Western Cape Government

Local Government

WORKSHOP ON IMPROVING VELD FIRE RESPONSE PLANNING

Western Cape Province
Chief Directorate Disaster management and Fire Brigade Services

INTRODUCTION

Introduction

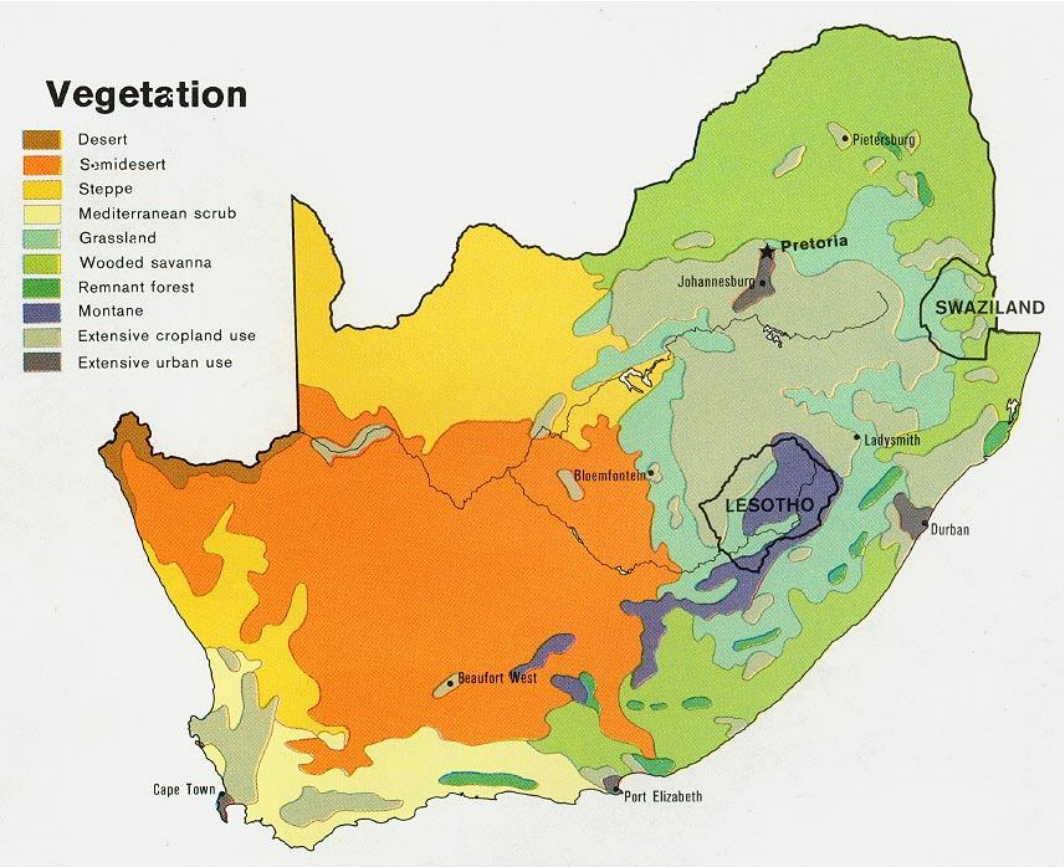
This presentation will focus on the following key areas:

- Background.
- The risk.
- The plan.
- Focus areas
- Financial implications
- Moving forward.

Background

Background

The Western Cape Province, with the exception of the dry regions of southern Namaqualand in the north and the Central Karoo district, is prone to the regular occurrence of veldfires.



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Background

Western Cape Fire Weather Zones

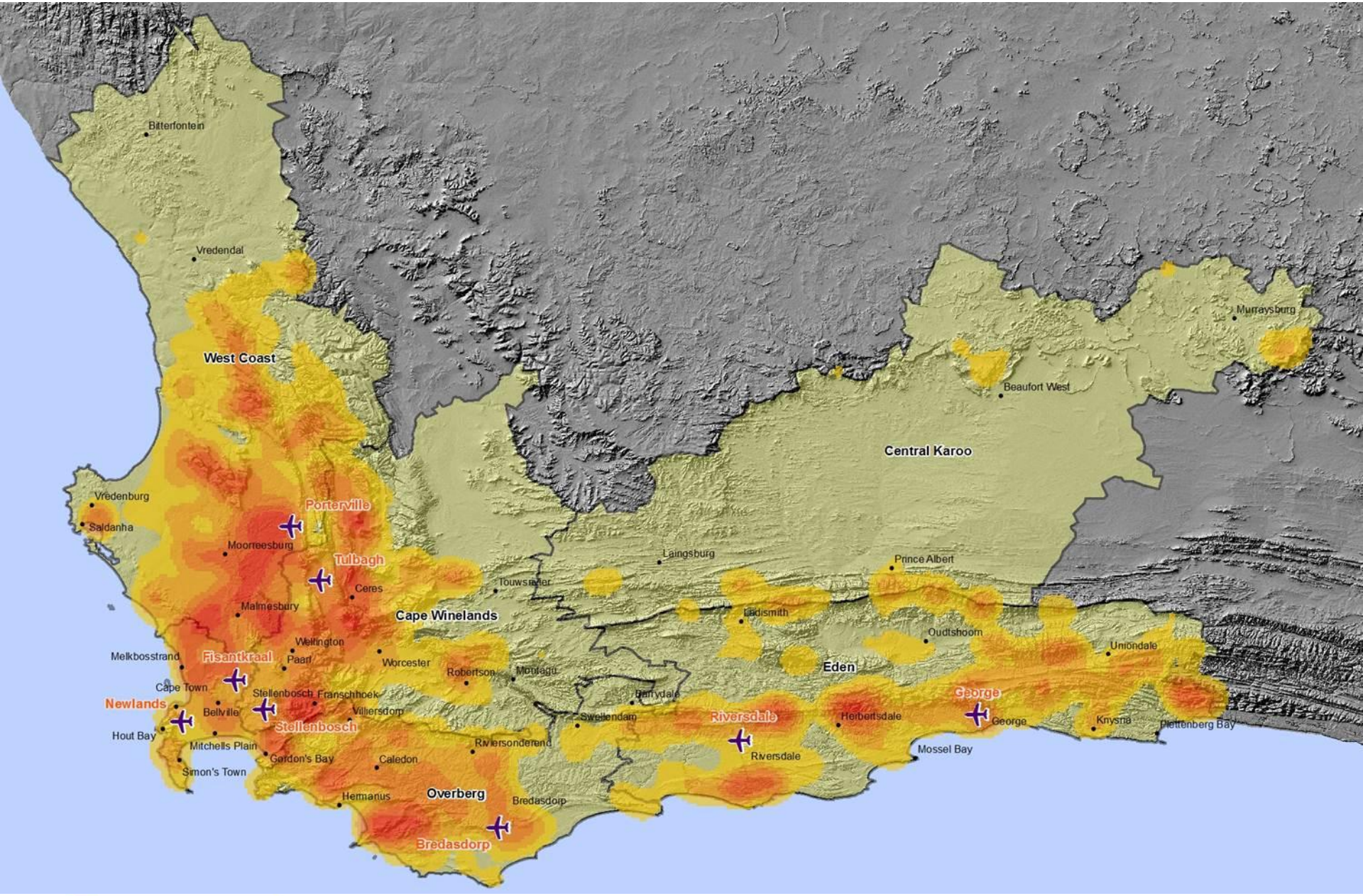
On the basis of the effects of weather variables on fuel moisture, Van Wilgen (1984) identifies five distinct fire climate zones for the Western Cape. These zones are:

- Western coastal zone: veldfires are most likely to occur under extreme conditions of high temperature, low relative humidity and high winds in **summer**.
- Western Cape inland zone north of Langeberg including Hex River and Breede River valleys: high mean potential for fire in **summer.**
- South-western coastal zone: veldfires most likely under extreme conditions in **summer and occasionally in winter** under berg wind conditions.
- Eastern inland zone: potential peak in **summer.**
- South-eastern coastal zone: veldfires under occasional suitable conditions in either **summer or winter**; winter berg winds are important.

Background

- The Western Cape is globally recognized as a biodiversity hotspot and offers a home to 66% of critically endangered ecosystems in the entire country.
- The mountain catchment areas in the Western Cape cover 9% of the province, but are the source of 60% of the water resources of the whole region.
- The spread of uncontrolled fires and alien plant invasion poses the biggest threat to the regions fynbos biome and water catchment areas.
- Fire data suggests a marked increase in the size of fires as well as an increase in the frequency of fires in the province over the past 15 years.
- The tendency of fires to occur on decreased intervals (less than 6 years) in specific areas, like the Boland Mountain range, places a risk on the province's biodiversity and threaten the livelihood of certain species like Protea Stokoei.

The Risk



Bitterfontein
Vredendal
West Coast
Vredenburg
Saldanha
Porterville
Moorreesburg
Tulbagh
Ceres
Malmesbury
Cape Winelands
Wellington
Paarl
Melkbosstrand
Fisantkraal
Worcester
Robertson
Montagu
Cape Town
Stellenbosch
Franschhoek
Newlands
Bellville
Villiersdorp
Stellenbosch
Hout Bay
Mitchells Plain
Gordon's Bay
Caledon
Simon's Town
Riviersonderend
Hermanus
Overberg
Bredasdorp
Bredasdorp
Touwsrivier
Laingsburg
Prince Albert
Ladismith
Oudtshoorn
Eden
Barrydale
Swellendam
Riversdale
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George
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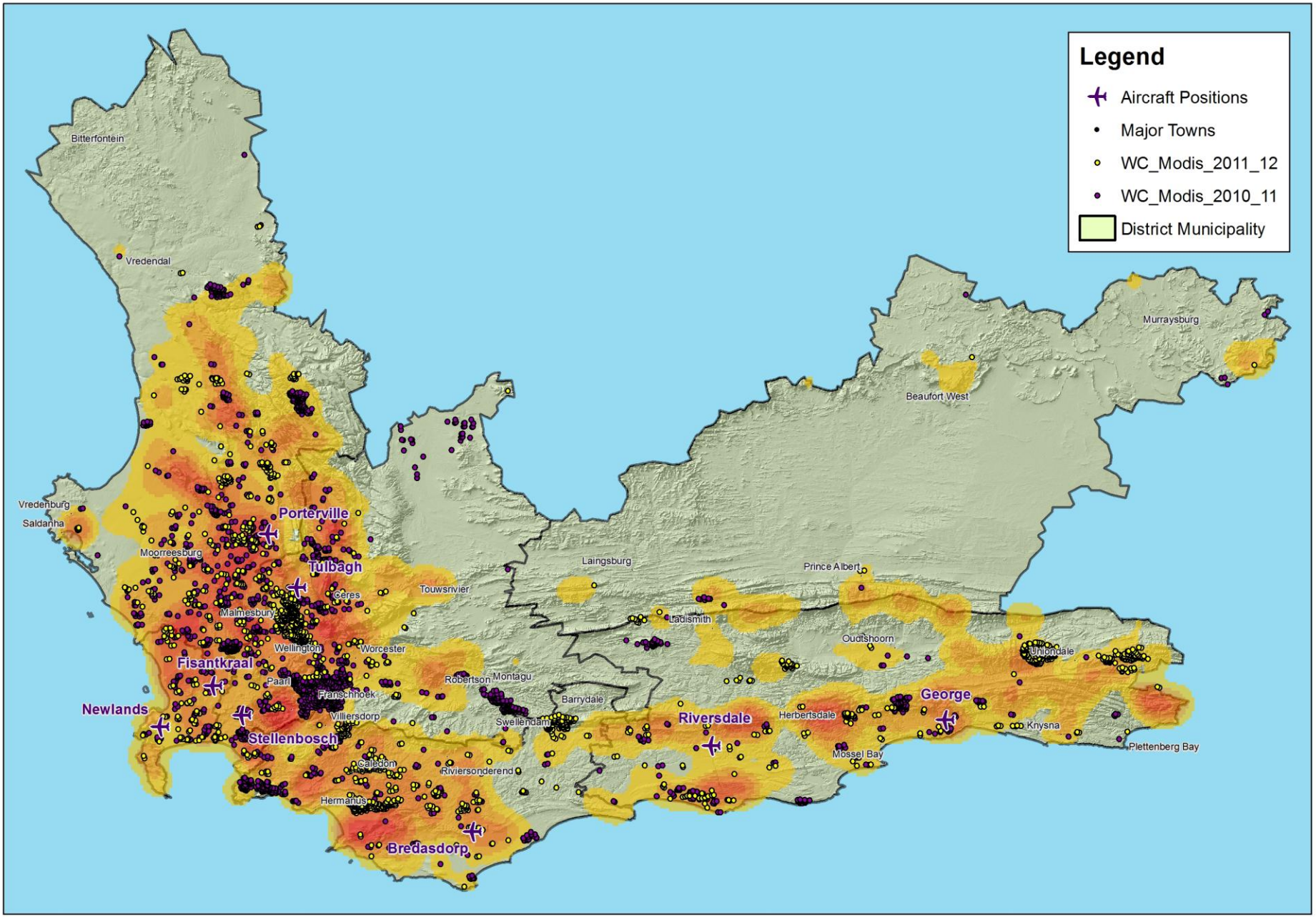
Mossel Bay
Knysna
Plettenberg Bay
Uniondale
Central Karoo
Beaufort West
Murraysburg


Legend
Aircraft Positions
Major Towns
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WC_Modis_2010_11
District Municipality
Bitterfontein
Vredendal
Vredenburg
Saldanha
Moorreesburg
Porterville
Tulbagh
Ceres
Touwsrivier
Malmesbury
Wellington
Worcester
Fisantkraal
Paarl
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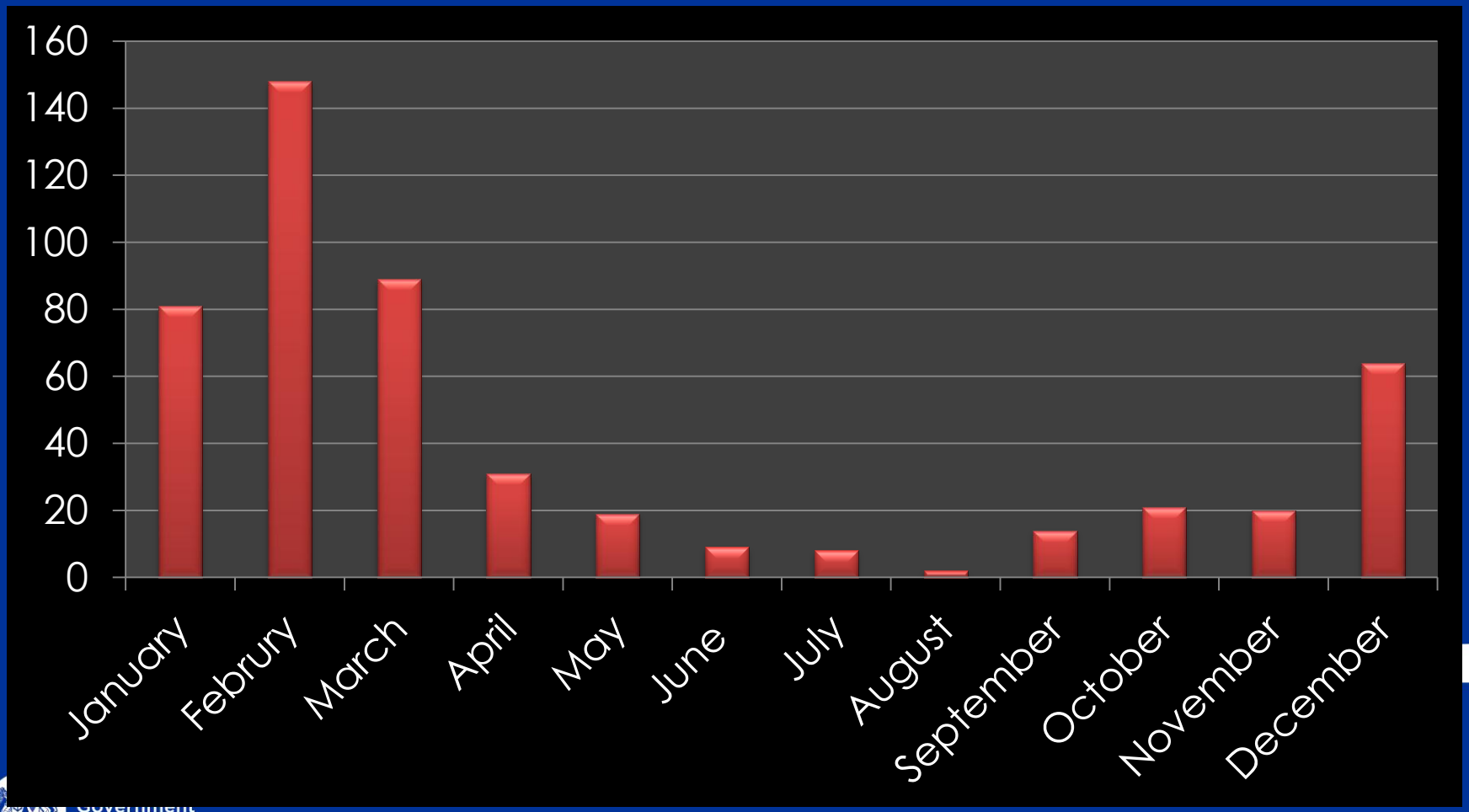
Oudtshoorn
Riversdale
Herbertsdale
Mossel Bay
George
Knysna
Uniondale
Plettenberg Bay
Beaufort West
Murraysburg

Fires per month



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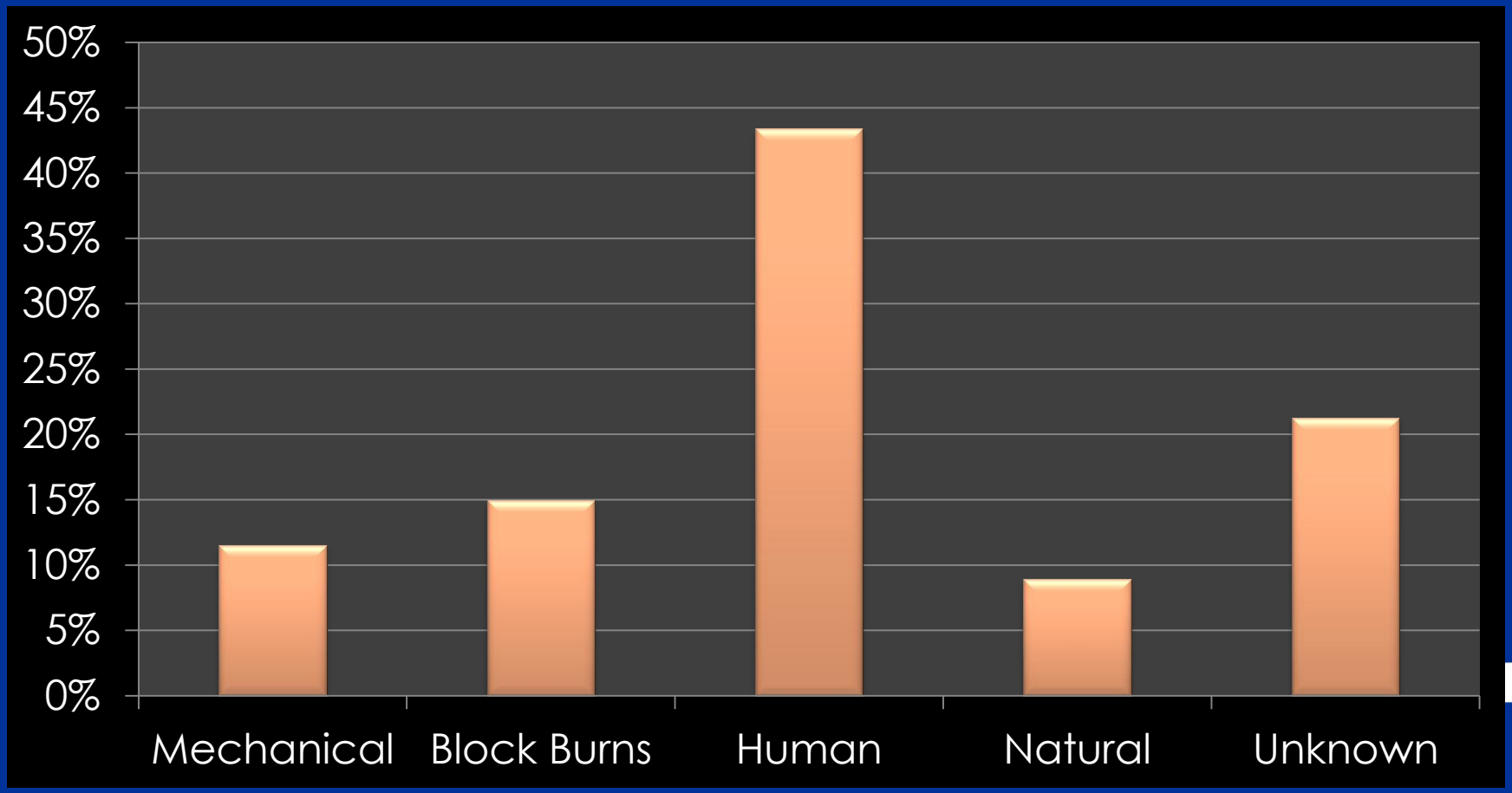
Ignition Sources



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The Plan

Proactive approach

Our approach to veld fires aim to ensure healthier natural ecosystems; preservation of catchment areas; communities that are less at risk from fire; and a more cost-effective fire suppression program. This can only be achieved by:

- Reducing fire hazards and risks (particularly in and around communities and other high-value areas);
- Developing a high level of public awareness and support for veld and forest fire management.;
- Monitoring and management, rather than suppressing, fires that are of minimal risk to communities, infrastructure or resource values;
- Integration of fire management into programs aimed at the reduction and control of invasive alien plant species.
- Minimizing the potential occurrence of ecological undesirable fires in fynbos ecosystems.
- Implementing land, natural resource, catchment area and community planning.

Integrated fire management objectives

Objective 1: To establish a well-co-ordinated early detection rapid response strategy that is financially sustainable.

Objective 2: To develop and maintain a Knowledge Management System, which can be used by all spheres of government and other agencies involved with fire management that will ensure well informed decisions relating to fire and fuel load management.

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Objective 3: To ensure the sustained availability of appropriate fire management resources so as to efficiently practice integrated fire management In terms of knowledge, personnel and equipment quality and quantity.

Integrated fire management objectives

Objective 4: To ensure a sustained budget so as to address the long term integrated fire management activities which include alien vegetation management.

Objective 5: To develop and strengthen effective partnerships with relevant government bodies, agencies, and departments as well as private entities so as to support integrated fire management.

Objective 6: To ensure that integrated fire management plans protect our critical infrastructure, natural ecosystems and catchment areas.

Objective 7: To develop awareness strategies that will raise the awareness of the importance of integrated fire management at an organizational, municipal and provincial level to reduce the incidence of ignitions and property loss

Focus areas

Focus areas

Prevention

-Active Awareness campaign
-Municipal By Laws
-No burn permits issued over high risk days
-Fuel load reduction

Protection

-Creation of fire buffer zones (WUI)
-Natural barriers identified and mapped
-Man made barriers identified and mapped
-Specific fire breaks created, maintained and mapped

Focus areas

Detection	-Early detection and reporting. -CCTV cameras (City, Eden district, Cape Pine plantations) -Public reporting through numbers and means promoted in awareness campaign. -AFIS satellite.
Primary response	-Landowners, FPA/FMU may include WoF team, as well as Local/District Municipality.
Secondary response	-District Municipality
Specialised response	-May occur during primary or secondary response phase ,normally in the form of aerial support.

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Overview of specialised support provided during 2011/12

For the period 1 December 2011 until 31 March 2012 the Provincial Disaster Management Centre provided a total of **24** aircraft, comprised of the following:

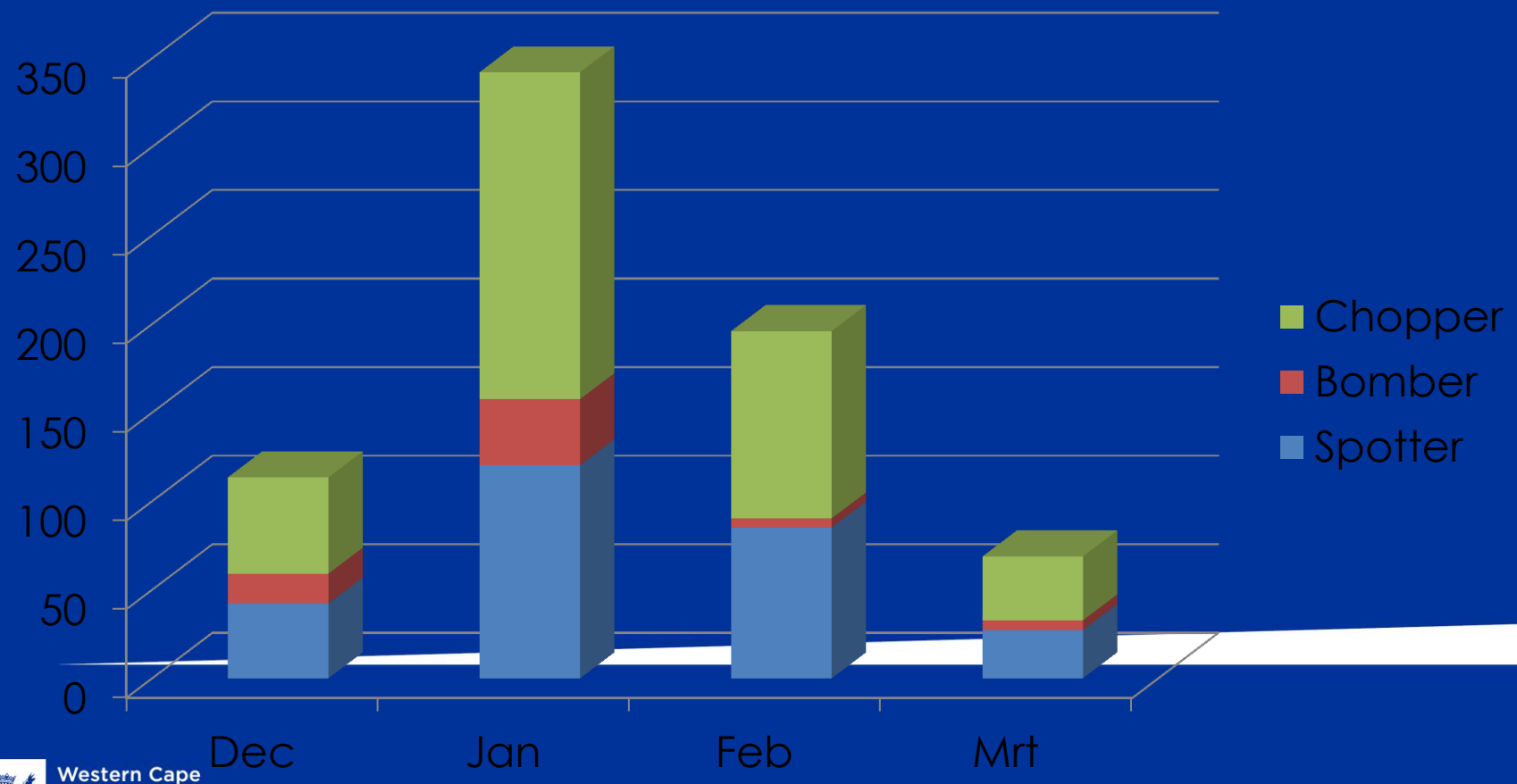
8 Spotters;

8 Fixed wing Bombers and,

8 Bell 205 (Huey) Helicopters

These aircraft were used on **78** occasions, the vast majority (**65**) were initial strike missions that resulted in the successful containment of the incipient fire within the first hour.

Hours flown Fire season 2011/2012



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Overview of specialized support provided for 2012/13

For the period 1 November 2012 until 31 March 2013 the Provincial Disaster Management Centre will again provide a total of **24** aircraft, comprised of the following:

8 Spotters;

8 Fixed wing Bombers and,

8 Bell 205 (Huey) Helicopters

These aircraft will again be used to provide the initial attack to all identified high risk areas on high risk days. (Red FDI)

The mobilization of these resources are controlled by the provincial Sub Directorate Fire Brigade Services. The province has a detailed aerial Fire Fighting plan including "call out" protocol.

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Intra Provincial Co-operation

- Provincial wide mutual aid agreement is currently in place between the City of Cape Town and the 5 District Municipalities.
- District Municipalities co-ordinate mutual aid in their areas of jurisdiction.
- The Province Government have MOU's with Cape Nature, the City of Cape Town and the 5 District Municipalities.

Requests for Mutual Aid will be coordinated by the PDMC with the City of Cape Town Fire Control Centre acting as nodal point.

Provincial Wildfire planning

Planning is performed on three levels:

- **Local level;** FPA's and Landowners perform specific risk planning and implement district planning initiatives. (Operational Level).

- **District level;** through the various District Fire Working Groups (DFWG)chaired by the District Chief Fire Officer. (Tactical Level).

- **Provincial level;** through the Provincial Fire Working Group (PFWG) the Western Cape Government serves as the secretariat for this group. The PFWG is a standing member of the Provincial Disaster Management Advisory Forum.

There are currently three sub Working Groups functioning within the PFWG namely;

- Aerial Fire Fighting Working Group (AFFWG).
- Incident Command Working Group (ICSWG).
- Ground operations Working Group (GOWG).

All District Municipality Chief Fire Officers are also members of the Western Cape Chief Fire Officers Committee.

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Inter Provincial Co-operation

- The Western Cape Working on Fire region have active MOU's with seven other Provinces to ensure the availability of 28 additional Working on Fire Teams should the need arise.
- These teams can be deployed to the Western Cape within 12 to 24 hours in the event of catastrophic or extended fire incidents.
- This arrangement will add nearly 500 trained Working on Fire personnel to the existing 30 Working on Fire teams currently based throughout the Western Cape.

The request for activation of these recourses will be channeled through the Provincial Disaster Management Centre.

All other requests for assistance from another Province or National agency will be channeled through the National Disaster Management Centre.

Placement of WoF Ground Teams

- Financial Implications

Financial Implications

- The total invoiced bill for aerial intervention, excluding Standing Charges, Chemicals and Runway Costs amounted to: **R3,1 million**
- This expense has been shared between the PDMC and both District and Municipal Fire Services
- The PDMC provide aerial fire-fighting support across the province to the amount of **R5,34 million**
- NDMC assisted with ferry costs to the value of **R 1,9 million**
- The PDMC authorised a total of **79** sorties during the period 01/11/11 – 30/03/12

- Recommendations

Thank you