

FIRE **AND** RESCUE INTERNATIONAL



Integrated fire, rescue, EMS and incident command technology

Volume 4 No 5

WILDFIRES

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Photographer: Simon McDonnell



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Comment



Lee Raath-Brownie

Fire and Rescue International (FRI) proudly presents its 41th edition. Enjoy the read!

Southern African Emergency Services Institute (SAESI) News

Dino Padayachee, SAESI president, presents the presidential message and Riaan Janse van Vuuren provides a review of the recently held AGM and visit to the Cape Peninsula. The SAESI House launch features prominently and Dino Levendall shares the results of the Cape Branch ten pin bowling event.

SAESI 2017 Conference, Expo and Training Events

The excitement is on the increase with the anticipation of the largest emergency services' event date creeping closer. Book your seat or exhibition stand now! Have your teams registered for the training challenges? Visit www.saes2017.com for more details.

In the news

eThekweni Fire and Emergency Services' new fire station features in this month's news section with the recent USAR-SA's INSARAG classification as a medium USAR team stealing the show. The SA ICS team visit to the US is featured and upcoming JOIFF conference and Securex exhibition concludes the news.

Hazardous materials 4 and 5

In the series of articles by Colin Deiner on hazardous materials (hazmat), Deiner discusses flammable solids, oxidising agents and organic peroxides. He looks at the health hazards and response to these hazmat incidents and its management.

Fires in high-rise buildings

Ron Spadafora of the FDNY writes an addition to Ian Schnetler's series of articles on high-rise fires. Spadafora discusses fire fighting procedures, command post location and the intricacies of modern day high-rise building construction materials.

Rescue roundup

The use of hand tools in vehicle extrication is the topic of Julius Fleischman and Neville van Rensburg's column. These veteran rescuers look at tool selection and the impact of tool selection on the procedures on scene.

Back to basics

New to the Fire and Rescue International columnists is Dale Jenkins of the Houston Fire Department in the US, who looks at on scene fire fighter safety. Jenkins discusses surviving a sudden and unexpected change in fire conditions.

Wildfires: analysing your risk

Malcolm Procter details fine scale risk analysis and how mapping your area according to its risk level can impact on response.

Thank you to all our contributors for their continued support! Fire and Rescue International is your magazine. Read it, use it and share it!

Lee Raath-Brownie
Publisher

Publisher

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This month's FRI Images winner!

Congratulations to

Ian Schnetler for his photograph 'Silently fuming' taken with a Nokia Lumia on an auto setting.

Ian Schnetler wins this month's prize money of R 2 000!

Photo description:

The Verona Port Villa fishing vessel fire in Cape Town harbour. The vessel was laden with a thousand litres of diesel, as well as hundreds of thousands Styrofoam containers.

Well done!

Best rescue, fire or EMS photo wins R2 000!

Fire and Rescue International's (FRI) monthly photographic competition is open to all its readers and offers you the opportunity of submitting your digital images of fires, fire fighters, disasters, incidents, emergencies and rescues.

Rules

- All photographs submitted must be high resolution (minimum 1 meg) in jpeg format
- Allowed: cropping, curves, levels, colour saturation, contrast, brightness, sharpening but the faithful representation of a natural form, behaviour or phenomenon must be maintained
- Not allowed: cloning, merging/photo stitching, layering of two photos into one final frame, special effects digital filters
- Fire and Rescue International (FRI) reserves the right to publish (printed or digitally) submitted photographs with acknowledgement to the photographer
- Winners will be chosen on the merit of their photograph
- The judge's decision is final and no correspondence will be entered into afterwards



Entries must include:

- Name of photographer
- Contact details (not for publishing)
- Email (not for publishing)
- Name of photograph
- Brief description of photograph including type of incident
- Camera, lens and settings used

All entries must be emailed to:

lee@fireandrescue.co

>> ENTER NOW!



SAESI President's comment



Dino Padayachee

present to speak on the history of SAESI. This was a dream come true for SAESI after many years.

SAESI also demonstrated its commitment towards social responsibility by donating an amount of R5 000 each to Gift of the Givers, Children of Fire and K9 Rescue Unit at the launch of SAESI House.

Mr Riaan van Vuuren was tasked to visit the Western Cape during the recent fires that were out of control in order to establish if SAESI could assist in any manner and to give support to the fire and emergency services that worked long hours to bring the fires under control.

mark for many purposes including promotion of fire personnel within the fire services fraternity. SAESI WILL NOT STOP THE PROCESS UNTIL EVERY STONE HAS BEEN UNTURNED FOR THE BENEFIT OF ALL THAT HOLD SAESI QUALIFICATIONS.

We are also aware that there is an unrecognised organisation that claims to represent fire fighters in South Africa that is bad mouthing SAESI. We take note of these false allegations and will deal with that organisation in due course.

We wish to point out that SAESI is the only truly South African institution that is a member on the Fire Brigade Board.

To all our members and non-members, we wish well over the Easter period. We pray that our Great Almighty God keeps you safe during this period. We are truly proud of you.

Dino Padayachee, president, SAESI ▲

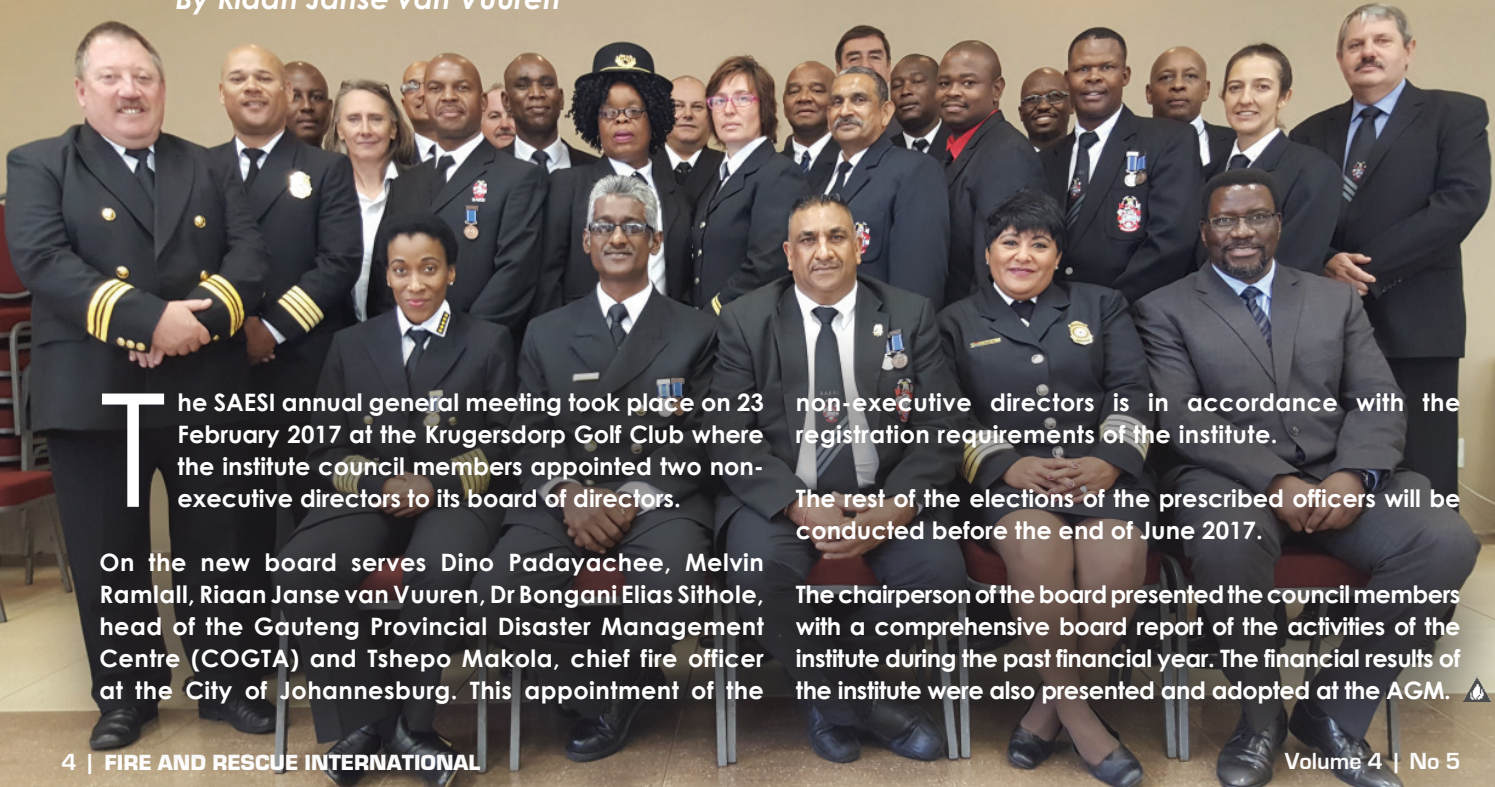
You will all agree that 2017 is passing by at a rapid pace as we have now passed the first quarter of the year.

The official launch of SAESI House on 24 February 2017 was a great success and it was heart-warming to have one of our past presidents, Chief R Cloete

SAESI is currently investigating all avenues to align our qualifications against the national standards. We wish to place on record that SAESI qualifications have been recognised by the relevant stakeholders in the emergency environment for many years and that our qualifications have also been used as a bench

SAESI holds 2017 annual general meeting

By Riaan Janse van Vuuren



The SAESI annual general meeting took place on 23 February 2017 at the Krugersdorp Golf Club where the institute council members appointed two non-executive directors to its board of directors.

On the new board serves Dino Padayachee, Melvin Ramlall, Riaan Janse van Vuuren, Dr Bongani Elias Sithole, head of the Gauteng Provincial Disaster Management Centre (COGTA) and Tshepo Makola, chief fire officer at the City of Johannesburg. This appointment of the

non-executive directors is in accordance with the registration requirements of the institute.

The rest of the elections of the prescribed officers will be conducted before the end of June 2017.

The chairperson of the board presented the council members with a comprehensive board report of the activities of the institute during the past financial year. The financial results of the institute were also presented and adopted at the AGM. ▲



SAESI support for Cape Peninsula after major wildfires

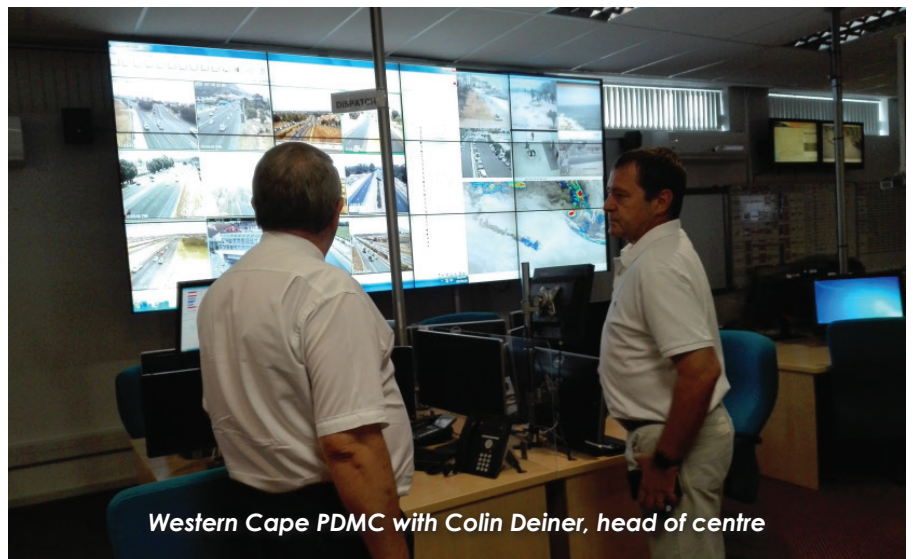
By Riaan Janse van Vuuren

After the recent wildland and mountain fires in the Cape Peninsula area, the SAESI board of directors decided to visit the fire fighters and express their sincere appreciation for the hours they work to protect lives and property. On behalf of all the members of SAESI, Riaan Janse van Vuuren visited the City of Cape Town to express the members' appreciation and support to the fire fighters in the Cape Peninsula.

Janse van Vuuren visited the City of Cape Town's chief fire officer, Ian Schnetler, who provided a broad overview of the fires and challenges over the past months. During the visit to the Western Cape Provincial Disaster Management Centre (WC PDMC), Janse van Vuuren addressed the provincial aerial support task team followed by a visit to the WC PDMC operations centre. Accompanied by Arlene Wehr, SAESI's vice president elect, several fire stations were visited where the personnel were thanked for their dedication and sacrifices. ▲



Riaan Janse van Vuuren meeting with CFO Ian Schnetler



Western Cape PDMC with Colin Deiner, head of centre



Visits to a number of fire stations followed accompanied by Arlene Wehr



Visits to a number of fire stations followed accompanied by Arlene Wehr



SAESI launches SAESI House in Krugersdorp

The launch of SAESI House in February 2017



The traditional ribbon cutting ceremony

The Southern African Emergency Services Institute (SAESI) has launched SAESI House, situated at 295 Jorissen Street in Krugersdorp, Gauteng on 24 February 2017. This is a first for this 58-year old organisation. SAESI House will serve as an anchor for this essential institute and will provide stability for its members as well as ease of access.

The SAESI presidency, Dino Padayachee, president; Melvin Ramlall, vice president and Arlene Wehr, incoming vice president, extended a warm welcome to all those present.

SAESI's treasurer and executive director, Riaan Janse van Vuuren provided an introduction to the event and welcomed all members, sponsors and VIPs.

An overview of the origins of SAESI was presented by Ronnie G Cloete, one of SAESI's past presidents who served from 1988 to 1990. Cloete also sketched SAESI's background as one of the oldest institutions serving the emergency services in southern Africa, forming a professional brotherhood since its inception on 2 March 1959.

The official opening was complemented by the handover of three cash donations to humanitarian organisations, Children of Fire, K9 Rescue and Gift of the Givers.

Chaplain Charmaine Dick, national operations coordinator for the Emergency

SAESI Eastern Gauteng Branch upcoming events

By Hennie Croucamp

The SAESI Eastern Gauteng Branch will be hosting the following upcoming events

- 17 March 2017: Branch meeting
- 23 June 2017: Branch meeting
- 1 September 2017: Branch meeting
- 20 October 2017: Branch annual general meeting (AGM)

For more information contact Hennie Croucamp, secretary SAESI Eastern Gauteng Branch

Tel: 011 744 3705/6

Cell: 082 763 3910

Email: Hennie.Croucamp@ekurhuleni.gov.za.



SAESI AWARD WINNERS : 2015

SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
FST 300	Chubb Floating Trophy	Highest Percentage over 70	M051775	GIBA MM	Tshwane Fire & Rescue Services
FES 300	Sasol Floating Trophy	Highest Percentage over 70	M051711	NCHABELENG DG	Tshwane Fire & Rescue Services
FIT 300	Hi-Lay Sales Floating Trophy	Highest Percentage over 70	M031221	MOPALAMI AM	Johannesburg Emergency Management Services
MNG 100	Flip van Staden Floating Trophy	Highest Percentage over 70	M033001	MAKUYA LG	Tshwane Fire & Rescue Services
SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
FST 400	Bob Hardy Floating Trophy	Highest Percentage over 70	M033043	MALEFU NJ	Johannesburg Emergency Management Services
FES 400	Confeco Floating Trophy	Highest Percentage over 70	M040012	MASINDI LP	Johannesburg Emergency Management Services
FIT 400	Sysman Floating Trophy	Highest Percentage over 70	M050173	NGWENYA TS	Ekurhuleni Emergency Services
MNG 200	Amkus Floating Trophy	Highest Percentage over 70	M050292	MABUZA NJ	Johannesburg Emergency Management Services
SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
FST 500	MSA Shield	Highest Percentage over 70	M050292	MABUZA NJ	Johannesburg Emergency Management Services
FES 500	"The Alliance" Shield	Highest Percentage over 70	M033001	MAKUYA LG	Tshwane Fire & Rescue Services
FIT 500	Escom Floating Trophy	Highest Percentage over 70	M033001	MAKUYA LG	Tshwane Fire & Rescue Services
MNG500	Dries Lombard Floating Trophy	Highest Percentage over 70	M040066	MOKWENA BK	Johannesburg Emergency Management Services
SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
ALL 4 (300)	Angus Floating Trophy + R 5000 Bursary	Highest Overall Percentage	M031221	MOPALAMI AM	Johannesburg Emergency Management Services
ALL 4 (400)	Shorten Floating Trophy + R 5000 Bursary	Highest Overall Percentage	M050173	NGWENYA TS	Ekurhuleni Emergency Services
ALL 4 (500)	Sir HM Smith Floating Trophy	Highest Overall Percentage	M020218	MOABELO KG	Johannesburg Emergency Management Services
SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
ALL 4 (500) 75%	LS de Villiers Floating Trophy	Highest Overall Percentage 75% Distinction	M020218	MOABELO KG	Johannesburg Emergency Management Services
SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
SAESI Student of the Year 2015	No Trophies	Top Achievers on 500 Level	M040236	MATSIMELA B	Johannesburg Emergency Management Services
		Top Achievers on 500 Level	M040066	MOKWENA BK	Johannesburg Emergency Management Services
SUBJECT	TROPHY	CRITERIA	NUMBER	SURNAME & INITIALS	SERVICE
SAESI Student of the Year 2015	Sir HM Smith Floating Trophy	Highest Overall Percentage			
		Highest Overall Percentage 75% Distinction	M020218	MOABELO KG	Johannesburg Emergency Management Services
		Top Achievers on 500 Level			
SUBJECT	TROPHY	CRITERIA	SERVICE		
Service	Hannes de Beer Floating Trophy	Most Awards Received	Johannesburg Emergency Management Services		

Services Chaplaincy of South Africa, read the dedication followed by prayer.

The event also provided the ideal platform to recognise the 2015 SAESI Academic Awards winners with the Hannes de Beer Floating Trophy being awarded to the City of Johannesburg for achieving the most awards. SAESI president, Dino, Padayachee assisted by Juggie Padayachee and Petrus Brits handed over the student awards.

A wreath laying ceremony conducted by Ronnie Cloete, Dr Elias Sithole and Mrs Patricia de Villiers, payed tribute to members who lost their lives in the line of duty and inaugurated the specially designed and manufactured fire fighter's memorial situated at the front entrance to SAESI House.

The traditional ribbon cutting ceremony concluded the event with Chaplain Rodney Berry blessing the house. Dino Padayachee, Melvin Ramlall, Arlene Wehr, Ronnie Cloete, Riaan Janse van Vuuren, Dr Elias Sithole, Tinus Pretorius, Salomé van den Berg and Pieter Rudolph thanked the various contributors and the people that made this memorable event a possibility, for their vision.



SAESI's administrative team with CEO Salomé van den Berg



KB Moabelo of the Johannesburg Emergency Management Services won the LS de Villiers and Sir HM Smith Floating Trophies for the highest overall percentage







SAESI Cape Peninsula Branch hosts tenpin bowling team event

By Dino Levendall, sports coordinator, SAESI Cape Peninsula Branch



Tenpin bowling teambuilding event

On 1 March 2017, City of Cape Town Fire and Rescue Service and Southern African Emergency Services Institute (SAESI) Cape Peninsula Branch hosted a tenpin bowling teambuilding event at the Grandwest Casino situated in Goodwood.

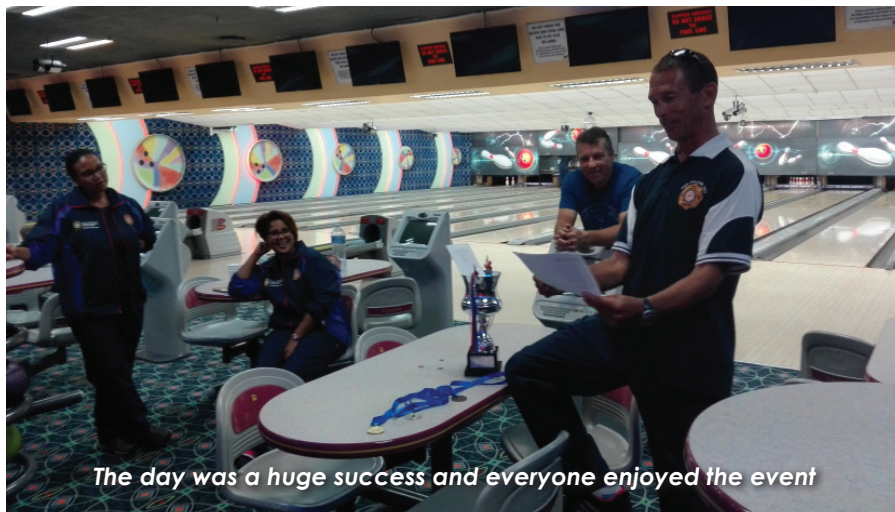
Teams consisted of administrator and operational staff and 17 members participated. Dino Levendall, sports coordinator, SAESI Cape Peninsula Branch said, "The teambuilding events help with communication between all and a better understanding of who we talk with over the phone."

"The day was a huge success and everyone enjoyed the event. The teambuilding was great between all staff members who attended the event. We had a few newcomers to sports in general and learnt to play tenpin bowling for the first time. The average score was around 70 points," said Levendall.

Winners

- First: Richard Erasmus – 126 points
- Second: Llewellyn de Lange - 125 points
- Third: DC Francis van der Byl - 116 points

Llewellyn de Lange received a special prize for having the most strikes and carry overs. 🏆



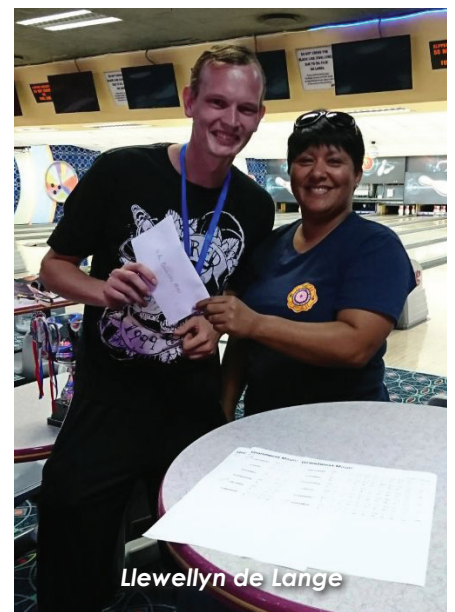
The day was a huge success and everyone enjoyed the event



Francis van der Byl



Richard Erasmus



Llewellyn de Lange

29 Oct - 3 Nov 2017

Expo Centre NASREC, Johannesburg

CLIMATE CHANGE AND THE EMERGENCY SERVICES

The 31st SAESI Conference, Exhibition, Training Events and Challenges

CONFERENCE

EXHIBITION

TRAINING

CHALLENGES



**THE LARGEST EMERGENCY SERVICES
CONFERENCE AND EXHIBITION IN AFRICA**

The programme will include:

- Conference
- Exhibition
- Gala dinner
- Cocktail evening
- SAESI EXCO meeting
- Fire Fighter Challenge
- Vehicle extrication
- High angle rescue
- Emergency medical rescue
- Incident command system
- Badge swapping evening
- World record attempt
- Meet and greet
- And much more!!

Registrations and
exhibitor bookings
NOW OPEN online
saesi2017.com

Save the date!

Conference programme, exhibition layout and details on the training events and challenges will be released shortly

For more information contact the organiser

Lee Raath-Brownie at Fire and Rescue International

Tel: 011 452 3135 Cell: 082 371 0190 Email: lee@fireandrescue.co

Organiser

**FIRE AND RESCUE
INTERNATIONAL**



SAESI Conference 2017:

Climate change and the emergency services



1 - 3 November 2017

Book your seat now! The 31st SAESI Conference, Expo and Training Events is THE place to be in 2017! The conference will be held from 1 to 3 November 2017 and will address issues pertaining to climate change and the impact thereof on the emergency services. Our impressive speaker line up will feature international and local presentations bolstering insight, research and practical know-how with hands-on discussions providing a great networking forum for debate. Topics will include extreme weather incidents such as heat waves, storm surges, floods, drought etc, resources such as water supply, rural-urban interface, incident command and wildfires.

This year we will offer a one day package for those interested in attending the

specialised plenary sessions or are constrained by time and cost.

Conference package

3 days R8 125 incl VAT for SAESI members,
R8 938 incl VAT for Non-SAESI members
1 day R2 223 incl VAT for SAESI members,
R2 445 incl VAT for Non-SAESI members

3 Day attendance includes daily lunch, presidential cocktail and gala dinner for one

1 Day attendance excludes daily lunch, presidential cocktail and gala dinner
Gala dinner attendance: SAESI members: R800 incl VAT and Non-SAESI members: R880 incl VAT

Presidential cocktail attendance: SAESI members: R143 incl VAT and Non-SAESI members: R157 incl VAT

Who should attend?

- Provincial fire, emergency and disaster management
- Metro fire departments
- Municipal and district fire departments
- Industrial fire departments
- Petrochemical fire departments
- ARFF services
- Head of disaster management centres
- Wildfire suppression and prevention organisations
- National and private game parks' fire managers
- Forestry companies
- Fire protection associations
- Emergency medicine and medical response organisations
- Rescue organisations ie Metro Rescue, USAR, wilderness, mountain, maritime/water, search dogs etc
- South African Police Service (SAPS)
- South African National Defence Force (SANDF)
- South African Air Force (SAAF)
- Mining fire and safety officers

Contact

Lee Raath-Brownie,

Organiser, Fire and Rescue International

Cell: 082 371 0190

Tel: 011 452 3135

Email: lee@fireandrescue.co

Application forms available at:

www.saesi2017.com

Volunteer as an assessor for SAESI 2017

SAESI 2017 will be the host several training events/challenges including the ever so popular Extrication Challenge, EMS Challenge, Fire Fighter and Rescue Challenge, High-angle Rescue Challenge and the new kid on the block, Incident Command System (ICS) Training.

Essential criteria

The essential criteria to be an assessor for SAESI 2017 are:

- In order to maintain currency and credibility, persons nominated should be a member of an organisation whose primary function is emergency/rescue service based. This may be extended up to one year following an individual leaving or retiring from said organisation.
- They should have a minimum of five years operational experience and be directly involved in vehicle extrication management and operation within the community.

- They will have experience of assessing a rescue challenge, at national or world level on a minimum of two occasions within the last four years.

Preferable criteria

- Experience of assessing national events.
- Experience of assessing various classes presented at those events.
- Experience as a training provider within the field of vehicle extrication.
- Experience of assessing events with the use of live casualties.
- Experience as a shadow assessor at a previous SAESI challenge.

Download the assessor application form at www.saesi2017.com and email to lee@fireandrescue.co.

Exhibit at Africa's largest expo

catering for the emergency services!



The 31st SAESI Conference, Expo and Training Events is THE place to be in 2017! The SAESI Expo has over the years grown from being an addition to the ever-so-popular SAESI Conference to an informative exhibition serving the emergency services in Africa. This year's SAESI Conference is themed, 'Climate change and the emergency services' and will take place at the Johannesburg Expo Centre, NASREC, in Johannesburg, Gauteng, from 1 to 3 November 2017.

Early bird offer!

Book and pay before 19 May 2017 and qualify for the early bird offer!

Exhibition with standard shell scheme package (includes glass round table, two stackable chairs and a lockable cupboard): R2 338per m2

Exhibition: floor space only: R1 969 per m2

Exhibition: vehicle space only: R1 576 per m2

Rates include VAT

Outside exhibition space is available for the longnecks (aerials, ladders etc) other vehicles and equipment not suitable for inside exhibits.

Exhibit! Launch! Network! Meet new clients!

We are focusing on presenting a conference, exhibition and training events experience of formidable proportions so that we can attract high calibre visitors from all over Africa, bringing quality feet through the door and making it Africa's place to be for all its emergency services.

The conference plenaries include industry specific subject matters:

- Wildland urban interface
- ARFF
- Emergency medicine
- Fire safety and standards
- Technical rescue
- Trainer development

Who should exhibit?

Industry associations and institutes



Vehicle manufacturers (OEMs)
 Vehicle and trailer builders ie fire engines and rescue trucks, ambulances, aerial platforms, ladder trucks, USAR/rescue vehicles etc
 Rescue gear ie extrication equipment, saws, IR cameras, lighting etc
 High angle gear ie rope, harness' etc
 Protective equipment suppliers ie bunker gear, SCBAs, gloves, helmets, boots etc
 Equipment suppliers ie nozzles, hose and reels, pumps, monitors, skid units, tanks etc
 Communications and trunking
 Software suppliers
 Fire safety
 Fire detection and suppression
 Emergency medicine suppliers
 Medical equipment
 Water rescue equipment and craft
 Training providers
 Insurance companies

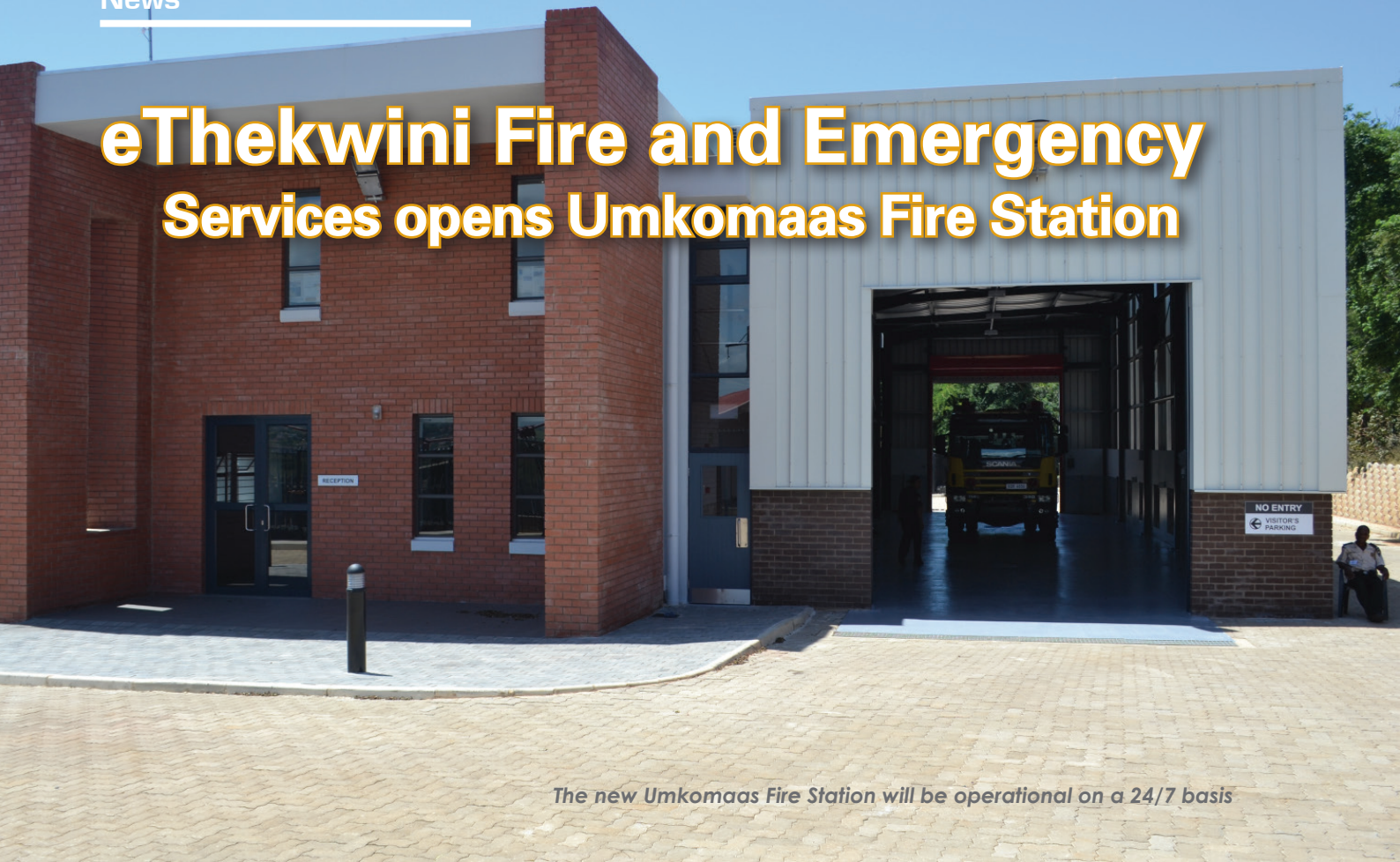
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Provincial fire, emergency and disaster management
 Metro fire departments
 Municipal and district fire departments
 Industrial fire departments

Petrochemical fire departments
 ARFF services
 Heads of disaster management centres
 Wildfire suppression and prevention organisations
 National and private game parks' fire managers
 Forestry companies
 Fire engineers
 Fire protection associations
 Emergency medicine and medical response organisations
 Rescue organisations ie Metro Rescue, USAR, wilderness, mountain, maritime/water, search dogs etc
 South African Police Service (SAPS)
 South African National Defence Force (SANDF)
 South African Air Force (SAAF)
 Mining fire and safety officers
 National Ports Authority, Eskom, Transnet etc

For more information contact the organiser, Lee Raath-Brownie, owner of Fire and Rescue International on cell: 082 371 0190, Tel: 011 452 3135 or on email: lee@fireandrescue.co. Visit www.saesi2017.com for floor plans, stand booking forms etc. ⚠

eThekwini Fire and Emergency Services opens Umkomaas Fire Station



The new Umkomaas Fire Station will be operational on a 24/7 basis

The eThekwini Fire and Emergency Services situated in Durban in the KwaZulu-Natal Province of South Africa, commissioned its new Umkomaas Fire Station effective 6 February 2017. The new station is situated at 153 Maclean Street, Umkomaas and will be operational on a 24/7 basis forming part of the eThekwini Municipality Integrated Development Plan (IDP). Sbu Mkhulisi, eThekwini Fire

and Emergency Services regional commander, provided Fire and Rescue International with some detail on the new station.

The eThekwini Fire and Emergency Services' purpose statement refers, "To provide access to comprehensive fire and emergency management services to all communities of the eThekwini municipal area to enable them to reduce the incidences

and adverse effects of fire and emergencies and, in so doing, to contribute to preserving life, maintaining a healthy natural environment and safeguarding the economic base of the eThekwini municipal area".

In line with its purpose statement, the eThekwini Fire and Emergency Services set itself key objectives with one of them being to progressively



The station was designed to accommodate at least two fully-manned rescue pumps



Fire fighters Nkosenhle Ndelu and Sabani Buthelezi with leading fire fighter S'celo Mbili and station commander Kuben Naidoo

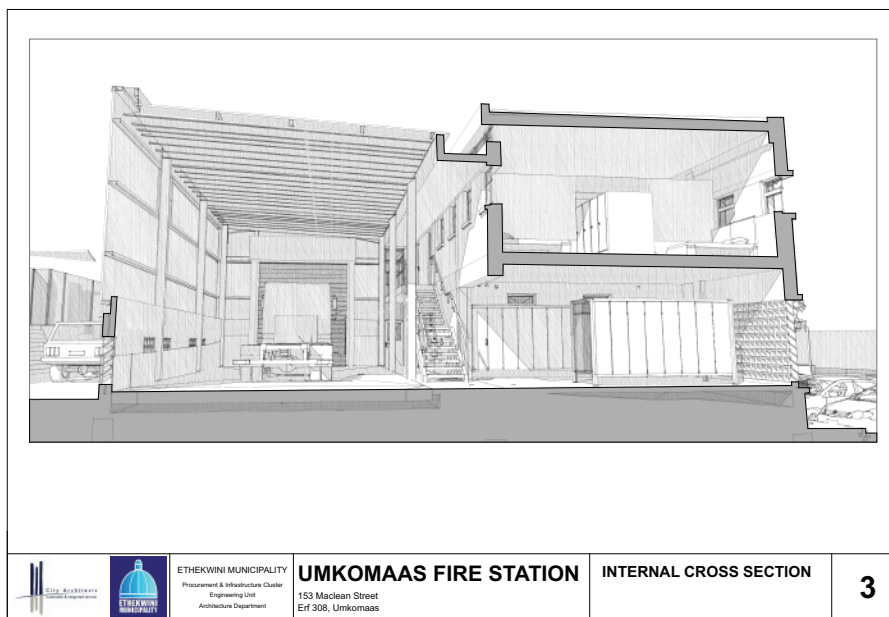
reduce the number of citizens in eThekweni jurisdictional area that are outside the reach of the fire service. This objective has been incorporated into the eThekweni Municipality Integrated Development Plan (IDP) as part of the overall strategy for its council. With help from Council for Scientific and Industrial Research (CSIR), they were able to scientifically determine in order of priority, which areas within its jurisdiction require fire stations to be built. Also, with an understanding that all citizens are rightfully entitled to a safe and healthy environment, they had established that not all the citizens in the eThekweni municipal area were within the reach of the fire and emergency services when measured against South African National Standards Code of Practice, "Community Protection Against Fire" (SANS 10090). This gap is partly addressed by establishing fire stations on a prioritised basis to improve the service's reach to a greater number of citizens.

Resources deployed

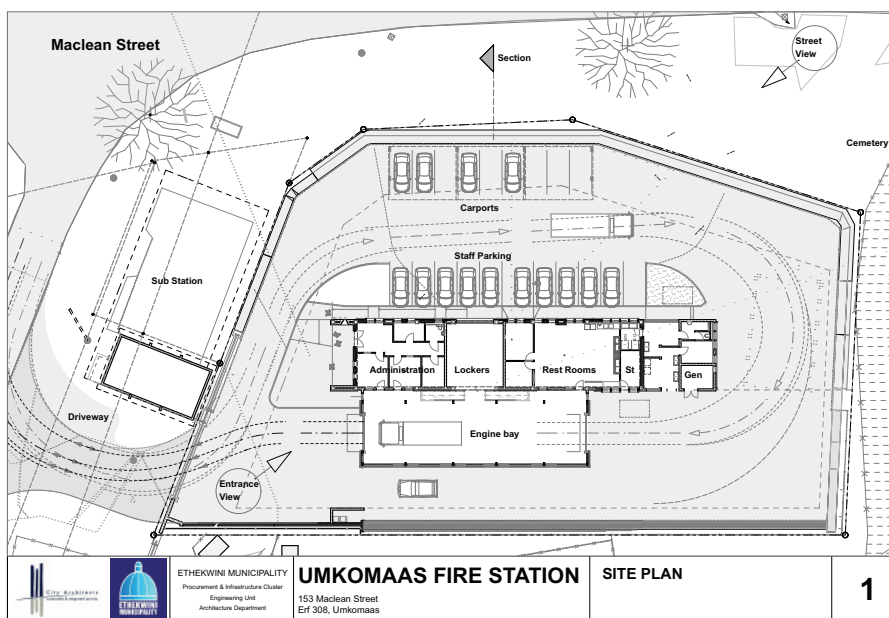
Given the area and the terrain that this station will be responding to, a rescue pumper with reasonable water capacity and 4x4 capability to negotiate steep terrain, is deployed at this station. It is envisaged that in future a water carrier vehicle to support with water supply will be deployed. In terms of staffing level, a three-man crew with one station commander per shift has been deployed. eThekweni Fire and Emergency Services works a four shift system, which implies four platoons. The current resources deployed at this station, both in terms of equipment and skills level, has the primary capability to respond to fire calls, rescue calls, hazmat incidents, etc.

Risk profile

The area is characterised by various risks ranging from special risk, which may experience incidents raging from fire, toxic gas release, chemical spillages etc, hotels, a major freeway ie the N2 with potential motor vehicle accidents and bulk hazardous tankers, which are a cause for concern. There are also a number of informal settlements within this area.



The internal cross section of the new Umkomaas Fire Station



The site plan of the new Umkomaas Fire Station

Response times

Before the station was built and operationalised, a fire engine responding from Amanzimtoti Fire Station, which was the closest fire station, via the N2 freeway to the furthest point of the eThekweni municipal area which is the Scottsburgh River, may take approximately 35 minutes. The operationalisation of the Umkomaas Fire Station has cut this time by approximately 25 minutes. These reduced response times decreases the risk considerably.

Station design

The building of the this station had to accommodate a number of

changes due to the unpredictable nature of development around this area such as the expansion of eThekweni municipal area and the change in the risk profile. Therefore, the station was designed and built to accommodate at least two fully-manned rescue pumpers. All facilities at the station were also designed to be gender friendly with regard to ablution facilities, rest areas etc.

The eThekweni Fire and Emergency Services' fire safety branch is also accommodated at this station in order to facilitate fire prevention and enforcement functional needs. ▲



The USAR South Africa team classified as an USAR medium team by INSARAG

The USAR South Africa team classified as an USAR medium team

The Urban Search and Rescue South Africa (USAR-SA) team received their classification as an USAR medium rescue team under the United Nations' International Search and Rescue Advisory Group (INSARAG) in February 2017. South Africa is the second country in Africa to achieve the international status, the first being Morocco. Fire and Rescue International was invited to spend some time with the team and classifiers during the classification exercise as an observer.

The USAR-SA team comprises of members from various municipalities within the Gauteng Province. Their assessment started on Monday, 20 February 2017 with presentations at the City of Johannesburg EMS head office in Martindale with a practical

exercise ensuing on Tuesday morning, 21 February 2017, simulating an earthquake in Lesotho. The practical exercise took place at the Rietfontein Training Centre in Lenasia in very adverse weather conditions, with 50 active rescue members participating while an extra 70 qualified team members were reserves.

The classification assessment was performed by an international team of INSARAG classifiers, who hale from various countries around the world including the United Kingdom, Germany, Spain, Russia, Oman and Japan.

The USAR technicians, who trained under the mentorship of two highly skilled USAR mentors from Poland, achieved their international search and rescue accreditation with flying colours.

The Gauteng-based USAR-SA team was formulated in November 2014 and the application for registration with INSARAG was initiated under the leadership of Gauteng Cooperative Governance and Traditional Affairs (COGTA), Gauteng Provincial Disaster Management Centre (PDMC), the National Disaster Management Centre (NDMC) and emergency management services (EMS) from various municipalities within Gauteng Province.

The team

The USAR-SA is a medium rescue team complemented by emergency rescue technicians from all municipalities within the Gauteng Province. The team management hale from a number of EMS services in Gauteng and include other government entities as well. The highly-skilled team members have experience ranging from three years of service and above within the emergency management services fraternity. The team fully complies with the standards in accordance to International External Classification (IEC) requirements.

Team management consists of a team leader, deputy team leader, logistics, reception and departure staff (RDC) staff, liaison officer, on-site operations coordination centre (OSOCC) staff, safety and security, information communication technology, engineers and doctors. Operations included squad leaders, hazardous material (hazmat) technicians, USAR technicians and medics.



Sean Moore, team leader (UK); Betram Baehr, rescue leader (Germany); Olga Proshina, deputy team leader (Russia); Chris Prichard (UK); Haruka Ezaki, logistics in training (Japan); Michael Etges, medical leader (Germany); Annika Coll-Eriksson, logistics (Spain); Ali Khamis Mohammed al-Dawoodi, search leader (Oman); Stephanie Trassari, field coordination support (Switzerland). Front row: Morné Mommsen, USAR-SA management, Glenn-Eric Bellingan, USAR IT

Training

The team members underwent thorough urban search and rescue training modules rendered by the relevant registered training institutions within the country as per INSARAG requirements.

"Emergencies happen when least expected hence continuous training is being conducted to keep team members ready and sharp always," said William Ntladi, spokesperson for the USAR-SA team. "The team management is continuously engaging with the different municipal emergency services whereby team members are being employed to allow team members time for training and sharpening their skills. New technology is continuously being developed and team members need to equip themselves with the use of such resources/equipment," added Ntladi.

"To sharpen their skills, future full scale rescue evolutions exercises will be conducted. The team's management is working closely with the political focal points from COGTA and the Gauteng PDMC continuously engaged in plenary meetings to outline the lowest point scored during classification exercise with the aim of improving there upon," continued Ntladi.

"The team would like to grow from being a 'medium team' to 'heavy team', which needs to have about 100 skilled team members at any given time. The team should be ready to respond locally within the borders of South Africa and beyond. One should take into consideration that as a medium team, a K-9 unit is not included but it would be a necessity for a heavy team. From the political focal point of view, the intension of the team is to encompass other government entities from all other provinces as well. Every team member should be able to comply with the INSARAG requirements to keep and sustain membership."

Closing ceremony and results

The closing ceremony took place on 23 February 2017 at the Thaba Eco Hotel in Klipriviersberg Nature Reserve in Kibler Park, Johannesburg. The event was opened by Joshua Ngonyama, . . . The results of the INSARAG classification exercise were announced by Stefania Trassari of the United Nations Disaster Assessment and Coordination (UNDAC) and INSARAG Africa Focal Point based in Switzerland.

Sean Moore, team leader for the INSARAG classifiers, commended the USAR-SA team on their attitude and

willingness. The team's Polish mentors said that the team came through with flying colours and that special bonds were formed. Dr Elias Sithole of Gauteng COGTA and head of the Gauteng PDMC, provided background to the USAR-SA team and its purpose. Dr Sithole also congratulated the team on their classification.

Moses Khangale, senior manager, fire services coordination at the National Disaster Management Centre (NDMC) spoke on behalf of Dr Mmaphaka Tau, saying that South Africa has a responsibility to its neighbouring countries to support them during disasters, highlighting the Malawian floods the Nigeria church collapse. He said that a number of structural collapses and incidents also occurred in South Africa such as the Durban mall collapse, Orlando Power Station, the structural collapse in Alberton and the November 2016 floods in Ekurhuleni. He congratulated the team on their effort and Dr Sithole and Chief Tshepo Makola, City of Johannesburg, for their vision.

Although the adverse weather conditions continued, the USAR-SA team danced for joy in the rain. ▶





SA incident management team visits United States

A South African incident management team (SA-IMT) recently visited the US and participated in the Northern Rockies 2016 wildfire season and fire management programme from 1 to 15 August 2016.

The team consisted of Philip Prins, fire manager, Table Mountain National Park, SANParks; Pierre Gallagher, general manager, Cape Peninsula Fire Protection Association (CPFPA); Dean Ferreira, managing director, NCC Environmental Services and Michelle Kleinhans, managing director, Dynamic Incident Management. Members were responsible for their own financing of the tour and members' sponsorship was obtained from the Rotary Club, Claremont in Cape Town.

The specific objectives and expectations of the study tour were:



The SA-IMT participated in the Northern Rockies 2016 wildfire season and fire management programme

- Interagency dispatch and coordination centre operations
- Type one interagency hotshot crew operations
- Rappelling and short-haul programme operations
- Fire protection association operation in US
- Commercialisation operations
- Incident management team shadow

Missoula, Montana

The team members booked into the Missoula Smokejumpers (SMJ) dorm at the Northern Rockies Training Centre and were welcomed by Tim Murphy, the United States Forestry Services (USFS) deputy fire operations specialist and Ted Giesey who was appointed the SA-IMT liaison officer.

Steve Wallace of the Montana Department of Natural Resources

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piet@hansensouthafrica.co.za



The SA incident management team during the visit to the US

► and Conservation (DNRC) facilitated a one day operational and fire safety briefing, including helicopter safety, deployment and use of fire shelters, including a practical session.

Wildfire operational, procedures within different geographical areas and collaboration between interagency dispatch centres plus coordination centre was presented. Anthony Krause, Northern Rockies fire cache manager, conducted a tour to the Northern Rockies fire cache, a type one interagency cache that supports the wildfire logistics needs in the Northern Rockies. It showed potential for expanding and implementing some of the South African wildland fire equipment for effective initial response efforts.

The mechanical fire fighting equipment mechanics conducted a tour around their department highlighting the importance maintenance of equipment after operations and before new incident deployment.

Kathy Pipkin, the Northern Rockies Coordination Centre (NRCC) manager, provided a tour of the NRCC. She highlighted the importance of conference calling for interagency communications, which enables communication with regards to current conditions, status and availability of resources in the geographical zone. Michael Richmond, the NRCC meteorologist, presented the predictive services linked to the coordination centre.

Bob Beckley, project leader and Chris Grove, operations programme leader

at the USFS Missoula Technology and Development Centre gave an overview of the daily operations and testing in various fields of a wildland fire operations. Shirley Zylstra, wildfire chemical systems programme leader, demonstrated the use and testing of fire retardant and the effect of aerial water/retardant drops.

Dr Joe Dimitrovich, the USFS exercise physiologist, explained the importance of the health and fitness of fire fighting crew members. Kevin Brown, the Missoula Technology and Development Centre equipment specialist, provided insight into the equipment utilised for the different programmes such as rappelling, short haul and emergency medical extractions followed by demonstrations and a workshop presented by Ward Hiesterman, USFS rappel specialist; John Harris, USFS helicopter inspector pilot; Seth Weber, USFS short haul specialist and Dave Crumb, USFS helicopter operations specialist. The discussions and ideas equipped the team for further investigation within South Africa to possibly obtain surplus resources (equipment) for future use in wildland fire fighting operations similar to the US Federal Excess Property Program conveyed during this tour.

The team toured the Department of Natural Resources and Conservation (DNRC) equipment, development and communications centre (EDC). Bill Colwell, fire district chief for Missoula Rural Fire District, discussed operational and procedural information regarding fire protection

associations and the use of volunteer fire fighters within South Africa in comparison to Montana. Matthew Hall, Department of Natural Resources and Conservation fire programme manager, described their fire prevention programmes, equipment, tools and fire awareness materials.

Yellowstone National Park

The team attended the Tatanka Complex Type three IMT morning operational period briefing at the Mammoth Camp in Yellowstone National Park. The meeting was led by Shelby Majors type three IMT planning section chief. Various interactions were held with the IMT members including incident commander, Todd Opperman.

Copper King Fire

The team visited the Copper King Fire at Plains Montana to shadow a type one incident management team. The incident transition in-briefing from a type three IMT to the type one IMT was discussed and the transfer of command took place led by Laura Ward, the fire management officer (FMO) for Lolo National Forest. The team also met with Copper King Fire's type one IMT including Greg Poncin, incident commander; Mike Kopitzke, deputy public service commission and the deputy planning section chief (PSC); Jim Evanoff, logistics section chief (LSC); Bob Habeck, safety officer (SOFR); Paul Fieldhouse, head planning section chief (PSC); Brent Olsen, operations section chief (OSC); Dennis Morton, aircraft operations branch director (AOBD) and Rogers Warren, the forest aviation officer of the Lolo National Forest.

Hotshot crews

The team interacted with various type one interagency hotshot crews (IHC) working on the fire line. Philip Prins, Pierre Gallagher and Dean Ferreira were in possession of J-1 Visas and hence were able to go accompanied to the fire line. Both teams conducted burnout operations including snag removal and mop-up operations.

Thompson Helibase

The team visited the Thompson Helibase with the air operations branch director, Dennis Morton and the air support supervisor, Brian Campbell, including the air ops briefing conducted by



Tatanka Complex Type 3 IMT morning operational period briefing



A visit to the Missoula Technology and Development Centre presented by Bob Beckley and Chris Grove



Kevin Brown explaining the various equipment used in rappelling and other programmes



Paul Fieldhouse, PSC; Bob Habeck, SOFR and Mike Kopitzke, deputy PSC in planning mode

Jeffrey Currier, the helibase manager. The use of automated flight following was discussed at length and recommendations were made for a similar system to be implemented within the South African context to facilitate the tracking of aerial resources. An aerial ignition was led by branch director one.

Michelle Kleinhans shadowed the planning section and in particular, the situation unit led by Rob Carlin. She attended all the tactics, strategy, command, general and planning meetings and visited the Plains Initial Attack Interagency Dispatch Centre. The team demobilised from the Copper King Fire back to Missoula to finalise the study tour after action review with Tim Murphy and Ted Giesey. They also observed the Missoula Smokejumpers undertaking their proficiency jumps at the base.

Concluding remarks and recommendations

It is impossible to single out any specific highlight due to the exposure to multiple experiences, some completely new to the team, all of which will be assimilated, reflected upon and implemented where possible within the South African context.

Although not all systems and methods are practical for SA there are certain areas that the team can focus on immediately:

1. Integrated planning concerning all agencies involved in wildfire activities
2. The sharing of resources is critical, especially in terms of budgetary constraints, common goals and objectives
3. Interagency coordination and collaboration of resources preferably centralised via a specific interagency coordination centre
4. The team believes that with the experiences and information gained, they can initiate a number of specific activities such as:
 - a. Set required standards for hand crews to become more professional and proficient
 - b. Possible insertion methods with the possibility of implementing one of the programmes eg fast roping compared to rappelling
 - c. Review various hand tools that are presently utilised in fire fighting activities and adjust accordingly
 - d. Review various resource contracts to make them more efficient and effective
 - e. Through the FPAs, provide valuable fire prevention and educational material to the respective

- f. Reflecting on the ICS currently in use within the wildfire context
 - g. Recommend the initiation and implementation of the Interagency Red Card system to the SA ICS working team
 - h. Set standards for implementation for interagency dispatch and coordination centres throughout the country
5. Furthermore, the team recommends ▶



Ward Hiesterman running through the Huey's rappelling installation bracket design and functionality and other relevant equipment such as the Sky Genie (variable descent system), gunner strap and harnesses



The short haul programme conducted by Wendy Hafer and facilitated by Seth Weber



Missoula Smokejumpers tour

further development of these crews. The development of ground crew capabilities is seen as a priority especially when compared and equated to the type one Interagency Hotshot Crews within the USA wildfire context.

- Assess and evaluate the type of insertion method (fast roping compared to rappelling) to be used under different conditions and assist with training in this regard.
- Assess and evaluate the use and practicality of various hand tools and other equipment used for wildland fire fighting in South Africa compared to those in the USA.

The SA-IMT would like to extend their sincere gratitude to the Northern Rockies Coordinating Group including the following agencies: State of Montana, Bureau of Indian Affairs, USDA Forest Service, Montana Firewardens Association, Bureau of Land Management, State of Idaho, Montana Division of Disaster, National Park Service, North Dakota Forest Service, US Fish and Wildlife Service, Montana Disaster and Emergency Services Division, Montana Department of Natural Resources and Conservation, Idaho Department of Lands, Montana Fire Chief's Association, Montana Sheriffs' and Peace Officers' Association. The team thanks Seth Weber and Ward Hiesterman for giving their valuable professional time to facilitate various interactions such as the team's visit to Yellowstone National Park and specifically the insertion programmes.

The workshop on comparing the various insertion methods was immensely beneficial. The input from Dave Crumb and Kevin Brown was much appreciated. A special word of thanks must go to the team's dedicated liaison officer, Ted Giesey, who was instrumental in making this study tour successful.

The US Forest Service international programmes, USAID and especially Tim Murphy must be thanked for this remarkable opportunity to exchange knowledge and to build not only effective relationships and networks but also develop friendships across the global fire fighting fraternity.

The collaborative exchange exceeded the team's goals and objectives of incident management operations. ▲

▶ that the SA ICS Working Group considers the implementation of an additional phase (Phase III) after the completion of Phase II in April 2017. Phase I and Phase II largely focused on adopting the incident command system (ICS) and with the support provided by the USFS and the USAID's office, a comprehensive program of training, organisation and cooperative oversight has been achieved. The team is of the opinion that there is a need and desire to expand the current program and therefore propose a third phase. The proposed Phase III, however, will consist of wildfire specialists from the USFS and other federal agencies visiting South Africa to provide expert input into localised wildland fire fighting activities at ground level within the different fire prone provinces. These wildfire specialists will be requested to assess and evaluate:

- Assess and evaluate the various interagency agreements as well as the interagency coordination and collaboration of resources between the various wildland fire fighting agencies and the possible creation of a specific interagency

coordination centre within each province and the efficacy thereof.

- Assess and evaluate South African IMT operations at a type two and or type three incident during wildland fires within the different wildfire prone provinces.
- Assess and evaluate the effectiveness and efficiency of aerial fire fighting within the South African context. Considerable attention has been given to suppressing wildland fires with aerial bombing, which includes helicopters and fixed-wing aircraft. While the public has strongly identified aerial programs with successful wildland fire suppression, fire managers have been keen to more fully understand the costs and effectiveness of using aircraft for fire fighting operations. This could assist fire authorities in South Africa to identify the most effective combination of suppression resources to minimise the impact of wildfires.
- Assess and evaluate the current fire fighting crews from different fire authorities and contractors, which will include training and infield assessments as to the

Targeted security and fire products exhibited at Securex 2017

Securex 2017, held at Gallagher Convention Centre from 30 May to 1 June 2017, provides businesses and private individuals with a common platform for all security- and fire-related solutions all under one roof.

Fire and Rescue International will be exhibiting as usual promoting its two magazines, Fire and Rescue International and the Disaster Management Journal. Also on offer will be information regarding the upcoming SAESI 2017 expo and conference.

Remote monitoring is addressed by Keystone Electronic Solutions' remote site management system (RSM). The company will be showcasing Project V – a stream on trigger solution that provides centrally managed video surveillance, triggered either through security events or alarms, or via a video-on-demand interface.

Paxton's Net2 Entry Touch Panel is the latest addition to the company's door entry system.

IT solutions from Potevio International include LTE base stations, vehicle server, ethernet switch, network management and dispatching integration client, digital trunking outdoor base station host, Tetra terminals and a wireless communications system solution for rail transportation and integrated public security system, which incorporates a commanding and dispatching solution.

Procore Trading's Intimus 9000 Degausser uses most modern APT technology to erase information from hard drives.

Mul-T-Lock's key and patented 20 telescopic-sizes pin system, mobile biometric reader, facial recognition systems, intelligent asset tracking, all-in-one digital video recorder, BN soft Evardy S1 Black Box, Mobi-black box,



rugged mobile DVR, surveillance cameras, time and attendance (T&A), vehicle security systems, RFID hotel locks and accessories will all be showcased at Securex.

VIRDI is launching the next generation of VIRDI biometric terminals. The AC2x00 series IP65 rated terminals, a new proximity card reader, together with the UNIS V4 command and control software, provide a formidable access control and T&A solution.

TimeTec Patrol provides a way to manage the guards patrolling business premises effectively. Using near field communication (NFC) and cloud computing technology to provide security firms with an effective patrolling app on Android NFC-infused smartphones, the app also allows the patrolling guards to report incidents, send photos, provide updates in real-time or request an SOS distress message to be sent to the manager in charge to maintain high levels of security at all times.

Anviz's SecurityONE is an integration solution incorporating access control, video surveillance and alarm monitoring.

Powell Tronics' stand will feature the new Morpho Extreme, the Morpho V2 Tablet (with Powell Tronics' Atom and PT-Rollcall) and Impro's portal range.

PSS Distributors will showcase its new SHC Series solar inverter.

Digital ID Technologies' ID card printers from HID Fargo include the DTC5500LMX, a 600 dpi security transfer printer and the new standalone IXLA laser engraver.

MultIVES is a digital voice evacuation and control system designed with a view to maximise safety in the work environment. Supplied by Soundcom, MultIVES is based on fibre optic ethernet connections between control units and the other elements of the system, which allows for its application in structures such as airport terminals, oil fields and refineries, shopping centres, mines, office complexes and virtually any scenario where audio evacuation and public address is needed.

Zonke's key systems offer several methods to store, audit and manage keys and assets. The personalised cabinets are used to secure a variety of sensitive items in addition to keys. ▶

- ▶ Doculam offers both local and imported products to the market. Some new products being displayed this year include the WatchDog body worn camera, the Suga Blu active patrol baton and the torch camera.

OnGuard's real time monitoring system provides analysis, recording, interpersonal communication between guards on patrol and their supervisors, control room safeguards and detailed patrol reporting and backup data via a combination of intelligent hardware and software systems.

The Security Technology Store (STStore), an online store for well-known access control, intercoms, gate automation and CCTV security products into Africa, is relaunching at Securex 2017.

Focusing on the physical safekeeping of valuables, Godrej Security Solutions will have a range of strongroom doors, category safes, rifle safes, drop safes, fire-resistant filing cabinets, fire-resistant safes and security deposit lockers on show.

The 100 percent black-owned SA Intelligence Fire Fighting distributes and installs pulse discharge superfine dry powder automatic fire fighting products.

SA-made Liberty Lockers offers a fresh approach to the secure locker environment. Aesthetically pleasing and highly functional secure structural elements form the core of the design principles, thereby providing a non-invasive form of secure storage with a fitted USB port to allow for cell phone recharging.

Integrity Control Systems has a number of specialised, tamper-evident medical carriers for the healthcare sector, including insulated blood-in-transit bags, human tissue transport bags, vaccine carriers, medical records holdalls, ambulance bags, pharmacy bags, emergency services bags and personal property bags.

HISSCO products cover the entire spectrum of detection including

security X-ray machines with single and multi-view capabilities, advanced CT systems for automatic explosive detection, hand-held and walk-through metal detectors, radiation-free body scanners and explosive trace detectors.

Cathexis Technologies will highlight the new features of its flagship product, CathexisVision, a comprehensive business intelligence tool to enhance operational efficiencies.

ZKTeco South Africa is launching new products for entrance control solutions. Within the range is the new biometric full height turnstile, which features a modular design, visible indicator, semi-automatic mechanism and SUS304 stainless steel cabinet that allows for its application in industrial facilities, corporate security, government security and public transportation.

HiTek Security will highlight CCTV, alarm systems and home automation products from Provision-ISR, INIM Electronics and DUEVI, including a 4MP (4K) AHD camera and the latest (H.265) technology in its 4 and 5 MP IP camera and NVR range.

Amax is launching its estate management system (EMS). The Amax EMS platform integrates all Amax systems. Although it communicates with each system, each remains independent from the other.

Axis will have various new products and technologies on display at Securex 2017 including the AXIS Q6055-C PTZ camera, which provides the highest video quality and performance in environments such as deserts, where high ambient temperatures and solar radiation require cameras to operate in extreme heat.

Easi-card makes and supplies printed and non-printed plastic cards for the security access ID, banking and retail industries. The company stocks a number of access ID blank cards including MiFare 1k, 4k, DesFire Ev1 8k, 125 kHz prox and the whole range of HID cards and credentials.

Upcoming new products from ELID include ER929 Shake Thru' Mobile Access multi-technology reader, perfectly suited for car park barrier access applications with an extended reading range of up to five metres for both smartphones or long-range active tags.

Jablotron will be launching its J150R wireless one-way repeater, extending communication range up to 300 metres in open areas, making it particularly useful where obstacles are apparent.

Tagtron Solutions will showcase the Proudly South African Tagtron AM EAS system and Tagtron Library SelfCheck units, fully designed and manufactured in SA. Also launching is the affordable EM retailer system, display security and RFID vehicle access control.

In addition to these and other high-end technologies and services, popular visitor attractions at Securex 2017 will include the Securex Seminar Theatre, the New Products Display, the FPASA InFIREs Workshop, the ESDA breakfast and the SAIDSA Techman Competition. For the first time, Genesis K9 Group (GK9) is hosting a stand with live demonstrations of highly trained security and detection dogs.

Also new to Securex 2017 is the launch of a technical training component. Two morning and two afternoon sessions covering various topics such as surveillance for the entrepreneur (targeting end users and installers), IP surveillance and remote deployment (targeting entrepreneurs), storage know-how (targeting installers) and IP convergence possibilities and solutions in industry (targeting installers and end users), have been scheduled. Full details of each training session are available at www.trainingtech.co.za.

Underlining the exhibition's credibility is the endorsement by several recognised industry associations and institutions that include ESDA, FFETA, FPASA, PSIRA, SAIDSA, SANSEA, SASA and SIA.

To visit the show please register at www.securex.co.za or contact Leigh Miller on leighm@specialised.com 📧

Free State Umbrella Fire Protection Association hosts information and strategy sessions

In February 2017, Free State Umbrella Fire Protection Association (FSUFPA) had an information session and thereafter held a management strategy session at its official training centre in De Wets Dorp, Free State. Fire and Rescue International received the following report from Thinus Steenkamp, general manager of the Free State Umbrella Fire Protection Association.

The information session, sponsored by Landmark Insurance, Workhorse Clothing and FSUFPA, was attended by FSUFPA, Free State Agriculture, Insurance Companies, Provincial Disaster Management Centre, University of Free State Disaster Management Training and Education Centre for Africa (DiMTEC), Mangaung Metro and Municipality, Department of Agriculture, Forestry and Fisheries (DAFF) Landcare, media, fire protection associations and the Naledi Landcare Community. The topics discussed included the danger and risk of veldfires to the agricultural and insurance industries, Landcare and veld fires, veld fires and disaster management, incident command system (ICS) training, DiMTEC involvement in local disaster management development and insight into technology where incidents are now circulated as live feed.



Guest speakers Malcolm Procter, DAFF; Lizzy Morake, CoGTA; Jack Armour, FS Landbou; Prof Andries Jordaan, DIMTEC; Chris Smit, DAFF Landcare and Gert Henning, Landmark Insurance

The information session ended with participants of the Naledi Landcare community, who, after having completed a grassland and bush fire fighting course, were presented with certificates and fire fighting personal protective equipment (PPE), which was sponsored by Workhorse Clothing.

The FSUFPA strategy session developed short and long term goals

and from the areas requiring focus, it was agreed that the umbrella FPA needed to primarily focus on three areas; governance and compliance of FPAs, training and efficient information dissemination.

Governance and compliance is essential to FPAs to ensure members are reasonably informed, equipped and protected in terms of the Act. This ▶



FSUFPA team Marietjie Smit, Erica Scotton, Joseph Renison, Thinus Steenkamp, Johan Breytenbach, Theo Schultz, Jan De Villiers, Malcolm Procter, Johan Terblanche



Thinus Steenkamp handed over certificates to Naledi Landcare committee chairman

JOIFF Industrial Fire and Explosion Hazard Management African Summit



Kevin Westwood, technical director of JOIFF and BP Group fire advisor Ronnie King, secretary, All Party Parliamentary Fire Safety and Rescue Group in the UK's presentation will focus on the infamous Milford Haven Tank 11 incident presented by the OIC on scene during this event chief fire officer at the time Ronnie King OBE followed by a short presentation on other boiler incidents of note and an update on Boilover research programme results conducted by the LASTFIRE Group.

Other speakers will include Nthai F Monnye, chairman of Fire Professional Council of South Africa (FPCSA); Raymond Bras of the United Fire Services in the Netherlands; Gary McFadden, ERM; Moses Khangale, NDMC; Marius Atterbury, Eskom; Colin Deiner, Western Cape Disaster Management and Fire and Rescue Services and Pine Pienaar, JOIFF.

A demonstration of the Ferrara Super Pumper and high volume filter will take place at Umuzi Lodge.

For further information or to register contact Paul Budgen on:

Tel: +44 (0) 203 286 2289

Email: pbudgen@edicogroup.net
or visit: www.joiffconferences.com



JOIFF

The International Organisation for Industrial Hazard Management (JOIFF) is holding its Industrial Fire and Explosion Hazard Management African Summit on 26 to 27 June 2017 at the Gracelands Casino Hotel and Country Club situated in Secunda, South Africa. The summit will be hosted by Pine Pienaar, director of JOIFF.

The programme includes speakers such as Randy Fletcher, the chairman of JOIFF and BP global response advisor: intelligence,

security and crisis management who will be delivering the key note address, which will include an overview of JOIFF and an analysis of the difference between training and competency development and its application in the industrial response arena.

Tinus Pretorius, senior manager, emergency services at Sol Plaatje Municipality will discuss the role of the Southern Africa Emergency Services Institute (SAESI) as the partner of the LG SETA in the assessment quality process.

▶ in turn should ensure that all conditions as set by insurance companies are met thereby providing assurance that landowners have met the reasonable man criterion, as required by the Act.

Training is a requirement of the Act and therefore the FSUFPA has developed relationships with DAFF, University of Free State DiMTEC, SA ICS Working Group and Montana Department of Natural Resources and Conservation so as to provide efficient cost effective training to landowners and their staff.

The FSUFPA will on the 2 to 5 May 2017 host a South African Qualifications Authority (SAQA) accredited ICS 300 and 400 course at their training centre in De Wets Dorp.

Efficient information dissemination is about communicating essential statistics to ensure that FPAs, landowners and all relevant stakeholders have access to historic and current information thus ensuring the effectivity of decision making regarding firebreaks, fire fighting, ecology and risk factors. DAFF is in the

process of finalising the sector maps in accordance with Level 3 Veld Fire Disaster Management Planning.

Reflecting on the success of our first media day held in 2016, FSUFPA will hold annual media days so as to ensure media, relevant government departments, landowners and the general public are kept informed on all and any new developments that will assist with the effective prevention and suppression of wildfires in the Free State. Our next media day will be held 25 July 2017 in Bloemfontein. ⚠



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Hazardous materials: flammable solids, oxidising agents and organic peroxides

By Colin Deiner, chief director, disaster management and fire brigade services,
Western Cape Government

Fire fighting of organic peroxides must be done from a safe area



This is the fourth article in our series on responding to specific classes of hazardous materials (hazmat). I have decided to include two classes in this month's article namely (1) flammable solids, which also includes substances liable to spontaneously combust and substances which, in contact with water, emit flammable gases and (2) oxidising agents and organic peroxides.

Flammable solids

Flammable solids are amongst the most common hazardous materials yet a relatively small percentage is included in the United Nations (UN) hazardous substances classification. The first classification includes flammable solids, self-reactive substances and desensitised explosives such as the types that are

wetted down with sufficient water, alcohol or plasticiser to suppress their explosive properties eg trinitrotoluene, nitroglycerine mixture.

Readily combustible solids include solids that are capable of causing a fire through friction (safety matches) and celluloid. Also included are self-reactive materials that are thermally unstable and are prone to undergoing a strong exothermic decomposition even without the presence of oxygen. Materials that meet the UN transport regulations definition of explosive, oxidiser or organic peroxide are excluded from this classification.

The second classification of flammable solids includes those solids that are liable to spontaneous combustion. These include substances that are liable to spontaneous

heating under normal transport conditions or will have an exothermic reaction when it comes in contact with air.

Spontaneously combustible solids include (1) pyrophoric materials, which are materials that are capable of igniting, without being exposed to any external ignition source, within five minutes of being exposed to air eg UN 1854 barium alloys and (2) those self-heating materials that exhibit spontaneous ignition or can self-heat to temperatures of 200 degrees Celsius during a 24-hour period in the presence of air but without any external energy supply eg UN 2002 celluloid.

The third classification includes substances that emit flammable gases when they come into contact with water. Examples of this classification includes aluminium phosphide, which releases phosphine gas and calcium carbide, which emits acetylene when in contact with water and sodium.

Health hazards

The primary health risk of exposure to flammable solids is the inhalation of dust powder particles of certain types of these materials. Particles such as sodium metals react with the moisture in the lungs to form a caustic solution that will damage sensitive lung tissue. There is a further risk of chemical burns when certain metallic dusts come into contact with body moisture. It is therefore important for responders to stay clear of any smoke columns that may contain by-products of the burning metal.

Managing the incident

The most important operational consideration would be to make sure that you know what the reaction of the substance will be before deciding to apply any extinguishing agent. Make sure that the relevant safety data information for the product is at hand and that the correct extinguishing or controlling agent is available in sufficient quantities before starting the operation.

A flammable solid spill can be relatively easily managed by covering the spilled product with tarps or heavy plastic sheeting and to ensure that it does not come into contact with water. Regardless of the condition of the product ie fire or dust, always ensure that responders have adequate respiratory protection available.

Most actions involving flammable solids will be based on letting the incident stabilise through fire or just exercising control over the spilled product and could be handled relatively easily.

A dust propagation will increase the surface area of a combustible solid and enhance the ease of ignition. A flammable gas-air mixture can form within certain limits and the resulting explosion will be similar to a gas explosion. Although dust explosions are rare, they can propagate an enormous energy release.

Preventing a possible dust explosion in a flammable solid environment will require a strict control of the environment where the spillage occurred. Firstly, all



Make sure you know what the reaction of the substance will be before deciding to apply any extinguishing agent

ignition sources need to be eliminated. Try to avoid or limit disturbing the dust and attempt to control the dust concentrations. This can be done by using hoses to 'water down' the particles of a product that is non-water reactive.

Oxidising agents and organic peroxides

The best known oxidising agent we know is air, which is necessary for all combustion to take place. There are, however, a number of other substances that are able to propagate large volumes of oxygen thereby accelerating a burning process and, if uncontrolled, have disastrous results.

Oxidising agents are generally defined as "substances that supply oxygen to another substance" or "substances that supply any supporter of combustion to another substance". The first definition would be more relevant to our purposes, however, large quantities of other supporters of combustion such as chlorine, fluorine and bromine, may also be encountered and should therefore form part of the preparedness planning for fire department hazmat teams.

In order for a product to be classified as an oxidising agent, it must conform to the following criteria:

- It must itself contain oxygen and
- It must be capable of supplying oxygen to another substance

Sodium chlorate is a good example of a powerful oxidising agent while although calcium carbonate and calcium sulphate contain at least as much oxygen as sodium chlorate, they are not capable of transferring their oxygen to another substance.

Oxidising agents can further be classified into organic and inorganic oxidising agents. The most common of these is the inorganic. Although they are classified as



Know the properties of the products you are dealing

- ▶ non-flammable, certain types (sodium chlorate and ammonium nitrate) will decompose rapidly and present a major risk when stored or transported in an enclosed area in large quantities.

Products classified as organic oxidising agents are organic peroxides, which are commonly used as catalysts in the manufacture of plastics ie dibenzol peroxide, methyl ethyl ketone peroxide. Where inorganic oxidising agents are non-flammable and only provide the one side of the fire triangle ie oxygen, organic peroxides are also capable of burning and therefore provide two sides of the triangle ie oxygen and fuel.

Hazards

The main fire hazard related to inorganic oxidising agents is when the agent comes into contact with flammable materials. The oxidising agent will slowly provide oxygen to the fuel at first. This exothermic reaction will cause the temperature to rise gradually until it reaches its ignition temperature and then starts to burn. As when highly concentrated hydrogen peroxide comes into contact with wood, the spontaneous combustion occurs almost immediately. Other spontaneous combustion reactions can take slightly longer eg glycerol coming into contact with potassium permanganate and finally the well-known example of rags soaked in linseed oil being exposed to atmospheric oxygen can take quite a while to combust.

The risk is not only limited to spontaneous combustion but can manifest when a fuel starts to burn in the presence of an oxidising agent. The fire is then not reliant on ambient atmospheric oxygen to burn but is fed by the oxidising agent, which ensures the presence of oxygen in a highly concentrated form eg if a cellulose material such as a wooden floor or shelving becomes impregnated with an oxidising agent such as sodium nitrate.

The heat energy generated through the self-decomposition of an organic peroxide such as methyl

ethyl ketone peroxide exceeds 50 degrees Celsius. Others are significantly lower and must be stored in refrigerated conditions. These peroxides, if heated, can become sensitive to heat, shock and friction. Due to the instability of these products, they are normally stored in a diluted state by adding a chemically inert material; generally at 50 percent relations. This is also how they will in all possibility be encountered. Even in this state, certain products can still ignite and burn fiercely.

In addition to its fire risk, several concentrated oxidising agents also hold a corrosive and toxic risk. The skin and eyes are specific areas which could be affected.

Responding to the incident

Incidents involving organic peroxides and oxidising agents will require a full hazmat team response and access to a comprehensive database of the products you might encounter.

The most important consideration will be to appreciate the unpredictability of the product involved. As with most hazmat incidents, approach the incident in a defensive mode. Be alert for possible violent container failure eg peracetic acid could detonate if its concentration exceeds 56 percent; this could happen if the container is stored incorrectly and the product is allowed to evaporate.

If it is possible, efforts must be made to separate the affected product from the fuels. Water streams can be used to cool down containers and consider ventilation if the containers are in a confined area. If the product is involved in a fire, the choice of extinguishing agent must be carefully considered. The challenges that certain water reactive products may provide must be an important consideration. Also take into account the potential environmental impact of any fire fighting operations.

Fire fighting of organic peroxides must be done from a safe area. The surrounding area should be evacuated of all non-essential personnel. Placement of ground monitors should also be considered.

There is also the danger of mixing combustible products with water containing dissolved oxidising agents, which might spontaneously combust later on after the water evaporates.

In closing

Incidents involving flammable solids, oxidising agents and organic peroxides will not happen often. It is generally fairly easy to identify the sites where these incidents might take place.

Transport route response planning will also give you an indication of what hazardous materials might be travelling through your area of jurisdiction. As mentioned a few times in this article, knowing the properties of the products you are dealing with and understanding their reactivity with water, air and other elements is what will give you the critical advantage when responding to this type of hazmat incident. ⚠

Fires in high-rise buildings: additional recommendations from FDNY fire chief

By Ronald R Spadafora, chief of fire prevention, Fire Department of New York (FDNY)

Large structural fires can challenge ANY fire department

This commentary is being written as a supplement to Chief Ian Schnetler's 'Initial attack' article as part of a series on the subject of high-rise fires. It can be found in Fire and Rescue International magazine, Volume 3 no 12. The following is a listing of key features that should be addressed when confronted with a high-rise fire.

Height and dimension

Large structural fires can challenge ANY fire department. During the initial attack on a working fire requiring one fully manned engine and one fully staffed ladder company to possibly bring it under control, manpower is the key component not only to success but to fire fighter safety as well. The building must be sighted from the exterior by first arriving units for signs of occupants in need of assistance, fire and smoke. All four sides of the building must be looked at for this important information. If these signs are noted by any member, it should be communicated to the recently arrived or incoming chief officer. Additional manpower, apparatus,

tools and equipment will be required for any incident where multiple victims are spotted out of windows yelling for help as well as fire or smoke coming out of the exterior of the building.

Construction

In general, traditional high-rise structures built of dense steel and concrete (heavyweight), having compartmental floor arrangements will have a better chance of containing fire to the floor of fire origin than modern lightweight (light gauge steel, plastics and glass) of open space core design. All factors being equal, the more mass a building has the greater resistance to the damaging effects of fire. Compartmentation can allow fire fighters the opportunity to move along the fire floor to reach the seat of the blaze. Closing off rooms and corridors will provide time for the hose line to be placed in position for effective water application. Many of these buildings have air conditioning equipment serving only the floor where located, individual window air conditioners and/or

openable windows, which allow for ladder rescue of trapped occupants on lower floors and coordinated ventilation, where feasible. These features simplify smoke containment. ▶



Openable/breakable windows in a high-rise residential building can be utilised by fire fighters for search and rescue, access, egress, ventilation as well as water application

Fires in high-rise buildings

▶ Gaps in exterior cladding systems (panel walls) installed in modern buildings may allow fire to spread vertically from floor to floor dramatically compounding the fire problem. Inside a modern high-rise, a fire starting within a utility shaft (electrical, telecommunications) commonly installed from top to bottom within the core can also support the vertical spread of fire. Additionally, non-compartmental design often found in modern high-rise buildings support rapid fire spread on the floor of fire origin. Fire fighting forces must be prepared to attack the fire upon entering the fire floor. These factors must be considered when developing strategy and tactics.

Central air conditioning systems serving multiple floors complicate the fire problem. Safety component (fire/smoke actuated dampers) failure inside the heating, ventilation and air conditioning (HVAC) system can cause the products of combustion to spread rapidly on multiple floors, both above and below the floor of fire origin. Strategy should include shutting down the entire HVAC system utilising the assistance of building engineering personnel until the fire floor has been discovered and verified. Subsequently, floors not being serviced by the HVAC system affected by the fire can be turned back on. This action will pressurise floor areas above and below the fire area, limiting the influx of smoke and toxic gases.

Command post

A lobby is often selected by the fire department as the primary command post. Its location should be adjacent to fire protection automatic devices that annunciate where in the building smoke/heat detectors have been activated. A command post situated within sight of the elevator banks and stairs will also facilitate command and control.

All building elevator cars must be brought to the lobby floor level for occupant search and control. An exception, of course, would be elevators servicing the lobby during a fire located in this area. If provided, each elevator should also be placed in the 'fireman service' position for use only by fire fighters during operations. Fire fighters who are controlling the movement of cars should have no other duties until the operation is deemed 'under control' by the incident commander (IC). Fire service control of the elevators during fire and emergency incidents is essential. All stairs above and below the fire floor must be searched for victims. A record of all elevator cars and staircases that have been searched must be communicated to the IC for recordkeeping.

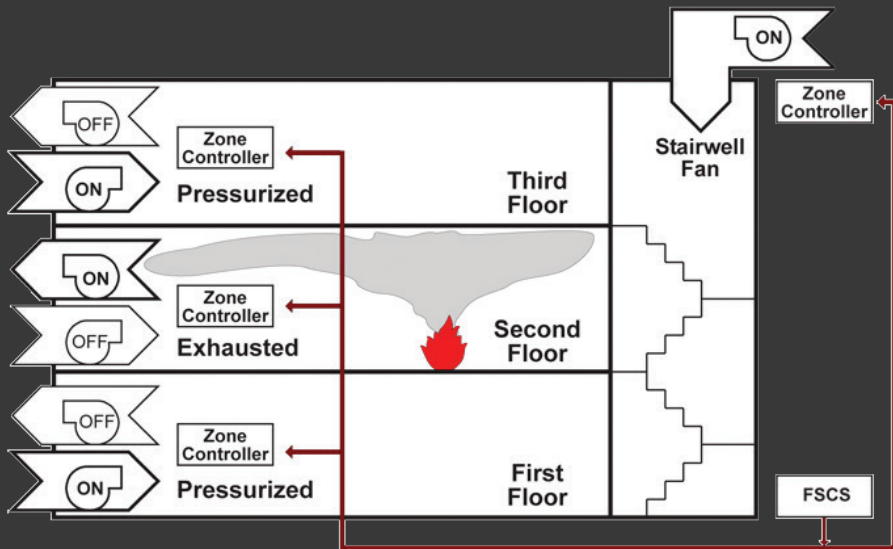
Modern high-rise buildings commonly have a computerised building management system (BMS) installed. A BMS monitors and controls the building's mechanical and electrical equipment such as HVAC, lighting, power, fire suppression and security systems. Assistance from building

role players and other site-specific personnel will be extremely valuable throughout the operation. The IC occupies this critical position and ensures fire company accountability, communications and the establishment of a fire fighter rescue and intervention team (RIT), triage area and staging area.

Built-in building radio communications systems for first responder use have proved useful to NYC fire fighters in enhancing our operations when installed in both tall, below grade and large-dimensional structures. Enhanced portable radios developed according to fire service recommendations provide additional ways to coordinate tactics and enhance operational safety throughout the building. An operations post, established on the floor below the fire and manned by a chief officer in charge of sufficient manpower to successfully fight the fire and search for occupants on the fire floor and floor above the fire, as well as a search and evacuation post responsible for the upper floors of the building, are both doable with enhanced communication technology.

Fire fighting procedures

In general, high-rise building floor areas require large diameter attack hoselines with solid, smooth-bore, nozzles. This requirement, when adequate volume and pressure is supplied, enhances the goal of engine company fire fighters reaching the seat of the fire with their hose streams. Fog and hollow stream nozzles are frowned upon by the FDNY for initial assault. These devices produce a non-penetrating stream of water that breaks apart on its way to the fire producing large amounts of steam endangering both fire fighters advancing on the fire as well as trapped occupants. Two hose lines, stretched in unison on to the fire floor is often needed for successful knockdown and safety of members. Engine company fire fighters must team-up utilising the hose lines to be successful. The potential for a large-scale fire generating enormous amounts of fire and smoke can easily overwhelm



The use of hand tools in vehicle extrication

By Neville van Rensburg and Julius Fleischman,
World Rescue Organisation (WRO) assessors and members



The rescuer must learn the art of extrication using hand tools with heavy emphasis on the first responder jack, reciprocating saws, air chisels and other basic hand tools.

As part of a kitchen table discussion, particularly for departments on a limited budget, responders commonly ask the question, "If you could only have several extrication-related tools, what would they be

and why?" It would be wonderful to have a fully stocked heavy-rescue vehicle at every scene with any tool we could dream of at our disposal but most of the time that's not possible. ▶

a single hose line manned by only a few fire fighters. The attack stair designation where these two hose lines originate from, must be communicated by company officers in charge of the units to all. Any person caught above the fire within this staircase is in serious danger from fire and smoke, once operations begin.

Ladder company fire fighters must also work together in teams in their attempt to save lives and locate the fire. The use of search ropes is vital for coordinated effort and safety. Freelancing is extremely dangerous. Members can get lost very easily and run out of air. The thermal

imaging camera is another essential tool for ladder company members performing search for fire and victims.

Ventilation tactics such as opening windows should only be attempted when water is being applied onto the fire and the parameters of the fire have been ascertained. It should be noted that wind magnitude and direction at the upper level of very tall buildings are unpredictable. Permission must be granted by the IC prior to breaking glass windows since shards falling from above can inflict serious injury to persons below as well as sever hose lines. Time will be required to clear the area around the building and protect equipment.

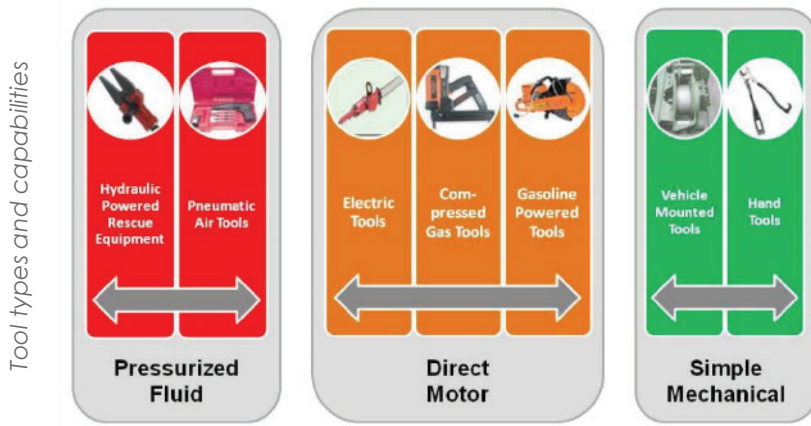
Conclusion

This article hopefully complements the ideas and information found in Chief Schnetler's article. The best way to plan for high-rise building fires and emergencies is to visit the structure and become familiar with its fire safety personnel and fire protection systems. Frequent on-site training drills are excellent ways to prepare for fires that can challenge even the most advanced fire departments.

About the author

Ronald R Spadafora is a 38-year veteran with the Fire Department of New York (FDNY) and is currently the chief of fire prevention. 🔥

Rescue roundup



► As such, keeping selections simple and mastering those tools allow responders to successfully mitigate most extrication scenes in a timely manner.

Hydraulic tools are prevalent on most vehicle extrication operations. As effective as these tools are, they are not the only tools available. Hand tools have been pushed into the background but still play an important role in vehicle extrication operations.

Sometimes hand tools are more effective than hydraulics. For example, removing the hinge bolts from a passenger car door can be easier and quicker than spreading it with a hydraulic tool. It is also quieter and places less stress on the car; this will aid in patient calmness during the operation.

What we need to consider

Consider EVERY possible application, every type of incident and how each type of tool would impact on how you work on scene. In addition to how the tools perform during a rescue, also consider what different equipment means in terms of testing, training, maintenance and service.

Options for success

It is fantastic that there is such a tremendous range of equipment options available to the modern day rescuer. Having the right tool for the desired application is crucial and, we have said many times, that you must have options to be successful.

Tool types and capabilities

The different tools logically separate into three basic groups according to primary power sources. First are the powered rescue tools that use pressurised fluid including pressurised gas/compressed air, supported by an external pressure pump via hose lines, with the most common liquid fluids being hydraulic or mineral oil.

Second is the wide range of tools that have a self-contained motorised power source such as a gasoline engine, compressed gas or an electric motor. Finally, there are numerous tools that are directly powered by human energy, such as hand tools and tools directly mounted on vehicles, like a winch.

It has been said that we must be able to use hand tools should your hydraulics for some reason give problems on

accident scenes and that must never limit the rescue effort. There is a variety of small hand tools that are very useful during access procedures or where hydraulics is not immediately available. It's also useful in rural areas where there are no rescue vehicles.

There are specific tools needed to quickly and efficiently perform in a vehicle accident situation where a patient is trapped. With this in mind and according to the vehicle extrication techniques manual of Holmatro, patients can be physically trapped due the structure of the vehicle eg dashboard and steering wheel. You need to use equipment to extricate patient.

The second one is when patient is medically trapped; they cannot extricate themselves due to their medical condition such as priority one - red patients. You need to use equipment to extricate the patient and to protect the patient and move him as a unit.

As we all know trauma on our roads is a major killer and vehicle accidents on our roads continue to claim thousands of lives of thousand each year. Just look at the 2016 holiday season death toll statistics. Sometimes a first responder vehicle or team arrives on these scenes only to find they are unable to reach the patients inside the vehicle. Precious minutes of that Golden hour are lost, awaiting the arrival of rescue tools and personnel, especially in rural areas.

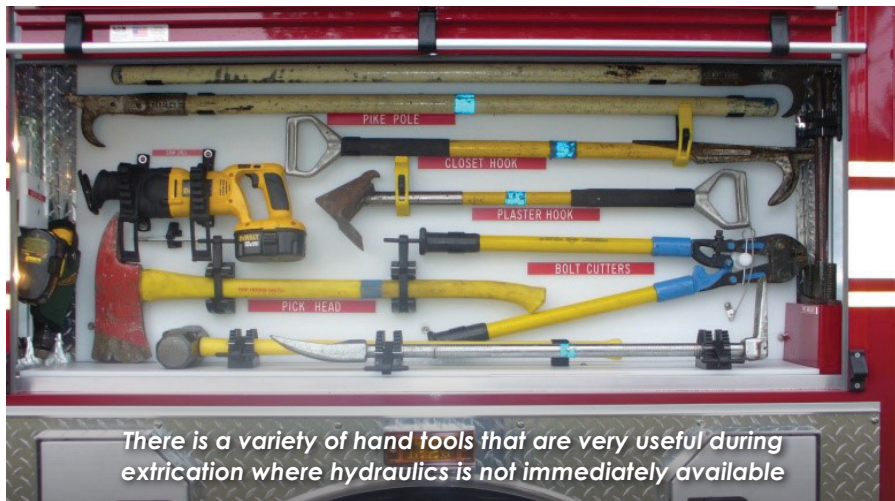
If these people are trained to use hand tools and the safety that goes with that, they really can make a difference. We must always remember that it's about a patient and their lives.

Recommendation

We highly recommend hands-on training with ratchet straps, come-along, high lift jacks, bottle jacks, trolley jacks; making a third door out of a two-door vehicle and how to effectively extricate someone from the back seat of a two-door coupe.

Summary

There's no denying that every responder would love to have every tool possible. Having the right tool for the right job certainly makes many tasks easier. However, it also means that responders will have to be proficient with its use.



There is a variety of hand tools that are very useful during extrication where hydraulics is not immediately available

A well-trained responder, keeping selections simple and mastering hand tools allow responders to successfully mitigate most extrication scenes in a timely manner.

The following hand tools can be effective for this purpose and is below:

There's no denying that every responder would love to have every tool possible. Having the right tool for the right job certainly makes many tasks easier. However, it also means that responders will have to be proficient with their use. A well-trained responder who has this set of tools can

adapt to almost any situation and successfully mitigate the entrapment.

Reference

- Essential Extrication Tools Fire Rescue
- Technology and Engineering
- Fire Protection Research Foundation
- Holmatro 

Halgan bar	To gain entry, to create space, to lift
<ul style="list-style-type: none"> • Wedges, • Cribbing • Chocks 	Cribbing is necessary to stabilise the vehicles that require tactics for the benefit of the patient and the safety of responders. Cribbing purpose is to hold the vehicle in position during operations
Bolt cutter	To cut chains ,locks
Other jacks	To lift, to stabilise, to spread in small places
Hi lift jacks	To lift vehicle, to spread doors, Lift roofs and stabilisation, helps with B-post tear at roof to do dash lift and creating space.
Hack saw and 10 spare blades-Lenox 18 teeth	To cut where needed some small body parts specially the new body materials that replace sheet metal
Toolbox with spanners	To disconnect batteries, some vehicles doors, remove seats and any other needs
Window punch	To completing disentanglement tactics, all applicable glass must be managed
Screw drivers 1 to 16 including large flat blade	Can be used to do trimming remove interior trim before cutting or to break piece in vehicles off
Axe	For cutting front laminated glass, to created space.
Utility knife	A sharp blade can be used to expose upholstered areas during operations for example to cut seat cushions. Cutting seat belts, shoes laces etc
Chains	For pulling, lifting, stabilisation
Pliers	Can be used to disconnect the 12-Volt battery system; remove interior trim at all push, pull and cut locations; disassemble vehicle components, etc
Large side cutter	Cut off wires
Hammer	To break something
Mallets	Chocking
Pair of scissors	Cut materials and clothing where necessary
Large monkey wrench	Batteries
Small wrench	Tools such as these can be used to disconnect the 12-Volt battery system at all push, pull and cut locations; disassemble vehicle components
Crow bar	Pry, lift and to create space
Screw jacks	Stabilisation especially if no other stabilisation equipment is available
1 heavy vice grip pliers	To support
1 battery pliers	For battery
1 Roll duct tape	To attach items together especially cutting at gas cylinders of hatch back doors. To cover sharp edges
Pack cable ties	To attach and secure loose pieces as well as gas cylinders at hatch back vehicles doors and many more uses
2 Ratchet straps	To marry to vehicles or stabilised vehicles
Seat belt cutters	Almost any disentanglement tactic requires wires and/ or seatbelts to be severed for the complete removal of components
Lumber/timber	Example: if no struts available lumber can be use as part of stabilisation

Surviving a sudden and unexpected change in fire conditions

By Dale Jenkins, senior captain safety 24-A at Houston Fire Department, US



Know the basics of surviving on the fireground

I recently sat at home watching the news when I saw footage from a helicopter of a crew getting in trouble as they began their attack on a one storey house fire. As soon as the first fire fighter entered the front door, things seemed from the video to suddenly go wrong. Luckily, due to our outstanding gear, he appeared to come out unharmed. When his movement away from the front door stopped, he appeared to me to be regrouping not retreating.

I think many would agree there is a noticeable difference in the body language of someone who wants to do the job and someone who has checked out. I see no problem with regrouping. It's always the wise choice over going to rehab during an active fire attack.

I believe what I saw was a young fire fighter who had just received God's blessing, experience without lasting pain. Experience that he

earned the hard way, by doing! No doubt that he and his crew will all be better fire fighters because of this close call.

However, watching this unfold on TV triggered something in me. It hit a nerve; that fire coupled with 13 Houston fire fighters killed in the line of duty since 1996, all inside burning buildings. 11 of the 13 were all first arriving crews just like the crew I had just watched. This, combined with numerous other close calls, left me with that sick feeling. I can't say that I knew anyone on the crew but that's irrelevant. My wife, Kathy, sat there as I hit the rewind and play button over and over. I kept asking her, how can I get this basic information out there that I feel other fire fighters need to know?

As in the video that same thing ie suddenly being covered up in fire, can happen to us in any number of different ways in a building fire.

We could have a flashover, flame over, backdraft, smoke explosion, sudden wind change, ceiling failure, improper ventilation or any other number of sudden changes that could cause us to be covered up in fire. Gasoline, propane, aerosol cans, gun powder and many other products found inside the buildings we fight, can all have the sudden and unexpected consequences of putting us and our crews in a struggle for survival.

After it has happened it is no longer relevant as to how it happened; what is relevant is are we ready?

Do we have a plan on how to survive a sudden and unexpected change in fire conditions when we are suddenly covered up in fire?

Have we made sure that our crews know our plan and have one of their own?

I know all of you are outstanding fire fighters but I also know that at times I

can get so preoccupied with teaching so much information that I fail to get the new fire fighter or rookie on the most basic life safety skills. Periodically I have to go back and cover the basics of surviving on the fireground.

I have to assure myself that everyone knows their options if we are suddenly covered up with fire.

Do they know?

- To get down.
- That our mask can melt to failure in approximately 10 seconds of direct flame contact!
- That we only have three viable options for survival, which are:

1. Get out!

Which may very well require being able to read a coupling with zero visibility and with gloves on. If your fire fighters use the saying "smooth bump, bump to the pump", please make sure that they realise the bump, bump is only there because it rhymes with pump. They DO NOT have to feel two bumps or any bumps to know they are going out. The SMOOTH tells them everything they need to know and can be determined with a gloved hand, no fingers needed.

2. Get the fire off of you!

Without going into a long drawn out discussion about nozzle selection I will just stick to the facts. You better have more water at your nozzle than you need when things suddenly go bad or the fire wins! Remember, if you do not overwhelm the fire, the fire will overwhelm you!

3. Protect your mask!

If you are unable to accomplish 1 and 2, then you had better have a plan for number 3. What we were teaching at one time, 'covering your mask with your hands' is now changed to 'clinch your hands to protect your fingers and cover your mask with your arms'. Both methods are responsible for fire fighters surviving, both required skin grafts but are alive and back fighting fires!

A couple of other survival points that I try to consistently push are:

Where to get air! Do all of your crews know about the air in the:

1. Wall: Sheetrock walls have somewhere between two to five minutes of air trapped between a set of studs on 40cm centres; depending



Do your crews all know about garages?

- on how fast you are breathing.
2. The P-trap: Is connected to a vent pipe that goes through the roof
3. Toilet: connected to a vent pipe that goes through the roof.

We are talking about options to live or die so get over the how dirty it may be. You need to have gone through the motions and trained on how to do it, short of actually inhaling. You need to have a grasp on how to accomplish it and the concept of how it works before your life really depends on it. Do your crews all know about garages?

Do they know about all of the bad stuff that is in them?

Do they know that a free standing garage is a three sided box, which if any one part of the three sides is compromised, allows gravity to take over and gravity always wins!

I have had seven fall! All but one was two storey garage apartments. Three pancaked! Three fell over and one leaned over into a large tree, all with no warning! I dare to think what the outcome could have been had anyone been in the wrong place.

One last thought to pass on; a new concept and or a new tactic for exposure protection. Positive pressure for exposure protection!

Think about it literally! It is the practice

of protecting exposures by using positive pressure on the interior to slow or stop the spread of the fire. Fire spreads four ways of which convection being smoke and heat is the fastest. If we control the smoke, we control the fire. So we pressurise, we do not ventilate. We use our positive pressure fan just like we would for positive pressure ventilation (PPV) except we do not vent we only pressurise. We do not want any other openings; we are trying to build up a positive pressure in the exposure so that if the fire starts to burn through, that area then becomes our vent. The positive pressure then flows to and through that area not allowing any smoke, heat or fire in. For this to work, it is imperative that we open the attic and any voids to allow the pressure in to those areas. This is not a replacement for handlines but we are able to cover a much larger area with only one fan and one or two fire fighters to put it into service and monitor it.

We have used this on four fires with incredible results.

All I ask is that you consider this information, if you think it has the potential to make a difference then pass it on or use it to add to your toolbox of ways to survive on the fireground.

Be trained, be safe! 

Fine scale risk analysis

By Malcolm Procter
Deputy director, Department of Forestry and Fisheries (DAFF), Free State, South Africa

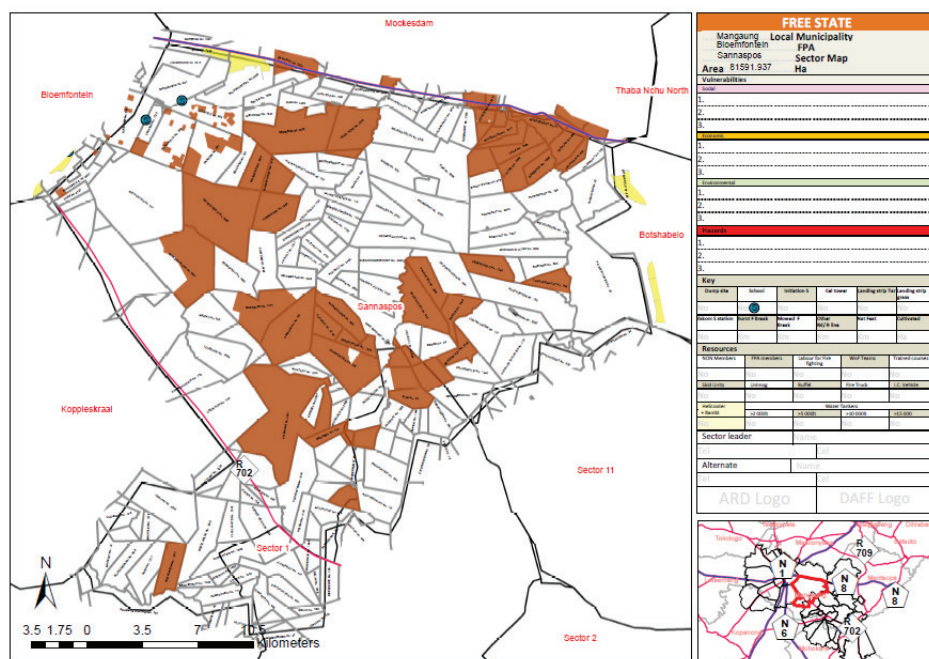


Some property owners do not realise they live in a high-fire-hazard area

Disasters are caused by single- or multiple-event natural hazards that, for various reasons, cause extreme levels of mortality, morbidity, homelessness, joblessness, economic losses or environmental impacts. In his book, 'Preventing chaos in a crisis: strategies for prevention, control and damage limitation', Patric Lagadec said, "...the ability to deal with a crisis situation is largely dependent on the structures that have been developed before chaos arrives. The event can in some ways be considered as an abrupt and brutal audit; at a moment's notice, everything that was left unprepared becomes a complex problem and every weakness comes rushing to the forefront."

The South African Disaster Management Act requires three levels of planning. A level 3 plan must specify clear institutional arrangements for co-coordinating and aligning the plan with other governmental initiatives and plans of institutional role players. It must also show evidence of informed disaster risk assessment and ongoing disaster risk monitoring capabilities as well as relevant developmental measures that reduce the vulnerability of disaster prone areas, communities and households but does not set out the methodology for this. By implication in order to get to the root cause of the veldfire problem, further levels of planning are required whereby a level 4 plan would consider the risks within a local municipality. A level 5 plan

A basic parent farm or original farm names map

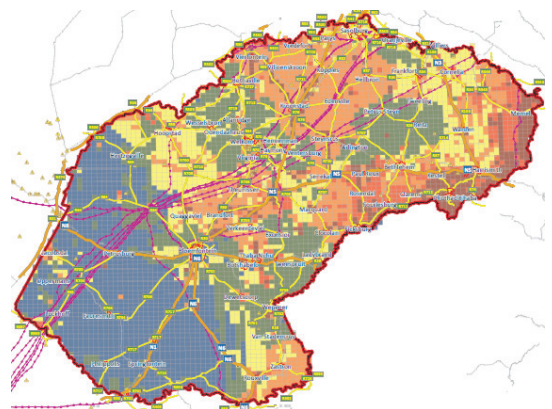
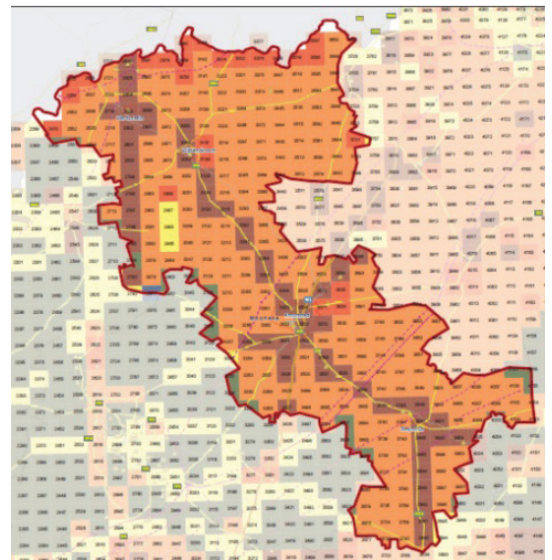


Map 1 was used 4 times to indicate
 1) FPA membership using a blue highlighter
 2) Hazards using a purple highlighter
 3) Vulnerabilities;
 • Social – pink highlighter
 • Economic – yellow highlighter
 • Environmental – green highlighter
 4) The 4th map was used to denote houses and structures on farms that are likely to be vulnerable to the passing of a veldfire. (HOMES SHOULD BE DESIGNED, BUILT AND MAINTAINED TO WITHSTAND A VELDFIRE WITHOUT THE INTERVENTION OF THE FIRE DEPARTMENT.)
 For purposes of this exercise the entire farm was marked with a yellow highlighter.

Moqhaka Sectors



Sector map of the Moqhaka Local Municipality left, risk map Moqhaka Local Municipality top right, risk map Free State Province bottom right



- ▶ effects of these disasters manifest in several ways. First and most obvious is the loss of life and property. Second, how people value their property and place within the community changes; some residents sell their properties, many are forced to rebuild and others relocate. All are resigned to accept a highly disturbed landscape for years to come.

Perceptions of risk and danger are largely based on what society and organisations choose to value and what they choose to fear. Often, these values are shaped by larger organisational and political interests that bias perceptions of risk, danger and responses that reinforce the values they match.

Some property owners do not realise they live in a high-fire-hazard area. This lack of awareness is often associated with people who have recently moved to an area. Without the knowledge that a threat exists, there is no motivation to take action. However, residents are usually better informed about their exposure to veldfire risk than people think they are. For the most part, property owners living in high fire-hazard areas are aware of the threat.

In general research in to the perception of risk shows that people evaluate risks through a number of subjective concepts and beliefs in a multi-dimensional way. The quantitative aspects of risk are often regarded as less important than the qualitative attributes of risk. Despite awareness of the veldfire threat, some individuals refuse to

acknowledge that they are at risk. They choose to ignore the hazard and do not act on it. Some property owners may be aware of the veldfire threat but do not take action because they do not consider it their responsibility. These individuals often believe it is the fire protection association's job to protect their properties from veldfires. After all, that's why they pay membership fees! Sometimes coupled with this belief is a misconception about the abilities of fire fighters to control an intense veldfire.

A lack of knowledge about ways to carry out veldfire threat-reduction practices prevents some property owners from creating defensible space. Some homeowners are uncertain about which veldfire threat-reduction practices are most worthwhile and how to implement them. Some property owners discount the need to take action because they feel their properties are adequately insured. There are people out there who take care of some of their serious valuables, like pictures and things that they can't replace. Once they find secure places for them, they don't care if the house burns down. This is particularly true when the property is a second home or if the property is a rental.

The level of knowledge about veldfires varies greatly. While it appears that some of the more basic matters about veldfires are known, many myths still persist. Knowledge about veldfires is necessary to be well prepared but in itself it is not sufficient to ensure preparedness. Studies indicate that there are many who are poorly informed and believe

many of the myths about wildfires. There are also those who are quite well informed but not necessarily well prepared overall. Finally, depending on the location there is likely to be a significant minority who have acquired a good understanding of wildfire and have applied it to become well prepared.

When people become aware of a hazard and its potential to affect them, they make decisions about how they will respond to the risk. For some, this is a considered process of information gathering, decision making and deliberate action. For others it may be an 'unconscious', relatively spontaneous response to the realisation that the threat exists, in which case 'preparedness' might consist of the intention to flee at the first sign of fire. In other words, it is suggested that everyone makes choices about how to use or not use their skills and resources in relation to the risk.

Ultimately, while information can increase risk perception, increased risk perception has not been clearly linked to taking action. High risk perception appears to be a necessary but not sufficient condition. While high risk perception may foster investigation into alternatives, various other factors come into play in the decision to adopt mitigation measures, when experience does increase awareness levels and risk perception, its influence often only lasts for a relatively short period immediately following the event. This is why the best time to institute mitigation measures and legal change generally is immediately following a disaster. Many groups must share responsibility for solving the problem such as fire protection associations, home owners, local and regional planners and governing bodies, builders, contractors, building and landscape architects and insurance carriers.

Community risk reduction uses prevention processes to reduce or eliminate hazards and risks in the community, thus reducing the frequency and severity of fires and injuries. This effort requires planning. But the foundation for success is laid long before the planning step. First, it's important to have proactive individual and organisational attitudes about the community education program and a strong personal and organisational commitment to making the program achieve its goals and objectives. A successful program follows a five-step process:

1. Conduct a community analysis
2. Develop community partnerships
3. Create an intervention strategy
4. Implement the strategy
5. Evaluate the results

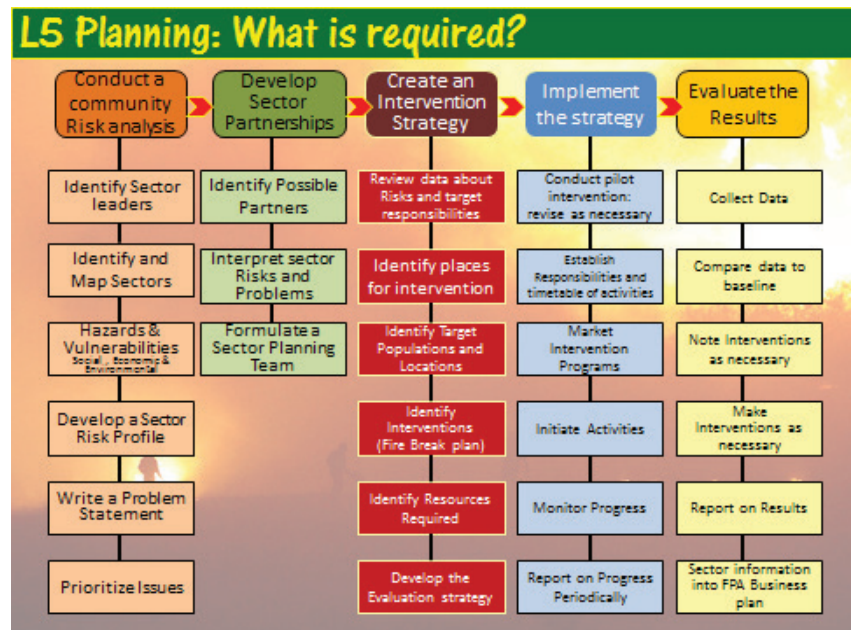
Each of these steps involves several sub processes.

In the next article I will explain in more detail what is entailed in each of the five mitigation planning steps.

Conduct a community analysis

a. Identify sector leaders

A sector leader is a person, willing to join forces and



Level 5 planning: What is required?

address a community risk. The most effective risk reduction efforts are those that involve the community in the planning and solution process.

b. Conduct a community analysis.

A community risk analysis is a process that identifies fire and life safety problems and the demographic characteristics of those at risk in a community. Evaluating fire history helps to identify problem areas where regular fires originate. It provides the foundation for a more intensive Risk analysis and is used to evaluate shifts in risk over time.

To achieve this, FPAs needed to subdivide themselves into manageable units or 'sectors'. Each sector needs to be mapped separately. Ideally an area of 30 000 to 50 000 hectares fits on an A3 map. A3 maps tend to be a useful size as they can be copied and scanned emailed relatively easily. Higher risk areas will require that smaller areas are mapped as opposed to low risk areas where less detail is required. In the Free State Province of South Africa, three basic maps were produced for each sector. Each map contained additional information such as the location of rural schools, dump sites and the location of land reform farms. This required approximately 400 maps to cover the 12,97 million hectares of the province. The following steps were followed.

The sector maps can also be overlaid with a plethora of information such as:

- Risk map
- Standard deviation of risk
- External and internal hazards
- Source of fires
- Fire history from Modis
- Firebreaks vs risk level
- Firebreak alignment
- Cultivated lands
- Contour map
- Normalised vegetation differentiation index map

Things you can learn from watching squirrels

By Wayne Bailey

AA Milne from the wildlife, they reminded me of how we humans interact. Winnie the Pooh said, "Some people talk to animals. Not many listen though. That's the problem." I took this quote to heart one early morning. I was sitting in my favourite chair watching the birds and squirrels eating from a feeder just outside my window. As I watched

the wildlife, they reminded me of how we humans interact.

Getting along well with family

What I learned that day is sometimes we play well together and other times we don't. Seems the squirrels always competed for food with a brother, sister or parent. You would think they would all get along well until I



Wayne Bailey

- ▶ • Google earth
- Vegetation map
- Population density map
- SAPS map
- Roads map
- Response times

Implementing a mitigation strategy involves pilot testing the interventions and then putting the plan into action in the community. Modifications are sometimes made to the program. The primary goal of the evaluation process is to demonstrate that risk reduction efforts are reaching target populations, have the planned impact and are demonstrably reducing loss. Evaluation must span the risk reduction process. It begins with analysing and planning to address risk. It continues through implementation. Modifications to program activity are made according to evaluation results.

With so much at stake, why guess if risk reduction efforts are being successful? Prove it!

Evaluation offers tangible proof that populations are responding to risk reduction efforts or interventions. A good evaluation process can prove that an intervention program is effective by validating that the goal of the intervention is being met by citing objective data. Evaluation is all about measuring performance. Monitoring the progress of the program implementation and preparing regular progress reports also are important. If evaluation is done well and begun early, it can help provide the framework that sets up a successful risk reduction effort. A starting point (baseline) is established and a destination (benchmark) is identified. Monitoring progress is important. That is why an evaluation plan measures performance at several levels: outcome, impact and process objectives.

Following through with each level can provide tangible proof that the risk reduction effort is moving toward the

goal of reducing the identified risk. However, in some cases interventions will need to be modified in order to meet the risk reduction goal. Successful programs are the result of hard work by people who are committed to making things better in their communities and who are willing to make a personal sacrifice to bring that change to reality.

How often should the planning process be repeated? That question can be answered only by each individual sector; in reality, this is an ongoing process. Smaller communities that have fewer residents, sectors and socioeconomic/sociocultural groups will see a slower change in fire and injury problems and may require an analysis only every five to eight years. Larger communities composed of numerous cultures and groups will change at a faster pace and may require a community analysis every two or three years. This is of particular relevance in areas located where the urban edge poses a threat.

In any event, it is up to the sector team to determine how often a planning process is needed and then to see that the process is implemented. However, this doesn't mean that a constant eye shouldn't be on fire and injury statistics. Regularly analyse available data on causes of fires, location of fires in the community, changing demographics and economic conditions and types of injuries. Reviewing these data leads community educators to be proactive instead of reactive to community problems. In other words, watching for trends and patterns can help you identify problems early and put a program in place prior to the problem escalating. This should be the objective.

Sound impossible to achieve? It may be at first. But after the first planning process is complete, it will be easier to believe. The results of the process can be amazing. Any community can be successful in reducing fires and injuries through the use of the five-step planning process. It all begins with you. ⚠

started thinking of my own family. I asked the question, "Do I always get along with my family?" Being honest, not always.

Getting along with non-family member

As I watched the wildlife eat, a squirrel is on top of the feeder eating a sunflower seed as a bird flies in, grabs a seed and off he flies again without much fuss from the squirrel. Why? Was the squirrel just being nice? Perhaps they didn't speak the same language? The point is the squirrel didn't mind the birds coming and going. Was it because we're nicer to other non-family members more than we are to our own family?

The prize is at the top

A young squirrel came by later sniffing and eating seeds that fell to the ground. Leftovers. The prize at the top was fresh new peanuts still in the shell. They love peanuts. This young immature squirrel looked up several times, however, he never saw the prize and continued eating the leftovers. What were they telling us that day? If you keep your head down, you will never find the prize. Even if you look up, you have to know what you're looking for.

Effort pays off

During winter weather, the feeder pole becomes icy and cold. A squirrel trying to reach the top had great difficulty due to the ice that formed on the pole. He would start to climb and slid back down. Although this was funny to watch, I felt sorry for the squirrel and cheered him on from inside the house. "You can do it", I kept saying aloud. He did this over and over until finally reaching the top. Another squirrel attempted to climb the same pole and gave up after just one attempt. Was the squirrel just too lazy to continue to try and climb the pole where the real food was stored or was he just willing to settle for scraps?

Jim Rohn said, "If you are not willing to risk the unusual, you will have to settle for the ordinary." The squirrel was unwilling to use the extra energy risk to climb the pole where only the top one percent of the population

dined. What I learned that day was victory and better views come to the ones that are in the top one percent. What are you doing today to be in that one percent population? Staying on the ground eating leftovers is not what the one percent do. Keep looking up, set your eyes on the prize and go for it.

Timing is everything

A good friend of mine says, "Bad timing can make a great man look average. Great timing can make an average man look great." Perhaps the other squirrel was smarter and would wait just a few hours and let the sun heat the pole melting the ice, so it would be climbable again. In this scenario, timing would be everything.

We're creatures of habits

G Stanley Hall said, "Man is largely a creature of habit and many of his activities are more or less automatic reflexes from the stimuli of his environment." Every now and then we have run out of food in the feeders while on extended holiday and the neighbourhood bear had come by and got into the feeders. When we run out of food, the wildlife still comes by daily to check on the food. They continue to do this for many days, hoping we have refilled the feeders. Humans will develop the same habits too. Some good and some bad. There was a story just told recently about a fire chief requiring all truck tires to be washed off before backing into the truck bays. Why? After

researching this, I found that when the fire department started back in the early 1900s, they used horses to pull the steamers. Since most of the streets lacked street pavement, they usually came back muddy, so they always washed the dirt and horse poop off the wheels before they were returned to service. This habit was carried over by six fire chiefs without knowing the reason why the tires were being washed.

Try changing your habits one day and see if you see something you've missed while just going through the motions.

Empty feeders

Lao Tzu said, "Being deeply loved by someone gives you strength, while loving someone deeply gives you courage." When the wildlife finally realised the feeders were not being refilled, they found food at other feeders or in their natural environment. What I heard that day is when your spouse, daughter or son is looking for your love and it's not there, they go looking for it with someone else. We constantly need to be filling our love banks up and have it overflowing for those that are closest to us. If we have no love to give, it will be found somewhere else and we will be found very empty inside.

So the quote from Winne the Poo came alive in this writing. When you open your eyes, set your focus on the prize and you too can be in the top one percent. ▲



William Pett Medal



The medal awarded to William Pett

Alex Gloster, training manager at eThekweni Fire and Emergency Services, received a number of badges and medals from the Memorable Order of Tin Hats (MOTHs). On further research of the medals, some proved to belong to the fire services. One medal in particular, the Pett medal, was awarded to William Pett, chief officer, fire brigade headquarters, New North Road, Exeter, Devonshire, UK. Pett was one of the original eight to sign the Institute of Fire Engineers (IFE) agreement dated 30 June 1924.

Gloster officially handed the medal over to the IFE's South African branch during their annual general meeting for safekeeping on 2 November 2016. When Fire and Rescue International spoke to Gloster, he explained that there was limited information on the medal at the time he received it from the MOTHs. He set out to do

some research. However, it has proved difficult to undoubtedly say for what reason the medal was awarded to William Pett.

William Pett

Fire and Rescue International did some research and was able to gain the following information on William Pett, superintendent, Exeter Fire Brigade.

In the 19th-Century, Exeter in the United Kingdom had already acquired the nickname 'The Fiery City', by the time of the tragedy of the 5 September 1887 when the Theatre Royal burned with the loss of 186 lives. This single event was the catalyst that forced the city council to take on the responsibility from the fire-insurance companies for fire fighting in the city. To control the new force, William Pett was appointed as the superintendent.

William Pett was born in Kent, on 5 July 1858, into a long established family of whom, Peter Pett (1610-1672) was a respected shipwright at Chatham and Sir Peter Pett was advocate general of Ireland. William Pett's branch of the family ended up in Sevenoaks, after the shipbuilding industry declined, to establish an engineering works. He joined the Sevenoaks Fire Brigade at the age of 16 in 1875 and became the sub-engineer and later the chief engineer of the Sevenoaks service.

By the time that Pett applied for the new superintendent's post at Exeter, he was a married man with two sons. Pett was one of 38 candidates interviewed for the job, emerging from a short list with the most votes from the councillors. He was appointed in January 1888 and on 1 March 1888 the Exeter Fire Brigade was formed.

Pett immediately set about organising an efficient fire fighting service, introducing the latest equipment and methods, along with a training programme for his

newly recruited firemen. The service initially employed an engineer and fourteen firemen, recruited locally. Pett liked to lead from the front and would not allow any man to do anything that he was not prepared to do himself. He was very competitive and in June 1893 he was national champion for single-man fire engine drill.

In the same year at the Grand International Fire Tournament and Exhibition, his brigade won the International Challenge Trophy outright. The solid silver cup is on exhibit in the Guildhall. In 1896, the annual Exeter Fire Brigade Competition was held at Baring Crescent Field, Magdalen Road. The competition was held to encourage the firemen in their efforts in saving life and the speedy extinction of fire in the city. It is interesting to note that superintendent Pett was first in the single man, manual engine drill with a time of 50,5 seconds, followed by fireman Winsborrow with a time of 53,25 seconds. Pett was also second in the bicycle hurdle race and first in the special single man drill.

Pett was an ambitious man for he applied for the post of superintendent at Aberdeen in 1896. William Inkster, a former fisherman from the Okneys, was appointed after receiving one vote more than Pett. One of Pett's sons, William Montague Pett joined the Exeter Fire Brigade before going to South Africa during the Boer War, as part of the 98th Ambulance Brigade. Later, he was appointed superintendent of the fire brigade in Singapore. Pett's youngest son, Algernon was the first person to take a fire engine to South Africa. His family now live in the United States.

An innovative man, Pett was responsible for several patents of fire fighting equipment including an arrangement for directing water at the top of a fire escape, improvements to sprinkler systems and a way of dealing with fire in



William Pett's headstone in Higher Cemetery, Exeter, UK
Photo credit: David Cornforth, Exeter Memories



William Pett from a photo
in the Flying Post in 1899

a ships' cargo. He also devised a system of coded whistles instead of shouting directions to his men. He travelled widely, inspecting other fire stations, both in Britain and Europe, looking for new ways of efficient fire fighting. In January 1914, Pett introduced Exeter's first motor fire engine, the Merryweather Limited, FJ450 Exonia, that also towed the old steam driven Devonian pump.

One of the earliest fire appliances in the country was rescued from a barn by William Pett and restored. It dated from 1626 when it was stationed at the Guildhall. In 1903, he loaned the ancient apparatus to the International Fire Exhibition at Earl's Court.

Pett lived on the premises at the Fire House, New North Road and was often the first to pick up the phone when a call was made for assistance from the Fire Brigade. When a fire was discovered at 05h10 at the Victoria Hall in 1919, it was Pett who took the call.

After an active and popular time as superintendent of the Exeter Fire Brigade, William Pett retired in May 1927 from the service that he had created. He died on the 15

July 1934 and was buried at Higher Cemetery, where there was placed a headstone that befits his lifelong passion, a carefully carved, stone fire fighters' helmet.

Montague William Pett

Montague William Pett of Exeter Fire Brigade was the son of William and Emily Pett. He was born in Sevenoaks in Kent, England in the September of 1880. He volunteered to go to South Africa to serve in the 98th Ambulance Brigade and his name appears on a board in Exeter's Guildhall. Pett was the first professional fire fighter from England sent to Singapore to organise and head the Singapore Fire Brigade in 1905. He was instrumental in reorganising the Singapore Fire Brigade and establishing the Central Fire Station at Hill Street, Singapore's oldest surviving fire station. Pett resigned from his post in 1912 and went on to command the Shanghai Municipal Fire Brigade.

Early life

Pett's grandfather was one of the founders of the Kent Volunteer Fire Association, which served the area before a proper fire fighting force was set up. Pett's younger brother, Algernon, was the first to introduce a fire engine to South Africa.

Pett received his education at Hele's College and the Albert Memorial College in Exeter. Upon graduation, he worked in an electrical engineering firm and was subsequently appointed a member of the Exeter Fire Brigade. Before long, he had assumed the position of second engineer at the fire brigade and was placed in charge of the fire alarm and telephone communication systems. He was later promoted to second officer.

Following the outbreak of the Second Boer War in South Africa in 1899, Pett volunteered to serve with the 98th Ambulance Brigade. His name appears on the Boer War Memorial Tablet in the Guildhall. Upon his return to England, he joined renowned fire engineers, Merryweather and Sons, to gain more technical knowledge and experience in working with fire engines.

Major accomplishments

Pett was appointed superintendent of the Singapore Fire Brigade and assumed duty on 1 January 1905. As the first professional fire fighter commanding the brigade, Pett initiated the building of the Central Fire Station, streamlined operations and brought more modern fire fighting equipment to Singapore. ▶

Heritage

- ▶ When Pett first arrived, there were a few small fire sheds and stations that were inadequate in terms of equipment, space and capabilities. One of the immediate changes that Pett introduced was to transfer the telephone call system from the Central Police Station to the telephone exchange so that the public could call the fire station directly in the event of a fire. He advocated the building of the Central Fire Station and oversaw its planning and construction.

The Central Fire Station was completed in 1909 at a cost \$64 000. The station, with its distinctive red and white brick façade features a 110 feet high watch tower, which was the tallest structure in the city when it was built, providing a vantage from which a 24 hour watch could then be kept over the city. It also served as a hose drying tower, a feature in many fire stations. As the main headquarters of the fire brigade, the new station had an engine house, living quarters for the firemen and their families, a repair shop, a carpenter shop, a paint room, a training yard and a lookout tower. The Central Fire Station was

gazetted as a national monument on 18 December 1998.

During his tenure as superintendent of the Singapore Fire Brigade, Pett also replaced the outdated horse-drawn fire engines with modern, motorised fire engines from England. The new Merryweather fire engines had greater power and capabilities, encapsulating a fire pump, fire brigade tender, hose reel and escape in one machine. These reforms revolutionised the fire brigade, making it a more effective force. The Central Fire Station in Singapore was gazetted as a national monument on 18 December 1998.

In addition, Pett pushed for better working conditions for firemen in order to raise morale. He increased their pay, made changes to their uniforms as well as implemented a three-tier categorisation, first, second or third class for the firemen. Pett also instituted fire safety measures for public buildings. He served a total of seven-and-a-half years as superintendent until his resignation from the fire brigade on 28 November 1912. Under his leadership, Singapore's fire

fighting force was professionalised and made more efficient and response-ready.

Pett returned to England on home leave for a period of six months before taking up his new responsibility in Shanghai in December 1912.

Shanghai Fire Brigade

Pett was the chief officer of the Shanghai Municipal Fire Brigade from 1912 to 1926. There he introduced street fire alarms and wireless telephones to prevent delayed responses by the fire brigade.

Death

Pett died at his home in Exeter on 10 November 1940 after battling a long illness. He left behind a daughter, R Richards. Pett's wife had passed away in Shanghai in 1934.

Family of William Pett

Wife: Emily Annie Pett

Sons: Montague William Pett and Algernon Pett

Sources include Cherylyn Tok, Alex Gloster, training manager, eThekwini Fire and Emergency Services, Wikipedia and Exeter Memories. ▲

The Central Fire Station, Singapore was gazetted as a national monument on 18 December 1998



2017

April

6 – 8 April 2017

Fire and Safety India 2017

It is an international exhibition and conference for key players of fire and safety segment, to be held concurrently with the fifth edition of Secutech India 2017

Venue: Bombay Exhibition Centre, NESCO, Goregaon, Mumbai, Maharashtra

For more information visit:

www.globalfireevents.mdmpublishing.com/event/fire-and-safety-india-2017/

12 – 14 April 2017

Fire and Safety by Secutech International

Held concurrently with Secutech International, the 16th edition of International Fire and Safety Expo emphasise on the concept of smart fire and safety

Venue: Nangang Exhibition Centre, Taiwan

For more information visit:

www.newera.tw.messefrankfurt.com/taipei/en/visitors/welcome.html

24 – 29 April 2017

FDIC International

The quality of our world class instructors, classrooms, workshops, HOT evolutions and exhibits play a major role in the decision to attend FDIC International

Venue: Indiana Convention Centre and Lucas Oil Stadium, USA

For more information visit:

<http://www.fdic.com/index.html>

May

2 – 5 May 2017

IFSEC India

The event is the centre for 15 000 industry buyers and decision makers attending to review the latest products and innovations

Venue: Philippines

For more information visit:

www.ifsec.events/india/

22 – 24 May 2017

EMS2017 Copenhagen

The EMS2017 congress is expected to attract about 1 500 participants from all over the world. As exhibitor you will have excellent opportunities to promote your latest products and services and interact with participants

Venue: Tivoli Hotel and Congress Centre, Copenhagen

Contact: Kirstine Vestergård Nielsen, senior executive consultant
Tel: +45 24 97 88 27

Email: Kirstine.vestergaard.nielsen@regionh.dk

24 – 25 May 2017

Hazmat 2017

Hazmat 2017 is an essential opportunity for hazmat specialists to share experiences and knowledge with professionals working in the hazmat and chemical incident industry

Venue: Crowne Plaza, Stratford-upon-Avon

Contact: Sheena.Newell@ricardo.com

June

4 – 8 June 2017

Xtreme Industrial Fire and Hazard Training

Celebrating its 24th anniversary of training, the industry-recognised Xtreme Industrial Fire and Hazard Training will be held at the largest fire training field in the world

Venue: Brayton Fire Training Field, USA

Contact: Lindsey Boren

Tel: +1-409-550-3751

Email: Lindsey.Boren@tycofp.com

4 – 7 June 2017

NFPA Conference and Expo 2017

The NFPA Conference and Expo brings to life the products and services needed to meet and maintain compliance with prevailing codes and standards in the design, construction and operation of buildings and facilities of every kind

Venue: Boston Convention and Exhibition Centre, Boston, USA

For more information visit:

www.nfpa.org/training-and-events/by-type/conferences/conference/expo

9 – 10 June 2017

International Hazardous Materials Response Teams Conference 2017

The Toughest Firefighter Alive is a competition specifically for fire fighters. It is carried out on a national, European and world championship basis.

Venue: Mönchengladbach, Germany

For more information visit:

www.tfa-germany.de/en/home/

15 – 18 June 2017

International Hazardous Materials Response Teams Conference 2017

The Hazmat Conference is a four-day event offering hands-on training across a range of essential topics

Venue: Hilton Baltimore, Baltimore, USA

For more information visit: www.iafc.org/hazmat

20 – 22 June 2017

FIREX International 2017

FIREX International is the only event that connects the global fire and security markets and gives fire and security professionals access to the very latest technology from suppliers across the world

Venue: London, England

For more information visit: www.firex.co.uk

27 – 29 June 2017

The 7th China (Guangzhou) Fire Safety Industry Expo (CFE)

CFE 2017 will host the industry's latest trends, cutting-edge innovations and new products

Venue: Haizhu District, Guangzhou

For more information visit: www.cfe.cn.com/

July

23 – 28 July 2017

52nd Annual GSSA Congress

Advancing rangeland ecology and pasture management in Africa incorporating the eighth research skills workshop and a policy and practice workshop

Venue: Wits Rural Facility, Mpumalanga

Contact: Freyni du Toit on 049 842 4335

26 – 28 July 2017

KwaZulu-Natal Industrial Technology Exhibition

KZN Industrial Technology 2017 is a trade event targeted at the industrial industries in the KwaZulu-Natal region

Venue: Durban Exhibition Centre, KwaZulu-Natal

For more information visit: www.iafc.org

26 – 29 July 2017

IAFC Annual Conference and Expo 2017

The IAFC represents the world's leading experts in the first responder community

Venue: Charlotte Convention Centre, Charlotte, USA

For more information visit: www.iafc.org

August

25 – 26 August 2017

Grinder Challenge 2017

Fire fighter competition with categories such as age, gender and relay team.

Venue: Durban

Contact: Aghmat Steel, eThekweni Fire Brigade
Tel: 031 311 5922

Email: aghmat.steele@durban.gov.za/

30 August – 3 September 2017

World Rescue Challenge (WRC) 2017

The WRC sees world class rescue and trauma teams compete annually in an event designed to challenge emergency service personnel

Venue: Targu Mures, Transylvania, Romania

For more information visit:

www.wrescue.org/World-Challenges/World-Rescue-Challenge-2017-Romania/2017



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CHALLENGES

For more information contact Lee Raath-Brownie at Tel: 011 452 3135 Cell: 082 371 0190 Email: lee@fireandrescue.co

If you only knew written by a proud paramedic

If you only knew the things that I have seen. All the tears that have dripped down my face as I worked what I was sure would be my last call, only to be wiped away by sweaty gloved hands. In this game, there is no time for tears.

If you only knew the sensation of being jolted awake, at 3am, time and time again. Until sleep no longer feels necessary to survive and your body, your mind, becomes numb. I am so tired of being numb.

If you only knew the weight of a wife as she crumbles to the floor when I pronounce her husband dead. In the very same spot that their young baby took his first steps just hours before. His first birthday cake still on the kitchen table and I feel my chest caving in. That weight is almost as heavy as the weight that I've carried on my shoulders since that day.

If you only knew the pain in my gut when I arrive on scene after a suicide. Blood and dreams scattered on the wall. Images that cannot ever be erased, for me or for them. I struggle with the thought that as a system maybe we could have done more, done better but yet, here we stand. It's too late now.

If you only knew how hungry and tired you can be after running calls for 23 hours straight, with no time to eat, sleep or even pee. You lose all sense of time. Sometimes even I forget how long I've been awake.

If you only knew the sound a mother makes as she watches her child slip away. We keep going, knowing that our efforts are in vein but we do them anyway. I think I would want that if it was my child. I always think of my own children as I cradle their little bodies, I wish I didn't, the thought is hard to bare.

If you only knew how frustrated I feel when we make our seventh trip to you in a single shift. The smell of alcohol seeps from your pores. I know your name and you know mine. You want our help but neither of us are sure in what capacity. I have tried so many times. I just wish you would let me help you.

If you only knew what it felt like to pull cold wet skin out of a river in the middle of winter. Shivering inside from the snow in the air, the sogginess in your boots and the coldness you feel for trying not to feel. It chills you to the bone and makes you question everything you know.

If you only knew how scary it is to arrive on the scene of a shooting. Are they still here? Am I safe? Will I ever see my family again? I let the thoughts creep in but the patient needs me, deserves me, all of me. So, I brush my fear a side and trudge on. The fear is real but I do it anyway.

If you only knew how hard I studied, how many hours I spent in school and how much I actually know. Only to be called names or belittled by those who don't understand the work that I do. It's not easy. Grades and titles don't matter in the back of the truck.

If you only knew how hard I cry sometimes when I am alone. How much I can't leave behind and how much I struggle to overcome the things my eyes have seen and the words my mouth has said. I even can't make myself believe some of it's real.

If you only knew how much pride I feel, after I successfully intubate a tiny little trachea. Knowing that because of me they have a chance to survive. I wish I could see them now.

If you only knew how amazing it feels to use your brain, your hands and your skills in the back of a truck. To have NO other resources and somehow, somehow at 100kms per hour perform street miracles. It's the best part of the job.

If you only knew what the wet grass feels like under your knees, as you kneel in a ditch to calm a young teenage girl as she is cut from her mangled car. Through tear-filled eyes she tells you that you are the reason she is alive and how thankful she is for you. Although you try not to let the emotion come, it does and with her, it's okay.

If you only knew how much I love all this, the good and the bad, the ugly and the sad. If you only knew what a family I have here and somehow, through all of this, I find the ability to soldier on. Hungry, tired but standing tall. Armed with incredible colleagues, skilled hands and caring hearts.

If you only knew how proud I am to be a paramedic, to be a life changer, a life saver, an all too often forgotten hero.

If you only knew.

By Cindy Swart

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