

FIRE AND RESCUE INTERNATIONAL

Integrated fire prevention, detection, management and rescue technology

Volume 1 No 2

What Working on Fire has done for me and my country



"Damage caused by the 2007 fires was estimated at R3,6 billion. **The damage would have been double without the assistance of Working on Fire**"

MIKE EDWARDS
former FSA CEO



WILDFIRE

The 5th International Wildland Fire Conference
2011

Sun City
9-13 May 2011

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Comment

Welcome to the second edition of the new monthly magazine, Fire and Rescue International.

We have received several emails from our readers with heart-warming compliments, suggestions and ideas. Thank you to all that took the trouble in writing to us.

We love to hear from you!

Conference

Wildfire 2011, the 5th International Wildland Fire Conference will be held at Sun City, South Africa, from May 9 to 13, 2011 and is a must-attend event this month.

Cover profile

Our cover profile this month highlights the incredible job creation and skills upliftment effort of the Working on Fire (WoF) programme. The programme creates equal opportunities and implements skills development, poverty relief and job creation as its core focus.

Japan is without a doubt currently at the forefront of most humanistic organisations' work and our thoughts go out to the people of Japan, their families and the many fire fighters and rescue workers.

This month's edition features several news articles on fires from around the world, new technologies and equipment, new services being offered and a case study on the use of fire in controlling and reducing the spread of Slangbos in the Free state.

Share your experiences

Also featured are several articles on fires extinguished without fatalities and some that had loss of life. It's all part of the job, they say. That doesn't make it any easier for the firemen involved or for the families that have to say an abrupt goodbye to their loved ones.

However, we have received some photographs of fire fighters that worked though many days and



Lee Raath-Brownie

nights and still were able to smile at the camera.

Share your experiences with us and the readers so we can honour the unselfish work performed by our many fire fighters.

Poem

The monthly poem submitted is also an ode to the fire fighter. Send us your poems and we'll publish it!

We trust you will enjoy reading our second issue and that you'll find in us a partner in your calling.

**Lee Raath-Brownie
Publisher**

To be a fireman

I have no ambition in
this world but one,
And that is to be a fireman.
The position may,
In the eyes of some,
Appear to be a lowly one;
but those who know
the work which a
fireman has to do
believe his is a noble calling.
Our proudest moment
is to save... lives.
Under the impulse
of such thoughts
the nobility of the
occupation thrills us
and stimulates us to
deeds of daring,
even of supreme sacrifice.

Edward F Crocker
Chief of Department, FDNY
1899-1911

Calling all budding photographers!

We want your photographs!



Fire and Rescue International (FRI) is introducing a monthly photographic competition to all its readers. This exciting competition offers you the opportunity of submitting your digital images of fires and fire fighters, any fire, anywhere.

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:

Name of photographer
Contact details (not for publishing)
Email: (not for publishing)
Name of photograph
Brief description of photograph including type of fire
Camera used
Lens
Settings

All entries must be emailed to lee@fireandrescue.co.za.

>>ENTER NOW!

A photograph of two firefighters in yellow protective gear, including helmets and jackets, standing in front of a large, intense fire. The firefighter on the left is holding a tool, possibly a pike pole. The firefighter on the right has "WORKING ON FIRE" and "FIREFIGHTER" printed on their jacket. The background is filled with bright orange and yellow flames and smoke.

Working on Fire — South Africa's award-winning job creation and poverty alleviation success story

by Evelyn John Holtzhausen

The Working on Fire Programme, (WoF) now in its eighth year, is one of the South African government's most successful job creation and poverty relief programmes.



The programme provides more than 3 000 highly skilled WoF Wildland fire fighters supported by dedicated aerial resources and coordinated by dispatch and coordination centres - to reduce the personal and economic harm caused by unwanted wildland fire in South Africa.

During 2007 when South Africa experienced devastating veld and forest fires, the CEO of Forestry South Africa, Mike Edwards said: "these fires caused damage estimated at R3,6 billion Rand, that the damage would have been twice as much were it not for the efforts of the Working on Fire programme."

The WoF programme is implemented and supported by the FFA Group, based in Nelspruit, South Africa, that specialises in integrated fire management (IFM) internationally.

Young men and women in rural areas, who typically have no previous job experience and who are generally unemployed are recruited into the WoF programme after passing a basic fitness test. Once accepted they are put through rigorous training

which equips them to work as WoF Wildland fire fighters deployed, like a reserve army, in "Hotshot" teams of between 22 and 25 people to any unwanted wildfire in South Africa.

South Africa has achieved a unique distinction in that 30% of our fire fighters are women, the highest proportion of women wildfire fighters in the world.

Hotshot teams are established at more than 100 bases across South Africa, with members of teams recruited and deployed, where possible, at a base close to their homes.

Should an unwanted fire occur in another region, the WoF Wildland fire fighters are transported in custom designed vehicles with their Personal Protection Equipment (PPE) and necessary wildfire fighting equipment to where their services are required.

WoF Wildland fire fighters are typically called to assist when local fire fighting resources are stretched to the limit. For this reason many of the WoF bases are "hosted" by organisations that partner with WoF, such as SANParks, and CapeNature.

The FFA Group, through FFA Aviation, provides a fleet of aerial fire fighting aircraft from Dromader water bombers to helicopters and fixed wing spotter local command and control planes to support the WoF Wildland fire fighters suppress an unwanted fire.

Prior to each season a special training camp is held to increase fitness levels and refresh WoF Wildland fire fighters techniques. It is here that that additional recruiting also takes place. At these camps the various Hotshot teams compete with one another to receive trophies for excellence in various wild land fire fighting fields. Competition to be the top "Hotshot" team in the province and in the country is fierce and builds loyalty and morale throughout the programme.

Because of the vast distances which have to be covered to effectively mitigate against unwanted wildfire in South Africa, WoF strategists, deploy WoF Wildland fire fighters in the four provinces in anticipation of the different fire seasons. For example, FFA fire fighting aircraft are dispatched to the Cape in ►



► December to support WoF Wildland fire fighters at local bases fight fires in Western Cape from December until April. From May they are redeployed to the South Western Cape then up the East Coast of South Africa to the KwaZulu-Natal region, and after that to the northern regions of the country.

This strategy ensures that local wildfire fighting agencies always know they have additional resources close at hand to deploy should their own wildfire fighting resources be stretched.

WoF teams are often deployed in times of large fires under the USA pioneered Incident Command system (ICS). This system establishes a single authority at time of disaster under which all resources are coordinated and deployed. A number of senior FFA Group and WoF managers have undergone ICS training courses in South Africa hosted by the FFA using North American ICS specialists invited to South Africa to conduct ICS courses.

When they are not fighting unwanted wildland fires, WoF Wildland fire fighters spend a considerable amount of their time working with local communities and visiting schools teaching local people about the risks associated with fire.

After identifying the need for skills training in structural fire fighting the FFA training academy also offers courses to WoF qualified wildland fire fighters to enable them to seek posts in municipal fire departments where structural fire fighting techniques are required. More than 70 of WoF trained wildland fire fighters have found permanent jobs in this area.

In addition WoF's advocacy department, through its "Firewise" programme, has worked with the public in fire-vulnerable communities across South Africa to educate children about wildfire and raise awareness among adults of fire risky behaviour and the consequences of unwanted wildfire. "Where Firewise has been embraced by a community we've seen tangible results. Parents step in when children take risks, children in turn are more cautious about lighting fires, always a problem in winter when they need warmth," says WoF programme manager Fred Mokgope. ►

► In 2005 WoF was awarded a Platinum Award, the highest accolade, by the Impumelelo Innovations Trust. The prestigious award recognised exceptional achievement by government-initiated projects that are sustainable and can be replicated. Impumelelo adjudicators favour programmes and projects that foster public-public and public-private partnerships to reduce poverty and address key developmental issues of national concern.

In 2009, the remarkable work done by WoF in reducing the impact of unwanted fires on people and the environment was acknowledged when the programme received the Kamoso Award for Best Environmental Programme. The Kamoso Awards were launched in 2007 by the Department of Public Works with the intention of rewarding national departments, provinces, municipalities and public bodies that excelled in initiating and implementing labour intensive projects aimed at creating jobs. Achievements are recognised for labour intensive projects in infrastructure, environment, social and economic sectors.

In March 2010, Working on Fire was advised that it had been awarded a Certificate of Merit by the Impumemelo Awards Trust for its KwaMemela Firewise Community project, which has successfully pioneered community-based fire management concepts in rural KwaZulu-Natal.

“Which ever way you look at it, Working on Fire has been an unprecedented success. The programme has grown from humble beginnings, fired by highly motivated, programme directors and a dedicated back-up staff to the point where it has no equal in terms of skills development, poverty relief and job creation.”

“Moreover, we have done it with an unparalleled safety record. Our training, fire suppression methodology and good fortune have spared us any fatality on the fire line the past eight years of our existence,” says Trevor Abrahams, FFA Executive Chairman, of FFA Operations, which implements the Working on Fire programme. ▲

Nolukanyo Babalaza was recruited 2003 as a wildfire fighter and after qualifying as a crew leader, was later promoted to administrative assistant and soon after that to debtors and creditors clerk. She was able to get her driver's licence and has attended skills and leadership training. “Working on Fire,” she says, “ has changed my life!”





Rebuilding Japan

The reconstruction of Japanese towns and cities devastated by a deadly earthquake and tsunami last month could take a decade, an advisory panel to the Japanese government tasked with coming up with a blueprint for rebuilding, said.

The March 11 earthquake and tsunami left a large section of Japan's north-east in ruins. The disaster death toll is currently at 28 000, a horrific statistic and it forced about 130 000 people into shelters. The damage is said to be estimated at around 300 billion US dollars.

It still overwhelms the mind when you look at the devastation. Japan's Prime Minister, Minister Kan, was right when he said it was the worst crisis seen since WWII. General predictions are that they will get back on their feet in record time, but not overnight. The scale is too vast.

"The first three years would be needed for tasks like rebuilding roads and constructing temporary housing," said Jun Iio of Japan's Reconstruction Design Council, formed after the quake to advise the government's rebuilding efforts.

"We have to bear in mind that the area afflicted by the disaster is much larger than Kobe," Iio said, referring to the Japanese city ravaged by a powerful earthquake in 1995. The council, comprising scholars, local governors, business executives and a Buddhist priest, have also said the challenges of rebuilding after the March disaster have been made greater by a crisis at a tsunami-stricken nuclear power plant. ▶





► Tens of thousands of residents around the Fukushima Daiichi plant have been ordered to evacuate after the tsunami knocked out the plant's cooling functions, leading to leaks in radiation in the world's biggest nuclear disaster since Chernobyl in 1986.

Japan's economy will overcome some temporary setbacks and may recover once reconstruction from last month's earthquake and tsunami damage begins, Finance Minister Yoshihiko Noda said.

Radioactivity rises again in sea near No 2 reactor

The operator of the crippled Fukushima Daiichi nuclear power plant says levels of radioactive substances in seawater have risen again near the water intake of its No 2 reactor. TEPCO has installed underwater barriers and metal boards near the intake to prevent contaminated water from leaking into the sea. The power company says the rise in the levels of radioactivity may have been caused by the installation work, but no new sources of leakage have been found.

Quakes may continue in wide area

Japanese weather officials are calling on people to stay on the alert, as strong earthquakes are expected to continue for some time. Aftershocks continue to rattle the Tohoku and Kanto regions along the Pacific coast, although the number is on the decline. The Meteorological Agency is warning that strong aftershocks may still occur. It is calling on people to stay on the alert for possible landslides and collapsing buildings. ▲

Hundreds homeless after Eastern Cape fire

A man died and 83 families were left homeless, after a fire raged through the Skiet Informal Settlement in Butterworth, Eastern Cape police said.

Police spokesperson Captain Jackson Manatha said the settlement was located on the Old Hospital road, and the fire occurred just before midnight.

Lunga Masiko, 27, died whilst asleep in his shack, he said. Masiko lit a candle and his gas stove when he arrived home. "It is presumed [that he left the candle and stove on] and fell asleep and at about 02h00," said Manatha.

A fire started and spread to the other shacks.

An inquest docket into the incident was opened and no one else was injured.

"It is up to the municipal bosses to now help the homeless," he said.

The municipality was not immediately available for comment, SAPA reports.

Johannesburg factory fire doused

A fire that broke out at a bedding factory in Booyens, south of Johannesburg on Good Friday was completely extinguished by 07h00 on Saturday, Johannesburg Emergency Services said.

“We managed to stop the fire from spreading and had it completely extinguished by 07h00,” spokesperson Percy Morokane said.

Security guard at the factory, Martin Griessel, said the fire broke at 21h00 on Good Friday. “I was in the bathroom, when the light suddenly went off. I went out to investigate and saw smoke coming from the basement,” he said.

Emergency services had feared that the Gordon Prince factory on Koster Street, would collapse. A structural engineer had been at the scene advising emergency services which perimeters they could work in.

“A structural engineer came in last night to advise us which perimeters we need to work on. We followed all the safety protocols.”

Morokane said the factory, which manufactures bedding material such as duvets, blankets and comforters had been condemned. “There will be no further production, entry or exit to this building,” he said. “The Department of Labour will now have to visit the premises to carry its own investigation.”

The department would investigate whether anyone had “broken any rules regarding employee safety”.

The building appeared to have burnt from the basement and “might have been started by a spark”. “We’ll have to look at the machinery being used in the basement. We suspect that it may have started from a spark from the machinery being used.”

The police, labour department and structural engineers will hold an “extensive investigation” into the cause of the fire.

Morokane said the safety of the 150 employees who were inside the building when the fire broke out could be attributed to quick response by emergency services.

He added that the fire could have been a disaster if not for the emergency fire doors in the basement where the fire started.

Divisional Chief of Johannesburg emergency services, JJ Viljoen, said “water could not be used to extinguish the fire because of the weight it carries and it might cause the building to collapse. The heat emanating from the basement was so intense, that it caused the upper floor to crack. Therefore, it could collapse at any time.”

Foam was pumped into the building to extinguish flames. He said the pipes from fire hydrants attached to the building could also not be used earlier as it was melting, SAPA reported. ▲

Nyrstar’s largest zinc smelting plant hit by fire



The Nyrstar Zinc smelting plant in Balen, Brussels, Belgium

Belgium’s Nyrstar, the world’s biggest producer of zinc, said a fire had struck its plant in Balen, Belgium.

The fire started late on Tuesday, April 26, 2011, in the leaching unit at Balen, Nyrstar’s largest zinc smelting plant, and was brought under control after three hours. At the time of going to press, it was too early to determine what damage had been caused.

Nyrstar also said that production at its zinc mines increased by 64 percent in the first quarter from the fourth quarter, while zinc metal output decreased three percent from record highs reached in the final three months of 2010. Nyrstar is a leading global multi-metals company, producing significant quantities of essential resources - zinc and lead as well as other metals such as silver, gold and copper.



Fires destroyed hundreds of homes in Texas

Fires in Texas and Mexico

Milder weather has boosted fire fighting efforts in Texas

An evacuation order for the town of Palo Pinto, Texas, was lifted as cooler, wet weather and calmer winds allowed fire fighters to move closer to a wildfire that had been threatening the county for more than two weeks.

Sadly, a second volunteer fire fighter was killed fighting the wildfires that consumed close to 404 685 hectare across Texas.

Elias Jaquez, 49, of the Cactus Volunteer Fire Department, died of fire-related injuries after he and three other fire fighters attempted to put out a fire near County Road U, south of Dumas, Cactus City Manager Steve Schmidt-Witcher said.

Volunteer fire fighter Gregory Simmons, 51, of Eastland was killed the previous week after being struck by a vehicle as he fled a fire truck that was trapped in a wildfire-consumed pasture.

Wildfires threatened both high-dollar homes and humble cabins around Possum Kingdom Lake, about 113 kilometres west of Fort Worth, and a wind shift sent fires racing toward the towns of Palo Pinto and Strawn south of the lake. Palo Pinto, west of Mineral Wells, was under an evacuation order as the fire raced toward the county seat. Prisoners in the county jail were evacuated and county computers removed. "The only ones who can stay here are fire fighters and people who have emergency vehicles," said Dee Jackson, a communications specialist for Palo Pinto Fire Department, and one of the last to leave.

Wildfires also threatened Strawn and Graford, but no official evacuation orders had been issued.

The unpredictability of the North Texas fires isn't expected to end soon. As the latest cool front moves north into Oklahoma, warmer air is expected to move back into the area as the winds shift from the northeast

back to the south and southeast, said National Weather Service meteorologist Daniel Huckaby. Temperatures should rise in coming days, but more moisture should lower the threat of the wildfires spreading quickly, he said.

The North Texas fire, known as the PK Complex Fire after four individual fires merged in Palo Pinto, Stephens and Young counties, has burned about 60 700 hectares, in four counties. The fire destroyed 149 homes around Possum Kingdom Lake.

Palo Pinto County Judge David Nicklas ordered the lake closed to everyone except emergency workers. Water access on the lake is being curtailed because of the fire's size and unpredictability.

The Forest Service said that 37 homes were destroyed in Gaines Bend, along with 56 homes in the Sportsman World subdivision and another 24 in Hog Bend. ▲



The Evergreen Boeing 747 Supertanker

Evergreen Supertanker to help fight fires in Mexico

Evergreen International Aviation said its Boeing 747 Supertanker aircraft has been deployed to Mexico to extinguish on-going fires in the state of Coahuila, Mexico.

The aircraft is capable of dropping up to 75 700 litres of fire retardant per mission.

The Evergreen Supertanker is the largest aerial fire fighting aircraft in the world. It also has the highest dash speed of any fire fighting aircraft, allowing it to deploy halfway around the world within a day.

The aircraft is a converted B747-100 cargo aircraft, which is large enough for the crew to take all of its support equipment inside the aircraft when deploying.

The Supertanker is currently based at Kelly Air Force Base in San Antonio, Texas, and is under contract with the Mexican government through the Comision Nacional Foresta (CONAFOR). ▲

17 killed, 24 hurt in Beijing factory fire

Seventeen people were killed and 24 injured in a blaze at a Beijing garment workshop, the latest accident to highlight China's poor fire safety record, state media and officials said.

The fire broke out about 01h00 in the morning (17h00 GMT Sunday) in the four-story building in the capital's southern Daxing district, the agency quoted police as saying, adding that it was put out by fire fighters about an hour later.

A woman official who answered the phone at the local government headquarters in Jiugong town, where the fire took place, confirmed the numbers of dead

and wounded but said she had no other details.

The fire broke out on the first-floor unlicensed garment workshop before spreading to upper floors that housed the facility's workers; a fire official said.

Deadly fires are common in China and are typically blamed on lax observation and enforcement of fire safety measures. The government routinely orders nationwide safety

crackdowns after particularly deadly fires, but such disasters continue to happen.

In November 2010, a fire engulfed a high-rise apartment building in Shanghai, leaving 58 people dead.

A preliminary investigation blamed the inferno on careless work by unlicensed welders who ignited nylon netting swathing the building, which was being renovated to improve energy efficiency. ▲



WILDFIRE

Wildfire 2011 delegates will get first-hand view of SA wildland fire fighting expertise

By Carol Campbell

More than 700 of South Africa's finest wildland and forest fire fighters from the Working on Fire Programme (WoF) will participate in a national training camp taking place at a sports complex close to the Sun City resort, during the 5th International Wildfire Conference from 09 to 11 May, 2011.

The wildland and forest fire fighters, from Gauteng, North West Province, Free State and Limpopo, formed into "Hotshot" teams of 22 to 25 member crews scattered across the provinces, are preparing for the impending winter wildfire season which starts in the north and east of South Africa on June 1, 2011.

At the training camp they will also compete for recognition as their province's top teams. They will later be joined by top WoF Hotshot teams from the Western Cape, Eastern Cape, KwaZulu-Natal and Mpumalanga who will also be on hand to assist at the conference.

Before the conference draws to a close, delegates will be able to see the Hotshot teams in action in a demonstration of South Africa's wildland fire fighting expertise. There will also be an aerial fire fighting display by pilots from FFA Aviation, part of the FFA group

which implements the WoF programme on behalf of the South African Government.

At the end of the conference all the WoF wildland and forest fire fighters will participate in a mass passing out parade especially organised for the Wildfire Conference.

WoF Programme Manager Fred Mokgope, said the safety and survival training was part of WoF's pre-season skills development and training. The course is being held close to Sun City to allow conference delegates a glimpse into the workings of the WoF Programme.

"These training camps show the Working on Fire Programme at its best," said Mokgope, "the wildland and forest fire fighters will also take part in a 36km route march through the area which is always a proud display of the discipline and commitment of our teams." ▲

Three people died in recent Cape fires

Three people died, 13 buildings were gutted and many hectares of farmland were scorched in fires which raged in the Cape region.

Helicopters were forced to abandon water-bombing of the wildfire in the Helderberg Mountains as darkness fell on Sunday 17 April 2011. The fire, which had swept from Somerset West over the ridge to Stellenbosch, threatened wine farms in the area. The fire was still burning fiercely on Sunday night, but a change of wind direction had forced it into the higher reaches, inaccessible to fire engines.

A fire fighter reported that the Helderberg fire was so intense in the early hours that trees "virtually exploded in fireballs, sending flames 100m into the night sky", according to an IOL report.

Three helicopters and three fixed-wing aircraft water bombed the Helderberg fire over the weekend, while 200 fire fighters fought the blaze on the ground.

A thick cloud of smoke hung over the region on Sunday and as the wind picked up in the afternoon, the blaze ravaged the forested area above a number of wineries, including Ernie Els, Bilton House and Peter Falke.

Winemakers joined fire fighters with the Cape Winelands fire service to ensure that the flames stayed within the forested area. Tractors normally used to spray insecticide were instead equipped to spray water.

Cape Town Fire Chief Ian Schnetler said the fire started around 08h00 in the morning and was fuelled by strong south-easterly winds. "I can confirm that there was a large bush fire near the Helderberg Nature Reserve. Property in the area was affected. We received aerial assistance from helicopters but strong winds were hampering our efforts," Schnetler said.

Spokesperson Theo Layne said the fire spread rapidly in a south easterly direction. "There were no reported fatalities or injuries," Layne said.

More fires

Emergency services reported on Sunday 17 April, 2011, that they had responded to 106 fire calls over the weekend, ranging from fires in residential areas to grass fires.

At the Redhill informal settlement above Simon's Town, a 23-year-old pregnant woman died in a fire that broke out among the shacks. Police spokesperson Frederick van Wyk said the circumstances surrounding the fire were being investigated and an inquest docket has been opened. The expectant mother with days to go to full term killed in the Redhill fire was Thembisa Booie, 23, originally from Fort Beaufort near Grahamstown.

Eerste River

The charred bodies of two adults, an unidentified man and woman, were found after fire fighters had extinguished a grass fire at Eerste River. The cause of the fire is being investigated and the authorities had no further details. ▲



Working on Fire team leaders at the fire on Signal Hill

Busy Western Cape summer season ends with fire drama

The Governments' Working on Fire (WoF) wildland fire fighters were being kept busy right to the end of the summer fire season in the Western Cape, due to unseasonal south-easterly gales. In mid-April they were called on to help City and District Municipality fire fighters control a disastrous fire in Somerset West, a town on the False Bay coast east of Cape Town.

Three WoF "Hotshot" wildland fire fighting teams were among the 200 structural fire and wildfire fighters who fought the blaze which destroyed a dozen homes, a four star hotel, holiday chalets and many other structures before being brought under control. Four FFA Aviation water bomber aeroplanes, one spotter and three helicopters were deployed in support of the ground teams.

In spite of the high winds, the aircraft were instrumental in preventing even greater damage to property and assisted the combined teams to finally control the blaze after three days. The water bombers, purpose built fire fighting Dromader aircraft, were in the province for

the fire season at the request of Western Cape Provincial Disaster Management and have been used very effectively on over fifty wildfires since the beginning of December.

The fire was one of the worst in a busy Cape season which saw WoF's 19 "Hotshot" Wildland fire fighting teams respond to 190 wildfires and 210 Eskom fires under and near critical power lines. According to Bianca van Biljon, WoF's Western Cape provincial co-ordinator, an estimated 136 437 hectares of veld, forest and fynbos were destroyed by these fires. Van Biljon said these figures were well up on the 2009/2010 fire season when WoF responded to 145 fires covering 87 272 ha.

"We'll all be glad when the winter rains set in," she said. "This last fire was very big. It was a difficult and traumatic end to the fire season."

The Cape fire season extends from December to the end of April, when winter rains reduce the risk of runaway wildfire. At the beginning of the season WoF weather forecasters predicted a busy season after good rains had increased fuel loads and hot weather had dried the vegetation. They were certainly correct in their forecast and Working on Fire has been continually in the midst of the action.

This year the Western Cape had five spotter planes, four bombers and six Huey helicopters stationed in the province for the season. The aircraft, ►

► administered by FFA Aviation in Nelspruit, fall under WoFAviation. They were based in the province for use by Western Cape Provincial Disaster Management, district municipalities and other Working on Fire partners, including the City of Cape Town, SANParks and CapeNature.

public. She said that, in her experience, they were among the most fire-wise communities in the country. "People on the Cape Peninsula live with the threat of fire all the time; it is part of the fynbos cycle and is a constant threat for those living on the urban fringe. The number and intensity of fires definitely

Over the same holiday period three fires were doused near Hout Bay, another in the Silvermine area, one in Ocean View and one on Chapman's Peak.

Michelle Kleinhans, Working on Fire Programme's national dispatch coordinator said the programme had trained wildfire "Hotshot" teams across country that could be called in to assist their city and district colleagues fight wildfires in the Western Cape. On two occasions teams from the Free State and Gauteng had been deployed onto fire lines in under twenty four hours from time of request. At one stage, with five fires raging in the Province, their assistance was invaluable. "After Cape teams had been on the fires for days at a stretch, the ability to replace them with fresh teams was appreciated by all concerned with suppressing the wildfires." By the same token, Western Cape teams can be transported north to the winter fire season areas, and have done valuable work in Gauteng, the Free State and Mpumalanga in the past. ▲

The Working on Fire Programme, (WoF) implemented by the FFA Group, was founded in 2003 to develop and implement Integrated Fire Management practice in South Africa. It operates as a multi-million rand job creation programme that is supported by National Government's Expanded Public Works Programme (EPWP) and the private sector. WoF Wildland fire fighters are recruited from marginalised communities and trained in fire awareness, prevention and fire suppression skills. Fire fighting crews are used extensively in fire prevention work, to prepare fire breaks, and in fuel reduction operations as well as assisting partners during wildfires. WoF's Aviation division provides aerial fire fighting support using helicopters, water-bombers and spotter aircraft as part of the integrated approach to wildland fire fighting. Weather forecasting and co-ordination of operations is provided through a network of dispatch centres.

This year the pilots spent a record 1 321 hours in the air. This, when compared to the 864 hours flown the previous season, indicates how intense the 2011 Cape fire season has been.

Graham Barlow, general manager for Working on Fire, said the decision by Provincial Disaster Management and WoF to bring the Dromader bombers to assist the other aircraft in the Western Cape, despite the additional expense, had been justified.

"The water bomber is a perfect 'first-strike' mechanism for the typical Western Cape fire, which burns very hot due to the combination of fynbos and alien vegetation.

"Quick dispatch of the planes on notification of fires, plus the significant water loads the bombers can carry, has seen WoF Aviation assist in suppressing some potentially calamitous blazes," he said.

He added that the fixed-wing aircraft had been equally effective when used in tandem with the helicopters and ground crews. "We have experienced incident commanders in the Cape who have utilised aerial and ground resources extremely well. Expert coordination is the key to fire suppression."

Lizette Heine, WoF's national dispatch and coordination manager, commended the Cape Peninsula

shows that the local population needs to play an increasing role in protecting the environment."

One of the worst fires of the season was in Worcester, an hour from Cape Town in early January when a wildfire threatened farms, a diesel storage facility and electricity infrastructure.

Jannie de Vos, WoF's Western Cape aerial operations manager, said WoF's aerial division dispatched one spotter plane, three helicopters and four fixed-wing Dromader water bombers at the request of Eskom and the Cape Winelands District Council. "The fire fight was complicated when smoke from a second fire impeded visibility for pilots," he said, "but we managed to prevent a disaster. Our pilots are the best in the business."

The fires were not limited to outlying districts. Pierre Gallagher, manager of the Cape Peninsula Fire Protection Association, said a fire on Signal Hill over the New Year period tested pilots' abilities when wind speeds picked up dangerously. "Accurate water dropping by the helicopter and bomber pilots, despite these extreme conditions, brought it under control before too much damage was done. At one stage during that fire, aircraft had to be stood down when wind speeds reached 120 to 130 kms/hour, making flying too dangerous for pilots as well as ground teams near to the dropping zone," said Gallagher.

Cape Town hardware shop gutted by fire

A recent fire at a hardware store in Tokai resulted in two women being treated for smoke inhalation.

The fire started shortly after 04h00 in the storeroom of the hardware shop, Cape Town Fire Service spokesperson Theo Layne said. The two women were stabilised at the scene before being rushed to a nearby hospital.

The entire storeroom was damaged by the fire while the rest of the shop was damaged by smoke and water.

Fire fighters managed to extinguish the flames in just over an hour, the Cape Town fire department reported.

US planes fly more than 60 fire fighting runs in Mexico



The US Air Force Reserve C-130 aircraft

Lack of communication hinders fire fighting

Ghana's Cape Coast's Central Regional Fire Officer, Mr Kwesi Ankonam Quayson, has said lack of prompt communication by victims of fire was the major challenge hindering immediate response to fire fighting in the country.

He said things could get out of control after the first three minutes of a fire outbreak and it was necessary to report any sign of fire within the shortest possible time to enable fire officers respond. It was part of Mr Quayson's speech when he launched the 5th anniversary of the Fire Service Ladies Association (FISLA) in Cape Coast.

He also said that FISLA was embarking on a public education campaign while fire safety inspection on office premises have started to alert organisations on the need to obtain fire extinguishers.

Ms Sophia Baidoo, Central Regional President of FISLA, said the main objective of the association was to help educate the public to ensure safety as well as enhance the welfare of women in the service.

She said since its formation in 2006, FISLA has mounted a number of educational campaigns to check fire outbreaks in the Region, attributing the reduction in domestic fire out breaks to intensive education on safety measures.

Six specially equipped US military planes have flown 60 missions to help fight wildfires in Mexico and Texas, Peterson Air Force Base reported.

The Air Force Reserve C-130 aircraft carrying US Forest Service Modular Airborne Fire Fighting Systems (MAFFS) and a C-130 support aircraft departed Peterson Air Force Base. The MAFFS, which is owned and maintained by the US Forest Service, is a pressurised self-contained fire fighting system designed for installation in C-130 aircraft without structural modifications to the aircraft. The system is designed to air-drop fire-retardant chemicals onto wildfires.

The US Northern Command said that C-130 cargo planes have flown 28 missions in Mexico and dropped about 238 480 litres of retardant there.

The planes have also flown 32 missions in Texas, dropping 340 687 litres of retardant.

US Northern Command is based at Peterson Air Force Base in Colorado. Northern Command, at the request of the Department of State and the Mexican government, deployed the 302nd Airlift Wing aircraft and personnel in support of the Mexican government's response to the wildfires in Northern Mexico. Two of the planes are from an Air Force Reserve unit at Peterson and the others are from Air National Guard units in California, North Carolina and Wyoming.

They are flying their missions from Laughlin and Dyess Air Force bases in Texas. ▲

Pilot safe after jet catches fire aboard USS Carl Vinson

The quick response by fire fighters kept a blaze on a fighter aircraft aboard the San Diego-based aircraft carrier USS Carl Vinson from getting out of hand in the Arabian Gulf, Navy officials said.

The fire broke out when an engine caught fire in an F/A-18C fighter aircraft performing touch-and-go landings and take-offs, said Lieutenant Commander Erik Reynolds.

The pilot noticed the fire on take-off, circled around and landed and escaped without injury, Reynolds said.

Chief Petty Officer Benjamin Bilyeau said the speed of the fire fighters' response prevented the blaze from spreading.

"If it spread to the fuel tanks the fire would have been much worse," said Bilyeau, from Kansas City. "We drill day-in and day-out, and to see all the training come into play was absolutely amazing."



The aircraft carrier USS Carl Vinson

Petty Officer 3rd Class Julian Berry, said he and fellow sailors got flame-retardant foam on the fire within 10 seconds of touchdown and the flames were extinguished seconds afterward.

According to Lieutenant Commander Reynolds, the plane was damaged

but not destroyed. An infrared imaging pod slung beneath the aircraft was used the next day, he said.

An engine fire in a jet aircraft aboard the USS John Stennis injured at least 10 sailors last month. ▲

Bombardier sells four fire fighting water bombers

Montreal-based Bombardier Aerospace announced the sale of four Bombardier 415 amphibious aircraft to an undisclosed customer.

This is the second order from this customer, who has previously ordered one Bombardier 415 aircraft. Based on the current list price, the contract for the four aircraft is valued at approximately 162 million US dollars and includes training and initial spares provisioning. Delivery of the aircraft will begin in the second quarter of 2011 and continue through to the first quarter of 2013.

"The Bombardier 415 aircraft is recognised as the market leader in the aerial fire fighting industry and has been selected worldwide by countries such as Croatia, France, Greece, Italy, Canada and Spain," said Michel Bourgeois, President,

Specialised and Amphibious Aircraft and Military Aviation Training, Bombardier Aerospace. "With its unique operational capabilities and exceptional performance, the Bombardier 415 aircraft operates in the most rugged and demanding of conditions," he added.

Recent orders for the Bombardier 415 aircraft include those from the Canadian provinces of Newfoundland and Labrador and Manitoba, with four aircraft each.

Since the first Bombardier 415 amphibious aircraft was delivered in 1994, a total of 75 Bombardier 415 and four Bombardier 415 MP aircraft

have been delivered to governments and fire fighting agencies around the world. In addition, 64 CL-215 amphibious piston aircraft remain in service.

The Bombardier 415 fire fighter aircraft has a normal cruise speed of 333 km/h under certain conditions. In an average mission of 11 nautical kilometres distance from water to fire, it can complete nine drops within an hour and deliver 55 233 litres of fire suppressant.

Montreal-based Bombardier is the world's third-largest aircraft manufacturer. Its rail division is the world's largest. ▲

New foundation inaugurated

The Pau Costa Alcuibierre Foundation on Fire Ecology and Management was recently inaugurated

“There is a need to establish a common platform in Europe, capitalising on knowledge and experience attained by specialists in fire ecology and management and sharing it with others across borders and continents”, says Marc Castellnou from the Grup de Actuacions Forestals (GRAF) units of the Catalanian Fire Service in Barcelona, Spain.

During the past decade extensive experiences and knowledge have been accumulated for managing wildfires in Europe. So far experiences were shared amongst the leading fire management groups and research institutes in Europe through cross border training courses and exchanges. In order to enhance the communication of experiences and scientific knowledge gained, international experts were consulted recommending the establishment of a foundation. Such a foundation was seen as both suitable for serving as an information platform on fire management as well as allowing for addressing future fire management and fire ecology research.

Therefore the Pau Costa Foundation was called into life as an organisation that seeks to stimulate fire ecology research, create knowledge, tools and techniques for operational wildfire management and convey those through training and other capacity building measures. The Pau Costa Foundation aims to be the leading organisation in advocating a profound change in the perception of landscape fire ecology and facilitating fire management at the landscape level through bridging the gap between research and practitioners. It aims to change the concept of fire prevention towards a concept of fire resistant landscapes. It serves as an acknowledged coordination platform and contact point for knowledge exchange and transfer in the field of fire ecology research and operational fire management.

The Foundation was officially inaugurated on 17th of January 2011 through a Formal Act of Establishment in Barcelona by 60 founders from several countries. One of the foundations governing bodies is the Supervisory Board consisting of 13 members from several international organisations: Marc Castellnou (Catalonian Fire Service (GRAF), Spain) – Chair, Ricardo Olabegoya (Autonomous Government of Cantabria, Spain) – Vice Chair, Jaume Costa (Spain) – Secretary, Timothy M. Murphy (USDA Forest Service, USA), Douglas J. McRae (Canadian Forest Service, Canada), Andreas Schuck (European Forest Institute), Xavier Pomedá (Spain), Doug Campbell (USA), Johan Heine (Working on Fire (WoF), South Africa), Cristina Montiel (University Complutense Madrid, Spain), Tomas Rydkvist (SCA Skog AB, Sweden), Xavier Ubeda (University of Tras-os-Montes and Alto Douro (UTAD), Portugal).

The main tasks of the Supervisory Board are of strategic (mission and vision, work programme) and administrative (monitoring, project and budget approvals) nature. The Board will strongly support the Foundation in advocacy and fundraising. The Executive Board on the other hand serves as a secretariat to the Foundation and consists of the General Manager and the Programme Managers. As a third body the Advisory Board represents the Founding Members and gives direct advice to the Supervisory Board.



The Pau Costa Foundation is an associate member of the European Forest Institute (EFI) and partners with the South African Working on



Fire Programme (WoF). The Africa Programme of the Pau Costa Foundation is closely collaborating with Working on Fire International for training exchanges and carbon fixation projects on landscape level.

Pau Costa Alcuibierre

Pau was a high level fire analyst at the GRAF units from Catalonia, Spain, who tragically died in the Horta de St Joan Fire on 24th of July 2009. He strongly advocated for such a platform based on his extensive experiences in fighting and managing fires. His idealistic spirit inspired fire managers and fire ecologists in Europe and overseas alike, to join forces to initiate such a foundation. It is due to Pau's dedication that his vision became reality in 2011. All involved in the activities of the Pau Costa Foundation will commemorate this dedication and strive towards achieving our vision. ▲



Pau Costa Alcuibierre

San Diego poised to buy hybrid fire fighting vehicles

The City of San Diego is looking to spend 2,6 million US dollars on three hybrid fire vehicles that will be equally adept at fighting fires and responding to emergency medical calls

A San Diego City Council committee voted unanimously in favour of the purchase at the urging of fire chief Javier Mainar who said the new vehicles — called quint fire trucks — would allow fire fighters to get to fires quickly, extinguish them and then rescue trapped victims without waiting for a second vehicle to arrive. The full council will make the final decision.

The department currently relies on 47 fire engines and 12 fire trucks to respond to emergencies.

"I don't think the average member of the public understands when a big red fire truck shows up and all the fire fighters jump off it with a fire extinguisher that's the best they can do," Mainar said.

The chief said he and other fire fighters have more than once "pulled up (to a fire) on the wrong rig to do anything about it."

The quint fire truck gets its name from being able to provide five distinct functions—pump, watertank, fire hose, aerial device and ground ladders.

During a time when up to eight fire engines are idled each day through scheduled brownouts to save money, the purchase would eliminate some of the worry that comes with waiting for both vehicles to respond, said Fire-Rescue spokesman Maurice Luque.

The fire department currently has three quints and has looked into purchasing more in the past but has always considered them too clunky and impractical for fleet-wide use. The three approved for purchase

are sleeker and take up less space than older models, Luque said.

One of Mainar's main reasons for bringing the quints onto the fleet was to counteract difficulties fire fighters have faced because of brownouts that were approved in December 2009. The brownouts have required engines from some neighbourhoods to travel farther than normal to respond to fires. Occasionally that means a fire truck arrives on scene before an engine and can't begin to put out the blaze.

"Even in a perfect world this happens, but it's happened more because of the brownouts," Luque said. "With the quints, that won't happen. They'll get there and they'll have a water supply." Mayor Jerry Sanders said Monday he plans to phase out the brownout plan by January 2012. That makes the purchase of the quints pointless, Arrollado said.

"Should we find ourselves in a brownout situation, these will become invaluable," he said. "If we are able to avoid that fate for all time forward, these will still be a valuable resource to us. It's a compromise for sure but it's one that's very workable for us." ▲

SafeQuip supports fire fighters and fire victims

In the interest of public safety, SafeQuip is supportive of a Jaws-of-Life training initiative to procure old car bodies for fire fighters to practice on.

The Jaws-of-Life is used to cut through the steel of a car body so that accident victims are extricated quickly and safely to be treated by medical rescue teams.

Car bodies needed for practice

The Western Cape Fire Fighters Associations' rescue unit urgently requests old car bodies to be donated by scrap yards or private individuals that can assist. The car shells must have the doors and roof in tacked, so that simulated vehicle rescue can be practiced using the Jaws-of-Life.

Between 80 and 90 percent of rescue call outs to extract trapped occupants in vehicle accidents require the use of these life-saving

devices. The speed of freeing the victims is vital, to minimise blood loss and shock.

Potential donors of car shells are urged to contact the fund raiser, Robin Fitzgerald on Tel 021 686 9303 or 078 6241841 or email him at wcfirefighters@mweb.co.za.

Donations needed for homeless orphans

In its corporate responsibility initiative, the fire equipment supplier has recently donated R10 000 to an orphanage that was burned down, leaving 35 children homeless. An additional R220 000 is needed to rebuild the orphanage. If you wish make a donation, please contact Chantelle Smit on Tel 011 454 3250

or email compass15@telkomsa.net. The fire extinguisher manufacturer will also give fire extinguishers and smoke detectors to the Compass organisation to prevent this from happening again.

SafeQuip is a Rovic International subsidiary and a leading fire equipment supplier in southern Africa. It is also the regions only manufacturer of DCP fire fighting powder which it sponsors to the Epping Fire Departments training facility.

SafeQuip has recently acquired Cam-Quip, supplier of the Fire King bakkie mounted mobile fire fighting pumps, used to fight veldfires, which are prevalent at this time of year. These mobile fire units are critical for the controlled burn of fire breaks. ▲



Aerial fire fighting company offers first-class service

FFA Aviation is the leading aerial fire fighting company in Southern Africa providing an aerial fire fighting service to Working on Fire and the Fire Protection Associations (FPAs) supported by board of directors chaired by Trevor Abrahams, an Aircraft Maintenance Organisation (AMO), a national dispatch and coordination system and aviation fuel supply service.

This prominent aviation company nationally operates fifteen Huey helicopters, six single engine air tankers (SEAT's) and fifteen spotter aircraft (for command and control) during the winter fire season in the northern part of the country, with reduced resources during the summer fire season in the southern part of the country.

The company is also fully committed to contribute to the FFA Group's BEE targets in the time frames it has set itself.

The company has a core of the most experienced fire fighting pilots and personnel that are all highly qualified and skilled and receive regular training in order to improve efficiency and safety. The training

programme also provides for the further development of previously disadvantaged staff.

FFA Aviation employs 38 previously disadvantaged individuals including pilots, helicopter support vehicle drivers, helicopter safety leaders, bomber loaders, store men, technical assistants, fuel attendants and dispatchers. This makes up 50% of the total employees.

The aircraft are maintained by the company's own Aircraft Maintenance Organisation (AMO) which ensures that all aircraft remain SACAA (SA Civil Aviation Authority) compliant and serviceable. The company's objective is to ensure at least a 90% aircraft availability, a level which has been frequently surpassed in recent years. The FFA

Group established its own AMO to be cost effective, create independence with flexibility ensuring high quality maintenance as well as 24-hour in-field line servicing.

FFA Aviation operates, manages and participates in a national fire detection and dispatch and coordination system which consist of 19 dispatch centres supported by eight coordination centres for ground and air operations. This system ensures operational effectiveness, enhances flight safety and coordinates search and rescue with the support of ER24 for all Working on Fire personnel during operations. This system will shortly be expanding to countries south of the equator in conjunction with foreign donors and the CSIR to enhance the fire detection and management capacity. ▲



FFA GROUP OF COMPANIES

FIRST IN INTEGRATED FIRE MANAGEMENT

The company comprises four departments:



Aircraft Maintenance Organisation (AMO)

Provides servicing for own and external aircraft

Manager: Rinus Van Raaij

Tel: 013 741 8222



Aircraft Fuel Supply Department

Provides fuel to own and outside aircraft

Manager: Emile Grobbelaar

Tel: 013 741 6400



Dispatch and Coordination Department

Provides a dispatch and coordination function for both aerial and ground fire fighting resources

Manager: Lizette Heine

Tel: 013 741 6451



Aviation Operations Department

Manages the logistics and client interests of the operations

Manager: Mike Assad

Tel: 013 741 8222

26 years of aerial fire fighting experience

Our fleet comprises of:

- 12 Huey UHI helicopters (access to 6 extra Huey helicopters)
- 5 fixed wing water bombers (access to 7 extra bombers)
- 3 spotter aircraft (access to 12 extra spotters)



The Pierce fire fighting vehicles destined for Ghana

Pierce receives major order for 104 custom fire trucks

The 31 million US dollar order is the largest single purchase of Pierce fire fighting trucks in 18 years

Pierce Manufacturing, an Oshkosh Corporation company, recently announced that it has received an order for 104 custom fire trucks from US exporter, Project Development International (PDI) through Ghana's Ministry of Interior Service and the Ghana National Fire Service.

The order includes a combination of 90 pumper tanker units, 10 water tender vehicles and four aerial ladder vehicles.

Shipment of the vehicles began in February 2011 and will be completed over the following 12 months.

"We are excited and proud to have been selected by Project Development International and the Republic of Ghana for an order of this magnitude. This is a major accomplishment and a significant stepping stone for the Pierce brand on the world stage," said Jim Johnson, Oshkosh Corporation executive vice president and president, Fire & Emergency. "Pierce is proud to

be awarded this contract based on our quality vehicles, technology, warranties and service, and we look forward to this relationship with PDI. This is a comprehensive team effort by our international group and the entire Pierce organisation."

The Pierce vehicles will replace existing units and will help the Ghana National Fire Service in its planned expansion from 136 to 202 fire stations across the country.

The order includes 60 Pierce Saber dual-purpose pumper tanker vehicles, each of which features a 7 571 litre water tank and a 3 785 litres/minute single stage pump. The order also features 30 Saber dual-purpose pumper tanker vehicles, each outfitted with an 11 356 litre water tank. In addition, there are 10 Saber water tenders, each with an 11 356 litre water tank.

The purchase also includes four Pierce aerial ladder vehicles built on Pierce Arrow X chassis. Each vehicle

features a 38,1 meter aerial device, aluminium body, 500 hp engine, TAK-4 independent front suspension, tandem rear axle, seating for six fire fighters and a wide range of compartments with adjustable trays, shelves and roll-up doors.

In addition to Pierce fire apparatus, the order includes 13 Jerr-Dan HDL 500 heavy-duty wrecker vehicles and four IMT service trucks. "Jerr-Dan and IMT are also Oshkosh Corporation companies. We are among a select few providers worldwide that are able to deliver an order of this range in a single transaction. Moreover, through our local dealer, we are able to deliver timely and effective training and support. We look forward to seeing these vehicles serving communities and rural villages throughout the country," added Johnson.

Pierce dealer, Fire Raiders Inc, of South Africa will open a facility in the Republic of Ghana to provide local service and support. ▲



SA first: on-board water purification system for fire trucks

In a South African first, local fire, rescue and disaster management specialist company, Fire Raiders, is making steady progress towards introducing the continent's first on-board water purification system for fire engines.

Fire Raiders MD Trevor Fiford says the technology was developed by WS Darley & Co in the USA and is working very successfully at several fire departments in that country.

"This technology makes absolute sense in a water-scarce region such as ours, where the additional threat of serious future water shortages is looming on the horizon," he says. "Not only will this system allow fire fighting personnel to fill their tanks with industrial grade and even contaminated water from local sources, but it will also allow fire teams to establish and maintain a potable water supply in the event of an emergency situation. This will add a new dimension to the fire department's traditional role in disaster management.

"These state-of-the-art vehicles can be deployed to the scene of

natural disasters like earthquakes, floods and droughts, as well as man-made disasters such as fires or mining, chemical, biological, radiological, nuclear or high-yield explosive incidents where public water infrastructure is not available or has been damaged.

"The high capacity fire trucks will also be able to supply local informal settlements with potable water by arrangement. This will make South African fire departments the first department in a local authority to implement a major paradigm shift to tackle present and future water shortages."

New design

The Darley system being investigated by Fire Raiders is integrated into the fire truck's internal system and utilises the fire pump and on board water supply to feed the water purification unit. The unit utilises multi-stage

purification based on advanced media filters and ozone to purify contaminated surface water, effectively removing sediments, bacteria and viruses to produce potable water.

To incorporate this pioneering technology, Fire Raiders has designed an entirely new fire truck capable of carrying 4 000 litres of water on-board – 1 000 litres more than has been conventionally possible up until now.

The company has addressed the payload issue by entering into an exclusive agreement with Netherlands-based Plastisol, whereby the Dutch company will erect a fully-fledged GRP (glass-fibre reinforced polyester) plant on site at Fire Raiders. By replacing their fire truck's conventional aluminium bodies with GRP, Fire Raiders will achieve significant payload, cost and time savings. ►



► Plastisol is the world's market leader in the manufacture of GRP bodies for structural and aircraft fire fighting and rescue vehicles. This composite material is produced using a unique vacuum-injection process developed by Plastisol, whereby resin is injected into the glass fibre and, where relevant, into the foam cores. After the curing process, the result is an extremely strong "sandwich construction" which can be painted in any required colour. The Plastisol bodies are self-supporting and are mounted outboard of chassis frame rails with stress relieving Meta-Cone flexible mountings.

The benefits include weight-savings of up to 30%, in comparison with traditional metallic materials, a corrosion-free and non-conductive body and extremely low cost body maintenance.

"GRP is ideal for fire truck body construction because it is a fire retardant and self-extinguishing material, with unlimited body design potential," says Fiford. "It offers the longest technical and economic life of any other body construction material.

Fire Raiders has made presentations on the new concept to several South African fire departments, which have responded with a great deal of interest and enthusiasm.

Compressed air foam

As part of its commitment to deliver innovative fire fighting technology to South African authorities, Fire Raiders has also been instrumental in introducing the revolutionary Compressed Air Foam system for extinguishing fires and protecting unburned areas from catching fire.

Steve Tshwete Local Municipality in Mpumalanga and the Midvaal Local Municipality in Gauteng were the first fire departments to implement this globally advanced system, followed by the City of Cape Town.

A CAF system is a standard water pumping system that has an entry point where compressed air can be added to a foam solution to generate foam. The air compressor also provides the energy need to propel the compressed air foam farther than aspirated or standard water nozzles.

CAF attacks all three sides of the so-called "fire triangle" simultaneously. The foam blankets the fuel, reducing its capacity to seek out a source of

oxygen. CAF adheres to ceilings and walls, more readily aiding in rapid heat reduction. The opaque surface of the foam, as it adheres to walls and ceilings, also shields the fuel source from radiant energy.

"CAF is streets ahead of any other fire extinguishing technology worldwide for fighting structural Class 5 fires," says Fiford. "We were the first company to introduce this technology to South Africa and it has since been taken up by many other companies.

About Fire Raiders

Fire Raiders is a diverse South African company that exists for the sole purpose of serving fire, rescue and disaster management departments in South Africa, Africa and the Middle East. The company has established offices throughout all nine provinces in South Africa, as well as in Botswana, Kenya, Mozambique, Qatar, Kuwait and Nigeria, bringing a fire, rescue and disaster management service capability close to clients and allowing Fire Raiders teams to respond rapidly to customer requirements. Through its Strategic Alliance Partnerships, Fire Raiders partners with local suppliers to strengthen local content and empower service providers, as well as bringing stability to local markets. ▲



Rural Pumpers



Medium Pumpers



From South Africa



Custom Pumpers



Tanker Pumper



Major Pumpers



RFD

Fire Raiders

**2 Top Road, Anderbolt
Boksburg North, SOUTH AFRICA
Tel: +27 11 894 3205/6
Fax: +27 11 894 8106
E-mail: info@fireraiders.co.za
Web: www.fireraiders.co.za**



Rising to the challenge



New role player focuses on Wildland Urban Interface (WUI)

Rural Fire Rescue, a new role player in the supply of fire fighting equipment, technology and services was recently launched.

Rural Fire Rescue (RFR) is the latest addition to the FFA Group of Companies stable and forms part of the Group's vision of offering the complete suite of fire fighting and rescue products. The company will not only offer the latest in technology, but will also offer a one-stop service for rural and metro fire fighting integration, better known as Wildland Urban Interface or "WUI".

Metro fire fighters have historically focussed on structural and municipal fire fighting procedures while the rural departments and Fire Protection Associations (FPA's) concentrated more on fighting wildland and bush fires. However, these varied sectors, have in recent years, become increasingly interlinked as metro units need to fight bush fires and rural fire departments and FPA's require the technology to fight structural fires.

Rural Fire Rescue (RFR) offers the unique package of integrated

fire fighting technology, products, services, consultation and training.

RFR's product line-up includes:

- Fire fighting vehicles and trailers
- Rescue vehicles and trailers
- Skid units – custom built
- Fire fighting and rescue equipment
- Fire fighting foams
- Portable pumps
- Staffing solutions
- Financing options
- Service and maintenance plans
- Vehicle refurbishing



So what sets this new company apart?

Marius Koekemoer, managing director of RFR, has more than 15 years' experience in the fire fighting industry, providing insight and an understanding of the main elements of fire fighting and rescue departments and units. Knowledge gained from past mistakes, interactive involvement in the industry and the ability to offer unique products and services to the market forms part of their integrated approach.

"We are proud to announce that we have been appointed as the official Wildfire Environmental Inc – previously Wildfire Equipment – agents for Southern Africa", says Koekemoer in an interview with **Fire and Rescue International**. "Our first shipment of products and service tools has arrived in South Africa."

Be on the lookout for their new demonstration unit which is a one-of-a-kind in South Africa.

Real-time weather data

An innovative portal created by CW Price and Co, provides access to real-time national weather data

Kelvin Price, managing director of CW Price and Co and system developer of VitalWeather, described the system to . "The background of the locally designed system's development can in part be traced back to the growing need to link disparate information sources together to allow for the seamless integration of information and access to it," Price clarified.

The system is based on data relayed via General Packet Radio Service (GPRS) from Davis Vantage Pro2 weather stations dispersed across South Africa to the company's central server located in Midrand. The smart GPRS modem interrogates the Weather Station and relays data via GPRS to the central server at five-minute intervals (literally live).

Weather data, along with a 24-hour history graph, can be viewed on any web-enabled PC. Current data can also be downloaded to cellular phones via SMS. The VitalWeather server also allows viewing of multiple weather stations all on one web page.

"The system is suitable for various applications including emergency services, farmers, forestry, agriculture and aviation. Generally, anyone with an interest in the weather will find the system useful. "In fact, the increasing importance of renewable energy has increased the system's relevancy. Wind and sunlight radiation data are also accessible, making it easy for wind energy and photovoltaic developers and service providers to plot the efficacy of an installation in a specific location," Price continued.

Fire Danger Index (FDI) values are calculated automatically and displayed in both numeric and FDI colour code on the site. The FDI had to be calculated

manually before by each monitoring station, resulting in unnecessary wastage of time and resources.

The software for VitalFire, an ancillary service, is also being developed. This service will allow greater fire data to be vertically integrated with the weather information resulting in predictive capability.

Data tags displayed on the site includes: Weather station name/location, SMS code, Windspeed data (km/h, knots and m/second, direction), temperature, humidity, barometric pressure expressed as QNH (Question Nil Height), rainfall rate (mm/h), rainfall past 24 hours, FDI and last updated.

Pilots can also view the conditions at their intended destinations online prior to take off, providing that the airport has VitalWeather installed. They can also receive SMS' of prevailing conditions prior to landing.

Full access to the server is subscriber based. Coverage is dependent on the installation of the Davis VantagePro2 weather station at a specific site. ▲

VitalWeather
ONLINE WEATHER STATION

SUN

WIND

RAINFALL

HUMIDITY

Tel: 27 11 805 4720 e-mail: cwp@cwprice.co.za
www.cwprice.co.za

History of data can be viewed for any recorded period and if required saved as a .csv file for future analysis.

Information available:

- FDI graphs
- Wind speed averages and distribution classes
- Temperature averages
- Growing degree days GDD
- Temperature humidity hours
- Chill units

- NOAA daily max-min reports
- NOAA monthly max-min reports
- Access current data via simple, sms
- FDI, temperature, wind an rain mapping

Does fire have a role to play in controlling Slangbos?

Burning Slangbos bush

By Lynne Trollope

The spread of Slangbos or *Seraphium plumosum* (*Stoebe vulgaris*) is threatening economic viability in the livestock farming sector as it invades large areas of the South Eastern Free State, North West Province and the Highveld regions of Mpumalanga and Gauteng.

Slangbos is indigenous and generally unpalatable to domestic livestock; it increases due to mismanagement of rangelands, particularly with sheep farming. Natural progression from the grassland stage to a higher stage in the development of the vegetation, along with the prevailing climatic conditions encourages the invasion of Slangbos into the grasslands.

The most economical method of controlling or reducing the increase of Slangbos with minimum inputs is a question most farmers who have to deal with this problem, would like answered. Fire does not kill Slangbos, in fact it sprouts vigorously after a fire, and spraying extensive areas with chemicals is expensive and ecologically suspect, so what is the way forward? The owners of the farm "Leeuwfontein" in the Zastron district, Willem and Christine Cronje, decided to address this challenge. Professor Winston Trollope (Working on Fire International, Research and Development Division), assisted by Dr Herman Fouche (Agricultural Research Council) have established

a trial on "Leeuwfontein" to investigate the most economical method of controlling Slangbos. Multiples of 50m x 50m plots were laid out in an area invaded by Slangbos to test various methods of control comprising burning, Molopo weedicide, stumping and slashing.

In a previous research programme conducted by Professor Trollope to control the encroachment of fynbos into the Amatole Mountains of the Eastern Cape, it was found that a combination of multiple burns interspersed with resting of the rangeland proved to be the most effective and economical method of controlling fynbos encroachment. The results were then applied to extensive areas and 10 000 hectares were converted from fynbos to rolling grasslands. Fynbos reacted in a similar manner to Slangbos after a single fire. It was thus hypothesised that Slangbos will be controlled by a multiple burning and resting programme and therefore a similar treatment was included in the Slangbos trial. The various treatments that are being applied in the

presence and absence of grazing are:

- Burn, rest for two years, burn, rest for one year, burn
- Burn once, spray regrowth with weedicide
- Slashing
- Stumping
- Control (no treatment applied)

The treatments were applied to fenced plots where livestock was excluded together with replicate plots in adjacent unfenced area ▶



The recent Slangbos burning trial



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- ▶ that were subjected to grazing in the normal veld management system applied on Leeuwfontein.

The plots were intensively surveyed prior to the application of the various treatments to document the density of Slangbos plus the grass basal cover and grass species composition. With the assistance of Working on Fire the fires were applied to the burn plots. The weather conditions, temperature, relative humidity and wind speed at the time of the application of the fires on each plot were recorded and the Fire Danger Index for each plot was estimated. In addition rates of spread of the fires were recorded. Photographic records of each plot were captured. The plots were monitored and resurveyed on an annual basis for 3 years while the various treatments were being applied.

Due to the volatile components contained in Slangbos shrubs, burning Slangbos is a dangerous practice and extreme care is necessary as the fires are very intense and fast moving even under relatively mild weather conditions. The fires were applied on a "green day" with a moderate fire danger index (FDI) but still great care and three "bakkie-sakkies" or mobile fire fighting units with attendant staff and researchers were necessary to control the fires.

Results of the burning treatment show stumping was the most effective method of control, but this practice is very labour demanding and very costly. It is a viable method of control for initial invasion but



Slangbos is reduced by fifty percent or more after a fire

not for extensive areas invaded by Slangbos. Chemical spraying resulted in a short term control of Slangbos as after three to four years, the Slangbos re-encroaches from seedlings. Furthermore, depending on the type of chemical used and the degree of rigorous control on the spraying programme, weedicide control can have devastating effects on the ecosystem resulting in the creation of completely bare areas which persist even four to five years after the initial spraying. Chemical control is not really cost effective as the initial financial outlay for the chemicals is not recuperated by the increased grazing potential.

Slangbos is not completely killed by multiple fires but there is a 50 % reduction in plant density and after two years the coppicing plants had not recovered to their previous size. The experiment was followed up by a field scale burning and grazing trial on 55 hectares of encroached rangeland where the grass fuel load was greater than 4 000 kg per hectare. Burning areas with grass fuel loads of less than 4 000 kg per hectare does not comply with

Slangbos invasion in the Free State

ecological criteria for burning and cool fires resulting from low grass fuel loads will not have a significant effect on the Slangbos. Immediately after the fire the camp was stocked with cattle and sheep. Initially the sheep grazed the newly emergent Slangbos seedlings and therefore contribute to its control.

The role of fire is to decrease the density and phytomass (volume of bush) of the Slangbos and to improve the condition of the grasslands. Burning every four years and grazing immediately after the fire for a restricted time period will contribute to the control of Slangbos and an improvement in range condition provided judicious range management is applied.

If the landowner should wish to use chemical control then burning using ecological criteria for burning before spraying will considerably reduce the amount of chemicals necessary for the spray programme and therefore the costs will be significantly lower. ▲



Coppice growth of Slangbos after a fire

Yamaha's EWT500 bakkie-sakkie

Bakkie-sakkie's offers an ideal solution for fast attacking fires in both rural and metro areas.

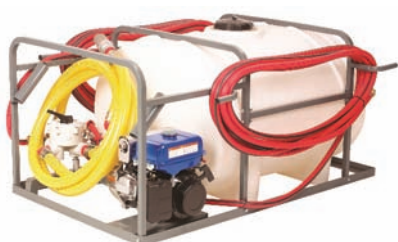


The EWT500 is Yamaha's bakkie-sakkie offering as an instant fire fighting tool, always ready to respond/pump/selector.

This 500 litre bakkie-sakkie is housed in a cradle frame complete with engine fitted with variable spray nozzles. Simple pump and selector valve with 'fill/empty/spray' control, five metre suction hose with stainless steel filter and two 15 metre delivery hoses and able to spray water a distance of 21 metres. Its transparent tank allows the operator to monitor his available water level.

The four-stroke Yamaha engine, model MZ175-E2, offers 4,1kW or 5,5hp output with an automatic low oil level protection system. The QP205S pump has a 50mm inlet diameter and offers 7,7 bar in pressure and 400 litres per minute volume.

The unit is designed to fit all popular bakkies (single and double cab). Its dry weight of 94kg allows for quick loading by two people. ▲



The Yamaha EWT500 bakkie-sakkie

MAN Truck & Bus AG to set up vehicle production in Russia

MAN will in future be building trucks for its target markets in Russia, Belarus and Kazakhstan in Russia.

In the medium term a production capacity of some 6 000 vehicles per year is planned at a location in St. Petersburg. On 14th April 2011 the Chairman of the Executive Board of MAN Truck & Bus AG, Dr Georg Pachta-Reyhofen, and the Governor of the City of St Petersburg, Valentina Matviyenko, signed a "Memorandum of Understanding" (MOU) on this. It covers a planned investment of some 25 million euros by MAN Truck & Bus in a MAN-owned production facility and the founding of a MAN-owned production company in St. Petersburg. The document was signed during the visit of the Bavarian Prime Minister, Horst Seehofer, to St Petersburg.

"Russia has very high growth potential and plays a central role in our internationalisation strategy. As a local manufacturer with the necessary proximity to the market and to customers we will be in the optimum position for taking a share of the rising demand for Western European commercial vehicles in the long term," said Dr Pachta-Reyhofen after signing the MOU. "It is above all the advantageous infrastructure conditions that speak in favour of St Petersburg", added Lars Himmer, Managing Director of MAN Truck & Bus in Russia. "We will probably build our production line in existing premises – that will save us long construction and start-up times", he continued

Even by as early as 2012 about one-quarter of the trucks sold in Russia will have been produced locally. MAN will also increase the local content and to this end develop local suppliers.

In the past MAN has taken an above-average share of growth in the Russian market. With market shares of more than 30 per cent of the trucks over six tons imported from Europe and over 50 per cent of imported intercity buses and coaches over 12 metres MAN has increased its vehicle population to over 45 000 registered vehicles and is the market leader in Russia for imported trucks and buses.

What's on?

May 2011

8 – 10 May 2011

Beijing International Disaster Reduction and Emergency Equipment Expo 2011

Where: China World Trade Centre, Beijing, China

Details: www.ecidrea.com.cn/en

9 – 13 May 2011

WildFire 2011, the 5th International Wildland Fire Conference
Living with Fire, addressing global change through integrated fire management

Where: Sun City, South Africa

Details: www.wildfire2011.org

10 – 13 May 2011

Security and Fire Vietnam 2011

Where: Saigon Exhibition and Convention Centre, Vietnam

Details: www.construction-vietnam.com

16 – 19 May 2011

International Firex 2011

Where: Birmingham NEC, UK

Details: www.internationalfirex.co.uk

17 – 19 May 2011

Fire and Security Pakistan

Where: Karachi Expo Centre, Karachi, Pakistan

Details: www.firesecurity.com.pk

25 – 27 May 2011

EUROFIRE 2011

Where: The E'Cole Militaire, 1 Place Joffre, Paris, France

Details: www.eurofireconference.com

29 – 31 May 2011

International Conference for Fire and Rescue Executives

Where: Toronto, Ontario, Canada

Details: www.internationalfireconference.com

June 2011

9 – 10 June 2011

Sixth International Conference on Composites in Fire

Where: The Research Beehive, Newcastle University, Newcastle upon Tyne, UK

Details: www.compositesinfire.com

12 – 15 June 2011

NFPA Conference and Expo 2011

Where: Boston Convention and Conference Centre, Boston, USA

Details: www.nfpa.org



WILDFIRE
The 5th International Wildland Fire Conference

19 – 21 June 2011

Fire India

Where: NSIC Grounds, Okhala, New Delhi, India

Details: www.fire-india.com

20 – 24 June 2011

10th International Symposium on Fire Safety Science (IAFSS)

Where: University of Maryland, USA

Details: www.iafss.org

August 2011

23 – 27 August 2011

Fire-Rescue International (FRI)

Where: Atlanta, GA, USA

Details: www.iafc.org/fri

29 August – 1 September 2011

AFAC/Bushfire CRC Conference 2011

Where: Sydney Convention and Exhibition Centre, Darling Harbour, Australia

Details: www.afac2011.org

October 2011

4 – 6 October 2011

International Conference on Fire Behaviour and Risk Modelling

Where: Alghero, Sardinia, Italy

Details: www.iafss.org

9 October 2011

The Science of Suppression - a FIRESEAT Symposium

Where: University of Edinburgh, UK

Details: www.eng.ed.ac.uk/fireseat/

12 – 14 October 2011

Safety and Security Asia 2011

Where: Suntec Singapore International Convention and Exhibition Centre, Singapore

Details: www.safetysecurityasia.com.sg

14 – 17 October 2011

Exploring the Mega-fire Reality 2011, A Forest Ecology and Management Conference

Where: Florida State University Conference Centre, Florida, USA

Details: www.megafirereality.com

November 2011

23 – 24 November 2011

The Emergency Services Show 2011

Where: Stoneleigh Park, UK

Details: www.ess2010.com

30 November – 1 December 2011

IFSS Expo 2011

Where: Henry B. Gonzalaz Convention Centre, San Antonio, Texas, USA

Details: www.ifssevent.com

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