WESTERN CAPE VELD FIRE PLAN 2019-20

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1 Revision Log

Date	Revision
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2 Letter from the Deputy Director Fire and Rescue Services

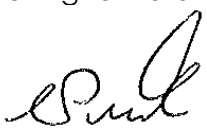
The 2019/2020 veld fire hazard season will start shortly in the Western Cape. Partnerships between the City of Cape Town, Table Mountain National Park, Cape Winelands DM, Overberg DM, Eden DM, West Coast DM, Provincial Government: Western Cape, Working on Fire, MTO, Cape Nature and the Fire Prevention 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 team 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.



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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

3 Introduction

3.1 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.

3.2 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 the incidence 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.

4 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 have an understanding of the systems, structure, resources, capabilities and statutory obligations of the other agencies.

4.1 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

4.2 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.

4.3 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.

4.4 Other Agencies

Many agencies have roles in veld fire prevention, response and recovery. The veld and Forest Fire Act specifically places 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 recognise the potential risk of veld fire on their businesses and to plan for continued service provision throughout and after a major disruption;
- Non-government and community organisations, 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 organisational partnerships to build community capacity and capability;
    - Support individuals and communities to prepare to respond to and recover from veld fires;

5 Objectives and principles of veld fire management

5.1 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.

5.2 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.

6 Planning

6.1 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 Fire Work Group 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 also to develop tools and processes for consistent and continuous improvement in veld fire management planning.

6.2 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.

A guide to develop a Fire Management Plan is attached as **Annexure A**.

6.3 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.

6.4 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.

An example of a fire management unit action plan is attached as **Annexure B**. The unit action plan must be audited annually by the Fire Prevention Officer.

6.5 Current risk in the Western Cape

The Western Cape Government, in collaboration with AFIS completed a veld fire risk assessment based on an analysis of exposure of social, economic and environmental assets. A 2010 CSIR report on veld fire risk in South Africa included a map of the distribution of fire ecology types based on the type of vegetation, which is closely related to the veld fire risk.

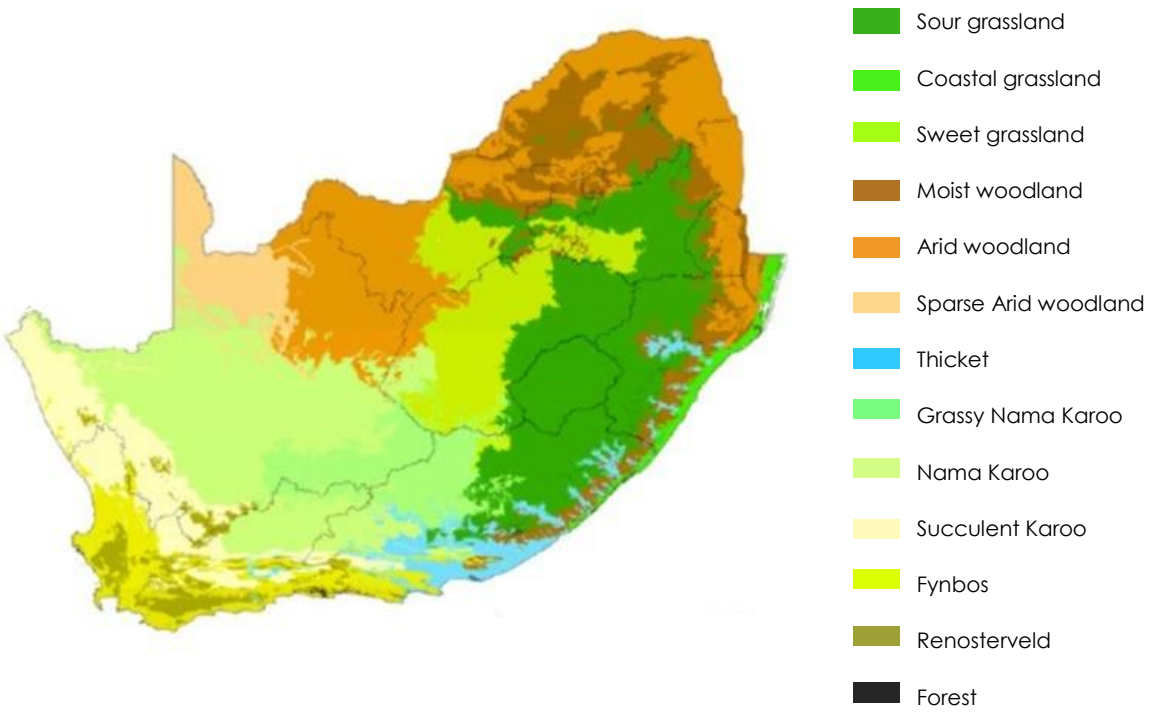

Figure 1: The distribution of the different fire-ecology types(CSIR report 2010)

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.

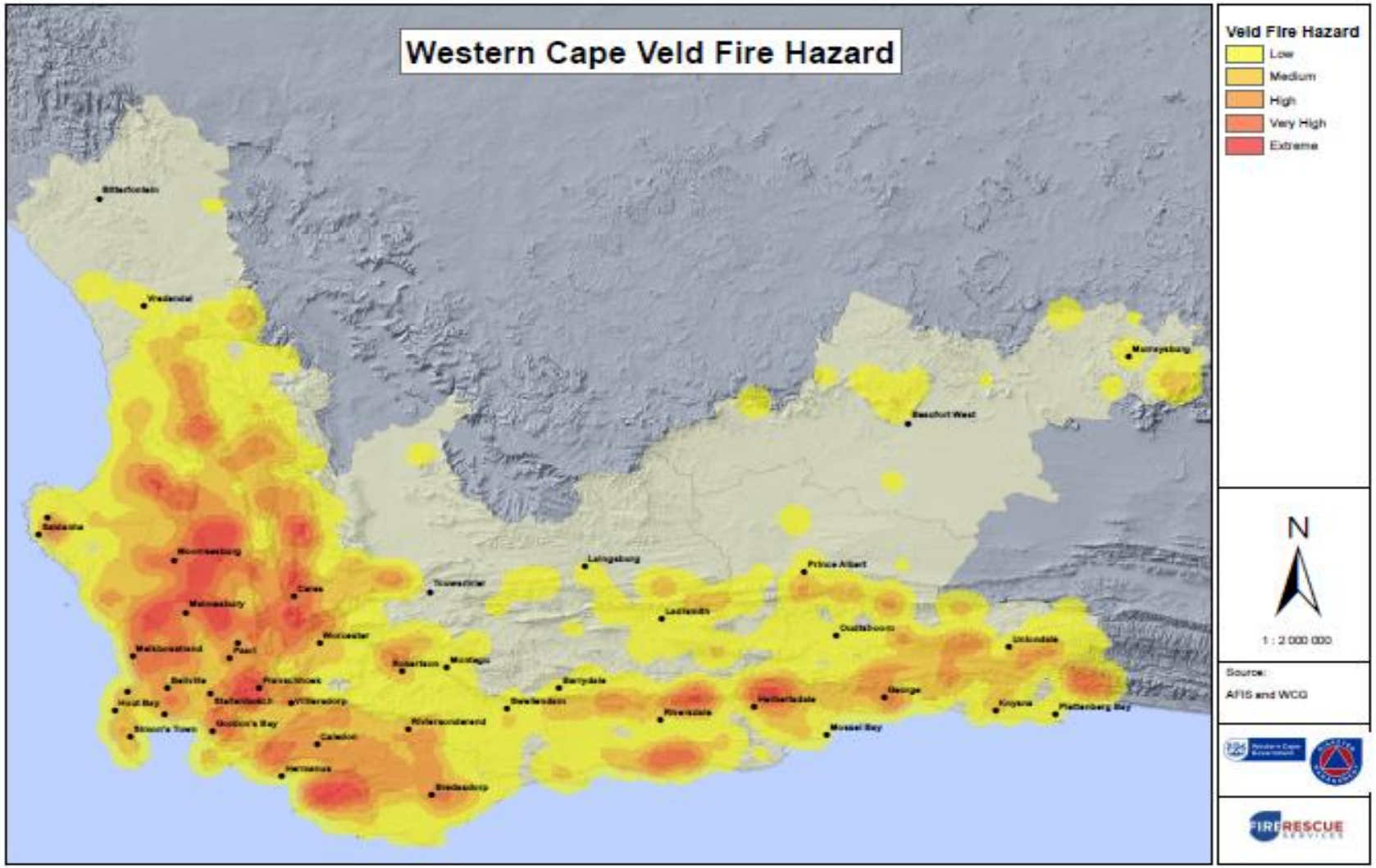

Figure 2: Overall Veld Fire Risk (WCG Risk Register 2017

6.6 Previous fires

The CSIR provide a very useful tool to report incidences of fire. The AFIS (Advanced Fire Information system) makes use of the MODIS satellite to record incidences of fire as well as burn scar information.

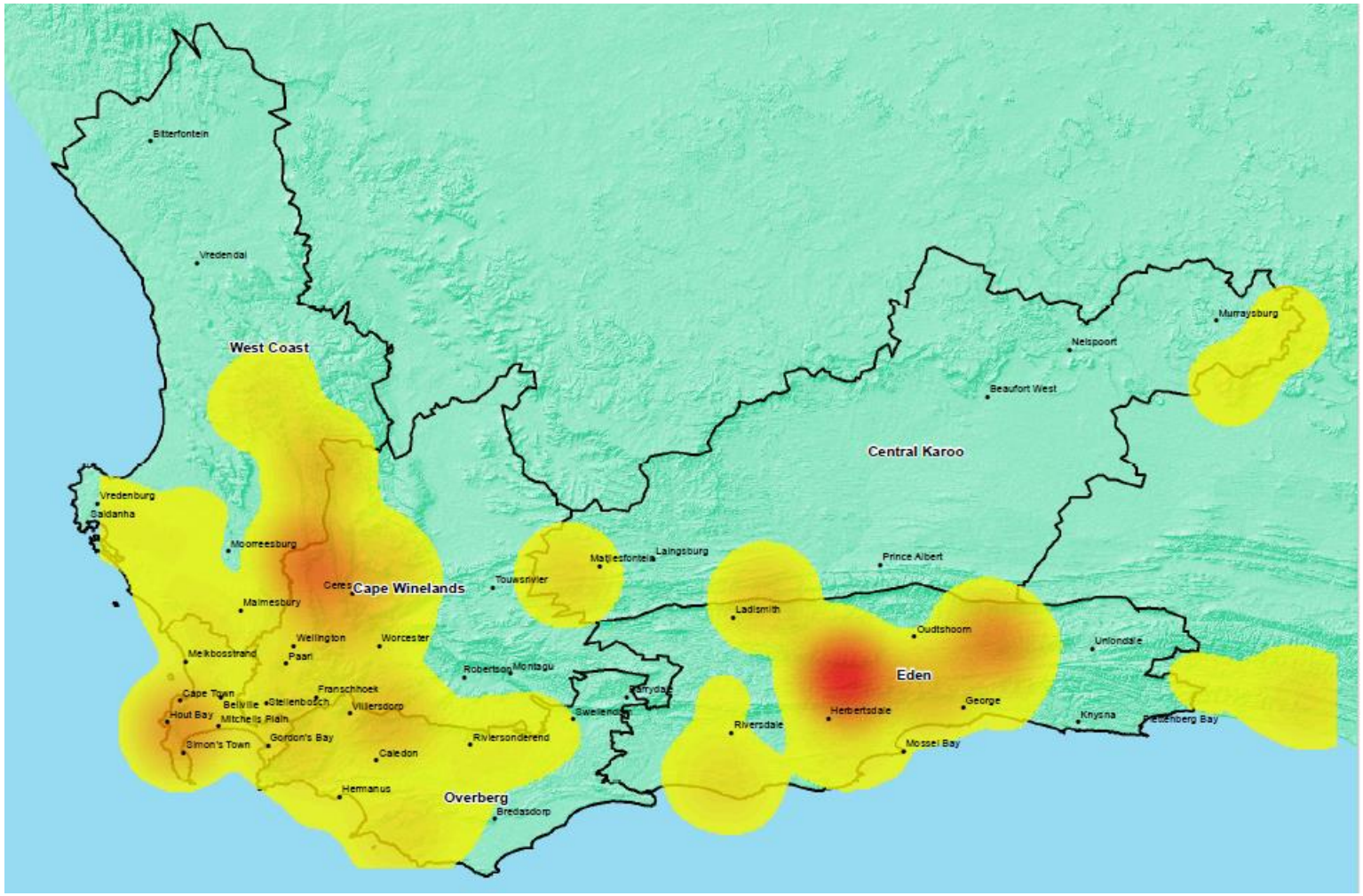

Figure 3: Fires 2014/2015

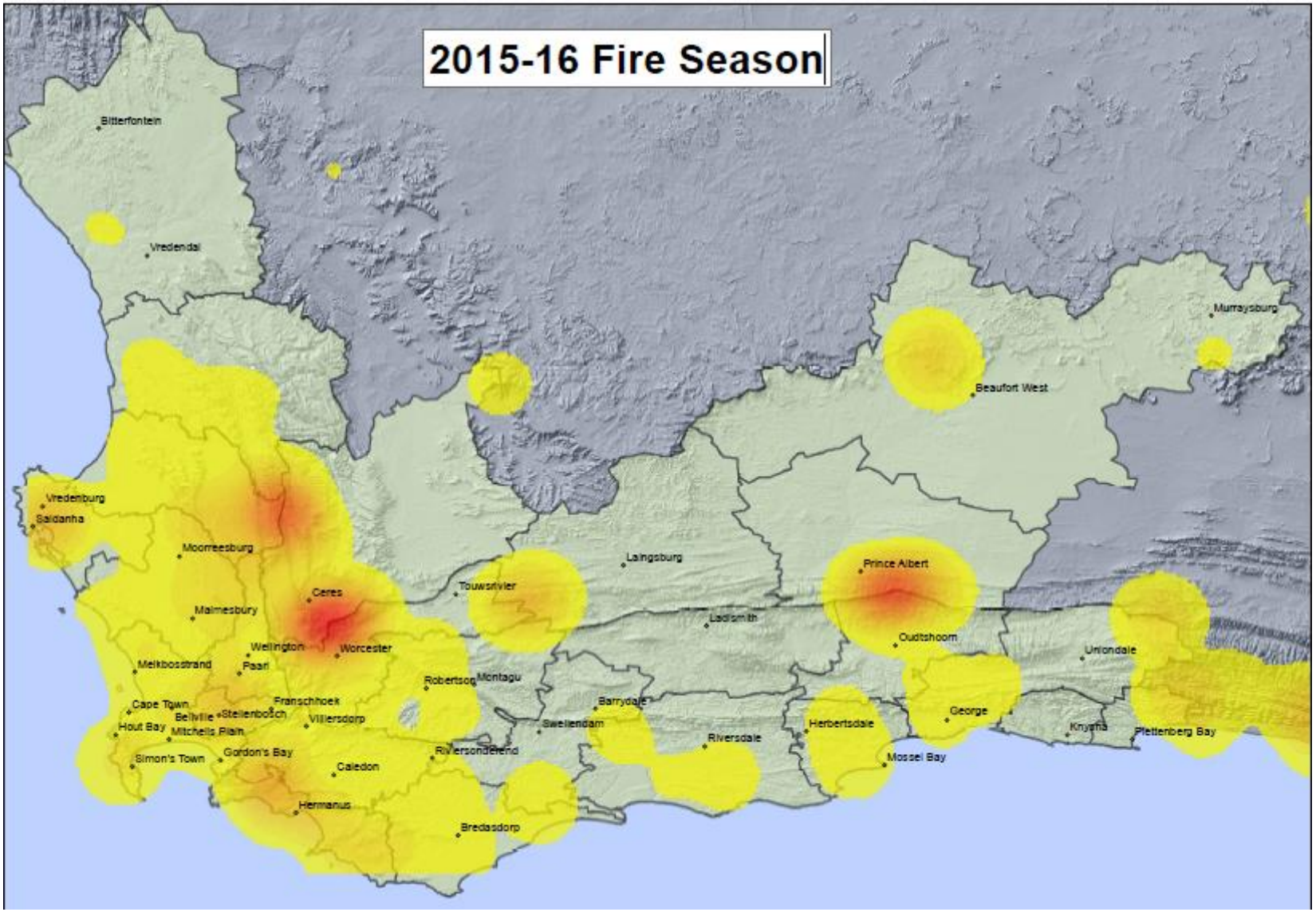

Figure 4: Fires 2015/2016

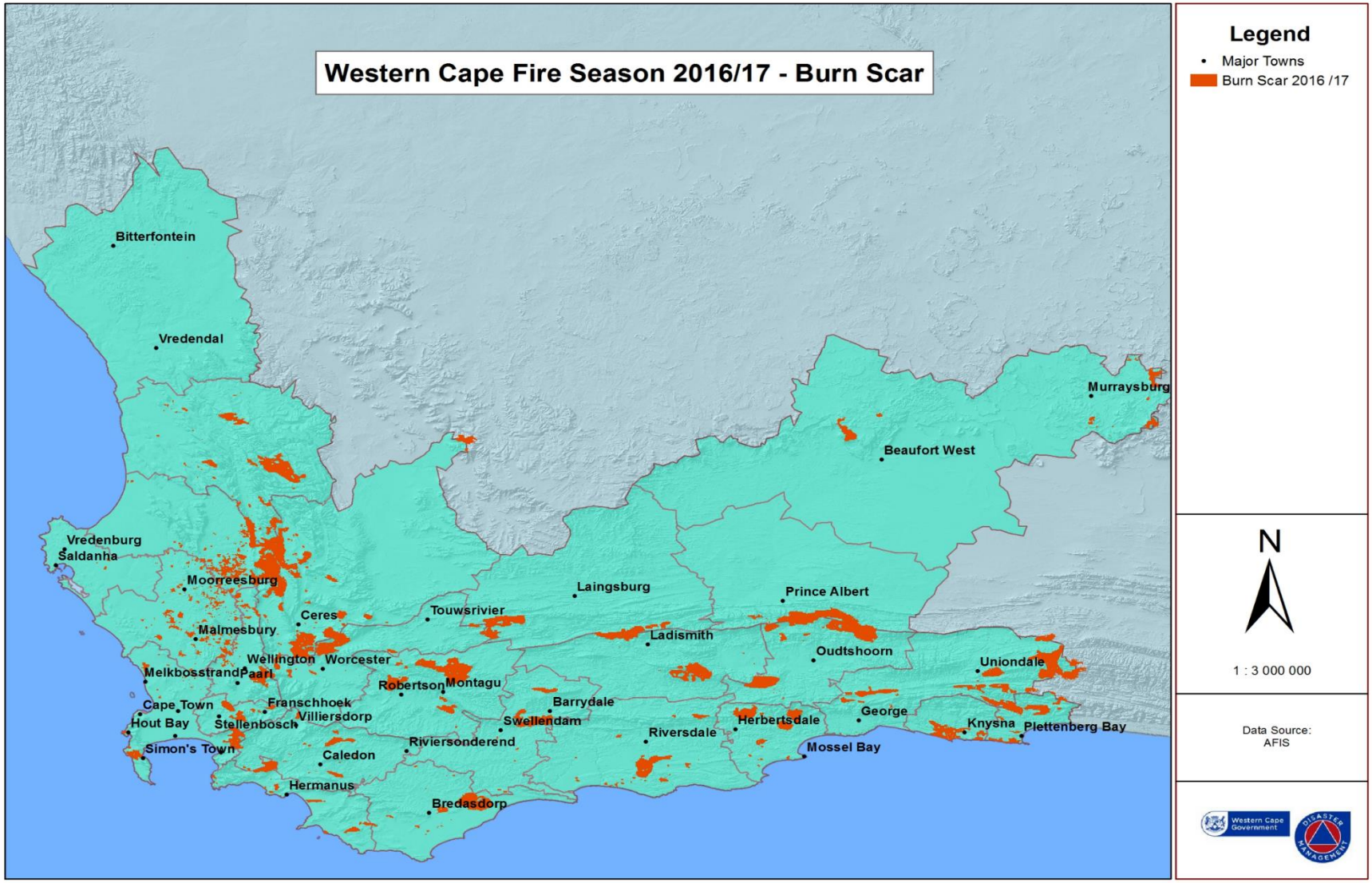

Figure 5: Fires 2016/2017

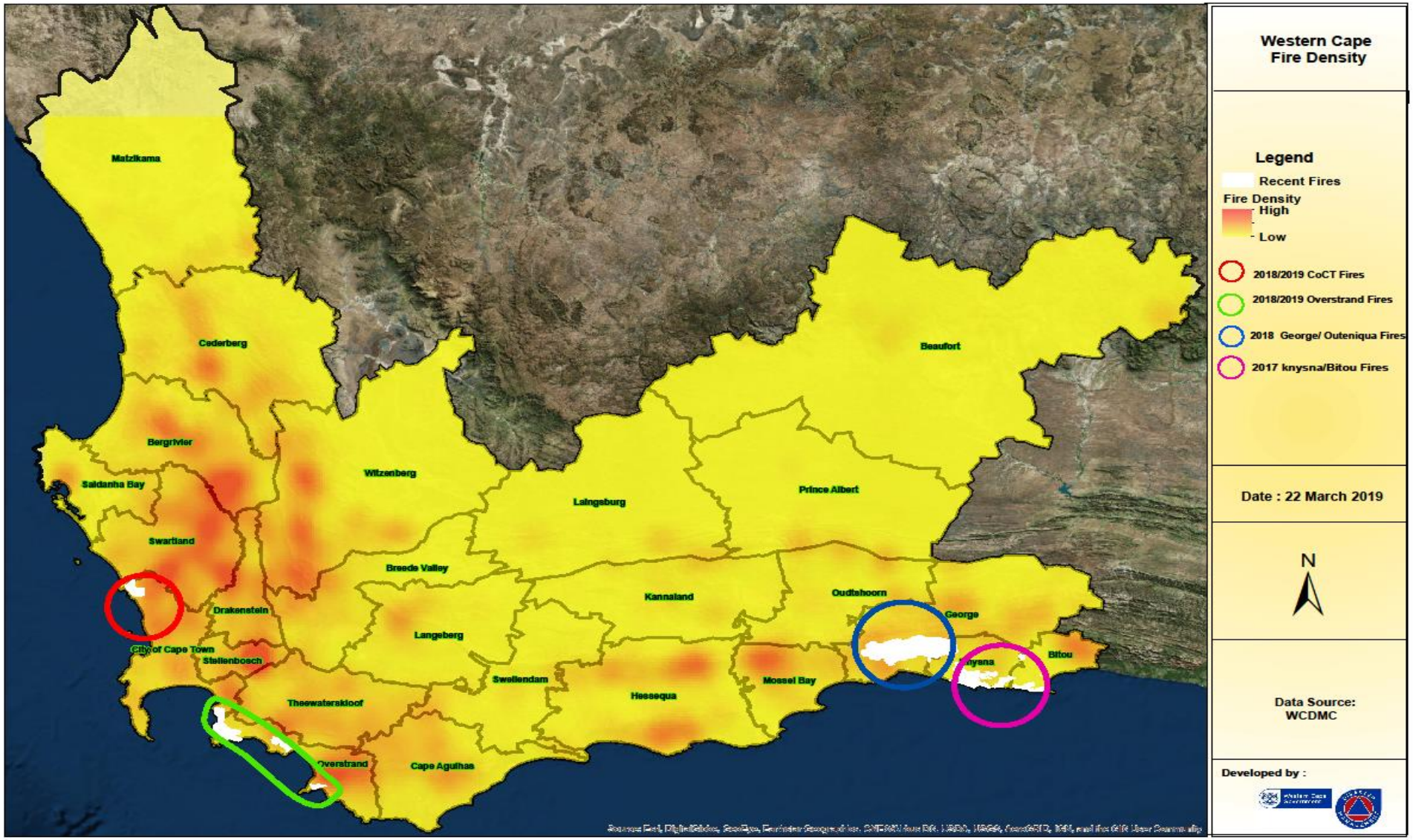

Figure 6: Fires 2017/18/19

7 Awareness and Prevention

Awareness campaigns and Prevention strategies are seen as ways to eliminate or reduce the incidence 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.

Figure 7: Awareness material

8 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.

8.1 Fire Services

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

- Ensuring sufficient 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, neighbouring 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.

8.2 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.

8.2.1 Fire danger ratings are classified as follow:

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 1: Fire Danger Rating Classification

8.2.2 Five fire danger rating classes proposed to by the Department of Water Affairs and Forestry to meet the requirements of Chapter 3 of the National Veld and Forest Fire Act, Section 9(4)(c) and 9(4)(d).

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. Municipal Disaster Management Centres must invoke contingency plans and inform National and Provincial Disaster Management Centres. (Section 49 of the Disaster Management Bill).	The threat of disastrous wildfires at provincial level exists under these conditions. Municipal Disaster Management Centres must invoke contingency plans and inform National 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 than 0.5 m and rates of forward	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.

INDICATIVE COLOUR	BLUE	GREEN	YELLOW	ORANGE	RED
	spread less than 0.15 kilometres per hour.				
FIRE SUPPRESSION DIFFICULTY	Direct attack feasible: one or a few field crew with basic firefighting tools easily suppresses any fire that may occur.	Direct attack feasible: fires safely approached on foot. Suppression is readily achieved by direct manual attack methods.	Direct attack constrained: 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.	Direct attack not feasible: fires 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.	Any form of fire control is likely to be precluded until the weather changes. Back burning dangerous and best avoided.

Table 2: Fire Danger Rating class significance

8.3 Medium term forecast

The medium term weather outlook for the Province provide expected temperature and rainfall patterns for a period of three to four months. This is intended to guide pre-planning as it influences the veld fire hazard. The current medium term forecast is attached as **Annexure C** and updates will be sent to District municipalities as it become available.

9 Response

9.1 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.

1.	Keep informed on fire weather conditions and forecasts
2.	Know what your fire is doing at all times
3.	Base all actions on current and expected fire behaviour
4.	Identify escape routes and safety zones, and make them known.
5.	Post lookouts when there is possible danger
6.	Be alert. Keep calm. Think clearly. Act decisively
7.	Maintain prompt communication with your forces, your supervisor and adjoining forces.
8.	Give clear instructions and be sure they are understood
9.	Maintain control of your forces at all times
IF YOU CONSIDER 1-9, THEN	
10.	Fight fire aggressively, having provided for safety first

Table 3: Ten standard Fire Fighting orders

Watch-out situations are those developing that require fire fighters to be alert and on the Watch-Out to ensure safety. The situations to watch out for are tabled below:

1.	Fire not scouted and sized up
2.	In country not seen in daylight
3.	Safety zones and escape routes not identified
4.	Unfamiliar with weather and local factors influencing fire behaviour
5.	Uninformed on strategy, tactics and hazards
6.	Instructions and assignments not clear
7.	No communication link with crew members or supervisor
8.	Constructing line without a safe anchor point
9.	Building fire line downhill with fire below
10.	Attempting frontal assault on fire
11.	Unburned fuel between you and the fire
12.	Cannot see the main fire; not in contact with someone who can
13.	On a hillside where rolling material can ignite fuel below
14.	Weather becoming hotter and drier
15.	Wind increases and/or changes direction
16.	Getting frequent spot fires across the fire line
17.	Terrain and fuels make escape to safety zones difficult
18.	Taking a nap near the fire line

9.2 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. (**Annexure D and E_1-E_2**)

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. Dispatch centre contact details and team placement are respectively attached as **Annexure F_1 and G**. It is important to follow the best operating procedures attached as **Annexure H_1** and specific call-out procedures for Provincial teams, attached as **Annexure O**.

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.

Please peruse the accepted mopping up guidelines attached as **Annexure H_2** to minimise flare-ups.

9.3 Aircraft

The Provincial Government of the Western Cape, Department of Local Government has an agreement with Kishugu Pty (Ltd) through the Directorate Disaster Management and Fire and Rescue Services for the provision of aerial resources to support firefighting. The aircraft placement is attached as **Annexure I** and the aerial request flowchart are attached as **Annexure J_1**.

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. The requesting authority must fax the Aerial Fire Fighting Request form attached as **Annexure K_3** (completed in full), to the Provincial Fire and Rescue Services official and follow the call-out procedure attached as **Annexure J_2**.

9.4 Reports

The National Fire report form (**Annexure L**) must be completed in the event of all veld fires and faxed to the nearest DAFF office.

9.5 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.

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	

Table 4: Briefing format

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.

10 Incident Command

The Provincial 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
- utilises common terminology.

It is expected that incident command will always be established regardless of the incident size. While many Local Fire Authorities are able to 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 situations districts must plan with the stakeholders in their area to fill incident command positions.

10.1 Incident typing

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

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.).
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.).

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.
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).
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.

Table 5: Incident Typing

10.2 ICS Structure

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

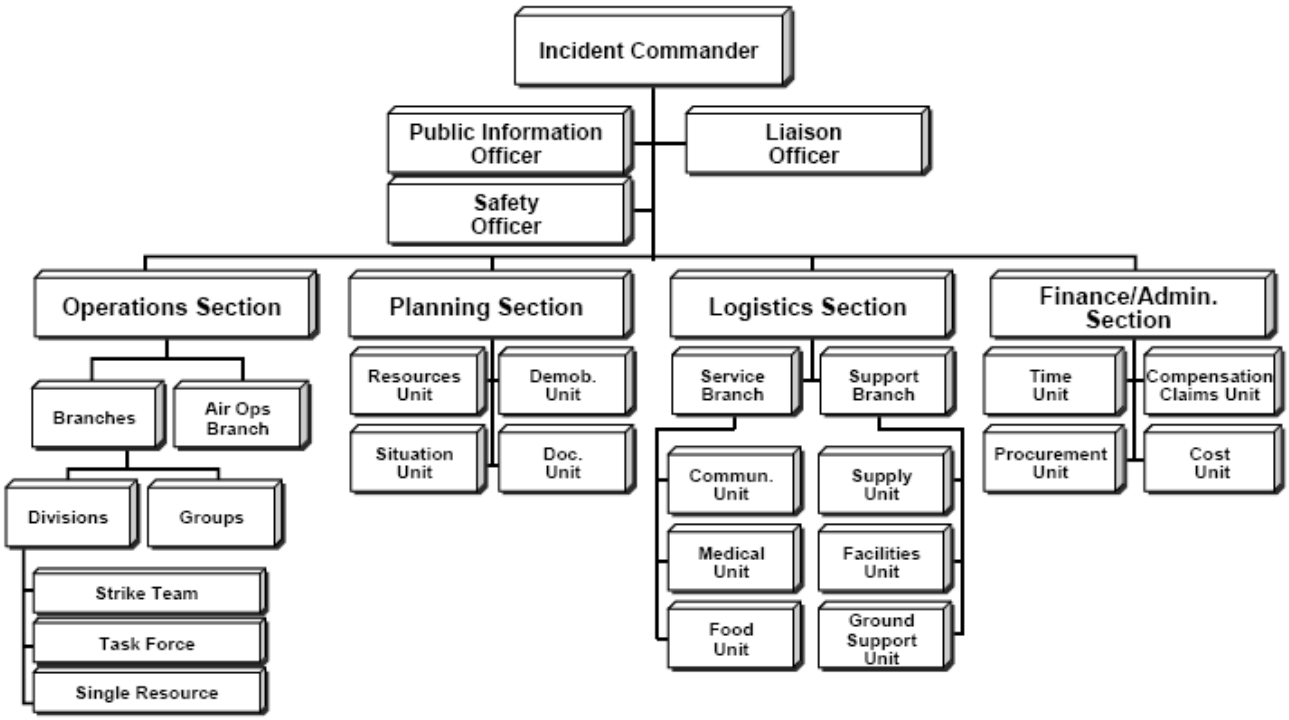

Figure 8: ICS Structure (example)

10.3 On-scene Command responsibilities

Incident Commander
The Incident Commander (IC) is responsible for all aspects of the response, including developing incident objectives and managing all incident operations. Responsibilities include: • Establish immediate priorities especially the safety of responders, other emergency workers, bystanders, and people involved in the incident. • Stabilize the incident by ensuring life safety and managing resources efficiently and cost effectively. • Determine incident objectives and strategy to achieve the objectives. • Establish and monitor incident organization. • Approve the implementation of the written or oral Incident Action Plan.
Command Staff
The Command Staff is responsible for public affairs, health and safety, and liaison activities within the incident command structure. The IC remains responsible for these activities or may assign individuals to carry out these responsibilities and report directly to the IC. The Public Information Officer's role is to develop and release information about the incident to the news media, incident personnel, and other appropriate agencies and organizations. The Liaison Officer's role is to serve as the point of contact for assisting and coordinating activities between the IC and various agencies and groups. The Safety Officer's role is to develop and recommend measures to the IC for assuring personnel health and safety and to assess and/or anticipate hazardous and unsafe situations. The Safety Officer also develops the Site Safety Plan, reviews the Incident Action Plan for safety implications, and provides timely, complete, specific, and accurate assessment of hazards and required controls.
General Staff
The General Staff includes Operations, Planning, Logistics, and Finance/Administrative responsibilities. These responsibilities remain with the IC until they are assigned to another individual. When the Operations, Planning, Logistics or Finance/Administrative responsibilities are established as separate functions under the IC, they are managed by a section chief and can be supported by other functional units. The Operations Staff is responsible for all operations directly applicable to the primary mission of the response. The Planning Staff is responsible for collecting, evaluating, and disseminating the tactical information related to the incident, and for preparing and documenting Incident Action Plans (IAP's). The Logistics Staff is responsible for providing facilities, services, and materials for the incident response. The Finance and Administrative Staff is responsible for all financial, administrative, and cost analysis aspects of the incident.

Table 6: ICS Roles

10.4 On-scene command operating cycle

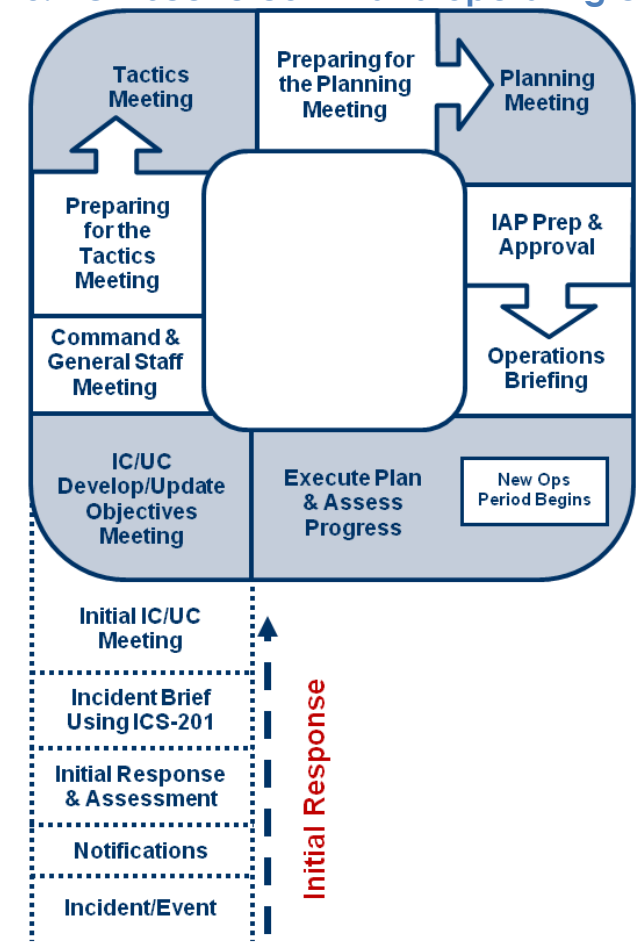

Figure 9: Planning Cycle

10.5 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.

10.6 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. The incident organizer is attached as **Annexure M**.

10.7 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.

11 Provincial Multi-Agency Coordination Centre

(Overview of Area command:Fresh Water Spills Symposium, 2009)

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 close 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.

11.1 Organizational structure

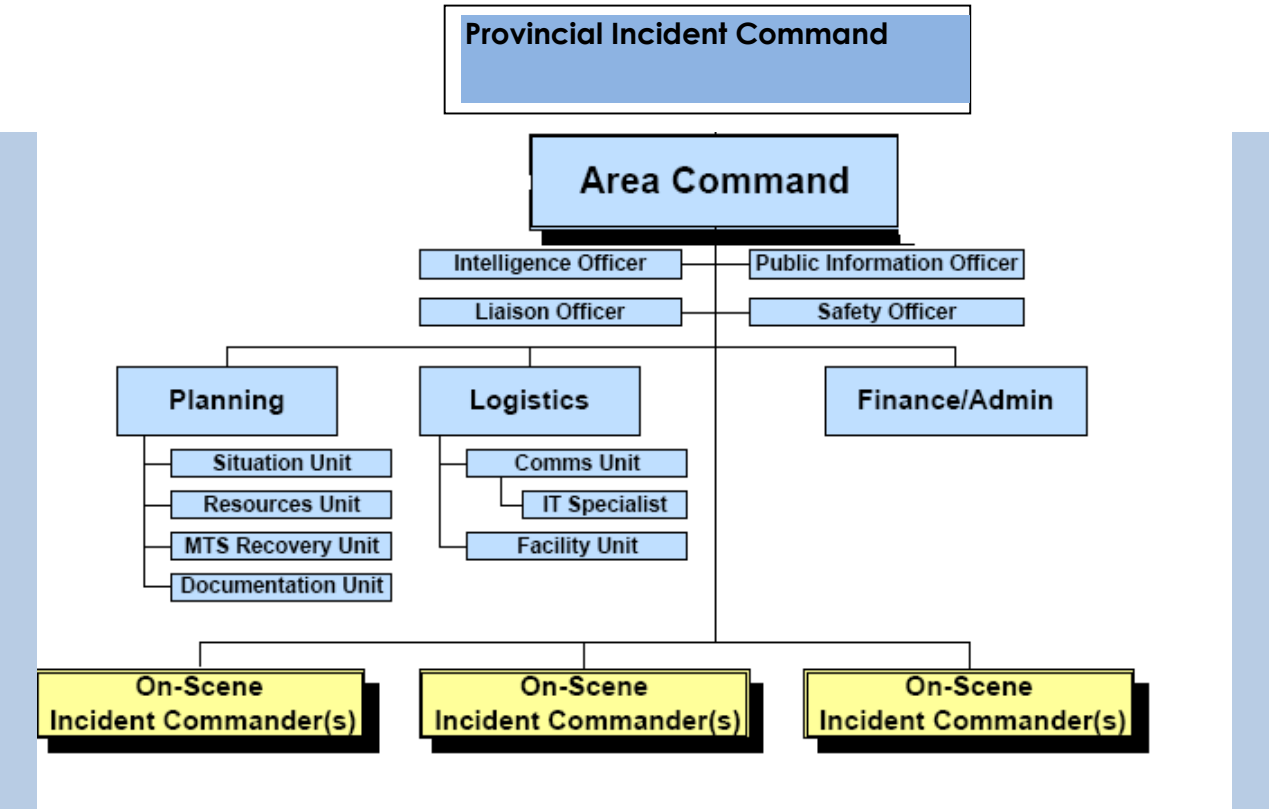

Figure 10: Typical organisational structure

11.2 Position responsibilities

Incident Commander	• Set overall objectives. • Ensure incident objectives are met and do not conflict with each other. • Establish incident-related priorities. • Allocate/reallocate critical resources.
Public Information Officer	• Provides public information coordination between incidents. • Serves as the contact point for media requests.
Liaison Officer	• Maintains off-incident interagency contacts and coordination.
Planning Section Chief	• Assembles information on individual incident objectives. • Recommends resource allocation priorities. • Maintains critical resources status. • Ensures advance planning is accomplished. • Prepares MAC briefings. • Reviews Incident Action Plans and completed ICS 209 forms from assigned incidents.
Logistics Section Chief	• Provides facilities, services, and materials for the multi-agency coordination centre. • Designates and coordinates ordering process. • Ensures communications are coordinated. • Assists in Area Command decision making.

11.3 Operating cycle

The operating cycle works very similar to the on-scene incident command planning cycle.

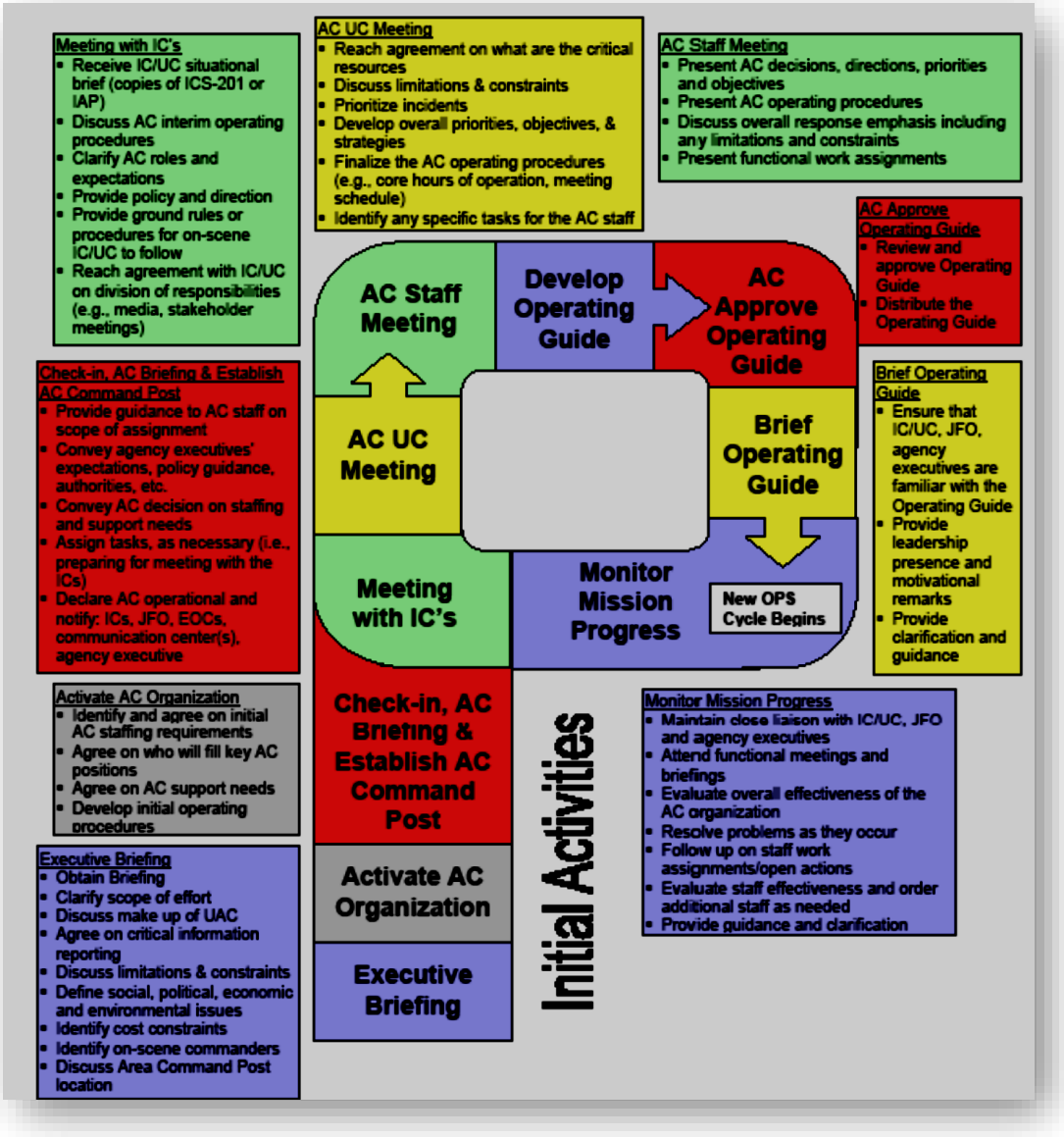

Figure 11: Multi-agency coordination planning

12 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.

13 Debrief

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

13.1 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 include:

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?

13.2 Multi-agency debrief

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.

AIRCRAFT DISPATCH PROTOCOL

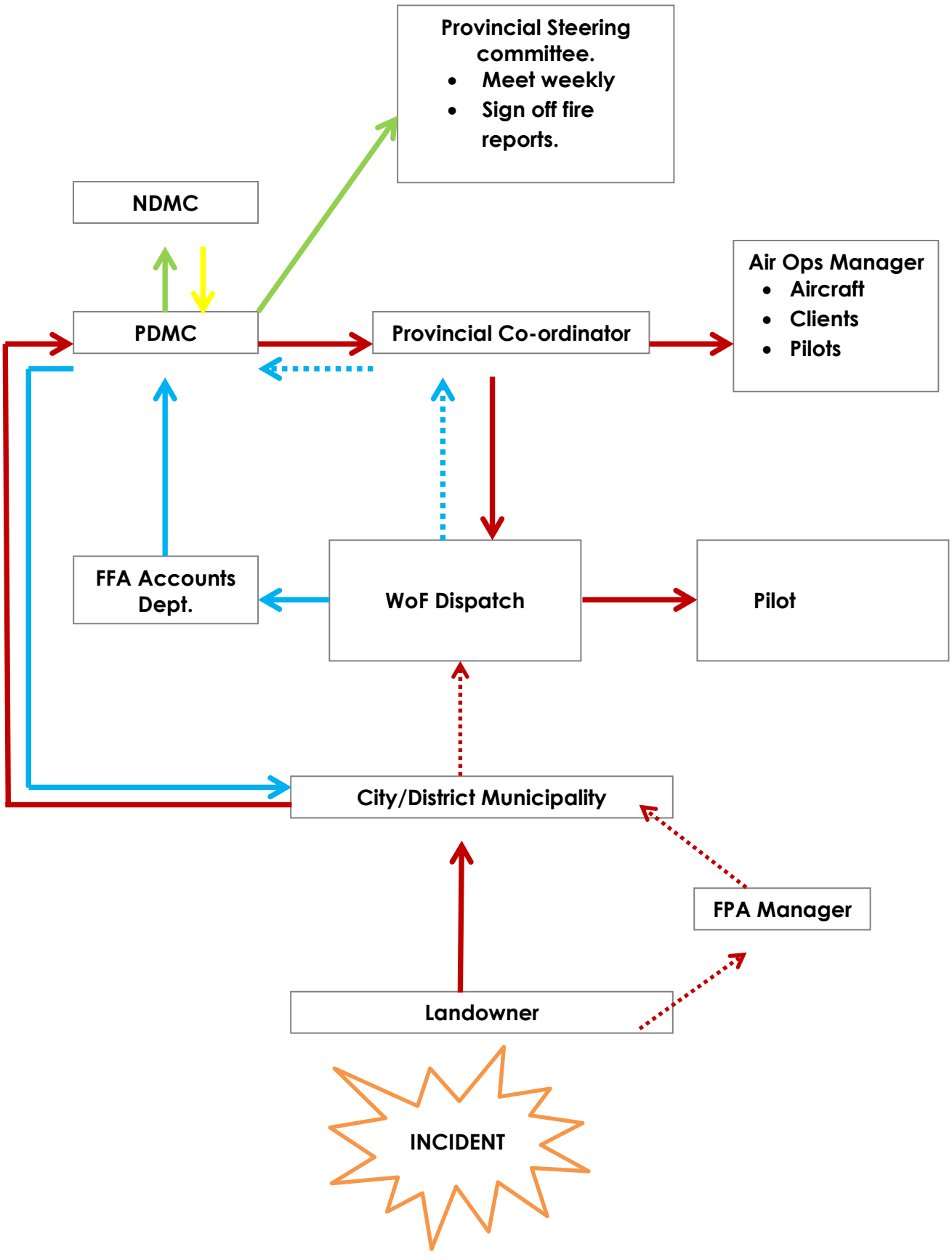

Figure 12: Aircraft Dispatch Protocol

ANNEXURES

ANNEXURE A

Fire Management Planning Guide

Fire Management Plan (FMP) Template
This document is intended as a guide document and not prescriptive in any way.

Purpose of an FMP -- The fire management planning process and requirements may differ among agencies. However, for all agencies, a common purpose of a fire management plan is to provide decision support to aid managers in making informed decisions. The FMP includes a concise summary of information organized by fire management unit (FMU) or units.

The fire management plan also contains strategic and operational elements that describe how to manage applicable components such as; response to unplanned ignitions, hazardous fuels and vegetation management, burned area emergency stabilization and rehabilitation, prevention, community interactions and collaborative partnerships roles, and monitoring and evaluation programs.

Purpose of the Interagency Fire Management Template-- The purpose of the interagency fire management plan template is to provide a framework to facilitate cooperation across administrative boundaries. The FMP has different detail depending upon area complexities, agency need and direction.

1. Introduction
The intent of this chapter is to introduce the reader to the area covered by the FMP.
State the reasons for developing the FMP. Provide a general description of location of the area covered by the FMP with vicinity map and agencies involved. Briefly describe land ownership, significant resources, mission or direction for the area and different management areas (e.g. fynbos, agricultural, natural or commercial forest, and urban interface) for agencies participating in the planning effort.

2. Policy and Partnerships
The intent of this chapter is to establish the linkage between higher level planning documents, legislation and policies and the actions described in the document.

2.1 Fire Policy
Identify sources of guidance and direction that relate to actions described in the FMP. These include: interagency and departmental policy (e.g. departmental manuals), agency specific policies (e.g. manuals, strategic plans), and bylaws.

2.2 Land/Resource Management Planning (LMP)
Identify documents that relate to the area covered by the FMP including interagency efforts. Examples include: land management plans, comprehensive conservation plans

2.3 Partnerships
Identify any internal and external fire management partnerships or planning teams that helped you develop this FMP. This information documents the level of cooperation occurring.

3. Fire Management Unit Characteristics

The intent of this chapter is to articulate specific objectives, practices and considerations common to all FMUs and unique to individual FMUs.

The primary purpose of developing FMUs in fire management planning is to assist in organizing information in complex landscapes. The process of creating FMUs divides the landscape into smaller geographic areas to more easily describe physical and social characteristics. The following sections provide guidance on what to include in this chapter.

3.1 Area-wide Management Considerations

The intent of this section is to document overall veld fire management program guidance and characteristics common to all FMUs. Describe fire management related goals, objectives, standards, guidelines, and/or desired future conditions as found in the appropriate LMP(s) that apply across all FMUs. Include fire management related goals that may come from non-fire program areas within the LMP or other planning documents.

3.2 Fire Management Unit --Specific Descriptions

The intent of this section is to describe the characteristics of the FMU. Examples are: Physical description of FMU (e.g. topography, fuel types, special conditions that may result in extreme fire behaviour, access, high value concerns, special areas) jurisdictional boundaries, other values at risk within and adjacent to FMU, previous fire behaviour and weather descriptions

Operational information may be detailed or added as an appendix, such as:
Permanent repeater locations, radio frequencies, radio 'dead spots', communication plan, evacuation plan, water fill sites and helicopter landing spots.

4. Veld Fire Operational Guidance

The intent of this chapter is to document the procedures used in the area covered by the FMP to implement the veld fire management program.

4.1 Appropriate Management Response

Describe procedures that should be in place for planning and responding to fires. Procedures to be included are dependent on local and interagency agency needs.
Examples include:

- preparedness (including training, qualifications, readiness, detection and aviation)
- cooperative or mutual aid fire management agreements
- cost apportionment agreements
- protection agreements
- cross-boundary fire agreements,
- size up, initial response and extended response procedures
- dispatching/obtaining resources
- prioritizing allocation of resources
- large fire cost management
- public interaction and media policies
- reporting requirements

4.2 Prevention and Education
Describe or reference veld fire prevention and education strategies. Procedures to be included are dependent on local agency needs.
Examples include:

- human caused ignition patterns and problems
- fire investigation policies and procedures
- burn permit systems
- law enforcement procedures and agreements
- community involvement
- education programs
- memorandum of understanding (MOU)

5. Monitoring and Evaluation
The intent of this chapter is to document processes for determining whether the FMP is being implemented as planned and fire-related goals and objectives are being achieved. Information obtained from monitoring and evaluations is used to update the FMP. Describe monitoring processes that will be used to measure achievement of FMP objectives.

Glossary
Include a glossary for common terms. Include full definition for agency or unit specific terminology.

Appendices – Optional

ANNEXURE B

FIRE PROTECTION ASSOCIATION
Fire Management Unit
ACTION PLAN TEMPLATE

1. MEMBERS

Owner	Property	Contact Number	Signature
.....	.....	.....	.....
.....	.....	.....	.....
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2. GENERAL INFORMATION AND RISK ANALYSIS OF MANAGEMENT UNIT

BACKGROUND DESCRIPTION OF BUSINESS UNIT (MAP – use colour codes where possible)

- **Boundaries of unit**
- **Water points** (indicate suction pumps "SP", gravitational water point "GW", Helicopter Filling point "HF")
- **Breaks** (irrigated lands used for grazing must also be indicated)
- **Landing strips** (indicate helicopter and /or light aircraft, co-ordinates, Helicopter or aircraft symbol with adjacent co-ordinates)
- **Danger Points** (stores, picnic sites, workers' houses, rubbish dumps, etc)
- **Veld Ages (**date of previous burns, is the veld adequately burned especially relevant in mountain catchment areas. Alternatively, age classes can be highlighted in different colours e.g. 0-2 years: green, 3-4 years: yellow, 5-6 years: orange, >6 years: red)
- **Properties of non-members**
- **Central Points where equipment is stored** (person's name and telephone number at the point, every point must have a specific number and must have an inventory of the types and amount of equipment available)
- **Access Roads – not public roads** (include jeep tracks in mountains, types of roads indicated in different colours on the map, colours will depend on the accessibility of the road for different vehicle types)
- **Structures** (Houses, stores, etc)
- **Equipment** (members' available equipment) Use table below

Owner	Property	Contact Number	Equipment	
			Type	Amount

3. PERSONNEL AND TRAINING

REACTION TEAM (Permanent personnel)

NAME	SURNAME	OWNER (PROPERTY)	CONTACT NUMBER

CREW BOSS

NAME	SURNAME	PROPERTY	CONTACT NUMBER

FIRE BOSS

NAME	SURNAME	PROPERTY	CONTACT NUMBER

Compulsory Courses

Category	Levels Required	Refresher Requirements
Reaction Team	A + B	Yearly
Crewboss	C	Every 2 years
Fireboss	C + D	Every 3 years

4.1 RATIONS

Policy:

- Trained fire fighters deployed to fight a fire must be supplied with rations.
- Ration packs are only given out for 12 hour periods.
- Recommended minimum standard for ration packs – see table below. Other types of rations (e.g. "wet rations") are optional
- A minimum of _____ (*BU decides quantities)* ration packs must be stored by BU
- The FPA is responsible for the costs involved in purchase of the first rations for the stores. Re-fills will be the responsibility of the landowner who has made use of the reaction team's services.

AMOUNT	CONTENTS	MASS
2	Meat (bully beef and viennas)	190g x 2
1	Fruit (peaches or other)	225g
1	Energy bar	50g
2	Tins of cooldrink	375ml x 2
1	Biscuits/half a loaf of bread	200g

Duties	Responsible Person	Contact Number
Storing and management of rations		

Handling and issuing of rations: (Describe by whom, how and when rations should be issued /distributed)

4.2 FIRST AID EQUIPMENT AND TRAINING

- The FPA will be responsible for the costs relating to the purchase of the initial contents for the first aid box in the stores
- All issuing/use of first aid supplies must be accounted for to the FPA

Name	Surname	Property	Contact Number

See Appendix 2 for Minimum Requirements for Contents of First Aid Box

4.3 PROTECTIVE CLOTHING

Policy:

- The ..... reaction team personnel (*BU will decide on size of reaction team) and* the Crew Boss will be provided with protective clothing
- Protective clothing must meet the minimum legal requirements (Boots, long pants and T-shirt. All clothing must be made of cotton.
- The clothing must be stored together with the other fire equipment.
- The clothing must only be worn during times of fires – members must ensure that this rule is strictly adhered to.
- The clothing will be provided by the FPA?
- Clothing will only be replaced if the old clothing is shown to BU Manager and he deems it necessary to replace.

Name	Surname	Shoes	Pants	Jacket

** ***Date of issue must be indicated under each item***

4.4 EQUIPMENT

Policy:

- All FPA equipment remains the property of the Association
- The FPA equipment may only be used for FPA activities.
- The central store of the BU must ensure that all compulsory equipment is always available (see Table for prescribed minimum equipment)
- The serviceability of the **equipment must be checked weekly** in the fire season and once a month in the winter. The responsible person identified must control this.

Duties	*Responsible Person*	Contact Numbers
Chief person responsible for equipment		

Minimum equipment per central store:

Item	Amount
Bakkie sakkie (600l water)	1
Fire beaters	10
Rake hoes	5
Knapsack pumps	4
Long handle axes	1
Petrol for bakkie sakkie pump	20l
Torches	5
Drip torch plus 20-liter mixture (40/60 petrol/diesel)	1

4.5 TRANSPORT

Policy:

- No member can claim transport costs from the FPA during times of fire
- If special trips are undertaken, (e.g. Collection of rations), approval must be obtained from the ExCo for claiming petrol costs.
- Within the business unit members will decide if they will help each other free of cost or to compensate for expenses.

Duties	*Responsible Person*	Contact Numbers
Transport of the Reaction Team		
Transport of WoF team		
Transport of bakkie sakkie		
Transport of other fire equipment		

Pre-determined tariffs applicable (as determined by the FPA):

Type of Vehicle	Tariff per km

4.6 PETROL

Policy:

- The FPA will only provide petrol for its own pumps and drip torches
- The petrol must be stored under safe conditions at a central store/point.
- If members assist other members with tractors, then the assisted member will re-fill the tractor with petrol. This principle also applies to help provided between Business units. (To be decided by B unit)

Duties	Responsible Person	Contact Numbers
Storage and transport of fuel		

5. AWARENESS-RAISING

5.1 New Members – members must actively seek to increase membership within the BU

5.2 Visitors – Fire risk boards, brochures, high fire risk and bokkie boards.

5.3 Farm Workers and their Families

- Raise awareness regarding red days – every landowner/member is responsible for their own workers
- Incorporate in rules for property/farm/business – all members
- Annual inspection of labor houses

6. FIRE READINESS

6.1 BEFORE THE SEASON

Fire Readiness audit will be conducted annually in September by the FPO. (See Appendix 1).

An annual "dry run" will also take place in September and be evaluated.

6.2 DURING THE SEASON – FIRE DANGER INDEX (FDI)

The F.D.I. will be sent to members on a daily basis by the BBB via e-mail, fax or sms. The **FDI must be strictly adhered to by members**.

CLASSIFICATION		DESCRIPTION OF CLASSIFICATION
Blue		The fire danger is so low that no precaution is needed
Green		Fires, including prescribed burns, maybe lit, used or maintained in the open air, on the condition that persons making fires take reasonable precautions against the fires spreading.
Yellow		The fire danger is of such a nature that no fires may be allowed in the open air except those that are authorised by the Fire Protection Officer where a FPA exists; or elsewhere by the Chief Fire Officer of the local fire service; or fires in designated fireplaces.
Orange		The fire danger is of such a nature that no fires under any circumstances may be allowed in the open air. Ensure that equipment is ready.
Red		The fire danger is of such a nature that no fires under any circumstances may be allowed in the open and extraordinary readiness and response plans must be in place. Ensure that the Reaction Team and equipment are on alert.

6.3 PROTOCOL AND ACTION PLAN ON ORANGE AND RED DAYS

- No open fires may be made.
- No rubbish may be burnt.
- Workers and their families must be informed – this is the responsibility of the member.
- The Reaction Team must be available at the central BU store within a maximum of 60 minutes.
- Normal work activities must be adapted for the current situation e.g. no chainsaws in the veld.
- WoF (where available) on standby
- Members must be informed about which ExCo member is available
- Members must let each other know and the BU representative if they are going to be absent from their properties and must provide an alternative contact person to EC representative.

- If a member is responsible for certain functions, he must delegate this responsibility to someone if he is not available and must inform the ExCo representative.
- Incorporate the above-mentioned in the farm rules

7. CONTROLLED BURNS

7.1 CONTROLLED BURNS AND GENERAL RULES RELATING TO THEIR MANAGEMENT

Types of Controlled Burns
Burning of natural veld (including firebreaks and blocks)
Burning of stumps
Rubbish dumps
Burning of any farming land

- **NO CONTROLLED BURNS MAY TAKE PLACE WITHOUT A BURNING PERMIT (See 7.2 for Permit Application Process).**
- **"DRIP TORCHES" MAY ONLY BE USED IN THE PRESENCE OF A FIREBOSS.**

7.2 PROCEDURE FOR THE CONDUCTING OF CONTROLLED BURNS

Approved People who may Issue Burning Permits in the BU

Name	Contact Number

Procedure for Permit Applications:

1.
2.

8. REPORTING OF FIRES

As per organogram. This should detail the procedures that members should follow when a problem fire is encountered.

9. "INCIDENT COMMAND CENTRE"

Describe duties of every person involved.
Indicate structure in the form of a diagram.

10. HANDLING OF EMERGENCIES (ACCIDENTS AND INJURIES)

Person/Organization	Name	Contact Details
Medical Practitioner		
Ambulance		
SAPD		
Metro		
Provincial Traffic		
FPO		
Chairperson of the FPA		
Fire Boss and ExCo member		

11. CATASTROPHIC FIRES (FIRES OVER FPA BORDERS)

EXCO representative and the FPO shall make contact with other representatives in the event of a fire becoming a threat to bordering FPAs.

BUSINESS UNIT	REPRESENTATIVE	CONTACT DETAILS

12. AIR SUPPORT

14 Policy

- Landowners/members may not request helicopters on their own unless they are prepared to be responsible for the full costs (FPA cannot be held responsible for the costs)
- Helicopters will only be deployed through the DM.

13. ADMINISTRATION DURING AND AFTER FIRES

Policy:

- The evaluation of the situation must be completed by the members involved as per the standard requirements of fire reporting.

- The "situation report" must be compiled by the relevant landowner involved in the fire
- The BU member must ensure that he/she identifies someone who will at all times when there is a fire, keep record of all actions and decisions taken during the fire.
- Once the incident command system is in place and operational, this function will be carried out by the I.C. structure.

14. HANDLING OF THE MEDIA

No-one other than the Public Information Officer in the Incident Command structure or his/her delegate may deal with the media during times of a fire.

15. FIRE POSTMORTEM AND STATISTICS

Policy:

- A fire postmortem meeting shall be held within two weeks of a fire with all those who had been involved. See table below for a standard/set agenda for postmortem sessions.
- Notice/Minutes - must be made available to the Chairperson within 10 days after the postmortem for discussion at the next EXCO meeting.
- The necessary recommendations and changes to the action plan must be put into effect within 2 weeks' subject to the approval of the BU concerned.
- Within a week after the EXCO meeting and approval of the fire report, the BBB must provide the report to DWAF.

Post Mortem Agenda

1	Identification of everyone present
2	Overview of incidents
3	Discuss reporting of the fire
4	Discuss reaction times of teams
5	Discuss plan of action
6	Discuss the control of the fire
7	Discuss manpower
8	Discuss equipment
9	Discuss communication
10	Discuss accommodation if applicable
11	Discuss rations if applicable
12	Discuss other role players involved
13	Discuss shortfalls
14	Discuss cause of the fire
15	Recommendations (Must include corrective actions)
16	General

16. STANDBY ROSTERS

Standby rosters of larger organizations must be attached here.

Presented to EXCO (Yes/No)

....

APPROVED: CHAIRPERSON **DATE**

APPENDIX 1

FIRE-READINESS AUDIT

Subject	Completed (Yes/No)	Comments
1. Action Plan		
1.1 Updated during the last 12 months and meets FPA requirements.		
1.2 Copy of plan circulated to all members of the BU (signed distribution list available)		
2. Maps		
2.1 Map of FPA and BU that includes all prescribed sections (as per action plan)		
2.2 Maps distributed to all members of the BU (signed distribution lists available)		
3. Personnel and Training		
3.1 All permanent personnel appointed as per BU Action Plan (Reaction Team, Crew Boss, Fire boss, First Aid)		
3.2 Personnel (as per 3.1) trained /Reaccepted as per FPA requirements		
4. Logistics		
4.1 Minimum **rations** (as per BU action plan) available in BU store		
4.2 Person/organisation appointed responsible for the stores and management of rations.		
4.3 Minimum **first aid** supplies and equipment (as per BU action plan) available in BU store		
4.4 Person/Organisation appointed **responsible** for the store and management of **first aid equipment/supplies**		
4.5 All Reaction Team members and Crew Boss in BU have **protective clothing** (signed PPE register available)		
4.6 **Protective clothing** meets minimum **legal requirements** (as per BU Action Plan)		
4.7 Minimum **fire equipment** (as per BU Action Plan) available in BE store		
4.8 Fire Equipment checked and tested for serviceability weekly during the fire season and monthly during winter controlled and tested for serviceability (signed inspections and tests logbook available in store)		

4.9 Person/Orginisation responsible for the store and management of **fire equipment appointed**		
4.10 Persons responsible for **transport** of reaction teams, bakkie-sakkie, WoF teams (where available) and fire equipment during emergency situations appointed		
4.11Minimum quantities (as per BE action plan) of **fuel available** in store (fuel for pumps and "drip torch")		
4.12 Person/Organisation responsible for the store and management of **fuel** appointed.		
5. Awareness-Raising		
5.1 Physical examples/proof of awareness-raising actions within BU		
5.2 Proof available of yearly inspections carried out on dwellings\houses of labour or other people staying on farms		
6. Fire Readiness		
6.1 Annual (preferably during September) fire readiness exercises undertaken.		
6.2 Daily FDI predictions distributed to all BU members		
7. Controlled Burns		
7.1 Persons identified for the issuing of permits		
7.2 Persons in 7.1 approved by ExCo		
7.3 Approved permits available for all controlled burns that took place during the past year		
8. Administration after Uncontrolled Fires/Burns		
8.1 Fire reports completed timeously and according to requirements for all uncontrolled fires in BU		
8.2 Post Mortem minutes available for all uncontrolled fires in BU		

APPENDIX 2

MINIMUM CONTENTS OF A FIRST AID BOX

Item 1:	Wound cleaner/antiseptic (100 ml)
Item 2:	Swabs for cleaning wounds
Item 3:	Cotton wool for padding (100 g)
Item 4:	Sterile gauze (minimum quantity 10)
Item 5:	1 Pair of forceps (for splinters)
Item 6:	1 Pair of scissors (minimum size 100 mm)
Item 7:	1 Set of safety pins
Item 8:	4 Triangular bandages
Item 9:	4 Roller bandages (75 mm x 5 m)
Item 10:	4 Roller bandages (100 mm x 5 m)
Item 11:	1 Roll of elastic adhesive (25 mm x 3 m)
Item 12:	1 Non-allergenic adhesive strip (25 mm x 3 m)
Item 13:	1 Packet of adhesive dressing strips (min quantity, 10 assorted sizes)
Item 14:	4 First aid dressings (75 mm x 100 mm)
Item 15:	4 First aid dressings (150 mm x 200 mm)
Item 16:	2 Straight splints
Item 17:	2 Pairs large and 2 pairs medium disposable latex gloves
Item 18:	2 CPR mouth pieces or similar devices

ANNEXURE C

South African Weather Service
ISO 9001 Certified Organisation

Seasonal Climate Watch

May-June-July including September 2019 to February 2020

Date: September 30, 2019

1. Advisory

Most local and international forecasting systems are indicating that all areas in South Africa had above normal rainfall. The dryer areas who has received below normal rainfall is Garden Route, Central Karoo and Overberg Districts, and does raise concern. There is also good probability of rainfall for October-November-December.

2. Recommendation

Given the expected positive conditions mentioned above, the public is reminded that the country is still firmly in the grasp of severe drought conditions, especially in the Central Karoo area. Added to this, the forecasting system also indicates the possibility of well above normal rainfall conditions which, given the current drought effects, may cause negative impacts if flooding does occur in the above mentioned area. It is very important to keep monitoring the developments that may alter or strengthen the current expectations for the summer season.

3. State of Climate Drivers

Observations show that ENSO (El Niño Southern Oscillation) is currently in a neutral state and the forecast indicates that it will most likely remain in a neutral state for the coming seasons. ENSO forecasts are currently extremely uncertain, with a wide variety of outcomes, including a weak El Niño, predicted by different forecasting centres. Usually when this is the case, seasonal forecast for the summer rainfall areas tend to be very uncertain as well.

The late spring (Oct-Nov-Dec) period indicates confident forecasts that below-normal rainfall is more likely over the central to south-eastern parts of the country. Early-summer (Nov-Dec-Jan), however, indications are that above-normal rainfall is more likely for the central and eastern parts, which are predicted to continue into mid-summer (Dec-Jan-Feb). The threshold forecast mainly indicate a higher number of rainfall days during late-spring through to mid-summer. It is important to note the heightened likelihood from international forecast (mainly from global dynamical models) that seem to be very confident about typical El Niño rainfall conditions over Southern Africa during the entire summer period. This means there are opposite forecast for the most of the summer period, and this increases the uncertainty for the coming summer season.

With regards to temperatures, mostly higher than normal temperatures are expected from early-spring through to mid-summer for the northern most parts of the country.

The South African Weather Services will continue to monitor and provide updates on any future assessments that may provide more clarity on the current expectations for the coming seasons.

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4. Climate Forecast Details

4.1 Rainfall

The forecasting system shows rainfall days exceeding desired thresholds (derived from high resolutions 0.1 X 0.1 degree (ARCv2) African Rainfall Climatology version 2 rainfall dataset) within seasons of interest over South Africa by using model output statistics (MOS). The 850-hPa geopotential heights are used here because they are found to be the best predictor of rainfall over southern Africa.

These forecasts can be used together with the traditional seasonal rainfall total forecasts in that it can indicate the frequency of rainfall days where seasonal rainfall forecast areas expects below- or above-normal conditions.

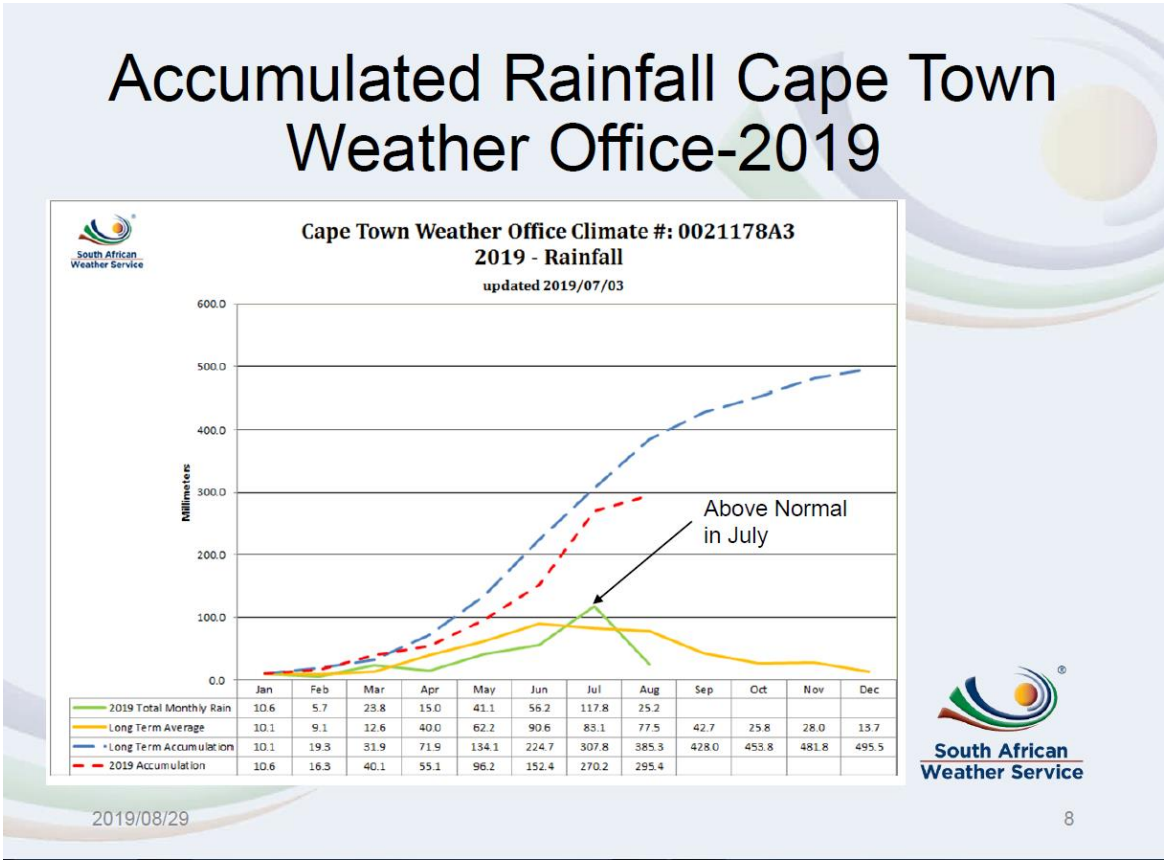

Figure 13: Above normal rainfall in Cape Town

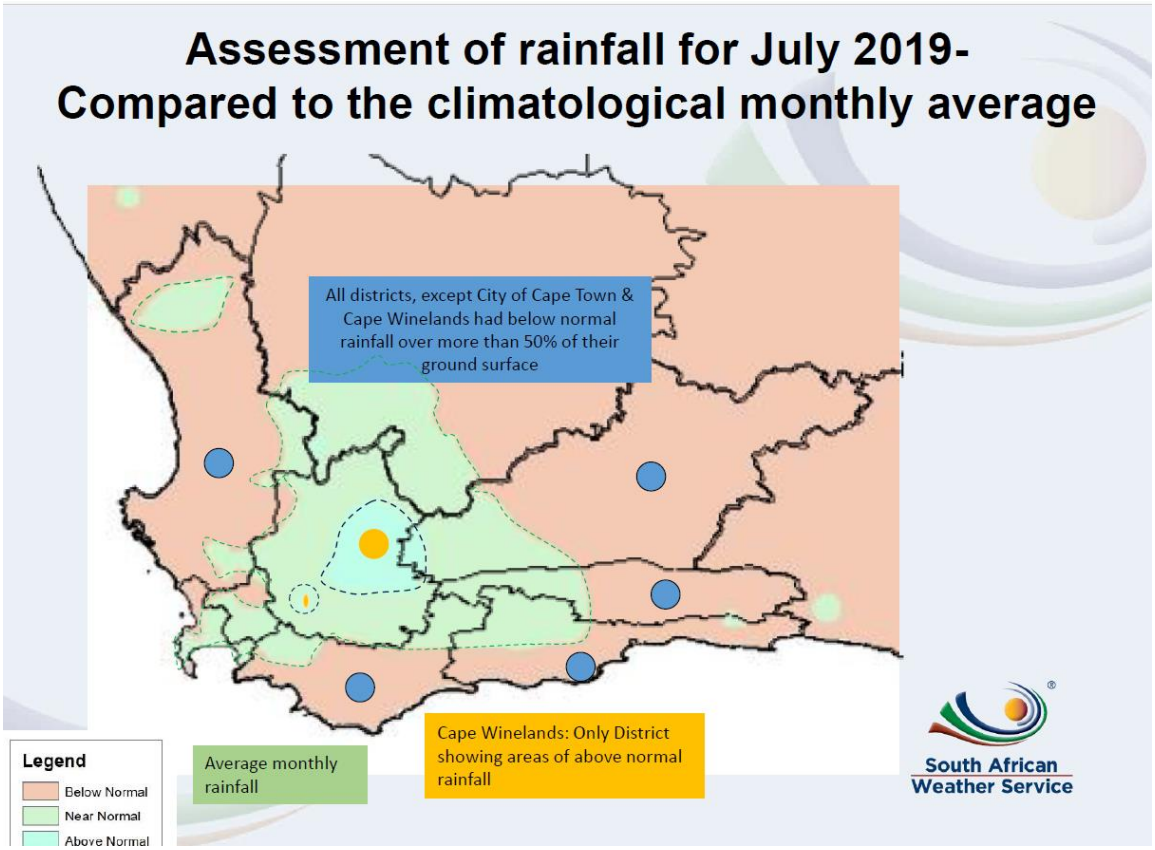

Figure 14: Assessment of rainfall

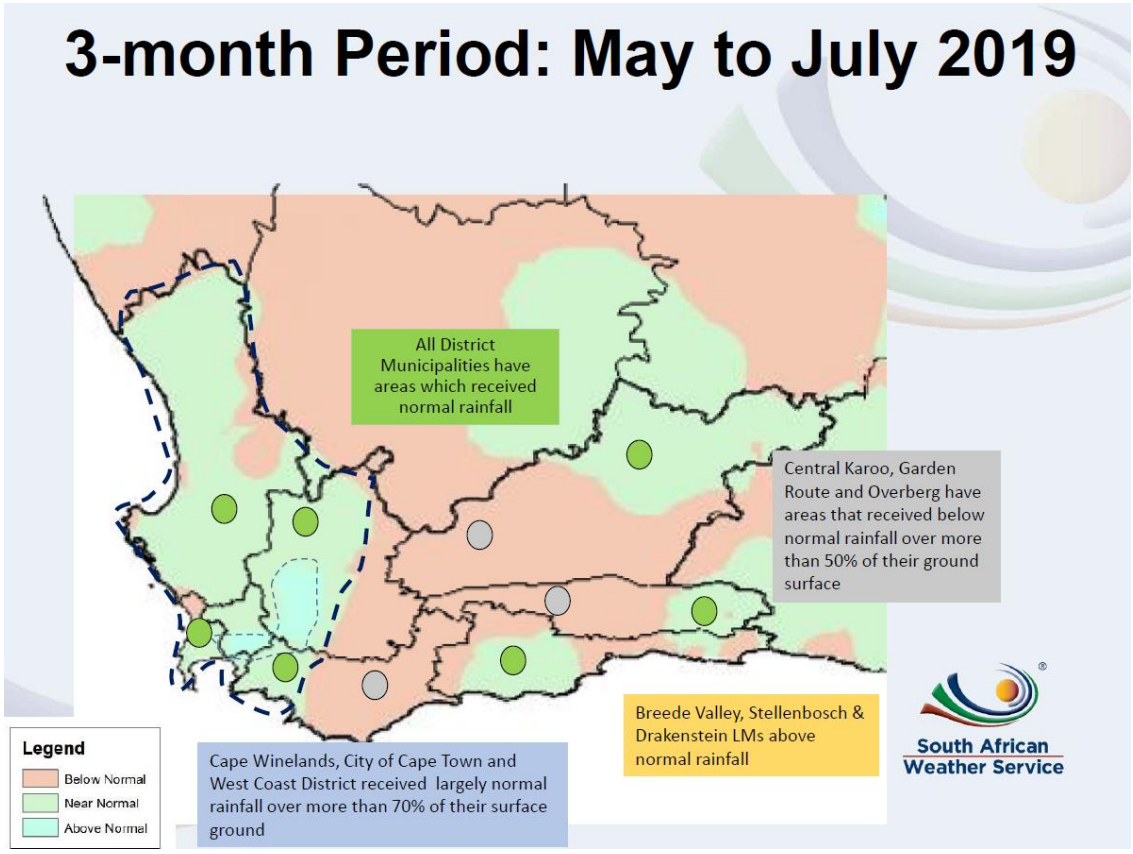

Figure 15: Rainfall for May to July 2019

Forecast quality for total seasonal rainfall is indicated in figure 16

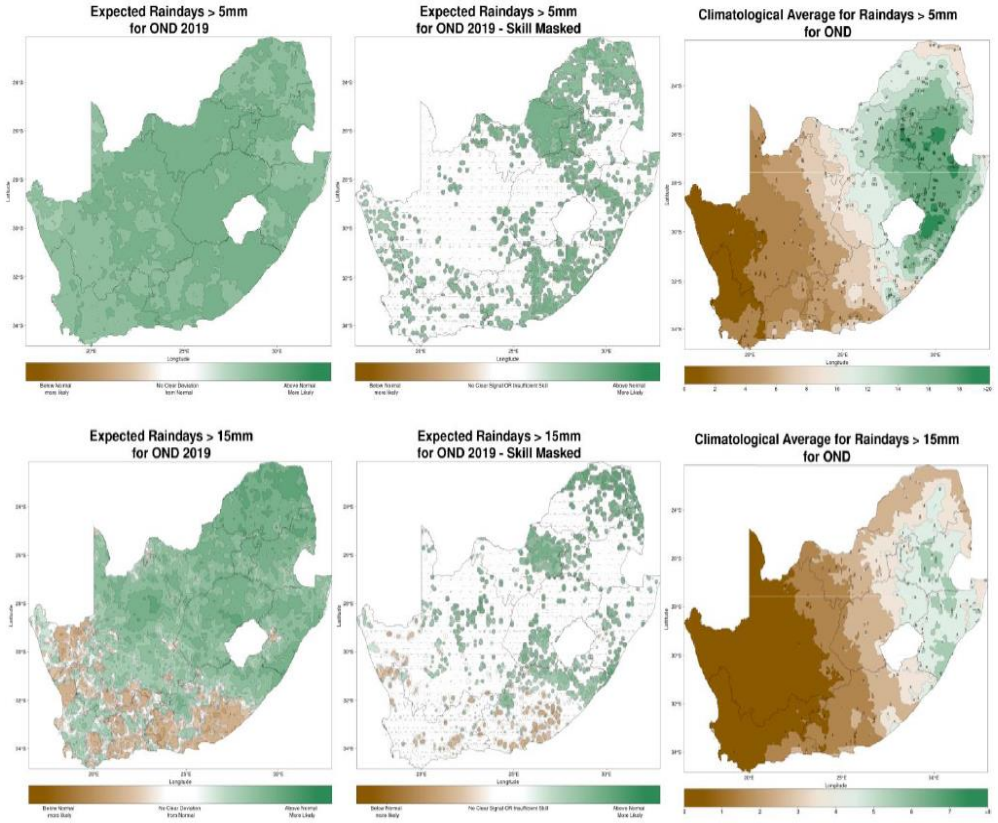

Figure 16: Rainfall forecasts for the three overlapping seasons valid for the period of November 2019 to March 2020. Forecast for high and low number of rainfall days exceeding 5 and 15mm without skill taken into account (left) and with skill taken into account (middle). Also included is the climatology for rainfall days (right) exceeding 5 and 15mm calculated over the period 1983-2009.

For further enquiries contact stella.nake@weathersa.co.za
(Ms) Ntshalle Stella Nake

Forecast quality for total seasonal rainfall is indicated in figure 17

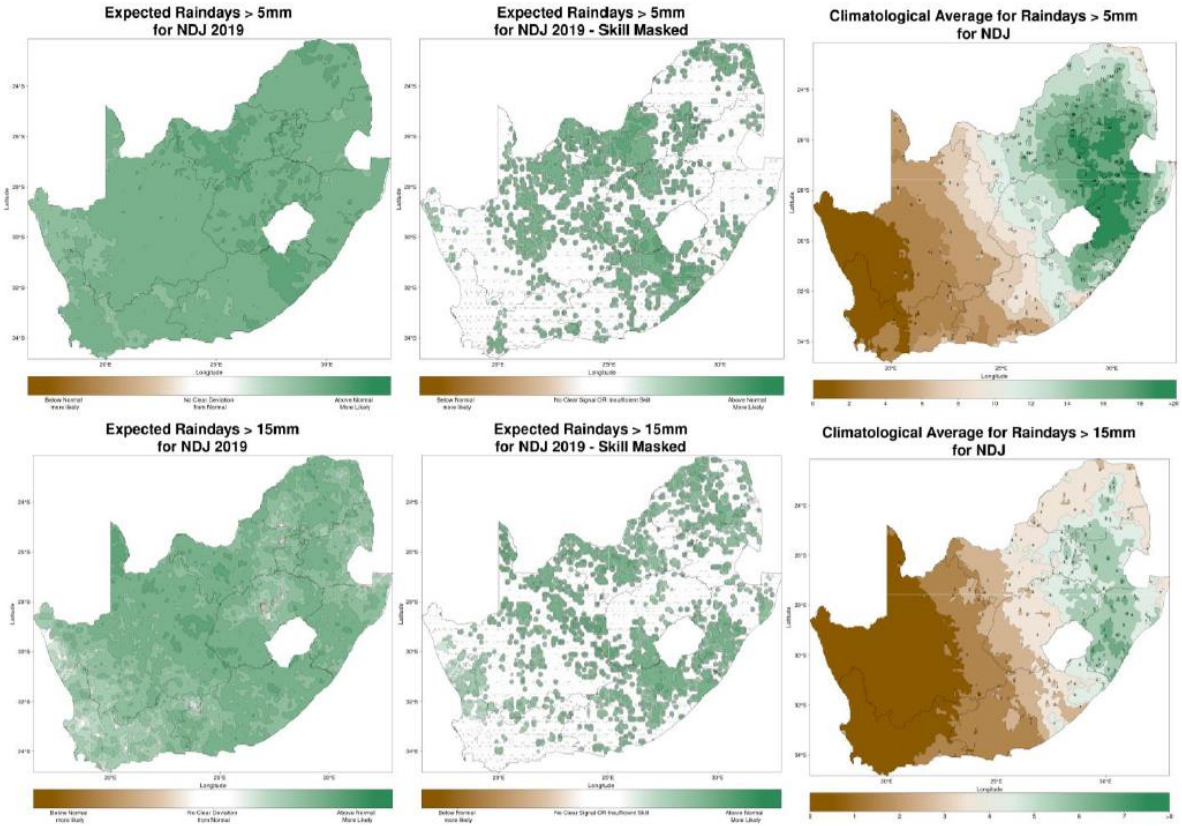

Figure 17: Rainfall forecasts for the three overlapping seasons valid for the period of November 2019 to March 2020. Forecast for high and low number of rainfall days exceeding 5 and 15mm without skill taken into account (left) and with skill taken into account (middle). Also included is the climatology for rainfall days (right) exceeding 5 and 15mm calculated over the period 1983-2009.

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Forecast quality for total seasonal rainfall is indicated in figure 18

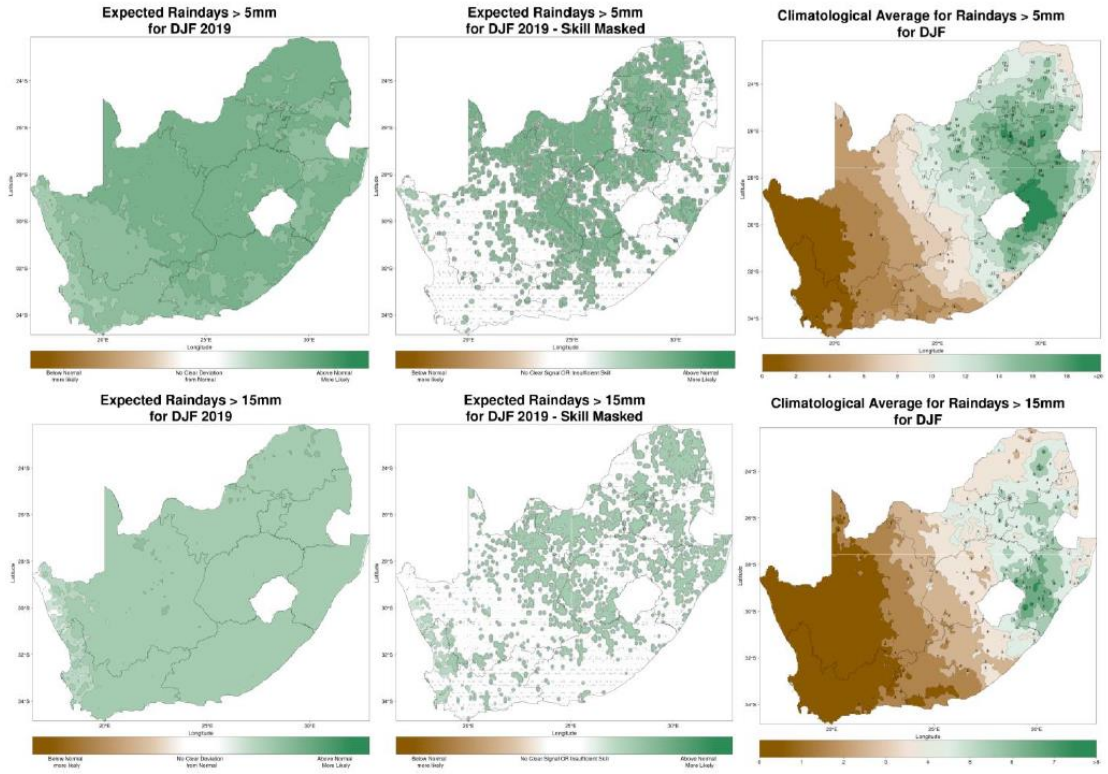

Figure 18: Rainfall forecasts for the three overlapping seasons valid for the period of November 2019 to March 2020. Forecast for high and low number of rainfall days exceeding 5 and 15mm without skill taken into account (left) and with skill taken into account (middle). Also included is the climatology for rainfall days (right) exceeding 5 and 15mm calculated over the period 1983-2009.

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4.2 Saws Operational Ensemble Prediction System

The South African Weather Service (SAWS) is currently recognised by the World Meteorological Organization (WMO) as the Global Producing Centre (GPC) for Long-Range Forecast (LRF). This is owing to its local numerical modelling efforts which involve coupling of both the atmosphere and ocean components to form a fully-interactive coupled modelling system, named the SAWS Coupled Model (SCM), the first of its kind in both South Africa and the region. Below is the first season (October-November-December) predictions for rainfall (Figure 19 and average temperature (Figure 20).

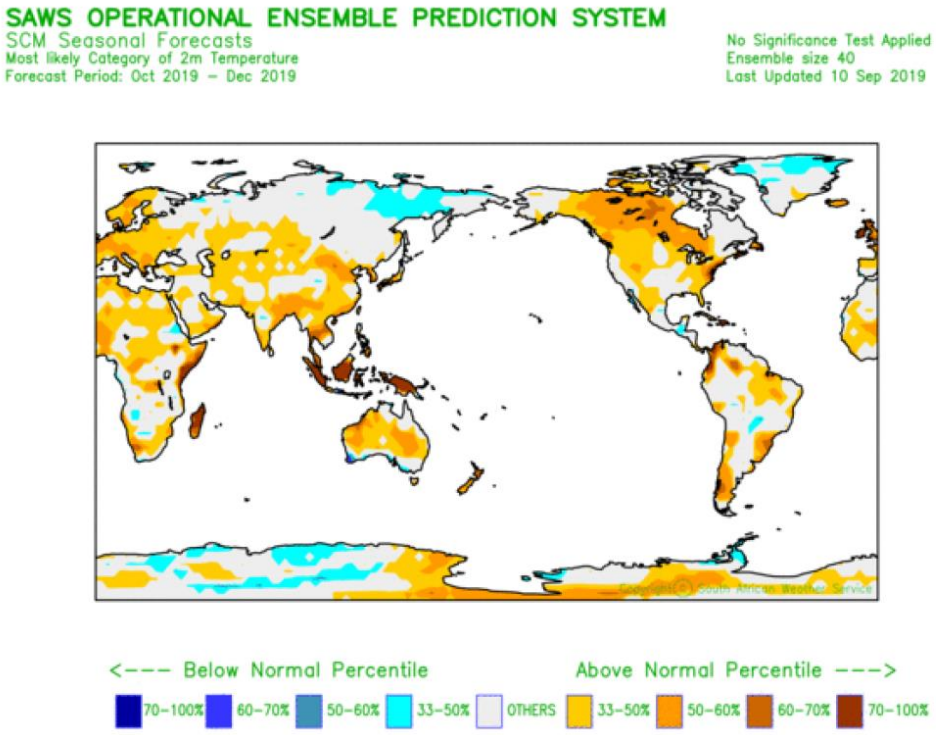

Figure 19: October-November-December global prediction for total rainfall probabilities

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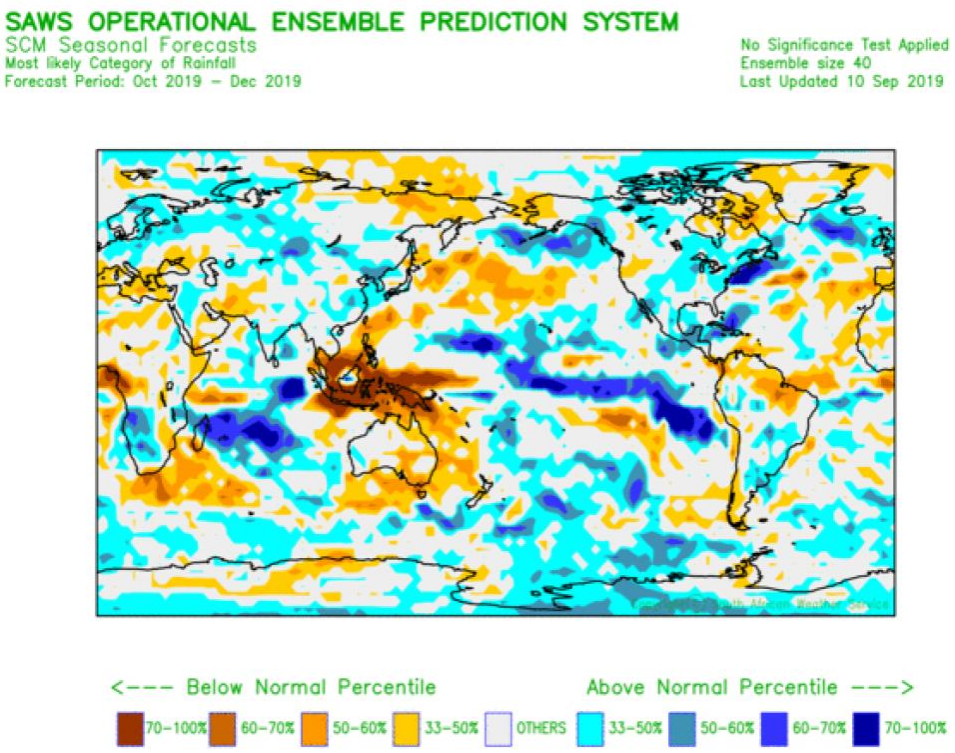

Figure 20: October-November-December global predication for average temperature probabilities.

Contributing Institutions

All the forecast is a result of an objective multi-model prediction system developed at South African Weather Service. This system consists of long-range forecast produced by the following institutions:

5. AREAS OF CONCERN

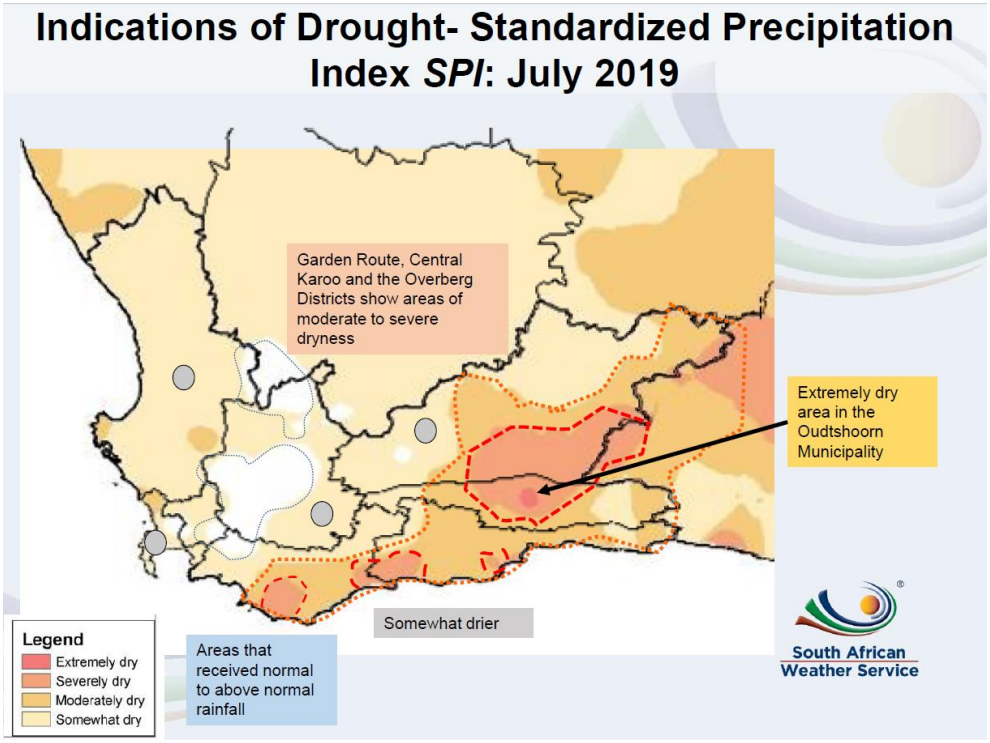

Figure 21: Areas of concern showing moderate to severe dryness for Garden Route, Central Karoo and the Overberg Districts

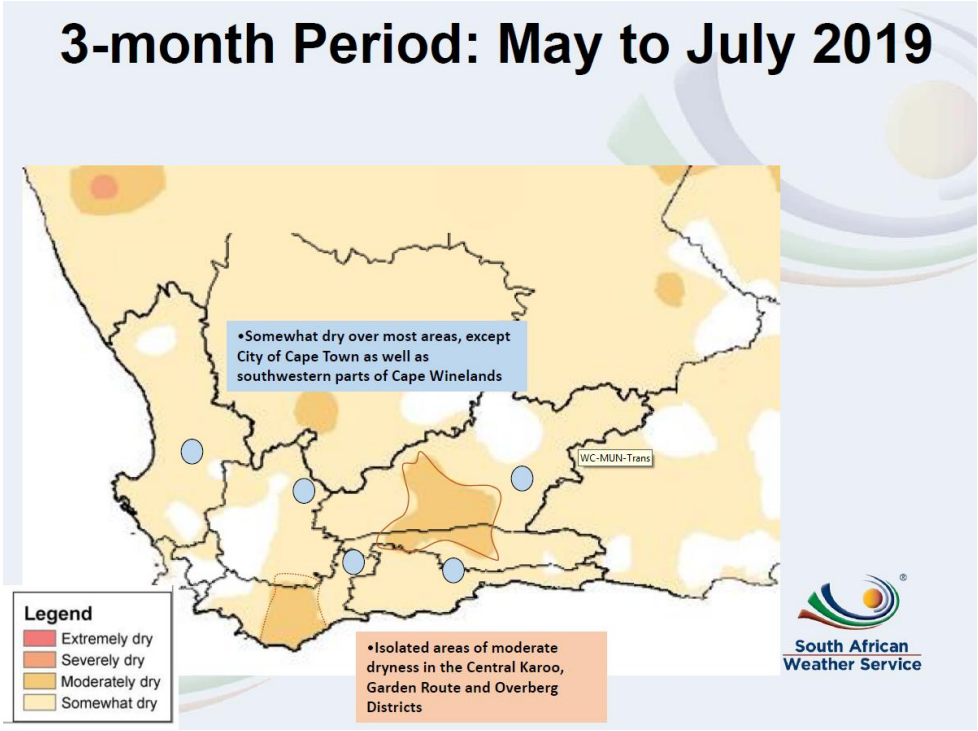

Figure 22: Rainfall predication for City of Cape Town and Southern Western parts of Cape Winelands

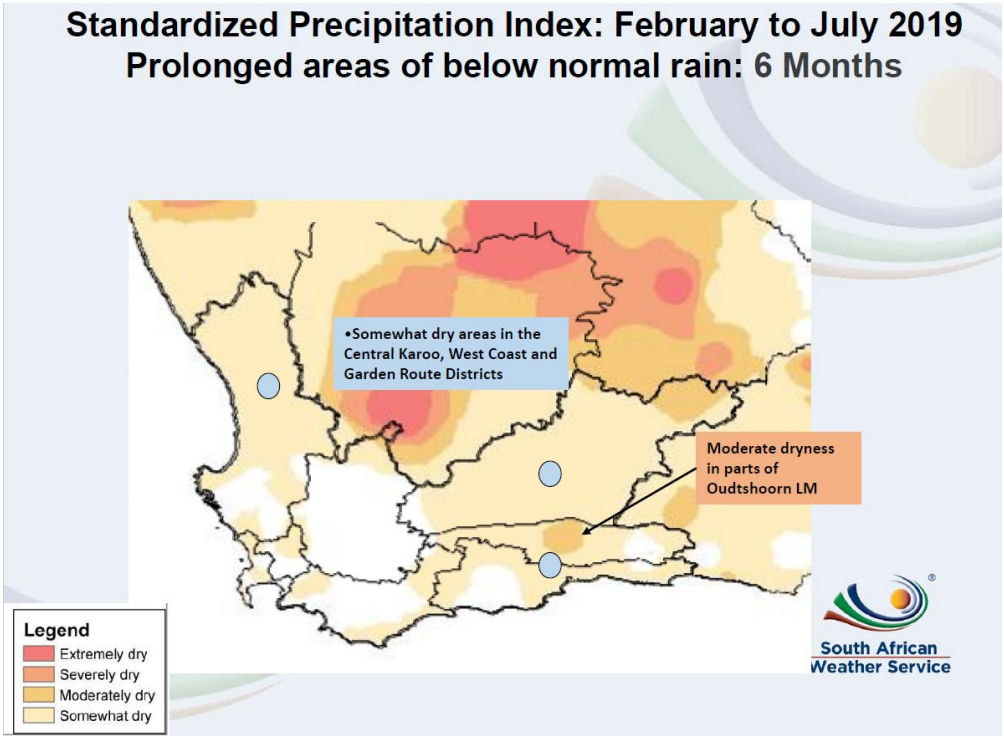

Figure 23: Indication of dry areas in the Central Karoo, West Coast and Garden Route District area

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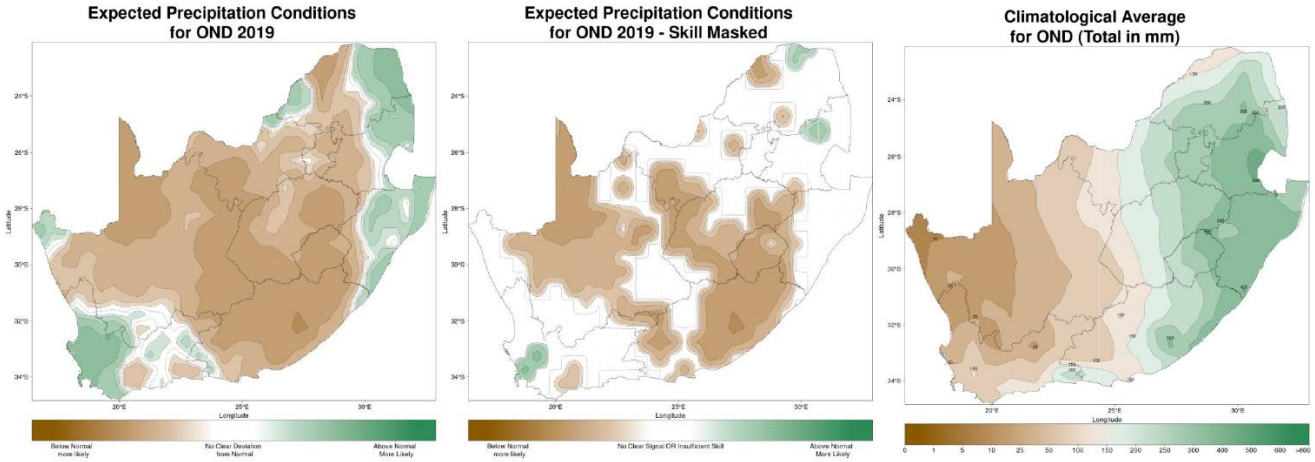

Figure 24: October-November-December (OND) 2019 seasonal precipitation prediction without skill taken into account (left), as well as skill masked out (middle). Also included is the climatological for OND (right in mm) calculated over the period 1979-2009.

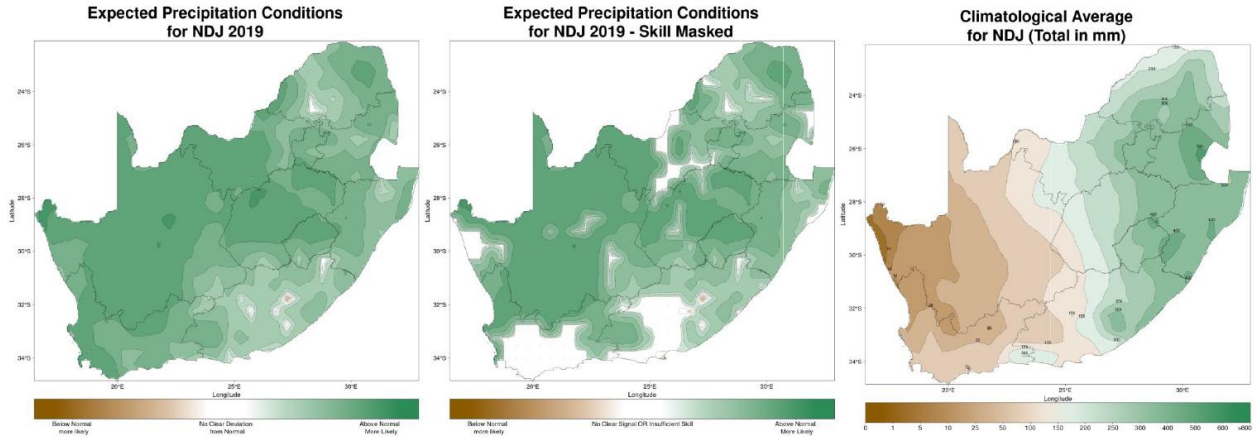

Figure 25: November-December-January (NDJ) 2019 seasonal prediction without skill take into account (left), as well as skill masked out (middle). Also included is the climatological average for NDJ (right, in mm) calculated over the period 1979-2009.

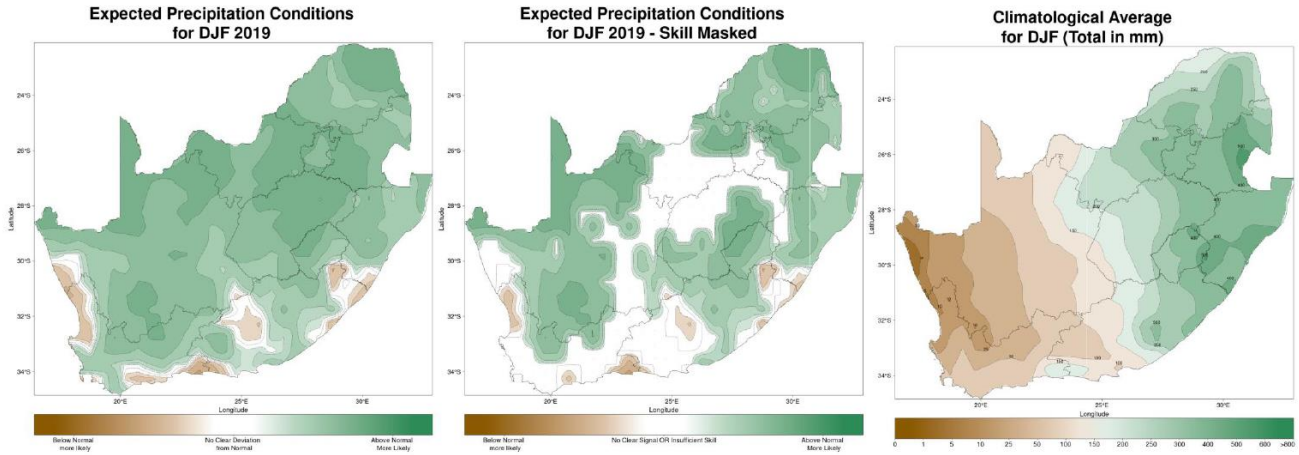

Figure 26: December-January-February (DJF) 2019 seasonal precipitation prediction without skill take into account (left), as well as skill masked out (middle). Also included is the climatological average for DJF (right in mm) calculated over the period 1979-2009.

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ANNEXURE D

GROUND CREW STANDARDS AND TYPING

Ground Crew Standards and Typing				
Crew Size: **Stick:** 10-16 **Crew:** 17-25				
Minimum Standards	**Type 1**	**Type 2 A with IA Capability**	**Type 2B**	**Type 3**
Fire line Capability	Initial attack/can be broken up into sticks where applicable, fire line construction, complex fire line operations.	Initial attack/can be broken up into sticks, where applicable fire line construction, able to do a burnout.	Initial attack, fire line construction, able to do a burnout.	Fire line construction, fire line improvement, mop-up and rehab.
Leadership	1 Type 1 Crew Leaders and 2 type 2 crew leader	1 Type 1 & 2 Type 2 Crew Leader	1 Type 1 & 1 Type 2 Crew Leader	Crew leader type 2
Bilingual Requirement	Yes			
Experience	80% 1 season	60% 1 season	40% 1 season	
Full Time Organized Crew	Yes (work and train as a unit 40 hrs per week)	Yes	No (Seasonal Crew)	No (Seasonal Crew)
Communications	5 programmable radios	4 programmable radios	2 programmable radios	2 programmable radios
Chainsaw operators	3 qualified		2 qualified	None
Training	80 hours annual training	Basic firefighter training and/or annual firefighter safety refresher.		Basic firefighter training and/or annual firefighter safety refresher.
Fitness	Arduous	Arduous	Arduous	Moderate
Logistics	Team self-sufficient for min of 12 hrs	Team self-sufficient for min of 12 hrs		No supplies or logistics

Minimum Standards	Type 1	Type 2 A with IA Capability	Type 2B	Type 3
Transportation	Own transportation	Own Transportation	Transportation may be needed	Transportation may be needed
Personal Gear	Capability to camp in base camp for extended periods.			No personal gear
First Aid Training	1 x level 3 per 10 people			1 x Level 1 per 10 people
Rations	Must arrive with 24 hrs. rations as per own agency standard			
Certification	Must be annually certified by the local host unit, Agency Administrator or designee prior to being made available for assignment.	N/A		N/A

ANNEXURE E1

Western Cape Province
Chief Fire Officers Committee
Established under the Fire Brigade Services Act (Act 99 of 1987) so as to promote the coordination, standardisation, regulation and mutual cooperation of the Fire & Rescue Services

FIRE RESCUE SERVICES

Typed Resource Definitions:

- **WC TRD 100-1: FIREFIGHTING RESOURCES**
- **WC TRD 100-2: HAZARDOUS MATERIALS RESOURCES**
- **WC TRD 100-3: SEARCH AND RESCUE RESOURCES**
- **WC TRD 100-4: AERIAL FIREFIGHTING RESOURCES**

Alphabetical Listing of Terms Specific to 100-1, 100-2

Area Command Team, Firefighting
An Area Command Team is an interagency organization under the auspices of the (1) relevant Authority Having Jurisdiction to oversee the management of multiple incidents that are each being handled by an incident management team (IMT) organization; or (2) to oversee the management of a very large incident that has multiple IMTs assigned to it. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources based on priorities, ensure incidents are properly managed, and that objectives are met and strategies followed.

Backburn
Used to specify fire set to spread against the wind in prescribed burning.

Backfire
A fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire or change the direction of force of the fire's convection column.

Backfiring
Tactics associated with indirect attack, intentionally setting fire to fuels inside the control line to slow, knock down, or contain a rapidly spreading fire. Backfiring provides a wide defense perimeter and may be further employed to change the force of the convection column. Backfiring makes possible a strategy of locating control lines at places where the fire can be fought on the firefighter's terms. Except for rare circumstance meeting specified criteria, backfiring is executed on a command decision made through line channels of authority.

Boat, Fire
A vessel or watercraft designed and constructed for the purpose of fighting fires providing specified level of pumping capacity. The boat is designed with the ability to carry firefighting foam and personnel for the extinguishments of fires in the marine environment.

Biological Agent
Living organisms or the materials derived from them (such as bacteria, viruses, fungi, and toxins) that cause disease in or harm to humans, animals, or plants, or cause deterioration of material.

Breathing Apparatus Support (SCBA Support; Breathing Air, Firefighting)
A mobile unit designed and constructed for the purpose of providing specified level of breathing air support capacity and personnel capable of refilling self-contained breathing apparatus (SCBA) at remote incident locations (Compressor Systems or Cascade).

Bush Pumper, Firefighting
Any light, mobile vehicular unit with limited pumping and water capacity for off-road operations

Chemical/Biological (C/B) Protective Ensemble
A compliant vapour-protective ensemble that is also certified as being compliant with the additional requirements for protection against C/B warfare agents such as vapours, gases, liquids, and particulate (National Fire Protection Association [NFPA] Standard # 1991)

Chemical Warfare Agent
A chemical substance (such as a nerve agent, blister agent, blood agent, choking agent, or irritating agent) used to kill, seriously injure, or incapacitate people through its physiological effects.

Decontamination
The physical or chemical process of reducing and preventing the spread of contaminants from persons and equipment used at a hazardous materials (HazMat) incident. (NFPA Standard # 472)

Deployment
Departure of team or personnel from home unit or base

Engine, Fire (Engine Company)
Any ground vehicle providing specified levels of pumping, water, hose capacity, and staffed with a minimum number of

personnel as per RTL.

Fireline
The part of a containment or control line that is scraped or dug to mineral soil.

Fireground
Operational area on which firefighters combat a fire

Geographical Incident Management Teams, Firefighting
A Geographical Incident Management Team is an interagency organization under the auspices of the Geographical Area Coordination Group composed of the Incident Commander (IC), and appropriate general and command staff personnel assigned to an incident, and trained and certified to a particular level.

Hazardous Materials (HazMat)
Any material that is explosive, flammable, poisonous, corrosive, reactive, or radioactive, or any combination thereof, and requires special care in handling because of the hazards it poses to public health, safety, and/or the environment.

Hazardous Material Response Team
An organized group of individuals that is trained and equipped to perform work to control actual or potential leaks, spills, discharges, or releases of HazMat, requiring possible close approach to the material. The team/equipment may include external or contracted resources.

Hazardous Materials Incident
Uncontrolled, unlicensed release of HazMat during storage or use from a fixed facility or during transport outside a fixed facility that may impact public health, safety, and /or the environment.

HazMat Task Force
A group of resources with common communications and a leader. A HazMat Task Force may be pre-established and sent to an incident, or formed at the incident.

HazMat Trained and Equipped
To the level of training and equipment defined by the National Fire Protection Association (NFPA).

Incident Management Team
A command team comprised of the Incident Commander (IC), appropriate command, and general staff personnel assigned to an incident

Liquid Splash-Protective Ensemble
Multiple elements designed to provide a degree of protection for emergency response personnel from adverse exposure to the inherent risks of liquid-chemical exposure occurring during hazardous materials (HazMat) emergencies and similar operations. The liquid splash-protective ensemble is either an encapsulating or non-encapsulating ensemble. (National Fire Protection Association [NFPA] Standard # 1992)

Mobile Communications Centre (Mobile Emergency Operations Centre [EOC]; Mobile Command Centre; Continuity of Operations Vehicle)
A vehicle that serves as a self-sustaining mobile operations centre capable of operating in an environment with little to no basic services, facilitating communications between multiple entities using an array of fixed and/or wireless communications equipment, providing appropriate work space for routine support functions, and providing basic services for personnel in short-term or long-term deployments.

Release
Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant).

Rescue
To access, stabilize, and evacuate distressed or injured individuals by whatever means necessary to ensure their timely transfer to appropriate care or to a place of safety.

Vapour Protective Ensemble

A vapour protective ensemble or garment that is intended for use in an unknown threat atmosphere or for known high health risk atmospheres is vapour tight, and is in compliance with National Fire Protection Association (NFPA) Standard # 1991, "Standard on Vapour-Protective Ensembles for Hazardous Materials Emergencies."

Water Truck
A truck with a permanently mounted water tank with the capabilities of dispensing potable or non-potable water. Uses can range from delivering potable water to shelter locations, non-potable form for irrigation, assisting in wildfire situations, dust control, compaction requirements, flushing of storm conveyance sanitary sewer lines, and washing areas of dirt, debris, and dust.

Weapons of Mass Destruction (WMD)
(1) Any destructive device defined as any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than 0,1 kg, missile having an explosive or incendiary charge of more than 7 grams, mine or device similar to the above);

(2) Any weapon that is designed or intended to cause serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors;

(3) any weapon involving a disease organism; or

(4) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

WMD Chem/Bio
A short-hand phrase for "weapons of mass destruction chemical/ biological," in reference to those substances that were developed by military institutions to create widespread injury, illness, or death

Zone, Contamination Reduction (Warm Zone)
The area between the Exclusion Zone and the Support Zone. This zone contains the personnel decontamination station. This zone may require a lesser degree of personnel protection than the Exclusion Zone. This separates the contaminated area from the clean area and acts as a buffer to reduce contamination of the "clean" area.
Zone, Exclusion (Hot Zone)
The area immediately around a spill or release and where contamination does or could occur. The innermost of the three zones of a hazardous substances/material incident. Special protection is required for all personnel while in this zone.

Zone, Support (Cold Zone)
The "clean" area outside of the contamination control line. In this area, equipment and personnel are not expected to become contaminated. Special protective clothing is not required. This is the area where resources are assembled to support the hazardous substances/materials release operations

100 - 1: FIREFIGHTING

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	ENGINE (Urban Pumper)							
CATEGORY		Call Sign Designation	ENGINE - E-			Drive Train	4x 2 or 4x4 TRUCK	
MINIMUM CAPABILITIES		TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI	TYPE VII
COMPONENT	METRIC							
EQUIPMENT	PUMP CAPACITY (l/min)	3850	2250	1850	1800	190	190	190
	TANK CAPACITY (litres)	1800	1800	1800	2800	1800	1000	800
	HOSE (63mm)	360m (12 X 30m)	300m (10 x 30m)	150m (5 x 30m)	90m	90m	90m	90m
	HOSE (38mm) Hose (25mm)	300m (10 X 30m) 60m	150m (5x 30m) 90m	300m 200m	90m 90m	90m 90m	90m 90m	60m 60m
	LADDER	9-10m OR 13.5m / 3 Extension	9-10m / 3 Extension	6 m / 2 extension	--	--	--	--
	Optional: HYDRAULIC RESCUE (JAWS of LIFE)	Full Set with rams and chains	Full Set with rams and chains	Combo–Set	Combo-Set	--	--	--
PERSONNEL	PERSONNEL	4 (excl. driver and Officer)	3 (excl. driver and Officer)	3 (incl. driver)	2 (incl. driver)	2 (incl. driver)	2 (incl. driver)	2 (incl. driver)

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	TANKER PUMPER (Water Tender)				
CATEGORY		Call Sign Designation	TANKER –T-	Drive Train	4x 2 or 4x4, 6 x 6 TRUCK
MINIMUM		TYPE I	TYPE II		
	METRIC TANK CAPACITY (litres)	≥10000	≥5000		
COMMENTS	All Types to have connection compatibility of being able to have direct pump connection to Engine or Veld Fire Vehicles.				

RESOURCE	FOAM TENDER, FIREFIGHTING						
CATEGORY		Call Sign Designation	FOAM TENDER –FT-			Drive Train	4x 2 or 4x4 TRUCK
MINIMUM CAPABILITIES		TYPE I	TYPE II	TYPE III	TYPE IV	OTHER	
COMPONENT	METRIC						
EQUIPMENT	TANK CAPACITY – CLASS B FOAM CONCENTRATE (litres)	2000	1000	800	500		
	FOAM MONITOR	Fixed	Fixed	Fixed	Fixed		

RESOURCE	VELD FIRE VEHICLE					
CATEGORY		Call Sign Designation	Agency determined		Drive Train	4x4 TRUCK/LDV
MINIMUM CAPABILITIES		TYPE I	TYPE II	TYPE III		
COMPONENT	METRIC					
EQUIPMENT	PUMP CAPACITY (l/min)	3800	1800	300 Low Pressure or 50 High Pressure		
	TANK CAPACITY (litres)	4000	2500	500		
	HOSE (63mm)	--	--	--		
	HOSE (38mm)	300m	90m	60m		
	Hose (25mm)	200m	90m	60m		
PERSONNEL	PERSONNEL	4	2	2		

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	AERIAL FIRE TRUCK (Ladder or Platform)				
CATEGORY		Call Sign Designation	LADDER –L- *or* PLATFORM –P-	Drive Train	4x 2 or 4x4 LARGE TRUCK

MINIMUM CAPABILITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
EQUIPMENT	AERIAL (m)	37+	30	22	22
	ELEVATED STREAM (l/min)	1800	Same as Type I	1200	1200
	GROUND LADDERS (m)	50	Same as Type I	30	12
PERSONNEL	PERSONNEL	4-person team	Same as Type I	3-person team	2-person team

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	ENGINE STRIKE TEAM (Fire)					
CATEGORY			Call Sign Designation	STRIKE TEAM	Drive Train	ANY
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV	
Equipment	Engine, Fire	5	4	3	3	
Personnel	Strike Team Leader	1	1	1	1	
	(per) Engine	4	4	4	3	
	Total	21	17	13	10	
COMMENTS	Strike Team defined as the number of resources with common communications and a leader.					

FIRE AND RESCUE RESOURCE TYPING

Resource	MOBILE COMMAND UNIT (Also referred to as "Mobile EOC")				
CATEGORY		Call Sign Designation	COMMAND –C-	Drive Train	4x 2 or 4x4

MINIMUM CAPABILITIES		TYPE I	TYPE II	TYPE III	TYPE IV
COMPONENT	METRIC				
Vehicle	Chassis	13-15m custom trailer, Bus, conventional panel van chassis or diesel motorhome chassis with or without side-out room	10-12m motorhome, chassis with or without side-out room, conventional panel van or LWB/SWB minibus chassis	LWB/SWB Panel van or minibus or custom built 7-10m trailer or converted caravan (trailer or caravan does require additional tow vehicle)	Converted SUV or minibus, motorhome/caravan or custom built 7-10m trailer (caravan or trailer does require additional tow vehicle)
Equipment	Interior	6-10 work stations with private meeting area for command personnel	4-6 work stations with private meeting area for command personnel	2-4 workstations	1-2 work stations
	Radio Frequency				With adjoining agencies.

FIRE AND RESCUE RESOURCE TYPING

Resource	MOBILE COMMAND UNIT (Also referred to as Mobile EOC")				
CATEGORY		Call Sign Designation	COMMAND –C-	Drive Train	4x 2 or 4x4

MINIMUM CAPABILITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
Equipment	Internet Access Speed and Fax System	High Bandwidth capabilities via satellite such as INMARSAT or VSAT	High Bandwidth capabilities via satellite such as INMARSAT or VSAT.	Cellular System	Cellular
	Power Generation System	Auxiliary and AVR Generators	Auxiliary and AVR Generators	Auxiliary and AVR Generators	AVR Generator

RESOURCE	MOBILE COMMAND UNIT (Also referred to as "Mobile EOC")				
MINIMUM CAPABILITIES					
COMPONENT	**METRIC**	**TYPE I**	**TYPE II**	**TYPE III**	**TYPE IV**
Equipment	**On Scene Video Monitoring**	Through fixed camera system with streaming via 3G/4G or satellite	Through fixed camera system with streaming via 3G/4G or satellite	Through fixed camera system with streaming via 3G/4G	No
	Computer Aided Dispatch	Yes	Yes	Yes	No
	Voice Communication	Landlines, Cellular and Satellite	Landlines, Cellular and Satellite	Cellular or Satellite	Cellular
	Computer /Server	Hardwired or Wireless LAN with AVR and Power surge protection	Hardwired or Wireless LAN with AVR and Power surge protection	Hardwired or Wireless LAN with AVR and Power surge protection	Basic 3G Laptop
	Capabilities	All types should be capable of: • Operating in an environment with little or no basic facilities, including no electrical service and phones lines • Providing own power generation and fuel supply to operate a minimum of 3-4 days from station • Sustaining long term deployment as well as short term responses • Facilitating communications between multiple agencies (Provincial and municipal agencies) • Operating as FCP, ICP and EOC • Minimal Set up time			

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	RAPID INTERVENTION UNIT (Firefighting and Rescue)				
CATEGORY		Call Sign Designation	RIU –RIU-	Drive Train	4x 2 or 4x4 LCV or Medium truck

MINIMUM CAPABILITIES				
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III
	Pulling Equipment	1x 4000kg. Cap, chassis mounted 1 hand winch, (come-a-long type), 2 tons and may be chain or cable, webbing tape not accepted. 1 chain, 3/8 x 6 ft., grade 70 transport chain-w/clevis hooks		
	Medical	Same as Type II	Long spine board, 1 KED, 3 extrication collars (2 adult & 1 pediatric), O_2 Cylinder with 15 lpm regulator, bag-valve mask (adult, child & infant), 1 portable suction unit, Jump Bag	Long spine board, 1 KED, 3 extrication collars, bag-valve mask (adult, child & infant), Jump Bag
PERSONNEL	**Personnel**	2 (VMR II +BLS)	2 (VMR I +BLS)	2 (VMR I+ BLS)

FIRE AND RESCUE RESOURCE TYPING

	FIRE BOAT				
CATEGORY		Call Sign Designation	FIRE BOAT –FB-	BHP	
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	
Personnel	Pump Capacity (LPM)	18000	4000	1000	
COMMENTS	Fire Boats may vary in length, draft and related firefighting equipment				

RESOURCE	FUEL TENDER (Petrol, Diesel, Avgas, Fuel Tanker)				
CATEGORY		Call Sign Designation	FUEL TENDER –PT-	Drive Train	4x 2 or 4x4 LCV or Truck
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	
Supply	Fuel	3800	400	200	
COMMENTS	These vehicles may vary widely and ALL types must have Transport Service Permit for Dangerous Goods				

FIRE AND RESCUE RESOURCE TYPING

	CREW BUS				
CATEGORY	FIREFIGHTING [ESF #4]	Call Sign Designation	CREW BUS –CB-	Drive Train	ANY
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	
Personnel	Passengers	30	20	10	
COMMENTS	Vehicles may be buses, mini-buses, vans and special crew carrying vehicles equipped to carry firefighters.				

100 - 2: HAZARDOUS MATERIALS

FIRE AND RESCUE RESOURCE TYPING

Resource	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")				
CATEGORY		Call Sign Designation	HAZMAT –HZ-	Drive Train	4x 2 or 4x4

MINIMUM CAPABILITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
Equipment	Detection	**Same as Type III plus:** CBR WMD	**Same as Type III plus:** Unknown Chemicals	Presumptive testing and identification of chemical substances using a variety of sources to be able to identify associated chemical and physical properties. Sources may include printed and electronic reference resources, safety data sheets, field testing kits, specific chemical testing kits, chemical testing strips, data derived from detection devices, and air-monitoring sources	

FIRE AND RESCUE RESOURCE TYPING

Resource	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")					
CATEGORY			Call Sign Designation	HAZMAT –HZ-	Drive Train	4x 2 or 4x4
Equipment	Air Monitoring	**Same as Type II plus:** (WMD Chem/Bio Aerosol Vapour and Gas) Advanced detection and monitoring includes WMD Chem/Bio detection Instruments	**Same as Type III plus:** The use of advanced detection equipment to detect the presence of known or unknown gases or vapours that may incorporate instruments that differentiate between two or more flammable vapours, and may directly identify by name a specific flammable or toxic vapour	(Basic Confined Space Monitoring; Specific Known Gas Monitoring). The use of devices to detect the presence of known gases or vapours. The basics begin with ability to provide standard confined space readings (oxygen deficiency percentage, flammable atmosphere Lower Explosive Limit [LEL], carbon monoxide, and hydrogen sulphide)		

FIRE AND RESCUE RESOURCE TYPING

Resource	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")					
CATEGORY		Call Sign Designation	HAZMAT –HZ-		Drive Train	4x 2 or 4x4
MINIMUM CAPABILITIES		TYPE I	TYPE II	TYPE III		
COMPONENT	METRIC					
Equipment	Radiation Detection	**Same as Type II plus:** Identify and establish the exclusion zones after contamination spread. Ability to identify some, but not all, radionuclides). Ability to conduct environmental and personnel survey. All survey teams' members equipped with accumulative self-reading instruments (dosimeters)	**Same as Type III plus:** ***(Alpha Detection)*** Basic criteria include detection and survey capabilities for alpha, beta, and gamma	**(Beta Detection; Gamma Detection)** The ability to accurately interpret readings from the radiation-detection devices and conduct geographical survey search of suspected radiological source or contamination spread. Basic criteria include detection and survey capabilities for beta and gamma		

FIRE AND RESCUE RESOURCE TYPING

Resource	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")				
CATEGORY		Call Sign Designation	HAZMAT –HZ-	Drive Train	4x 2 or 4x4
MINIMUM CAPABILITIES		TYPE I	TYPE II	TYPE III	
COMPONENT	METRIC				
Equipment	Protective Clothing:	**Same as Type II plus:** (Weapons of Mass Destruction (WMD) Vapour Protective CPC; WMD Liquid Splash Protective CPC). Levels of CPC vapour protection are: Vapour- Protective, Flash Fire Protective option for Vapour Protective, and Chemical/ Biological Protective option for Vapour Protective, all of which must be compliant with NFPA Standard# 1991, current edition.	**Same as Type III plus:** *(Vapour-Protective CPC; Flash Fire Vapour- Protective CPC)* **Levels of CPC vapour protection is:** Vapour-Protective, and Flash Fire Protective option for Vapour-Protective both of which must be compliant with NFPA Standard # 1991, "Standard on Vapour Protective Ensembles for Hazardous Materials Emergencies," current edition.	**(Liquid Splash-Protective CPC) Chemical Protective Clothing (CPC),** which includes complete ensembles (suit, boots, gloves) and may incorporate various configurations (encapsulating, non-encapsulating, jumpsuit, multi-piece) depending upon the level of protection needed. **Level of CPC liquid protection is:** Liquid Splash-Protective, which must be compliant with NFPA Standard # 1992, current edition	

	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")				
CATEGORY		**Call Sign Designation**	**HAZMAT –HZ-**	**Drive Train**	**4x 2 or 4x4**

MINIMUM CAPABILITIES					
COMPONENT	**METRIC**	**TYPE I**	**TYPE II**	**TYPE III**	
Equipment	**Technical Reference**	**Same as Type III plus:** *(WMD Chemical/Bio)*	**Same as Type III plus:** *(Plume Air Modelling; Map Overlays)* At a minimum, technical references will have the ability to outsource additional capabilities and have one source for air-modelling capability.	**(Printed and Electronic)** Access to and use of various databases, chemical substance data depositories, and other guidelines and safety data sheets, either in print format, electronic format, stand-alone computer programs, or data available via telecommunications. The interpretation of data collected from electronic devices and chemical testing procedures	
	Special Capabilities	**Same as Type II plus:** *Digital Imaging Documentation Capability*	**Same as Type III plus:** *Heat Sensing Capability; Light Amplification Capability*	Gloves and Other Specialized Equipment Based on Local Risk Assessment. Equipment Based on Local Risk Assessment. Additional resources that augment the capabilities of the team.	

FIRE AND RESCUE RESOURCE TYPING

	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")				
CATEGORY		**Call Sign Designation**	**HAZMAT –HZ-**	**Drive Train**	**4x 2 or 4x4**

MINIMUM CAPABILITIES					
COMPONENT	**METRIC**	**TYPE I**	**TYPE II**	**TYPE III**	
Equipment	**Intervention**	**Same as Type II plus:** *(WMD Chem/Bio Agent Confinement)* Advanced capabilities should include ability to intervene and confine incidents involving WMD Chem/Bio substances.	**Same as Type III plus:** *(Liquid Leak Intervention; Neutralization; Plugging; Patching; Vapour Leak Intervention)*	**(Diking; Damming; Absorption)** Employment of mechanical means of intervention and control such as plugging, patching, off-loading, and tank stabilization. Environmental means such as absorption.	
	Decontamination	**Same as Type II plus:** *(WMD Chem/Bio)* Capable of providing decontamination for known and unknown contaminants and WMD Chem/Bio.	**Same as Type III plus:** *(Unknown Contaminants)* Capable of providing decontamination for known and unknown contaminants.	**(Known Contaminants Based on Local Risk Assessment)** Must be self-sufficient to provide decontamination for members of their team. Capable of providing decontamination for known contaminants.	
	Communications	**Same as Type II plus:** *(Secure Communications)*	**Same as Type III plus:** *(Wireless Data)*	Personnel utilizing CPC shall be able to communicate appropriately and safely with one another and their team leaders	

FIRE AND RESCUE RESOURCE TYPING

	HAZARDOUS MATERIALS RESPONSE UNIT (Also referred to as " HazMat" or "CBR")				
CATEGORY		**Call Sign Designation**	**HAZMAT –HZ-**	**Drive Train**	**4x 2 or 4x4**
MINIMUM CAPABILITIES					
COMPONENT	**METRIC**	**TYPE I**	**TYPE II**	**TYPE III**	
Personnel	**Training**	**Same as Type II**	**Same as Type III**	All personnel must be trained to the minimum response standards in accordance with the most current editions of NFPA Standard # 471, "Recommended Practice for Responding to Hazardous Materials Incidents," NFPA Standard # 472, "Standard for Professional Competence of Responders to Hazardous Materials Incidents up to Technician Level.	
	Staffing	5 personnel	5 personnel	5 personnel	
	Sustainability	**Same as Type II**	**Same as Type III**	Capability to Perform Three (3) Entries in a 24-hour Period	

100 - 3: SEARCH AND RESCUE

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	TRANSPORT RESCUE (Rescue)				
CATEGORY		Call Sign Designation	RESCUE –R-	Drive Train	4x 2 or 4x4 LCV or Medium truck

COMPONENT	METRIC	TYPE I –Heavy	TYPE II – Medium	TYPE III –Light
CHASSIS	Vehicle	Capable of transporting rescue personnel and equipment. Cannot exceed the vehicle's GVR including chassis, body and rescue equipment. All equipment shall be loaded on the apparatus and response ready.		
Equipment	Heavy Hydraulic Rescue Tools	Same as Type II **plus** 720 bar Combination Set	☐ Hydraulic Pump: 720 bar [2 simultaneous tool operation] ☐ 1 Hydraulic Spreader ☐ 1 Hydraulic Cutter ☐ 2 Hydraulic Rams ☐ 1 Back-Up Power Unit	☐ Hydraulic Pump: 720 bar Combo Set ☐ 1 backup power unit
	Cribbing	☐ 60 blocks, 4"x4"x24" ☐ 20 blocks, 2"x4"x24" ☐ 12 blocks, 6"x6"x24" ☐ 12 pair wedges, 6"x6"x24" ☐ 20 pair wedges, 4"x4"x18" ☐ 2 per vehicle wheel chocks	☐ 30 blocks, 4"x4"x24" ☐ 16 blocks, 2"x4"x24" ☐ 16 pair wedges, 4"x4"x18" ☐ 6 blocks, 6"x6"x24" ☐ 2 per vehicle wheel chocks ☐ 4 step cribbing	☐ 12 blocks, 4"x4"x24" 12 blocks, 2"x4"x24" ☐ 12 pair wedges, 4"x4"x18" ☐ 2 per vehicle wheel chocks ☐ 2 step cribbing

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	TRANSPORT RESCUE (Rescue)				
CATEGORY		Call Sign Designation	RESCUE –R-	Drive Train	4x 2 or 4x4 LCV or Medium truck

COMPONENT	METRIC	TYPE I –Heavy	TYPE II – Medium	TYPE III –Light
	Striking & Prying Tools	***Same as Type II***	***Same as Type III***	Flathead & Pick head axes, hammers, chisels, pry axes, pry bars.
	SCBA	***Same as Type II***	4 self-contained breathing apparatus with motion alarm 4 spare air cylinders	2 self- contained breathing apparatus with motion alarm 2 spare air cylinders
	Scene and Portable Lighting	Combined wattage of 2000 watts	Combined wattage of 1000 watts	Combined wattage of 500 watts
	Ladder (M)	***Same as Type II***	***Same as Type III plus:*** 1 ladder, extension type, 24 ft. Length, fire service rated	1 ladder, attic type, 10 ft (3m) Length minimum, fire service rated
	Generator	***Same as Type II plus:*** 8 KW mobile	***Same as Type III***	5KW mobile

TRANSPORT RESCUE (Rescue)					
CATEGORY		**Call Sign Designation**	**RESCUE -R-**	**Drive Train**	**4x 2 or 4x4 LCV or Medium truck**
MINIMUM CAPABILITIES		**TYPE I – Heavy**	**TYPE II – Medium**	**TYPE III – Light**	
Equipment	**Rope & Access**	2 X 100m - 11mm Low Stretch Kernmantle (Static) Rope, 4 X 50m - 11mm Low Stretch Kernmantle (Static) Rope, 6 x 120cm x 25mm Sling, heavy-duty flat webbing 6 x 60cm x 25mm Sling, heavy-duty flat webbing 6 x 180cm x 25mm Sling, heavy-duty flat webbing 8 x Rope Protector Sleeve,45 cm, PVC type, secured by wrap-around webbing strap and velcro	2 X 100m - 11mm Low Stretch Kernmantle (Static) Rope, 2 X 50m - 11mm Low Stretch Kernmantle (Static) Rope, 6 x 120cm x 25mm Sling, heavy-duty flat webbing 6 x 60cm x 25mm Sling, heavy-duty flat webbing 6 x 180cm x 25mm Sling, heavy-duty flat webbing 8 x Rope Protector Sleeve,45 cm, PVC type, secured by wrap-around webbing strap and velcro	2 X 100m - 11mm Low Stretch Kernmantle (Static) Rope, 2 X 50m - 11mm Low Stretch Kernmantle (Static) Rope, 6 x 120cm x 25mm Sling, heavy-duty flat webbing 6 x 60cm x 25mm Sling, heavy-duty flat webbing 6 x 180cm x 25mm Sling, heavy-duty flat webbing 8 x Rope Protector Sleeve,45 cm, PVC type, secured by wrap-around webbing strap and velcro
	Rope				

TRANSPORT RESCUE (Rescue)					
CATEGORY		**Call Sign Designation**	**RESCUE -R-**	**Drive Train**	**4x 2 or 4x4 LCV or Medium truck**
MINIMUM CAPABILITIES		**TYPE I – Heavy**	**TYPE II – Medium**	**TYPE III – Light**	
Equipment	**Rope & Access**	☐ 2 x Rescue Pulley, sealed bearings ☐ 1 x Rigging Plate ☐ 1 x Rigging Harness for Rescue Stretcher ☐ 6 x Triangular Delta Maillon Screw Link, 10mm, Steel ☐ 10 x CT Oval Steel Screw-gate karabiner, ☐ 1 x basket stretcher, stokes type with adjustable bridle (premade or mfg.) ☐ 8 x Personal Rope Rescue Kits* (see example)	☐ 2 x I Rescue Pulley, sealed bearings ☐ 1 x Rigging Plate ☐ 1 x Rigging Harness for Rescue Stretcher ☐ 6 x Triangular Delta Maillon Screw Link, 10mm, Steel ☐ 10 x CT Oval Steel Screw-gate karabiner, ☐ 1 x basket stretcher, stokes type with adjustable bridle (premade or mfg.) ☐ 6 x Personal Rope Rescue Kits* (see example)	☐ 2 x Rescue Pulley, sealed bearings ☐ 1 x Rigging Plate ☐ 1 x Rigging Harness for Rescue Stretcher ☐ 6 x Triangular Delta Maillon Screw Link, 10mm, Steel ☐ 10 x CT Oval Steel Screw-gate Karabiner, ☐ 1 x basket stretcher, stokes type with adjustable bridle (premade or mfg.) ☐ 4 x Personal Rope Rescue Kits* (see example)	

RESOURCE		TRANSPORT RESCUE (Rescue)			
CATEGORY		Call Sign Designation	RESCUE -R-	Drive Train	4x 2 or 4x4 LCV or Medium truck
		TYPE I – Heavy	TYPE II – Medium	TYPE III – Light	
Equipment	Medical	*Same as Type II*	*Same as Type III*	☐ Long spine board, with straps ☐ 1 extrication device (k.e.d. type) ☐ 3 extrication collars, 2 adult & 1 paediatric ☐ 2 oxygen cylinders ☐ 1 oxygen regulators, 0-15 lpm ☐ 1 non rebreathing masks, infant, child and adult ☐ 2 nasal cannuals - adult, child and infant ☐ 1 bag-valve mask, with high concentration kit for adult, child & infant ☐ 1 suction device, portable suction unit w/rigid tip or soft tip suction Catheter ☐ 1 blanket ☐ 1 splint kit, assorted to include traction splints ☐ 1 trauma kit - per medical responder standards criteria ☐ 1 body/exposure bag	

RESOURCE	TRANSPORT RESCUE (Rescue)				
CATEGORY		Call Sign Designation	RESCUE -R-	Drive Train	4x 2 or 4x4 LCV or Medium truck
		TYPE I – Heavy	TYPE II – Medium	TYPE III – Light	
	Traffic Scene Safety	☐ 8 x Luminous/Reflective Traffic Cones ☐ 2 x "Accident Warning" Reflective Triangles ☐ 600m Barrier Tape / "Caution" Tape			

RESOURCE	TRANSPORT RESCUE (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	RESCUE –R-	Drive Train	4x 2 or 4x4 LCV or Medium truck

COMPONENT	METRIC	TYPE I –Heavy	TYPE II – Medium	TYPE III –Light
Equipment	Pulling Equipment	1x 4000kg. Cap, chassis mounted 2 single sheave snatch blocks for winch 2 hand winch, (come-a-long type), 2 ton and may be chain or cable. Webbing type not accepted). 4 chain, 10mm x 2m (3/8 x 6ft) grade 70 transport chain-w/clevis hooks 4 chain, 10mm x 4m (3/8 x 12ft) grade 70 transport chain-w/clevis hooks 1 chain, 10mm x 6m (3/8 x 20ft) grade 70 transport chain-w/clevis hooks 8 chain shorteners, 10mm (3/8") grade 70 transport chain-w/clevis hooks	1x 4000kg. Cap, chassis mounted 2 single sheave snatch blocks for winch 2 hand winch, (come-a-long type), 2 ton and may be chain or cable. Webbing type not accepted 2 chain, 10mm x 2m (3/8 x 6ft) grade 70 transport chain-w/clevis hooks 2 chain, 10mm x 4m (3/8 x 12ft) grade 70 transport chain-w/clevis hooks 1 chain, 10mm x 6m (3/8 x 20ft) grade 70 transport chain-w/clevis hooks 4 chain shorteners, 10mm (3/8") grade 70 transport chain-w/clevis hooks	1x 4000kg. Cap, chassis mounted 1 hand winch, (come-a-long type), 2 ton and may be chain or cable, webbing Type not accepted. 1 chain, 10mm x 2m (3/8 x 6ft) grade 70 transport chain-w/clevis hooks 1 chain, 10mm x 4m (3/8 x 12ft) grade 70 transport chain-w/clevis hooks 1 chain, 10mm x 6m (3/8 x 20ft) grade 70 transport chain-w/clevis hooks 2 chain shorteners, 10mm (3/8") grade 70 transport chain-w/clevis hooks

RESOURCE	**TRANSPORT RESCUE (Rescue)**				
CATEGORY	**SEARCH & RESCUE [ESF#9]**	**Call Sign Designation**	**RESCUE –R-**	**Drive Train**	**4x 2 or 4x4 LCV or Medium truck**
COMPONENT	**METRIC**	**TYPE I –Heavy**	**TYPE II – Medium**	**TYPE III –Light**	
	Overhead Lifting Chains	□ Should a Fire Service keep Overhead Lifting Chains and Chain Assemblies on any Transport Rescue Vehicle to be used by a rated commercial crane; these chains and assembles must be rated Grade 80 with a safety factor of4:1 and must be certified by the manufacturer			
	Lifting Equipment	□ 2 x 1m (48 in). High lift jacks □ 2x 1.5m (60 in.) High lift jacks □ 2 x bottle jack, hydraulic, 10 ton □ 2 x bottle jack, hydraulic, 20 ton □ 1 x high pressure airbag set-range from 3- 70 ton capacity-w/accessories-hoses, regulators & Gauges	□ 2 x 1m (48 in.) High lift jacks □ 1 bottle jack, hydraulic, 10 ton □ 1 high pressure airbag set -range from 3-50 ton capacity-w/accessories-hoses, regulators & gauges	□ 2 x 1m (48 in.) High lift jacks □ 1 bottle jack, hydraulic, 10 ton 1 high pressure airbag set-range from 3-30 ton capacity-w/accessories-hoses, regulators & gauges	

RESOURCE	TRANSPORT RESCUE (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	RESCUE –R-	Drive Train	4x 2 or 4x4 LCV or Medium truck

COMPONENT	METRIC	TYPE I –Heavy	TYPE II – Medium	TYPE III –Light
	Stabilisation Kit	***Same as Type II***	Kit consisting of: ☐ 2-B Struts ☐ 2-E4.5-7 struts ☐ 2x12" extensions ☐ 2x24" extensions ☐ 2 rigid basis ☐ 1x 15deg swivels ☐ 2 x V-block ☐ 2 x chain wedges ☐ 4x 6" base plates ☐ 4 x 45deg static clevis ☐ 4 x ratchet straps ☐ 2 x ratchet strap extensions	Kit consisting of: ☐ 2-B Struts ☐ 2x24" extensions ☐ 2 x V-block ☐ 2 x chain wedges ☐ 2x 6" base plates ☐ 2 x 45deg static clevis ☐ 2 x ratchet straps ☐ 2 x ratchet strap extensions
	Cutting Saws	☐ 2x Fire & Rescue Chain Saw(example Stihl MS 460 R) ☐ 2 x Reciprocating saw ☐ 2 x Rotary/Circular/ Cut-off Saw ☐ * Saws to have blades/chains capable of cutting wood, masonry, metal and concrete)	☐ 2x Fire & Rescue Chain Saw(example Stihl MS 460 R) ☐ 1 x Reciprocating saw ☐ 2 x Rotary/Circular/ Cut-off Saw ☐ * Saws to have blades/chains capable of cutting wood, masonry, metal and concrete)	☐ 1x Fire & Rescue Chain Saw(example Stihl MS 460 R) ☐ 1 x Reciprocating saw ☐ 1 x Rotary/Circular/ Cut-off Saw ☐ * Saws to have blades/chains capable of cutting wood, masonry, metal and concrete)

RESOURCE	**TRANSPORT RESCUE (Rescue)**				
CATEGORY	**SEARCH & RESCUE [ESF#9]**	**Call Sign Designation**	**RESCUE –R-**	**Drive Train**	**4x 2 or 4x4 LCV or Medium truck**
COMPONENT	**METRIC**	**TYPE I –Heavy**	**TYPE II – Medium**	**TYPE III –Light**	
	Rescue (Hot Cutting)	☐ 1 x Oxy Acetylene Set ☐ 1x Thermal Lance /Plasma Cutter	☐ 1 x Oxy Acetylene Set	---	
	Rescue (Breeching)	☐ Demolition Hammer (=125mm) ☐ Rotary Hammer Drill ☐ Concrete core drill and bits (25, 64 & 125mm)	☐ Demolition Hammer ☐ Rotary Hammer Drill	☐ Rotary Hammer Drill	
	PERSONNEL	2 (VMR & BLS)	2 (VMR & BLS)	2 (VMR & BLS)	

FIRE AND RESCUE RESOURCE TYPING

TECHNICAL SEARCH and RESCUE RESOURCES

Purpose

The Typing Policy to provide for the systematic mobilization, deployment, organization, and management of SAR & Technical Rescue resources throughout
Western Cape.

Key Concepts of Technical Search and Rescue (SAR) Resource Typing

SAR Resource Typing Policy is directed towards enhancing SAR & Technical Rescue response at the local, regional and provincial level of government by:

1. Providing a mechanism for the evaluation of fire and non-fire service SAR & Technical Rescue resources in the Province.

2. Providing a mechanism for funding of training and evaluation of SAR & Technical Rescue responders to augment existing resources.

3. Pre-determining resource capabilities at the local, regional and provincial levels.

4. Integrating non-fire service resources into the planning and response phases of Emergency Management systems at the local, regional and provincial levels.

Activation

Whilst local activation and mutual aid activation lies with the respective Fire Service Authority working according to the Provincial Special Operations Response Team (SORT) Plan; SAR resources on a regional, provincial and national level are activated via the Provincial Special Operations Response Plan with control of these resources then vested in the SORT Committee.

Performance Competencies

- Personnel who make up Technical Rescue Teams for any of the Technical Rescue disciplines must comply with the NFPA 1006 "Standard for Rescue Technician Professional Qualifications"
- Services must ensure that they meet the NFPA 1670 "Standards on Operations and Training for Technical Rescue Incidents"
- SORT Units must be accredited by the WC SORT Steering Committee

Technical Rescue Teams

Per NFPA 1670 Chapter 2 1.3 The Authority Having Jurisdiction shall establish operational procedures to ensure that technical rescue operations are performed in a safe manner consistent with the identified level of operational capability. In addition, the same techniques used in a rescue operation shall be considered appropriate for training, body recovery, evidence search, and other operations with a level of urgency commensurate with the

risk/benefit analysis.

- Type I - Heavy Technical Rescue Team
  The Heavy Non-USAR Technical Rescue Team represents the minimum capability to conduct safe and effective technical rescue operations at the technician level. These incidents may involve: heavy, industrial, or vehicle extrication, life safety rope rescue, confined spaces, trench/excavation or structural collapse.

- Type II - Light Technical Rescue Team
  The Light Non-USAR Technical Rescue Team represents the minimum capability to be competent in safe and effective technical rescue operations at the operations level. These incidents may involve: heavy, industrial, or vehicle extrication, life safety rope rescue, confined spaces, trench/excavation or structural collapse.

SORT TASK FORCES

- Type I - Full SORT Task Force
  A Western Cape Provincial asset made up of local responders and with the personnel, equipment and training equivalent to a Task Force. This unit is capable of twenty-four hour operations for a minimum of five days without the need for outside resources. One Full Task Force may be divided into two Regional Task Forces.

- Type II – Regional SORT Task Force (Intermediate Task Force)
  A Western Cape Provincial asset made up of local responders equivalent to half of a Full Task Force. This unit is capable of twelve hour operations for a minimum of five days without the need for outside resources. This resource will provide a scaled down version of a full Task Force and will be able to handle some collapse incidents without the need for additional assistance. Two Regional SORT Task Forces can be added together to form the equivalent of a Full Task Force or divided to make two SORT Units.

- Type III - SORT Unit (Light Task Force)
  A Western Cape Provincial asset made up of local responders equivalent to a third of a Full SORT Task Force. This unit is capable of twelve hour operations for a minimum of five days with logistical assistance from a Type I or II task force. This resource will provide a scaled down version of an Intermediate Task Force and will be able to handle basic collapse incidents with the need for minimal assistance. Two Units can be added together to form the equivalent of a Regional Task Force.

Search and Rescue Area Definitions

Search and rescue is an area specific specialty. The type of area to be searched dictates the kind and type of resource to be utilized.

a) Zone A (Urban Area) - Generally areas with high-density population and buildings of light, medium and heavy construction
b) Zone B (Interface Area) - Generally the rural interface and intermix. Single family residential areas with light and medium construction
c) Zone C (Rural) - Generally sparsely populated rural areas with residential structures

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	COLLAPSE SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TEAM	KIND	SORT
MINIMUM CAPABALITIES		TYPE I		TYPE II	
COMPONENT	METRIC				
DESIGNATION	Competency	HEAVY TECHNICAL RESCUE TEAM		LIGHT TECHNICAL RESCUE TEAM	
INCIDENT TYPE	Capability	☐ Trained for Heavy Floor Construction, Pre-cast Concrete Construction, Steel Frame Construction, High Angle Rope Rescue (including highline systems), Confined Space Rescue (permit required), Mass Transportation Rescue and Trench Collapse		☐ Trained for light frame, light wall, light floor and unreinforced concrete construction ☐ High Angle Rope Rescue (not including highline systems), Confined Space (no permit required) and Trench Collapse	
		☐ Trained to the HazMat Technician Level (NFPA 472)		☐ Trained to the HazMat First Responder Operational Level (NFPA 472)	
PERSONNEL	Training & Certification	☐ NFPA 1006: 2008 Technician Level II Certification for areas of specialisation in: Structural Collapse, Rope Rescue, Confined Space, Vehicle and Machinery, Trench and Excavation.		☐ NFPA 1006: 2008 Technician Level I Certification for: Areas of specialisation: Structural Collapse, Rope Rescue, Confined Space, Vehicle and Machinery, Trench and Excavation.	

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	COLLAPSE SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TEAM	KIND	SORT
MINIMUM CAPABALITIES		TYPE I		TYPE II	
COMPONENT	METRIC				
DESIGNATION	Competency	HEAVY TECHNICAL RESCUE TEAM		LIGHT TECHNICAL RESCUE TEAM	
TEAM	Organisation/Authority	☐ Certified by WC SORT Committee ☐ Comply with organization Technician Level for support personnel as outlined in NFPA 1670		☐ Certified by WC SORT Committee ☐ Comply with organization Operations Level for support personnel as outlined in NFPA 1670.	
	Minimum Staffing Maximum Time to initial Response	☐ 8 Members made up as follows: o I x Team Leader o 6 X Technicians (HRTs) o 1 x Medic ☐ Immediate		☐ Members made up as follows: o I x Team Leader o 6 X Technicians o 1 x Medic ☐ Immediate	
	Sustained Operational Period	☐ 8-12 Hours		☐ 4-8 Hours	
	Response Type	Local or Regional		Local	

RESOURCE	COLLAPSE SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TEAM	KIND	SORT
MINIMUM CAPABALITIES					
COMPONENT	METRIC	TYPE I – Heavy		TYPE II – Light	
EQUIPMENT	Technical Equipment	***Same as Type II Plus*** Audible and optical search equipment to conduct Technical search Visual inspection devices Listening devices (seismic and acoustic) Handheld radios		Shoring assortment Rebar cutters Reciprocating and Chain saws Assorted hand tools Generator Lights Extensions cords Air blower Fire extinguishers Demolition and Rotary hammers Hydraulic concrete breakers Hydraulic vehicle rescue system Hammer drill Nail gun Cutting torch Hoisting slings and shackles Rope equipment (kernmantle and lifeline rope, ascenders/ descenders, pulleys, tripod hauling system, carabiners)	

RESOURCE	URBAN SEARCH & RESCUE TASK FORCES (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TF	KIND	SORT

MINIMUM CAPABALITIES				
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III
DESIGNATION	Competency	PROVINCIAL TASK FORCE	REGIONAL TASK FORCE	LOCAL UNIT
	Training & Certification	*Same as Type II*	*Same as Type III*	☐ Trained to the HazMat Technician Level (NFPA 472) ☐ NFPA 1006: 2008 Technician Level II Certification for areas of specialisation in: Structural Collapse, Rope Rescue, Confined Space, Vehicle and Machinery, Trench and Excavation. ☐ Certified by WC SORT Committee
	Sustained Operations	24 Hour S& R Operations ☐ Self Sufficient for first 72 Hours	12 Hour S& R Operations ☐ Self Sufficient for first 72 Hours	12 – Hour S&R Operations ☐ Self Sufficient for first 48 Hours
	Organisation/Authority	☐ Comply with organization Technician Level for support personnel as outlined in NFPA 1670	☐ Comply with organization Operations Level for support personnel as outlined in NFPA 1670.	☐ Multidisciplinary organization of Command; Search; Rescue; Medical; HazMat; Logistics; Planning

RESOURCE	URBAN SEARCH & RESCUE TASK FORCES (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TF	KIND	SORT

MINIMUM CAPABALITIES				
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III
DESIGNATION	Competency	PROVINCIAL TASK FORCE	REGIONAL TASK FORCE	LOCAL UNIT
	Sustained Mission Duration	☐ Same as Type II	☐ Potential Mission duration of up to 10 days	☐ Potential Mission duration of up to 5 days
Equipment	Rescue Equipment	*Same as Type II*	*Same as Type III*	☐ Pneumatic Powered Tools ☐ Electric Powered Tools ☐ Hydraulic Powered Tools ☐ Hand Tools ☐ Electrical ☐ Heavy Rigging ☐ Technical Rope ☐ Safety

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	COLLAPSE SEARCH & RESCUE TEAM (Rescue)					
CATEGORY	SEARCH & RESCUE [ESF#9]		Call Sign Designation	SORT TEAM	KIND	SORT
MINIMUM CAPABALITIES						
COMPONENT	METRIC		TYPE I – Heavy		TYPE II – Light	
	Breathing Apparatus		☐ SCBA		☐ SCBA	
	Medical		*Same as Type II*		Medical aid equipment ☐ Backboards ☐ Stokes stretcher	
	HazMat		*Same as Type II plus:* ☐ Level A Suits		☐ HazMat monitoring equipment ☐ Level B Suits ☐ Sampling detection kit ☐ 4-gas meters ☐ Rad monitoring ☐ Decontamination Equipment	

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	URBAN SEARCH & RESCUE TASK FORCES (Rescue)					
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TF	KIND	SORT	
MINIMUM CAPABALITIES		TYPE I	TYPE II	TYPE III		
COMPONENT	METRIC					
DESIGNATION	Competency	PROVINCIAL TASK FORCE	REGIONAL TASK FORCE	LOCAL UNIT		
PERSONNEL	Number of People per Response	88 Person Response made up as follows: - 68 HRTs - 12 Support Staff - 8 Medics	44 Person Response made up as follows: - 34 HRTs - 6 Support Staff - 4 Medics	22 Person Response made up as follows: - 1 Unit Leader (HRT) - 1 Operations Officer (HRT) - 2 Team Leaders (HRTs) - 12 HRTs - 2 Medics - 1 Logistics Officer - 1 Equipment Officer - 1 Safety Officer (HRT) - 1 Communications Officer		

RESOURCE	URBAN SEARCH & RESCUE TASK FORCES (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	SORT TF	KIND	SORT
MINIMUM CAPABALITIES		TYPE I	TYPE II	TYPE III	
COMPONENT	METRIC				
DESIGNATION	Competency	PROVINCIAL TASK FORCE	REGIONAL TASK FORCE	LOCAL UNIT	
	Medical Equipment	*Same as Type II*	*Same as Type III*	Antibiotics/Antifungals; Patient Comfort Medication; Pain Medications; Sedatives/ Anaesthetics / Paralytics; Steroids; IV Fluids/Volume; Immunizations/Immune Globulin; Canine Treatment; Basic Airway; Intubation; Eye Care Supplies; IV Access/ Administration; Patient Assessment Care; Patient Immobilization/ Extrication; Patient/ PPE; Skeletal Care; Wound Care; Patient Monitoring	
	Technical Equipment	*Same as Type II*	☐ Structures Specialist ☐ Technical Information Specialist ☐ HazMat Specialist ☐ Technical Search Specialist ☐ Canine Search Specialist	☐ Structures Specialist ☐ Canine Search Specialist	

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	URBAN SEARCH & RESCUE TASK FORCES (Rescue)					
CATEGORY	SEARCH & RESCUE [ESF#9]		Call Sign Designation	SORT TF	KIND	SORT
MINIMUM CAPABALITIES						
COMPONENT	METRIC	TYPE I		TYPE II	TYPE III	
DESIGNATION	Competency	PROVINCIAL TASK FORCE		REGIONAL TASK FORCE	LOCAL UNIT	
EQUIPMENT	Communications Equipment	*Same as Type II*		***Same as Type III plus:*** Repeaters; Accessories; Batteries; Power Sources; Small Tools; Computer	Portable Radios; Charging Units; Spare Batteries; Power Sources;	
	Logistics Equipment	*Same as Type II*		***Same as Type III plus:*** Task Force Support; Cache Transportation/ Support; Base of Operations; Equipment Maintenance	Water/Fluids; Food; Shelter; Sanitation; Safety Administrative Support; Personal Bag	

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	SWIFTWATER / FLOOD SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	WATER RESCUE	KIND	SORT
MINIMUM CAPABALITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
PERSONNEL	Team Composition	10-member team comprised of: □ 2 managers □ 2 squad leaders □ 6 personnel	6-member team comprised of: □ 1 squad leader □ 5 personnel	4-member team comprised of: □ 1 squad leader □ 3 personnel	3-member team comprised of: □ 1 squad leader □ 2 personnel
	Number Technical Animal Rescue	1	1	1	
	Number ALS Certified	2	--	--	
	Number Helicopter/ Aquatic Rescue Operations	4	2	--	
	Number Certified Power Boat Skippers	4	2	--	
	Number Class IV Emergency Diver Certified with Equipment	4	2	2	

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	SWIFTWATER / FLOOD SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	WATER RESCUE	KIND	SORT
MINIMUM CAPABALITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
TEAM	Specialist SAR Skills	*Same as Type II*	***Same as Type III plus***: ☐ Technical rope systems	☐ In-water contact rescue ☐ Dive rescue	
	Capabilities	☐ Manage search operations ☐ Power vessel operations ☐ Helicopter rescue operational ☐ Animal rescue ☐ HazMat ☐ ALS ☐ Communications ☐ Logistics	☐ Manage search operations ☐ Power vessel operations ☐ Helicopter rescue operational ☐ Animal rescue ☐ HazMat ☐ BLS	☐ Assist in search operations ☐ Non-powered water craft ☐ Animal rescue ☐ HazMat ☐ BLS	☐ Low-risk operations ☐ Land-based ☐ HazMat ☐ BLS

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	SWIFTWATER / FLOOD SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	WATER RESCUE	KIND	SORT
MINIMUM CAPABALITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
TEAM	Training	***Same as Type II except:*** ☐ Divers to have 80 hours of formal public safety diver training	***Same as Type III plus:*** ☐ Helicopter operations awareness ☐ Technical rope rescue	***Same as Type IV plus:*** ☐ Divers to have 60 hours of formal public safety diver training	☐ Paddle skills ☐ Contact and self-rescue skills ☐ HazMat ☐ ICS Swift water ☐ Rescue Technician
	Certifications	***Same as Type II***	***Same as Type III***	☐ Divers DOL Certified ☐ WC SORT Committee	☐
EQUIPMENT	Transportation Resources	☐ Equipment Trailer ☐ Personnel Support			
	Communication	***Same as Type II***	***Same as Type III plus:*** ☐ Airband Radio	***Same as Type IV***	☐ Portable Radios ☐ Spare Batteries and Chargers
	Medical	***Same as Type II plus*** ☐ ALS medical kit	***Same as Type III plus:*** ☐ Spineboard	***Same as Type IV plus:*** ☐ Litter	☐ BLS medical kit ☐ Blankets

FIRE AND RESCUE RESOURCE TYPING

RESOURCE	SWIFTWATER / FLOOD SEARCH & RESCUE TEAM (Rescue)				
CATEGORY	SEARCH & RESCUE [ESF#9]	Call Sign Designation	WATER RESCUE	KIND	SORT
MINIMUM CAPABALITIES					
COMPONENT	METRIC	TYPE I	TYPE II	TYPE III	TYPE IV
	SCUBA	*Same as Type II plus*	*Same as Type III plus:* ☐ Life vests ☐ PFD Type V	*Same as Type IV plus:* ☐ Lamps ☐ Fins	☐ Flares; Markers; Bags; Flashlight; Gloves; Helmets; Light sticks; PFD Type III/IV; Knives; Shoes; Whistles
	Rescue Boat	☐ 2 x Fuelled (Rubber Duck) ☐ 2x Crocs	☐ 1 x Fuelled (Rubber Duck) ☐ 1 x Croc	☐ 1 x Croc	

100 - 4: AERIAL

RESOURCE			AIR TRACTORS		
CATEGORY	• FIREFIGHTING [ESF #4]	Call Sign	**Agency determined**	Drive Train	All Terrain
MINIMUM CAPABILITIES	TYPE I	TYPE II	TYPE III	TYPE IV	
CAPACITY (litres)	10000	6000	3000	1500	
EXAMPLES	C-130 P-3 DC-7	DC-7 SP2H P2U	S-2 CL-215T CL-415	Thrush Air Tanker Dromader	

RESOURCE			HELICOPTERS		
CATEGORY	• FIREFIGHTING [ESF #4]	Call Sign	**Agency determined**	Drive Train	All Terrain
MINIMUM CAPABILITIES	TYPE I	TYPE II	TYPE III		
Allowable Payload @59.˚ @ Sea Level	2250kg	1125	540		
Passenger Seats	≥15	9-14	4-8		
Maximum Gross Takeoff/Landing Weight (Kg)	≥5600	2700-5599	≤2699		
Retardant or Water Carrying Capability (Litres)	2500	1100	750		
Examples	Bell 214	Bell 204, 205, 212	Bell 206, Squirrel B2, Jet Ranger		

ANNEXURE E2

VELD AND FOREST FIRE VEHICLE TYPING

RESOURCE			TANKER PUMPER (Water Tender)		
CATEGORY	• FIREFIGHTING [ESF #4] • HAZARDOUS MATERIALS [ESF#10]	Call Sign	TANKER –T-	Drive Train	4x 2 or 4x4, 6 x 6 TRUCK
MINIMUM CAPABILITIES	TYPE I	TYPE II			
TANK CAPACITY (litres)	≥10000	≥5000			
COMMENTS		All Types to have connection compatibility of being able to have direct pump connection to Engine or Veld Fire Pumpers.			

RESOURCE			VELD FIRE VEHICLES		
CATEGORY	• FIREFIGHTING [ESF #4]	Call Sign	Agency determined	Drive Train	All Terrain
MINIMUM CAPABILITIES	TYPE I	TYPE II	TYPE III		
PUMP CAPACITY (litres/min)	3800	1800	300 Low pressure or 50 High Pressure		
TANK CAPACITY (litres)	4000	2500	500		

RESOURCE			AIR TRACTORS		
CATEGORY	• FIREFIGHTING [ESF #4]	Call Sign	**Agency determined**	Drive Train	All Terrain

MINIMUM CAPABILITIES	TYPE I	TYPE II	TYPE III	TYPE IV
CAPACITY (litres)	10000	6000	3000	1500
EXAMPLES	C-130 P-3 DC-7	DC-7 SP2H P2U	S-2 CL-215T CL-415	Thrush Air Tanker Dromader

RESOURCE			HELICOPTERS		
CATEGORY	• FIREFIGHTING [ESF #4]	Call Sign	**Agency determined**	Drive Train	All Terrain
MINIMUM CAPABILITIES	**TYPE I**	**TYPE II**	**TYPE III**		
Allowable Payload @59.˚@ Sea Level	2250kg	1125	540		
Passenger Seats	≥15	9-14	4-8		
Maximum Gross Takeoff/Landing Weight (Kg)	≥5600	2700-5599	≤2699		
Retardant or Water Carrying Capability (Litres)	2500	1100	750		
Examples	Bell 214	Bell 204, 205, 212	Bell 206, Squirrel B2, Jet Ranger		
Helitanker	- Fixed Tank - Air Tanker Board Certified - 4000 Min. litre.				

ANNEXURE F1

General Contact Detail

Organization	Name	Cell. Number	Control room Office Number	Fax Number
City of Cape Town	Goodwood Fire Control		021 590 1900	021 591 4115
Central Karoo District Municipality	Hein Rust Curvin Alexander	082 925 7953 071 869 3235	023 414 4467	023 414 3675
Overberg District Municipality	Reinard Geldenhuys Chris Pieterse	083 273 8234 083 274 9322	028 425 1690	028 4242748
West Coast District Municipality	Bertus Senekal Gareth van de Westhuizen Markus Lutz Deidré Dowries Michael Badenhorst Nathaniël Scholtz Dirk du Preez Mayor: Harold Cleophas Municipal Manager: David Joubert Director: Wilhelm Markus	083 236 4588 082 705 1500 067 407 4131 079 221 2880 079 717 1152 071 400 0220 082 871 5699 083 340 6407 071 876 2342 082 557 7681	022 433 8700/1	022 433 8875
Cape Winelands District Municipality	Danie Wilds Wayne Josias Jo-anne Otto	082 822 1233 082 300 4544 072 808 0106	021 887 4446 021 888 5822 021 888 5202	021 886 6206 021 882 8190
Garden Route District Municipality	Freddy Thaver Deon Stoffels	061 443 7393 083 941 1994	044 805 5071	086 614 4228
Provincial Government Western Cape - Fire & Rescue Services	Etienne du Toit Marthinus Rust	073 995 1609 082 776 9287	021 937 6357/55 0021 937 6375	021 931 9031
Disaster Management officials:	WCDMC J Pandaram	083 577 1100 083 440 9698	021 937 6300 021 937 6306	021 931 9031

	L Nicholson	083 277 4221	021 937 6317	
Cape Nature	Gail Cleaver Peter Viljoen	082 377 2040 082 740 7736		086 528 9801
TMNP Fire Management: Newlands Control Centre	Philip Prins Clinton Dilgee Yusug Hartley Kyle Hattingh	083 961 5046 082 401 8538 082 312 9413	021 689 7438/9 021 689 7438/9	
SA National Parks Southern Cape	Len du Plessis	082 809 1955	044 382 0443	
MTO Cape **George** **George** **Grabouw** **Grabouw** **Wemmershoek** **Garcia (Riversdale)** **Jonkersberg (George)** **Woodville/Bergplaas (Hoekwil)** **Buffelsnek (Knysna)** **Kruisfontein (Knysna)** **Bluelilliesbush (Tsitsikamma)** **Lottering (incl Keurbooms to Bloukransrivier)** **Witelsbos** **WoF Aviation**	 Gideon van Lill Geoff Taylor Aubrey Thompson Conwill Davids Tommy Eckley Tertius Notley Marius Davids Francois du Plessis Tom Eckley Christiaan Smit Thinus Kok Koos Lourens Godfrey Visagie Francois Wyers Frank Smook	 082 789 6564 082 887 5076 082 805 7199 082 880 6497 071 366 9233 082 805 7669 082 804 9854 079 699 6006 078 457 6641 082 784 6971 082 889 5332 082 940 3804 082 374 8645 083 785 2014 082 650 0860	044 871 1081 044-8711081 044-8711081 021-859 5298 021-859 2606 021 867 0146 028 713 2558 044 620 5101 044 850 1153 044 382 9772 044 375 0260 042 280 3606 042 281 1712 042 285 0240 	044 871 1328

DISPATCH CENTRES

WoF Western Cape Provincial Coordinator Office - Tygerberg	
Land Line	021 532 2516
Fax to E-Mail	086 292 6393
Bianca van Biljon	072 663 9745
E-mail Address	coord.wc@wofire.co.za / bianca.vanbiljon@wofire.co.za
Land Line	021 937 6389
Fax to E-Mail	086 557 9303
Moses Manganye	076 580 8617
E-mail Address	angelo.cole@wofire.co.za

Porterville Dispatch (T1)	
Fire Line	060 691 4215
2nd Hot line	N/A
Admin Line	023 004 0424
Fax Line	N/A
Fax to E-Mail	086 295 5229
Deidre Louw	073 278 1616 (Back-up personal no)
Louise Potgieter	078 995 5633 (Back-up personal no)
E-mail Address	dispatch.porterville@wofire.co.za

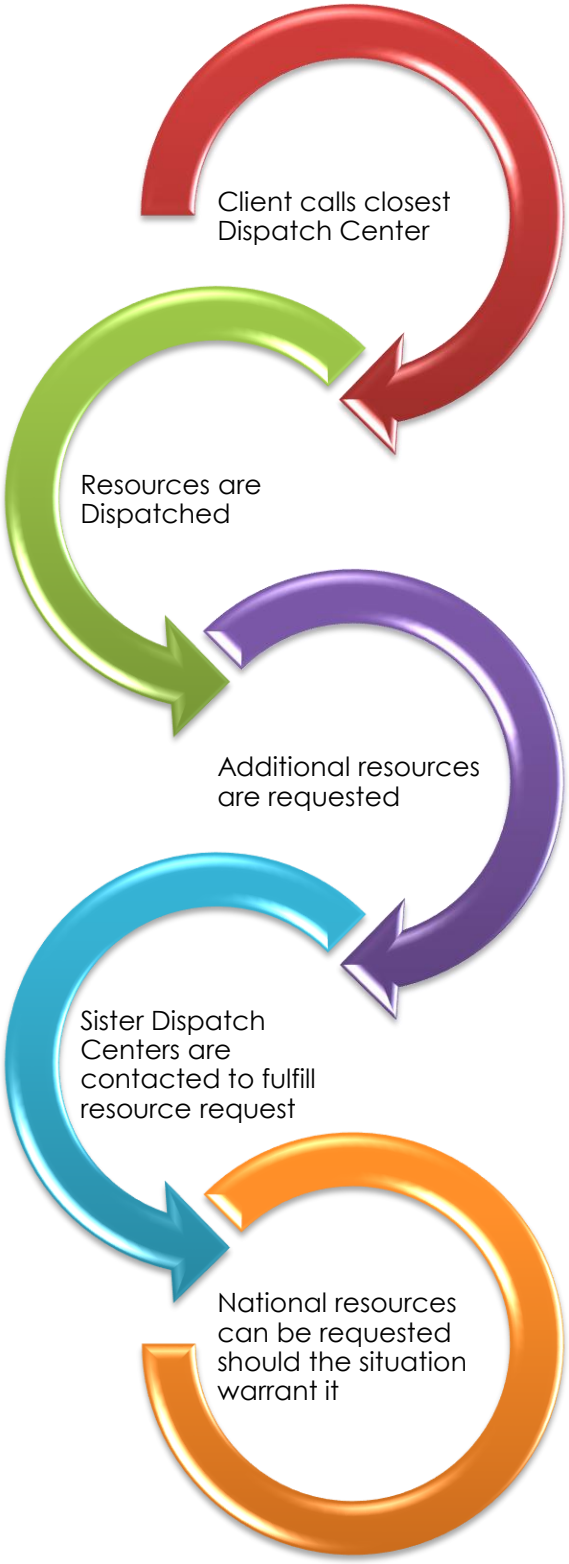
Tulbagh Dispatch (T1)	
Fire Line	082 561 9329
2nd Hot Line	N/A
Admin Line	023 004 0682
Fax to E- Mail	086 616 5067
Fax Line	N/A
Theodore Gaffley	073 390 1553 (Back-up personal no)
E-mail Address	dispatch.tul.wc@wofire.co.za
Stellenbosch Dispatch (T1)	
Fire Line	060 961 8847
Hot Line	082 323 5109
Admin Line	021 880 2639
Fax to E- Mail	086 514 4729
Natasha Lewis	082 452 5427 (Back-up personal no)
E-mail Address	ops.wc@wofire.co.za
Newlands Dispatch (T1)	
Fire Line	082 312 9413
2nd Hot Line	021 689 7438 / 7439
Admin Line	021 689 7438
Fax Line	021 685 5944

Fax to E- Mail	086 611 5855
Yusuf Hartley	071 762 0064 (Back-up personal no)
E-mail Address	dispatchnew@sanparks.org
Land Line	028 425 1287
Fax Line	028 425 1288

Southern Cape Region Provincial Coordinator Office - Bredasdorp	
Alwyn de Wet	072 609 4221
Land Line	028 425 1287
Fax Line	028 425 1288
Fax to E-Mail	Not available yet
E-mail Address	coord.scr@wofire.co.za / alwyn.dewet@wofire.co.za
Blackie Swart	071 174 5052
E-mail Address	coord.scr2@wofire.co.za / emile.matthysen@wofire.co.za

Bredasdorp Dispatch (T1)	
Fire Line	082 312 9507
Admin Line	028 425 1690
Fax to E-mail	086 601 1923
Fax Line	028 424 2748
Imelda Arends	076 919 8006(Back-up personal no)
Andifsa Mfabe	(Back-up personal no)
E-Mail Address	dispatch.bredasdorp@wofire.co.za
George Dispatch (T1)	
Fire Line	082 312 9461
2nd Hot Line	044 805 5199
Admin Line	044 805 5199
Fax Line	086 233 5235
Margie Hopewell	082 883 4707
Stephan Truter	072 769 3056
E-mail Address	opswit.sc@wofire.co.za
Riversdale Dispatch (T1)	
Fire Line	060 961 3169
Admin Line	028 713 3695
Fax to E-mail	086 224 7217
Fax Line	028 713 4461
Rika Muller	076 514 9604
Vacant	
E-Mail Address	dispatch.riversdale@wofire.co.za

ANNEXURE F2



- Refer to **Annexure F1**
- Puts in resource request

ANNEXURE G

WORKING ON FIRE GROUND CREW PLACEMENT

ANNEXURE H1

Western Cape Province BOP for WoF team deployment and rations

Basic principle: User pays all variable costs (food, transport, accommodation etc.)

The crew leader may only commit his ground crew once he has determined the following:

- Where he is to operate (observing 18 watch out situations)
- What are the instructions (observing the 10 standard firefighting orders)?
- What communications are in place
- All PPE in order
- All team members comply with minimum training standards
- WC2 forms & WoF IOD info in first aid bags
- Ration supplies in order (see below)

Rations

- WoF stock two 12-hour ration packs per person at each base to be used only when the teams (heli or ground) go to "another" organization/private fire, for example a Cape Nature team to Sanparks or a District Municipality.
- One ration pack is issued per person when dispatched to "another" organisation fire.
- The ration pack may only be used once the team exceeds the normal 8-hour day shift.
- The notification of rations used will be indicated on the WoF route form that must be completed for every movement, even if other than WoF transport are used, then the crew leader must complete the route form with all the information on, including the amount of rations used. (Please do not call Dispatch with rations information.)

- Regional managers & base managers to keep stock figures. RM replenish as necessary
- If the base manager dispatches a WoF team to his own organisation fire, then the base manager must supply all rations from his organizations stock
- The base manager may only use WoF stock in emergency situations, but would then be invoiced on the user pay principle.
- Once the team is on the fire line, the user is responsible for all further rations supplies after the first 12 hours.
- After the fire season, left over ration packs could be used for sleep over prevention work situations (e.g. firebreaks in mountains) on the user pay principle.
- If a user refuses to pay for variable costs, the Provincial Manager (WoF) must immediately be informed of this breach of good faith. This will obviously influence the future availability of WoF teams to this specific user.

ANNEXURE H2

MOPPING UP STANDARDS

Western Cape Provincial Fire Work Group Mopping-up Guideline

1. **Background:**

The threat of veld and forest fires does not cease after the flames have passed, as smouldering 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.

2. **Key concepts:**

a. 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).

b. 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.

c. 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.

d. 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.

3. Mop-up Guidelines:

a. 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 immediate 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.

b. OPERATIONS:

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.

c. 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.

d. 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.

e. 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.

4. Guideline for line width:

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

ANNEXURE I

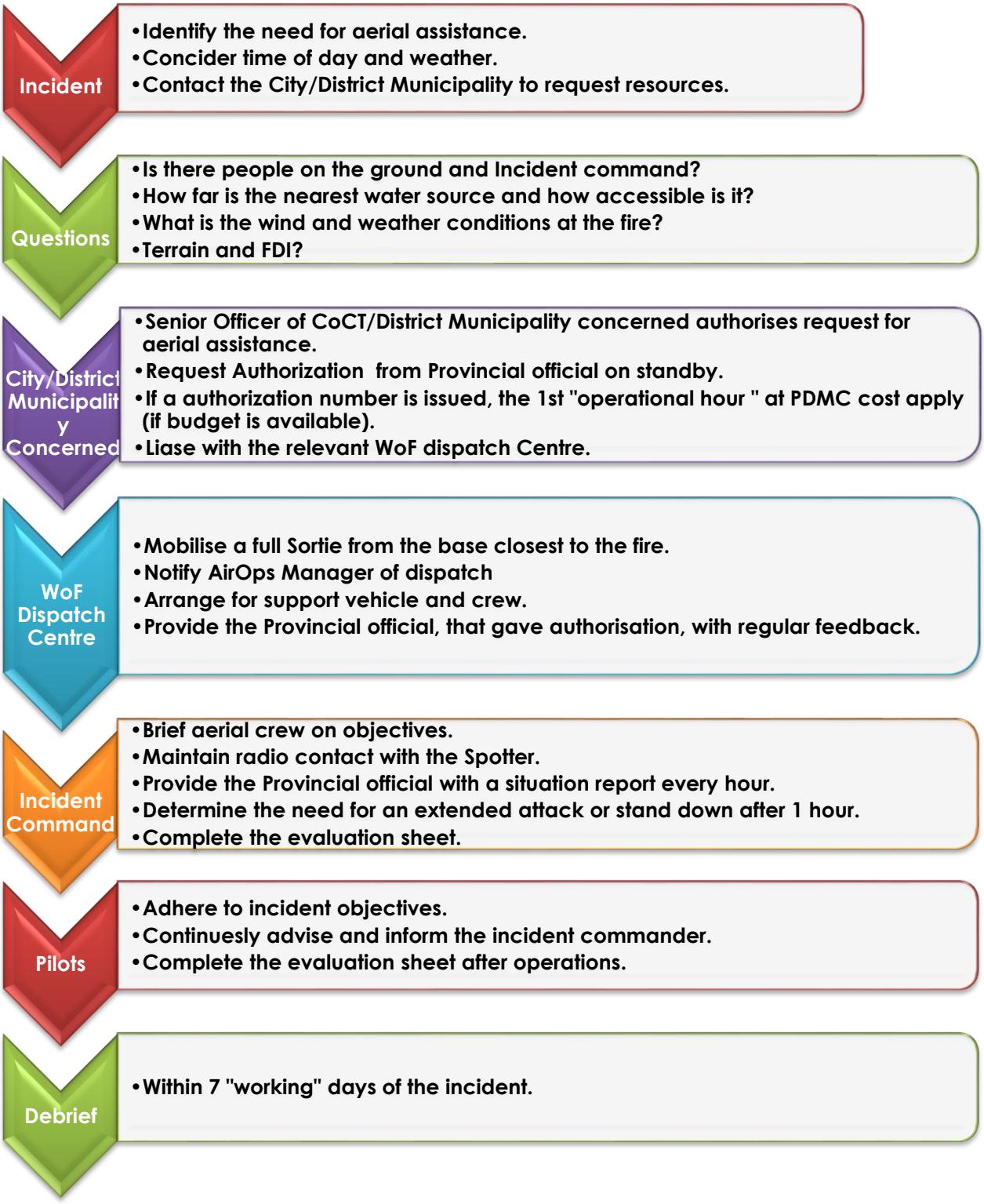
Placement of Aerial Resources

BASE	CLIENT	RESOURCE	A/C Reg.	PILOT NAME
Porterville	WOF/PDMC	Spotter		
Porterville	WOF/WCDM	Spotter		
Porterville	WOF/PDMC	Spare Spotter		
Porterville	WOF/WCDM	AT 802		
Porterville	WOF/PDMC	AT 802		
Porterville	WOF/PDMC	Huey		
Stellenbosch	COCT	Spotter		
Stellenbosch	WOF/PDMC	Spotter		
Stellenbosch	WOF/PDMC	Spotter		
Stellenbosch	WOF/PDMC	Spare Spotter		
Stellenbosch	WOF/PDMC	Huey		
Stellenbosch	WOF	Spare Huey		
Stellenbosch	WOF	Black Hawk		
Stellenbosch	WOF	ASVJ		

Stellenbosch	WOF	ASVJ		
Newlands	SanParks	Huey		
Newlands	COCT	Huey		
Newlands	COCT	Huey		
Bredasdorp	WOF/PDMC	Spotter		
Bredasdorp	WOF/PDMC	Huey		
Stilbaai	WOF/PDMC	Spotter		
Denneoord George	WOF	Spotter		
Denneoord George	WOF	Spotter		
Denneoord George	WOF	Spotter		
Denneoord George	WOF/PDMC	AT 802		
Denneoord George	WOF	AT 802		
Denneoord George	WOF	Huey		
Denneoord George	WOF	Spare Huey		
Tsitsikamma	ECUFPA/MTO	Spotter (St. Francis)		
Tsitsikamma	ECUFPA/MTO	Huey (Witelsbos)		

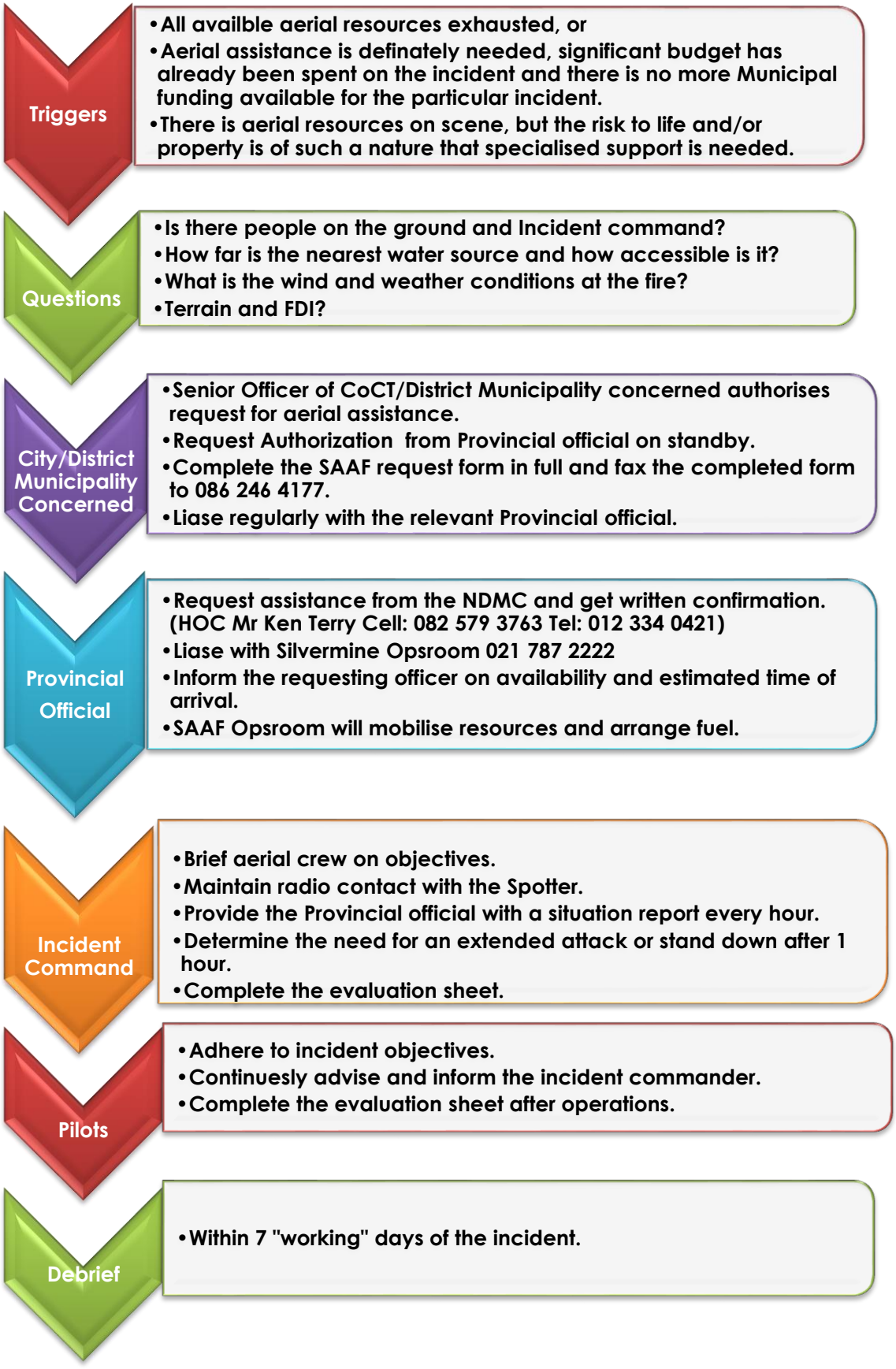
ANNEXURE J1

PROVINCIAL AERIAL ASSISTANCE REQUEST FLOWCHART



ANNEXURE J2

SAAF AERIAL ASSISTANCE REQUEST FLOWCHART



ANNEXURE K1

PROVINCIAL STANDBY ROSTER 1 DECEMBER 2019-1 JANUARY 2020

Date	Day	Standby Official	Phone
01-Dec-2019	Sunday	Etienne/Marlu	073 995 1609 / 071 481 9437
02-Dec-2019	Monday	Etienne/Marlu	073 995 1609 / 071 481 9437
03-Dec-2019	Tuesday	Etienne/Marlu	073 995 1609 / 071 481 9437
04-Dec-2019	Wednesday	Etienne/Marlu	073 995 1609 / 071 481 9437
05-Dec-2019	Thursday	Etienne/Marlu	073 995 1609 / 071 481 9437
06-Dec-2019	Friday	Etienne/Marlu	073 995 1609 / 071 481 9437
07-Dec-2019	Saturday	Etienne/Marlu	073 995 1609 / 071 481 9437
08-Dec-2019	Sunday	Etienne/Marlu	073 995 1609 / 071 481 9437
09-Dec-2019	Monday	Etienne/Marlu	073 995 1609 / 071 481 9437
10-Dec-2019	Tuesday	Etienne/Marlu	073 995 1609 / 071 481 9437
11-Dec-2019	Wednesday	Etienne/Marlu	073 995 1609 / 071 481 9437
12-Dec-2019	Thursday	Etienne/Marlu	073 995 1609 / 071 481 9437
13-Dec-2019	Friday	Etienne/Marlu	073 995 1609 / 071 481 9437
14-Dec-2019	Saturday	Etienne/Marlu	073 995 1609 / 071 481 9437
15-Dec-2019	Sunday	Etienne/Marlu	073 995 1609 / 071 481 9437
16-Dec-2019	Monday	Etienne/Marlu	073 995 1609 / 071 481 9437
17-Dec-2019	Tuesday	Etienne/Marlu	073 995 1609 / 071 481 9437
18-Dec-2019	Wednesday	Etienne/Marlu	073 995 1609 / 071 481 9437
19-Dec-2019	Thursday	Etienne/Marlu	073 995 1609 / 071 481 9437
20-Dec-2019	Friday	Marlu	071 481 9437
21-Dec-2019	Saturday	Marlu	071 481 9437
22-Dec-2019	Sunday	Marlu	071 481 9437
23-Dec-2019	Monday	Marlu	071 481 9437
24-Dec-2019	Tuesday	Marlu	071 481 9437
25-Dec-2019	Wednesday	Marlu	071 481 9437
26-Dec-2019	Thursday	Marlu	071 481 9437
27-Dec-2019	Friday	Marlu	071 481 9437
28-Dec-2019	Saturday	Marlu	071 481 9437
29-Dec-2019	Sunday	Marlu	071 481 9437
30-Dec-2019	Monday	Etienne/Marlu	073 995 1609 / 071 481 9437
31-Dec-2019	Tuesday	Etienne/Marlu	073 995 1609 / 071 481 9437

Contact details for Support Staff: Amanda - 063 604 9021 & Rowina - 074 522 0900

ANNEXURE K2

PROVINCIAL OFFICIAL: CONTACT FOR AUTHORISATION

Western Cape Government
Local Government

Etienne Du Toit
Deputy Director: Fire Brigade Services

Tel: +27 (0)21 937 6357 **Fax:** +27 (0)21 931 9031
Cell: +27 (0)73 995 1609 **www.westerncape.gov.za**
Etienne.DuToit@westerncape.gov.za
Tygerberg Hospital, Francie van Zijl Drive, Parow, 7500

Alternative contact details if neither of the above officials are available:

Western Cape Government
Local Government

Mr Colin Deiner
Chief Director: Disaster Managment and
Fire Brigade Services

Tel: +27 (0)21 937 6308 **Fax:** +27 (0)21 931 9031
Cell: +27 (0)82 550 6770 **www.westerncape.gov.za**
Colin.Deiner@westerncape.gov.za
Tygerberg Hospital, Francie van Zijl Drive, Parow, 7500

ANNEXURE K3

SAAF AUTHORISATION REQUEST FORM

CHIEF DIRECTORATE DISASTER MANAGEMENT AND FIRE & RESCUE SERVICES
TEL: 082 456 7182 or 073 995 1609 or 081 756 4483 **FAX: 086 246 4177**

DATE:	***ORGANISATION / SERVICE***							***Reference***			
1. ASSISTANCE REQUESTED - PERSON BY NAME											
ORGANISATION / DISTRICT MUNICIPALITY											
CONTACT TEL. OR FAX No.								ACCOUNT FOR :			
2. ASSISTANCE REQUIRED FROM:	**CITY/PGWC**		**TMNP**		***CN/MTO/ WOF***		**SANDF**		**DATE REQ**		
AERIAL FIRE FIGHTING (SEE 11)							YES	NO			
TROOPING, No. OF FIRE FIGHTERS/HANDLERS TO BE AIRLIFTED (HAZMAT Form 1)							YES	NO	No.		
RECONNAISSANCE - SPOTTER							YES	NO	ONLY		
FIXED WING BOMBER							YES	NO	No.		
EQUIPMENT REQUIRED TO BE TRANSPORTED (HAZMAT Form 1)							YES	NO	Kg		
3. LOCATION OF FIRE INCIDENT											
FIRE COMMAND NAME:							MAP No. [1:50 000] REF. NUMBER:				
PLACE NAME:											
LZ [JOC BRIEFING SITE]											
POSITION [LAT & LONG]				° S		° E		° W			
4. EXTENT OF FIRE - SITUATION REPORT:											
FDI YELLOW OR ABOVE		YES	NO	SUFFICIENT WATER SUPPLIES AVAILABLE					YES	NO	
GROUND TEAMS DEPLOYED		YES	NO	FLYING CONDITIONS SUITABLE					YES	NO	
SUFFICIENT DAYLIGHT HOURS		YES	NO	VISIBILITY SUFFICIENT FOR AERIAL OPS?					YES	NO	
DISASTROUS POTENTIAL		YES	NO	WILL USE REDUCE SPREAD/SEVERITY					YES	NO	
POTENTIAL THREAT:	LIFE	YES	NO	PROPERTY	YES	NO	ENVIRONMENT		YES	NO	
5. VEGETATION OR TERRAIN TYPE - MOUNTAIN CATCHMENT AREA								**YES NO**			
VEGETATION:							TERRAIN:				
6. FIRE/HAZMAT INCIDENT HAZARD POTENTIAL: (WEATHER CONDITIONS ON SCENE)											
VISIBILITY				CLOUD				WIND			
7. PROXIMITY & TYPE OF WATER SOURCE (Type & distance from fire)											
DAM Km			RIVER Km		SEA Km		CANAL Km		OTHER		

8. LIAISON OFFICERS (Name & Telephone Number)					
INCIDENT CMDR		Tel:	AIR ATTACK BOSS		Tel:
FIRE BOSS		Tel:	DUTY OFFICER		Tel:
9. FUEL ORDERED/ARRANGED			YES		NO
ORDERED BY:		SENT TO:			
10. AIR to GROUND COMMUNICATIONS	**Type & frequency** **AERIAL PORTABLE/MOBILE AVAILABLE YES NO**		**Are radios required?**	YES NO	No.
11 DISPATCH PROCEDURES – AIRCRAFT NUMBERS REQUIRED PERIOD REQUIRED __ HRS **LARGE (Mi8) MEDIUM (B205) SMALL (Alouette) NUMBER SPOTTER**					
LOCAL PROCEDURE WoF AIRCRAFT	1. Actuate aircraft when locally approved or by City of Cape Town.		2. Confirm automatic Spotter actuated by WoF.		
12 APPROVAL: NDMC	NDMC APPROVAL _____ DATE _____ REFERNCE NUMBER _____ DATE _____				
OTHER PROCEDURE PROVINCIAL AREA SANDF AIRCRAFT	1. Request approval from Province as per protocol. 2. Once approval confirmed by Province immediately actuate response for other aircraft/ SANDF. 3. Immediately actuate Spotter response.				
13. AUTHORISATION (VALID FOR ONE DAY ONLY) **NAME: (Print)** _____ **DESIGNATION:**_____ **SIGNATURE:** _____ DATE: _____ TIME: _____					

ANNEXURE L

Fire Name _____ Time Fire Started _____

Date Fire Started _____ Date and Time Fire Contained _____

NATIONAL STATISTICAL FIRE REPORT FORM

INFORMATION SUPPLIED BY:

Full Name _____ E-mail address _____

Contact Tel Number _____ Cell number _____

ORIGIN OF FIRE:

Cross National Border | YES | NO | Please mark with an **X**

If YES - Country of origin _____

Local | YES | NO | Please mark with an **X**

Local municipality	FPA	Registered farm / Property name	Registered farm /Property nr

GPS CO-ORDINATES - position of origin of fire: OPTIONAL

Latitude ° ' " SOUTH

Longitude ° ' " EAST

CAUSE OF FIRE:

Successful prescribed burn: | YES | NO | Please mark with an **X**

If **NO** (prescribed burn) complete the following: Please mark with an **X**

Cause of Uncontrolled Fire:

MECHANICAL	TRAIN	CHAIN SAW	POWER LINE	POWER TOOL	WELDING	BLASTING	HEAVY EQUIPMENT	FIRE ARMS

ACCIDENTAL OR ALLEGED NEGLIGENCE	CONTRACTOR	COOKING	WARMING	HONEY HUNTERS	CHILDREN	PICNICKER	VEHICLE ACCIDENT	NEIGHBOURS	

OWN PRESCRIBED BURNING	FIRE BREAKS	BRUSH WOOD	CROP RESIDUE	REFUSE DUMP	SUGAR CANE	VELD/ GRAZING	FLARE-UP	BLOCK BURN	TRACE BURNING

NATURAL CAUSE	LIGHTNING	STATIC	ELECTRICITY	FALLING ROCKS	OTHER

Accuracy of Ignition	Definite		Probable		UNKNOWN		ALLEGED ARSON

WEATHER AT START OF FIRE: (IF AVAILABLE)

FDI Please mark with an **X:**

BLUE	GREEN	YELLOW	ORANGE	RED

Temperature Degrees Celsius	**°C**
Relative Humidity %	**%**

WIND

Wind Speed _____ Km/h

Wind Direction	**N**	**NE**	**E**	**SE**	**S**	**SW**	**W**	**NW**

SUPPRESSION COST:

Manpower ---------- R _____

Transport----------	R
Aircraft----------	R
Other----------	R
Total Cost	**R**

OFFICIAL USE:

Type of resources lost as a result of the fire

Where there any human casualties or loss of life? | YES | NO | Please mark with an **X**

If YES - amount _____

NATURAL VEGETATION IF APPLICABLE

Description	HA Burnt	Estimated Value

AGRICULTURE/FORESTRY IF APPLICABLE

Description	HA Burnt	HA Lost	Estimated Value

STRUCTURES

Description	QTY	Estimated Value

LIVESTOCK

Description	QTY	Estimated Value

TOOLS/EQUIPMENT

Description	QTY	Estimated Value

IRE REPORTED TO:

SA POLICE SERVICES	YES	NO
STATION		
REF. NR DATE		

ANNEXURE M

INCIDENT ORGANIZER

Situation Report

Incident Name: **Location:** **Incident Number:** **Incident Type:** **Grid Reference:**	**Shift:** **Date:** **Hours:**

Assessment: Current Situation (Note any critical issues & assumptions made)

Action Taken: (Consider Progress)

Factors: (Weather and other factors or limitation should be noted including resource status)

Predicted Incident Development: (Note how this situation is expected to evolve)

Resource Summary

Resources Ordered (hrs)	Resources Type & Name Call Sign	ETA (hrs)	Arrival (hrs)	Location/Assignment/Comment	Time Released (hrs)

Completed by: **Date:**

Position: **Time:**

Hints for Successful Incident Management:

- Keep records
- Plan ahead
- Set up a Command and Control structure
- Delegate functions
- Develop and update Incident Action Plans
- Brief Personnel
- Sectorise the incident
- Give regular Situation Reports
- Plan Changeovers
- Have effective Communications

Safety First, Every Job, Every time **(L.A.C.E.S.)**

Situation Report:

	Prepared & Communicated:	**Time:**
On Arrival		
+ 1 hr		
+ 2 hrs		
+ 3 hrs		
+ 4 hrs		
+ 5 hrs		

Incident Action Plan

Incident Objective / Aim: (Analyse and consider all options before setting plan to achieve desired outcome)

Strategy / Strategies: (Plan of Action to meet Incident Objective/ Aim)

Tactics: (Specific actions to achieve incident strategy/s)

Tasks: (Allocation of work. Who must do what and by when)

Date: **Period:**

Prepared by: **Position:**

Incident Map

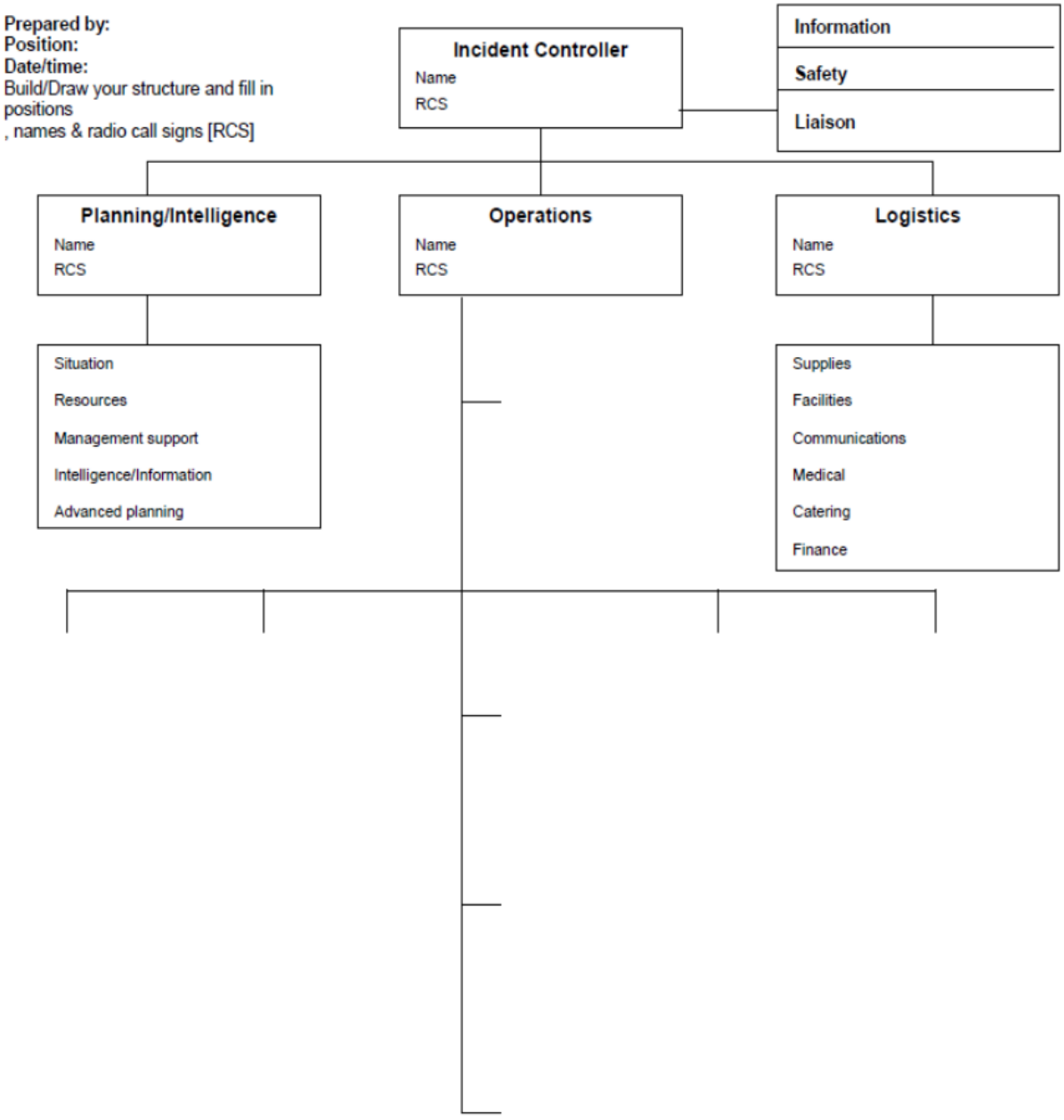
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
																		1
																		2
																		3
																		4
																		5
																		6
																		7
																		8
																		9
																		10
																		11
																		12
																		13
						North												14
																		16
																		17

Map Legend:

Incident Control Point	ICP
Assembly Area	AA
Staging Area	SA
Safe Forward Point	SFP
Helibase	HB
Helipad	HP
Other	

Incident Management Structure

Prepared by:
Position:
Date/time:
Build/Draw your structure and fill in positions
, names & radio call signs [RCS]



Operational Tasking

Sector	Resource	Task	Grid	Tasked at hrs

Log of Actions		Date:
Time		**Initials**

Completed by: _____

(All log entries are to be completed in pen. Record time of each entry. Do not leave blank lines between entries. Sign off entries)

Page ____of _____

Communication Plan: Radio channels and frequencies:	
Command:	
Tactical:	
Support:	
Ground to Air:	
Air to Air:	

ANNEXURE N

INCIDENT ACTION PLAN

1. Incident Name	2. Operational Period Date Time	IAP COVER SHEET

INCIDENT ACTION PLAN

The items checked below are included in the incident Action Plan

- ☐ SITUATION REPORT
- ☐ INCIDENT OBJECTIVES
- ☐ ORGANISATIONAL LIST
- ☐ SECTOR ASSIGNMENT
- ☐ DIVISIONAL ASSIGNMENT
- ☐ AIR OPERATIONS PLAN
- ☐ COMMUNICATION PLAN
- ☐ SAFETY PLAN
- ☐ MEDICAL PLAN
- ☐ FIRE MAP
- ☐ WEATHER FORECAST AND MAP
- ☐ FIRE BEHAVIOUR FORECAST
- ☐ 14.1.1.1.1 FACILITIES LAYOUT PLAN

3. Approved by Incident Commander: Name	Signed	Date/Time

1. **Incident Name**	**2. Operational Period** Date Time	**SITUATION REPORT**
3. Location	**4. Vegetation** Plantation/Mountain fynbos/Coastal fynbos /Grass/Slash/Alien veld Other:	**5. 1:50000 Map ref./GIS ref.**
6. Assessment		
7. Action taken		
8. Factors		
9. Predicted Incident Development		
10. Prepared by:	**Date/Time**	

1. Incident Name	2. Operational Period Date Time	**INCIDENT OBJECTIVES**

3. Overall Incident Objectives

4. Objectives for specified Operational Period

5. Prepared by:	Date/Time

1. Incident Name	2. Operational Period Date	**ORGANISATION LIST**

	Time		

3. Command Staff	Phone	Cell Phone	Radio Ch
Incident Commander			
Deputy IC			
Information Officer			
Safety Officer			
Liaison Officer			

4. Agency Representative	Phone	Cell Phone	Radio Ch
Lead Agency			
Agency			
Agency			
Agency			

5. Planning Section	Phone	Cell Phone	RadioCh
Planning Section Chief			
Situations Unit			
Resources Unit			
Management Support Unit			
Information Unit			
Advance Planning Unit			
Technical Specialists Unit			

6. Logistics Section	Phone	Cell Phone	Radio Ch
Logistics Section Chief			
Supply Unit			
Catering Unit			
Facilities Unit			
Finance Unit			
Communications Unit			
Medical Unit			

7. Operations Section		Phone	Cell Phone	Radio Ch
Operations Section Chief				
Deputy Operations Manager				
Division One Commander				
Sector A Supervisor				
Sector B Supervisor				
Sector C Supervisor				
Sector D Supervisor				
Division Two Commander				
Sector E Supervisor				
Sector F Supervisor				
Sector G Supervisor				
Sector H Supervisor				
Air Division Commander				
Air Attack Supervisor				
Air Support Supervisor				
8. Prepared by:		**Date/Time**		

1. Incident Name	2. Operational Period Date Time	**SECTOR ASSIGNMENT**
3. Sector	**4. Description**	**5. Division Assigned**

6. Sector Supervisor *Affiliation* *Phone* *Radio Ch*

7. Resources Assigned this period

Resource/Crew	*Leader*	*# Persons*	*Transport Required*	*Drop-off Point/time*	*Pickup Point/time*

8. Sector Assignment / Special Instructions

9. Sector Communications *Phone* *Radio Ch*

Division/Division Cmdr			
Air Attack Supervisor			
Safety Officer			

10. Prepared by: **Date/Time**

1. Incident Name	2. Operational Period Date Time	**DIVISION ASSIGNMENT**
3. Division	**4. Description**	

5. Division Commander	***Affiliation***	***Phone***	***Radio Ch***

6. Resources Assigned this Period

Sector	***Supervisor***	***Crews***	***Radio Ch***

7. Division Assignment/Special Instructions

8. Division Communications		***Phone***	***Radio Ch***
Operations Manager			
Air Division Commander			

9. Prepared by:	**Date/Time**

1. Incident Name	2. Operational Period Date Time	**AIR OPERATIONS PLAN**

3. Personnel and Communications

Position	Name	Affiliation	Phone	Radio Chan
Air Div Commander				
Air Attack Supervisor				
Air Support Supervisor				
Lead Helicopter Pilot				
Lead Fixed-Wing Pilot				

4. Air Resource Assignments

Pilot Name/ Company	Aircraft Type	Reg or Call sign	Assignment	Tactical Freq/Chan	Telephone Numbers
					Onboard: Company
					Onboard: Company
					Onboard: Company
					Onboard: Company
					Onboard: Company
					Onboard: Company
					Onboard: Company
					Onboard: Company

5. Location of Filling Points/Service Areas

Name	Grid Reference

6. Safety Notes / Hazards / Radio Coverage Limitations

7. Air Operations Special Equip or Service

8. Prepared by:	Date/Time

1. Incident Name	2. Operational Period Date Time	**COMMUNICATIONS PLAN**

3. Radio Channels

Assigned to	*Function*	*Channel*	*Frequency*	*System*

4. Telephone

Assigned to	*Landline*	*Cell phone*	*Fax*	*Comments*

6. Other (e.g. email, Satphone, etc)

7. Prepared by:	**Date/Time**

1. Incident Name	**2. Operational Period** Date Time	**SAFETY PLAN**

3. General Safety Points

Everyone is to be signed in and out of the fire ground through the Incident Control Point for both safety check and payment records.

Maintain regular situation reports (containing all relevant information) via line supervisors.

LACES	***Fire Orders***	***Watch-outs***
L *- Lookout(s)* **A** – Awareness – Anchor Point(s) **C** – *Communication(s)* **E** – Escape Route(s) **S** – Safety Zone(s)	1. conditions and forecasts 2. Know what your fire is doing at all times. 3. Base all actions on current and expected fire behaviour of the fire. 4. Identify escape routes and safety zones and make them known. 5. **Post** lookouts when there is possible danger. 6. **S**tay alert. Keep calm, think clearly, act decisively. 7. Maintain prompt communication with your crew/s, your supervisor and adjoining crews. 8. Give clear instructions and ensure they are understood. 9. Maintain control of your crew/s at all times. 10. Fight fire aggressively having provided for safety first.	1. Fire size is unknown (no size up). 2. Unfamiliar territory 3. Safety zones and escape routes not identified. 4. Unfamiliar with weather and local factors influencing fire behaviour. 5. No communications link with crew members or supervisor. 6. Instructions and assignments not clear. 7. Weather is getting hotter, drier and relative humidity dropping 8. Wind increases and/or changes direction. 9. Getting frequent spot fires across the line 10. Working uphill or down wind of a fire 11. Working on a steep slope 12. Working in rugged terrain 13. Can't see main fire 14. In unburnt vegetation 15. Walking through hot ashes 16. Working alone 17. Getting tired 18. Working near power lines 19. Working near machinery 20. Working w ith aircraft 21. Working around trees or spars

4. Specific Safety Points

5. Prepared by:	**Date/Time**

1. Incident Name	2. Operational Period Date Time	**MEDICAL PLAN**

3. First Aid Station *Name*	*Location*	*Phone/Radio Channel*	*Paramedics available at Station*

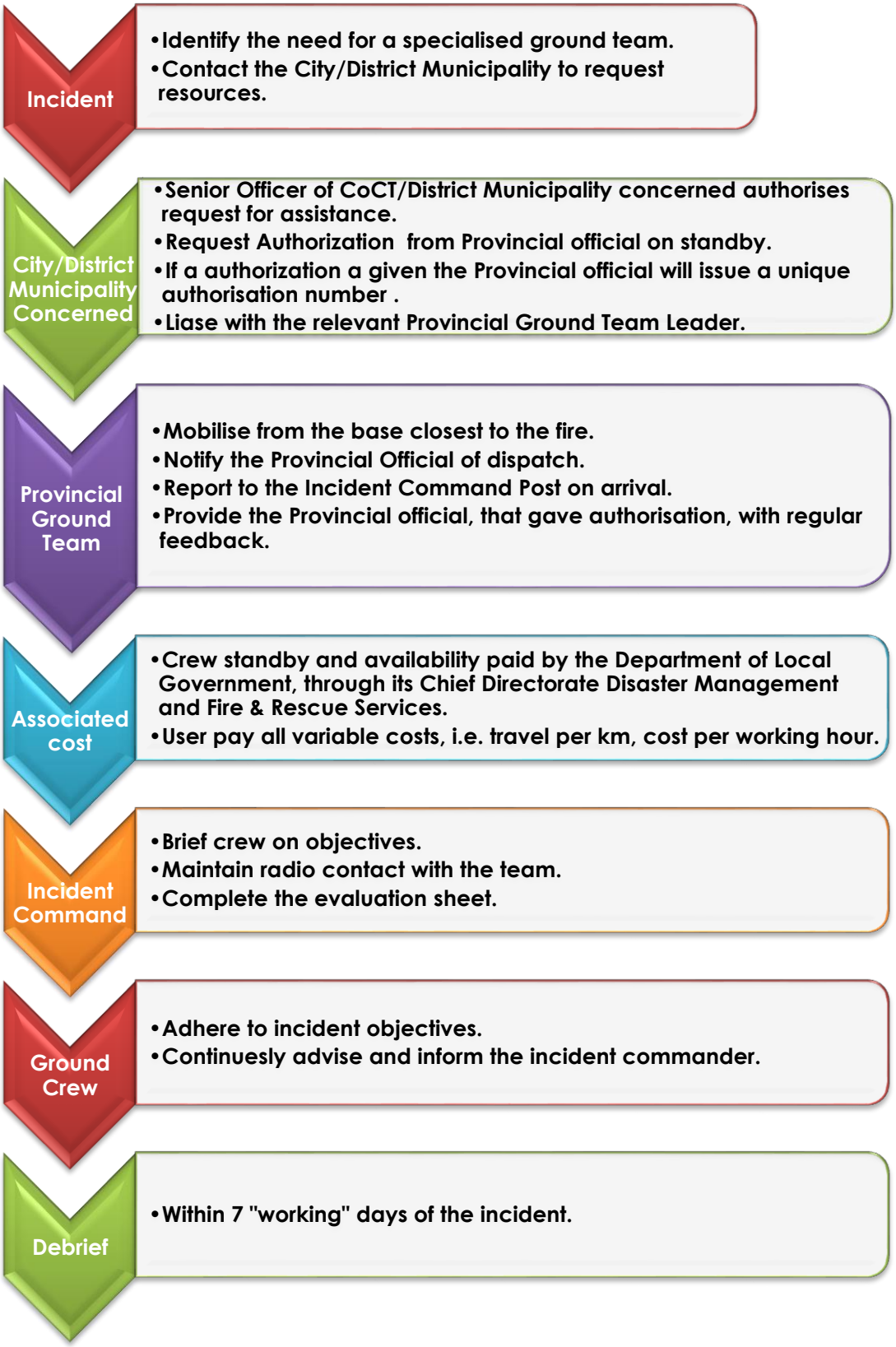
4. Transportation *Ambulance Service*	*Address*	*Phone/Radio Channel*	*Paramedics available with Ambulance*

5. Hospitals *Hospital Name*	*Address*	*Phone*	*Travel Time* Road	Air	*Burn Unit*	*Heli Pad*

6. Special Emergency Procedures	
7. Prepared by:	**Date/Time**
8. Reviewed by Safety Advisor:	**Date/Time**

ANNEXURE O

PROVINCIAL GROUND TEAM REQUEST FLOWCHART



ANNEXURE P

SPOKESPERSON AND MEDIA COMMUNICATION

The fire season is here. Only authorised Public Information Officers may issue media releases and speak with members of the media regarding a veld / wild land fire in the province. Our current spokespeople are:

Name	Main Responsibility	Area Code	Tel (Landline)	Cell	Fax	Email	Website
Western Cape Disaster Management & Fire Brigade Services							
Colin Deiner	Public Information Officer	021	937 6301	082 550 6770	931 9031	Colin.Deiner@westerncape.gov.za	http://www.westerncape.gov.za/your_gov/1219
City of Cape Town Fire & Rescue							
Theo Layne	Media Liaison	021	590 1788 / 1900	079 059 1090	086 576 0783	Theodore.Layne@capetown.gov.za	www.capetown.gov.za/fireandrescue
West Coast District							
Bertus Senekal	Chief Fire Officer	022	4338700	083 236 4588	433 8875	bsenekal@wcdm.co.za	www.westcoastdm.co.za
Cape Winelands District							
Wayne Josias	Communication Services	021	888 5310	082 300 4544	882 8190	waynej@capewinelands.gov.za	www.capewinelands.gov.za
Overberg District							
Reinhard Geldenhuys	Chief Fire Officer	028	4251690	083 273 8234	424 2748	rgeldenhuys@odm.org.za	www.overberg.co.za
Garden Route District							
Wouter Jacobs Gerhard Otto	Public Information Officer Senior Manager Emergency Service	044 044	803 1435 803 5071	083 530 4307 083 630 2602	086 614 4228	wouter@gardenroute.gov.za gerhardo@gardenroute.gov.za	www.gardenroute.gov.za
Central Karoo District							
Hein Rust	Manager	023	449 1000	082 925 7953	415 1253	hein@skdm.co.za	www.skdm.co.za

Curvin Alexander	Chief Fire Officer			071 869 3235			
Working on Fire							
Limakatso Khlianyane	PRO	021	761 1992	065 976 6949		limakatso.khalianyane@wofire.co.za	www.workingonfire.org
Cape Nature							
Loren Pavitt	Head Communications	021	483 0077	071 688 2649		lpavitt@capenature.co.za	www.capenature.co.za
SA National Parks							
Merle Collins	Communications Manager	021	689 4441	072 627 3910	685 5944	merle.collins@sanparks.org	www.sanparks.co.za
Philip Prins	Fire Manager	021	689 7438	083 961 5046		philip.prins@sanparks.org	

On Scene: If you are a bona fide member of the media and would like to have access on the scene of a fire incident, please ensure that you report to the Public Information Officer or Incident Commander on scene.

DISTRICT EMERGENCY CENTRES (24 HRS)

City of Cape Town	021 480 7700
Overberg District Municipality	028 425 1690
West Coast District Municipality	022 433 8700
Garden Route District Municipality	044 805 5071
Central Karoo District Municipality	023 414 2603
Cape Winelands District Municipality	021 887 4446
ALL EMERGENCIES	CELL: 112