities in order to assess the nature of municipal intervention and support, suitability of the organizational structure, institutional arrangements, adequacy of Operating Procedures, monitoring mechanisms, information tools, equipment and communication system.
- Post-emergency impact studies for long term preventive and mitigation efforts to be taken.

5.7.5 **FACILITIES AVAILABLE WITH MUNICIPAL DISASTER CONTROL ROOM**

The facilities and amenities available with the Municipal Disaster Control Room would include well-designed control room and workstations, wireless communication, hotlines, and intercoms. The Municipal Disaster Control Room, as a data bank, will maintain various Municipal action plans and maps.

In addition to above, a Municipal Disaster Control Room should have space for various desk arrangements during disaster situations. The Municipal Disaster Control Room should be equipped with:

- On-site Disaster Management Plans for Major Hazardous installations;
- An up-to-date Map of the Municipality indicating the following information:
 - Vulnerable areas,
 - Identified shelters,
- Communication link system;
- Inventory of manpower resources, particularly address, telephone numbers of key contact persons;
- Inventory of material resources;
- List of experts;
- Important phone numbers, which are frequently required, will be displayed at appropriate places so that they can be referred to easily, while other phone numbers, names and addresses etc., will be displayed on a separate screen or notice board to facilitate easy retrieval and cross-referencing.

5.7.6 **COMMUNICATION ROOM (MAIN MESSAGE ROOM)**

The police wireless system should continue to be in contact with the Municipal Disaster Control Room. In addition, the following facilities should be available in the communication room:

- Telephones;
- Fax;
- Civil Wireless Network;
- One PC with printer;
- Internet facility with e-mail capabilities;
- Photocopying machine.

Some of this equipment is not necessary during normal operations, but must be readily available from the commencement of the Municipal Disaster Control Room extended operations.

The Municipality have two wireless communication systems and a dedicated wireless communication system for Fire and Rescue Services. However, currently two of these systems are down due to technical reasons. The new High site has not yet been finalized.

In every Municipality, the police will have a well-established wireless communication system. Therefore, it is proposed that under any emergency the communication resources available with the police should be depended upon as a secondary communication system until the Municipality's are fully operational..

5.7.7 MUNICIPAL DISASTER CONTROL ROOM STAFFING

Three kinds of staff are proposed for the Municipal Disaster Control Room:
Regular staff (this will consist of the normal personnel of the Fire Department),
Staff-on-call, and
Staff on disaster duty.

The regular staff comprise of the permanent Call Centre staff (Control room operators), which would be responsible for manning the Communication Room round the clock;

Staff-on-call would be available for immediate duty in case of an emergency. These staff will usually be staff that is on standby at the Fire Department and Traffic division.

The staff on disaster duty would be required to shoulder additional responsibility in the case of a disaster. This additional staff would be of the nature of a reserve and may be drawn from the various departments or volunteers. During normal time, this staff will not be called on to perform any duty in the Municipal Disaster Control Room. This staff would be responsible for managing the desk arrangements. Each concerned Municipal department should nominate one official for Municipal Disaster Control Room. The departmental officials nominated as "Desk Officers" from the concerned line departments and other agencies will be available in the Municipal Disaster Control Room during the disaster period. All the important revenue officials in the Municipality should be trained in the working of the Municipal Disaster Control Room. The nodal officers of other line departments should also be familiar with the functions of Municipal Disaster Control Room. The Standard Operating Procedure for the functioning of Municipal Disaster Control Room will be drafted and will be read as an Annexure.

The Municipal Disaster Control Room must, when activated and during any response and relief operations under the direction of the relevant Executive Manager, perform the following functions and report to the District Disaster Management Centre;

- Maintain records of communications, decisions, actions and expenditures,
- Designate emergency area(s) and sites,
- Decide on emergency measures and priorities,
- Assess impact
- Request emergency partner assistance / invoke mutual aid agreements,
- Close public buildings,
- Issue public warnings, orders and instructions,
- Protect the health and safety of emergency responders,

- Ensure an acceptable level of emergency services for the Municipality outside emergency area(s),
- Prepare lists of fatalities, casualties and missing persons,
- Prepare lists of destroyed and damaged properties,
- Co-ordinate response with District Disaster Management Centre,
- Co-ordinate response with non-governmental disaster relief organizations, neighbourhood and community organizations.
- Identify persons/organizations to contribute to emergency response,
- Provide information to the media for dissemination to the affected population(s) and the general public,
- Co-ordinate information for public release with emergency partners' communications staff,
- Respond to inquiries from the media, public,
- Identify target audiences for post-emergency communications,
- Identify persons/organizations to contribute to post-emergency reports/debriefings
- Submit information for payment of invoices

5.8 RESPONSIBILITIES OF DEFFERENT ROLE PLAYERS WITHIN DISASTER MANAGEMENT

5.8.1 MUNICIPAL MANAGER

To ensure disaster prevention, risk reduction and disaster preparedness, the Municipal Manager must:

- Ensure that the disaster management function is executed in an effective and efficient manner in the Victor Khanye Local Municipality,

During and after emergencies or disasters the Municipal Manager will be responsible to personally or through a designated official:

- Report, liaise and consult with councillors and external district, provincial and national government departments.
- Report on emergency impact and response to the Mayor,
- Report on emergency impact and response to the Councillor(s) for the affected area(s),
- Report on emergency impact and response to the remaining Councillors,
- Notify next of kin when a Municipal employee is injured, missing or killed.
- Authorize extraordinary expenditures,
- Identify persons/organizations to receive recognition for contributions to emergency response.

5.8.2 DIRECTORS

The Directors must:

- Ensure that departmental disaster contingency plans are compiled and maintained in his/her service.

5.8.3 CHIEF FIRE OFFICER (Chief Emergency Services)

The Chief Fire Officer is responsible for the effective planning and functioning of the Municipality's emergency services throughout all the phases of the Disaster Management Continuum.

He/she must ensure that disaster plans are compiled and maintained in his/her division, with specific reference to the following;

- Compilation of pro-active divisional disaster management programmes to support risk reduction or elimination.
- Compilation of reactive divisional disaster management plans to ensure service continuation during emergency/disaster situations.
- Coordinating response and mutual aid agreements with adjacent municipalities,
- Protecting health and safety of emergency responders,
- Ensuring acceptable level of emergency services for the Municipality outside of the emergency area(s),
- Identifying persons/organizations to contribute to post-emergency reports/debriefings,
- Supplying resources for disaster management purposes as requested by the Municipal Crisis Group,

- Establishing and maintaining a resource database that is integrated with the Municipal Disaster Control Room Disaster Management Resources Database (DisRes).

5.8.4 HEAD OF THE DISASTER MANAGEMENT CENTRE (DISASTER MANAGEMENT CENTRE)

The Chief Fire Officer as Head of Disaster Management is also responsible for the compilation, maintenance and distribution of the Municipality's Disaster Management Plan and its supporting risk-specific and incident management plans.

The Head is also responsible for the performance by the Centre of its disaster management functions and to implement and co-ordinate the Municipality's Disaster Management Plan (Section 44(1)).

The Chief Fire Officer must:

- Liaise with municipal and district officials,
- Liaise with provincial officials and national officials,
- Co-ordinate response with CBO'S and NGO'S,
- Authorize area evacuation/re-entry,
- Identify persons/organizations to receive recognition for contributions to the emergency response,
- Establish and maintain required telecommunications links
- Identify available resources for disaster management purposes as requested by the EMT,
- Establish and maintain a resources database (DisRes).
- Ensure effective media liaison

As Head of the Centre, in consultation with the Municipal Crisis Group, will determine when an incident or disaster is adequately dealt with and the response structure set up for the incident / disaster can be deactivated.

5.8.5 ASSISTANT MANAGER: HEALTH SERVICES

The Assistant Manager: Health services must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk education or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Steps to eliminate risks presented by communicable disease,
- Isolate person(s) in order to decrease or eliminate risk presented by a communicable disease,
- Protect the health and safety of emergency responders,
- Care for evacuees and victims,
- Monitor large groups of people for contamination and/or health effects,
- Immunize large groups of people,
- Assist with the management of emergency shelter, evacuation assembly points and mass care facilities for persons displaced by emergencies or disasters

- Disposing of non-hazardous waste,
- Providing facilities for the disposal of hazardous waste,
- Provide health care for disrupted populations (may be general population or limited to vulnerable populations and essential service operators),
- Seize and dispose of food that poses a health hazard,
- Monitor the environment (air, water, and ecosystem) for contamination,
- Identify persons who may require medical follow-up and/or who may require psychosocial support,
- Identify persons/organizations to contribute to post-emergency reports/debriefings,
- Supplying resources for disaster management purposes as requested by the Municipal Crisis Group,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.6 ASSISTANT MANAGER: PUBLIC SAFETY

The Assistant Manager: Public Safety must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active divisional disaster management programmes to support risk reduction or elimination.
- Compilation of reactive divisional disaster management plans to ensure service continuation during emergency/disaster situations.
- Coordinating response with the South African Police Service, National Defence Force and other security forces or departments,
- Protecting the safety of emergency responders, evacuated areas, affected communities and damaged or threatened property,
- Controlling and dispersing crowds,
- Support the evacuation of designated area(s) of both persons and livestock,
- Controlling access to and egress from emergency area(s),
- Protecting private and public property,
- Managing and controlling traffic in and around emergency area(s) on evacuation routes and on emergency vehicle routes,
- Maintaining vehicle staging area for emergency or disaster stricken areas.
- Ensuring security measures at vehicle staging areas as well as at any operations centres as well as at temporary medical facilities.
- Identifying persons/organizations to contribute to post-emergency reports/debriefings,
- Protecting essential service facilities,
- Supplying resources for disaster management purposes as requested by the EMT,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.7 MANAGER: HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT

The Manager: Human Resource Management and Development must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following:

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Emergency/contingency planning for all Council facilities used for mass events,
- Make available facilities for emergency assembly and/or shelter of persons displaced by emergencies or disasters,
- Plan and assist with the management of emergency shelter, evacuation assembly points and mass care facilities for persons displaced by emergencies or disasters.
- Supplying resources for disaster management purposes as requested by the EMT,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.8 DIRECTOR: FINANCE

The Director: Finance must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Managing donations for emergency response
- Facilitating emergency procurement,
- Initiating and facilitating efforts to make funds available for disaster Management in the municipal area (Section 43).
- Supplying resources for disaster management purposes as requested by the EMT,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes)

5.8.9 DIRECTOR TECHNICAL SERVICES

The Director technical services shall be responsible for the Managers: Roads and Civil Works that must ensure that disaster plans are compiled and maintained in their respective service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Coordinating response with businesses and industries affected by the emergency,
- Coordinating response with national and provincial Public Works departments,
- Identifying buildings which are unsafe,
- Identifying areas, buildings and structures which may require restoration,
- Removing debris from transportation routes and other sites as required,
- Monitoring the environment (air, water, and ecosystem) for contamination,
- Controlling consumption of public water supply,
- Providing alternate water supplies (portable, industrial and fire-fighting),
- Identifying persons/organizations to contribute to post-emergency reports/debriefings,
- Plan and ensure that risk reduction and disaster mitigation principles are adhered to in the recovery and redevelopment phases,
- Maintain a flood warning system throughout its area of jurisdiction for alerting the Disaster Management Centre,
- Ensure that risk reduction and mitigation principles are applied in all development projects,
- Submit development plans to the Disaster Management Centre for input regarding risks and hazards,
- Include the reduction of natural disasters as an element in environmental education programmes,
- Identify and make available alternative land and housing for persons displaced by an emergency or disaster,
- Providing technical advice in preventing or reducing the effects of flooding
- Confining and containing flood water
- Plan and assist with the management of emergency shelter, evacuation assembly points and mass care facilities for persons displaced by emergencies or disasters,
- Liaison with the Ministry of Water Affairs and Forestry as required
- Supplying resources for disaster management purposes as requested by the EMT,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.10 MANAGER: ELECTRO TECHNICAL SERVICES

The Manager: Electro technical Services must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Identifying and prioritizing essential services that may require restoration as the result of an emergency or disaster,
- Coordinating response with Eskom,
- Allocating available electricity ,
- Planning alternate electrical supply,
- Arranging for an alternate telephone or communication service, if required,
- Identifying persons/organizations to contribute to post-emergency reports/debriefings.
- Supplying resources for disaster management purposes as requested by the EMT,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes),

5.8.11 MANAGER: CORPORATE AND LEGAL SERVICES

The Manager: Corporate and Legal Services must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination.
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations.
- Monitoring compliance with relevant legislation, regulations, licenses and by-laws,
- Providing information to Municipality Staff and their families,
- Documenting information for potential municipal insurance claims,
- Documenting information for potential legal actions,
- Identifying information to be documented for inquests or investigations under applicable laws.
- Documenting information for remuneration of municipal employees involved in emergency response,
- Reporting to the Occupational Health and Safety Committees on the emergency response,
- Documenting potential occupational health and safety issues,
- Documenting information for potential municipal Labour relations issues.
- Documenting information for potential compensation claims,
- Identify persons/organizations to contribute to post-emergency reports/debriefings,
- Supplying resources for disaster management purposes as requested by the EMT,

- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.12 DIRECTOR CORPORATE SERVICES

The Director Corporate Services must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination.
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations.
- Establishing and maintaining required information links,
- Rendering support and advice throughout all phases of disaster management planning activities,
- Ensure that the Disaster Management Plan forms an integral part of the IDP,
- Compiling, exercising and carrying out adequate disaster recovery procedures for IT infrastructure and information management,
- Supplying resources for disaster management purposes as requested by the EMT,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes),
- Supplying IT Infrastructure and assets to host and maintain DisRes.

5.8.13 MANAGER: DEVELOPMENT PLANNING

The Manager: Development Planning must ensure that disaster plans are compiled and maintained in his/her service.

The manager must ensure:

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination.
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations.
- Facilitating feedback regarding disaster management initiatives from communities to the Disaster Management Centre/Disaster Management Advisory Committee.
- Supplying resources for disaster management purposes as requested by the Municipal Crisis Group,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.14 COMMUNICATIONS OFFICER

The Communications Officer must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following;

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Providing information to persons at emergency facilities (e.g. Assembly points / evacuation centres / mass care facilities),
- Providing information to persons at special incident-related meetings,
- Providing information to Municipality employees and their families who are affected by emergencies / disasters,
- Arranging site visits for persons affected by the emergency, e.g. families of deceased persons,
- Arranging anniversary events of disasters for affected persons in support of efforts to facilitate psychosocial coping mechanisms,
- Regularly updating on emergency situation to councillors,
- Supporting the Disaster Management Centre in communicating status reports and public safety notices.
- Supporting the Disaster Management Centre in risk-reducing public education and awareness programmers.
- Supplying resources for disaster management purposes as requested by the Municipal Crisis Group,
- Establishing and maintaining a resources database that is integrated with the Dam's Disaster Management Resources Database (DisRes),

5.8.15 INTERNAL AUDIT

The Internal Auditor must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following:

- Auditing the emergency /contingency plans of Council installations to ensure compliance with the relevant legislation, codes and regulations.
- Auditing the risk management plans of council installations to ensure pro-active risk reduction and compliance with relevant legislation.
- Audit compliance of Municipality services with the stipulations of the Corporate Disaster Management Plan,
- Supplying resources for disaster management purposes as requested by the Municipal Crisis Group,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes).

5.8.16 RESPONSIBLE PERSON: HOUSING

The Responsible Person: Housing must ensure that disaster plans are compiled and maintained in his/her service, with specific reference to the following:

- Compilation of pro-active departmental disaster management programmes to support risk reduction or elimination,
- Compilation of reactive departmental disaster management plans to ensure service continuation during emergency/disaster situations,
- Ensuring that the Disaster Management Centre are supplied with the identification of new development with the view of providing feedback on risk and vulnerability assessments.
- Assisting with relocation of displaced families during and after an emergency or disaster.
- Assist in identification of alternative and temporary accommodation to affected families during restoration and rebuilding process.
- Supporting the Disaster Management Centre in risk-reducing public education and awareness programmes.
- Supplying resources for disaster management purposes as requested by the ECC Management Team,
- Establishing and maintaining a resources database that is integrated with the Disaster Management Centre's Disaster Management Resources Database (DisRes),

5.8.17 OTHER SECTIONS/DEPARTMENTS WITHIN THE REGIONS

- People's Centres
 - Communication
 - Information distribution
- Councillors and Ward Committees
 - Community liaison
 - Community mobilization

5.8.18 EXTERNAL ORGANISATIONS/ENTITIES

- South African Red Cross Society
 - Rendering first aid
 - Provision of blankets and clothing
 - Assist with the distribution of food parcels etc.
- Salvation Army
 - Emergency feeding
 - Relief work/blankets/clothing
- Gift of the Givers
 - Provision of blankets, clothing and basic necessities
 - Assist with the distribution of food parcels etc.
- Church groups
 - Provision of blankets, food, clothing
 - Spiritual counselling
 - Emergency shelter
- 4X4 Vehicle club
 - Rescue and transport

- South African Weather Bureau
 - Constant monitoring of the weather conditions
 - Early warnings to the Disaster Management Centre
- TELKOM
 - Restoration of telephone service, emergency communication
- ESKOM
 - Restoration of power supply
- Nkangala District Municipality
 - To coordinate with local municipalities
 - Assist with Disaster Management functions
- Provincial Government Disaster Management
 - To coordinate with District Municipalities
- National Disaster Management
 - To coordinate with all provinces
- South African Police Service
 - Maintain law and order
 - Investigate crime
 - Liaison with mortuaries
 - Coordination and control of security services
 - Counselling (Social Services)
 - Photographs of the disaster area
- South African National Defence Force
 - Search and rescue work
 - Supply water tankers
 - Power supply
 - Emergency feeding
 - Food preparation (field kitchen, cooking utensils)
 - Emergency housing
 - Emergency repairs to roads and bridges
 - Provision of bulk transport
 - Medical support with regard to medical posts and general public health
- Rescue divers
 - Search and rescue work

6. DEPARTMENTAL PLANS

Each individual service of the Municipality as indicated in the Municipal Disaster Management Framework is responsible for submitting its Departmental Disaster Management Plans to the Disaster Management Centre.

NOTE:

Emphasis should be on prevention.

Typical aspects addressed in any plan should encompass the following:

1. Planning Framework/Introduction
 - The way in which the concept and principles of disaster management are to be applied in its functional area;
 - Its role and responsibilities in terms of the national, provincial or municipal disaster management frameworks;

2. Risk and Vulnerability Assessment leading to a needs analysis
3. Evaluation and description of Infrastructure / Organization available
 - E.g. Disaster Management Resources Database
 - (Its capacity to fulfil its role and responsibilities)
4. Prevention through risk elimination.
 - E.g. Remove hazards / alternative processes
 - (Particulars of its disaster management strategies)
5. Mitigation through risk reduction
 - E.g. Engineering solutions / Legislative compliance / Safety culture
6. Preparedness planning for risks that can not be eliminated (Risk Management) (Contingency strategies and emergency procedures in the event of a disaster, including measures to finance these strategies)

Contingency Planning based on risks and vulnerabilities

- E.g. Fire / Chemical spills / Engineering aspects

Emergency organization, internal and external

- Emergency management structure and allocation of responsibilities
- Standard Operating Procedures
- Telephone lists

Response planning

(Role and responsibilities regarding emergency response)

- Emergency response teams (groups with special responsibilities during emergencies)

Notification and Activation

- Stand-by lists / Emergency numbers

Recovery plans

- Its role and responsibilities regarding post-disaster recovery and rehabilitation; E.g. Business continuity / Disaster Recovery for IT systems can lead to reconstruction and redevelopment projects and programmes

7. Lines of communication (Protocols) and liaison
 - Internal and external communication lines (Who informs who, who reports to whom).
 - Each department must co-ordinate and align the implementation of its plan with those of other organs of state and institutional role players; and regularly review and update its plan.)
8. Awareness and Education
 - Before (Prevention, Mitigation and Preparedness)
 - During (Notifications and advisories)
 - After (Advisories, Public information and education) – Return to “Before”

9. Evaluation and Maintenance

- (Section 49) of the Disaster Management Act, 2002

7 DISASTERS OCCURRING OR THREATENING

When a disastrous event occurs or is threatening in the area of the Municipality, the Disaster Management Tactical Team will be established. If, in their opinion this event is to be that of a disaster the Municipal Crisis Group will be established, which will bring into effect the full implementation of the Disaster Management Centre and the Municipal Disaster Control Room which will determine whether the event is a disaster in terms of the Act, and, if so, the Head of the Disaster Management Centre will immediately:

- Initiate efforts to assess the magnitude and severity or potential magnitude and severity of the disaster;
- Alert all disaster management role players in the municipal area that may be of assistance in the circumstances;
- Initiate the implementation of the disaster response plan or any contingency plans and emergency procedures that may be applicable in the circumstances; and
- Inform the District Disaster Management Centre, National Disaster Management Centre and the Mpumalanga Provincial Disaster Management Centre of the disaster and its initial assessment of the magnitude and severity or potential magnitude and severity of the disaster.
- When informing the National Disaster Management Centre and the Mpumalanga Provincial Disaster Management Centre, the Centre may make recommendations regarding the classification of the disaster as may be appropriate. (Section 46(1))
- Irrespective of whether a local state of disaster has been declared or not, the Municipality is primarily responsible for the co-ordination and management of local disasters that occur in its area. (Section 50(1))
- The Municipal Manager in his capacity as chairperson of the Municipal Crisis Group will be effectively responsible to keep the Disaster Management Advisory and Coordinating Committee updated of the proceedings and assistance received/required.
- The Disaster Management Advisory and Coordinating Committee will liaise on Political level with the representatives of the District / Provincial Advisory Committees, if established or requested to be established.

8 DECLARATIONS

Whether or not an emergency situation is determined to exist, municipal and other agencies may take such actions under this plan as may be necessary to protect the lives and property of the inhabitants of the Victor Khanye Local Municipality.

DECLARATION OF A DISASTER AND ISSUES OF IMPORTANCE

Irrespective of whether a local state of disaster has been declared, the Municipality is primarily responsible for the coordination and management of local disasters that occur in its area.

In the event of a local disaster the Municipal council may by notice in the provincial gazette declare a local state of disaster if existing legislation and contingency arrangements do not adequately provide for the municipality to deal effectively with the disaster; or other special circumstances warrant the declaration of a local state of disaster. (Section 51:1) The declaration of a disaster by Council may only be considered if so indicated by way of recommendation from the Chief Fire Officer.

If a local state of disaster has been declared, the Municipality may make regulations or issue directions, or authorize the issue of directions concerning:

- (a) The release of available resources of the Municipality, including stores, equipment, vehicles and facilities;
- (b) The release of personnel of the Municipality for the performance of emergency services;
- (c) The implementation of all or any of the provisions of a municipal disaster management plan that is applicable in the circumstances;
- (d) The evacuation to temporary shelters of all or parts of the population from the disaster stricken area if such action is necessary for the preservation of life;
- (e) The regulation of traffic to, from and within the disaster-stricken or threatened area;
- (f) The control and occupancy of premises in the disaster-stricken area;
- (g) The provision, control and use of temporary emergency housing;
- (h) The suspension of limiting sale, dispensing or transportation of alcoholic beverages in the disaster-stricken or threatened area;
- (i) The maintenance or installation of temporary lines of communication to or from or within the disaster area;
- (j) The dissemination of information required for dealing with the disaster;
- (k) Emergency procurement procedures
- (l) The facilitation of post-disaster reconstruction, rehabilitation and recovery and
- (m) Other steps that may be necessary to prevent escalation of the disaster, or to alleviate, contain and minimize the effects of the disaster

If a local state of disaster has been declared, the Municipal Council may issue directions, or authorize the issue of directions to:

- (a) Assist and protect the public;
- (b) Provide relief to the public;
- (c) Prevent or combat disruption; or
- (d) Deal with the destructive and other effects of the disaster.

9 REQUESTS FOR DISTRICT ASSISTANCE

Under certain circumstances, assistance, including SANDF assistance, may be requested from the District Disaster Management Centre who will arrange for such assistance from the Provincial Centre. The requesting of such services shall not be deemed to be a request that the District or Provincial Administration: Mpumalanga assumes authority and control of the emergency.

10 RECOVERY AND REHABILITATION OPERATIONS

Post-disaster recovery and rehabilitation operations normally take on the nature of programmes and projects.

The Disaster Management Centre will assist with the identification of needs and will facilitate recovery and rehabilitation operations. The function or department with the most direct involvement in the operation will take responsibility for any project management and delivery. Project teams convened for these purposes must report to the Disaster Management Advisory Committee on a regular basis as determined by the Disaster Management Advisory Committee.

In this regard the causal factors of disasters must be addressed and disaster prevention through risk elimination should be pursued.

6. MITIGATION STRATEGY

6.1 FLOOD

6.1.1 CAUSES OF FLOODS

Floods can occur because of two reasons:

- a) Natural Features
- b) Man Made Features

6.1.2 NATURAL FEATURES

PHYSIOGRAPHY

Because the Victor Khanye Local Municipality is situated at the origin of the catchments area and its fairly flat topography, there are no natural features that may cause floods.

RAIN FALL

The total amount of average rainfall in the Municipality average about 400 – 600 mm annually. But there are phenomena where excessive rain is falling in a short period of time. This occurrence is common as the municipality display a typical Highveld thunderstorm climate. These thunderstorms may result in heavy downpours that may result in isolated flash flooding.

HIGH WATER TABLE

Higher water table is also one of the important reasons for slow drainage of rainwater in the Municipality. The average underground water is between 30 meters below to 1 meter above the surface. The rainwater could not penetrate into the surface and remains on the surface.

6.1.3 MAN MADE FEATURES

The problem of floods is further accentuated by the existence of man-made barriers like roads and dam walls, which obstruct the natural flow of water. The highest hazard here is when one of these dam walls fails. Mostly the most damage is caused to low-lying residences, with little to no damage to crops.

A point worth mentioning is that roads tend to obstruct or deviate the natural flow of water, which cause erosion damage to crops.

6.1.4 POSSIBLE MITIGATION OUTCOMES

Increased maintenance programs on existing storm water systems, especially in the known affected areas.

Investigation is conducted in the construction ineffective storm water drainage systems in the new developing areas, and where the storm water systems have not been installed yet.

Effective bunding of road reserves between streets and Ervin.

Incorporate the natural flow of storm water into future planning of urban extensions.

6.2 HIGHVELD THUNDERSTORMS AND HIGH WINDS

6.2.1 CAUSES OF HIGHVELD STORMS AND STRONG WINDS

Thunderstorms form when significant condensation (resulting in the production of a wide range of water droplets and ice crystals), occurs in an atmosphere that is unstable and supports deep, rapid upward motion. This often occurs in the presence of three conditions: sufficient moisture accumulated in the lower atmosphere, reflected by high temperatures; a significant fall in air temperature with increasing height, known as a steep adiabatic lapse rate; and a force such as mechanical convergence along a cold front to focus the lift.

6.2.2 PHYSIOGRAPHY

Victor Khanye Local Municipality is situated on the Highveld Ridge and the occurrence of Thunderstorms is a common phenomenon in this area.

6.2.3 DANGERS INVOLVED WITH THUNDERSTORMS

- Lightning
- Hail
- Flash floods
- High winds or gusts
- In severe instances, tornadoes

6.2.4 POSSIBLE MITIGATION OUTCOMES

- Good public awareness to the safety during thunderstorms.
- Preventative measures such as maintenance of the storm water drainage systems
- Enforcing the compliance to building regulations and proper building techniques
- Ensuring that relief measures are in place for when a severe thunder storm do strike.

6.3 FIRES AND WILD FIRES

6.3.1 CAUSES OF FIRES AND WILD FIRES

The occurrence of fires is mostly due to human intervention or negligence and even deliberate intentions.

Natural causes of fires are mostly spontaneous combustion, the magnifying effect from dew, lightning or chemical reactions between contacting substances.

Man-made causes vary from pollution to deliberate setting a fire.

6.3.2 POSSIBLE MITIGATION OUTCOMES

Proper education and law enforcement of regulatory requirements will assist in the prevention in the spread of a fire, but will not necessarily prevent the ignition thereof. The continuous upgrade and extension of the Fire Department's personnel and vehicles will mitigate for a quick response and proper equipment to fight the fire, and the prevention of the spread thereof.

6.4 DROUGHT

6.4.1 CAUSES OF DROUGHT

The main cause of drought is the decreasing annual rainfall due to various reasons. The most common currently being investigated by physicists is the so-called green house effect or more commonly known as Global Warming, which have an adverse effect on the climate all over the world.

6.4.2 PHYSIOGRAPHY

The collapse of boreholes, decreased capacities of wells, formation of sinkholes due to the residing underground water table, the shortage of the natural occurrence of rain. All these factors indicate the initial stages of drought.

6.4.3 MAN MADE FEATURES

Some man made features, such as the over usage of underground resources in terms of pivot point irrigation also have an extensive impact on the current drought conditions as more water is extracted than what is replenished.

6.4.4 POSSIBLE MITIGATION OUTCOMES

Closer monitoring of the current water situation by implementation of a water management plan and by-laws.

Possible establishments of water restrictions to prevent over usage of current resources.

Regulation of the usage of pivot point irrigation systems.

Investigation into other resources to increase water reserves.

Educating the communities into water preservation and how they could also utilize other water resources for themselves.

7. RESOURCES

7.1 EMERGENCY SHELTERING

Emergency housing and sheltering is required in the event of a large scale evacuation or when a disaster left several households without shelter.

For this purpose the usage of community halls, school halls or other large facilities where people could be accommodated is necessary and their location and availability is known. The following facilities are currently known:

7.1.1 SIZUZILE PRIMARY SCHOOL

KGOMO STREET, BOTLENG

TELEPHONE NUMBER: 013 665 4470

PRINCIPAL

I M MAFATLE
0834377778

FACILITIES AVAILABLE

HALL
CLASS ROOMS

7.1.2 BAZANI PRIMARY SCHOOL

SHABANGU STREET, BOTLENG

TELEPHONE NUMBER: 013 665 3961

PRINCIPAL

H MOLOISANE
072 348 8727

FACILITIES AVAILABLE

CLASS ROOMS
SPORT FIELDS FOR EMERGENCY TENTS

7.1.3 KHANGELA PRIMARY SCHOOL

MOTLOUNG STREET, BOTLENG

TELEPHONE NUMBER: 013 665 3981

PRINCIPAL

M S MASEKO

FACILITIES AVAILABLE

CLASS ROOMS

7.1.4 BOTLENG SECONDARY SCHOOL

SHABANGU STREET, BOTLENG

TELEPHONE NUMBER: 013 665 4257

PRINCIPAL

M A NKUMANE
072 216 6692

FACILITIES AVAILABLE

CLASS ROOMS

7.1.5 PHAPHAMANI SECONDARY SCHOOL

BOTLENG EXTENSION 4, BOTLENG

TELEPHONE NUMBER: 013 665 3184

PRINCIPAL

S N C S MOSHESHA
072 219 5423

FACILITIES AVAILABLE

CLASS ROOMS

7.1.6 MDUMISENI PRIMARY SCHOOL

BOTLENG EXTENSION 4, BOTLENG

TELEPHONE NUMBER: 013 665 2351

PRINCIPAL

L W MONONYANE
082 747 6322

FACILITIES AVAILABLE

CLASS ROOMS
OPEN FIELD FOR EMERGENCY TENTS

7.1.7 SUNDRA PRIMARY SCHOOL

RENNIE AVENUE, SUNDRA

TELEPHONE NUMBER: 013 661 1239

PRINCIPAL

MR. T CREMER

FACILITIES AVAILABLE

HALL

CLASS ROOMS

SPORT FIELDS FOR EMERGENCY TENTS

7.1.8 HIGH SCHOOL SUNDRA

NESTAD AVENUE, SUNDRA

TELEPHONE NUMBER: 013 661 1997

PRINCIPAL

S N MOTLOUNG

FACILITIES AVAILABLE

HALL

CLASS ROOMS

SPORT FIELDS FOR EMERGENCY TENTS

7.1.9 HIGH SCHOOL DELMAS

H.F. VERWOERD STREET, DELMAS

TELEPHONE NUMBER: 013 665 2351

PRINCIPAL

MR. JURIE DE JONGH
TEL: 0136652324
BRANDLAAN 12
DELMAS WEST

FACILITIES AVAILABLE

HALL
CLASS ROOMS
SPORT FIELDS FOR EMERGENCY TENTS

IZAK LOMBARD KOSHUIS

TELEPHONE NUMBERS: 0136652170 OR 0136652180

FACILITIES AVAILABLE
ACCOMODATION

DORM ROOMS FOR EMERGENCY
LARGE KITCHEN FACILITIES

7.1.10 DELMAS PRIMARY SCHOOL

SIXTH AVENUE , DELMAS

TELEPHONE NUMBER: 013 665 2076

PRINCIPAL

MR. J DE BEER

FACILITIES AVAILABLE

HALL

CLASS ROOMS

SPORT FIELDS FOR EMERGENCY TENTS

JOHAN DU PLESSIES KOSHUIS

TELEPHONE NUMBERS: 0136652077 OR 0136651931

FACILITIES AVAILABLE

SLEEPING FACILITIES FOR EMERGENCY
ACCOMODATION

LARGE KITCHEN FACILITIES

7.1.11 ELOFF PRIMARY SCHOOL

ST ANDREWS STREET , ELOFF

TELEPHONE NUMBER: 013 667 9145

PRINCIPAL

MR. GILDENHUYS
082 875 3175

FACILITIES AVAILABLE

HALL
CLASS ROOMS
SPORT FIELDS FOR EMERGENCY TENTS

7.2 COMMUNITY HALLS

DUMAT HALL

SAREL CELLIERS STREET, DELMAS

ELOFF HALL

OXFORD ROAD, ELOFF

SIMON GONDWE SPORT CENTRE

MANDELA DRIVE, BOTLENG

BOTLENG COMMUNITY HALL

OFF MANDELA DRIVE, BOTLENG EXTENSION 3

AGRI DELMAS HALL

ON THE OLD SHOW GROUNDS NEXT TO PANNAR

7.3 EMERGENCY MEDICAL FACILITIES

Knowing where emergency medical facilities are situated and what their capabilities are will ensure fast decision making and assignment of medical casualties for fast treatment.

Only the larger medical facilities are noted herein. (Those facilities that will be able to handle a significant number of casualties from serious to the walking injured or the seriously ill to minor ill patients). There are a significant number of doctors offices around the Municipal area, but these doctors would be called upon during a level two or three disaster to come and serve within the under mentioned facilities.

7.3.1 MEDICAL FACILITIES: BERNICE SAMUEL HOSPITAL

HOSPITAL STREET, DELMAS

TELEPHONE NUMBER: 013 665 2086 / 013 665 2089

CHIEF EXECUTIVE
OFFICER

MR. M. MOSGAFELA
CELL: 082 459N5615

SUPERINTENDENT

DR. A VANTER

FACILITIES AVAILABLE

26 BEDS IF AVAILABLE

2 THEATERS

WELL ORGANIZED CASUALTIES

OPEN AREAS FOR EMERGENCY TENTS

HELI PAD FOR EMERGENCY EVACUATION
OF INJURED

EMERGENCY MEDICAL EQUIPMENT AND
STAFF

WELL ESTABLISHED NETWORK TO OTHER
MEDICAL FACILITIES AROUND THE
PROVINCE

THREE AMBULANCES, TWO IMMEDIATELY
AVAILABLE AND THE THIRD CAN BE
MANNED BY STANDBY PERSONNEL

{CURRENTLY UNDER CONSTRUCTION FOR UPGRADE AND INCREASMENT OF THE
HOSPITAL FACILITIES}

7.3.2 MEDICAL FACILITIES: BOTLENG EXTENSION 3 CLINIC

BOTLENG EXTENSION 3, BOTLENG

TELEPHONE NUMBER: NO CURRENT TELEPHONE FACILITIES
AVAILABLE

RESPONSIBLE MANAGER MR. M. MONAMA
CELL: 079 318 3706

FACILITIES AVAILABLE	LIMITED EMERGENCY EQUIPMENT
	TREATMENT ROOMS FOR INITIAL MEDICAL TREATMENT OR DIAGNOSIS
	LIMITED EMERGENCY MEDICAL EQUIPMENT AND STAFF
	SUFFICIENT SPACE FOR AMBULANCE STANDBY FOR TRANSPORT TO LARGER MEDICAL FACILITY

7.3.3 MEDICAL FACILITIES: BOTLENG CLINIC

KGOMO STREET, BOTLENG

TELEPHONE NUMBER: 013 665 6073

RESPONSIBLE MANAGER MR. M. MONAMA
CELL: 079 318 3706

FACILITIES AVAILABLE	LIMITED EMERGENCY EQUIPMENT
	TREATMENT ROOMS FOR INITIAL MEDICAL TREATMENT OR DIAGNOSIS
	LIMITED EMERGENCY MEDICAL EQUIPMENT AND STAFF
	SUFFICIENT SPACE FOR AMBULANCE STANDBY FOR TRANSPORT TO LARGER MEDICAL FACILITY

7.3.4 MEDICAL FACILITIES: DUMAT CLINIC

SAREL CELLIERS STREET, DELMAS

RESPONSIBLE MANAGER MR. M. MONAMA
CELL: 079 318 3706

FACILITIES AVAILABLE	LIMITED EMERGENCY EQUIPMENT TREATMENT ROOMS FOR INITIAL MEDICAL TREATMENT OR DIAGNOSIS LIMITED EMERGENCY MEDICAL EQUIPMENT AND STAFF SUFFICIENT SPACE FOR AMBULANCE STANDBY FOR TRANSPORT TO LARGER MEDICAL FACILITY, PARKING AREA NEXT TO DUMAT BUILDING COULD BE EASILY CONVERTED INTO A READY AREA
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THE DUMAT HALL IS IN THE SAME BUILDING AND COULD BE ACCOMODATED FOR
EMERGENCY TREATMENT FACILITY OR EMERGENCY ACCOMODATION

7.4 PRIVATE EMERGENCY MEDICAL SERVICES

It is a known fact that the emergency medical services within the municipality is not able to handle a major incident that may occur. The resources of the private emergency medical services are highly valued to supplement the existing medical services within the municipality.

These private sector services have their own operating procedures, but there is a well understood understanding on incidents that they fall in with the operating procedures of the managing service.

Contact details are as follows:

Netcare (CCA support)	082 911(have emergency air evacuation)
Life Med (CCA support)	082 859 7150
ER24 (CCA support)	084 214 / 011 915 4904(have emergency air evacuation)

(CCA support indicates that the service have Advanced Medical Practitioners on duty and are available to respond into our area when called upon)

7.5 HAZMAT RESPONSE ORGANIZATIONS

HAZMAT EMERGENCY HELP DESK 0800 112 890

WASTE TECH – ENVIROSERV **082 453 8743**

RAPID SPILL RESPONSE **082 775 3305**

DRIZIT **083 282 7951**

WASTE MANAGEMENT SERVICES 083 229 2995

7.6 RECOVERY AND HEAVY LIFTING EQUIPMENT

CAR TOWING SERVICES 011 616 2348

RIEKS TOWING 012 546 0382

TRANSYLVANIA TOWIN 011 917 4108

The above-mentioned companies have resources for the heavy lifting of debris or the recovery of vehicles, trucks and equipment that might need to be recovered from various scenarios.

Below are the contact details of the local towing companies that could be able to perform smaller recovery functions, like in the instance of flash flooding with vehicles that are lodged in mud or in ditches.

A & D Panel beaters	013 665 3209	082 413 8172	082 211 2427
Highway Towing	073 644 5691		
Indaba Towing	072 822 0072		

8. ABBREVIATIONS

MDCR – Municipal Disaster Control room (Also known as the Joint Operations Centre)
MCG – Municipal Crisis Group (The executive committee consisting of Councillors and management)
DMC – Disaster Management Centre
DMTT – Disaster Management Task Team (Identified managers that acts as the first responding services co-ordinating team)
DMAC – Disaster Management Advisory Committee (Committee consisting of role players having technical knowledge in their respective fields)

9. REFERENCES

Municipality of Ottawa Official Emergency Plan
Municipality of Cape Town Disaster Management Policy Framework
Constitution of the Republic of South Africa, 1999.
Disaster Management Act, 2002
Fire Brigade Services Act, 1997 as amended.
Fire Services By-Laws
Local Government: Municipal Systems Act, 2000
Major Hazardous Installations Regulations of the Occupational Health and Safety Act
Road Traffic Act
SA National Disaster Management Policy Framework
Western Cape Disaster Management Policy Framework
Ekurhuleni Policy Framework and Draft disaster plan
Transvaal Ordinance on Civil Defence (ordinance 20 of 1977)
City of Johannesburg Corporate Disaster Management Plan
ATNS – Air Traffic Navigation systems – Johannesburg International Airport.

The following risk-specific and incident-management plans support and should be read with this document:

- N12 Freeway Incident Management Plan
- Hazardous Materials Transport Contingency Plan (Somchem)
- Major Aircraft Disaster Plan
- Multi-Disciplinary Incident Management Plan (MIMP)
- Rail and Terminal Services Contingency Plan (Spoornet)
- Rail Disaster Plan (Spoornet)
- Refinery Emergency Response Plan (Caltex)
- Transport of Hazardous Materials Contingency Plan (Spoornet)

10. STANDARD OPERATING PROCEDURES

(Standard operating procedures are guidelines that are set to ensure that a common understanding is set for the tasks that need to be done.

Every functionary is responsible for their own procedures.

These operational plans are numerous and would only make this document hard to handle. Each Line function is responsible to establish and maintain Standard Operational Procedures at their level. Copies of such Operational plans should be submitted to the Disaster Management centre for the purpose of adding it to a separate file under this section.

Together with the Operating procedures of the different functionaries, it must also be understood that some organizations have their own operational and emergency procedures that are, because of safety and security reasons not included into the Disaster Management Plan, but are secured in the office of the Chief Fire Officer.

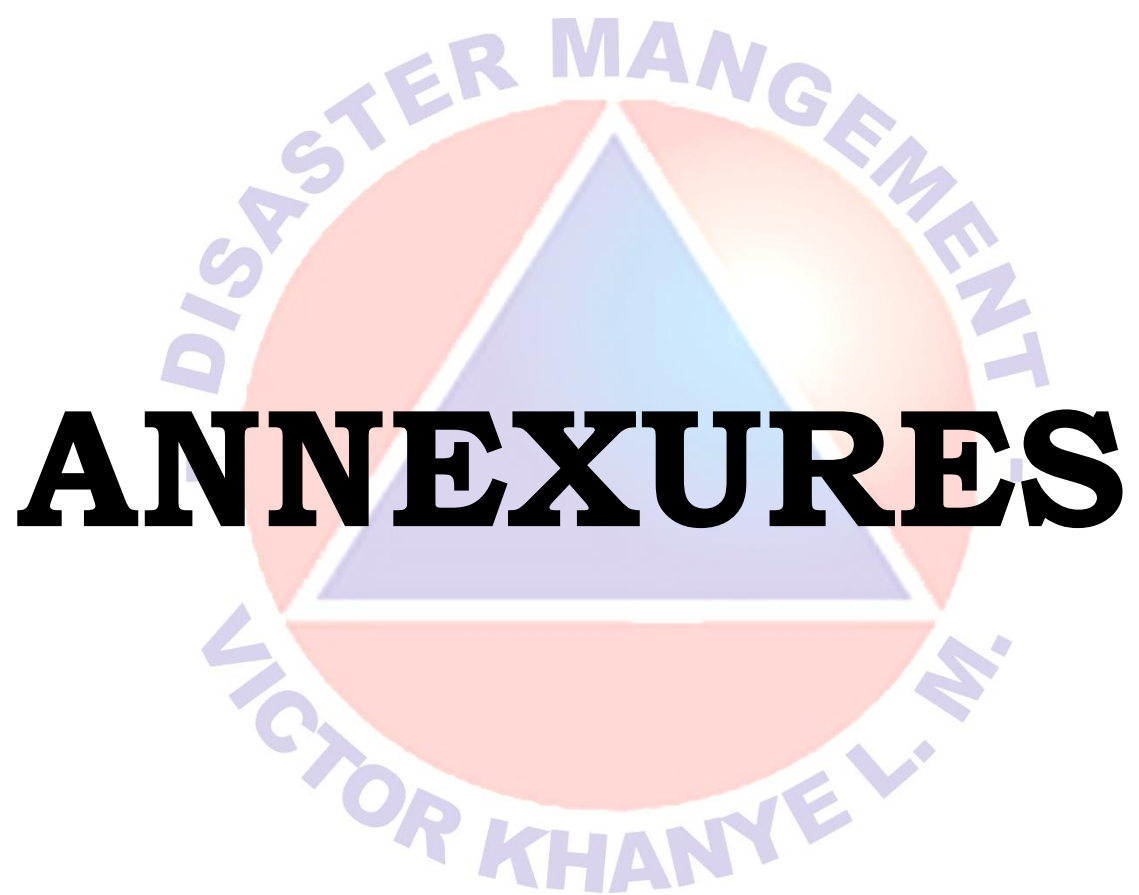
These plans include operational plans of the South African Police Service, Plant emergency plans for Major Hazardous Installations such as Omnia, Bulk Mining Explosives, Kusile Power Station, etc.

11. RESPONSE ACTIVITY PLANNING

The following chapter deals with response and relief activities identified per risk identified within our area. They are listed here and are found in the Annexure B attached hereto;

LIST OF RESPONSE AND RELIEF ACTIVITIES	
1. AIRCRAFT INCIDENTS	
2. BOMB DISPOSAL / THREAT INVESTIGATION	
3. FIRE FIGHTING – STRUCTURAL	
4. MAKING AREA SAFE – ELECTRICITY	
5. MEDICAL EMERGENCY RESPONSE	
6. AREA SAFETY	
7. CONTINUATION OF CLEANSING SERVICES – STRIKES	
8. HAZMAT RESPONSE - DECONTAMINATION OPERATIONS	
9. HAZMAT RESPONSE – POISONOUS GASES RELEASE	
10. PROLONGED DISRUPTION OF WATER SUPPLY	
11. RESCUE / SEARCH & RESCUE	
12. EPIDEMICS {OUTBREAK CONTROL}	
13. INDUSTRIAL LABOUR ACTION	
14. PUBLIC DISORDER	
15. MOBILIZING RESOURCES	
16. MEDIA RELEASE	
17. RAPID IMPACT ASSESSMENT	
18. RESCUING PERSONS TRAPPED	
19. WATER TANKERS	
20. EARLY WARNING	
21. FIRE FIGHTING – VELD	
22. FIRE FIGHTING INFORMAL SETTLEMENTS	
23. ROAD CLOSURE	
24. ROADBLOCK	
25. ANIMAL DISEASE OUTBREAK CONTROL	
26. STANDDOWN	
27. MANAGING CROWDS	
28. LANDING ZONE – HELI	
29. LOCALIZED FLOODING DUE TO STORMWATER	

This is a basic response plan indicating which role players are required for the activities. The role players are noted in sequence of urgency. Where more than one role player are primary role-players, the most primary will be listed as the first. Role-players indicated in red have jurisdiction at the scene.



ANNEXURE A: AIRIAL PHOTOGRAPHS USED IN RISK ASSESSMENT

The aerial images below are the master copies of the areas used in the risk and vulnerability assessments (photo's taken in 2005, newest available).



ANN A-1: Botleng and Delpark



ANN A-2: Botleng Extension 3 and 4



ANN A-3: Delmas Town



ANN A-4: Eloff town and Agricultural holdings



ANN A-5: Rietkol Agricultural Holdings



ANN A-6: Sundra

ANNEXURE B: RESPONSE ACTIVITY PLANNING

Guidelines for specific risks identified. These guidelines identify role players, steps to be considered, supporting role-players as well as items to be noted.

These plans are adaptable according to the incident at hand and must therefore only be used as a guideline only.