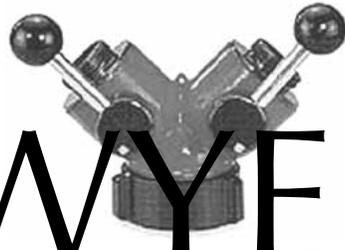


GATED WYE



December 2012 · Oregon Office of State Fire Marshal · 4760 Portland Road NE · Salem Oregon 97305-1760 · No. 347

DOGAMI study provides important warnings to local emergency planners and responders

The Oregon Department of Geology and Mineral Industries (DOGAMI) recently concluded an earthquake risk study on Oregon's Critical Energy Infrastructure (CEI) Hub in Portland, Oregon. The study was part of a larger U.S. Department of Energy-funded Energy Assurance Project conducted by the Oregon Department of Energy, Public Utility Commission of Oregon and DOGAMI.

Oregon's CEI Hub covers a six-mile stretch on the lower Willamette River located between the south tip of Sauvie Island and the Fremont Bridge on US Highway 30.

The purpose of the study was to better understand the vulnerabilities of the energy sector when it is confronted with a magnitude 8.0 or larger Cascadia earthquake.

Central findings of the study demonstrate Oregon's CEI Hub is vulnerable to a Cascadia earthquake, and that Oregon's energy sector will be severely impacted after a major Cascadia earthquake. The study's findings are significant because they point to a complete (if not significant) period of energy isolation for the entire state in the event

of a large Cascadia earthquake. As a result, supplies and sources of liquid fuel, natural gas, and electricity will be restricted throughout Oregon. This means communities dependent on these resources need to include contingencies for these shortages in their emergency plans.

DOGAMI advises energy companies to pro-actively integrate seismic mitigation into their business practices in order for Oregon's energy sector to adequately recover from a magnitude 8.5 to 9 Cascadia earthquake in a reasonable time.

DOGAMI also advises citizens and emergency planners throughout the state of the following:

"Rather than wait for an earthquake disaster to strike, Oregon should take precautions today and become better prepared. It is not a question of *if* a large magnitude Cascadia earthquake will occur, but *when* it will occur."

This study demonstrated that Oregon's CEI Hub is vulnerable to a Cascadia earthquake, and its failure will impact the entire state's supply and sources of liquid fuel, natural gas and electricity.

Oregonians have experienced gas shortages during the 1970s, and power outages during winter storms. Following a Cascadia earthquake, there will likely be no gas available to the public for a considerable period of time.

During a winter storm, power outages may last hours or days, but after a Cascadia earthquake, Oregonians could be without heat and electrical power for months.

The study recognizes:

- A Cascadia earthquake will occur
- Oregon's CEI Hub – where critical energy infrastructure is located in a six-mile stretch of land – is vulnerable to a Cascadia earthquake
- Oregon's resilience to a Cascadia earthquake is low
- Energy sector companies must adopt best practices and pro-actively integrate seismic mitigation efforts into their business operations to prepare their facilities and systems to absorb and recover from a Cascadia earthquake and to sufficiently restore critical electric,

From the desk of the State Fire Marshal



A thank you, as work goes on

Around Thanksgiving each year, it's traditional to consider everything you are thankful for. As State Fire Marshal, I am thankful for the opportunity to work and interact with so many dedicated professionals in the OSFM and OSP, as well as all our constituents, collaborators, cooperators, customers, partners, and other stakeholders.

One of the things I am most thankful for is the high level of support and positive feedback we have received. I know we have a superb staff doing great and important work, so I expect no less than positive feedback.

I also realize it is the people of the organization (more so than the leader) that do the work and create success in every organization, so I am thankful for all of the individuals at OSFM, and those who serve on committees and groups, that have become an essential part of our success. Thank you.

As an update – I've now travelled more than 16,000 miles around the state and interacted with representatives of about 245 Oregon fire departments. I've received important feedback as I continue my efforts to build effective relationships statewide. I'll take at least one more trip in 2012.

I still plan on attending at least one meeting of every fire defense board in Oregon, but it is taking longer than I first predicted. Remembering to be patient but persistent, I have more work to do and believe my efforts will always be a "work-in-progress" in the weeks, months, and years to come.

For some months, we have been working on preparing the FY 2013-2015 budget approval process. The planning, preparations, calculations, and other processes required to prepare, submit, and gain approval for the OSFM budget are critical components of our success and ability to support Oregon's fire service and citizens.

The process has multiple sequential steps and we've proceeded effectively through a number of preliminary steps. The culmination will be

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Mark Wallace**

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**The foundation of
our FY 2013-2015
budget is successful
completion of
our FY 2011-2013
budget.**

– SFM Mark Wallace

SFM Wallace

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an adopted budget approved by the Oregon Legislature. And, we may not know for sure until July 1, 2013, the first day of the next biennial budget.

The foundation of our FY 2013-2015 budget is successful completion of our FY 2011-2013 budget. Our goal is for expenditures not to exceed revenues, and finish the biennium with enough money to fund the OSFM during the first few months of the new biennium, until we begin receiving new revenues.

Since most of the OSFM budget is used to cover personnel costs, the most effective way to balance the budget has been to leave open positions, unfilled. However, this is a "double-edged sword." Open positions lower expenditures, but people are needed in these positions to do the work of the OSFM. Although there are signs the economy is slowly improving, we will proceed with caution and fill positions as revenues allow.

At the same time, I know everything will never be perfect. Human error will occur. There will be differing opinions on priorities when choices need to be made. Other things may "fall through the cracks" that might have been caught if we were at full staffing levels - or not.

In the end, we must rely on our best efforts for open communication, working towards common understanding of our strategic issues, and continuing to build effective relationships.

Save the Date

The 2013 Fire Defense Board Chief training and meeting is scheduled to take place during the annual Oregon Fire Chiefs conference, planned for the first full week in May 2013. Specific days and times will be released as they are confirmed.

For more information, contact Mariana Ruiz-Temple at 503-934-8238 or mariana.ruiz-temple@state.or.us.

Mob plan committee update

The 2013 Mobilization Plan Committee has created a charter and began work on reviewing and updating the 2013 Mob Plan.

This year the committee created a charter with the following goals and objectives:

- Examine mutual aid reimbursement
- Consider adding the Conflagration Request Packet as an appendix
- Look at changing/increasing the volunteer rate
- Research and update Appendix D, Support Services

Current changes include:

- Adding the Conflagration Request Packet as an appendix, and
- Clarifying the reimbursement of mutual aid on-scene when a conflagration is declared. There will now be an official "reimbursement time," coinciding with the "Incident Activation Call"

The 2013 Mobilization Plan will be available for review and comment in early February.

[View the latest information on the Mobilization Plan Committee webpage.](#)

Reminder on use of fire net frequency

This summer, the OSFM decommissioned the 23 State Fire Net mountain top remote bases. However, the state Fire Net Frequency remains in use as the state of Oregon's mutual aid fire frequency.

The State Fire Net frequency of 154.2800 is a federal legacy frequency set aside by the FCC for use as a state fire mutual aid communications frequency and is not available for daily use as a tactical frequency unless it is necessary for communications with mutual aid companies. This can be referenced in the National Interoperability Field Operations Guide (NIFOG) v 1.4 Pages 15 and 40.

For more information, contact Alan McMahan at 503-934-8297 or alan.mcmahan@state.or.us.

Using data to target your fire safety messages

by OSFM Program Coordinator Terry Wolfe

This time of year can prove to be a challenge for fire prevention staff. On one hand, we're seeing an increase in fires related to home heating, such as combustibles too close to heat sources, improper equipment used as a heat source, improperly installed or maintained wood and pellet stoves, improper disposal of ashes, and a myriad of other fire related issues.

On the other hand, it's also the time of year when we see spikes in fires for other reasons – holiday cooking mishaps, unattended candles, or candles too close to combustibles, Christmas trees not properly maintained, deep frying of turkey or other meat (not just for Thanksgiving any more), and overloaded circuits from holiday lighting, are just a few examples.

There are many topics we could cover, but providing residents with too many messages may dilute them all, and even create complacency. If we're going to choose only a couple of the most important messages for those choice times when people are ready to listen, we need to be sure of what our most important safety issues are. Based on data provided to the OSFM from fire agencies across Oregon, we've come up with the following information.

In 2011, 8.4% of fires were categorized as "heating equipment fires." However, of the 896 fires reported, 615 were confined to the chimney? So, while we know we need to educate on heating fires, we should be targeting safety issues related to fireplaces, as well as wood and pellet stoves.

After several years of decline, candle-related fires jumped more than 35% in 2011. Seventy-two candle fires were reported, resulting in one death, seven injuries, and approximately \$1.8 million in property damage.

Cooking fires have always been a standard safety topic during the holidays. We continue to experience a steady increase in these types of fires. Did you know that since 2008, they are the leading cause of fire injuries?

Here's another one you may not have thought

about. After a steady decrease since 2007, cigarette-related fires increased in 2011. Cigarette fires now account for more fire deaths than cooking and heating-related fires combined. Now is the time of year when those who typically smoke outside the home will smoke indoors, because it's warm and dry.

We have relatively limited opportunities to reach residents when it comes to home fire safety.

When deciding which messages to focus on at these critical times, OSFM Data Unit statistics are always a good "scope" to use when aiming at the target.

US&R transition update

As of 2012, the OSFM is no longer receiving grant funding to support the state's Urban Search and Rescue Task Force (US&R). This program has existed since 2003, and many firefighters and fire agencies have dedicated time and money to help make the US&R program a success.

In an effort to keep structural collapse and technical rescue capability active in the state, the OSFM worked on various options for the sustainability and management of the US&R program.

With input from the program's participating fire chiefs, the OSFM decided to transition the capability and equipment to local departments that submitted proposals to maintain the equipment, training, and response capability. This transition is ongoing and should be complete by January 2013.

Although the OSFM is no longer managing the program as a state-owned asset, any jurisdiction in need of an emergency response of US&R assets can request them through the process currently outlined in the Oregon Fire Service Mobilization Plan.

More detailed information on the final structure of the US&R assets, as well as the activation process, will be covered in a future Gated Wye article as soon as these issues are finalized.

For more information, contact Mariana Ruiz-Temple at 503-934-8238 or mariana.ruiz-temple@state.or.us.

Candle fires

On November 11, 2012, a fire burned through a Clackamas area duplex and was estimated to have caused \$80,000 in damage to two apartment units. That same day, a single-family dwelling fire near Bend was estimated to have caused \$300,000 in property loss.

On this one day, the lives of three families were seriously disrupted. Both of these destructive fires were preventable; both were caused by candles.

In 2011, Oregon fire agencies reported that 67 fires were started by candles. These fires resulted in one death, seven injuries, and \$1.7 million in estimated property loss.

Here are some additional Oregon candle fire statistics for the period 2007 through 2011¹:

- December averaged approximately 25% more candle fires than any other month
- Candles were reported to have started 366 fires, resulting in 7 deaths, 55 injuries, and an estimated \$9.4 million in property loss
- The highest percentage of fires (34%) started in bedrooms, followed by dens (16%) and bathrooms (10%)
- Combustibles too close to a candle accounted for more than a third (36%) of these fires
- Unattended or abandoned materials were contributing factors in nearly one in every five (19%) fires
- The top four items first ignited were bedding, cabinetry, furniture, and curtains/drapes
- Three percent of fires were caused by people (usually children) misusing a candle

¹Statistics are based on incidents reported by Oregon fire agencies to the Office of State Fire Marshal from 2007-2011.

During the five-year period of 2007-2011, candle fires in Oregon decreased by 50% when compared the five years from 2001 through 2005.

Although comparatively the number of candle fires is down, these statistics demonstrate that candle fires can result in significant damage, injuries, and even fatalities.

Based on this information, the OSFM regularly encourages Oregonians to heed the following precautions to help prevent a tragedy:

- Keep candles at least 12 inches away from anything that can burn
- Never leave a burning candle unattended. Blow out candles when you leave the room
- Extinguish all candles before going to sleep
- Never leave a child unattended in a room with a lit candle
- A child should not sleep in a room with a lit candle

The OSFM has educational materials covering candle safety and many other topics. [You can review and order materials on the OSFM website.](#)

End of year reporting

For your agency's data to be included in the Office of State Fire Marshal's 2012 annual analysis:

- ▶ **Make sure you have reported all your fire incidents for the year 2012 in your account in Oregon Fire & EMS Bridge™ by January 31, 2013.**
- ▶ **If you use other reporting software, you must import your reports into Oregon Fire & EMS Bridge™ (or email us your .txt files to import for you) by January 31, 2013.**

Remember, all your incident reports must be 100% valid for them to be sent to the national database.

Questions? Please contact the Data Collection & Research Unit at 503-934-8250, toll free at 877-588-8787, or email osfm.data@state.or.us.

natural gas, and liquid fuel services to Oregon homes, businesses and industries in a reasonable time period

- More stringent oversight on seismic preparedness in the energy sector (liquid fuel, electricity, and natural gas) may be needed

[Access to the complete study report is available on the web.](#)

Code amendment proposals for the 2014 Oregon Fire Code now being accepted

The OSFM is now accepting code amendment proposals for the 2014 Oregon Fire Code, based on the 2012 International Fire Code (IFC).

The current Oregon Fire Code (OFC) is the 2010 edition, based on the 2009 IFC with Oregon amendments. The OSFM proposes to update the OFC with the 2012 IFC.

The OSFM is accepting proposed amendments through December 21, 2012.

Proposals must be submitted to the OSFM in writing. [A form, including code amendment proposal criteria, is available on the OSFM website.](#) Proposals may also be emailed to Deputy State Fire Marshal John Caul at john.caul@state.or.us.

Interested persons may propose to:

- Add an amendment to the proposed base model code, or
- Recommend to incorporate statewide code interpretations into the code, or carry these forward to the newly adopted code

The Oregon Fire Code Committee will review proposals at their monthly meetings beginning January 2013. The committee will make its recommendations to the Oregon State Fire Marshal.

There will be more opportunity for input at a future public hearing (TBD).

For questions or more information, contact Deputy State Fire Marshal John Caul at 503-934-8276 or john.caul@state.or.us.

Fire grant update

by Hines Lieutenant/Grant Writer Jonathan Manski

Hurricane Sandy, and the changeover of the Federal Government budget cycles, were the main roadblocks to a Happy Thanksgiving for most of the 113 Oregon fire departments still waiting to receive news about the 2012 Assistance to Firefighters Grants.

Just a few days before the Thanksgiving holiday, the 1199a's were beginning to be distributed yet again. So perhaps by the time you read this, many more of you will have something to tweet about!

FEMA specialists who normally answer questions and provide support for the grant program were pulled to assist with the disaster of Hurricane Sandy.

Their deployment to the Northeast did delay a smooth restart after the fiscal year changeover, but hopefully we are not so insensitive that we wouldn't all prefer that to be the correct path for the agency to take. There are a lot of folks, including firefighters, who are still hurting back there.

Also, hopefully by now, the Fire Prevention & Safety (FP&S) grant program has opened for 2012 and we can spark some interest.

Oregon fire departments haven't been very keen on this one, yet prevention goes a long way to keep us from needing all the equipment most departments ask for from Assistance to Firefighter Grants. In essence the programs go hand-in-hand. Last year only 19 Oregon applications were submitted for FP&S.

Here's wishing you a safe and "awarding" holiday season.

For the latest grant information, [visit the fire grants page on the FEMA website.](#)





Arsine AsH_3

Description:

- Synonyms: Arsenic trihydride, arsenous hydride
- Colorless gas with a garlic odor
- CAS No.: 7784-42-1
- EPA Section 302 EHS TPQ: 100 pounds
- EPA Section 304 EHS RQ: 100 pounds
- EPA Section 112(r) TQ: 1,000 pounds
- OSHA Process Safety Management (PSM) TQ: 100 pounds

NFPA 704 Information:

- Health: 4
- Flammability: 4
- Reactivity: 2
- Special: None

Uses and occurrences:

- Synthesis of semiconducting materials
- Synthesis of organoarsenic compounds

Reactivity and Fire Risk:

- Extremely flammable gas, stable as shipped
- LEL: 4.5%; UEL 78%
- Vapor density (air = 1): 2.6 – 2.7
- Boiling point: -81°F
- Strong reducing agent
- Forms explosive mixtures with air and oxidizing agents
- Can form accidentally by the reaction of arsenic impurities with mineral acids (hydrochloric and sulfuric) in the presence of common metals
- Incompatibles include nitric acid, oxidizers, halogens, combustibles, and acids
- May explode when exposed to chlorine, nitric acid, or potassium plus ammonia

Health Hazards:

- IDLH: 3 ppm
- Odor threshold: 0.5 ppm
- OSHA PEL: 0.05 ppm, TWA
- Inhalation LC_{50} (rat, 1 hour): 178 ppm
- May be fatal if inhaled
- Concentrations in excess of 50 ppm are rapidly fatal (Praxair MSDS)
- Rapidly destroys red blood cells
- Symptoms may include dizziness, nausea,

vomiting, abdominal pain, breath may smell of garlic

- Symptoms may be delayed up to 48 hours

Fire Fighting Measures:

- Extinguishing media: Water spray, fog, foam, carbon dioxide, or dry chemical
- Heavier than air
- Vapors may travel to a distant source of ignition and flash back
- Do not extinguish fire unless flow can be stopped first, explosive re-ignition may occur
- Withdraw immediately if rising sound from venting safety device or discoloration of tanks due to fire
- No part of cylinder should be subjected to a temperature higher than 125°F

2008 Emergency Response Guidebook:

- DOT Hazard Classes: 2.3 (Toxic gas), 2.1 (Flammable gas)
- UN/NA: 2188; Guide # 119 Gases-Toxic-Flammable
- Small spill: First isolate 600 feet in all directions (Table 1)
- Large spill: First isolate 3,000 feet in all directions (Table 1)

2010 Oregon Fire Code: Table 2703.1.1(2)

- Highly toxic
- Maximum Allowable Quantities (MAQ) per control area: 20 cubic feet

Incident Reporting and Information:

- Facilities reporting arsine or arsine mixtures on the Hazardous Substance Information Survey: Eight
- Hazardous materials incidents reported in Oregon since 1986: None

References and incidents include:

[Praxair, Inc., Arsine MSDS](#)
[Airgas, Inc., Arsine MSDS](#)
[Matheson Tri-Gas, Inc., Arsine MSDS](#)
[NOAA CAMEO Chemicals – Arsine](#)
[“Arsine gas release July 2001” - article](#)

For questions or suggestions, contact Aleta Carte at 503-934-8262 or aleta.carte@state.or.us.

Lake Chinook F & R using technology to assist with fire detection

Lake Chinook Fire and Rescue (formerly Three Rivers Fire Protection District) is a fire protection district located on the south side of the Metolius arm of Lake Billy Chinook in Central Oregon. For years the agency has been using technology to aid in the detection and control of lightning-caused wildfires. Now a new partnership promises to enhance their fire detection ability and improve the protection of resources in their jurisdiction.

Pine Telephone System Inc., a local fiber optics company, created a webcam system for the district with cameras installed on top of their 90-foot communication/wi-fi tower located near the center of the Lake Chinook Fire & Rescue service area. This gives firefighters, incident commanders, and dispatchers a real time, 360 degree view of areas previously difficult to see.

The project, titled FireCam, provides a clear view of about 60 square miles of the rural areas around Lake Billy Chinook. The camera images are accessible 24 hours a day, 7 days a week, anywhere there is internet access.

In a recent study by the Oregon Department of Forestry, smoke detection cameras have proved to be a significant asset in fire detection. Camera detection of fires in their infancy allows for quicker response and more effective use of suppression resources. This reduces fire cost and resource damage.

"This is just another tool in our toolbox for early wildfire detection and rapid initial attack," explains Lake Chinook Fire Chief Don Colfels. "One of the valuable features of the webcams is that they are accessible from anywhere there is internet access including your vehicle or your smart phone. The remote-controlled cameras can pan east over the Crooked River National Grasslands, west to the Deschutes National Forest, and all of our private protection areas in between. State and federal partners may also access the cameras to improve views that fire lookouts may have a difficult time seeing."

For more information, contact Chief Don Colfels at 541-771-0992 or don@lakechinookfire.org.

Fire service guide on hoarding

The National Fire Protection Association has released a free guide for fire agencies on hoarding and how to effectively handle it.

Many fire departments are experiencing serious fires, injuries, and deaths as a result of compulsive hoarding behavior.

The excessive accumulation of materials in homes poses a significant threat to firefighters, other emergency responders, and to residents and neighbors. Often, the local fire department will be contacted to help deal with this serious issue. Since studies suggest that between three and five percent of the population are compulsive hoarders, fire departments must become familiar with this issue and how to effectively handle it.

[Download the free NFPA guide on hoarding here.](#)

Retirement

Boring Fire Chief Doug Branch has announced his retirement from the District effective December 31, 2012.

Division Chief Brian Stewart will be Acting Fire Chief while the board considers its next steps.



Chief Branch has been employed by the District since 1996, when he was appointed Assistant Chief. Prior to that, he worked his way through the ranks at Stayton Fire District where he had been the Assistant Fire Chief. He was promoted to Boring Fire Chief in June, 2004.

During his tenure he promoted cost-saving innovations including partnering with neighboring fire districts, in Sandy, Estacada, Hoodland, and with Clackamas Fire District 1. In 2006, he added cross-trained firefighter-paramedics to Boring's staff, and most recently he led the district's effort to partner with Clackamas Fire District 1 to jointly serve the Damascus community.

Chief Branch served as the 2011/12 President of the Oregon Fire Chiefs Association and currently serves as Past President.