Western Cape Government

FOR YOU

DISASTER MANAGEMENT

FIRE RESCUE SERVICES









Department of Local Government

Provincial Veld Fire Plan

2024 - 2025

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ACRONYMS

DLG:	Department of Local Government
WCG:	Western Cape Government
PDMC:	Provincial Disaster Mangement Centre
NDMC:	National Disaster Management Centre
CFO:	Chief Fire Officer
PVFW:	Provincial Veld Fire Workgroup
FPA:	Fire Protection Association
MTO:	Mountain to Ocean
SANPARKS:	South African National Parks
CSIR:	Council for Scientific and Industrial Research
AFIS:	Advanced Fire Information Systems
MODIS:	Moderate Resolution Imaging Spectroradiometer
IMT:	Incident Management Team
JOC:	Joint Operations Centre
MOU:	Memorandum of Understanding
FDI:	Fire Danger Index
PMA:	Provincial Mutual Aid
FC:	Fire Control
FMP:	Fire Management Plan
FMU:	Fire Management Units
SAWS:	South African Weather Services
MOA:	Memorandum of Agreement
NFPA:	National Fire Protection Association
SAR:	Search and Rescue
WOF:	Working on Fire

LETTER FORM THE DEPUTY DIRECTOR FIRE AND RESCUE SERVICES

The 2024/2025 veld fire hazard season will start shortly in the Western Cape. Partnerships between the City of Cape Town, Table Mountain National Park, Cape Winelands DM, Overberg DM, Garden Route DM, West Coast DM, Provincial Government: Western Cape, Working on Fire, MTO, Cape Nature and the Fire Prevention Associations has been strengthened over the past couple of years and will again result in fires being secured in their incipient stages or the spread and impact of larger fires being reduced.

The Provincial Government of the Western Cape through its Chief Directorate: Disaster Management and Fire and Rescue Services have embarked on a proactive approach to managing veld fires, which occur in certain parts of the province mainly between the months of December and April each year. The aforesaid proactive approach to managing these fires includes the rapid response of aerial fixed wing aircraft and helicopters which can be deployed to rapidly respond to fires in their incipient stages and commence an early fire attack with the objective of preventing extended attack operations and major fire spread. The Department further strengthen the rapid response by having a specialized ground teams on standby throughout the season.

The rapid deployment of aerial assistance proved to be successful in 98% of the cases the previous season. An urgent call is again made for all to ensure a rapid response to control fires in its incipient stages to curb unnecessary time spent at fires and reduce costs. The aerial firefighting capacity is available and helicopters and fixed wing aircraft can be used as first response aircraft with the first response fire fighting vehicles and crews. Please again note that fire suppression is only one part of veld fire management. Fire prevention is the most important component of fire services and combined with this is the safety of all our personnel during firefighting operations. Let us never forget the latter. Ensure that your fire fighters remain aware of the Fire Fighting Safety Rules.

The Provincial Government Department Local Government – Chief Directorate: Disaster Management and Fire and Rescue Services have also embarked on a project to provide Incident Command Systems training. The province adopted the Incident Command system as proven method to manage incidents efficient and effectively. The ICS workgroup have identified persons trained in Incident Command that can be made available to assist Chief Fire Officers or other managers in the control and fighting of veld fires to supplement incident command structures. The Western Cape Disaster Management Centre will be activated as a Multi-Agency Command Centre according to the predetermined protocols to assist with coordination and the allocations of critical resources.

Looking forward to yet another successful and safe fire season



Mr. E.P. du Toit

Deputy Director: Fire and Rescue Services

Directorate: Disaster Management and Fire and Rescue Services

Department of Local Government, Western Cape Government

OFFICIAL SIGN-OFF

.....

MR E DU TOIT

DEPUTY DIRECTOR: FIRE RESCUE SERVICES

.....

MR C DEINER

HEAD OF CENTRE: PROVINCIAL DISASTER MANAGEMENT CENTRE

1. CHAPTER 1

1.1. Purpose

The Western Cape veld fire plan provides the various responsible fire authorities and agencies with an overview of the current arrangements that are in place for the management of veld and forest fires in the province. The purpose of the document is also to provide fire and rescue services, fire prevention associations, volunteer organizations and landowners with a convenient reference to the key structures and systems available and required to undertake effective and safe firefighting operations at veld and forest fires in the Western Cape.

The Plan contains an overview of veld fire preparedness, prevention and response arrangements. It also reflects an integrated approach and shared responsibility for veld, forest and fire management between government, agencies, communities, landowners and individuals. The purpose of the Chief Directorate: Disaster Management and Fire Rescue Services is to promote an integrated, coordinated, and multi- disciplinary Disaster Management and Fire Rescue Service.

1.2. Scope

The provincial veld fire plan provides the Western Cape Provincial Government and fire management agencies with a consolidated overview of the current arrangements for the management of veld fire and its consequences. The Plan contains an overview of veld and forest fire awareness, planning, prevention, and response arrangements.

The Plan uses the following definitions:

- Awareness is the education and spread of messages through various media to make people and communities at risk aware of the consequences of fires and safe practises.
- Prevention is the elimination or reduction of incidents or severity of emergencies and the mitigation of their effects;
- Response is the combating of fires, emergencies and the provision of rescue and immediate relief services;
- Recovery is the assistance to people and communities affected by veld fires and other emergencies, to achieve a proper and effective level of functioning;
- Veld fire is an unplanned fire primarily in vegetation such as grass, forests, mountains, fynbos and natural scrub; and
- Veld fire consequences are the impact of the fire on people, critical infrastructure, the economy and the natural environment. The WC: PDMC draws its legislative mandate from the Disaster Management Act 57 of 2002 as amended, and the Fire Brigade Services Act 99 of 1987. Below are some of the main legislations applicable to Disaster Management.

1.3. Responsibility for Veld Fire Management

The management of emergencies is a shared responsibility involving many organisations and people. Although some organisations have specialist roles, veld fire management is not something done by one single organisation.

An integrated organisational approach is the only way to ensure timely action to veld fires and provides a mechanism for achieving better outcomes by allowing the fire & rescue services, fire prevention associations and landowners to effectively work together before, during and after a fire. Interoperability maximises the capability of the agencies to work effectively and efficiently together to deliver seamless information, communications, and technology.

To achieve a cooperative response to fires, each agency must understand the systems, structure, resources, capabilities and statutory obligations of the other agencies.

1.3.1. Legislation

The following legislation, while not exhaustive, is the principal legislation for veld fire management in the Western Cape:

- Fire Brigade Services Act, Act 99 of 1987
- Veld and Forest Fire Act, Act101 of 1998
- The Constitution of the Republic of South Africa, 1996
- Disaster Management Act, Act 57 of 2002
- Conservation of Agricultural Resources Act, Act 43 of 1983
- Environment Conservation Act (ECA), Act 73 of 1989
- Municipal Systems Act, Act 32 of 2000
- National Environmental Management Act ("NEMA"), Act 107 of 1998
- National Environmental Management: Air Quality Management Act, Act 39 of 2004
- National Environmental Management: Biodiversity Act, Act 10 of 2004
- National Environmental Management: Protected Areas Act, Act 57 of 2003
- National Environmental Management: Protected Areas Amendment Act, Act 15 of 2009
- Pollution Prevention Act, Act 45 of 1965
- National Forests Act, Act 84 of 1998
- National Heritage Resources Act, Act 25 of 1999
- National Parks Act, Act 57 of 1976
- National Water Act, Act 36 of 1998
- Western Cape Environmental Implementation Plan – November 2002
- Western Cape Planning and Development Act, Act 7 of 1999

1.3.2. Fire Services

The primary agencies with the responsibility for veld fire management are the fire services. The Chief Fire Officer of each fire service is a statutory officer accountable for their respective service.

The fire services have standards and protocols for providing their communities with a seamless and effective fire service across jurisdictional boundaries through mutual aid agreements. District Fire Services can only achieve integrated fire management in their area of jurisdiction by working and planning with their local municipalities, fire prevention associations and other agencies such as Cape Nature, MTO Cape, SANParks etc.

1.3.3. Fire Protection Associations

Fire Protection associations aim to contribute to community safety by eliminating loss of life, human injury, economic and environmental losses by veld fires and by progressively reducing impacts while promoting the useful role of controlled fires.

The National Veld and Forest Fire Act make provision for the establishment of Fire Protection associations (FPA's) as a means of implementing integrated fire management by involving private landowners and local government and other role-players. FPA's makes rules for their members to ensure a lower risk to veld fires and develop and coordinate strategies with their respective fire services to prevent the unnecessary loss of life, property and the environment due to veld fires.

1.3.4. Other Agencies

Many agencies have roles in veld fire prevention, response and recovery. The veld and Forest Fire Act specifically place the responsibility of dealing with veld fires on the landowner.

In the Western Cape we are privileged to have well organized agencies and landowners able to assist with veld fires and their consequences. The Provincial Veld Fire Plan is based on involvement of all tiers of the community and expects:

- Individuals to take responsibility for their own safety and actively plan and prepare for veld fires.
- Local government and communities to conduct local fire prevention and preparedness programs.
- Industry, including critical infrastructure providers, tourism, and agriculture, to recognize the potential risk of veld fire and their businesses and to plan for continued service provision throughout and after a major disruption.
- Non-government and community organizations to which the community may turn for support or advice, to prepare for major events; and
- Government agencies to:
  - Provide information to the community during veld fires
  - Ensuring an effective, well-coordinated veld fire response.
  - Apply risk-based land management and planning principles.
  - Create organizational partnerships to build community capacity and capability.
  - Support individual and communities to prepare to respond to and recover form veld fires

2. CHAPTER 2:

OBJECTIVES AND PRINCIPLES OF VELD FIRE MANAGEMENT

2.1. Objectives

The objective of the Provincial Veld fire management plan is to guide activities in the Western Cape to reduce the impact of veld fire on human life, essential infrastructure, industry, the economy and the environment.

2.2. Principles

The following principles guide veld fire management in the Western Cape:

- Protection of human life: Human life, which includes both the community and emergency services personnel, takes priority above all other obligations in veld fire management.
- Responsibility for building resilience: Veld fires are inevitable and cannot always be prevented. All levels and sectors of society share responsibility, within their sphere of influence, for building a more resilient community and environment that can prevent, respond to and recover from veld fires.
- Community and landowner involvement: Community involvement is essential to ensure veld fire management approaches are inclusive, integrated and comprehensive across diverse societies and landscapes.
- A seamless approach: All agencies will work together, using resources efficiently and effectively, to present the community with a seamless approach to all aspects of veld fire management.
- Risk-driven: Policy and program priorities for veld fire management should be based on the measurable reduction of risk from the impact of bushfire.
- Learning and knowledge: The incorporation of local knowledge, experience, and operational and scientific evidence is integral to the on-going improvement of veld fire management policy and practice.

3. CHAPTER 3: PLANNING

3.1. Integrated Fire Management Planning

Integrated fire management planning committees operate within the existing legislative work groups. Membership of district and Provincial fire work groups comprises of representatives of the key stakeholder agencies.

The Provincial Veld Fire Committee oversees fire management planning in the Western Cape to ensure it is consistent, sustainable, and integrated. The Work group is responsible for providing leadership and to develop tools and processes for consistent and continuous improvement in veld fire management planning.

3.2. Regional Planning

District Joint Fire Services Work Groups provide a forum to build and sustain organisational partnerships, generate a common understanding and shared purpose with regard to veld fire management across a district. The work groups must meet at least every quarter as well as pre-season. The district work groups must ensure that municipal and individual agency plans are linked to the provincial strategic direction and also ensure that planning are consistent across district boundaries.

3.3. Municipal Planning

Municipal Fire Planning Committees provide a municipal level forum to build and sustain organisational partnerships, generate a common understanding and ensure shared purpose with regard to veld fire risk management in the municipality.

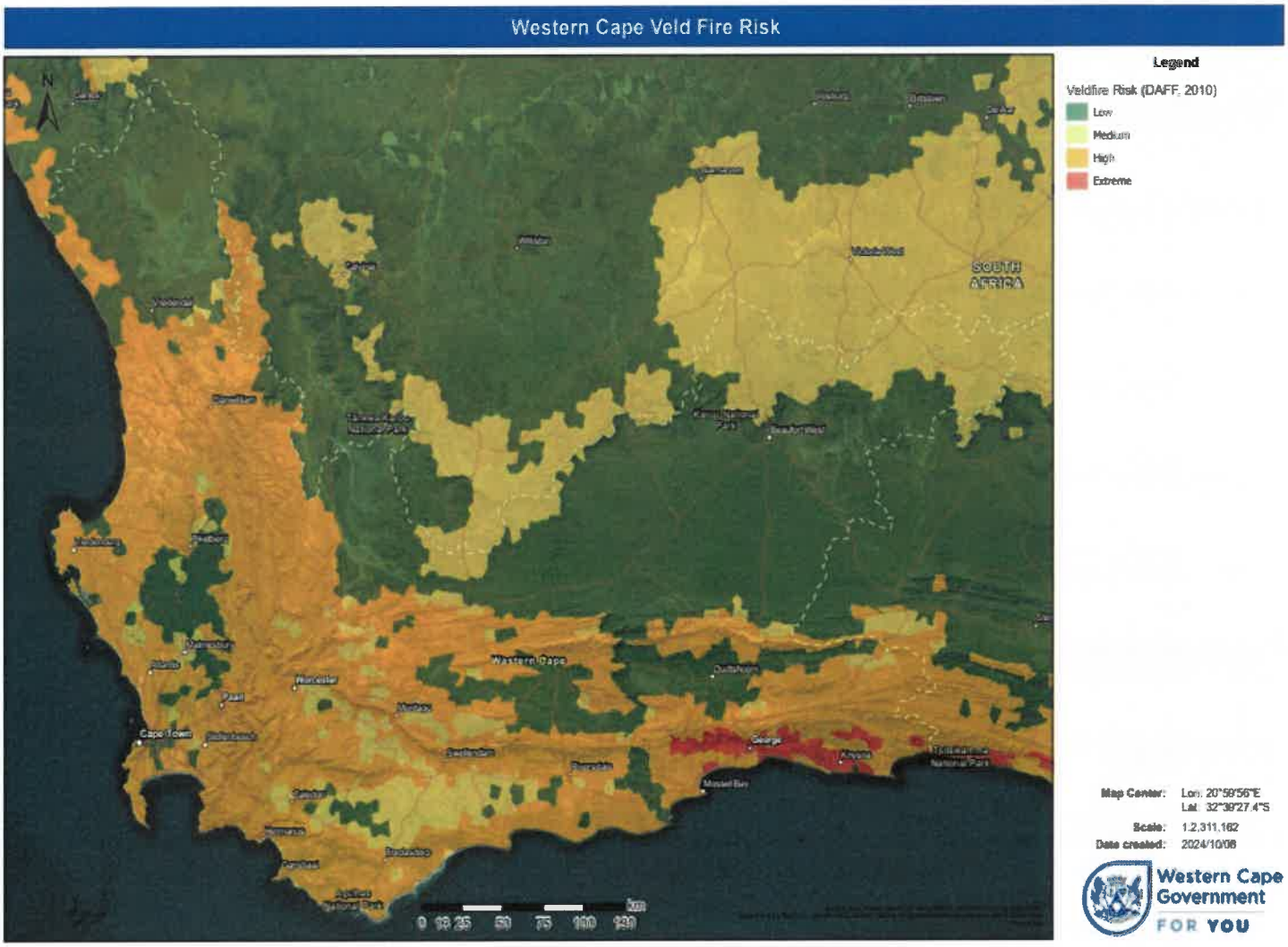
3.4. Landowner Planning

Fire prevention associations in collaboration with municipalities build and sustain relationships with landowners. Groups of landowners are organized in fire management units and develop fire management plans that are consistent with the provincial strategy, ensure implementation of the actions detailed in the plans and continuously monitor the effectiveness of those actions.

3.5. Current risk in the Western Cape

According to DAFF 2010 the following areas was highlighted as veld fire risks within the Western Cape Province.

Figure 1: Veld Fire Risk



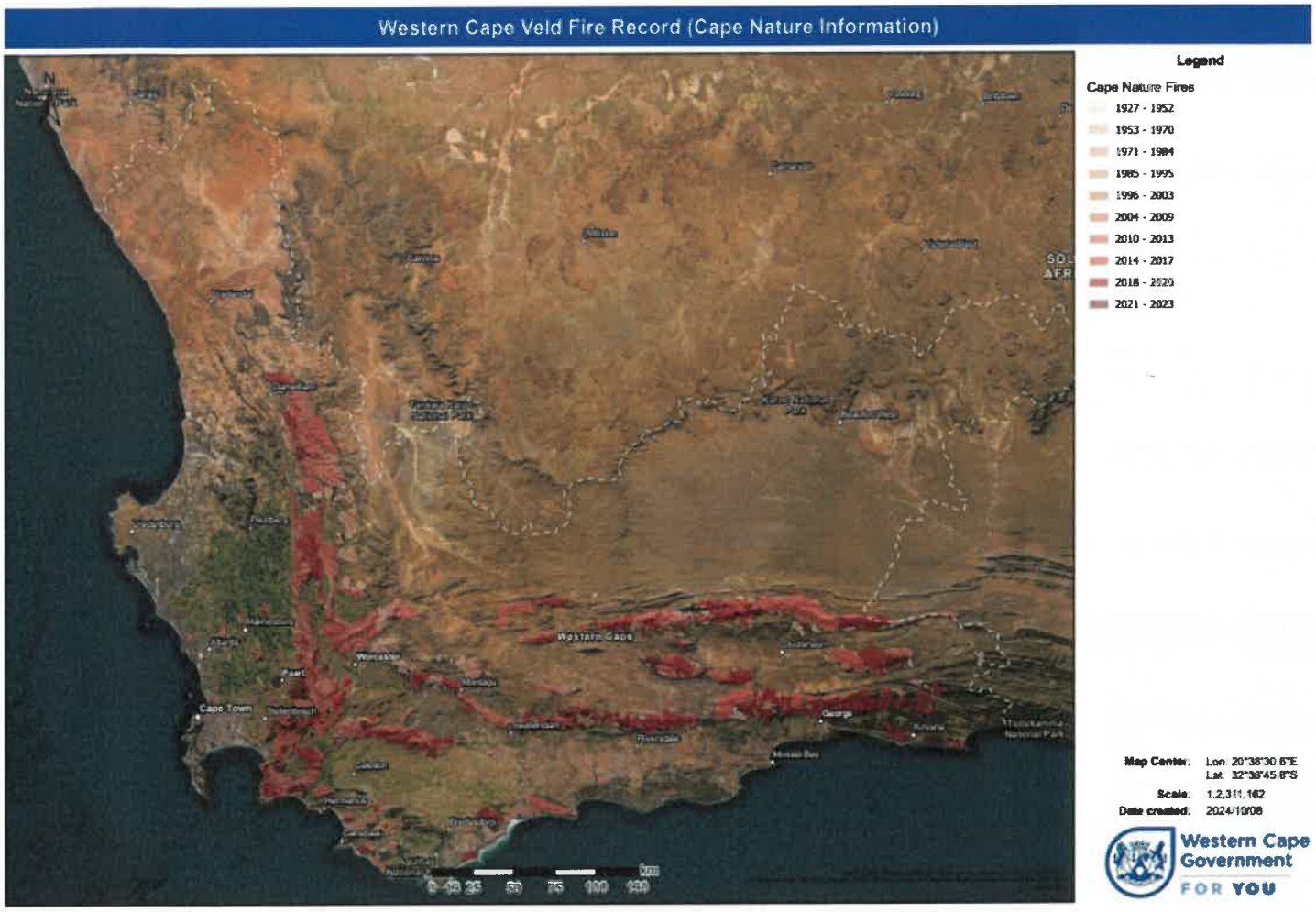
3.6. Overall, Veld Fire Risk (WCG Risk Register 2017)

The Western Cape predominantly has a high veld fire risk with an extreme risk in parts of the Garden Route District. The areas with a low risk to veld fires correspond with the areas where succulent Karoo fire ecology type is found.

3.7. Previous Fires

Cape Nature has reported the following incidents of veld fires within the Western Cape Province.

Figure 2: Western Cape Veld Fires



4. CHAPTER 4:
AWARENESS AND PREVENTION

Awareness campaigns and Prevention strategies are seen as ways to eliminate or reduce the incidents or severity of veld fires in the Western Cape as a whole. Veld fire prevention is the responsibility of all and can only be achieved through a concerted effort to reduce the occurrence of and to minimise the effect of unplanned veld fires on life, property, and the environment.

The Provincial Fire Work group has a responsibility to develop veld fire prevention policies and programs that mitigate the risk, minimise harm and support response to and recovery from veld fires. District work groups are responsible for identifying the risks and common causes of ignitions within their areas of jurisdiction and to implement prevention programs. Owners and occupiers of land have a responsibility to manage their properties to reduce the risk of veld fires.

4.1. Fire Danger (Caution)

The Western Cape has devasting fires during the fire season. The Fire Danger Caution materials was developed as a precautionary measure specifically prior to the fire season. The material warns the public to be cautious when entering high fire risk areas. It also provides some tips as to what not do when entering or making use of such areas. The material also provides the public with the emergency numbers in the event when they want to report a veld fire.

Figure 3: Fire Danger Material



4.2. BE WILDFIRE READY

As part of our wildfire prevention strategies, we have developed a booklet called "BE WILDFIRE READY". The booklet is an Emergency Guide to Property Owners in High WildFire inclined Areas. The following topics are discussed in the booklet:

a) Knowing the fire risk profile of the Western Cape;

b) What is a "Fire Wise Community";

c) What does "being" a fire wise community involve;

d) Understanding our Fire Risk;

e) Be prepared for a Fire Emergency;

f) Assessing your personal fire risk;

g) Maintain a fire wise garden;

h) Stay informed;

i) Do you stay or evacuate;

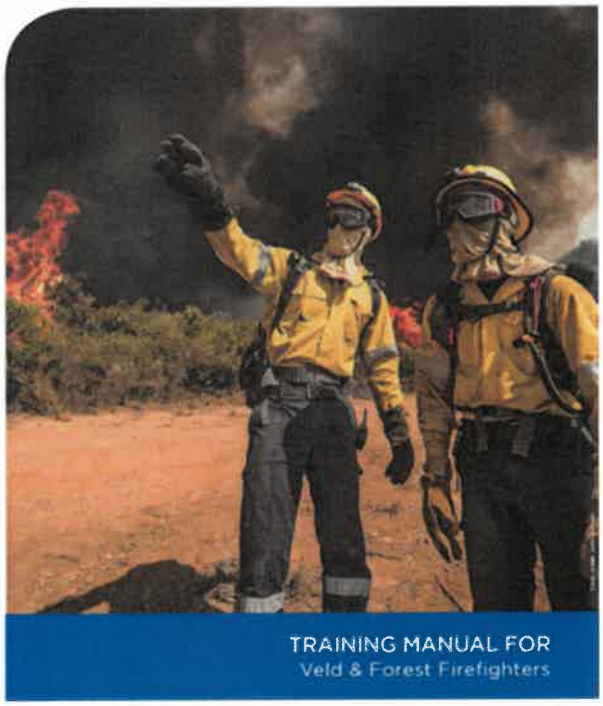
j) Prepare your home from wildfire risk; and

k) Fire rules for a "Fire Wise Community".

5. CHAPTER 5:

TRAINING MANUAL FOR VELD & FOREST FIREFIGHTERS

Figure 4: Training Manuel



5.1. Background

The Western Cape Government through its Disaster Management and Fire and Rescue Services, under the Provincial Ground Crew Workgroup in collaboration with Ms. Wendy Tawse (CapeNature) and CFO William Teie developed a training manual, as it was to focus on Veld and Forest Firefighting. It was also developed to improve the skills and knowledge of veld firefighters in the Province.

The importance of training can never be over emphasised in the emergency services. We must understand what it is that we do, only then we can provide an effective and efficient services to our community. In the fire service, experience is vital to making quick, correct decisions.

The WC: PDMC held four virtual Provincial Disaster Management Advisory Forum meetings for May, August, November 2021, and February 2022. The purpose of the forum is to give effect to Section 37 of the Disaster Management Act 57 of 2002 as amended to ensure the integration of disaster management activities across the province. It allows the various disaster management stakeholders to consult one another and coordinate the required action on disaster management related matters in the province. The topical agenda included discussions such as:

- Sharing lessons learned on the recent COVID-19 pandemic: 3rd and 4th wave;
- The monitoring of risk and risk assessments;
- Status updates of current disaster risks such as the electricity disruption, COVID-19 pandemic, avian influenza outbreak, locust outbreak, fire incidences, agricultural drought, social unrest, etc.;
- Ensuring risk reduction and preparedness by monitoring the weather outlooks, dam levels, drought, potential tsunami risks, seasonal planning, and the usage of drones; as well as; and
- Fostering relations with the private sector.

5.2. Introduction

Safe, effective veld and forest firefighting requires a thorough understanding of many complicated principles and procedures. It also requires great courage and personal commitment. Since you are interested in wildfire protection, the manual will provide you with the basics, but it will be up to you to develop the skills before you can profess to be a professional.

You should gain increased competency through reading and understanding the information and principles presented in the manual. The learning experience can be greatly enhanced by group study and discussions in which the participants can share relevant experiences and discuss problems and solutions to historic or anticipated fires.

The obvious benefits of this manual are:

- Increased self-confidence and competency in veld firefighting strategies and tactics.
- Commitment to and understanding of critical safety issues, thus minimising the potential for injury and death.
- Increased sense of pride and satisfaction in a job well done.
- Solid knowledge base from which increasingly sophisticated and advanced understanding of fire behaviour and suppression strategies will be possible.
- An awareness and understanding of the need for organising fire protection on a larger co-ordinated basis.

Firefighters cannot just be involved with the fighting of a fire, but they must be part of a fully developed system that has as only one part, the firefighting training equipment, and personnel. Today's firefighter must think fuel breaks, prevention, and education. This all-encompassing system is termed Integrated Fire Management.

The material in the manual is intended to be an information presentation of some of the issues involved in veld firefighting. The material presented in the manual is not intended to be used in lieu of the rules and regulations of your organisation or association. The strategies and tactics presented in the manual should be modified as appropriate by specific circumstances and your own best judgement.

5.3. Provincial Mutual Aid

5.3.1. Mutual Aid Concept

Mutual aid is the voluntary sharing of personnel and resources when an agency cannot deploy, sufficiently, its own resources to respond to an unusual occurrence. Resources are then requested by the affected agency through the Western Cape Provincial Mutual Aid Agreement. This cooperative system may be executed on a local, district, metropolitan and provincial basis. The Western Cape has been divided into six mutual aid regions to apply, administer, and coordinate mutual aid more effectively. Mutual aid can become mandatory following provincial and national disaster declarations. Generally, there is no reimbursement for providing mutual aid.

5.3.2. Authorities

- Municipal Systems Act, 2000 (Act 32 of 2000) section 3 (as amended) and;
- Fire Brigade Services Act, Act 99 of 1987, section 12 and;
- Municipal Structures Act, Act 117 of 1998

5.3.3. Mutual Aid Process

Local - Chief Fire Officer determines incident is beyond own service's resources, request mutual aid from District Municipality.

District Municipality Area – If event is beyond the resource capability of the District Municipality and other in-district fire service resources, the District Fire Chief requests Mutual Aid through the Western Cape Provincial Mutual Aid agreement. The District Fire Chief must declare a Code Yellow, Orange or Red

Province - If the resources within the impacted area are not enough, the Provincial Mutual Aid Coordinator may activate inter-provincial and national arrangements.

5.3.4. Activation and coordination control centre

City of Cape Town Fire Control (FC) shall be used as the Activation and Co-ordination Control Centre for the purposes of this agreement, should a District Municipality need assistance.

A District Municipality in need of assistance shall contact FC who shall have the right to co-ordinate and control the response so required.

When the City of Cape Town requires assistance, it must contact the relevant District Municipality Control Centre, who shall have the right to co-ordinate and control the requested response.

5.3.5. Channels for requesting Mutual Aid

See below flow chart as figure 05.

5.3.6. Mutual Aid Considerations

a) Disaster declaration not necessary to request and provide mutual aid.

b) Use of National resources requires approval by NDMC/NatJoints/Jtac. National resources are to be used when local resources are committed to maximum.

c) No service is required to unnecessarily deplete their own personnel, equipment, and capabilities, in order to provide mutual aid. It is generally accepted that a reasonable response will consist of up to 50% of available resources.

d) The service receiving mutual aid is responsible for the care, feeding and shelter of responding mutual air resources.

e) Planned and scheduled community events do not meet the criteria for mutual aid and therefore, should include costs if required. Mutual aid may however be necessary in extraordinary situations.

f) Mutual aid reimbursement costs may be applicable under local, provincial, or national disaster declarations. Otherwise, all mutual aid costs are the responsibility of individual participating services.

g) Out of province mutual aid is coordinated through the PDMC unless as already specified in interprovincial agreements and MOU's.

h) Other state-owned entities can be tasked or requested to assist in providing mutual aid.

Table 1: Incident Situation Codes

SITUATION CODES		
COLOUR	**ACTION**	**ICS INCIDENT TYPING**
GREEN - Normal	Nil	**Type 5 Incident:** An incident that can be handled with one or two single resources with up to six personnel.
YELLOW - Have an incident; provide back-up for area of jurisdiction.	Alert the service, which is required to provide back-up. Inform the PDMC Monitor situation until code "GREEN" is declared. Inform the PDMC	**Type 4 Incident:** An incident where several resources are required to mitigate the incident, including a task force or strike team.
ORANGE - Have a serious incident, provide stand-by in area of jurisdiction, and require relief crews	Alert the service which is to provide stand-by. Inform the PDMC. Co-ordinate arrangements for relief crews. Monitor situation until code GREEN" is declared. Inform the PDMC.	**Type 3 Incident:** An incident of which the needs thereof exceed the capabilities of the responding agencies.

RED - Have serious incident, require immediate assistance.	Immediately co-ordinate mobilization of assistance required. Inform the PDMC. Monitor situation and co-ordinate back-up for further possible incidents. Monitor the entire situation until code "GREEN" is declared. Inform the PDMC.	**Type 2 Incident** An incident that extends beyond the capabilities for local control and is expected to go into multiple operational periods. A Type 2 incident may require the response of resources out of area, including regional and/or national resources, to effectively manage the operations, command, and general staffing. **Type 1 Incident** A complex incident, requiring national resources for safe and effective management and operation.

NOTES ON CODE RED

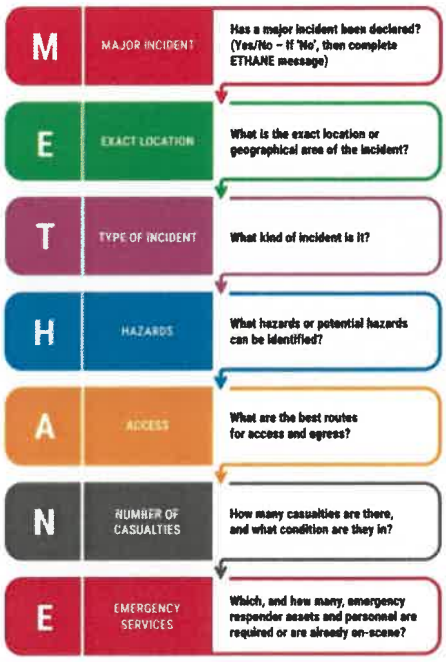
a) The Chief Fire Officer of the party requiring assistance shall, if necessary, inform his Chief of Disaster Management of the situation.

b) A code "RED" situation may require formal Disaster Management action but immediately action under the Agreement will, in any case, be initiated in order to speed up a return to a code "GREEN".

5.4. Reporting and alerting other emergency services

The Western Cape adopted the **METHANE** acronym to build a report for alerting others about a major incident.

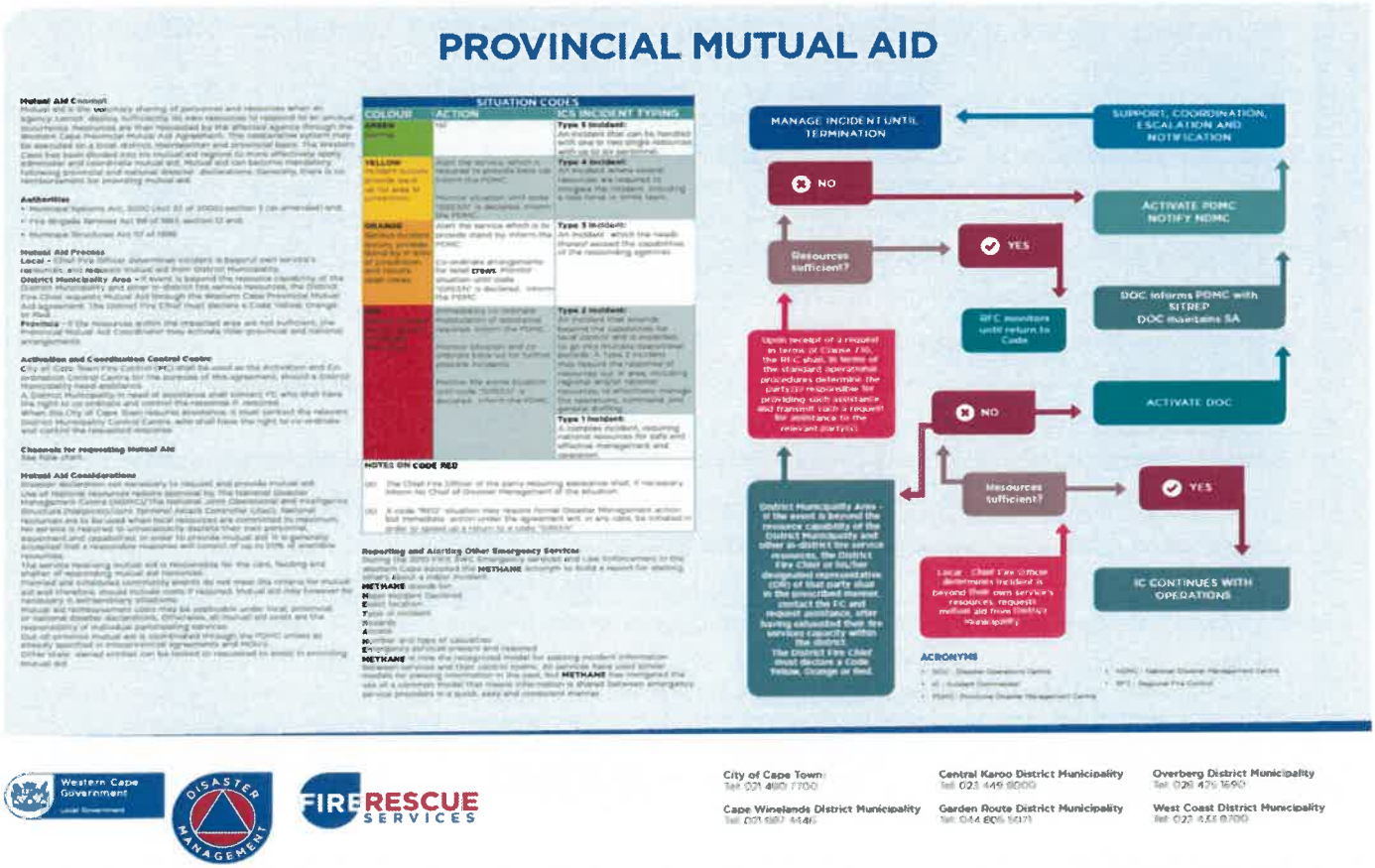
METHANE stands for:



METHANE is now the recognized model for passing incident information between services and their control rooms. All services have used similar models for passing information in the past, but **METHANE** has instigated the use of a common model that means information is shared in a consistent way, quickly and easily between emergency service providers.

Cape Winelands District Municipality	Tel 021 887 4446
Central Karoo District Municipality	Tel 023 449 1000 Tel 023 414 8176
Garden Route District Municipality	Tel 044 803 1300 Tel 044 805 5071
Overberg District Municipality	Tel 028 425 1157 Tel 028 425 1690
West Coast District Municipality	Tel 022 433 8400 Tel 022 433 8700

Figure 5: Provincial Mutual Aid Activation



City of Cape Town
Central Karoo District Municipality
Overberg District Municipality
Cape Winelands District Municipality
Garden Route District Municipality
West Coast District Municipality

5.5. Greenbook



5.5.1. Background

The Green Book is an online tool that supports municipal planning with the development of climate resilient settlement. It ultimately facilitates the mainstreaming of climate change adaption into local government planning instruments and processes.

The project was initially co-funded by the IDRC and CSIR during (2016-2019), and in partnership with the NDMC, GreenBook 1.0 provides and in-depth, current, and future (2050) climate risk and vulnerability profile for every municipality in the country (2513 profiles): numerous (81) planning-related adaption actions; and contextualise national climate change impacts in 11 narrated story maps. More partners came on board in (2019).

The second phase (2020-2024) focuses on building enduring municipal capacity to address climate risk through training and support; developing a new tool with downscaled metropolitan-specific profiles indicating climate risk zones (MetroView); identifying knowledge gaps in understanding climate risks; and growing the number of partners and collaborators.

The GreenBook is an internationally recognised online platform and have received over 18,000 views since the launch of the website. It is cited in multiple journal articles, research reports, dissertations, local, provincial, and national government strategies and plans, national TV and news articles; data are used by hundreds of consultants, researchers and students in a variety of projects; and it is recognised as reference tool by State departments.

The GreenBook is making an impact because it supplies critical evidence of all municipalities at an unprecedented depth and scale. It is also freely available.

The climate risk and vulnerability profiles reduce the need to commission time- and resource-intensive risk assessments, and the adaption tool provides actionable solutions that can be accesses instantaneously and integrated and mainstreamed into local plans and policies.

The GreenBook thus capacitate municipalities (and others) with evidence and solutions that best serve those most vulnerable to climate change.

The aim of the GreenBook is to strengthen the capacity and capability of the State in developing settlements in a changing climate that will not only reduce the risk for disaster losses and build long-term resilience, but also improve the quality of life of life of all South Africans by addressing many inequalities (transformative adaption).

The project entails to develop and disseminate a unique combination of planning support tools, models, guidelines, and strategies aimed at creating climate resilient, hazard resistant settlements.

Phase II (2020-2024) of the GreenBook focuses on:

- Expanding planning support to metropolitan cities through the development of MetroView profiles (TD);
- Roll-out, training, and dissemination of the GreenBook;

Engaging the private sector to invest in building the capacity of the state through the GreenBook

Building collaborative relationships with external partners and within the CSIR (Biodiversity and Ecosystems Services, Climate and Air Quality Modelling, Climate Services, Coastal Systems, Housing and Urban Studies, Infrastructure Innovation, Pavement Design and Construction, The Energy Centre).

The GreenBook is novel and innovative in how it integrates, distils, and communicates complex and dense scientific evidence beyond domain-specific advancements, to be applied in municipal planning.

Several gaps have been identified: changes in the underpinning science of climate models (i.e., IPCC AR6); probabilities of extreme event occurrences under different scenarios; coastal flood risk and erosion modelling; the impact of climate change on health, food security and the energy sector' green infrastructure as adaption strategy; and a decision-model around adaption efforts based on evidence.

Building on the successful use and uptake of the GreenBook platform, GreenBook 3.0 is solutions-orientated and aims to address gaps in the evidence-base available to municipalities to understand climate risks and vulnerabilities, and to provide an extensive adaption tool to guide settlement planning and decision-making in a changing climate towards resilient towns and cities.

Hot, dry and windy weather combined with fuel accumulation are key factors in the damage wildfires cause, but there are also development trends that are increasing the risk of fires.

Link to access the GreenBook for more information pertaining to climate change and how it plays a role in terms of veldfires. www.greenbook.co.za.

6. CHAPTER 6: PREPAREDNESS

Activities within the Province are guided by fire management plans that include planned contributions for interagency-shared resources, training, prevention, and response to veld fires.

6.1 Fire Services

The fire services depend on a suite of arrangements in preparation for the response to veld fires. These include:

- Ensuring enough resource capacity for a sustained response, including a sufficient number and distribution of trained and experienced personnel as well as firefighting equipment and vehicles specifically designed for veld fires.
- Mutual aid agreements or individual arrangements are in place to ensure aerial support for fire fighters.
- Mutual aid agreements or individual arrangements are in place to ensure support from landowners with an inherent risk, neighboring municipalities, and other government departments.
- Ensuring that there is a logistical system in place to support fire fighters during extended periods of firefighting.
- Arrangements for the readiness of resources, including readiness plans and pre-positioning of resources.
- Procedures for response initiation, including detection systems; and call-taking and dispatch arrangements.

6.2 Fire Danger ratings

The interaction of fuel, weather and topography determines veld fire behaviour; topography is fixed, and fuel can be managed to some extent. However, the weather cannot be controlled, and the fire services and landowners must monitor weather conditions in order to understand the fire risk at any point in time.

Figure 6: Fire Danger Rating Classification

Classification	*Description of Classification*
Insignificant	The fire danger is so low that no precaution is needed
Low	Fires including prescribed burns may be allowed in the open air on the condition that persons making fires take reasonable precautions against fires spreading
Moderate	The fire danger is such that no fires may be allowed in the open air except those that are authorised by the Chief Fire Officer of the local fire service and those in designated fireplaces; authorised fires may include prescribed burns
High	The fire danger is such that no fires may be allowed under any circumstances in the open air
Extremely High	The fire danger is such that no fires may be allowed under any circumstances in the open air, and special emergency fire preparedness measures must be invoked

Table 2: Fire Danger Rating Class Significance

INDICATIVE COLOUR	BLUE	GREEN	YELLOW	ORANGE	RED
DANGER RATING	**Insignificant**	**Low**	**Moderate**	**High**	**High - Extreme**
FIRE PREVENTION AND PREPAREDNESS MEASURES	No precaution is needed	Fires including prescribed burns may be lit, used or maintained in the open air on the condition that persons making fires take reasonable precautions against the fires' spreading.	No fires may be allowed in the open air except those that are authorised by the Fire Protection Officer where a Fire Protection Association exists, or elsewhere, the Chief Fire Officer of the local fire service, or fires in designated fireplaces.	No fires may be allowed under any circumstances in the open air.	No fires may be allowed under any circumstances in the open air and Fire Protection Associations and municipal Disaster Management Centres must invoke contingency fire emergency and disaster management plans including extraordinary readiness and response plans. All operations likely to ignite fires halted. Householders placed on alert.
APPLICATION OF THE ACT			Above precautionary measure to be prescribed and made applicable nationally on days rated moderate.	Section 10(1)(b) applies: no person may light, use or maintain a fire in the open air.	Section 10(1)(b) applies: no person may light, use or maintain a fire in the open air.
RELATIONSHIP WITH DISASTER MANAGEMENT				The threat of disastrous wildfires exists at municipal level under these conditions.	The threat of disastrous wildfires at provincial level exists under these conditions. Municipal Disaster Management Centres must

INDICATIVE COLOUR	BLUE	GREEN	YELLOW	ORANGE	RED
				Municipal Disaster Management Centres must invoke	invoke contingency plans and inform National
				contingency plans and inform National and Provincial Disaster Management Centres. (Section 49 of the Disaster Management Bill).	and Provincial Disaster Management Centres. (Section 49 of the Disaster Management Bill).
FIRE BEHAVIOUR	Fires are not likely to ignite. If they do, they are likely to go out without suppression action. There is little flaming combustion. Flame lengths in grassland and plantation forest litter lower t0.5 m and rates of forward spread less than 0.15 kilometres per hour.	Fires likely to ignite readily but spread slowly. Flame lengths in grassland and plantation forest litter lower than 1.0 m and rates of forward spread less than 0.3 kilometres per hour.	Fires ignite readily and spread rapidly, burning in the surface layers below trees. Flame lengths in grasslands and plantation forests between 1 and 2m, and rates of forward spread between 0.3 and 1.5 kilometres per hour.	Fires ignited readily and spread very rapidly, with local crowning and short-range spotting. Flame lengths between 2 and 5 m, and rates of forward spread between 1.5 and 2.0 kilometres per hour.	Conflagrations are likely in plantation forests, stands of alien invasive trees and shrubs, sugar cane plantations, and fynbos. Long range fire spotting is likely in these fuel types. Rates of forward spread of head fires can exceed 4.0 kilometres per hour and flame lengths will be in the order of 5 – 15 m or more.
FIRE	Direct attack	Direct attack feasible: fires	Direct attack constrained:	Direct attack not feasible: fires	Any form of fire control is likely to be precluded until

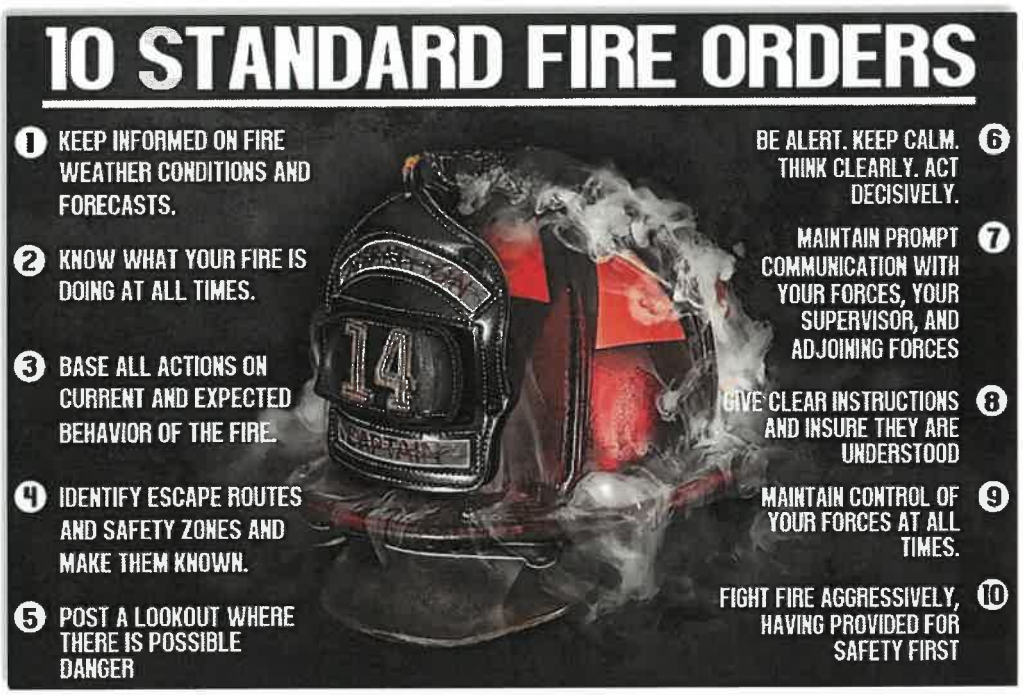
INDICATIVE COLOUR	BLUE	GREEN	YELLOW	ORANGE	RED
SUPPRESSION DIFFICULTY	feasible: one or a few field crews with basic firefighting tools easily suppresses any fire that may occur.	safely approached on foot. Suppression is readily achieved by direct manual attack methods.	fires not safe to approach on foot for more than very short periods. Best forms of control should combine water tankers and back burning from fire control lines.	cannot be approached at all and back burning, combined with aerial support are the only effective means to combat fires. Equipment such as water tankers should concentrate efforts on the protection of houses.	the weather changes. Back burning dangerous and best avoided.

7. CHAPTER 7: RESPONSE

7.1 Fire Services and Landowners

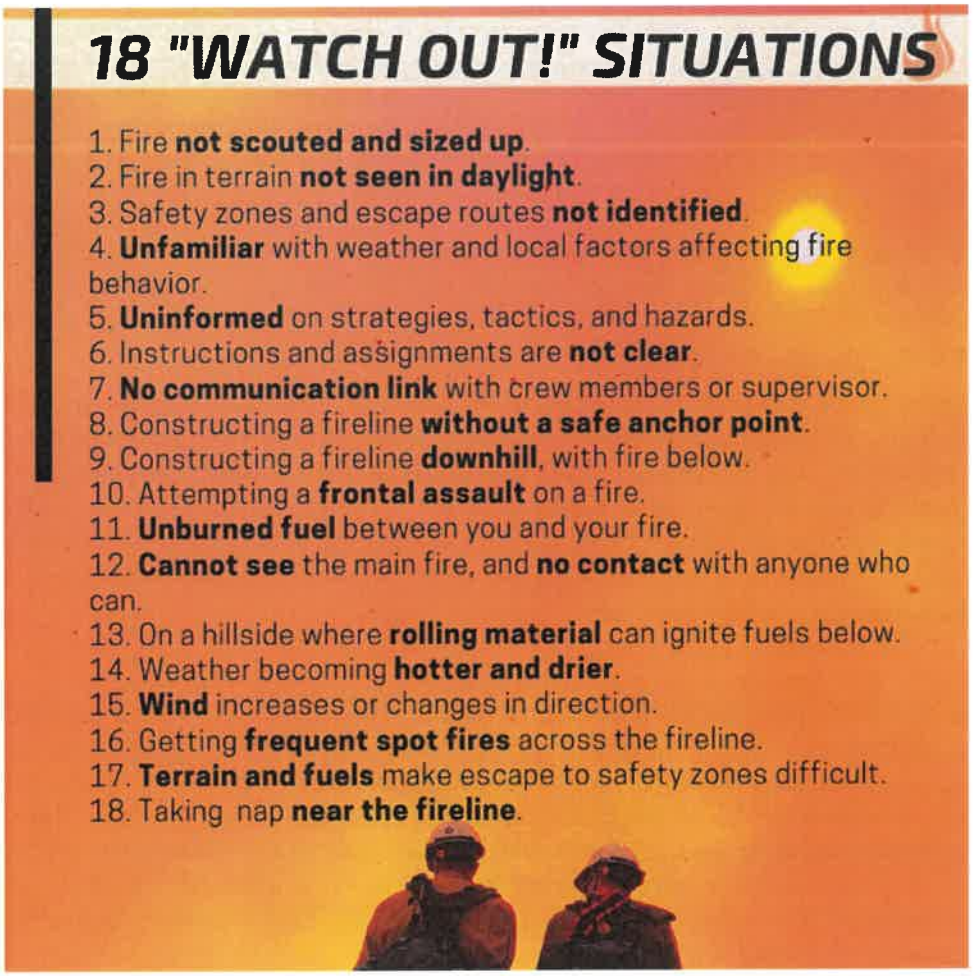
The fire services and landowners respond to the notification of a veld fire according to their own internal agency arrangements. Safety of responders is the top priority. It is therefore necessary to observe and never break the 10 Standard Firefighting Orders.

Figure 7: 10 Standard Fire Orders



Watch-out situations are those that require fire fighters to be alert and, on the Watch, -Out to ensure safety.

Figure 8: Watch out Situations



7.2 Support Agencies

The Incident Commander is responsible for the request, use of and release of resources at an incident. Support agency resources are sought through a process that must be outlined in the municipal response plan and each local authority must source common and specialized support like services, personnel, or material beforehand. It is important to request the correct type of ground team and vehicles according to the Ground crew and Vehicle resource typing.

A key support agency for ground crew and mopping-up teams is teams from the Working on Fire program. The Department of Local Government, through its Chief Directorate Disaster Management and Fire and Rescue Services embarked on a project whereby specialised ground teams are made available to agencies. There are various teams in the Western Cape available to provide support. Teams are dispatched through the local Working on Fire dispatch centre.

The fire services are key support agencies to each other in terms of mutual aid agreements and within a district or local municipality there are a variety of support services available. Fire services arrangements include the automatic activation of key support agencies in certain circumstances, for example Cape Nature or MTO Cape will automatically turn out to

a fire on private land where the fire could threaten a nearby nature reserve or commercial forest.

Command of resources remains within agencies and is exercised by the nominated incident commander unless an arrangement has been made to transfer the command to another agency or agency representative.

7.3 Aircraft

The Provincial Government of the Western Cape, Department of Local Government has an agreement with Kishugu Aviation through the Directorate Disaster Management and Fire and Rescue Services for the provision of aerial resources to support firefighting. The aircraft placement and activation process is attached to the document.

Aerial resources must be dispatch to all veld fires occurring in high-risk areas as identified per district. The intension of Aerial assistance is to have a big impact in the shortest time possible and thereby preventing the possibility of fires that burn active for extended periods. For all areas the request to use the fixed wing bombers, spotters and helicopters must go through the City of Cape Town's or District Municipality's Chief Fire Officer. The City or District Municipality must obtain a reference number from the responsible provincial official (Provincial Fire & Rescue Services official).

The ferry time and first operational hour will be for the cost of the Provincial Government, limited to the budget available. After the first operational hour the City of Cape Town or District Municipality's Incident Commander must evaluate whether the continued use of the aerial resources is required. If the need for continued operations is identified, the City of Cape Town or District Municipality's IC can make the decision to continue their use. The City of Cape Town or District Municipality's IC must inform the Provincial official responsible for Fire and Rescue services that the use of the aerial resources will be continued for the account of the respective municipality or landowner.

The WoF provincial co-ordinator must inform PGWC whenever aerial resources are mobilised. This is to co-ordinate planning, and for "information" to senior PGWC officials. Where more than one request for aircraft is received at the same time from the City or District Municipalities, and sufficient aircraft is not available, WoF Dispatch Centre must contact PGWC who will liaise with the respective parties and decide where the higher priority is.

The use of South African Air Force resources may also be called upon. Cognisance must be taken of the triggers for a call of assistance from the SAAF.

7.4 Reports

The National Fire report form must be completed in the event of all veld fires and faxed to the nearest DEFF office.

7.5 Briefings

The incident commander is responsible for briefing stakeholders at the incident. It is critical to provide regular, accurate and understandable instructions to subordinates and crew from assisting agencies.

All briefings must be in the SMEACS format and must allow time for questions at the conclusion of the briefing.

Table 3: SMEACS Format

Situation	• Current situation. • Details of incident. • Life and property at risk, including the location of places of shelter. • Location. • Weather. • Resource deployment.
Mission	• What are we trying to achieve? • Incident objectives.
Execution	• How do we plan to achieve objectives? • Sectors. • Strategies. • Tactics. • Tasking. • Resource movement details. • Timing.
Administration	• Logistics of operation
Command/ Communications	• Incident management structure. • Communications plan. • Radio channels. • Strategic telephone numbers.
Safety	• Weather. • Known/anticipated hazards. • Watch-out scenarios. • Dress standards. • Tasking suited to personnel.
Questions	

The Incident Commander must ensure that all incident personnel are provided with appropriate briefings regarding safety-related matters, the incident situation, incident objective(s), and relevant resource information and tasking and ensure that appropriate information is efficiently communicated through the incident structure to incident personnel.

As the situation changes and new information becomes available, updated briefings must be provided throughout the incident structure as practicable and appropriate. All incident personnel have a responsibility to ensure they are briefed before they commence their task.

The Incident Briefing form ICS 201 & 202 is a summary of the incident and can be used for transferring command when an incident is going from initial into extended response. The ICS 201 contains information such as maps, incident objectives, a summary of current actions and the status of resources assigned of ordered.

A guide to use the ICS forms and all ICS forms are included in the ICS Toolkit ring bound folder.

8. CHAPTER 8:
INCIDENT COMMAND

The Provincial Veld Fire Work group have adopted a standard Incident Command System (ICS) approach to managing incidents. ICS sets out a framework for the effective management of incidents that:

- is adaptable and scalable to any type or size of incident;
- is suitable for use regardless of jurisdictions or agencies involved;
- employs a common organisation structure;
- utilises common command structures and consolidated action planning; and
- utilises common terminology.

It is expected that incident command will always be established regardless of the incident size. While many Local Fire Authorities can manage small to medium sized incidents successfully, experience has shown that local resources are often quickly exhausted by large, multiple and/or on-going veld fire incidents. In such situation's districts must plan with the stakeholders in their area to fill incident command positions.

8.1 Incident Typing

Incident types are based on the following five levels of complexity. Each level requires certain actions and documents to be completed.

Table 4: Incident Typing

Type 5 	• The incident can be handled with one or two single resources with up to six personnel. • Command and General Staff positions (other than the Incident Commander) are not activated. • No written Incident Action Plan (IAP) is required. • The incident is contained within the first operational period and often within an hour to a few hours after resources arrive on scene. • Examples include a vehicle fire, an injured person, or a police traffic stop. • Incident Commanders are responsible for ensuring verbal IAP information is communicated to responders, safety is maintained, and incident status is tracked (using status boards, logs, recorded radio communications, incident reports, etc.). Examples include a vehicle fire, an injured person, or a police traffic stop.
Type 4	• Command staff and general staff functions are activated only if needed. • Several resources are required to mitigate the incident.

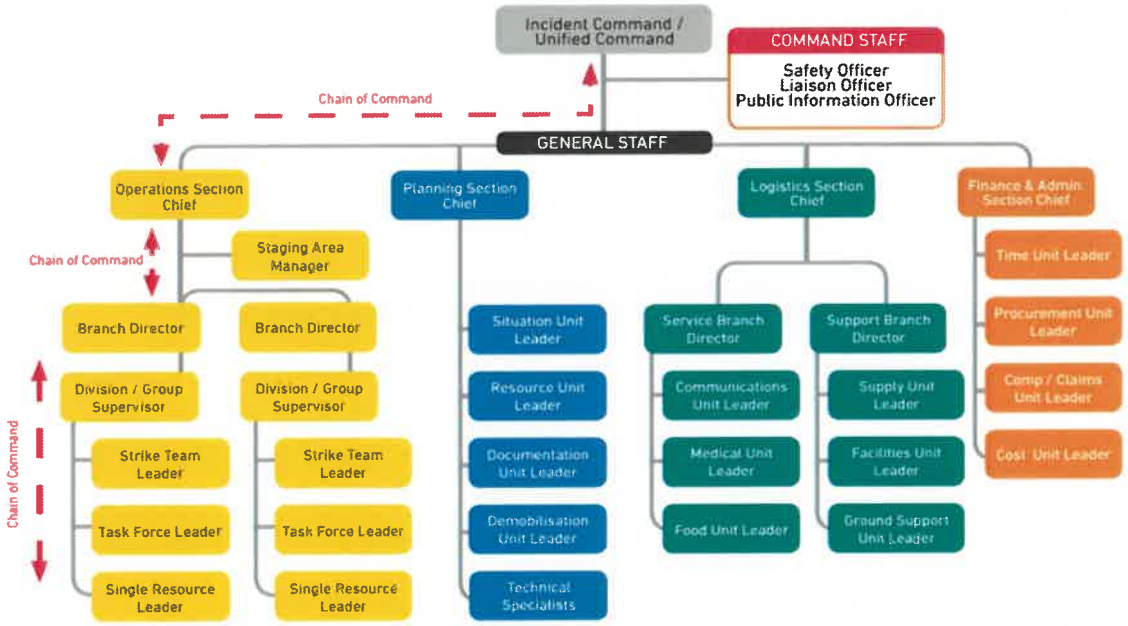
	• The incident is usually limited to one operational period in the control phase. • No written Incident Action Plan (IAP) is required but an Incident Organiser will be filled in. • Incident Commanders are responsible for ensuring verbal IAP information is communicated to responders, that safety is maintained and to ensure that the incident status is tracked (using status boards, logs, recorded radio communications, incident reports, etc.). Examples include a house fire, a multiple motor vehicle accident, or minimal localised flooding.
Type 3 	• When capabilities exceed initial attack, the appropriate ICS positions should be added to match the complexity of the incident. • Some or all of the Command and General Staff positions may be activated, as well as Division/Group Supervisor and/or Unit Leader level positions. • A Type 3 Incident Management Team (IMT) or incident command organization manages initial action incidents with a significant number of resources, an extended attack incident until containment/control is achieved, or an expanding incident until transition to a Type 1 or 2 -team. • The incident may extend into multiple operational periods. • A written IAP is required for each operational period. Examples include a large wildfire, a chemical spill, or large riot.
Type 2 	• This type of incident extends beyond the capabilities for local control and is expected to go into multiple operational periods. • A Type 2 incident may require the response of resources out of area, including provincial and/or national resources, to effectively manage the operations, command, and general staffing. • Most or all of the Command and General Staff positions are filled. • A written IAP is required for each operational period. • Many of the functional units are needed and staffed. • Operations personnel normally do not exceed 200 per operational period and total incident personnel do not exceed 500 (guidelines only). Examples include large wildfire, a chemical spill, or large-scale localised flooding.
Type 1 	• This type of incident is the most complex, requiring national resources to safely and effectively manage and operate. • All Command and General Staff positions are activated. • Operations personnel often exceed 500 per operational period and total personnel will usually exceed 1,000. • Branches need to be established.

	• Use of resource advisors at the incident base is recommended. • There is a high impact on the local jurisdiction, requiring additional staff for office administrative and support functions.

8.2 ICS Structure

The incident command organization structure is flexible and allow for expansion and contraction according to incident complexity.

Figure 9: ICS Structure

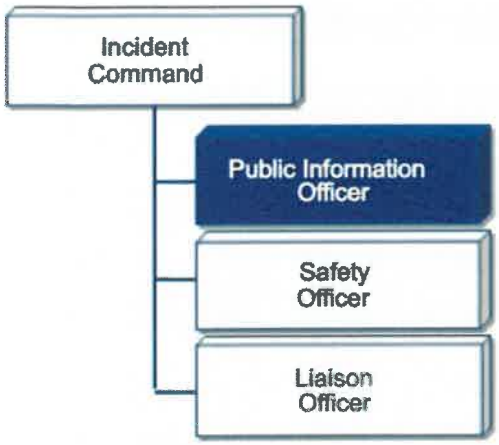


8.3 On-scene Command responsibilities

Figure 10: Major Staff descriptions

Function	Description
Incident Command	• Establishes incident objectives, strategies, and priorities. • Assume overall responsibility for the incident.
Operations	• Determines tactics and resources for achieving objectives. • Directs the tactical response.
Planning	• Collects and analyzes information. • Tracks resources. • Maintains documentation.
Logistics	• Provides resources and needed services.
Finance/ Administration	• Accounts for expenditures, claims, and compensation. • Procures needed resources.

Figure 11: Public Information Officer

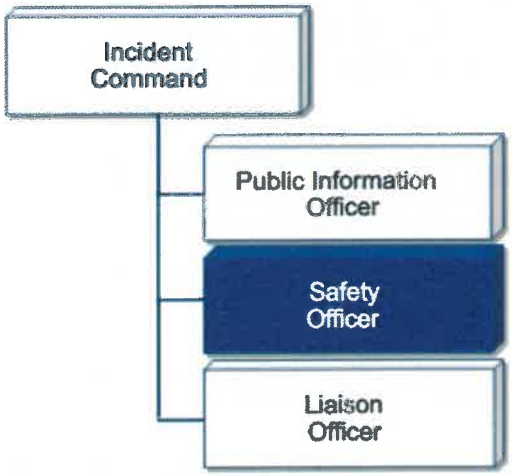


The Public Information Officer:

- Advises the Incident Commander on information dissemination and media relations.
- Obtains information from and provides information to the Planning Section, the community, and the media.

The Incident Commander approves information that the PIO releases.

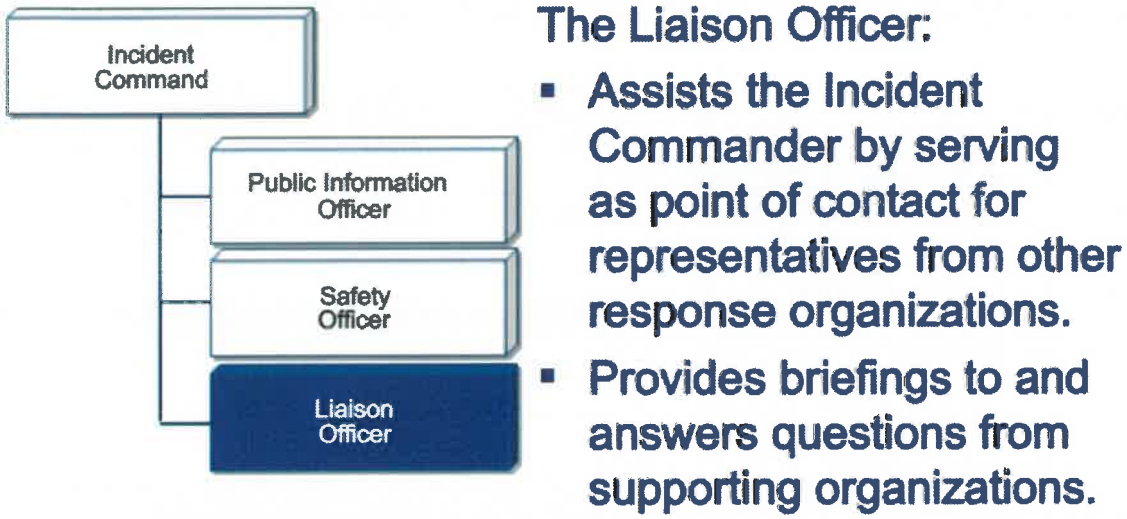
Figure 12: Safety Officer



The Safety Officer:

- Advises the Incident Commander on issues regarding incident safety.
- Works with Operations to ensure safety of field personnel.
- Ensures safety of all incident personnel.

Figure 13: Liaison Officer



8.4 Incident Action Plan

An incident action plan (IAP) formally documents incident goals, operational period objectives, and the response strategy defined by incident command during response planning. It contains general tactics to achieve goals and objectives within the overall strategy, while providing important information on event and response parameters. Equally important, the IAP facilitates dissemination of critical information about the status of response assets themselves. Because incident parameters evolve, action plans must be revised on a regular basis (at least once per operational period) to maintain consistent, up-to-date guidance across the system.

The standard Incident Command documents are published as a separate document on the Western Cape Provincial Government website. A written Incident Action Plan must be completed for type 1, 2, and 3 incidents.

8.5 Incident Organizer

The Incident Organizer is designed to aid Incident Commanders in organizing the fire and ensuring that all necessary procedures and checks have been made.

8.6 Situational Reports

Those in leadership positions must provide frequent, concise situation reports up the reporting chain. Section leaders and Crew Leaders from supporting agencies must recognise that this is an important part of their role. SITREPS are the tool to pass information on through the chain of command.

The following information should be included as appropriate when providing situation reports:

- Incident name;
- Sector call sign;
- Location of incident;

- Potential of fire/incident;
- Advice regarding any warnings that should be provided to the community;
- Fire status (type/size);
- Damage and loss;
- Fire behaviour (e.g. flame height and estimated forward rate of spread);
- Current control objective; and
- Additional help required.

9. CHAPTER 9:

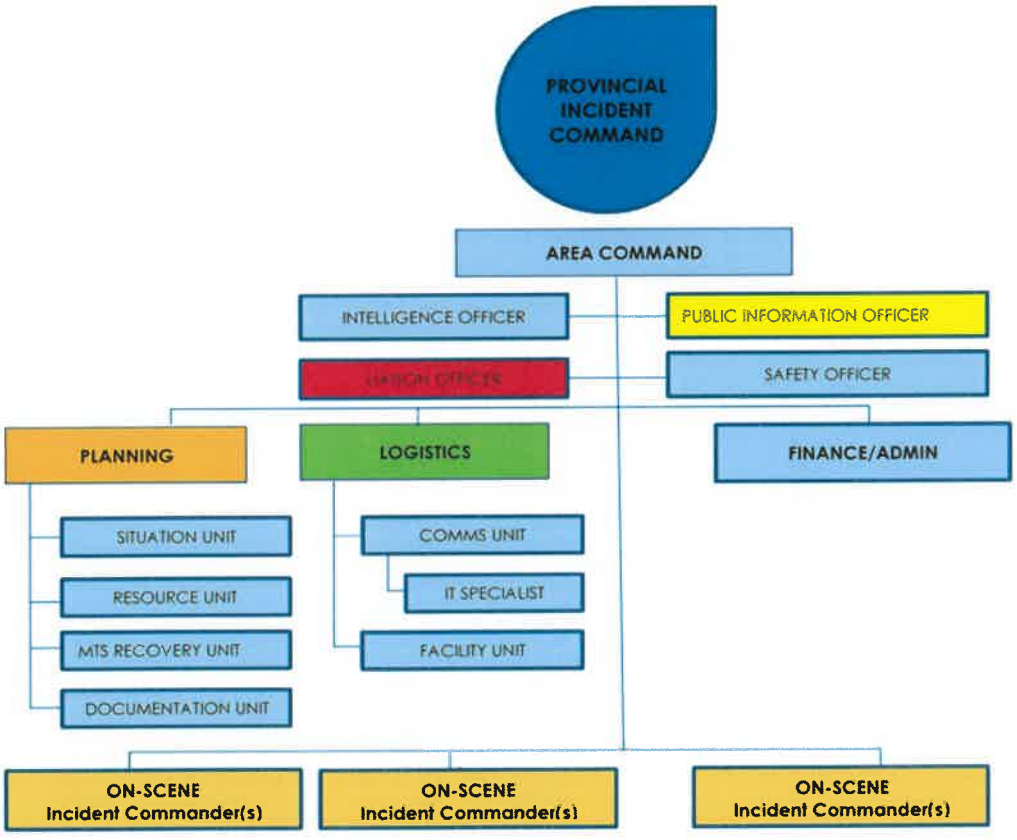
PROVINCIAL MULTI-AGENCY COORDINATION CENTRE

Provincial Multi-Agency Coordination Centre (MACS) is the Provincial organizational structure that will be established and used to supplement and support the on-scene command structures. The Western Cape Disaster Management Centre will be activated, and Provincial MACS will be established as soon as possible when:

- There are several active incidents in proximity and the Chief Fire Officer request assistance.
- Incidents are reported that involves National key points, critical life-saving operations or when critical property is at risk.
- Incidents use similar and limited resources.
- Difficulties are encountered with inter-incident resource allocation and coordination.
- There are two or more type 3 incidents active in the Province.

9.1 Organizational Structure

Figure 14: Typical Organisational Structure



9.2 Recovery

Recovery processes for affected communities from a veld fire should commence as early as possible and usually runs concurrently with the response process.

The Department of Social Services is responsible for coordinating recovery at Provincial and District levels when people lost housing or were evacuated. They are also responsible to provide advice, information, and assistance to affected individuals and communities, and detailing loss and damage.

9.3 Debrief

The intent of the debrief process is to learn from the incident and improve systems and processes where possible.

9.3.1 After action review

Resources deployed to assist with veld fire should have a local debrief at either the end of the shift or fire in order to identify and address issues as soon as possible.

An after-action review agenda includes:

I. What was planned?
   - What were the goals and objectives?
   - Incident action plan;
   - Crew incident roles;

II. What really happened?

III. Why did it happen?

IV. What can we do better next time?

9.3.2 Multi-agency debriefs

Following a veld fire, the District Municipality is responsible for conducting a multi-agency debrief within seven working days. Inputs from all participating agencies are needed to identify lessons learned and to ensure continuous improvement. All participating agencies are responsible for conducting their own operational debriefs beforehand.

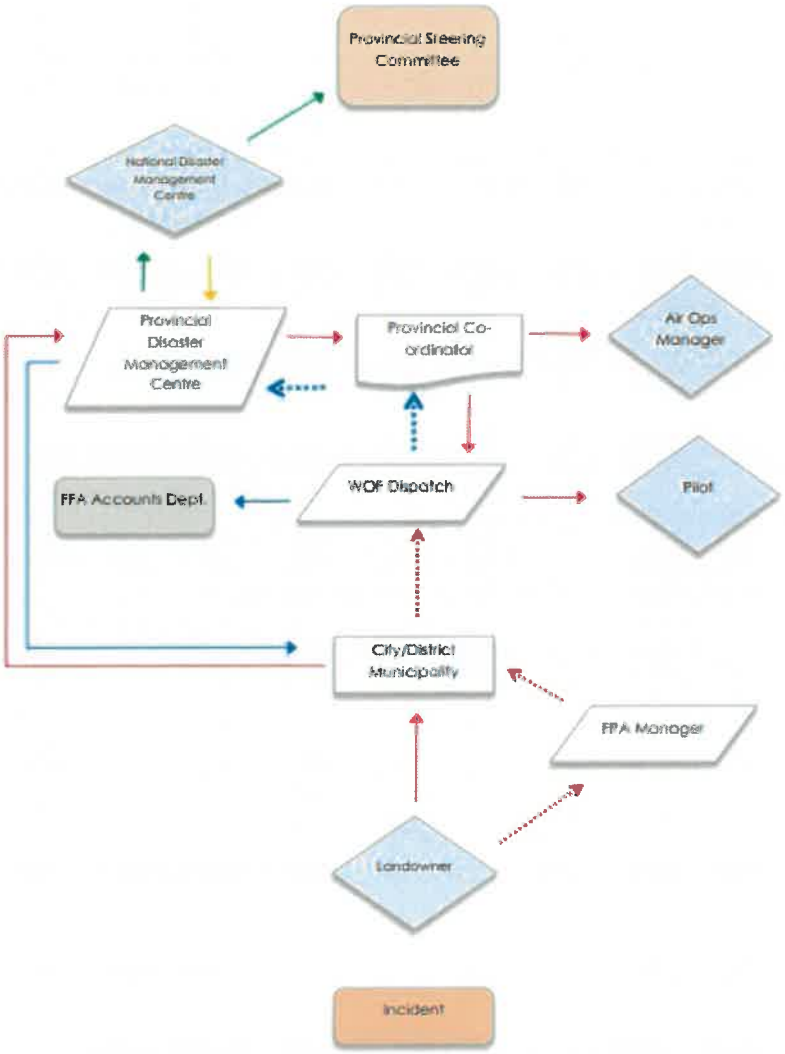
10. CHAPTER 10: THE WESTERN CAPE WEBSITE

10.1. WCG Facebook and Instagram Pages – Fire Updates

All updates are done by the office of the Minister for Local Government, Environmental Affairs and Development Planning. The relevant information is provided and verified by the office of the Chief Directorate: Disaster Management and Fire and Rescue Services, Mr. Colin Deiner or Mr. E. du Toit.

11. CHAPTER 11: AIRCRAFT DISPATCH PROTOCAL

Figure 15: Aircraft Dispatch Protocol



12. CHAPTER 12:
SEASONAL CLIMATE WATCH

The El Niño-Southern Oscillation (ENSO) is currently still in a Neutral state and is predicted to weaken further. Current predictions indicate the development of a La Niña state during the start of the summer season, however, there is still significant uncertainty in the predictions. It is advised to monitor the ENSO system during the start of the summer season, as it may change the rainfall outlook for the summer rainfall regions if and when the La Niña materializes.

Current predictions focus on the early- and mid-summer seasons and indicate wetter conditions over the interior of the country. The north-eastern parts however at this stage indicate drier conditions extending through to the mid-summer period. These predictions may change if the ENSO predictions become more certain towards a La Niña state, and as such continues monitoring of future seasonal climate watches are advised.

Minimum and maximum temperatures are expected to be mostly above-normal countrywide for the forecast period.

The SAWS will continue to monitor the weather and climate conditions and provide updates on any future assessments that may provide more clarity on the current expectations for the coming season.

12.1. South African Weather Service Prediction System

12.1.1. Ocean-Atmosphere Global Climate Model

The SAWS is currently recognised by the World Meteorological Organization (WMO) as a Global Producing Centre (GPC) for Long-Range Forecasts (LRF). This is owing to its local numerical modelling efforts, which involve the coupling of both the atmosphere and ocean components to form a fully interactive coupled modelling system, named the SAWS Coupled Model (SCM). The SCM is a first of its kind in both South Africa and the region. Below are the first season (OND) predictions for rainfall (Figure 16) and average temperature (Figure 16).

Figure 16: October-November-December, OND (2024) global prediction for total rainfall probabilities

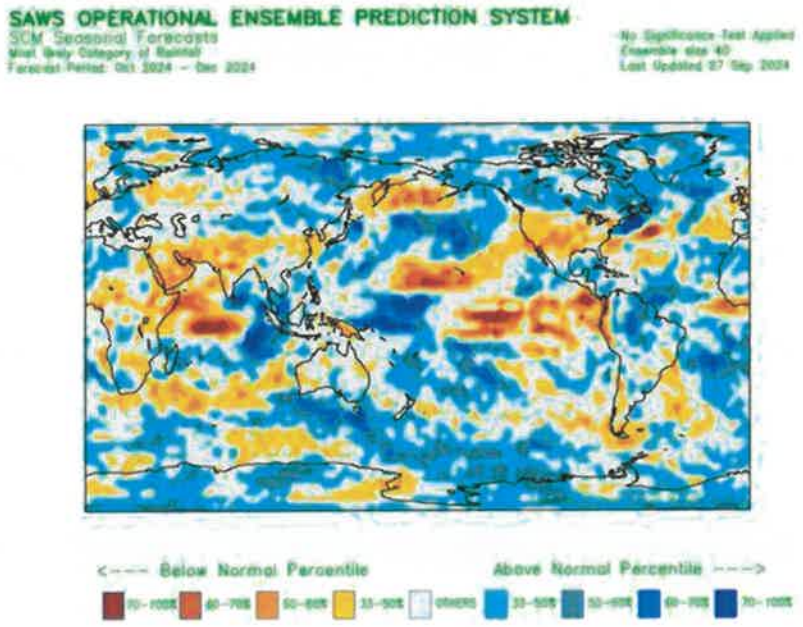
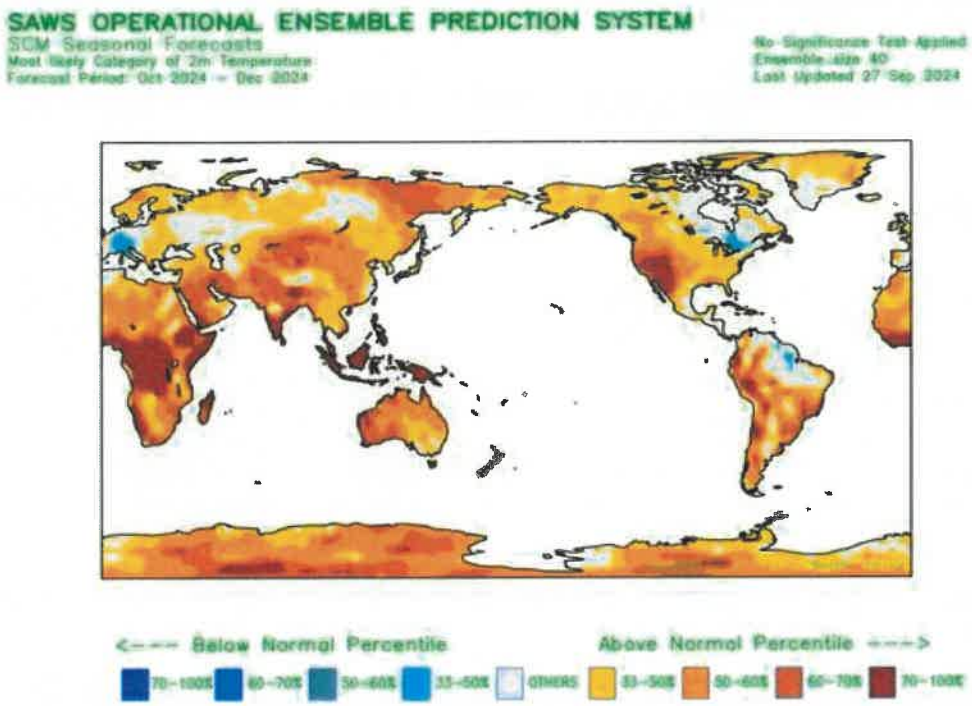


Figure 17: October-November-December, OND (2024) global prediction for average temperature probabilities



12.1.2. Seasonal forecasts for South Africa from the SAWS seasonal prediction system

The above-mentioned global forecasting systems' forecasts are combined with the GFDL-SPEAR and COLA-RSMAS-CCSM4 systems (part of the North American Multi-Model Ensemble System) for South Africa, as issued with the September 2024 initial conditions, and are presented below.

Figure 18: October-November-December 2024 (OND; left), November- December-January 2024/25 (NDJ; right); December-January-February 2024/25 (DJF; bottom) seasonal precipitation prediction

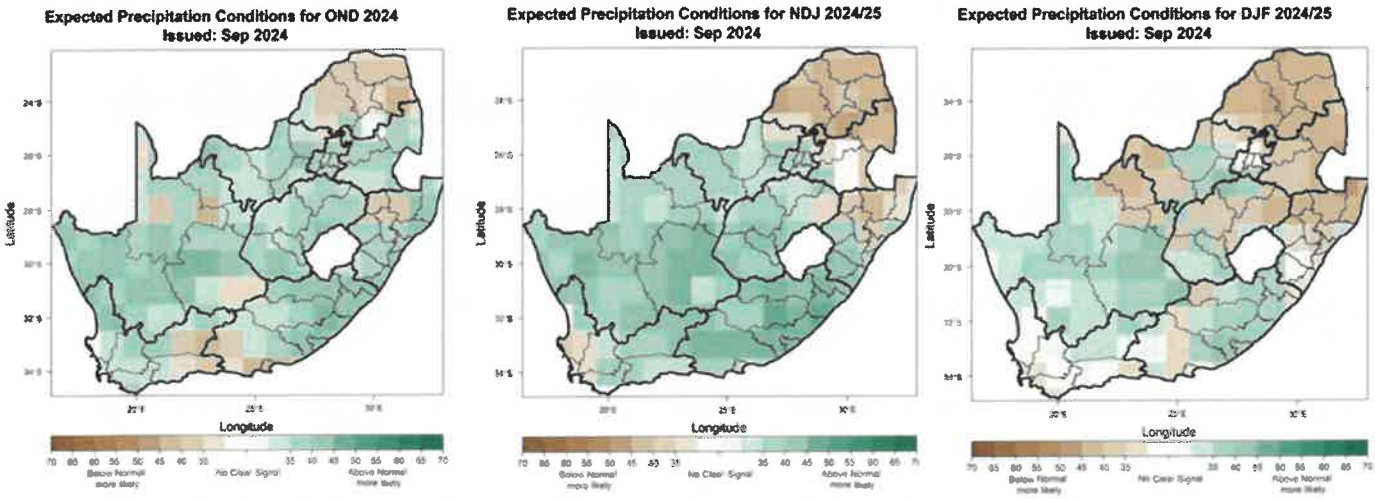


Figure 19: October-November-December 2024 (OND; left), November-December-January 2024/25 (NDJ; right), December-January-February 2024/25 (DJF; bottom) seasonal minimum temperature prediction

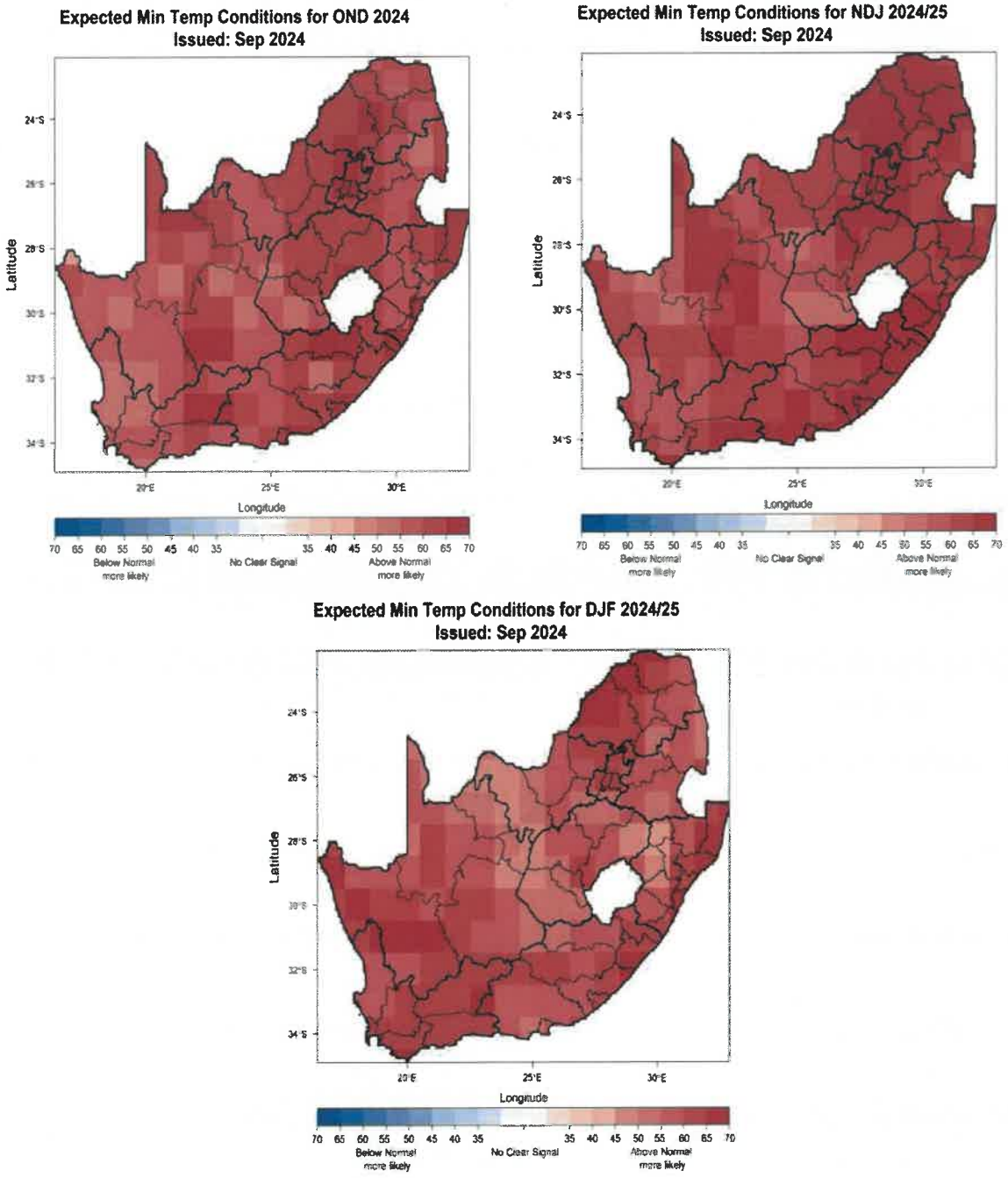
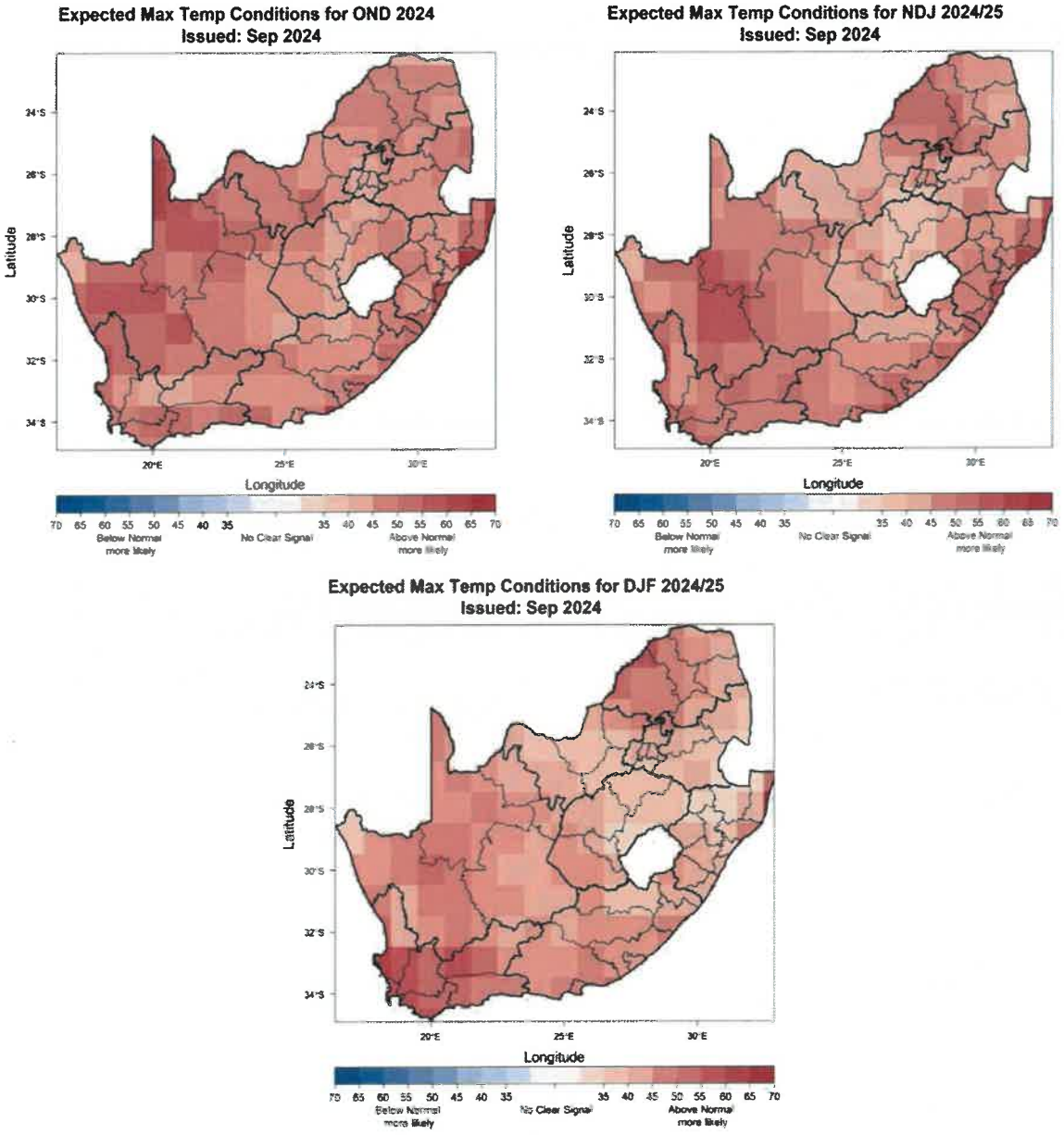


Figure 20: October-November-December 2024 (OND; left), November-December-January 2024/25 (NDJ; right), December-January-February 2024/25 (DJF; Bottom) seasonal maximum temperature prediction.



All the forecasts presented here are a result of the probabilistic prediction based on the ensemble members from the coupled climate model from the SAWS and two models from the NMME. Other useful links for seasonal forecasts are:

- http://www.weathersa.co.za/home/seasonal (Latest predictions from the SAWS for the whole of SADC)
- https://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/ (ENSO predictions from various centres)
- https://iri.columbia.edu/our-expertise/climate/forecasts/seasonal-climate-forecasts/ (Copernicus Global forecasts)

12.2. Recommendations

12.2.1. Veld fires

The province and farmers are advised to maintain firebreaks in all areas. An owner of the land who is obliged to prepare and maintain a firebreak must ensure that, with due regard Early Warning Unit: CCDRR 12 to the weather, climate, terrain and vegetation of the area, the following is taken care of in terms of installing firebreaks (Chapter 4 of the National Veld and Forest Fire Act No. 101 of 1998):

- It has to be wide enough and long enough to have a reasonable chance of preventing a veld fire from spreading to or from neighboring land.
- It does not cause soil erosion and
- It is reasonably free of inflammable material capable of carrying a veld fire across it.
- Firebreaks may be temporary or permanent.
- Firebreaks should consist of fire-resistant vegetation, inflammable materials, bare ground, or a combination of these.
- Firebreaks must be located in such a way as to minimize risk to the resources being protected.
- Erosion control measures must be installed at the firebreak.

12.2.1.1. Firebreaks can be made through the following methods:

Mineral earth firebreak:

- Through ploughing, grading, other earth movement.
- Use of herbicides.
- Use animals to overgraze specifically to minimize fuel.
- Strategic placement of burned areas,
- Not to be done on days with fire hazard (windy and dry/hot).
- Plant fire resistant plants.
- Plant species selected for vegetated firebreaks must be non-invasive and capable of retarding the spread of fire.

12.2.1.2. Maintaining firebreaks:

- Mow, disk, or graze vegetative firebreaks to avoid a build-up of excess litter and to control weeds.
- Inspect all firebreaks for woody materials.
- Inspect firebreaks at least annually and rework bare ground firebreaks as necessary.
- Repair erosion control measures as necessary.
- Access by vehicles or people must also be controlled.
- Bare ground firebreaks, which are no longer needed must be stabilized i.e.
- Sow grass.
- Mulch.

12.2.1.3. What to do when conditions favorable for veld fire are forecast:

- Prohibit fires in the open-air during periods of high fire hazard and establish a fire control committee.
- To control fires, an alarm system, firefighting teams, and beaters must be organized in advance and plans prepared.
- Livestock should be moved out of grazing land to a safe place.

12.2.1.4. What to do during a veld fire:

- Water is generally not available in sufficient quantities or at adequate pressure for the control of major fires; however, sand or other loose mineral soil material can be an effective method of control.
- Tree branches can be used to beat fire.
- Early Warning Unit: CCDRR 13

12.2.1.5. Heat stress – bad for productivity

Signs of heat stress:

- Bunching in shade;
- high respiratory rates; and
- open mouth breathing.

12.2.1.6. What to do:

a) Offer shade.

b) Offer water- keep good quality water in front of animals.

c) Wet with sprinklers/fire hose.

d) Water ground.

e) Avoid overworking animals.

f) Control insects. Biting insects, such as flies can further stress livestock and interrupt their cooling. If pastures or buildings draw insects to livestock during times of extreme heat, provide proper insecticides or considering relocating your livestock.

13. CHAPTER 13: GENERAL CONTACT DETAILS AND RESCOURCE INFORMATION

Table 5: Contact and Resource Information

ORGANIZATION	NAME	CELL NUMBER/Contact Number	CONTROL ROOM NUMBER
City of Cape Town	C Manual	071 687 8721	-
	Goodwood Fire Control	-	021 590 1900
Overberg District Municipality	R Geldenhuys	083 273 8234	-
	Overberg Control	-	028 425 1690
West Coast District Municipality	B Senekal	083 236 4588	-
	West Coast Control	-	022 433 8700
Cape Winelands District Municipality	W Josias	082 300 4544	-
	Cape Winelands Control	-	021 887 4446
Garden Route District Municipality	D Stoffels	083 941 1994	-
	Garden Route Control	-	044 805 5071
Provincial Fire & Rescue Services	C Deiner	082 550 6770	-
	E Du Toit	073 995 1609	-
Provincial Disaster Management	WCDMC – Standby	083 577 1100	-
	L Nicholson	083 277 4221	-
	S Chinnian	082 994 1975	-
Cape Nature	D Rossouw	072 437 4011	082 740 7787
	P Shone	082 743 3477	
TMNP Fire Management:	J Buchmann		

Newlands Control Centre			
	C Dilgee		
	Y Harley		
	K Hattingh		
SA National Parks Southern Cape			
MTO Cape	B Joemat	082 880 6434	042 280 3606
MTO Cape (IFM: Managers Forest South)	K Lourens	082 940 3804	042 281 1712
MTO: Jonkershoek Stellenbosch	C Davids	077 488 1167	N/A
MTO: Garcia	H Cunningham	082 805 4877	028 713 2558
MTO: Kruisfontein	C Smit	082 784 6971	044 375 0243
MTO: Blueliliesbush	F du Plessis	079 699 6006	042 280 3606
MTO: Lottering	T Notley	082 805 7669	042 281 1712
MTO: Witelsbos	M Borchards	060 500 3001	042 285 0240
MTO: Longmore	A Jacobs	061 549 8926	042 286 0763
MTO Cape: (GM: South Operations)	J Oosthuizen	083 675 5658	042 286 0701
MTO Cape: (GM: Forest South)	N De Waal	071 483 9867	044 375 0243
WoF Aviation	F Smook		

Dispatch Centres

Table 6: Dispatch Centres

WOF WESTERN CAPE & SOUTHERN CAPE PROVINCIAL COORDINATOR OFFICE – BREDASDORP	
Fire Line	028 425 1287 (SC)
Admin Line	028 425 1287 (SC)
Fax To Email	-
E-mail Address	alwyn.dewet@wofire.co.za

Alwyn de Wet	072 609 4221
Rika Muller	076 514 9604

PORTERVILLE DISPATCH (T1)	
Fire Line	060 961 4215
Admin Line	023 004 0424
Fax To Email	086 295 5229
E-mail Address	dispatch.porterville@wofire.co.za
Beki Sibiya	072 391 1722
Deidre Louw	073 278 1616

STELLENBOSCH DISPATCH (T1)	
Fire Line	060 961 8847
Admin Line	021 880 2639
Fax To Email	086 514 4729
E-mail Address	ops.wc@wofire.co.za
Natasha Lewis	082 452 5427
Theodore Gaffley	064 501 2698

NEWLANDS DISPATCH (T1)	
Fire Line	082 312 9413
Admin Line	021 689 7438
Fax To Email	086 611 5855
E-mail Address	dispatch.newlands@wofire.co.za
Yusuf Harley	071 762 0064
Imalda Arends	079 838 8988

BREDASDORP DISPATCH (T1)	
Fire Line	082 312 9507
Admin Line	028 425 1690
Fax To Email	-
E-mail Address	dispatch.bredasdorp@wofire.co.za
Andiswa Mfabe	064 166 9096
Marubini Malake	073 005 8235

GEORGE DISPATCH (T1)	
Fire Line	082 312 9461
Admin Line	-
Fax To Email	-
E-mail Address	opswit.sc@wofire.co.za
Margie Hopwell	082 883 4707
Stephan Truter	072 769 3056

13.1. Aerial Resource Allocations

Table 7: Aerial Resource Allocations

AIRBASE	CONTRACTED CLIENT	RESOURCE TYPE	CONTRACT START DATE	CONTRACT END DATE
WEST COAST DISTRICT				
Porterville	DFFE	Spotter	15 Nov 24	31 Mar 25
Porterville	WCDLG	Huey Helicopter	01 Dec 24	31 Mar 25
CAPE WINELANDS DISTRICT				
Stellenbosch	City of Cape Town	Spotter	01 Dec 24	30 Apr 25
Stellenbosch	DFFE	Spotter	15 Nov 24	31 Mar 25
Stellenbosch	DFFE	Spotter	15 Nov 24	31 Mar 25
Stellenbosch	DFFE	AT 802 SEAT	01 Dec 24	31 Mar 25

Stellenbosch	DFFE	Huey Helicopter	01 Dec 24	31 Mar 25
Stellenbosch	WCDLG	Black Hawk	01 Dec 24	31 Mar 25
CITY OF CAPE TOWN				
Newlands	City of Cape Town	Huey Helicopter	01 Dec 24	30 Apr 25
Newlands	City of Cape Town	Huey Helicopter	01 Dec 24	30 Apr 25
OVERBERG DISTRICT				
Bredasdorp	DFFE	Spotter	01 Dec 24	31 Mar 25
Bredasdorp	WCDLG	Huey Helicopter	01 Dec 24	31 Mar 25
GARDEN ROUTE DISTRICT				
Denneoord	DFFE	Spotter	01 Nov 24	31 Mar 25
Denneoord	DFFE	Spotter	01 Dec 24	31 Mar 25
Denneoord	DFFE	AT 802 SEAT	01 Dec 24	31 Mar 25
Denneoord	DFFE	Huey Helicopter	01 Nov 24	31 Mar 25
Denneoord	WCDLG	Huey Helicopter	01 Dec 24	31 Mar 25

13.2. Ground Teams Compilation

Table 8: Ground Teams Compilation

BASE	CONTRACTED CLIENT	RESOURCE TYPE	CONTRACT START DATE	CONTRACT END DATE
Vergelegen, Somerset West	WCDLG	Type 1 10 Persons	1 Dec 24	31 Mar 25

14. CHAPTER 14: MOPPING UP PROCEDURES AND STANDARDS

14.1. Background

The threat of veld and forest fires does not cease after the flames have passed, as smoldering fuels may continue to burn unnoticed for days, weeks, even months after flaming. It is during this phase that either the burn area exterior or the complete burn area of a fire is cooled so as to not reignite another fire.

Recent and historic observations in the field, during drills, through analysing records and investigation of many flare-ups has made it clear that veld and forest fire crews as well as all levels of command need to pay more attention to mop-up operations.

14.2. Key concepts

14.2.1. Guarding of Fires

- An adequate force of fire fighters is to guard a fire line for a minimum period of 48 hours, once a fire has been brought under control.
- Fire fighters are to conduct mopping up operations wherever necessary.
- Mopping up crews is to be equipped with radios and/or cell phones with which they can contact the Incident Commander.
- The Incident Commander is responsible to appoint a suitably qualified and experienced person, to conduct a personal inspection to satisfy him/her-self that mopping up was concluded and that the fire line is safe before withdrawing fire fighters, (i.e. before declaring the fire as completely extinguished and withdrawing all resources).

14.2.2. Mop-Up Operations

After primary line work is completed and a fire is called "contained," many things remain to be done to make the fire line safe and put the fire out. This work is called mop-up.

MOP-UP IS NOT SITTING AROUND LOOKING AT THE FIRE LINE BUT ACTIVELY WORKING ON THE LINE.

14.2.3. The objective of mop-up

- Put out all fire embers or sparks to prevent them from crossing the fire line and ensure that ground fires and creeping surface fires cannot cross the fire line.
- To strengthen the fire lines so that the teams can leave the fire safely **AND BE READY FOR THE NEXT FIRE AS SOON AS POSSIBLE.**

14.2.4. The principles of mop-up

- A certain amount of mop-up work must be done along with initial suppression operations.
- Mop-up becomes an independent part of firefighting as soon as the spread of the fire is stopped, and all lines contained.
- Ordinarily, mop-up is composed of two actions; putting the fire out and disposing of fuel either by burning to eliminate it or removing the fuel so it cannot burn.

14.3. Mop-up Guidelines

14.3.1. COMMAND

When addressing mop-up operations, Command should:

- Determine areas that require additional mop-up and determine what the priorities are.
- During extended fires determine what areas will immediately require mop-up and that there are sufficient resources to address this.
- Develop a mop-up and patrol plan.
- Determine specific actions and what is required to carry them out.
- Ensure that mop-up resource requirements are included in the Incident Action Plan for the next operational period. This includes personnel and equipment e.g., chainsaws and chainsaw operators.
- During rotation of crews, ensure that sufficient crew and equipment remain in the area to monitor for re-ignition or spread of fire.
- Ensure that there is a schedule for rotation of crews for mop-up and follow-up checks are done by crews to ensure that the fire is completely out in mopped-up perimeter.
- Determine the distance inside the control line to be overhauled (for small fires, this may be the entire burn area).
- Ensure that the task is clearly communicated and be specific on details of your expectations during the crew briefing.

14.3.2. OPERATIONS

14.3.2.1. General:

As soon as the suppression operations start, simultaneously, "MOP- UP" begins:

- On small fires, all inner fires should be extinguished in the mop-up, where quantities of burning material are not so large as to make this impractical. Work from the fire line toward the centre of the fire.
- On large fires, completely mop-up enough of the area adjacent to the line to be certain no fire can blow, spot, or roll over the fire line under the worst possible conditions.
- Always have a team or sufficient additional resources available right from the beginning to mop-up and guard the lines.

- Whenever possible the mop-up crew should always be able to keep up with the pace of the suppression crew.
- The mop-up crew will only move forward if the section is 100% safe should they not be able to move forward then additional resources should be called in
- Start work on each section of line just as soon as possible after the fire line is contained but treat most threatening situations first.
- Ensure that this line is properly anchored on both ends.

14.3.3. Strengthening the line

- Sweep the scratch line, widening it to a control line for a minimum of 3 m into the burnt area using a beater or rake hoe the appropriate hand tool for the remaining surface and ground materials.
- The control line fire line should be free of any flammable material.
- Begin with widening the scratch lines at the high-risk areas first into the burnt area and then proceed to the remaining scratch lines until you have a control line of the entire perimeter.
- Scratch line and control line width must be based on risk.
- Burnable material lying within or in close proximity to the control line across the fire line must be removed well into the burnt area. (15- 20 meters)
- Animal dung burnt or unburnt must be removed well into the burnt area. (15-20 meters)
- Beware of termite mounds particularly in Renosterveld and open a scratch control line around it isolating it.
- Consider an undercut control line in steep terrain where rolling material in likely. The undercut line must be wide and deep enough to catch the rolling materials.
- Allow fuel to burn up if it will do so promptly and safely. Monitor this process until area is safe.
- Burn out islands (unburned sections) only with permission from the Operations Chief or IC.
- Constantly check for spot fires outside the fire line, especially downwind from the fire line.
- Use water wherever possible and practical in mop-up.
- Wet the area 20 m into the burnt area from the fire line rake the ash bed while wetting wherever practical.
- Use water sparingly but use enough to do the job. Match the amount of water to the job.
- Adding Class, a foam to water will greatly increase effectiveness in mop up of deep-burning fuels.

14.3.4. Dealing with Heavy fuels

- Check heavier fuels (logs, snags, slash, etc.) for smouldering material. All smouldering material should be spread out well inside of lines into the burnt area. (20 meters) and apply water if possible.

- Smouldering stumps, that cannot be removed, should be isolated from the fire line and extinguished. Also open up the root collar around the stump.
- Open up stumps and roll over logs and ensure it is completely extinguished.
- Put into a safe area (the burnt area), at least 20 meters, all less flammable fuels, such as rotten logs and stumps, near the fire line.
- Any logs within 20 meters of the fire line that are impractical to move must be descaled and all scaled coals must be covered with dirt be broken down an allowed to cool down in a safe area or extinguished with water.
- Remove all burned trees inside of line that could throw sparks over line or fall over the line.
- Put all material that can role across the fire line in a position that it cannot possibly roll across the line. Pack it closed with stones if needs be.

14.3.5. Ground Fires, creeping surface fires and hot spots

- Look for indications of hot spots and ground fires. i.e. White ash, fine compacted fuels, root masses (e.g. in wattle stands)
- Feel for hot material along the fire line. (Or make use of Knox Heat scanner).
- Remove all stumps that can cause ground fires from near the fire line.
- Dig out dead or burning roots that cross under the fire line.
- Particular care must be taken where there is a thick mulch layer or Keystervaring patch adjacent to the line.
- Apply as much water as possible
- Dig out the ground fire to mineral soil.

Table 9: Ground Fires Clearing Guidelines

FUEL TYPE	WIDTH OF HAND CONTROL LINE (SWEPT.CLEARED OR HOSED DOWN AREA)	WIDTH OF SCRATCH LINE TO MINERAL SOIL
Grass	3 meters	1 meter
Fynbos 2 – 6 Years	3 meters	1 meter
Fynbos older than 6 years	10 meters	2 meters
Plantation and dense alien vegetation	20 meters	3 meters
Slash and cleared aliens	20 meters	3 meters

15. CHAPTER 15: PRE-ATTACK PLANS

15.1. Introduction

Wildfires pose a significant threat to ecosystems, communities, and the economy, especially in areas prone to extreme weather conditions and vegetation growth. In recent years, the frequency and intensity of these blazes have increased, underscoring the urgent need for proactive measures to mitigate their devastating impacts. Pre-attack plans are essential tools in this effort, providing a strategic framework for fire management before, during, and after fire events.

Pre-attack plans involve the development of detailed strategies and tactics tailored to specific geographic areas, emphasizing risk assessment, resource allocation, and coordination among various emergency response agencies. These plans incorporate key elements such as identifying high-risk zones, establishing communication protocols, and outlining evacuation routes, all of which are critical for efficient and effective wildfire response. The importance of utilizing pre-attack plans cannot be overstated. They serve several vital functions, including:

i) Preparedness and Prevention: By assessing vulnerability and implementing preventive measures, communities can significantly reduce the risk of ignition and spread.

ii) Resource Management: Pre-attack plans enable the strategic allocation of resources, such as firefighters, equipment, and water sources, ensuring that they are positioned effectively when a wildfire occurs.

iii) Coordinated Response: These plans facilitate collaboration between role-players, enhancing communication and operational efficiency during emergency scenarios.

iv) Post-Incident Recovery: Pre-attack plans also address the recovery phase, outlining steps for restoring affected areas.

In summary, pre-attack plans are a vital component of an integrated wildfire management strategy. By prioritizing preparation and coordination, these plans not only protect lives and property but also contribute to the long-term sustainability of our natural resources and communities.

15.2. Distribution of Pre-Attack Plans for Wildfire Management

In an ongoing effort to bolster wildfire preparedness and response, nine comprehensive pre-attack plans have been developed and distributed to various stakeholders, including local government agencies, community organizations, and emergency response teams. These plans aim to ensure that all entities involved in wildfire management are equipped with the necessary knowledge, strategies, and resources to efficiently address potential fire incidents.

These pre-attack plans have been meticulously crafted, incorporating best practices and lessons learned from past wildfire events. They cover a range of critical components, including risk assessments, resource management, evacuation protocols, and community engagement strategies. By ensuring that these plans are readily available, we are reinforcing our collective commitment to safeguarding lives, property, and natural resources.

The following pre-attack plans are now available for stakeholders:

- McGregor Wildfire Pre-Attack Plan
- Groot Brakrivier Wildfire Pre-Attack Plan
- Robben Island Wildfire Pre-Attack Plan
- Hemel-en-Aarde Wildfire Pre-Attack Plan
- Chatsworth Wildfire Pre-Attack Plan
- Riverlands Wildfire Pre-Attack Plan
- Witzenberg Valley Wildfire Pre-Attack Plan
- Hoekwil Wildfire Pre-Attack Plan
- Towsranten Wildfire Pre-Attack Plan
- Wuppertal Wildfire Pre-Attack Plan
- Algeria Pre-Attack Plan

Hard copies of these pre-attack plans can be sourced at the Provincial Disaster Management Centre, Fire and Rescue Services. Stakeholders are encouraged to obtain these documents to ensure they have a clear understanding of their roles and responsibilities in the event of a wildfire. By aligning our efforts and working collaboratively, we can enhance our resilience against wildfires and better protect our communities.

16. CHAPTER 16: AERIAL ACTIVATION



Figure 21: Aerial Activation Process

INCIDENT
- Identify need for aerial assitance
- Consider time of day and weather
- Contact city or district municipality to request resources.

METRO/DISTRICT MUNICIPALITY
- Once authorization number is issued on the whatsapp group, aerial resources can start up and deploy.
- Requesting agency to contact local dispatch center to provide operational information.
- Follow local protocal and procedure

WOF DISPATCH CENTRE
- Follow local protocol and procedure

INCIDENT COMMAND (Air Opertions Director)
- Brief aerial crew on objectives.
- Maintain radio communications with the Spotter.
- Provide the Provincial official with a situation report (critical information) soonest and then every hour).
- Determine the need for an extension or stand down after one hour.

PILOTS
- Adhere to incident objectives
- Continuously advise and inform the incident commander.
- Maintain communicaiton with dispatch.

AFTER ACTION REVIEW
- Follow local protocol and procedure

Western Cape Provincial Veld Fire Plan
Deputy Director: Mr Etienne du Toit
Tel Number: 021 937 6357
Cell Number: 073 995 1609
Email: Etienne.DuToit@westerncape.gov.za

Western Cape Government