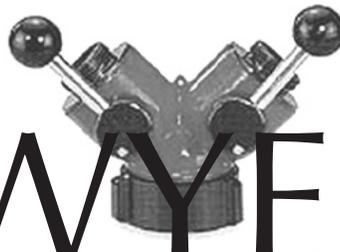


GATED WYE



November 2011 · Oregon Office of State Fire Marshal · 4760 Portland Road NE · Salem Oregon 97305-1760 · No. 334

Final report issued on High Cascades Complex incident

A panel, organized by the Office of State Fire Marshal to investigate an incident involving a structural task force deployed in support of the High Cascades Complex fire in August, found no wrongdoing on the part of the task force or those acting in a rescue capacity to ensure the safety of the task force members.

Background: While working at their predetermined draft site, the crew of Brownsville Fire Department Engine 64 took precautionary safety from fire as it burned dangerously near their work site. Communication with the crew was lost and a rapid intervention team (RIT) was deployed to ensure the safety of the Brownsville crew.

The OSFM requested a review in order to respond to a [SAFENET](#) submission regarding the incident (SAFENET is a federal program for reporting and correcting unsafe situations), and to provide a report to the Oregon California Incident Management Team, as the official incident management team, and the Bureau of Indian Affairs, as agency administrator of the complex.

"I find the report very well done and an objective account

of the incident using many first-hand views of what happened," said State Fire Marshal Mark Wallace. "I commend and thank those who went beyond normal requirements and provided answers to issues raised in the SAFENET. Although there are lessons to be learned, the SAFENET report was largely unfounded."

"In light of this, I want to recognize a few individuals who, facing extreme fire behavior on that day, took actions critical to ensuring a positive outcome. There were no injuries and only minor equipment damage. Credit to the Brownsville Engine 64 crew (including Chief Kevin Rogers, Lt. Joe Kirk, and Firefighter Alex Parker) who recognized the road into their pumping station at Mill Creek was cut off and, at a critical time, moved to their preplanned safe zone. This kept them safe, although communication was lost when their radios got wet."

Operations Section Chief John Ketchum positioned himself at the

critical area when fire behavior began building as predicted. He appropriately declared an emergency when radio contact was lost. Ketchum directed other on-scene units to make their way to Engine 64 as quickly as possible. Canby Engine 63 and Clackamas County B11, joined by Group Supervisor Chris Barney, were assigned as the RIT and faced extreme fire conditions as they made their way to Engine 64.

"Facing the highest level of risk during the incident, they reached their objective without injury," said Wallace. "Though I know I've missed naming some others also directly involved, everyone deserves my thanks for a job well done."

[The full report is available online.](#)



Photo taken after the fire burned through the draft site near Brownsville Engine 64

From the desk of the State Fire Marshal



“Right-sizing deployment response is here to stay nationally, as well as in Oregon.”

– SFM Mark Wallace

Fire season comes to an end

Although a “declaration” that the annual fire season has ended can never be absolute, the probability of major wildland fires occurring during the remaining months of 2011 is extremely low. That depends, of course, on the weather.

Having arrived just as the fire season was getting started meant that cost saving changes for deployments were made on an ad hoc basis. However, these decisions were based on the identified needs of each particular fire after being declared a Conflagration by Governor Kitzhaber. As a result, the OSFM did not deploy full incident management teams for any of the three deployments this year.

Right-sizing deployment response is here to stay nationally, as well as in Oregon. Certainly this change was unexpected by many IMT members and others in the fire service, and I realize such changes result in a degree of discussion concerning the advisability of the change. However, the proof is in the outcomes achieved.

Although 352 structures were reportedly threatened during the three conflagrations, only six small outbuildings were lost. Based on our cost estimates, by right-sizing our deployments, the state realized a savings of about \$324,500 compared to what it would have cost if full IMTs had been deployed on each of the three fires.

Now that the fire season is essentially over, we will turn our attention to the lessons learned. The next step is to prepare to move the ad hoc process necessary for this past season, into future procedures and plans to meet current challenges and respond to future incidents.



**State Fire Marshal
Mark Wallace**

**Office of
State Fire Marshal**

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The Gated Wye is published monthly by the Oregon Office of State Fire Marshal. For submissions or suggestions contact Rich Hoover at 503-934-8217 or e-mail richard.hoover@state.or.us. In compliance with the Americans with Disabilities Act, alternative formats of this publication are available.

Juvenile Intervention Specialist 1 training

This class prepares fire service personnel for completing the Department of Public Safety Standards and Training Task Book for National Fire Protection Association 1035 certification, as Juvenile Firesetter Intervention Specialist 1 in Oregon. All participants will receive a certificate of completion indicating 14 hours of professional development training.

Date: November 16th & 17th, 2011

Time: 8:30 a.m. - 4:30 p.m.

Location: Tualatin Valley Fire & Rescue Training Ctr.
12400 SW Tonquin Road
Sherwood, Oregon

For more information, contact Judy Okulitch at 503-934-8230 or judy.okulitch@state.or.us.

Fire & Life Safety Awareness I training November 2011

The Office of State Fire Marshal, in partnership with the Tenmile Rural Fire Protection District, is hosting a Fire & Life Safety Awareness I, Scope of Authority & Assembly Occupancies training, November 10, 2011.

The training provides a review of the Oregon Regulatory Statute, Oregon Administrative Rule, and Oregon Attorney General Opinions related to the powers and duties of the state fire marshal (SFM) and assistants to the SFM, inspection procedures, due process, and investigation of fires. Assembly Occupancies training provides definitions and fire and life safety concerns in assembly occupancies.

[Register online through iLearnOregon](#). Once logged in, scroll down to find OSFM - FLSS Fire and Life Safety Awareness I, click GO to the right of View Sections, click GO to the right of Enroll, click Enroll.

If you do not have an iLearnOregon account, you will need to create one. If you need assistance registering, contact Anita Horsley at 503-934-8249 or anita.horsley@state.or.us.

OSFM Positive Action Committee recognition

The OSFM Positive Action Committee's goal is to recognize and award non-management staff for positive efforts and to provide opportunities for employees to improve their skills and professionalism for the benefit of the employee and the agency.

In October, the Positive Action Committee honored Connie Dalke and Shelly Kendrick.



CR2K Operations Manager Chris Kuenzi (right) presents Administrative Specialist Connie Dalke with her Positive Action Certificate – “Your positive attitude everyday toward challenging tasks is exemplary. You greet everyday with a smile and do what is needed to help anyone who comes to you. You make our office look good!”



CR2K Operations Manager Chris Kuenzi (right) presents Information Assistant Shelly Kendrick with her Positive Action Certificate – “For taking tasks and going beyond expectations. Your positive attitude, willingness to learn new things and take on new responsibilities are a huge contribution to the OSFM.”

Older adult fire & fall training scheduled for November

The Office of State Fire Marshal Fire & Life Safety Education unit is providing a train-the-trainer class for the newly developed Older Adult Fire & Fall Prevention and Safety program.

According to Portland State University Population Research Center, more than 30% of Oregon's population is age 50 or over. Between 2005 and 2009, this age group accounted for 60% of fire deaths and 32% of fire injuries. In addition, falls are the leading cause of hip fractures and traumatic brain injuries among Oregon's older adults.

In response to this data, the OSFM, in collaboration with the Oregon Life Safety Team, developed *Take the Right Steps - fire and fall prevention and safety for older adults*. This program helps older adults recognize fire and fall hazards in their home and gives them preventative measures they can take to keep those incidents from occurring.

The first train-the-trainer session is Wednesday, November 9, 2011, from 1:30-3:30 p.m. at the Office of State Fire Marshal in Salem, Oregon.

[Download a registration form](#) and email it to osfm.ce@state.or.us or fax to 503-373-1825.

Updated school arson program available free

The Office of State Fire Marshal, in partnership with Special Districts Association of Oregon (SDAO) and Property and Casualty Coverage for Education (PACE), has completed an update of Oregon's school arson prevention program.

The new program includes a three and half minute video on DVD, brochure, poster, sprinkler system checklist, and fire reporting laws. The entire package is available free to fire departments and school districts.

Originally implemented in 2005, the program helps foster relationships between fire districts and their school districts in reporting all school fires. Currently, 50 fire departments are participating in the school arson program.

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Hazmat members complete task book training

More than 30 hazmat technicians from around the state, along with representatives from Oregon's Civil Support team arrived in Medford in September to participate in required task book training.

Oregon hazmat team members are required to complete their task books every two years. This requirement is one of the strictest in the U.S. and serves as a key component in the OSFM hazmat training program to ensure technicians are proficient and competent in the tasks necessary for them to carry out their duties.

The training was set up in a circuit format and involved sessions on personal protective equipment, monitoring equipment, chlorine kits, scene management, radiation, plugging, patching and containment, as well as chemical hazard categorization and sampling.

The OSFM hosts periodic task book trainings to help individual departments offset the cost of keeping technicians qualified and to provide team members valuable networking opportunities.

For other training information, [visit the OSFM training webpage](#).

Local experts participating in the DVD include McMinnville Fire Marshal Eric McMullen, Dr. Timothy Kopet from FireSafe Children and Families, Casey Waletich from Hillsboro School District, and Troy DeYoung from Special Districts Association of Oregon. The new program will be showcased at the Oregon Fire Chiefs Association conference in November.



On-scene during taping of the new school arson video (l to r) Krista Fischer, Timothy Kopet, Judy Okulitch, Troy DeYoung, and video producer Pat McAbery.

DATA Connection

News from the Data Collection & Research Unit

How Does Oregon Compare?

The U.S. Fire Administration's National Data Center provides comparative information on incidents each state has reported to the national level and breaks that down to show how many of those incidents were fire, EMS, or non-fire/non-EMS. Based on information for 2010, below is Oregon's compared to the other 49 states.

Total incidents reported - Oregon ranked 25th with 211,316; Florida ranked first with 2,422,779; and North Dakota ranked last with 17,008.

Total EMS calls reported - Oregon ranked 21st with 145,711; Florida ranked first with 1,789,624; and North Dakota ranked last with 8,186.

Total fire calls reported - Oregon ranked 35th with 8,967; Texas ranked first with 78,562 and North Dakota ranked last with 1,762.

Total non-fire/non-EMS calls reported - Oregon ranked 43rd with 56,638; Florida ranked first with 565,725 and North Dakota ranked last with 7,060.

Is your information included?

The Data Collection & Research Unit only submits incident reports to the national level if they are 100% valid under NFIRS standards. If a report is missing key information, or partially filled out, it is not sent to the national level. Invalid data is not used for research or statistical analysis at the national level.

However, incidents do not have to be 100% valid to be submitted to the state. Oregon uses all submitted data for research and statistical analysis. This means if you only have partial information, you can still submit your report to the state with the details you do have. Information in an incomplete report can still be valuable for research at the local and state level. As soon as the remaining details are available, you can add that information to your report. Only when your report is 100% valid, will it then be sent to the national level.

Every month, the Data Collection & Research Unit uploads incident data from the previous two months, to the national level. For example, in November we will submit September's data. Throughout the year, we also upload changes or additions not previously submitted.

Oregon's incident report database shows 30,045 incidents (14%) were not reported to the national level in 2010 because they were not 100% valid. To date in 2011, there are more than 14,000 incidents (10%) that are not 100% valid.

We encourage you to ensure all incidents you report to the state are able to be reported to the national level. Run an "Incomplete NFIRS Incident Report List" for your department, or ask the OSFM Data Collection & Research Unit to provide a report for you. The report shows which incident reports are incomplete to the NFIRS standard and what specific information is missing.

Questions? Please contact the Data Collection & Research Unit at 503-934-8273, or e-mail OSFM. Data@state.or.us.

Shown at right is a screenshot sample of an Incomplete NFIRS Incident Report List on the Oregon Fire & EMS Bridge.™



Start Safe in motion in Douglas County

More than 60 representatives from the communities of Roseburg, Riddle, Myrtle Creek, Tenmile, and Winston participated in a special training for *Start Safe: A Fire and Burn Safety Program for Preschoolers and Their Families* in October. The program gives preschool teachers and fire educators the tools to reach preschool age children, a significant at-risk group for fire and burn related injuries, and their families.

The OSFM Youth Fire Prevention and Intervention Program, in partnership with the Home Safety Council and Oregon SafeKids, provide Start Safe training and program materials free. If your department or preschool is interested, contact Krista Fischer at 503-934-8240 or krista.fischer@state.or.us.

Free NIMS class available

The Oregon Department of Public Safety Standards and Training is hosting training November 28 through December 2, 2011, on Incident Command System (ICS) Command and General Staff Functions for Local Incident Management Teams.

The course focuses on using ICS in managing large-scale/complex incidents and includes lecture, class participation, interactive activities, and simulations.

Training is free and recommended for emergency response personnel from multidisciplines including fire, law enforcement, emergency medical services, public health, emergency management, public works, local government, and others.

Prerequisites include IS-100, 200, 700, and 800. [Preregistration is required and available online.](#) Registration deadline is November 20, 2011.

Applicants traveling more than 75 miles one way are eligible for free lodging at the Public Safety Academy. Students lodging at the academy receive breakfast, lunch, and dinner. Lunch will also be provided to students who commute.

For more information, contact Thelma Denney at 503-378-2408 or thelma.denny@state.or.us.

Fire grant update

by Hines Lieutenant/Grant Writer Jonathan Manski

The 2011 Assistance to Firefighters Grant (AFG) applications that made it through the initial computer scoring, passed through the Peer Review process October 24-28 in Baltimore. The new application process reportedly forwarded just 5,000 applications of the 16,494 submitted nationally to the Peer Review process. Last year 8,000 made it through. We will have to see what exactly that means. Now, a little more waiting is in order, but I predict there will be some awesome presents under the ol' Christmas tree this year; at least I hope!

First off, let me offer a pat on the back to six Oregon departments that stepped up and submitted first time applications. Welcome to the club of dedication and disappointment.

Here is a quick rundown of this year's Oregon AFG statistics. In all, 179 applications were submitted; 115 in the Operations & Safety category and 64 hopeful applications in the Vehicle category. Of the 179 applications, eight were regional requests.

Oregon had 104 agencies with single applications, 36 agencies submitting two applications and one agency submitted in all three categories. Of these 137 agencies, five were non-affiliated EMS organizations who submitted three vehicle applications and two for Operations & Safety.

Applications were received from 85 combination departments, 34 all volunteer, 13 all paid, and nine paid on call. Finally, 143 applicants classified themselves as rural, 25 as suburban, and 11 as urban. This pretty well followed the national trend.

Approximately 40% of Oregon departments submitted a proposal. Oregon project requests were down again this year with just 179 applications. Since 2002, Oregon's average for annual application submissions has been at 205.

Looking forward, the SAFER program should be lined up for a November-December opening.

For the latest information on the FEMA grant programs, visit their website at www.fema.gov/firegrants.



by
Hazmat #7 (Portland)
Team Coordinator
Grant Coffey

Special Report

Detergent/Chemical Suicides

In December 2010, Hazmat #7 (Portland Fire & Rescue) responded to its first “detergent suicide” call. Since then, we’ve had several similar calls. Due to the increased potential for such calls, (nationally, there have been more than 40 incidents reported since 2008) there exists a safety concern for first responders answering a call to check on a patient in a vehicle or a small room.

Detergent suicide (also known as chemical suicide) is accomplished by mixing two or more common chemicals usually available at retail stores. When mixed, the chemicals produce a heat releasing (exothermic) reaction with gas by-products quickly filling an enclosed area. This technique originated in Japan, and is gaining popularity due to available instructions on the internet. This method is communicated as a quick and painless way to end one’s life.

An overview of the detergent suicide process:

- In Japan, a brand of detergent was combined with bath salts – In the U.S. the combination is most likely an inorganic acid and a pesticide, or garden product
- Usually, tape is used to seal joints and seams in a room or vehicle to contain the toxic products
- In most, but not all, incidents a suicide note will be taped to a door or window, warning responders of the hazards
- Common products from hardware stores are combined in a bucket or tub. The victim is quickly overcome, resulting in a crime scene and hazardous materials cleanup site
- The main toxic product is hydrogen sulfide (H₂S), which can cause coma and death at 1,000 parts per million. This level can be produced by mixing ½ cup of each product.
- You may note the smell of H₂S (sulfur or rotten eggs) upon approach or see tubs/buckets in the vehicle with multiple chemical containers
- Common sources for the acids may be: Lysol (up to 10% HCl); toilet cleaner (up to 15%

HCl); and tile, brick or drain cleaners (up to 20% or more HCl)

- Common sources for the sulfur may be: dandruff shampoo (possibly up to 1% zinc sulfide); Epsom salts, pesticides, or fungicides (Lime Sulfur – Bonide is a solution of calcium polysulfide, up to 25-30%)
- Mixing HCl with other chemicals can produce by-products other than H₂S (e.g., mixing it with cyanide containing compounds can produce hydrogen cyanide)
- Other possible toxic products could include: H₂S, sulfur dioxide, carbon monoxide, acid gases, nitrogen oxides, phosgene, carbon disulfide, methyl isocyanate, and thallium

This is a synopsis, along with a few photos of the December 26, 2010 detergent suicide incident:



Around 7pm, Hazmat #7 responded on a UN1 medical call, that became a hazmat call. The mother of the victim found her 50 year old son unresponsive in his pickup. Note the (yellow) stain on the driveway.



On arrival, Hazmat #7 noted an odor of rotten eggs, a yellow stain below the vehicle, and tubs and chemical containers in the back seat. Note the combination of chemicals needed to initiate the exothermic reaction and release of toxic gas.

see **Chemical suicides** page 8

Chemical suicides

continued from page 7



Monitors detected dangerous readings at the truck door gaps, even when closed. Levels inside the vehicle triggered high alerts on the four gas monitor. Note that H₂S will deaden your sense of smell at 100-150 ppm, masking estimates of the on scene danger. (This view is from outside the truck, looking in to the seat area.)

Lessons observed and action steps

- Don't become complacent – Always be aware of all on scene clues available to you. Size-up the situation before you act.
- If there is a smell of sulfur or rotten eggs – This may indicate H₂S gas, dangerous even at low levels (IDLH 100 ppm). Back off and don PPE (turnouts minimum) with respiratory protection. Minimal dermal exposure hazard. Request fire/hazmat with monitoring capability. Monitor low, as H₂S is heavier than air (1.19).
- Unresponsive patient in a vehicle – Warning notes, taped door and window seams, glass stains, or residue on the ground are signs to exercise caution and escalate the response. Call for hazmat and local police. Treat this now as a hazmat scene!
- Evidence of chemicals in the vehicle – Typical chemicals, tubs, and other equipment mentioned earlier are clues an active reaction has filled the vehicle with toxic products.
- Create hazard zones – The vehicle is a hot zone. Create an appropriate warm zone around the vehicle. Prohibit entry from anyone not in full PPE (at 1,000 ppm, there is a potential for collapse after even one breath).
- Entry into the vehicle – Use full PPE and completely vent the vehicle first. Have a charged hose line ready, vapors can be flammable. Position the patient outside the vehicle for assessment. Remember, the atmosphere in the vehicle is an inhalation and possibly explosive hazard.
- If police must perform a tactical entry into a vehicle or small room - Full SCBA is mandatory. Flash-bang or sting ball devices could cause an explosion of flammable gases.
- Remember this is a possible crime scene – Make notifications to police, medical examiner, etc. Avoid disturbing any evidence. Note there is potential for off-gassing from the victim.
- Be alert for secondary devices – Scan the vehicle or room for anything that looks out of place or suspicious. Do not unnecessarily disturb anything!
- Stored materials in the home or other areas- Along with appropriate legal considerations, consider areas in buildings or houses associated with the victim to contain not only precursor material but active agents. Other lab activity, secondary devices, or booby traps may be a possibility. Be alert for indications of other illicit activities, such as:
 - Large quantities of chemicals of any type
 - Oxidizers like acids, cleaners, pool chemicals, peroxide bleach, etc
 - Fuels such as acetone, powdered sugar, hobby fuels, etc
 - Lab setups with glassware, masks, mixing equipment, etc
 - Related literature, i.e., about making illicit substances or devices
- First aid actions – Remove victim(s) from exposure and if appropriate, support breathing. Skin contact with corrosive product may cause burns, but the hydrogen sulfide is not considered a skin absorption concern. Nitrite therapy may be considered by medical professionals.
- Decontamination – Remove clothing ASAP. For eye or skin exposure, flush with lukewarm water for 15 minutes. Porous material like leather and fabric may be too contaminated to decontaminate inexpensively.
- Hazmat waste – After victim/patient care and legal scene issues, treat scene as a hazmat site. Waste products must be overpacked and handled as hazardous waste by a licensed contractor. Notify appropriate environmental agencies as needed.

For more information, contact Grant Coffey at 503-823-3946 or grant.coffey@portlandoregon.gov.