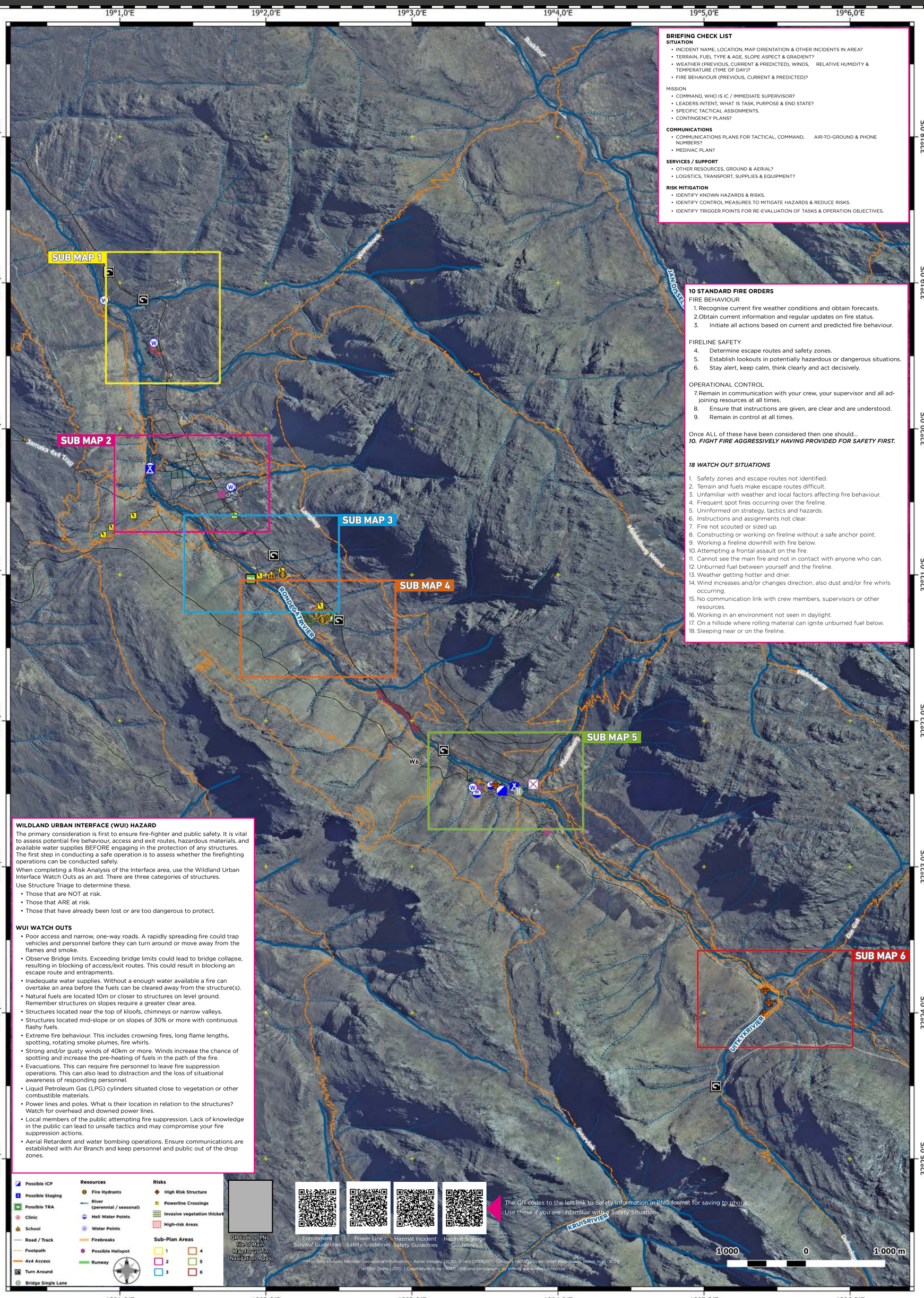

BRIEFING CHECK LIST

SITUATION

- INCIDENT NAME, LOCATION, MAP ORIENTATION & OTHER INCIDENTS IN AREA?
- TERRAIN, FUEL TYPE & AGE, SLOPE ASPECT & GRADIENT?
- WEATHER (PREVIOUS, CURRENT & PREDICTED), WINDS, RELATIVE HUMIDITY & TEMPERATURE (TIME OF DAY)?
- FIRE BEHAVIOUR (PREVIOUS, CURRENT & PREDICTED)?

MISSION

- COMMAND, WHO IS IC / IMMEDIATE SUPERVISOR?
- LEADERS INTENT, WHAT IS TASK, PURPOSE & END STATE?
- SPECIFIC TACTICAL ASSIGNMENTS.
- CONTINGENCY PLANS?

COMMUNICATIONS

- COMMUNICATIONS PLANS FOR TACTICAL, COMMAND, AIR-TO-GROUND & PHONE NUMBERS?
- MEDIVAC PLAN?

SERVICES / SUPPORT

- OTHER RESOURCES, GROUND & AERIAL?
- LOGISTICS, TRANSPORT, SUPPLIES & EQUIPMENT?

RISK MITIGATION

- IDENTIFY KNOWN HAZARDS & RISKS.
- IDENTIFY CONTROL MEASURES TO MITIGATE HAZARDS & REDUCE RISKS.
- IDENTIFY TRIGGER POINTS FOR RE-EVALUATION OF TASKS & OPERATION OBJECTIVES.

10 STANDARD FIRE ORDERS

FIRE BEHAVIOUR

1. Recognise current fire weather conditions and obtain forecasts.
2. Obtain current information and regular updates on fire status.
3. Initiate all actions based on current and predicted fire behaviour.

FIRELINE SAFETY

4. Determine escape routes and safety zones.
5. Establish lookouts in potentially hazardous or dangerous situations.
6. Stay alert, keep calm, think clearly and act decisively.

OPERATIONAL CONTROL

7. Remain in communication with your crew, your supervisor and all adjoining resources at all times.
8. Ensure that instructions are given, are clear and are understood.
9. Remain in control at all times.

Once ALL of these have been considered then one should...
10. FIGHT FIRE AGGRESSIVELY HAVING PROVIDED FOR SAFETY FIRST.

18 WATCH OUT SITUATIONS

1. Safety zones and escape routes not identified.
2. Terrain and fuels make escape routes difficult.
3. Unfamiliar with weather and local factors affecting fire behaviour.
4. Frequent spot fires occurring over the fireline.
5. Uninformed on strategy, tactics and hazards.
6. Instructions and assignments not clear.
7. Fire not scouted or sized up.
8. Constructing or working on fireline without a safe anchor point.
9. Working a fireline downhill with fire below.
10. Attempting a frontal assault on the fire.
11. Cannot see the main fire and not in contact with anyone who can.
12. Unburned fuel between yourself and the fireline.
13. Weather getting hotter and drier.
14. Wind increases and/or changes direction, also dust and/or fire whirls occurring.
15. No communication link with crew members, supervisors or other resources.
16. Working in an environment not seen in daylight.
17. On a hillside where rolling material can ignite unburned fuel below.
18. Sleeping near or on the fireline.

WILDLAND URBAN INTERFACE (WUI) HAZARD

The primary consideration is first to ensure fire-fighter and public safety. It is vital to assess potential fire behaviour, access and exit routes, hazardous materials, and available water supplies BEFORE engaging in the protection of any structures. The first step in conducting a safe operation is to assess whether the firefighting operations can be conducted safely.

When completing a Risk Analysis of the Interface area, use the Wildland Urban Interface Watch Outs as an aid. There are three categories of structures.

Use Structure Triage to determine these.

- Those that are NOT at risk.
- Those that ARE at risk.
- Those that have already been lost or are too dangerous to protect.

WUI WATCH OUTS

- Poor access and narrow, one-way roads. A rapidly spreading fire could trap vehicles and personnel before they can turn around or move away from the flames and smoke.
- Observe Bridge limits. Exceeding bridge limits could lead to bridge collapse, resulting in blocking of access/exit routes. This could result in blocking an escape route and entrapments.
- Inadequate water supplies. Without a enough water available a fire can overtake an area before the fuels can be cleared away from the structure(s).
- Natural fuels are located 10m or closer to structures on level ground. Remember structures on slopes require a greater clear area.
- Structures located near the top of kloofs, chimneys or narrow valleys.
- Structures located mid-slope or on slopes of 30% or more with continuous flashy fuels.
- Extreme fire behaviour. This includes crowning fires, long flame lengths, spotting, rotating smoke plumes, fire whirls.
- Strong and/or gusty winds of 40km or more. Winds increase the chance of spotting and increase the pre-heating of fuels in the path of the fire.
- Evacuations. This can require fire personnel to leave fire suppression operations. This can also lead to distraction and the loss of situational awareness of responding personnel.
- Liquid Petroleum Gas (LPG) cylinders situated close to vegetation or other combustible materials.
- Power lines and poles. What is their location in relation to the structures? Watch for overhead and downed power lines.
- Local members of the public attempting fire suppression. Lack of knowledge in the public can lead to unsafe tactics and may compromise your fire suppression actions.
- Aerial Retardent and water bombing operations. Ensure communications are established with Air Branch and keep personnel and public out of the drop zones.

Possible ICP
Possible Staging
Possible TRA
Clinic
School
Road / Track
Footpath
4x4 Access
Turn Around
Bridge Single Lane

Resources
Fire Hydrants
River (perennial / seasonal)
Heli Water Points
Water Points
Firebreaks
Possible Helispot
Runway

Risks
High Risk Structure
Powerline Crossings
Invasive vegetation thicket
High-risk Areas

Sub-Plan Areas
1 2 3 4 5 6

QR Code to PNG file of Main Map for use in Navigation Apps

Entrapment Survival Guidelines
Power Line Safety Guidelines
Hazmat Incident Safety Guidelines
Hazmat Signage Guidelines

The QR codes to the left link to Safety Information in PNG format for saving to phone. Use these if you are unfamiliar with a Safety Situation.

Map data sources: National Geo-spatial Information – Aerial imagery (2016), Rivers (2006/07), Contours (2007) | Open Street Map: Roads, power lines (2021)
NFEPA: Dams (2011) | CapeNature: Fires (2021) | GIS and cartography by Infinity www.infinityenv.co.za

OPERATIONAL & SAFETY BRIEFING

MISSION (COMMAND ORGANISATIONAL) CONSIDERATIONS

- ***Command*** - Incident Commander (IC) / Immediate Supervisor to establish Incident Command Post.
  - » Establish contact with local Fire Protection Association - General Manager - Charl du Plessis on (079) 172 4340.
  - » If Charl du Plessis is unavailable, contact the following Engela Celliers on (083) 603 3477 or Edrich Basson (076) 660 7540
- ***Incident Command Intent*** - Always use the following to guide your priority for Strategy and Tactics.
  - » 1) Life Safety, 2) Protection of Property, 3) Incident Stabilisation.
- ***Leaders Intent*** - Remember to brief your resources so they clearly understand what actions they must take to achieve objectives.
  - » Leaders Intent must include - Task, Purpose and End State.
- ***Specific tactical assignments*** - Given out once the overall strategy has been decided on.
- Use the ***Briefing Checklist*** in this Attack Plan or in your Incident Response & Fireline Safety Pocket Guide to ensure all required topics are covered.

OBJECTIVES

- Protect the lives of the responders and public always. ***Life safety is always the highest priority.***
- Protect residences and structures using aggressive perimeter control tactics ***only when safe to do so.***
- Plan for and develop potential Structure Protection Group(s) or Task Force(s) in order to:
  - » conduct reconnaissance, prepare structures for defence, and assist as needed with protection and evacuation of citizens.

GENERAL COMMAND CONSIDERATIONS

- All fires (structural and wildfire) in the Cederberg and surrounding area fall under the jurisdiction of the West Coast District Municipality.
- The Cederberg Fire Protection Association is well managed but understaffed for fire response. They can supply a limited response of staff trained in basic wildfire response. The isolated communities in the Cederberg have limited to no Basic Wildfire Suppression training. There are a limited number of water carrying vehicles available, ***see list *Possible Fire Suppression Resources below.***
- Temporary Refuge Areas (TRA) should not be used in lieu of evacuation to a true Safety Zone. The IC may exercise the option to shelter residents in place or evacuate as the incident dictates.
- There are only 3 access roads into the valley, these are Niewouds Pass, the dirt road to Clanwilliam and the Matjiesrivier Road. The area with the most people in one place over summer months is Jamaka. Ingress and egress to the the farms pose critical complications for firefighters entering with civilians exiting on the same roadways.
- Communications in the area were good on both MTN and Vodacom. CapeNature and Jamaka have radios and repeaters. Radio coverage may be poor in some areas. It is suggested to set up repeaters at the earliest opportunity to ensure a good radio network across the valley.
- Water for consumption as well as fire suppression is supplied (gravity fed) from the mountain reservoirs, and can be compromised if a wildfire burns out the water tanks and pipes. Protection of water sources should be a high priority.

REPORTING & CHECK IN

- Report to the Incident Command Post (ICP) for Check-In with Planning (on ICS Form 211) on arrival at the incident.
- Receive briefing from the relevant IC, Operations Section Chief (OSC) or Divisional or Group Supervisor.
- Make sure you understand the objectives within the Incident Action Plan (IAP), as well as the intent of Incident Command.
- Ask for a contingency plan in the event of the current plan failing.
- Confirm the Strike Team, Task Force, Division or Group and the Supervisor you are assigned to and make contact with them..
- Confirm preferred communication method (radios, cell phone, WhattApp group, etc.).
- Confirm the length and beginning time of the Operational Period and Confirm required reporting intervals (SITREPs).
- Ask what Hazards/Risks might be encountered and what Hazard areas exist. ***Understand where they are on the maps.***

STRUCTURE PROTECTION

- First carry out a ***Structure Triage*** before deciding on attempting structure protection. Determine whether the structure can be protected.
- The categories are: ***Defendable (Stand Alone)*** - determining factor - Safety Zone present, ***Defendable (Prepare and Hold)*** - determining factor - Safety Zone present, ***Non-Defendable (Rescue Drive By)*** - determining factor - NO Safety Zone present.
- Electricity is by means of overhead power lines with some homes/structures using solar. Be aware some structures use LPG.
- Structures, apart from the CapeNature offices and houses at Jamaka, have little defensible space and fuels in Home Ignition Zone.
- If firefighters are in danger undertaking structure protection, they should withdraw. Ensure that residents have left, apply foams/ retardants, and then leave the areas and return after the head of the fire has passed to extinguish any still burning fires.
- Do Not use up all your water wetting down before the fire front arrives. Use for spot fires and ignitions after the fire front has passed.
- Anyone considering defensive backburning, ***must*** get approval from IC prior to initiating the backburn.

COMMUNICATIONS

- CapeNature will likely create an incident-specific WhatsApp Group. ***Note: Bosdorp and Skilpaddorp only use word-of-mouth for emergency information sharing.***
- Radio communication is generally fine in the area, although setting up a repeater station for the Provincial radio cache is a good idea, as batteries (4 x 23kg) are required to airlifted up for the radio mast during load shedding.
- There is internet and Wifi connectivity available at Jamaka.
- Ensure all tactical, command, air-to-ground frequencies, cell phone numbers, etc. are shared.
- Responding organisations are to maintain their own communication system amongst their own resources and then link to ICP.

RISK MANAGEMENT

- Identify known and expected hazards and risks and make them known to your personnel and the other resources alongside you.
- Use the Go/No-Go Risk Management decision-making process when determining taking actions.

GENERAL SAFETY

- Brief personnel on Safety when deploying, when engaging and when changing tactics. Use the ***10 Standard Orders,*** the ***18 Watch Outs*** and ***LACES (Lookout, Awareness, Communications, Escape Routes and Safety Zones).*** Available on this Attack Plan.
- Keep hydrated (the Cederberg gets extremely hot), watch other personnel and crew members for signs of hyperthermia (heat) during the day (as well as fatigue) and hypothermia (cold) at night.
- Watch for indicators of problem fire behaviour and problem fire weather. Make these known to others as soon as they are noticed.
- Identify and communicate **Trigger Points** for disengagement or revaluation of the operational plan.

SITE AREA HAZARDS

- Ingress and egress pose critical complications of road congestion for firefighters entering, especially when civilians are exiting on the same roadways.
- Safe areas for firefighters and civilians are available. These will change depending on the location of the area of fire and what agriculture is in place in the fields. Check with the IC or Safety Officer for where current Safety Zones have been identified.
- Be aware of the danger that ember storms and spot fires pose for entrapments.

WHEN TO GET OUT!

- When the fire is making sustained runs and you have inadequate defendable spaces based on the length of the observed flames.
- When your water supply is limited and will not outlast the potential fire threat. Rather be cautious, be safe, pull out and then re-engage when conditions are favourable.
- When multiple spot fires occurring with more spot fires than can be easily suppressed.
- When increasing fire intensity means you are struggling to contain the area of fire.
- When you can no longer ensure compliance with any of the LACES.
- When unstable atmosphere indicators appear, i.e., fire whirls, gusting winds, pyrocumulus clouds (like a thunder cloud above the fire).

ALGERIA VALLEY
Wildfire Pre-Attack Plan

Conceptualised by:
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Produced in whole by Vulcan Wildfire Management
www.vulcanwildfire.co.za | info@vulcanwildfire.co.za

AREA SPECIFIC COMMAND CONSIDERATIONS

DEMOGRAPHICS

- The Algeria Valley can be summarised as being predominately a small-scale farming community with a mix of lower and middle class small independent communities. There are a high number of elderly people in the communities. These consist of single-family residences, or grouped housing for farm working staff, interspersed with vacant plots or cultivated fields forming part of a complex wildland-urban interface. Most residences are inhabited all year around. There are some guest houses in the northern end of the valley. The community is predominantly of a working age with children who attend local schools.

STRUCTURES

- Structures in the Witzenberg Valley can be summarised as a mix of low-medium income permanent residents houses, farm buildings, with some guest houses. Structural building materials are predominantly bricks and mortar.
- Bosdorp is mostly wooden structures, and Skilpaddorp is all wooden structures. These are noted as high risk on the map.
- Garden landscaping preferences include subsistance farming and mixed vegetation.
- There is a Camping site at Jamaka and the CapeNature offices. There are guest houses at Jamaka and the CapeNature campsite and at the Uitkyk Pass cottages to the southeast.
- The majority of structures and high priority areas do not have adequate defendable space in place around them. It is advised to evacuate these. The Community Hall at Bosdorp and the Grootkloof Sports Fields can be considered as Temorary Refuge Areas.

FENCES AND GATES

- There is little to impede access as far as major gates or fences in the valley.

ACCESS AND EGRESS

- There are only 3 access roads into the valley, these are Niewouds Pass, the dirt road to Clanwilliam and the Matjiesrivier Road. There is vegetation on both sides of these roads of varying density. The risk to fire exposure when travelling this road should be considered.
- Be aware of overhead electricity pylons and cables when planning fire suppression tactics and routes to the fireline.
- The dirt roads are narrow and passing can be problematic, especially for larger vehicles and fire services pumpers and tankers.
- Care must be taken when doing so, especially in smokey or rushed emergency situations.
- There is a narrow bridge crossing the Rondegat River, and bottle necks can occur there.
- Roads in some places, especially around Bosdorp and Jamaka, have vegetation close to the road side, with the vegetation being mostly indigenous with some invasive species predominantly in the river courses.
- All roads in the valley were accesible for 4x2 vehicles.

FUELS

- The fuels comprise a mix of dense, low to medium tall scrublands interspersed with patches of taller emergent plants including alien vegetation, especially along the river courses. At Jamaka there are orchards, vineyards, and grass fields.
- Trees and tall shrubs are more prevalent within the river courses and residential areas.
- There are dense groupings of trees above Jamaka and in the campsite, as well as an area of tall gum trees at Algeria campsite.
- There are continuous light fuels beside the roads, and in the landscape, that can carry fire into the WUI.
- The grass and shrubs will easily carry fire, especially in drought, dry and windy weather conditions. This should be considered when selecting locations for ICP, Staging Areas, Temporary Refuge Areas and Safety Zones. Consider the threat of ember attacks.

TOPOGRAPHY

- The area is an enclosed valley with mountains on all sides. These mountains are high and narrow kloofed with hills of varied degrees of slope. This will have an impact on fire behaviour and fire spread.
- The river through the valley is perennial (runs all year), though this may have lower levels of water in the summer months or during drought conditions.
- The topography of the valley will have a strong effect on the weather. Expect that conditions in the valley can be very different to outside of the valley.
- Steep slopes and medium density vegetation will make for slow crew movement through the veld at times.

WEATHER

- The Cederberg experiences extremely high temperatures during the summer months.
- The **predominant winds** that contribute to the increased risk in the two areas are as follows:
  - » The **South Easterly** (can shift to westerly in afternoon) as this will drive fires into the farms from the surrounding natural areas.
  - » The **North Westerly** as this will drive fires into the farms from the surrounding natural areas. These are usually prefrontal winds and history has shown that these winds can be devastating.
- **PLEASE NOTE:** If the above wind direction changes are noted, inform all concerned immediately, as there is a potential for a change in fire behaviour.
- The valley can experience up valley and up slope winds from early dawn till mid-morning, and down slope and down valley winds in the afternoon into the evening. Watch out for down slope and down valley winds resulting in increased fire behaviour and increased rate of down hill spread.
- The valley is likely to experience inversion layers at times. When the inversion layer lifts you can expect a sudden and dramatic increase in fire behaviour and rate of spread.

WATER SOURCES

- Hydrants/Water Points – the Water Points are all indicated on the maps. All the Water Points are gravity fed, and those at CapeNature office have connections for Fire Services vehicles, it is unknown how many others have correct connections. There is an overhead hydrant at the house of the CapeNature Manager. Check with the IC or OSC if there are concerns.
- Borehole above Grootkloof Sports Fields does NOT work during load shedding.
- Skilpaddorp has NO hydrants. Jamaka has NO hydrants.
- Reservoirs/Dams - There is ample water in the dams and the Algeria Cottages swimming pool. The depth of the dams will vary according to use and season, but they are all deep enough to be used. It is suggested to use a floating pump to draw water from the dams for use in firefighting vehicles.
- Water Bodies for aerial firefighting – there are two water sources at Jamaka that can be used for Bambi Bucket water pick-up. These are indicated on the maps, as well as their respective GPS coordinates for Bambi Bucket water pickup.
- The sewerage water may be a possible emergency water source.

EVACUATION CONSIDERATION / ROAD CLOSURES

- Should the IC decide to order an "evacuation" or "shelter in place" in a portion of the area, the following items should be considered:
  - » It needs to be ORDERED EARLY and communicated clearly! There are NO house numbers.
  - » Identify and use routes of travel for all vehicles and coordinate with law enforcement/ South African Police Services, and consider the establishment of an Evacuation Group or an Evacuation Task Force.
  - » Assign a Public Information Officer (PIO), an assistant or a fire services representative who has experience in Public Relations to any evacuation centre/point as soon as possible.
  - » Consider animal/livestock evacuation needs.
  - » The guest houses in the south-east end of the valley (Uitkyk guest houses) are built of predomonantly fire resistant materials, but have little or no vegetation clearance around them, the road is a standard quality dirt jeep track.
  - » There are limited areas that can be considered as Temporary Refuge Areas or Safety Zones, the main one's being situated at the Alegeria CapeNature office camp site and Jamaka, and are indicated on the maps. Check with IC on the current choices. These must be large enough to accomodate large numbers of people without risk of radiant heat burns, and any vegetation in them (grass) must be wet down to stop fire spread. These areas can also be suitable for responders to shelter in.

RESOURCE REQUEST LIMITATIONS & RECOMMENDATIONS

- In some areas there is limited road access, and the quality of the roads can be imapcted by weather conditions, allowing 4x4 access only. In all areas the IC should only use Bush vehicles and not Structural vehicles.
- Many of the Hose Boxes are not functional and used as rubbish bins. There are NO hydrant keys, and most have NO branch.

COOPERATING ORGANISATIONS

- West Coast District Municipality (WCDM), Greater Cederberg Fire Protection Association, WCPG - Fire Brigade Services, WCPG - Disaster Management, WCPG - Traffic Services, WCPG - Emergency Medical Services, South African Police Services, CapeNature (CN), Working on Fire, Volunteer Wildland Firefighting Organisations, local Community or Staff Firefighting Teams.

POSSIBLE INCIDENT MANAGEMENT TEAM (TRAINED AND ACCESSIBLE POSITIONS)

- 1 x Incident Commander (WCDM), 4 x Operations Section Chief (CN), 3 x Logistics Section Chief (CN), 4 x Planning Section Chief (CN), 1 x PIO (CN), 2 x Safety Officer (CN), 5 x Division/Group Supervisors (CN), 4 x Single Resource Leaders (CN).

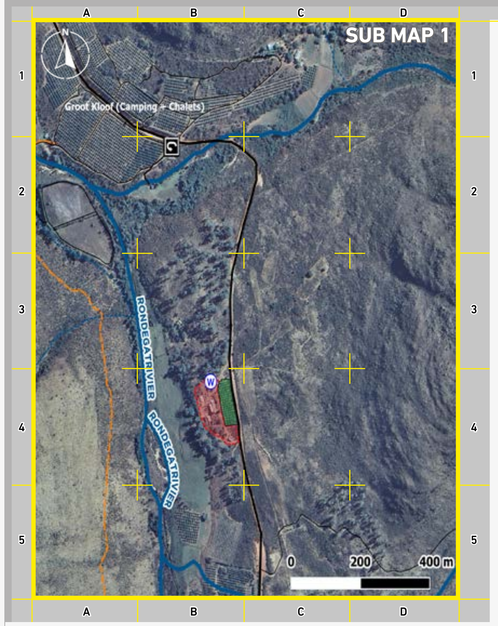
IMPORTANT CONTACT PHONE NUMBERS

West Coast District Fire Services Control Centre	022 433 8000	Greater Cederberg Fire Protection Association	079 172 4340
CapeNature (CN) Algeria Office	082 453 3766	Clanwilliam Animal Welfare Society	082 806 3275
CapeNature (CN) Algeria Office	087 087 3968	Aerial Operations Frequency (West Coast)	123.35

AVAILABLE LOCAL FIRE SUPPRESSION RESOURCES

NOTE: Fire Management Unit Mobile Command is a Caravan complete with radios, chargers for radios, cell phones and maps of the whole valley.

Organisation/Farm/Village	Vehicles	Fire Beaters	Fire Rakes	Other	Trained Personnel	Capacity
CapeNature - Algeria	Bakkie Skid Units	/	/	/	?	600L x 2
CapeNature - Algeria	/	10	/	/	20	Ground Crew
Jamaka	Bulldozer	/	/	/	None	/
Jamaka	Tractor Water Trailer	/	/	/	"	500L x 1
Jamaka	Trailer Skid Unit	52	/	/	"	2000L x 1
Greater Cederberg FPA	Bakkie	/	/	Chainsaw x 2		(4x4) x 3 / (2x4) x 1
Greater Cederberg FPA	Truck	/	/	/	/	(2x4) x 1
Greater Cederberg FPA	Truck	/	/	/	/	2000L x 2
Greater Cederberg FPA	/	25	18	Chainsaw x 2	72	Ground Crew
Sanddrif	Bulldozer	/	/	/	/	/
West Coast District Municipality	/	52	/	Radios x 12	42	Vehicle Based
West Coast District Municipality	Bakkie Skid Units	/	/	/	"	600L x 10
West Coast District Municipality	Water Tanker	/	/	/	"	2000L x 3
West Coast District Municipality	Large Water Tanker	/	/	/	"	5000L x 1
Working on Fire	?	?	?	?	?	?



DECISION MAKING GO/NO-GO PROCESS

Are controls in place for identified hazards?
- » NO - Reassess situation
- » YES - Next question.

Are the tactics selected based on expected fire behaviour?
- » NO - Reassess situation
- » YES - Next question.

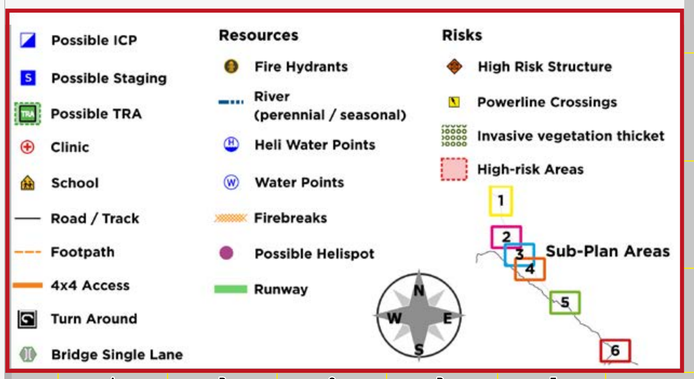
Have instructions been given and understood?
- » NO - Reassess situation
- » YES - Initiate action.

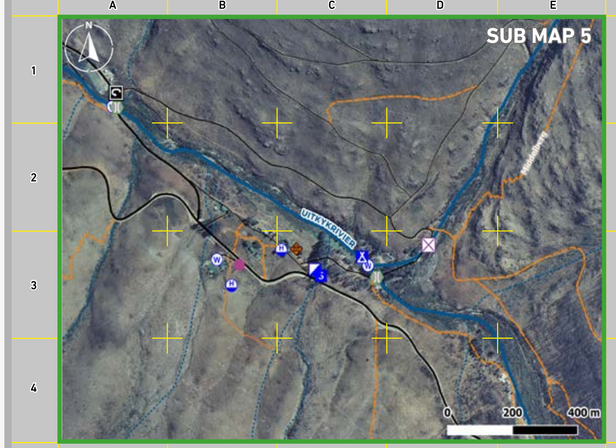
Evaluate what is occurring
Consider the human factors that can affect actions.
- Low experience level.
- Distraction.
- Fatigue or stress.
- Hazardous attitudes.

Consider the situation as it unfolds.
- Is anything changing?
- What is changing?
- Are the tactics working?
- Is the strategy correct?
- What could be done differently and smarter?
- Is there a hazard or threat developing?
- Is there a risk to life or property developing?

HELICOPTER WATER POINT

W1 - 32°20'24.05"S, 19°1'45.87"E





Sub Map 1

Sub Map 2

Sub Map 3

Sub Map 4

Sub Map 5

Sub Map 6

Scan the individual QR Codes above to get access to the Sub Maps.

These files can be downloaded and saved to your phone as PNG files for ease of use when the printed Attack Plan may not available.