

# FIRE AND RESCUE INTERNATIONAL

Integrated fire, rescue, EMS and disaster management technology

Volume 1 No 9



# International Specialists in Integrated Fire Management Services



- Working on Fire International
- International Specialists in Integrated Fire Management Services
- Wild Fire Investigation
- Fire Management Plans
- Prescribed Burning
- Fire Management Training
- Wild Fire Research
- Turn Key Integrated Fire Management for Carbon Sequestration Projects
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**Subscriptions**

12 editions per annum

**South Africa**

R136-80 per annum incl VAT  
Non-subscribers:  
R22-80 incl VAT per issue

**Southern Africa (airmail)**

R 360 per annum

**International (airmail)**

R 480 per annum

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# Comment

**Fire and Rescue International** proudly presents the ninth edition of this niche market publication. We trust that you enjoy the magazine and find it informative.

**Cover profile**

FireWise is our cover profile of the month. This community programme assists and teaches volunteers how to reduce the risk of wildfire on their community while respecting the beneficial use of fire as a management tool.



Lee Raath-Brownie

**FRI Images photographic competition**

Our seventh winner of the FRI Images competition is announced this month and won R2 000 cash! The winning photograph was submitted by a reader in the Eastern Free State. See page 3 for details. **CONGRATULATIONS!**

Email us your high resolution photographs and you too could be a winner!

**News section**

The news section this month features various articles on mega wildfires, airline crashes volcanoes and rescues. We also feature an in-depth conference held by Fire Raiders and Williams Fire and Hazard Control on the strategies and tactics for petrochemical, oil and gas emergencies. There is also news on new products launched and an interesting article on the El Nino phenomena.

**NAMPO**

FRI visited NAMPO in Bothaville, South Africa, and we feature some interesting fire fighting and prevention products for farmers and wildfire suppression.

**Urban search and rescue (USAR)**

Our thought-proving technical feature this month focuses on urban search and rescue (USAR) and Colin Deiner discusses what to do when disaster strikes. Deiner details the key issues in the responsibilities of the emergency services dealing with USAR and effective deployment of emergency teams during a major disaster rescue operation.

We would appreciate our reader's viewpoints on this article so we could relate perceptions and keep a neutral perspective.

**Marketing your fire service**

Lenny Naidoo details issues relating to the marketing of our fire services and the importance of media relations and public opinion.

**Weather patterns**

Bernadine Altenroxel submitted an interesting article on the WMO's announcement of 2011 being the 11<sup>th</sup> warmest year on record.

Fire and Rescue International is your magazine. Share your views, experiences, ideas and suggestions with fellow readers.

We welcome your feedback, comments, submissions, emails and photographs!

**Lee Raath-Brownie**  
**Publisher**

# This month's FRI images winner!

## Calling all budding photographers! We want your photographs!

Fire and Rescue International (FRI) has introduced a monthly photographic competition to all its readers. This exciting competition offers you the opportunity of submitting your digital images of fires, fire fighters, disasters, emergencies and rescues.

### The rules are simple:

- All photographs submitted must be in jpeg format and not bigger than 4 megabytes.
- Photographs must be in high resolution (minimum 1500 pixels on the longest edge @ 300dpi) for publishing purposes
- **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.
- Brief description should accompany photo.

### Entries must include: >>ENTER NOW!

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

All entries must be emailed to [lee@fireandrescue.co.za](mailto:lee@fireandrescue.co.za).



## Congratulations to

### Photographer

Bongani Gilbert Tshabalala,  
Working on Fire (WoF)

### Name of photograph

Fire breaks in Senekal

### Photo description:

This was a fire break organised by base manager, Jan de Villiers, with the WoF Senekal team, ER24 and Department of Traffic on the road R70 in the Eastern Free State.

**Camera:** Canon SX30is  
with zoom lens 35x

Bongani Tshabalala wins this month's prize money of R 2 000!

## Well done!



*Teaching effective invasive plant clearing techniques as part of the FireWise project*

# FireWise: protecting rural lives from wildfire

**The FireWise Communities Programme is primarily a self-help training initiative that teaches community volunteers how to reduce the risk and impact of a wildfire on their community, while respecting the beneficial use of fire as a management tool.**

**F**ireWise staff work in tandem with landscape management organisations, poverty reduction initiatives and the private sector. Uptake of the concept by rural communities in South Africa was so enthusiastic that it is currently being offered to other SADC countries. The FireWise Communities Programme is managed by the FFA Non Profit Company, registered as a Public Benefit Organisation and part of the FFA Group.

FireWise is teaching communities living in the natural and agricultural interface zone to protect themselves from unwanted veld fires. A FireWise

community takes responsibility for its wildfire potential and takes steps to reduce risks from potentially damaging fires. Not all fires are bad – in fact the publicity by-line that is used states “Don’t start fires you can’t stop. Be FireWise!”

Many landscapes, ecosystems and land-uses require fire in order to stay healthy and productive, so FireWise education promotes wise use of fires, mitigation of fire risks and hazards, and prevention of unwanted ignitions. FireWise concepts have proven so successful in South Africa that they are being shared with Tanzania and will likely be taken up in other countries

in the Southern African Development Community (SADC).

FireWise community training in Africa has been adapted from the original concept developed as Firewise Communities USA, an American programme that was first piloted in South Africa in 2006 by the Forest Fire Association and National Government, as one response to the need for a nation-wide wildfire awareness and education strategy.

In the USA, the original FireWise communities programme was started following devastating wildland fires in California and Florida in 1985. Today ▶



*Invasive plant clearing*

► there are over 700 voluntary FireWise communities across that country. Its development in USA was provoked, not by what did burn down during wildfires, but what didn't burn down and why! Research debunked many of the misperceptions about the spread of fire to structures during a wildland fire, proving that there was much that could be done to not only reduce fire hazards around the home and thus home ignitions, but prepare structures and the immediate area surrounding them, to survive a wildland fire.

Partnership with the United States' National Fire Protection Association (NFPA) and the US Forestry Service has continued and strengthened since 2006, developing FireWise initiatives in southern Africa and other parts of the globe. There is a growing international realisation that community-based fire management is an essential strategy in managing wildland fires today. The original USA concepts and materials have been

adapted for local use and new ideas integrated.

In South Africa, FireWise is starting to take off like a wildfire, with many communities asking for training in the last 18 months and new requests coming in almost weekly.

In KwaZulu-Natal alone there are 46 rural communities waiting for FireWise training, says Chandra Fick, FireWise Recognition Programme Co-ordinator. In every province there are between five and 10 villages wanting FireWise to teach their people about wildfire. "They are hearing about what we do through word of mouth," she says. "These are all communities who have experience of how devastating wildfire can be and who want to know what they can do to have more control."

One of the FireWise Communities Programme's original communities is Queens Mercy, near Matatiele, on the border of Lesotho. In a video

filmed during the training in Queens Mercy, George Moshoeshoe, an assistant chief, said wildfire had wrought havoc on grazing, destroying livestock and razing homes. "These wildfires are caused by lack of discipline, people burn grass to get the new grass to grow (for grazing), then they fail to control it."

Moshoeshoe joined the FireWise committee for his community "for the sake of our land and our people." He had nothing but praise for the programme with members of his community now heavily involved in fire prevention and sharing their awareness.

The FireWise training took three days in which community volunteers were trained on wildfire behaviour and how to prevent it causing damage. Volunteers were also issued with fire beaters and water backpacks. Levy Majikijela, deputy chair of the Queens Mercy FireWise committee, said the training had explained the ►



Fire management planning in Tanzania

- ▶ dangers of wildfire and how to fight it safely. "Before the training, we were trying to stop fire without knowledge. We were entering the fire anywhere, anyhow. After the training we knew that what we were doing first was wrong and dangerous."

While most of the communities benefitting from FireWise training are impoverished, the programme has been rolled out in affluent areas that face high wildfire risk like Betty's Bay, Gordon's Bay and Scarborough in the Western Cape. These are communities where homes worth millions have been destroyed in recent years because landowners and homeowners were ignorant of the basic steps to protect their properties from wildfire.

Val Charlton, managing director of the FFA Non Profit Company, believes the FireWise Community Programme's success has been driven by its recognition of community values, its strong emphasis on empowerment and giving communities back responsibility. "The programme taps into social capital, respecting and building on the values that communities feel are important," she says. "FireWise communities recognise that they are responsible for their own safety and protection. They work in partnership

with government and private partnerships to protect themselves and their assets. The concepts work equally well whether the community is impoverished or affluent, urban fringe or deep rural."

Chandra Fick, says it is this "giving back power" which communities respond to most enthusiastically.

"Once people have the knowledge and tools they want to look after themselves," she says.

Becoming a FireWise community isn't as simple or as easy as it looks and communities, no matter where they are, have to take responsibility for using the training even before it starts. The FireWise Community Recognition Programme encourages and entuses volunteers to keep going, sustain their efforts. Awarding recognition plaques attracts the wider community support needed to make a difference.

There are four criteria that communities must meet to qualify for FireWise training, Fick explains.

"Ideally, the community volunteers must have the support of strong partners, like a tribal authority, municipality, government department, forestry company or conservation

agency," she says. The broader the stakeholder involvement the greater the likelihood of incentivised support and encouragement for long term sustainability of the FireWise project in the area. "It is also good to have a Working on Fire team in the region," she says, "or access to a fully trained wildfire fighting team to assist the community with initial practical training, prescribed burning and the burning of fire breaks."

Secondly, before the FireWise trainers arrive, the community must establish a committee of community leaders who will drive the fire awareness project – not just for the duration of the training but for the years ahead. "It's commitment that involves volunteers who are prepared to give up their free time without getting paid for it - indefinitely," says Fick. "And they do it because it is in their own interest and the interests of the community for them to do it."

Thirdly, the community needs to conduct a fire risk assessment to establish how much of a risk wildfire poses in the area and decide what can be done to reduce and mitigate fire hazards. Finally the committee has to develop a work plan on how they can lessen their risk to an acceptable level, for example, by creating a defensible space around structures. They have to commit to holding an annual fire awareness day to continually remind and revise the principles they learn through FireWise training. FireWise staff assist communities through each step, if needs be.

Currently there are 32 recognised FireWise communities in South Africa of which 26 are steered by community volunteers and six use government's incentive funds to employ villagers part time to manage wild fire risk. "Even with these requirements we have a long queue of communities wanting FireWise training and to become recognised communities" says Fick.

The immediate benefits are the protection of life and property but the training also opens doors to individuals in the community. When possible, FireWise Community members are also provided with accredited basic veld fire fighting ▶



► training, giving them a better chance of securing work with forestry companies, emergency services or with environmental organisations. Demonstrated commitment and enthusiasm also mean a community is shortlisted to benefit from any grant funding that might become available from time to time.

Thomas Mackenzie, national FireWise co-ordinator, said the development of the incentive or stipend aspect of FireWise communities was an added benefit that means a great deal in impoverished rural communities where work opportunities and resources are scarce, however the programme pushed the FireWise objectives of the programme, not only the community works aspect. First comes FireWise volunteerism, 'sweat equity', and a strong committee. "Although the FireWise community concept was not initially designed as job creation initiative, it has certainly proven to be a successful community works model and 750 beneficiaries have each had about 130 days of employment during this last fiscal year. Through the government's Expanded Public Works Wage Incentive Programme six FireWise Communities have been moved onto a wage incentive model whereby individuals earn R65 a day and are employed two to three days per week for performing FireWise tasks. These tasks could be removing invasive alien vegetation, reducing fire fuel and cutting back grass near homesteads, schools and clinics or helping with the maintenance of roads for emergency vehicle access – even the safe burning of rubbish can be a useful task that prevents unwanted ignitions in the community. FireWise education in the community and at schools, door-to-door visits to check on defensible space and hand out educational pamphlets is all a part of the work that benefits the whole community. "The stipend, made available through the Department of Environmental Affairs' Natural Resource Management Programme, is offered to communities who have done the FireWise training, managed their projects well and shown strong leadership with responsible supervision."

Mackenzie says the work is not intended to be full time, but

supplements other means of income in the community like agriculture or trading.

Hein Krause, who runs FireWise training in Mpumalanga and Limpopo, says the stipend along with wildfire awareness is changing the economies of villages. "There is a little bit of money now and without wildfire destroying orchards and crops people have food to barter. "The frequent wildfires of previous years haven't come, because of increased awareness, he says, and when they do threaten communities that are FireWise, steps are in place to keep property and livelihoods safer.

FireWise co-ordinators Krause and Kholiwe Luvuno, based in KwaZulu-Natal, have been working with the Tanzanian Department of Natural Resources to roll FireWise training out in that country. Krause says wildfire is a major community issue in East Africa. "Like South Africa, people burn the savannah to stimulate new growth for grazing but then lose control of the fire. Charcoal-making is a livelihood for many but a big

cause of wildfire, as is smoking out wild bees for their honey."

The challenges Krause describes are common across the developing world. People, especially the poor, use fire to earn a living but too often lack of knowledge means fire destroys more livelihoods than it creates.

This is why the FireWise programme is being enthusiastically embraced by rural communities in South Africa and Tanzania with a growing number of eager enquiries coming from other countries.

"The challenge is to find the funding to make it happen," says Krause. "People are being given the skills and the knowledge to prevent wildfire that, in the past, was destroying livelihoods and property. It's poverty relief at its most effective. We are leaving a legacy that will help people for decades to come. I have a sense that people are better off," states Krause. "The change is small but it is there and it's a privilege to be part of it." ▲



Basic fire fighting training in Eshowe - raking a fire break



*A sky crane drops retardant on the Whitewater-Baldy fire in New Mexico*

# Largest wildfire in state history burning in New Mexico

**M**assive wildfires in drought-parched Colorado and New Mexico in the USA tested the resources of state and federal crews recently and underscored the need to replenish an aging US aerial fire fighting fleet needed to combat a year-round fire season.

Wyoming diverted personnel and aircraft from two fires there to help with a 166 square-kilometre wildfire in northern Colorado. Canada also lent two aerial bombers to fight the Colorado blaze following the recent crash of a US tanker in Utah. An elite federal fire fighting crew also arrived to try to begin containing a fire that destroyed at least 118 structures.

About 600 fire fighters were battling the fire some 24 kilometres west of Fort Collins, said incident commander Bill Hahnenberg.

“We are a very high priority nationally. We can get all the resources we want and need,” he said.

The US Forest Service said it would add more aircraft to its aerial fire fighting fleet, contracting one air tanker from Alaska and four from Canada. Two more air tankers were being activated in California.

The announcement came after Colorado’s US House delegation demanded that the agency deploy more resources to the fire, which was totally uncontained and has forced hundreds of people to abandon their homes.

The Larimer County sheriff’s office confirmed that one person died in the fire.

The family of Linda Steadman, 62, had reported her missing after the fire started, sheriff’s officials said. Her home received two evacuation notices that appeared to go to her answering machine, and a fire fighter who tried to get past a locked gate to her home to warn her

was chased out by flames that he later saw engulf her home, Sheriff Justin Smith said.

Investigators found remains in her burned home that haven’t been positively identified yet, but her family issued a statement saying Steadman died in the cabin she loved, Smith said.

In a letter to the Forest Service, Colorado’s congressmen said the need for fire fighting aircraft was “dire.” Colorado US Senator Mark Udall urged President Barack Obama to sign legislation that would allow the Forest Service to contract at least seven large air tankers to add to its fleet of 13 — which includes the two on loan from Canada.

The temporary additions to the fire fighting aircraft fleet will make 17 air tankers available to the forest service, which has deployed 10 air tankers, 62 helicopters and 4 000 personnel to more than 100 fires nationwide.

One of the region’s most potent aerial fire fighting forces — two Wyoming Air National Guard C-130s fitted to drop slurry — sat on a runway in Cheyenne, 80 kilometres north of the Colorado fire at the time of going to print. The reason: The Forest Service, by law, cannot call for military resources until it deems that its fleet is fully busy. It also takes 36 hours to mobilise the crews and planes, officials said.

“They just haven’t thrown the switch yet because they feel like there are adequate resources available,” said Mike Ferris, a spokesman for the National Interagency Fire Centre in Boise, Idaho.

The Colorado fire had five single-engine air tankers, five heavy air tankers and seven helicopters on scene, fire officials said. The Colorado National Guard also provided two Blackhawk helicopters.

Evacuees expressed gratitude for the help. ►



The New Mexico National Guard was activated by Governor Susana Martinez to assist local law enforcement agencies within Los Alamos due to the Las Conchas fire



A lightning-sparked blaze that jumped its containment lines raced through thick conifer forest in Little Bear, southern New Mexico

► **New Mexico**

In New Mexico, fire fighters used a break in the hot and windy weather and got new air and ground support to battle a fast-moving wildfire that charred tens of thousands of acres and forced hundreds of residents to leave their homes in the southern part of the state.

An estimated 35 structures have been damaged or destroyed by the blaze, and fire managers expect that number to grow once damage assessments are done.

Elsewhere in New Mexico, fire fighters made slow progress against the largest wildfire in state history. The blaze has charred 1 127 square kilometres of forest since it was sparked by lightning in mid-May, and was 37 percent contained at the time of going to print.

Arizona's state forestry division dispatched two water tenders and 15 fire trucks to New Mexico, which also welcomed the arrival of a DC-10 jet that can lay a 92 metre-wide, 1,6 kilometre-long line of retardant or water.

Fire bosses in New Mexico and Arizona ordered more elite crews, engines and air support from the Southwest Coordination Centre in Albuquerque, where director Kenan Jaycox said resources are approaching full capacity.

"It's a balancing game," Jaycox said.

At least 18 large wildfires are burning in nine US states, forcing the reshuffling of fire crews and aircraft. The National Interagency Fire Centre said 4 000 of 15 000 federal fire fighters are currently deployed at fires around the country.

Because aircraft had been scarce, federal fire managers asked Wyoming to send National Guard helicopters to a 11,7-square-kilometre wildfire in Guernsey State Park. In nearby Medicine Bow National Forest, crews containing a 3,7-square-kilometre fire sent air support to Colorado.

Forest Service Chief Tom Tidwell has long insisted the federal government has enough resources to respond to a year-round wildfire season driven by drought, heat,

decades of fighting forest fires rather than letting them run their natural course, and bark beetle pine tree kill.

"We have enough resources at this time to be able to deal with the fires we currently are dealing with and what we expect to have to deal with the rest of this fire season," Tidwell told reporters. He emphasised that the agency has the authority to transfer funds from other accounts to meet fire fighting costs in any given year.

Some 3 779 square kilometres have burned across the USA this year — less than the same period in 2011, when 16 385 square kilometres burned. ▲

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# Nigeria mourns after airliner crash kills 153

*The ill-fated airliner crashed into a residential area of Lagos*

Nigeria rescue services recovered bodies and searched for clues after an airliner crashed in a residential area of Lagos, killing all 153 people on board and prompting the president to declare three days of mourning.

President Goodluck Jonathan visited the crash site in Nigeria's commercial hub and saw rescuers working amid the smouldering, ash-covered wreckage of the McDonnell Douglas MD-83 flown by privately owned domestic carrier Dana Air.

Jonathan ordered an investigation into how the plane crashed into the



*A large crowd were curiously gathered around the scene in a fairly uncontrolled manner, hampering emergency services*

iron roof of an apartment block in the residential suburb of Agege.

Search teams found what they believed to be the plane's "black box" flight recorder, national emergency services chief Yushua Shuaibu reported.

Jonathan, who arrived in an armoured convoy with Lagos state governor Babatunde Fashola, got out and walked the last few metres to the crash site on foot in his traditional Nigerian kaffan and skull cap.

"This particular incident is a major setback for us as a people ... Investigations will have to be done thoroughly to ascertain what was the cause of the crash," he told reporters. The airline said 147 people had been killed but in a list published there were also six crew members on board, taking the death total to 153. An unknown number of people have been killed on the ground.

An official at the airline who could not be named said the pilot was an American, Captain Peter Waxtan, and the first officer an Indian named Mike Mahendra.

Oke Osanyintolu, head of the Lagos State Emergency Management Agency, told reporters at the scene that 80 bodies had been pulled out by about 12h30pm the day of the crash. A crane was brought in to assist in clearing away some of the debris.

A large crowd were curiously gathered around the scene in a fairly uncontrolled manner, hampering emergency services.

"This is a crash site, it is an investigation site and we should keep our distance and allow the first responders to do their work," Fashola told the crowds.

Among the dead was the spokesman for the Nigeria National Petroleum Corporation, Levi Ajuonuma, according to a passenger list released by the airline. Ajuonuma was also the only de facto spokesman for the oil minister in OPEC member Nigeria, Africa's biggest crude producer.

"We still don't know the numbers killed on the ground," said Shuaibu. "They were scattered in different places and we have yet to differentiate the passengers from others."

Air crashes are not uncommon in Nigeria, Africa's second biggest economy, which has had a poor airliner safety record.

"To be fair, the number of similar incidents has reduced in recent years," said Samir Gadio, London-based analyst at Standard Bank, which has a big operation in Nigeria.

"However, it was only a matter of time before something tragic happened. Security is poor on domestic flights, some of the planes are old, and maintenance is questionable."▲



Minister Botha officially opens Ceres EMS station, from left: Helen Lemoela, DA Member of Parliament; Theuns Botha, Western Cape Health Minister; Joyce Phumgula, ANC Counsellor; Pumzile Papu, EMS Ambulance Chief and Stefan Louw, Mayor: Witzenberg Municipality

## Ceres EMS ambulance base opened

The Western Cape Government (WCG) Health Minister Theuns Botha recently officially opened the Ceres EMS station. Aimed to service the Cape Winelands District of approximately ninety thousand residents, the station will service the communities of Ceres; Tulbagh; Wolseley; Hamlet, Koue en Warm Bokkeveld; Gouda and Saron.

WC Government Health has prioritised the establishment of health facilities in communities, ensuring better service delivery and public accessibility especially in remote communities in the province.

"The Department of Health's directorate that works with infrastructure development is continuously assessing health infrastructure needs as a result of population growth. Based on the assessments and the trend in ambulance response times, it was clear that the community of Witzenberg as well as Saron and Gouda needed more ambulances to increase service delivery", said the Western Cape Minister of Health, Theuns Botha.

Based in the heart of Ceres, located next to the Ceres Hospital, the ambulance base was designed to meet the specific need of the Witzenberg people, and is equipped to handle both medical and rescue emergencies and provides a waiting room for patients being transported on the HealthNET ambulances.

Handling an average of 1 400 calls a month, patients are predominately transported to Ceres Hospital, Ceres Private hospital, Anna Brown Clinic, Bella Vista Clinic, OP Die Berg Clinic and clinics based in Wolseley, Saron and Gouda.

The opening was well attended by Witzenberg Community representatives and councillors. EMS employees entertained the guests, belting beautiful hymns in honour of the new station which has improved staff morale tremendously.

EMS will open the Vredendal and Leeu Gamka ambulance stations later this year. ▲

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026 FBI V011 No4



*FireAde 2000 is a multi-purpose and highly efficient fire fighting foam*

# Marcè: introduces FireAde 2000

**W**ell-known fire fighting equipment specialists, Marcè Fire Fighting Technology, has recently introduced FireAde 2000 fire fighting foam into the South African market.

This multi-purpose, Underwriters Laboratories Inc (UL) dual listed, fire fighting agent combines technologies that historically were not compatible in fire fighting foam chemistry. It provides new technology which extinguishes fire at various levels with a large degree of efficiency and as such offers increased safety for fire fighters. This innovative breakthrough is changing the fire fighting foam agent industry.

Historically, Class A, Class B, and wetting agent products have been incompatible with fire fighting foam agent chemistry. The current manufacturers have developed 10 to 15 different types of products to combat Class A and Class B fires. This many choices become very complex when choosing a fire fighting agent.

The new FireAde 2000 eliminates the complexity of choosing the right fire fighting foam agent. FireAde 2000 has always been suitable for Class A and Class B fire fighting. Now, FireAde 2000 has UL listings that solidify this designation. FireAde 2000 has successfully completed the wetting agent/NFPA 18-2006 testing. It is also UL listed as a "foam liquid concentrate" having complied with the UL162 testing. This accomplishment with dual UL listings confirms that FireAde 2000 is a "true" Class A and Class B product.

FireAde 2000 is the first fire fighting foam agent that is a "true" Class A, Class B, and wetting agent. It is also environmentally safe, non-corrosive, non-toxic, and bio-degradable and provides the most cost effective way to extinguish fires.

### **FireAde 2000 vs fire tetrahedron**

The fire tetrahedron consists of four categories; (a) oxygen, (b) heat, (c) fuel, (d) chain reaction/free radicals. The science behind fire fighting has

educated us that the elimination of one category will successfully extinguish fire.

Historically, fire fighting foam agents eliminate one or maybe two categories of the fire tetrahedron. This has traditionally worked for fire fighters but with a low level of efficiency. The ability to attach all categories of the fire tetrahedron profoundly increases the level of efficiency. This high level of efficiency equates to large department savings.

FireAde 2000 successfully and effectively eliminates all categories of the fire tetrahedron. This effectiveness changes fire fighting foam agent's traditional low level of efficiency to an extremely high rate of efficacy which could save departments or companies large amounts of money in both the short and long term.

### **Elimination of oxygen**

The product produces foam with a tight bubble structure that allows for a thick aqueous membrane ▶



**SCOTT**  
SAFETY



**FireAde<sup>2000</sup>**



PIGEON MOUNTAIN  
**PMI**  
INDUSTRIES

**TNT RESCUE**



## Marcé Fire Fighting Technology

- ◆ Manufacturers of Fire Fighting Vehicles
- ◆ Export Fire Fighting Vehicles
- ◆ Import Fire Fighting Vehicles
- ◆ Emergency Lights
- ◆ Rescue Equipment
- ◆ Protective Clothing
- ◆ Fire Equipment



**enforcer 50**

04 FRI 6/11/09

Equipment and Protective clothing:  
Rocco de Villiers 0823422631  
Nico Oberholzer 0791834429

Vehicles:  
Jan Steyn 0833757135  
Jaco vd Merwe 0826698730

Emergency Lights:  
Mo Bondesio 079 820 6176



A demonstration done in South Africa through a Turbex as a high-expansion foam



FireAde 2000 has been UL dual listed

▶ that accelerates extinguishment on flammable liquids. This tight structure also provides a superior vapour barrier between the fuel and foam. The superior vapour barrier also ensures the integrity of the foam blanket for a long lasting blanket. As a result, FireAde 2000's drainage time into the fuel is drastically reduced by 75%. (Note this applies to most hydrocarbon fuels).

**Elimination of heat**

FireAde 2000 achieves a rapid reduction of heat by creating a temperature gradient caused by latent heat of evaporation and simple volume cooling. It creates a chemical reaction with water that reduces surface tension from 72-dynes/cm<sup>2</sup> to 22-26-dynes/cm<sup>2</sup>. (Note: range depends on water quality and type). This reduction in surface tension equates to water being 20 times wetter. The product, by its nature of increasing relative wetted area and by the higher latent heat of evaporation value compared with that of traditional products, has a dramatic cooling effect on fuels and combustibles.

**Elimination of fuel**

Its ability to separate the fuel molecules adds an additional protection to flammable liquid extinguishment. The fuel separation is created by a chemical reaction with hydrocarbon molecules. The chemical reaction changes the

positive charge of the molecule to a negative charge creating separation of the hydrocarbon chain. This separation eliminates the chance of re-ignition. This chemical reaction does not apply for traditional fire fighting mediums. This process will release over time to allow for proper clean up.

**Elimination of chain reaction/free radicals**

FireAde 2000 interrupts the free radical chain reaction by absorbing the energy and heat created by uncharged molecular fragments colliding with other molecules. This interruption prevents the molecules from coalescing, which creates fewer toxins. The dense and toxic black smoke rapidly changes to cleaner white smoke with proportionally higher water vapour content. This water vapour content indicates the removal of dangerous toxins and improved air quality.

**Applications**

**Class A fires:** wood, hay, straw, tires, cotton, coal, paper, landfills - 0.25% - 1% concentrate. It may be used in standard Class A foam tanks for Class A and B fires and in Class A compressed air foam systems (CAFS).

**Class B fires:** flammable liquids ie non-polar fires - petrol, jet fuels, diesel, crude oil, E-10, MTBE - 3% and 6% concentrate and for polar solvent fires

ie E-10, E-85, E-95, methanol, acetone, racing fuels - 6% concentrate (indirect and aspiration required).

**Class D fires:** magnesium, titanium - 6% concentrate (aspiration or low pressure required).

**Class K fires:** grease, animal fats, cooking oils - 6% concentrate (aspiration, low pressure or misting required).

**Ethanol blended fuels**

FireAde 2000 has been tested on numerous occasions and will work on ethanol blend fuels with proper application. It must be applied at 6%.

Furthermore, the product does not separate as a concentrate or pre-mix and will withstand high temperatures and freezing temperatures. A unique feature is the ability to freeze and thaw without changing the integrity of the product.

This product was developed to simplify the fire fighting foam industry and with fire fighters in mind. It's toxicity to humans, fish, and soil is zero to very low and it has been independently tested by environmental agencies worldwide.

Marcè Fire Fighting Technology is proud to offer such an efficient and safe product to the industry. Feel free to contact them to arrange a demonstration. ▲



# El Nino may strike in 2012

The feared El Niño weather phenomenon could strike as early as the third quarter of 2012, raising prospects of wreaking weather havoc from North and South America to Asia, the US Climate Prediction Centre (CPC) said reported recently.

"Overall, the forecaster consensus reflects increased chances for El Niño beginning in July-September 2012," the agency said in a monthly update.

The monthly report is the strongest prediction yet about when the El Niño weather phenomenon could emerge this year. In June, it issued an El Niño watch, warning the phenomenon could materialise in the second half of the year, but said conditions were still neutral between June and August.

El Niño is a warming of sea-surface temperatures in the equatorial Pacific that occurs every four to 12 years, affecting crops from Asia to the Americas and reducing the chances of storms forming in the Atlantic basin during the hurricane season that runs to 30 November. The oil industry in the Gulf of Mexico, which produces over 20% of domestic output, has been on hurricane watch since the Atlantic storm season started last month. Strong winds can topple oil rigs and cut production.

## Floods

"The oceanic heat content anomalies (average temperatures in the upper 300m of the ocean) increased during June as above-average sub-surface temperatures became more entrenched in the equatorial Pacific," the CPC said.

Apart from the energy sector, global food production could also suffer massive disruptions from the warming caused by El Niño.

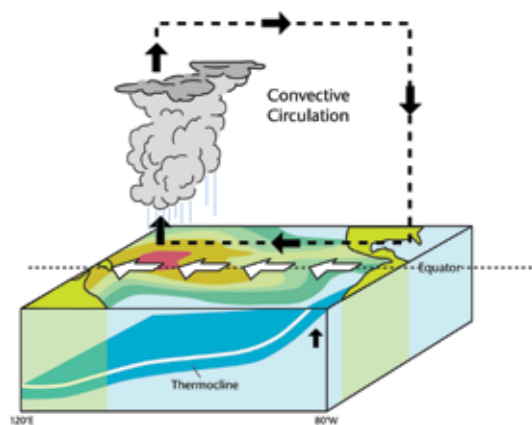
Three years ago, it slowed development of India's vital monsoon rains, sparking a rally in sugar prices to 30-year highs as the No 2 producer in the world produced a poor cane crop.

Unwanted rains also damage crops in agricultural powerhouses like Brazil and Argentina, while the normally dry areas of Chile, the world's No 1 copper producer, could see rampant floods.

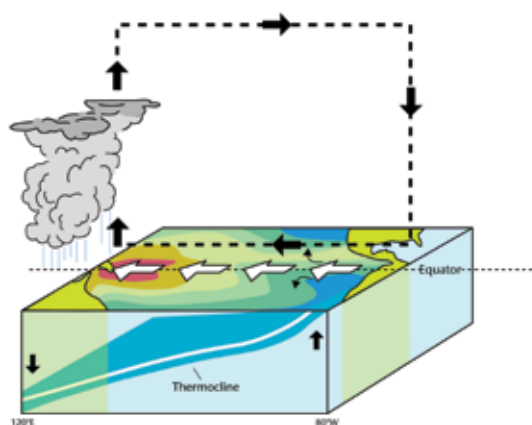
Brazil is the world's biggest producer of sugar, coffee and soybeans. Argentina is a major soybean exporter.

Further ahead to the end of the year, the pattern could trigger severe winter storms during the northern hemisphere's winter, particularly in California and other Western US states.

El Niño, which means "little boy" in Spanish, was first noticed by anchovy fishermen in Latin America in the 19<sup>th</sup> century.



El Niño conditions




Normal conditions


# DAVEY

**FIRE FIGHTING PUMPS**


REPRESENTING **DAVEY** FOR 30 YEARS



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040 PRR Vol 1 No 8



Some of the attendees joined the Fire Raiders and Williams Fire and Hazard team for a demonstration at Chevron's facility in Cape Town

# Strategies and tactics for petrochemical, oil and gas emergencies

Williams Fire and Hazard Control, a division of Tyco Fire Protection Products, together with the Fire Raiders Group of South Africa, held an in-depth conference on the management of petrochemical, oil and gas emergencies.

This well organised conference was attended by numerous chief fire officers from various petrochemical companies, municipal fire chiefs, disaster managers, training officers and national ports authority (NPA) fire chiefs.

The course presenters, Justin Wright and André Tomlinson of Williams Fire and Hazard Control, shared their combined experience, field-proven methodologies and tried and tested technologies with the attendees over a three-day period.

Justin Wright presented an overview of Williams Fire and Hazard Control,

its history, products and services. Said Wright, "we're the 'it's never gonna happen' company". Wright further more explained that Williams Fire and Hazard Control was a family owned company, with founders Les and Dwight Williams running the company for 32 years prior to the purchase by Tyco Fire Protection Products.

André Tomlinson then proceeded to take attendees on a visual tour of some of the major oil and gas emergencies. His presentation detailed the different types of emergencies and the different threats and challenges of some of the major events. Tomlinson also demonstrated, through extraordinary video footage, the collateral damage and event escalation. He furthermore explained some of the response challenges and also discussed the common errors in some of the events that escalated, some out of control fires, and the ultimate response that resulted in extinguishing some of the worst case scenarios.



Justin Wright of Williams Fire and Hazard Control

Tomlinson pointed out that Cape Town, as many other cities in South Africa, has to deal with the urban-industrial interface and that we ought to learn from history. He described various fires including the Sunray, Texas, fire in which 19 fire ▶

► fighters were killed in a fire in 1950. He also detailed the Caracas fire in Venezuela in 1982 in 128 fire fighters and civilians were killed, the gas line fire in Moscow, Russia, in 2009 and the San Juanico fire in Mexico in 1984 in which 550 people perished and 2 000 were severely burned.

"There are three traits involved in an emergency: skill, knowledge and heart", Tomlinson stated. "You need the skill to tackle the emergency, you need the knowledge to understand and know how to tackle the emergency and you need the heart to want to do it. These three traits are imperative."

The methodologies for process and pressure fed fires were explained next. Various threats were profiled and scenarios described. Flash fires and unconfined vapour cloud explosions (UCVCE) were explained and geocloud models and shockwave dissipation detailed. Confined vapour cloud explosions (CVCE) were also detailed and the effects of a boiling liquid-vapour explosion discussed ie its ergo shockwave, projectiles and the fuel-air explosions. In fighting fires like these distance equals safety and safety equals distance, the presenters elaborated.

Various other threats and phenomena were profiled in detail including sudden heat tears, runaway polymerisation, dust explosions, boil overs, slopping and frothing.

Tomlinson furthermore discussed spills and dike fires, rocketing tanks, internal floater tank fires, rim seal fires, pressure-fed fires and transformer fires.

Collateral effects such as over-pressure, projectile and shrapnel effects, dike fires, running spill fires exposure and structural collapse were also detailed.

Tomlinson also explained the challenges created by new tank designs. With space at a premium, engineers are designing tanks to optimum size and space which means there is always a tank in the shadow. "If you can't see the target, you can't reach it," said Tomlinson. He elaborated and explained the angle of attack, elevation and clad risks and the risks involved in geodesic dome tanks.

According to Tomlinson, the key elements of successfully extinguishing petrochemical and gas fires are:

- Your plan and methodology
- The quality of materials
- Effective resources
- Suppression team (quality and quantity).

Some of the main required competencies are:

- The master stream capacity
- 3D capacity
- Comprehensive water supply
- Supply chain logistics
- Infrastructure

Tomlinson also pointed out that foam concentrate should be in totes, not canisters and must be mobile.



*André Tomlinson of Williams Fire and Hazard Control*

A couple of age old truths, said Tomlinson, quoting Alan Brunacini in saying "the very worst fire plan is no plan, the next worse plan is to have two plans" and "if you can't control yourself, you can't control anything – Colin Powell".

Wright also gave an interesting talk on hydro-chem technology explaining the special hydro-chem nozzle and the methods of putting the flame where you want it.

Various types of tank fires were discussed in detail with accompanying video footage of some of the world's worst fires. Tomlinson described dike manifold fires and the affect it has on surrounding equipment ie valves, pipes etc. He furthermore stated that

tank fires always have a lean over. He reiterated the importance of the angle of attack and that the nozzle must have a direct line of sight.

Next followed an in-depth discussion on footprint methodology ie the footprint of the nozzles to hit the fire. He said that water reach/flow has reached optimal range of plus minus 155 meters with the current conventional technology. So if this is not enough, you need to double up on equipment.

Ghosting was also explained in detail and it was suggested that there should always be a height appliance at the fire to enable a bird's eye view of the situation.

A discussion surrounding logistics followed and Tomlinson called it the hidden secret. Wright explained various methods and equipment for moving heavy totes, hoses etc. The importance of water supply and gun selection also came under the spotlight. Knowing where your closest water supply is, whether a lake, sea, river, dam or channel, and the distance the water has to travel as well as the pressure needed for the water to travel. Various pumps and manifolds were detailed as well as foam handling systems and hose diameters. Numerous hose handling systems and trailers were featured as well as several hose recovery systems. Another suggestion was that equipment should be trailer-based in case of mechanical failure of the prime mover, so that the prime mover could be replaced while the equipment is still active.

Wright discussed the use of a foam wand in suppressing seal fires while Tomlinson details numerous fixed monitors.

A comprehensive overview of the tricks-of-the-trade followed where equipment was detailed, scenarios profiled and the ultimate equipment list (horses for courses) outlined. As Wright and Tomlinson so eloquently put it "go big or don't bother".

The conference was very informative and interactive and certainly gave many attendees food for thought, several leaving with a 'wish list' as far as equipment and technologies were concerned. ▲

*The Ambassador is capable of large volume discharge to striking heights*

**Specifications**

This "hybrid" nozzle has the unique capability to perform as an automatic pressure and fixed flow-rate nozzle. During automatic operation, the nozzle will respond to varying flows to maintain a nearly constant tip pressure, thus maximising effective range for a given discharge flow. Once the nozzle reaches the fixed set point of 7 571 to 22 700 litres per minute, it performs as a conventional fixed flow-rate nozzle. This is necessary for foam proportioning operations on storage tank fires or other hazards requiring specific application rates. This nozzle is capable of Hydro-Foam proportioning at rates up to 22 700 litres per minute at one to three percent and 11 350 litres per minute at six percent using remote jet pump technology.

# Chevron upgrades fire fighting arsenal

Major petrochemical company, Chevron South Africa, has invested in state-of-the-art, fire suppression equipment. Chief Fire Officer of Chevron South Africa's Cape Town refinery, Jaco Erasmus, told FRI that the decision taken to increase their fire fighting arsenal was a deliberate one and that he had spent quite some time doing research on the various products available.

Fire Raiders' Ian Newton, together with André Tomlinson of Williams Fire and Hazard Control, presented the best scenario solution for the potential hazards faced by Chevron.

The decision fell on the Williams Big-gun packages which included the Ambassador 6 gun trailer with a combination monitor/nozzle. The Ambassador is capable of large volume discharge to elevations never before attained by conventional equipment and is able to provide fire suppression, cooling, personnel protection, toxic gas dispersion and more. Its discharge flow rates from 7 571 to 22 700 litres per minute can be water only, Hydro-Foam or Hydro-Chem for extinguishing flammable liquids and gases in-depth or under pressure. Even at these delivery pressures and volume the operator is still afforded the freedom of smooth, rapid horizontal and vertical movement that the Ambassador can provide, placing this monitor/nozzle in a class of its own.

Tomlinson noted that "the Ambassador is designed for today's industrial fire fighting and protection needs".

The single 20,3 cm, full flow, stainless steel waterway construction provides minimum friction loss, maximum efficiency, and years of trouble-free service. The standard tiller-bar control provides full monitor articulation of 360° rotation and down to -10° and up to +80° vertical travel. Pattern control from straight stream to full fog is accomplished via a full wrap-around handle attached to the outer sleeve.

A transportable draft pump feeds the Ambassador trailer-mounted monitor. Erasmus decided on the Williams Dependapower DPPAT-6040-CAT-R-T3 which is a trailer-mounted, EPA Tier 3 diesel-driven, horizontal split case, centrifugal pumping system. Its nominal performance rating is 22 700 litres per minute @ 150 psi net with a three metre lift at sea level. The pump, driver, and integral fuel cell are included on a common independent skid. The skid is mounted on a dual-axle trailer and can easily be detached for stand-alone operations.

The new package from Williams will provide Chevron's Cape Town refinery with comprehensive fire power in case of a hazardous event involving any number of scenarios throughout the facility. The Chevron team has undergone hands-on training to hone their skills with the new equipment.

Williams Fire and Hazard Control is a Tyco Fire Protection Products company and offers fire response, site assessment and state-of-the-art, specialised fire suppression equipment. Fire Raiders is the sole agent in South Africa. ▲



*The Williams Dependapower DPPAT-6040-CAT-R-T3 draft pump*



*André Tomlinson of Williams Fire and Hazard Control explaining the Hydro-Foam proportioning system*

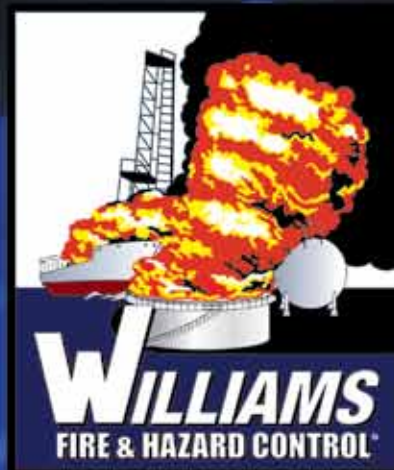


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## SOME COMPANIES STAND BEHIND THEIR PRODUCTS WE LIVE BY OURS



A Tyco International Company

Williams Fire & Hazard Control has over 220 responses around the world in the last 32 years. These incidents have directly influenced the engineering and manufacture of our line of response equipment — from large volume water supply to end-of-line delivery, including ThunderStorm Foams, Big Gun Monitor Packages, Hydro-Foam and Hydro-Chem Nozzles, Transportable Pumps, Quick Attack Trucks & Trailers, Hose & Accessories, and Fixed Systems Solutions.

Every fire response guides our mission to develop the most effective equipment available for the Fire Professional. Putting our lives on the line year in and year out motivates Williams Fire & Hazard Control beyond compliance toward reliable performance.



tyco

# Local FPA launches new fire detection centre



The LEFPA, Sappi and EnviroVision Solutions team

The Lowveld and Escarpment Fire Protection Association (LEFPA), in conjunction with EnviroVision Solutions and Sappi, launched its upgraded fire detection centre in line with its Fire Awareness and Commemoration week.

The centre, situated at the Afgrif Farm City in Nelspruit, Mpumalanga, South Africa, boasts a state-of-the-art, electronic, fire detection system associated with 61 (24 new digital) cameras fitted onto strategically placed towers throughout its area of operation.

Duncan Ballantyne, chairman of LEFPA, welcomed visitors and media



Duncan Ballantyne, chairman of LEFPA

to the event and explained that the inauguration also created the ideal opportunity of holding a fire awareness and commemoration week as it had been five years since the disastrous firestorm that swept through the area in 2007.

Ballantyne furthermore presented a brief history and overview of the project and LEFPA's involvement in it. He said that LEFPA was very excited about the roll out of the 24-camera-strong venture and the impact it would have on the early detection of fires during the 2012 Mpumalanga fire season.

The first forestry fire detection camera system was installed at Elandshoogte in 1996 which consisted of one analogue camera. In 1997 a 23-camera system went in at Bakenkop, Sabie and in 1999 a further nine-camera system was installed and implemented at Lothair. The detection systems grew further when a six-camera system was installed at Warburton in 2002.

Twefontein in Sabie was the first to receive digital cameras when a 24-camera system was installed in 2007. The digital era had arrived.

The new high-tech system that was launched in 2012 was first motivated

in November 2006 by Ballantyne and EVS Solutions to the managing director of Sappi.

During the inauguration of the detection centre, Ballantyne explained that the state-of-the-art technology integrated in the system, boasted leading edge software and was arguably the most advanced and sophisticated in the world. Ballantyne said that the contract lies with, and is managed by LEFPA and that one of its advantage is that it could attract more FPA members who are under the coverage of the cameras which will dilute costs, ultimately to the benefit of all.

Johan Bothma, forestry manager at Sappi, specialises in fire management and was the project manager for the venture. In explaining the extend of the project, Bothma detailed the camera location and explained the strategy in placing of the cameras. He furthermore detailed the area coverage of each camera and the combined coverage of the system.



Johan Bothma, Sappi

Bothma explained that the cameras work 24 hours a day and are programmed to continually rotate and scan pre-set subsections of the landscape at an optimal distance of up to 16 kilometres. One scan takes between two to six minutes.

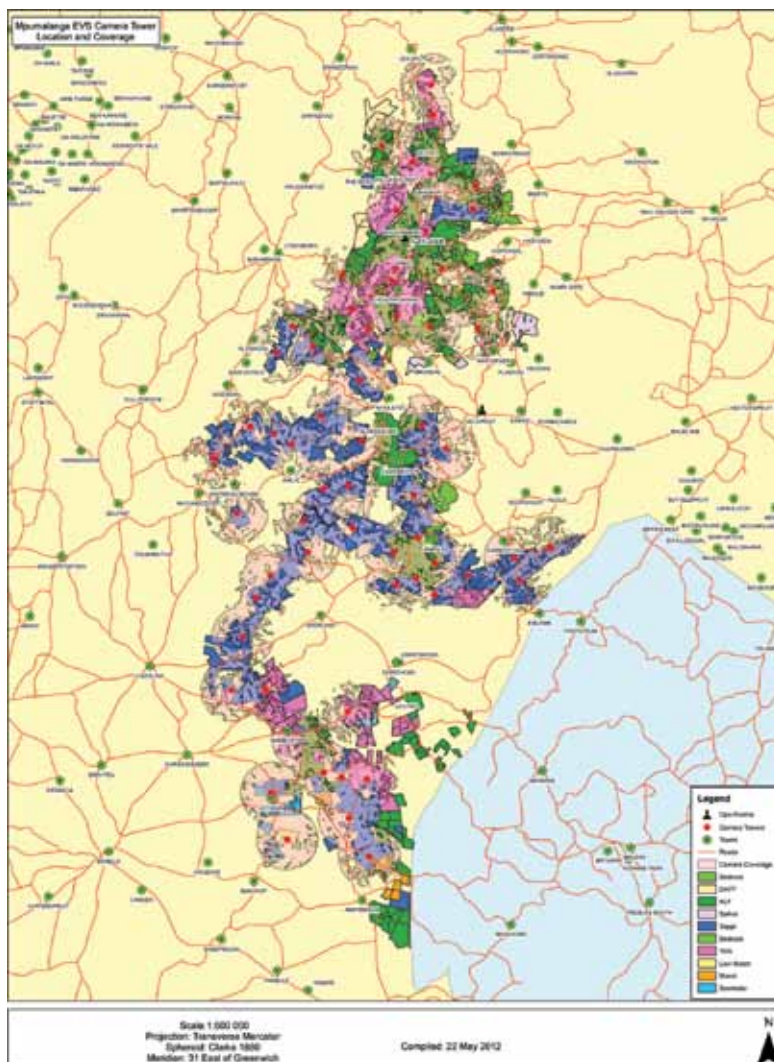
EnviroVision Solutions' CEO, Dr Gavin Hough, was on hand to explain the technical aspects of ▶



Dr Gavin Hough, CEO, EnviroVision Solutions

► this proudly South African system. The technology, ForestWatch, was developed by EnviroVision Solutions and combines camera systems with computer software to determine the onset of a forest or wildfire, map the fire line, and provide fire imagery with associated GIS information to assist land owners and FPA's to suppress fires. The cameras has a bird's eye view of 360 degrees and can detect and accurately plot fires out to a distance of 16 kilometres in all directions, providing precise GIS coordinates, increasing the response to a fire with a minimum of delay. With near-infrared capabilities, the cameras can also spot fires through smoke, dust, or haze, further focusing response to the fire. A computer workstation with each system uses software to detect smoke plumes in the very early stages of a forest fire. By using complex algorithms, this software can discriminate between a dust cloud, a flock of birds, or wildfire smoke. High bandwidth links allow for live video to be displayed at frame rates of eight images per second without any compromise to image resolution. While working with live video, the camera also captures a sequence of still images at each section. These images are then optimised (stabilised, compressed etc) by the on-site Image sampling engine – a small computerised image processing unit – before being forwarded on to the operations centre for analysis by the system software (machine vision layer below).

Once a potential fire has been spotted, the system alerts the LEFPA ops room, which in turn sets the wheels in motion by activating the relevant response measures.



The location and coverage of the 61 cameras

Dr Hough explained that the system turns detection into rapid response. He elaborated on the technical aspects of the system and described the man/machine interface.

The system also includes an electronic burning permit issuing system, developed in partnership with LEFPA according to the FPA's specifications.

The inauguration also celebrated the launch of LEFPA's new incident command centre.

Ballantyne concluded in thanking all the players for their input, Sappi Forests for the financial backing, LEFPA for its active involvement and EnviroVision Solutions, the system developer and supplier. ▲



The new system explained



Attendees and speakers outside the new PDMC in Nelspruit

## Mpumalanga’s Provincial Disaster Management Centre (PDMC) launched, workshop held

**C**elebrating the launch of the new Mpumalanga Disaster Management Centre in Nelspruit, the PDMC held a strategic fire workshop incorporating the forestry industry, fire brigades and services, provincial and local Fire Protection Associations (FPAs) and members of the South Africa Emergency Services Institute (SAESI) to discuss and formulate a provincial fire strategy.



Jacques Benade

Jacques Benade, Deputy Director of the PDMC, welcomed all at this auspicious event. Benade thanked all the role players for their input, specifically SAESI, Mpumalanga Umbrella Fire Protection Association (MUFPA), local FPAs, PDMC staff, exhibitors and sponsors of the event, Mbombela Fire and Rescue and Nerien van Heerden of the Lowveld and Escarpment Fire Protection Association (LEFPA).



Tozi Faba

Tozi Faba, Deputy Director General for the Mpumalanga Support Unit of the Department of Cooperative Governance (COGTA), defined disasters in his keynote address and discussed the impact of disasters and disaster management. Faba furthermore detailed the role of the spheres of government ie national; provincial; metro, district and local municipalities.

Various issues for consideration were highlighted by Faba including the current confusion regarding responsibilities and the anticipative integration and cooperation between all sectors.



Jurgens Deysel

Jurgens Deysel, Fire Services Coordination Manager for the NDMC, discussed the role of national and provincial government in risk reduction and disaster and outlined the responsibilities of local government. Deysel detailed the preparation considerations for a provincial plan. Deysel said that planning for all disasters in the province was imperative and that

all role players must be involved in the formulation of such a plan. He presented a template that could be used as a framework for the proposed disaster management plan and said that the purpose of the plan is as important as the plan itself. It should not be just a plan on your bookshelf so that you can tick a box on your to-do list.

Deysel stated that an incident action plan was vital and scenario planning should form part of it. The establishment of incident command systems and safety planning was also critical. Finally, he said, that a budget should be included in the plan as most plans contains strategic actions, but nobody sets budgets to these strategies.

In conclusion, Deysel discussed the activation of aerial fire fighting resources and said that only the PDMC could activate aerial resources; that it was not the responsibility of the NDMC. ▶





Jaco Johnstone

► Jaco Johnstone, Msukaligwa Fire and Rescue Service's Chief Fire Officer (CFO), gave an informative overview of the strategies implemented within the municipality, its industries and landowners in order to improve policing of the rural urban fire interface. Johnstone described how legislative and jurisdictional ambiguities lessened the district's fire readiness profile. "In 2001, the municipal amalgamation process that started then saw every property type within the jurisdiction of a specific municipality, whether it be town, farm or forestry area, becoming the responsibility of a specific municipality. This also included the Fire Brigade Services Act of 1987 becoming enforceable throughout the entire Msukaligwa Municipality. The amalgamation process allowed for a number of changes to be made at a legislative level to radically improve the fire safety profile of the municipality". Johnstone said that the FPAs and the fire services now work closely together to enforce fire safety throughout the entire district, while they also collaborate around fire safety inspections in the period leading up to the fire season. "A CFO is not there to earn a salary, but there for the duty to serve", said Johnstone.



Trevor Wilson

Trevor Wilson of the Mpumalanga Umbrella Fire Protection Association (MUFGA) detailed the responsibilities and duties of an umbrella FPA. Wilson presented attendees with an overview of the provincial fire statistics, but also mentioned that some data could not be analysed due to it being non-specific. He also displayed a wildfire risk map for the area and said that the risk profile in Mpumalanga was changing rapidly.



Martin Bolton

Wilson furthermore profiled the Working on Fire programme managed by the FFA Group and detailed how the programme has had a knock-on effect on the fire awareness of its workers, their families and the communities they live in.

Martin Bolton of Working on Fire, gave an interesting overview of a visit to Christchurch in New Zealand after it was hit by several earthquakes and aftershocks. Bolton detailed what happened, what was done and what worked after such a major disaster. He remarked that it was specifically noted that there was difference between a yellow- or blue shirt fire fighter (wildland or fire services fire fighter), they all worked together and the public saw them as equal.

Wynand Bruwer of Sasol Secunda described 'operation alert', a Community Awareness and Emergency Response ►



The Fire Raiders team



Marius Koekemoer of Rural Fire Rescue



The Working on Fire team



Obie Oberholzher of Marcè Rescue



The Conway team



The Sasol Secunda CAER exhibit



Wynand Bruwer

► (CAER) training initiative that took place in the Govan Mbeki municipality in collaboration with Sasol Secunda. The objective of the CAER initiative is to ensure that key role players, municipality, Sasol, Transnet and the community are prepared to take the correct action should hazardous chemicals emergency incidents occur. He explained how this live training exercise involved all the emergency services and contractors how it exposed possible weaknesses in their response strategy. It not only tested the emergency services ability to cope with any type of emergency, but also checked the community's response to an emergency. The outcome was a more integrated approach to incident management and an amplification of the awareness programme by Sasol. The campaign was introduced throughout the community and on all levels.



Dino Padayachee

Dino Padayachee, representing SAESI, shared video footage of the tsunami in Japan and detailed the official post tsunami report by Japan's disaster management sector. Padayachee reiterated: "Are our plans in place? Are we prepared?"

An open discussion followed after Benade presented the draft version of the 'Winter preparedness plan'. Padayachee commented that the model chosen must be concise and clear and incorporate all role players within the province.

Benade concluded that the plan was a work-in-progress and that it would be sent to all parties involved. He also promoted increased communication between the forestry industry, PDMC and fire and emergency services. ▲



Allan Ogram of Rudamans

# New low-pressure skid units launched by Goscor

**G**oscor Power Products (GPP) has launched a low-pressure fire fighting skid unit aimed at budget-conscious farmers and land owners.

Long-time GPP dealer in Rustenburg and leading equipment supplier, Blitz Lawnmowers, has been successfully promoting the new fire fighter with the co-ops and the farmers in the North West region.



*The new low-pressure fire fighting unit  
launched by Goscor*

"The Goscor low-pressure fire fighter is an outstanding product," says Blitz Lawnmowers owner Riaan Koorts. "We have in a short space of time sold 38 units to farmers in the area, including 12 units to a single farmer."

GPP Managing Director, Mark Bester, says there will be significant growth in areas where low-pressure fire fighting is appropriate and Goscor Power Products will soon be marketing it throughout the southern African region.

The unit is fitted with the GPP 620-litre step-tank which is the same tank used on the high-pressure unit. It is powered by the Robin-Subaru 'bullet proof' PTG 50mm pump motor, which delivers the water through a 20mm fire-hydrant hose and then dispersed through a fire fighting branch gun. The motor comes with a two-year warranty.

The GPP low-pressure fire fighting unit delivers low-pressure but has increased volume of water, which increases the cooling effect on the fire. "It is therefore versatile in that it can be used for grass fires as well as in bushy areas," says Bester. "In the bushveld environment, for example,

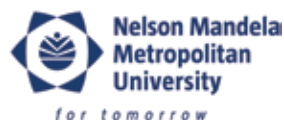
the low-pressure unit is ideal for the most prevalent type of grass/tree fire, where a greater volume of water is ideal."

Bester adds that one of the most significant advantages of the unit is that it can be reloaded in under a minute.

Koorts says that another advantage of the Goscor low-pressure fire fighters is that they reduce the risk of unintentionally exacerbating the fire. "High-pressure water delivery can sometimes create a vacuum which can, in fact, drive the fire on," he says.

"We always strive to bring the best products to our clients, and Goscor's products certainly fit that category," says Koorts. "Moreover, Goscor's commitment to after-sales service and constant availability of spares makes a significant difference."

GPP's fire fighter range is backed by Goscor's nationwide dealer network in South Africa, Namibia and Botswana. ▲



## (NNMU) SAASVELD / SAIF FIRE SYMPOSIUM 2012

(NMMU) Saasveld and the Southern African Institute of Forestry (SAIF) invite you to a Fire Management symposium

**Date:** 6 November (Tuesday) 2012  
**Venue:** White River – Ingwenyama Conference & Sport Resort  
**Time:** 8:30 am until 16:30

This event marks the 8<sup>th</sup> Fire Management symposium to be hosted by (NMMU) Saasveld and SAIF. One of the aims of this symposium is to share and transfer technical knowledge to fire managers. In the light of the catastrophic veld fires that destroy thousands of hectares in South Africa yearly, this is a worthy occasion. During this event fire managers and authorities from different disciplines and different land uses (Nature Conservation, Agriculture, Forestry, Local authorities, etc.), will come together to network and exchange ideas. This is a unique opportunity not to be missed. The key speaker at this year's event is Dr Kevin Tolhurst from the University of Melbourne Australia. He has a proven history as a fire specialists and act as advisor to national and international fire management organisations. He is both a fire management expert and a fire ecologist.

**Symposium Fees = R350-00 (Vat Incl.)**

**BOOKING IS ESSENTIAL, by 22 October 2012**  
**Please RSVP to: Sonia Roets**  
**Tel: 044-8015091 (08h00-16h00); Fax 044-8056691**  
**Sonia.Roets@nmmu.ac.za**

# IFSEC South Africa 2012

For anyone looking for the best security and fire solutions, IFSEC South Africa 2012 scored another success when it was held at Gallagher Convention Centre.

"With South Africa, indeed most of Africa, putting more faith in private security, IFSEC South Africa has become the premier annual event on the security calendar," says Ross Cullingworth, commercial events director, UBM Montgomery. "Feedback from our visitors and exhibitors has been very positive and proves that the biggest commercial security, government security and fire event on the African continent is entrenching its position as a leading global event," he added.

This year's event, one of the most interactive to date, introduced some of the most progressive technologies available on the market today, while giving visitors strategic networking opportunities.

Deputy Minister of Police, Maggie Sotyu, attended the official opening of Homeland Security and Safety Africa and thanked the show organisers for highlighting the importance of such a critical aspect of safety and security.

### Conference

Tarique Ghaffur, Former Assistant Commissioner of the London Metropolitan Police, provided an overview of International Homeland Security and Disaster Management. He said that some of the most prominent words associated with the concept of Homeland, include: national security, the prevention of terrorist attacks, minimising threats and risks, as well as dealing with the aftermath of such attacks.

"You cannot buy safety, but you pay for it dearly, if you don't have it," said Johan De Waal, of South

African Airways, who spoke about Aviation Safety and Security. "You cannot completely eliminate risk, but you can reduce it to an acceptable level," he added. "As long as systems are human-made, you will always have risk."

Narcotics detection by dogs at airports and other ports of entry - was another popular topic at the Homeland Security and Safety Africa Conference. "Sniffer dogs have been used for the detection of contraband substances since ancient times," said John Greyvenstein of Braveheart Dog Academy. He emphasised that these highly sensitive animals are one of the most powerful tools in the detection of and fight against narcotics. However, he also emphasised that the success of this depends on effective and accurate training methods. Visitors were able to witness demonstrations of some of the most innovative products including CCTV, remote monitoring, fire protection, access control, intruder alarms, perimeter protection, biometrics, guarding, counter terror, firearms and protective clothing.

IFSEC South Africa was once again co-located with OSH EXPO Africa 2012, an event dedicated to professionals involved in occupational safety and health, which launched for the first time last year. "This is truly a unique event that consistently draws higher attendance year-on-year," says Cullingworth.

"It's become clear to us that our continued investment in both IFSEC South Africa and OSH EXPO Africa, to position them as global events is paying dividends and the local market is demanding more of the same," says Cullingworth. "Plans are already in full swing for IFSEC South Africa 2013, which is scheduled to take place from 18-20 June next year," he concluded. ▲



Deputy Minister of Police, Maggie Sotyu, at the official opening



Stuart Wood and Lesley Gilbert of Vanguard Fire and Safety



David Nash of SafeQuip



Patrick Denyssen and Trevor Harty of Technoswitch Fire Detection



The ER24 team included Gert Cordier and Dr Vernon Wessels



John du Plessis and Adrienne Gurnell of Fire Equipment Distributors Red G



Lily Fraser, Louise Garland-Els and Faith Heinze of Imperial Armour



Johan Henning and Hannes Wiëse of Brigit Fire



Gavin Stewart and Trevor Cosgrove of GST Metrismart



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- Protective clothing
- Fire fighting units – bakkie or trailer type – depending on your land size
- A copy of the veld and forest fire act WITH frequently asked questions on CD
- A copy of a fire plan template on CD
- Training vouchers which entitle you to training of your staff for 3 days in your area – provided we have a total of 15 redeemable vouchers – by a qualified wildfire instructor.

The packages mentioned on the reverse are GUIDELINES only – a lot of landowners have already invested in some fire equipment, and can therefore opt to SUPPLEMENT their existing inventory with the missing pieces, we therefore welcome you to place your enquiry via your co-op branch so that we can quote you on your custom option.

[www.firefightingequipment.co.za](http://www.firefightingequipment.co.za)

## Suggested packages:

Small holders/Plot holders (1 to 20 hectares)	Qty
Fire beaters	2
Fire knapsack sprayers - Matabi 16ℓ	1
Basic fire fighting training vouchers - 3 day course	3
Basic fire plan - copy and CD	1
Copy of Veld and Forest Fire Act 101 of 1998 - copy and CD	1
Fire fighter shirt and trousers	3



Fire beaters, fire knapsack sprayers, fire fighter shirt and trousers

Small farmers/landholders (20 to 100 hectares)	Qty
Fire beaters	3
Fire knapsack sprayers - Matabi 16ℓ	1
Basic fire fighting training vouchers - 3 day course	4
Basic fire plan - copy and CD	1
Copy of Veld and Forest Fire Act 101 of 1998 - copy and CD	1
600ℓ bakkie unit with Venturi refill - 6.5hp Briggs and 50 bar pump	1
Fire fighter shirt and trousers	4



600ℓ bakkie unit with Venturi refill – 6.5hp Briggs and 50 bar pump

Medium farmers/landholders (100 to 1 000 hectares)	Qty
Fire beaters	5
Fire knapsack sprayers - Matabi 16ℓ	2
Basic fire fighting training vouchers - 3 day course	5
Basic fire plan - copy and CD	1
Copy of Veld and Forest Fire Act 101 of 1998 - copy and CD	1
600ℓ bakkie unit with Venturi refill - 6.5hp Briggs and 50 bar pump	1
Fire fighter shirt and trousers	5



1 000ℓ high pressure trailer

Large farmers/landholders (1 000 hectares and above)	Qty
Drawn water trailer - 1 000ℓ	1
600ℓ bakkie unit with Venturi refill - 6.5hp Briggs and 50 bar pump	1
Fire beaters	10
Fire knapsack sprayers - Matabi 16ℓ	2
Basic fire fighting training vouchers - 3 day course	12
Basic fire plan - copy and CD	1
Copy of Veld and Forest Fire Act 101 of 1998 - copy and CD	1
Fire fighter shirt and trousers	12



Copy and CD of Veld and Forest Fire Act 101 of 1998

# Fire fighting equipment at NAMPO

This year Grain SA's NAMPO Harvest Day provided a platform enabling agricultural producers to everything that has an impact on farming and at the same time it also served as a display window for agriculture, a discussion forum and a network opportunity for role-players in agriculture in southern Africa and further afield. FRI visited the exhibition to see what fire fighting and fire management tools and equipment were on show.

The wildfires of 2011 that devastated several Freestate farms and left a trail of dead livestock has left an impact on the fire fighting industry. However, there were very few fire management tools and fire fighting equipment on display at NAMPO.

The vehicle manufacturers mostly displayed their light, medium and heavy commercial vehicles for goods and livestock transport.

One of the highlights included the latest Mercedes-Benz Unimog, a vehicle in a league of its own. This versatile off-road vehicle is offers a myriad of advantages as a fire fighting vehicle for farmers, FPA's, game farmers, national parks, forestry and in many more applications.

It can also be used as a workhorse and tractor vehicle in one and combines great versatility on the job with fast speeds on roads and outstanding off-road capabilities. With its up to 40 ton overall haulage weight and thanks to its high payload and handling qualities, the Unimog is able to deal with large capacity and heavy loads both fast and effectively. Due to its short chassis, it is able to make the optimal use of the maximum transport – either with several axles or even with two trailers.

TATA exhibited its LPTA 1623 4x4 workhorse which boast a Cummins ISBE 6.7 Euro 3, six-cylinder inline engine. With a power output of 169kW at 2 500rpm and a torque rating of 900Nm at 1 700rpm, it also makes an excellent choice as a fire fighter. Its wheel base is 4 200mm and 3 600mm and it has a gross vehicle mass (GVM) of 15 000kg.

Mc Beans Implement Company exhibited its extensive range of fire fighting equipment and tools. The company had various bakkie-sakkie volume vs pressure configurations on show, as well as a comprehensive range of Davey pumps.

Also on show was a Japanese ride-on brushcutter from Chikusui, fitted with a Subaru V twin petrol engine. It can cut mixed brush of up to 250cm and has a cutting diameter of 975mm. This brushcutter will make easy work out of preparing firebreaks and keeping grass and brush short as part of a municipality or farmer's fire management regime.

GeoFire's Barry Campbell exhibited his wide range of fire fighting tools, hoses and equipment. Sharing the stand with Yamaha, GeoFire exhibited its range of bakkie-sakkies, fitted with Yamaha pumps and engines. GeoFire offers farmers, foresters, FPA's and municipalities a comprehensive range of fire management tools and equipment.

Although there were some fire fighting equipment and vehicles on display, we would love to have seen a more active marketing campaign from stand holders as far as fire management systems were concerned. The recent fires in the Freestate, Limpopo and the rest of the country prove that more attention should be given to integrated fire management. ▲



The new Unimog from Mercedes-Benz



The TATA LPTA 1623 4x4



The Mc Beans team at NAMPO



Marius Botha of Yamaha and Barry Campbell of GeoFire



Paul Benoit with the new Chikusui ride-on brushcutter



The Cool Ideas team at NAMPO



The Stihl team at NAMPO



# Powerful backpack blower from Stihl



Weighing in at less than 10kg, the Stihl BR600 has one of the best blowing power-to-weight ratios in the industry, enhancing operator comfort and productivity

Featuring revolutionary engine technology, Stihl's powerful BR600 backpack blower is well suited to use as a fire management tool. With its potent three kilowatt engine, it is ideal for clearing accumulated leaf litter off a previously constructed fire line. Its high air-throughput also means it has the capacity to create a new fire line, clearing flammable debris with a strong blast of air. The easy-to-use BR600 is also used to good effect in the management of cold fires, and where control and assistance is needed to clear a line for back-burning.

The BR600 is not only one of the most powerful backpack blowers in its class, but also the smartest, offering unsurpassed fuel efficiency and ease of use in a range of tough professional applications – from fire management to debris clean-up.

Stihl 4-MIX engine technology provides not only fast acceleration, added torque, but also lower noise, low exhaust emissions, low vibrations and proven fuel efficiency to complete jobs quickly, quietly, easily and cost-effectively.

In head-to-head comparisons in a fuel consumption test conducted by independent third-party, the Porsche Engineering Group, the BR600 proved to be as much as 28% more fuel efficient than leading competitors.

Other features and benefits include:

- A 1,4 litre fuel tank for a longer running time
- A nozzle that is specially designed with an extended wear area to prolong equipment life
- A thumb-operated multi-function control handle so that the operator's hand never needs to leave the handle
- Reduced vibrations. With Stihl's four-point anti-vibration system, oscillations from the engine are dampened, which significantly reduces harmful vibrations
- 4-MIX engine technology for lower fuel consumption
- Extra-large air-filter for demanding conditions
- Three-position adjustable blower tube with increased wear-area nozzle
- An "always on" feature for simplified starting

Stihl's BR600 also features easily adjustable blower tubes to provide greater versatility for a wide range of professional jobs and users.

As one of the cleanest-running backpack blowers in its class – with emissions 69% cleaner than EPA requirements and 75 d(B) noise levels – the BR600 is an environmentally responsible tool for heavy-duty operations. ▲



- Fire pumps and spares
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- Hoses, couplings, nozzles, foams and gels

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046 FR Vol 1 No9

# Scania launches new global engine range

**Scania used this year's NAMPO Harvest Day to launch their new global all-emission engine platform.**



*Scania's managing director, Steve Wager*

The official launch was presented by Scania's managing director, Steve Wager who has taken over from Christoffer Ljungner.

The new global platform engine range includes the new 9 litre 5-cylinder and 13 litre 6-cylinder engine platforms and ensures optimum performance for all operators.

A number of Swedish Scania board members also joined Wager at the NAMPO stand for the presentation.

Wagner said "We are launching our new engine platform exclusively here at NAMPO today," said Wagner. "South Africa is a key market for Scania, and our branch in Johannesburg is the hub for our main operations in southern Africa."

The changeover to the new global range of engines, which will be used world-wide for all emission standards ie Euro 3 to Euro 6, started at Scania's production units in South America in the second half of 2011. This year saw the modular system implemented in both South Africa and Europe. "We are not talking about major re-engineering, but continuous improvement based on proven technology," explained Wagner.

The new engines come with a new range of gearboxes, new Scania Opticruise and new Scania retarder, all with significantly improved performance.

The new range boasts a more robust design, a broad torque range starting at low revs and a more powerful

engine brake. These engines can operate on up to 100 percent biodiesel as an optional extra, and are optimised for low engine revving reducing fuel consumption. "Fuel is an operator's number one cost," said Wagner. "Each percentage point improvement in fuel is worth R14 000 per year to an average transport operator."

The Euro 3 engines are also able to run on fuel with high sulphur content, without risk of engine damage, making it ideal for the southern African market. There are units available at Euro 5 emission levels, demonstrating that this new platform enables Scania to provide engines to the global market.

The new engine range covers all imaginable heavy-duty truck applications. Scania's two initial Euro 6 engines (440hp and 480hp) feature a combination of exhaust gas recirculation (EGR) and selective catalytic reduction (SCR) technology. The range of sixteen Euro 5 engines spans from 230 to 620hp. Eleven enhanced environmentally friendly vehicle (EEV) engines between 230 and 730hp include one ethanol and two biogas versions. Scania customers can choose between EGR and SCR technology, provided that low-sulphur fuel (less than 10ppm) is available in the market.

For Euro 4 markets the range comprises nine engines between 250 and 620hp, all based on SCR technology. Seven Euro 3 engines from between 250 and 580hp complete the global range. ▲



*A number of Swedish Scania board members also joined Wagner at the NAMPO stand*



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*The 9/11 bombings of the World Trade Centre in New York City and the Pentagon not only refocused the world's attention on structural collapse rescue but also created awareness in many countries of the capabilities and benefits of establishing USAR task forces*

# Urban search and rescue response: what to do when disaster strikes

**By Colin Deiner, Chief Director, Disaster management and Fire Brigade Services, Western Cape Provincial Government**

**N**o rescue discipline has enjoyed as much attention or had as much time dedicated to it than urban search and rescue (USAR).

Since the 9/11 bombings of 2001 billions of dollars have been invested in training, equipment and response systems for urban search and rescue. Countries have established USAR response teams consisting of up to 200 members, able to respond to any corner of the world within 24 hours.

The 2010 earthquake disaster in Haiti was responded to by more than 30 formal and informal rescue teams, comprising more than 700 rescuers. Searching for victims trapped beneath the rubble of a collapsed structure has evolved into a science with resources ranging from rescue dogs, capable of discriminating

between the scent of live and dead victims, to remote controlled robots able to operate in oxygen deficient and toxic environments.

In South Africa two USAR units were deployed as part of the 2010 FIFA World Cup legacy projects. NGOs have also procured state-of-the-art equipment caches and deployed them to rescue operations in earthquake ravaged parts of the world with great success.

The rise of urban search and rescue has been phenomenal, and that is great. The main question is: how prepared are we as fire departments to respond to a major structural collapse incident in our own cities? What if the collapse does not necessarily warrant the need for a USAR task force? In this article I will try to provide some insights into how we should plan for this.

## Some history

Urban search-and-rescue is an activity which involves the location, rescue (extrication), and initial medical stabilisation of victims trapped in collapsed structures and its origins can be traced back to the London Fire Brigade during the dark days of the Blitz during World War II. Firemen were engaged daily in the location and extrication of victims of the frequent Luftwaffe bombing raids and it was here, where many of the strategies and tactics still used today, were first developed and tested. The concept of deploying a team of specialists from various interrelated disciplines to respond to a major structural collapse started developing in the seventies and eighties when rescuers from Metro-Dade County Fire Department in Miami, Florida and Montgomery County, Maryland, responded to the earthquake disasters in Mexico ▶



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Andreas Stihl (Pty) Ltd. Toll free: 0800 336 996 E-mail: [info@stihl.co.za](mailto:info@stihl.co.za)





*This aerial photograph shows some of the destruction caused when the high-jacked American Airlines flight slammed into the Pentagon on 11 September 2001. Department of Defence photograph by Tech Sgt Cedric H Rudisill - released*

► and Soviet Armenia. Specialist USAR response hit the front pages in a big way in 1994 following the bombing of the Murrah Building in Oklahoma City. Eleven teams, consisting of 665 rescue workers, responded from all over the USA and their heroic search and rescue efforts inside the badly fractured building were featured daily on television news bulletins. The 9/11 bombings of the World Trade Centre in New York City and the Pentagon not only refocused the world's attention on structural collapse rescue but also created awareness in many countries of the capabilities and benefits of establishing USAR task forces. Soon hereafter many nations started training and equipping USAR teams and those nations who already had teams relooked their strategies and deployment capacity and set about reorganising areas that needed to be improved.

This world-wide awareness has had massive benefits for disaster prone countries and has led to huge response efforts to earthquake affected regions such as Haiti (2010) and Japan (2011). The United Nations, recognising the value of having access to international USAR response systems, established its "International Search and Rescue

Advisory Group" (INSARAG) in the early nineties. INSARAG, which is under the control of the UN office for the Coordination of Humanitarian Affairs (OCHA), has established clear guidelines and standards for USAR activities and plays an important role in ensuring effective deployment of teams during major disaster rescue operations.

All these strides do not however take away the responsibility of the emergency services to respond effectively and safely to structural collapse incidents in their own towns and cities. How do we do that?

### **First response**

The massive capacities offered by a USAR task force is not necessarily available to all fire and rescue services when they experience a structural collapse incident in their cities and in the majority of occasions the first arriving units will set the course for the escalation of events. First arriving units generally consist of the first response fire truck for the area, a fire/rescue unit of some description and the relevant emergency medical response. Although the scene which they will be confronted with could be overwhelming, it will be their initial actions that will determine

the course of events over the next few hours or even days. The initial challenges that they will be faced with will include mass devastation (depending on the kind of collapse) over a large area, secondary fires still burning in sometimes inaccessible areas, many casualties (many still trapped and requiring prolonged extrication), debris strewn over a large area, exposed hazardous materials, damaged water mains and overwhelming requests for help from spontaneous community responders to injured victims.

In this situation which can easily overwhelm any incident commander it is important to put the crucial building blocks in place to ensure sufficient back-up response and to ensure that all incoming units are properly accommodated and deployed to the right areas.

The incident commander (who at this point will be the first arriving officer) must quickly form a picture in his/her mind of the total impact of the incident. This will often be difficult and not very accurate but will at least give direction to his/her initial activities. It is important to mentally triage people seeking assistance. People rushing to the responders might in all probability ►

► not be the most seriously injured. Do not tie your medical crews up dealing with these victims unless you have had a good look at the collapsed structure and identified areas where the most trapped and injured victims could be. In any structural collapse incident you will be facing more than one hazard. Not only do you have to look at the stability of the remaining structure but also take note of any utilities, hazardous materials and other risks that could prevail. In the event of act of terror you need to be wary of the possibility of a secondary explosion and it is important here to work very closely with the police explosives units on the scene.

Very little of the actions of the first arriving units will involve rescue operations or advanced patient care. Your activities will largely be to prepare the scene for the arrival of the next level of response and will include the establishment of a reliable water source (from hydrants outside the affected zone), establishing paths into the incident and keeping them clear, establishing a triage system and the implementation of a primary communications network. It would be advisable at this point to designate a team of communications runners to relay messages to other units. This will

become important as the chances of your radio traffic becoming too overwhelming and jamming in these early stages are very possible. A number of minor tasks must be carried out at this stage. Pay attention to them. They will be critical to the success of the incident later on.

### Incident command

Command of a large structural collapse incident will change significantly from the arrival of the first-due unit to the eventual, overall command system being implemented. At all these points it is vital that the incident commander evaluates the on-going events and adapts the action plan and allocation of resources accordingly. A measured approach is called for, only deploy the resources that you can safely use in a specific area and try to keep the well intending at a safe distance where they won't be a danger to the rescuers or themselves. Ensure a clearly marked and well managed secondary staging area for all incoming units and mutual assistance services, this will allow better site control and ensure that you can identify the available resources more readily, and deploy them to the areas where they will be of most value.

The bleeding, screaming victim is always going to be a distraction to your crews at this time and this problem must be firmly managed as EMS crews tend to get tied down to such victims at the expense of the mission objectives (more seriously bleeding and screaming victims). It is specifically the medical commanders who should refrain from getting involved in the medical management of the victims. Remember, if you are treating a patient you are not commanding the incident.

When commanding an incident of this nature you are going to be in command of a large number of responders from different services with different backgrounds and mostly having different tactical objectives. The art here is to have them all dovetailed to achieve the main objective (your objective!).

Throwing all available resources at the incident is a recipe for disaster and will severely limit your access to resources later on. Escalate slowly, ensuring that everyone working on the incident is aware of the direction of tactical objectives. Understand that an incident of this nature will probably require several days to complete and you will have rotate ►



*The IDF medical and rescue team in Port-au-Prince, Haiti rescued a Haitian government worker who was trapped in the ruined customs office for 90 hours, before being evacuated in a moderate manner to the IDF field hospital*



Volunteer workers dig for survivors in January 2006, after a building collapsed on Nairobi's Ronald Ngala Street in Kenya. US Air Force photo by Staff Sgt Ricky A Bloom

► crews at different times while at the same time ensuring their safety and welfare. Make sure you plan for this early on. When the first size-up is done, consider the possible extent of the operation and the time it might take to complete it. Then start ordering the necessary lighting equipment, shelter, food and rehabilitation facilities for the rescuers. Establish a rotation system and ensure that it is strictly adhered to. It happens too often that rescuers are in the process of extricating a victim when their shift comes to an end. They continue their work thinking “we almost have him free”, but underestimate the level of entrapment and end up working for a further two to three hours to release the victim. Tired rescuers make mistakes!

Remember that a structural collapse scene is dynamic and will change a number of times during a prolonged operation. When a large enough structural element is removed from the collapsed structure it could change the entire safety profile of the incident. You should therefore never stop information gathering and any new risks should be clearly marked and brought to the attention of all.

Periodic operational briefings are of huge importance and the following

two types of briefings must be held:

1. At each shift rotation: teams must be informed of the direction of the objectives and goals that should be achieved in their period of work. They should also receive a safety briefing on all prevailing hazards and possible situations that could develop (bad weather nightfall etc).

2. A briefing for the command structure should be held at specified times where certain benchmarks in terms of equipment, staffing etc should be set out. It is here where your public information office should get a picture of the situation in order to further brief the media and other interested groups.

The need for specialised rescue teams is vital during structural collapse operations and fortunately we have seen a fair number of these “rescue technicians” trained over the last few years. The incident commander must realise that these teams are trained to work as a team and that by separating them from each other you will scatter their skills which will be to no advantage. Special operations teams are usually extremely well trained and as part of their training are expected to complete a strenuous

72 hour exercise which is aimed at preparing them to work in the most extreme conditions. When you are deploying them on the “real thing” you must take the added stress into account and attempt to rotate them after a maximum of twelve hours.

### Rescue command

Rescue command is established in addition to the overall incident command and is responsible for achieving the objectives related to the following:

- Establishing scene safety
- Identifying and creating entry routes
- Maintaining sustained access
- Technical and canine search
- Structural stabilisation and shoring
- Concrete breaking and breaching
- Patient access and protection

Rescue command will be responsible for the largest number of staff and equipment and will also need access to heavy plant and machinery. They will work very close to the logistical support team who will spend approximately 70% of their time looking after rescue command. Incident commanders must take care not to be overwhelmed by the myriad of tasks and create too many levels (and too many responsibilities) ►



► within this structure. The incident command team must be a unified team with a fluid structure able to seamlessly adapt to the changing conditions.

It is a primary responsibility of rescue command to maintain and update the site operational plan and to keep everyone updated. The heavy rescue work performed by rescuers carries a constant risk of destabilising the structures and caution must be exercised to prevent secondary collapse from happening. Rescue command must work closely with equipment operators and must always take their experience into account. Also accept that although the crane operator may have many years of experience and can probably operate the crane with his eyes closed, he has never had to lift a concrete slab off a group of badly disfigured bodies. He might also not be used having to operate the crane load only centimetres away from a rescuer and a badly injured victim. Safety will always be the prime consideration and must be built into the chain of command from the outset. Safety officers should be appointed at each level that

should identify critical safety and health issues within their specific areas. Although all efforts should be made to prevent the possibility of a secondary collapse, it must always be a consideration and for this reason the number of workers deployed within the collapse zone should be limited.

### Task force deployment

I have discussed the deployment of a USAR task force earlier and the chances are that should you be dealing with a big enough incident, that you will at some stage receive the assistance of a self-contained USAR task force. The task force will not be part of the first response and might arrive several hours into the incident. Depending on the scale of the collapse (such as an earthquake where several buildings have collapsed) you may be offered the assistance of foreign search and rescue teams who will arrive within 24 hours of the incident taking place. The USAR team will work within the command system and can be utilised to perform the following tasks:

- Information gathering
- Building identification
- Structure triage

- Search and recon
- Structure/hazards evaluation and marking
- Victim marking
- Emergency medical services

The direction of emergency medical operations must be determined by the incident commander at an early stage and must be enforceable on all EMS responders. A major incident is likely to attract all sorts of responders from government and private services, some of whom will tend to work separately from the main command structure, thereby causing a danger to themselves as well as other responders. The person who assumes the position of EMS commander must establish a perimeter control early on and ensure that all EMS personnel within the operations zone follow the established incident command system.

As is the case with the rescue personnel, you don't want to flood the incident with responders so it would be advisable to hold personnel in the staging area and only use when necessary. The EMS commander must make an early call on the size of the incident and call for the necessary ►



A building collapse in downtown Fanwood, New Jersey, USA



A general view of the Transvaal water park ruins, Moscow, in 2004. Twenty five people were confirmed dead in the disaster

- ▶ medical supplies in anticipation of a protracted incident.

As medical responders generally do not have the same level of protection as rescuers they should be clearly briefed on the prevailing hazards and not be deployed into hazardous areas for which they are not properly attired. There will be a real possibility of bio-hazards present in a collapsed building due to destroyed sewer lines, compromised containers etc. This must be monitored on an on-going basis.

Emergency medical services operations will generally start with a huge number of victims seeking treatment and ambulance transportation. This will initially require the deployment of any number of paramedics and EMTs into triage areas. As the incident progresses, the need for EMS support will diminish and their activities will be limited to managing trapped victims and countering the effects of crush syndrome as well as providing medical support to the rescue teams. The initial patient treatment should be simple and medics should take care not to immerse themselves in the treatment of seriously injured patients when the numbers of victims also needing attention are piling up. As the victims become less, the need for more intense treatment will escalate. Due to the protracted duration of the incident it will also become necessary to rotate crews regularly. Allowance must however be made for the overlapping of shifts to ensure a thorough and detailed handover.

Any use of air transportation must be used with utmost care and any helicopter landing strips should be well away from any unstable structures.

### Equipment use

The number and type of equipment will be great and varied during a major structural collapse operation. Without going into too much detail on all the equipment required, here are just a few tips on some kit that will end up being vital to the success of the effort.

Lighting: enough lighting must be provided to illuminate the entire site. Do this early! Also ensure that there is enough "hands-free" lighting to provide to rescuers and paramedics. Hydraulic shears, cutters and spreaders: this equipment will be useful in the early stages of the incident for cutting rebar and lifting small concrete slabs.

Whizzer saws(K12): the small K12 whizzer saw is a small and compact tool which can be inserted into confined spaces with one hand and used to cut away at steel bars and sheets obstructing the entry of a rescuer or trapping the arm or leg of a victim.

Fire extinguishers: depending on the type of collapse you might be confronted with a number of small fires still burning in the structure. Certain exothermic cutting work might also start a fire in an area that you will not be able to reach with a fire truck. An adequate supply of fire extinguishers must be provided for this purpose.

Buckets and small shovels: will be invaluable for moving debris in confined spaces.

Utility ropes: a good supply of ropes of all lengths.

### Stabilisation

Stabilisation of a collapsed structure will normally take three forms:

Short term stabilisation: this allows rescue and specifically recon teams to enter a building and affect certain emergency rescues or reconnoitre the structure. High pressure air bags and box cribs are generally used to provide a measure of stabilisation in these cases.

Long term stabilisation: this is needed when protracted operations are expected in a specific part of a collapsed structure. This will consist of creating safe areas within the structure by constructing a series of vertical (dead) shores and countering the possibility of walls collapsing laterally by means of raker shores. In all cases you will need the advice of a structural engineer who is well versed in the stabilisation methods required. Only experienced USAR technicians must be used to do this task and no smaller than 150mm by 150mm ("8x8") timber must be used.

Sustained access: certain doors and windows will provide sustained access for rescuers to enter and exit the building over a prolonged period. These openings must be reinforced with timber lining the borders thereof. More advanced stabilisation methods will be required for the stabilisation of hanging slabs where winches or come-along tools could be used or reinforced nets could be used to create a "diaper" around the slab.

### Conclusion

In this article I have merely scratched the surface of the enormous task that confronts any incident commander at the scene of a major structural collapse incident. In future articles I hope to unpack certain of these concepts and provide a clearer picture of the technicalities of such an operation. It is however up to you, the responder, to train, plan and prepare for next time you have to do battle with a building.▲



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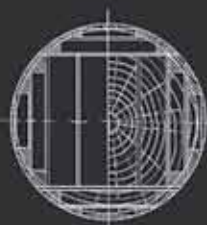
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# How professional is your fire service?

By Lenny Naidoo, chief fire officer, Rural Metro Emergency Management Services, South Africa

The American fire fighters are regarded as the people's heroes and are always known as the friends of the community. They are associated with the term "serve and protect" and each time a survey is conducted regarding service delivery, fire fighters come out on top.

Have you thought about what the public's opinion of is of your fire department? Is it good or bad, what are the implications of poor public opinion, does it matter?

### Let's take a look at our fire services:

1. Does the community we serve and protect really acknowledge us as professionals that are indispensable?
2. Does the average citizen understand the work of a fire fighter?
3. Do we market ourselves effectively?

It is clear that in most instances the answers will be no.

Wouldn't it be great if you were standing in a queue and people insist that you move ahead of them just because you are a fire fighter? Consider a fire fighter in uniform going into a restaurant to order coffee and being told "no charge, fire fighters are our heroes".

What can we do to improve our image to gain the support of the community and decision makers?

- Be a part of the community - proactively marketing ourselves to our politicians in a professional business manner gains us a better seat at the budget table, rather than casting stones at them once the damage is done.
- "A business with no sign is a sign of no business". Fire departments will need to be more creative in community involvement. Open up your firehouses and stop living in a secret society behind closed bay doors, because this is "your house." This is their house too, and they need to be a part of it. They need to know how hard you work in training, call volume, hose testing, apparatus and equipment maintenance, physical fitness, stress, sleep deprivation, studying for promotions, public education, company inspections, pre-fire planning, and last but not least, EMS calls.
- If you wait until the budget cuts are on the table before you start telling your story and trying to build support, you're too late. Market yourself now!
- It all comes down to using the resources we have more wisely, and how we market ourselves.
- When we consider the

deployment of resources, are we using it to our fullest advantage? What cost cutting measures are we implementing in our departments and how does it affect our business model?

- Better yet...what is your business model? These are just a few of the many questions that the fire service needs to be prepared to answer.

### Need to change

The deployment model will need to change for many fire services. I was a firm supporter for as many bums on the fire appliance as it will seat, and as many in the fire station as it will sleep, but that model is changing.

How will departments that have been accustomed to having adequate resources handle a reduction in personnel and changes in their deployment model?

### How we market ourselves

We need to look closely at how we market ourselves. Social media is not going away; in fact, it will only develop into new and more creative ways we get information.

What we say on Facebook, Twitter, YouTube, blogs, and other forums will continue to get us in trouble. We must maintain a professional image to those who trust us. ▶

### ► How to make your open house successful (by the NFPA)

One of the most successful ways to spread community awareness during Fire Prevention Week is through open house events.

Tips to ensure their success include:

#### **The date**

Your open house can be held during the day or in the evening, but it must be at a time that people in your community are available. Saturday and Sunday afternoons are often most convenient for families, and fewer events tend to take place on weekends. However, check the community calendar to make sure there are minimal conflicts.

#### **Adequate staffing/equipment**

Emergencies can happen at any time, including during an open house. If your event is being held at a fire station, make sure enough fire fighters are available so that even if a crew must leave, there is still staff available to meet with visitors.

#### **Dress for success**

This is your chance to showcase your fire station to your community. Assign someone to dress in the official Sparky the Fire Dog costume. Make sure the station is clean and inviting, with good signage and theme-related decorations to draw attention.

#### **Have handouts ready**

Have handouts available for all age groups. Distribute printed materials that reinforce your fire safety messages.

#### **Keep it brief**

Generally, the public won't attend an event that requires hours of their time. Visitors should be able to learn at least one positive fire safety action that will help them learn safety messages in 30 minutes or less.

#### **Feed them**

Nothing draws a crowd like good food. Arrange for a local restaurant or fast food outlet to sponsor and provide refreshments or have fire fighters cook up their favourite specialty.

#### **Make it fun**

Open houses should be fun! Hold activities that allow visitors to meet fire

fighters, move around the fire station, and learn about fire safety in the process. Human interaction creates a personal experience for people, and is key to an open house's success.

#### **What is marketing?**

One definition of marketing is "an aggregate of functions involved in moving goods from producer to consumer." If we think of the goods in the form of fire department services, marketing is the role taken in letting the public know what we offer. Keep in mind that the entire concept can be a bit elusive.

Pick up any fire department management text and turn to the index. Look for the section on marketing fire department services and what do you find? Nothing! This is not to say that any of these books do not contain a great deal of information on marketing, you just have to know where to go to look for it.

Most texts contain some sort of information on media relations, community relations, and public fire safety education. The trick is in researching some of what fire departments have accomplished in the past, and thinking about expanding these traditional public contacts into "plugs" for the services that we are providing.

What do we need our marketing efforts to accomplish? What follows is a short list of items that you may want to create or improve upon:

- The department's viability and survivability
- Providing higher visibility in the community
- Improved communications with internal and external customers
- Creating an understanding as to the department's services, costs and benefits, and culture

These items cannot stand alone or ignore how the department provides services and the underlying theme of meeting the goals of the organisation. Recognising this fact and utilising a synergistic approach to marketing will assist us in accomplishing our mission.

A shift has taken place over the past few years in the use of the media in providing the fire prevention and safety slant in the reporting of fire

incidents. Prior to that, we stressed the number of alarms, personnel on the scene, amount of water flowed, and the cause of the fire. We are now seeing information on how smoke detectors woke a family and allowed them time to escape, or how fixed fire protection features kept losses to a minimum. We must now do the same for all of the services that we, as fire departments, provide.

Think about how citizen-initiated CPR is making the difference in saving a life and how that training was provided by the fire department.

**Your average civilian has no idea that the fire department does more than show up when your house is on fire or someone is hurt. It is up to us to use whatever methods we have available to change that.**

#### **Media relations**

One of the most successful and low-cost marketing techniques that a department can utilise, is the development of a good working relationship with the media. Here you can use the ideas of other fire services that have initiated successful marketing techniques.

After coming to the realisation that what most people know about their fire department, originates from the media, we should set our sights on educating these folks about who we are, what we do, and what we can provide to them in the way of information and assistance. The NFPA guide provides an informative look at the services the department affords, explanations on what reporters may be seeing on the fire-ground or emergency scene, and how to access information during and after an incident. A glossary on fire department terms is also included in the guide.

What had started out as the adjustment of a document that another fire department had developed has lead to a greater use of public information officers at incident scenes. Another offshoot has been the hosting of a "media luncheon," to assure that this partnership remains in place, and to educate new folks as turnover takes place. It also allows us to identify the special needs of the different types of news gathering agencies. ►



- ▶ This includes getting good photos/video of incidents, as well as what type of deadlines these people are up against.

The return on this investment has been tremendous, and has solved numerous problems in keeping the media from seeking information from uninformed sources. The benefit of having the media assist us in educating our customers assists us in integrating our other programs and their associated marketing efforts into the big picture of providing the best service to the community.

### **Public fire and life safety programs**

From the way your informational handouts look, to the methods that you employ to get this information to the public, these programs provide a great opportunity to market the department.

Programs advanced around audience specific groups also show that the fire department is taking the extra steps to address the needs of the community. Knowing who the "at risk" population is in your community, and addressing the demographics of the make-up of your citizens will allow you to make the marketing message specific to the targeted group. Along with this is the addition of life safety information, and accident prevention education in the message we take to the public.

As with all of the different marketing programs and strategies, you are only limited by your imagination in what message you take to the

streets, and the methods used to get the information across.

### **Opportunities or pitfalls**

An easy out from providing any type of marketing for your department is the age-old excuse of a lack of money and staffing. Most of what it takes to effectively market a fire department can be accomplished with little to no cost.

The key here is being able to see the forest through the trees, or looking at potential pitfalls as opportunities to let your community know what the fire department is doing for them. Having everyone in your organisation understand what the basic purpose and the mission of the department is, is a great place to start. Without this, failing community support, lack of confidence in the fire department and the level of service provided can easily take place. If we do not take the opportunity to educate the public about the department at every turn in the road, misperception can become reality.

### **Getting the most out of your public contacts**

Image is everything. "Every employee is an advertisement for the fire department and its quality of service. Personnel can be the fire department's best or worst marketing tool. Every time we come into contact with the public, our customers are evaluating us. Treating others as we would like to be treated ourselves seems kind of basic, but it will go a long way to enhancing the image of the fire service.

While we have been making great strides in providing speakers for fire safety presentations, we need to make the jump into doing the same for marketing the department. We have been the "silent service" for way too long. What is stopping us from showing up at a Rotary luncheon with a Power Point presentation on what services the fire department is providing to the community? Tradition? Fear? We have to market ourselves to the public. If we don't, we have the potential of being "downsized" right out of sight.

### **Customer service**

Good customer services parallels a good marketing program. The recent awakening of the fire service to the customer's needs during and after any emergency will go leaps and bounds in marketing your fire department and its services.

Excellence in customer service will equate to word-of-mouth marketing that no program or money can provide.

### **Lessons from the private sector**

Some of the more traditional marketing concepts utilised by the private sector can easily be converted into use by fire departments. We have to take the best practices and successes that these folks provide and integrate them into our efforts.

Lets all contribute positively.

Stay focussed! "Fire fighters ensure that even police officers have heroes" ▲



Fire and smoke clearly visible as captured by MODIS, on-board the Terra satellite, in three consecutive overpasses. (NASA image by Jeff Schmaltz, MODIS Rapid Response Team at NASA Goddard Space Flight Center.)

# WMO – 2011

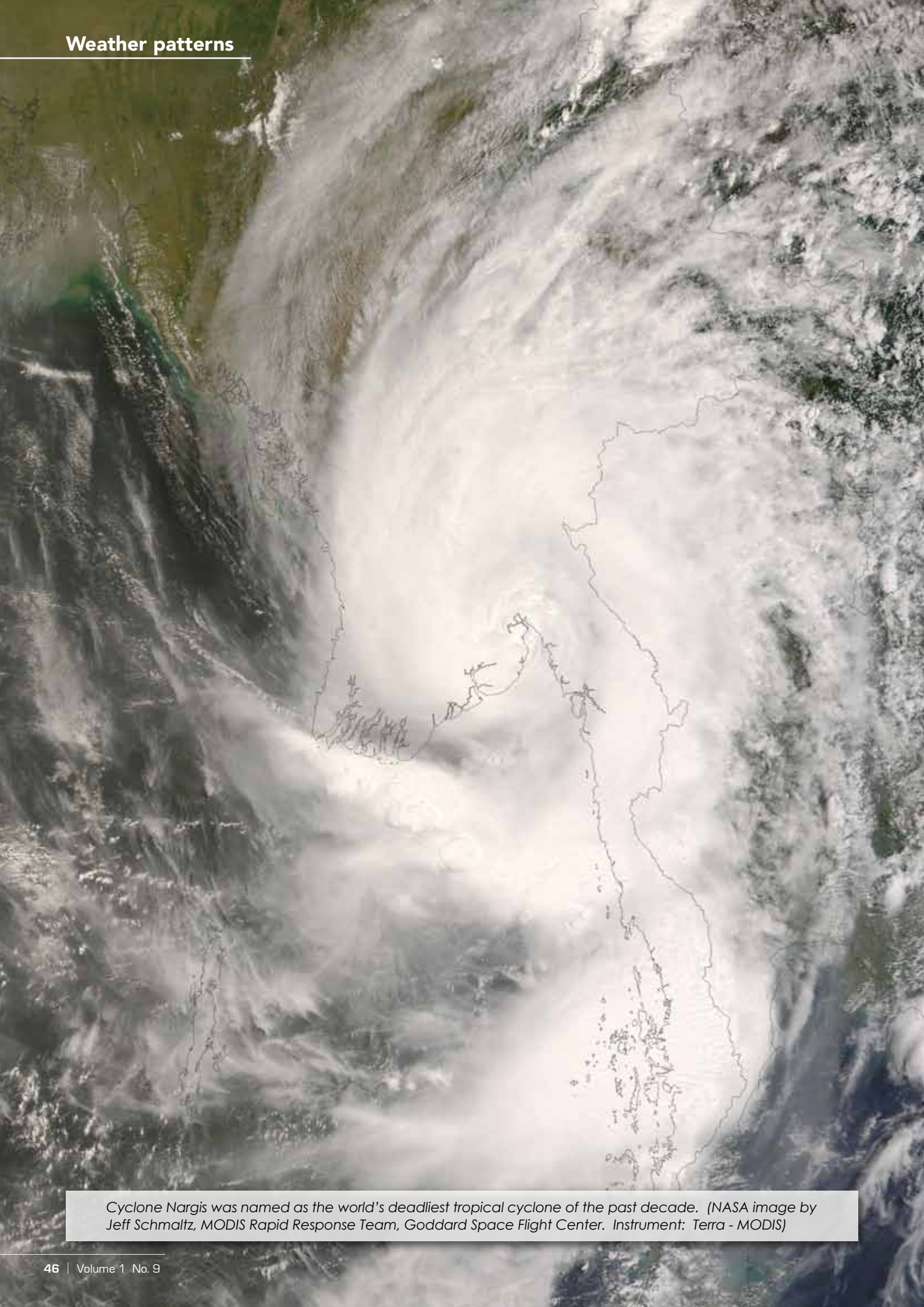
## the 11th warmest year on record

By **Bernardine Altenroxel**

It's official: the World Meteorological Organization (WMO) recently announced that 2011 was the 11th warmest year on record\*, with global average temperature estimated to be 0.40° Centigrade above the 1961-1990 average of 14°C. Preliminary findings also confirmed that 2011 was the warmest year on record during which a La Niña event, which has a cooling effect, occurred. Climate change accelerated during the period between 2001 and 2010, with this period being the warmest decade ever recorded across all continents - this according to a preliminary assessment of findings in the soon-to-be released Decadal Global Climate Summary. These announcements were made with the release of the WMO's annual statement on the status of the global climate, once again drawing the attention of the world to the very real threat climate change holds for us. Having experienced one of the strongest La Niña events of the last

60 years, precipitation extremes were experienced around the world, so while significant flooding occurred on all continents, droughts also affected parts of eastern Africa and North America. South Africa was one of the countries affected by severe flooding which resulted in 33 municipalities being declared disaster areas across seven provinces early in 2011 already. The agricultural sector was particularly hard-hit with thousands of hectares of land, which included vineyards and orchards, being submerged by flood waters. Neighbouring Mozambique was also badly affected and scores of people were forced from their homes due to the flood waters. Global precipitation over land between 2001 and 2010 was the second highest average after the period between 1951 and 1960 since 1901. Within this global average, says the WMO, there were big regional and annual differences. Globally, the WMO says that, while tropical cyclone activity was

below average in 2011, the United States experienced one of its most destructive tornado seasons on record. According to the NOAA (National Oceanic and Atmospheric Administration) website, a total of 1 691 tornadoes were reported across America in 2011. An estimated 552 people reportedly perished in these tornados - this figure nearly equivalent to the number of deaths in the previous ten years combined. In the Missouri town of Joplin alone, at least 157 people lost their lives to an EF-5 tornado which packed winds of over 322 kilometres per hour. This tornado, which was 1,2km wide and had a track lasting 9,66km, destroyed some 8 000 structures when it hit the town on the 22nd of May 2011. The NOAA cites the Joplin tornado as the deadliest single tornado since modern recordkeeping began in 1950 and ranked it as the seventh deadliest in US history. Late in April, the town of Hackleberg was hit by an F5 tornado, which resulted in the



*Cyclone Nargis was named as the world's deadliest tropical cyclone of the past decade. (NASA image by Jeff Schmaltz, MODIS Rapid Response Team, Goddard Space Flight Center. Instrument: Terra - MODIS)*





Satellite images taken before and after the Joplin tornado. Credit: NOAA

deaths of 18 people and destroyed an estimated 75% of the town, once again showing the devastating effect tornadoes can have.

As far as the past decade is concerned, the highest level of tropical cyclone activity on record for the North Atlantic basin was recorded. While Hurricane Katrina was amongst the most notorious cyclones of the decade, it was Tropical Cyclone Nargis which was named the world's deadliest tropical cyclone. Katrina, which formed over the Bahamas on the 23rd August 2005, claimed the lives of more than 1 800 people when it struck along the Gulf Coast, most notably New Orleans, but it was Tropical Cyclone Nargis, which formed in the Bay of Bengal, that reportedly killed more than 70 000 people when it swept over Myanmar in 2008 as a Category 4 cyclone, with sustained winds of 210 km/h.

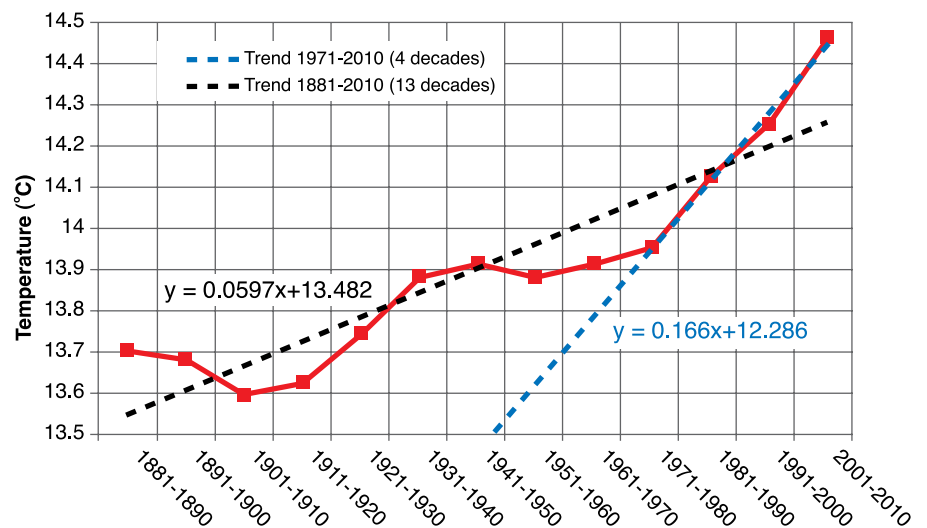
Besides the extreme tornado events, there were numerous other weather and climate extremes experienced around the globe, including heat waves and cold waves. Thousands of people were killed in heat waves which hit Europe and Russia during the summers of 2003 and 2010 respectively. The Russian heat wave spawned massive peat and forest fires which raged out of control for days. These fires reportedly covered an area of 1-million hectares and resulted in crop failures amounting to billions of US Dollars. The heat wave affected an area of around 2-million km<sup>2</sup>.

Of further concern is that arctic sea ice extent also fell to near record-low levels and which was once again below average in 2011. The decline in the Arctic sea ice extent has been observed since the end of the 1960s, with an historical low recorded in September 2007. For 2011, the US

National Snow and Ice Data Centre reported that the seasonal minimum, reached on 9 of September, was 35% below the 1979-2000 average. Sea ice volume was even further below average and was estimated at a new record low of 4 200 km<sup>3</sup>, which surpassed the record of 4 580 km<sup>3</sup> set in 2010. Over the past 35 years, scientific measurements have shown that both thickness and sea ice extent in the Arctic have shown a marked decline. The Arctic was cited as being one of the most prominent features to reflect the changing state of the climate during the decade, according to preliminary findings of the Decadal Global Climate Summary.

warmest decade on record. The year 2010 was named as the warmest year on record, closely followed by 2005, with a mean temperature estimated at 0,53°C above the long-term average.

"This 2011 annual assessment confirms the findings of the previous WMO statements that climate change is happening now and is not some distant future threat. The world is warming because of human activities and this is resulting in far-reaching and potentially irreversible impacts on our Earth, atmosphere and oceans," said WMO Secretary-General, Michel Jarraud.



Temperature trends (WMO).

The WMO statement describes as 'remarkable' the rate of temperature increase since 1971, adding that atmospheric and oceanic phenomena, such as La Niña events, had a temporary cooling influence in some years, but did not override the warming trend. As far as the past decade is concerned (the period between 2001 and 2010), nearly 90% of the countries involved in the assessment experienced their

While debate continues as to whether climate change is a reality or not, with the scientific evidence submitted by the WMO we are left in little doubt that the earth is indeed in a state of change. While it seems that nothing can be done to reverse the harm which has already been done, now is the time to start focusing on adapting to the coming changes.

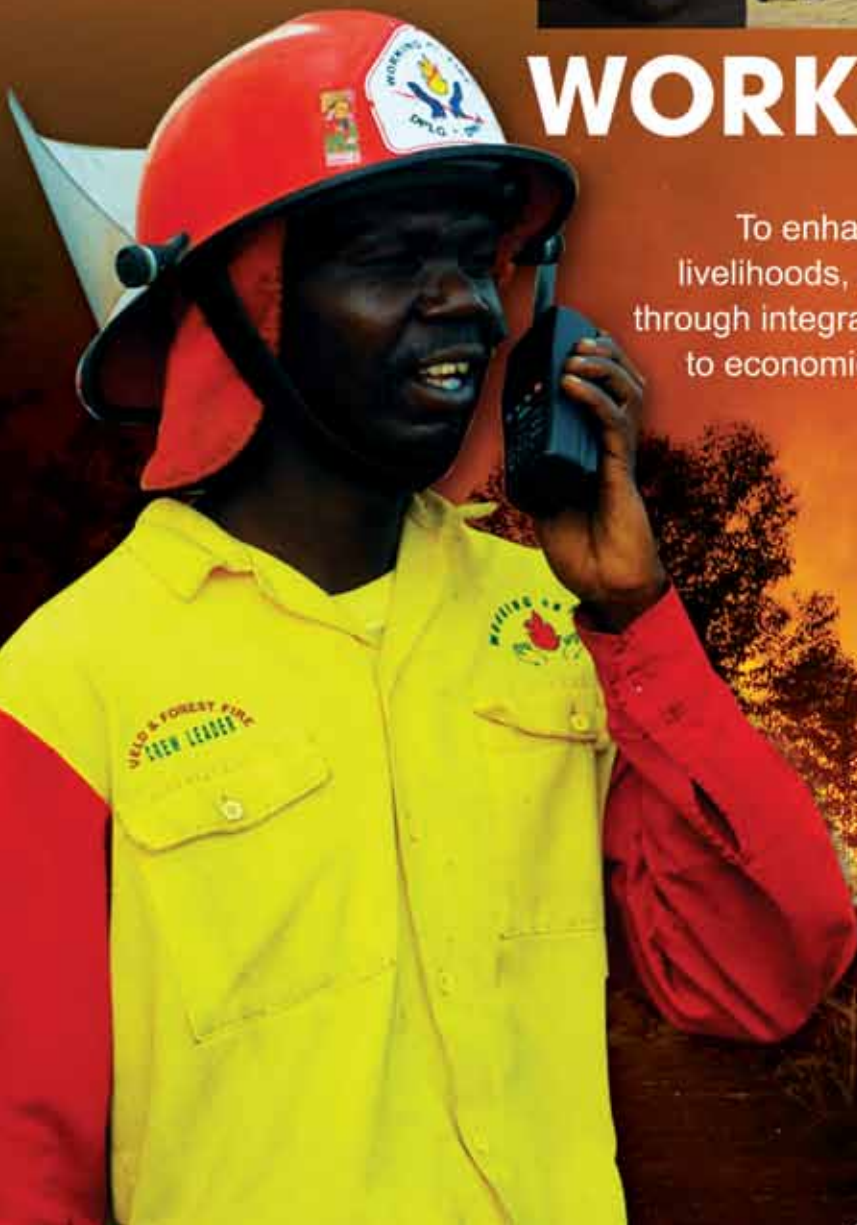
\*Records began in 1850 ▲



# WORKING ON FIRE

## SCHOLARSHIP FUND

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The **WORKING ON FIRE (WOF)** Programme is one of the most successful components of the South African governments Expanded Public Works Programmes designed to alleviate poverty through skills training and the creation of job opportunities. The WOF Programme draws beneficiaries from impoverished communities and transform formerly unemployed and in some cases unemployable youth into fit, disciplined and trained veld and forest firefighters, which are deployed at over 100 bases in fire prone areas across South Africa. South Africa has created a world record proportion of women in the ranks of these firefighters, where some 30% are young women.

The impact of this programme has been widely recognized through the accolades which it has been awarded over the years. Not only has the WOF Programme made a huge contribution to South Africa's veld and forest fire fighting capabilities, but the modest remuneration which the WOF Programme beneficiaries receive is a critical relief measure from the depths of poverty experienced by so many in South Africa. Their income represents a real contribution to the lives of the beneficiaries, their families and communities where they live.

WOF beneficiaries not only receive specialized training in various fields related to their veld and forest fire fighting work but are afforded to progress in the ranks of the WOF structure to become Type II then Type I crew leaders as well as branching out into the management and administration functions in the programme. Some 84 former fire fighters have already progressed into such positions such as instructors, regional managers, media and community liaison officers, financial clerks, stores and procurement administrators, etc.

The WOF Scholarship Fund is intended to provide resources to aspirant current and former wildland fire fighters still engaged by WOF to pursue further formal training to improve their skills and knowledge. The fund will be managed by a committee consisting of former fire fighters and programme managers, chaired by the executive chairman of FFA Operations, the company implementing the WOF programme.

Contributions will be solicited from the general public, both domestically and abroad, corporate social investment resources and public and private institutions both in the form of general contributions and targeted funding initiatives. Individuals or institutions may also choose to sponsor a WOF beneficiary pursue their further studies or training. The intention will be to register the WOF Scholarship Fund as a public benefit entity to allow for tax deductible contributions from the corporate sector. All contributors to the WOF Scholarship Fund will receive annual statements on the utilization of funds and beneficiary progress.

You are urged to make a contribution to this fund which will greatly enhance the ability of the WOF Fund beneficiaries to improve their skills and knowledge and in so doing improve their employment opportunities and contribution they can make to their communities. Contributions can be made via the enclosed pledge form.

**For further information, please contact:**

The Executive Chairman,  
FFA Operations T/A WORKING ON FIRE,  
Email: [Abrahams@iafrica.com](mailto:Abrahams@iafrica.com)  
Tel: +27 (0) 82 557 5069.

Also see the WOF website at [www.workingonfire.org](http://www.workingonfire.org)

**Or deposit your donation in the following Bank Account:**

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Account Nr: 405 953 7280  
Branch code: 632005  
Bank: ABSA Nelspruit  
Ref: Scholarship Fund



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For more information visit: [www.dosetech.co.za](http://www.dosetech.co.za)

#### 5 – 6 September 2012

##### **The Emergency Management Summit**

The leading forum on medical preparedness and response to disasters, epidemics and terrorism

**Venue:** Baltimore Waterfront Marriott Baltimore, Maryland, USA

**Contact:** Tel: 00 206 452 5206 or email: registration@hconferences.com

For more information visit:

[www.emergencymanagementsummit.com](http://www.emergencymanagementsummit.com)

#### 12 – 13 September 2012

##### **Disaster Risk Reduction 2012 – the 27<sup>th</sup> DMISA Conference**

Taking up the challenge, readiness for risk reduction and response

**Venue:** Karibu Leisure Resort and Conference Centre/NMN Grand Hotel, Tzaneen, Limpopo Province, South Africa

**Contact:** Karin Muller email: Karin@distaster.co.za  
For more information visit: [www.disaster.co.za](http://www.disaster.co.za)

#### 14 – 16 September 2012

##### **Fire Engineering India Conference**

Offers exhibitors a platform to display and promote products, expose new technology and services to the Indian region

**Venue:** Bombay Convention and Exhibition Centre, Goregaon (W), Mumbai, India

**Contact:** Paul Sweeney Tel: 0044 0 199 265 6623 or email psweeney@pennwell.com

For more information visit:

[www.fireengineering-india.com](http://www.fireengineering-india.com)

#### 18 – 22 September 2012

##### **Prague Fire and Security Days 2012**

Latest trends in fire-fighting and security technologies, recently extended with new branches - IT protection, safe traffic and rescue Prague

**Venue:** PVA Expo, Prague 8, Czech Republic

**Contact:** Thomas Franek email: franek@mascotte.cz

#### 19 – 20 September 2012

##### **Fire Behaviour and Tactical Ventilation Symposium**

International speakers on US tactics for compartment fires, case studies and incidents, practical demonstrations etc

**Venue:** West Midlands Fire Service Academy, Dartmouth Road, West Midlands, United Kingdom

**Contact:** Tel: 0044 121 380 6620 or email academy.enquiries@wmfs.net

#### 20 – 21 September 2012

##### **Hazards and Disasters International Conference**

Innovative ideas and solutions at Hazards and Disasters 2012. Take initiatives to forge better solutions to reduce future risks and threats of hazards

**Venue:** Negombo, Sri Lanka

**Contact:** Isanka Gamage email: isanka@leapbis.info

For more information visit: [www.globaldisasters.org](http://www.globaldisasters.org)

#### 20 - 23 September 2012

##### **International Security, Fire, Emergency, Search-Rescue Fair (ISAF)**

ISAF is the region's premier meeting for the Eurasia security and fire business, providing opportunity for those in the industry to network and pursue for the new contacts

**Venue:** Istanbul Expo Centre, Turkey

**Contact:** Merk Is threes  
email: marmara@marmarafuar.com.tr

For more information visit: [www.isaffuari.com](http://www.isaffuari.com)

#### 27 - 28 September 2012

##### **FIVE Fire in Vehicles**

Fire development, fire risks, detection and fire suppression in vehicles, regulations and standards, statistics and insurance issues as well as incident management in case studies

**Venue:** Renaissance Chicago Downtown Hotel on the waterfront, Chicago, USA

**Contact:** Fredrik Rosén email: fredrik.rosen@sp.se  
For more information visit: [www.firesinvehicles.com](http://www.firesinvehicles.com)

#### 26 – 28 September 2012

##### **XI International Exhibition Forum Protection Technologies**

Fire and anthropogenic safety, protection and rescue means, prevention and consequences liquidation of emergencies

**Venue:** International Exhibition Centre, Kyiv, Ukraine

**Contact:** email: protech@iec-expo.com.ua

For more information visit: [www.tech-expo.com.ua](http://www.tech-expo.com.ua)

### October 2012

#### 10 – 12 October 2012

##### **1<sup>st</sup> Biennial Disaster Risk Reduction conference - uniting theory and practice**

The conference will be an ideal opportunity for international networking and the sharing of ideas, best practices and leading research in the field of disaster reduction.

**Venue:** North-West University, Potchefstroom Campus, Potchefstroom, South Africa

**Contact:** Gideon Wentink  
email: gideon.wentink@nwu.ac.za

For more information visit: [www.acds.co.za](http://www.acds.co.za)

#### 10 – 12 October 2012

##### **4<sup>th</sup> Shanghai International Disaster Reduction and Public Security Forum**

Asia's largest platform for government procurement of security, safety and disaster management products

**Venue:** Shanghai World Expo Exhibition and Convention Centre, Shanghai, People's Republic of China

**Contact:** [sidrs.list@meorient.com](mailto:sidrs.list@meorient.com)  
For more information visit: [www.sidrschina.com](http://www.sidrschina.com)

### 11 – 13 October 2012

#### The Manitoba Emergency Services Conference

A program filled with practical and informative workshops that will offer attendees a variety of choices to quench their thirst for advanced training and development

**Venue:** Manitoba Emergency Services College and the Victoria Inn Hotel in Brandon, Manitoba, USA

**Contact:** Tel: 00 204 726 6855 or  
email: [firecomm@gov.mb.ca](mailto:firecomm@gov.mb.ca)

For more information visit: [www.gov.mb.ca](http://www.gov.mb.ca)

### 12 October 2012

#### Emergency Services Day of Prayer 2012

The service endeavours to show gratitude to the fire fighters, paramedics, police, metro police, the chaplaincy and trauma counsellors for their dedication, their compassion and their diligence

**Venue:** NG Church, 30<sup>th</sup> Avenue, Villieria, Pretoria, Gauteng, South Africa at 12pm

**Contact:** Frikkie Gous tel: +27 82 087 6860  
email: [marketing@lifemed911.co.za](mailto:marketing@lifemed911.co.za)

### 16 – 18 October 2012

#### Wildfire Assessment and Control Advanced Course

Forestry Solutions will be presenting an advanced open Wildfire Assessment and Control Course for fire managers and disaster managers in the Fynbos Biome.

**Presenter:** Dr Neels de Ronde.

**Venue:** Pine Lodge, George, Western Cape, South Africa

**Contact:** Ronalda McEwan Tel: +27 83 267 1317 or  
email: [ronalda@forestrysolutions.net](mailto:ronalda@forestrysolutions.net)

For more information visit: [www.forestrysolutions.net](http://www.forestrysolutions.net)

### 19 – 28 October 2012

#### 12<sup>th</sup> World Fire Fighters Games

More than 10 000 fire fighters from around the world will vie for glory in over 71 sporting events and social activities

**Venue:** Sydney, Australia

**Contact:** Tel: 00 61 7 5575 7444 or  
email: [info@wfgevents.com](mailto:info@wfgevents.com)

For more information visit:

[www.worldfirefightersgames.com.au](http://www.worldfirefightersgames.com.au)

### 22 – 24 October 2012

#### Dynamics of Preparedness Conference

Dynamics describes the complex interactivity among numerous governmental, private, and voluntary components of public health systems

**Venue:** Pittsburgh, Pennsylvania, Harrisburg, USA

**Contact:** email: [midas@pitt.edu](mailto:midas@pitt.edu)

For more information visit: [www.midas.pitt.edu](http://www.midas.pitt.edu)

### 26 October - 1 November 2012

#### International Association of Emergency Managers (IAEM) 60<sup>th</sup> Annual Conference

The conference provides a forum for current trends and topics, information regarding latest tools and technology in emergency management and homeland security

**Venue:** Rosen Centre Hotel and Orange County

Convention Centre, Orlando, Florida, USA

**Contact:** Tel: 001 703 538 1795 or email: [info@iaem.com](mailto:info@iaem.com)  
For more information visit: [www.iaem.com](http://www.iaem.com)

## November 2012

### 6 November 2012

#### South African Institute of Forestry (SAIF) and the Nelson Mandela University (NMMU) Saasveld 8<sup>th</sup> Fire Management Symposium

This successful and informative symposium will be held in White River, Mpumalanga this year and promises to be insightful and informative as usual

**Venue:** Ingwenyama Lodge, Mpumalanga, South Africa

**Contact:** Tiaan Pool email: [Tiaan.Pool@nmmu.ac.za](mailto:Tiaan.Pool@nmmu.ac.za)  
For more information visit: [www.nmmu.ac.za](http://www.nmmu.ac.za)

### 14 – 15 November 2012

#### Industrial Fire, Safety and Security Expo

All aspects of emergency response, IFSS is designed to help you stay ahead of the curve in the demanding industrial and energy marketplace

**Venue:** Morial Convention Centre, New Orleans, Louisiana, USA

**Contact:** email: [registration@tradedfairgroup.com](mailto:registration@tradedfairgroup.com)  
For more information visit: [www.ifssevent.com](http://www.ifssevent.com)

### 21 – 22 November 2012

#### The Emergency Services Show

Provides latest products, networking opportunities, learn about interoperability etc

**Venue:** Stoneleigh Park, Warwickshire, United Kingdom

**Contact:** David Brown at Broden Media  
email: [davidbrown@brodenmedia.com](mailto:davidbrown@brodenmedia.com)  
For more information visit: [www.emergencyuk.com](http://www.emergencyuk.com)

## December 2012

### 1 - 4 December 2012

#### Middle East Fire, Safety and Security Exhibition (MEFSEC)

The mission of MEFSEC is to facilitate knowledge transfer and business opportunity in key sectors of the fire fighting, safety and security market

**Venue:** Cairo International Convention Centre, Cairo, Egypt

**Contact:** email: [egytec@egytec.com](mailto:egytec@egytec.com)  
For more information visit:  
[www.mefsec-middleeast.com](http://www.mefsec-middleeast.com)

## March 2013

### 19 – 21 March 2013

#### Wildland Urban Interface Conference

The most influential people in firefighting, involved in combating the challenges of wildland fire will join to discuss the problems faced and how collectively new strategies can be implemented.

**Venue:** Peppermill Reno Hotel Casino, 2707 S. Virginia Street, Reno, Nevada

**Contact:** [IAFC@compusystems.com](mailto:IAFC@compusystems.com)  
For more information visit: [www.iafc.org/wui](http://www.iafc.org/wui)

# *We shall never forget*

## September 11 tribute

Let the world always remember  
That fateful day in September  
And the ones who answered duties call  
Should be remembered by us all

Who left the comfort of their home  
To face perils as yet unknown  
An embodiment of goodness on a day  
When men's hearts had gone astray

Sons and daughters like me and you  
Who never questioned what they had to do  
Who by example, were a source of hope  
And strength to others who could not cope

Heroes that would not turn their back  
With determination that would not crack  
Who bound together in their ranks  
And asking not a word of thanks

Men who bravely gave their lives  
Whose orphaned kids and widowed wives  
Can proudly look back on their dad  
Who gave this country all they had

Actions taken without regret  
Heroisms we shall never forget  
The ones who paid the ultimate price  
Let's never forget their sacrifice

And never forget the ones no longer here  
Who fought for the freedoms we all hold dear  
And may their memory never wane  
Lest their sacrifices be in vain

**Alan W Jankowski**



## FIRST IN INTEGRATED FIRE MANAGEMENT



# Low & Medium Pressure Fire Fighter



## Davey52/EX21

### Features: (Twin Stage)

620 lt tank; step tank c/w baffles  
Maximum pressure 10 BAR  
Operating flow 80 – 150L/M  
Engine: EX21(7HP. O.H.C)  
Hose Reel + Hose 20M STD.  
Fire Fighting Gun Included  
5m Suction Hose Included

### Applications:

Forestry, Bush Fires & Lodges

### Part Available:

Nation Wide from approved Goscor Dealers.

### Features:

620lt Tank; Step Tank C/W Baffles  
PTG210, Self Priming Pump  
In & Out Let; 50mm  
Engine: EY15 (3.5 H.P)  
Pump can re-load tank in under 2 min.  
Suction Hose Included 4m.  
Delivery Hose 15mx20mm Fire Hydrant Hose  
Fire Fighting Gun (Branch)  
Max Pressure 3 BAR  
Operating Flow 60 – 100 L/M

## PTG2110/620



### Applications:

Veld Fires, Bush Fires & Thatch

### Part Available:

EY15 Engines are the most popular engines in South Africa. Parts are available from our dealer network or any well known lawn mower repair shop.

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