Mission, Resources, and Proposed Collaborative Project

AOL Safety Conference
November 2014
Eugene, OR

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Oregon Institute of Occupational Health Sciences

Agenda

- What is OR-FACE
  - Mission
- Safety communication
  - Exercise
- AOL and OR-FACE collaboration

OR-FACE

OREgon Fatality Assessment & Control Evaluation

- NIOSH surveillance research program
  - Began in 1982
  - Expanded to states in 1992
- OR-FACE
  - Joined 14 other state programs in 2002
  - 2003 - 76 fatalities

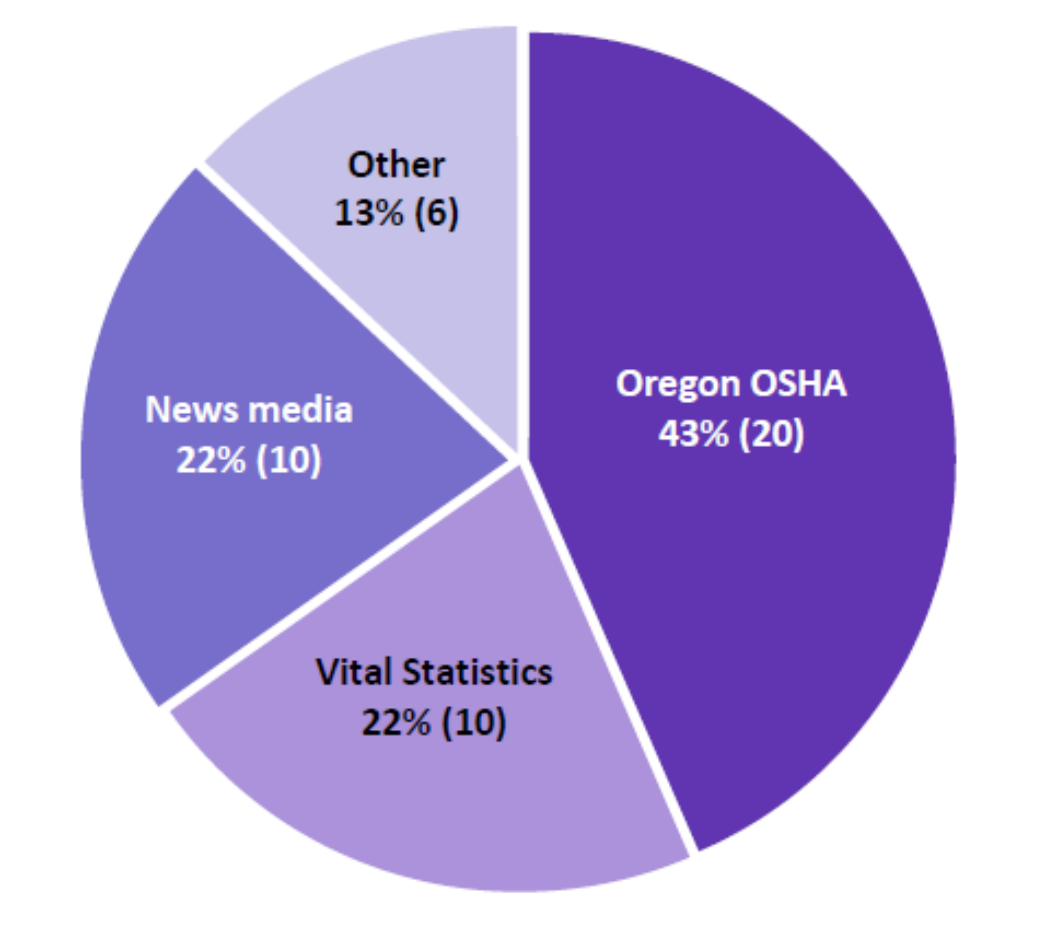
OR-FACE Mission

- Prevent occupational fatalities through
  - Surveillance
  - Targeted investigation,
  - Assessment
  - Outreach

Surveillance

Police reports
Coast Guard
CFOI
FAA

Google alerts

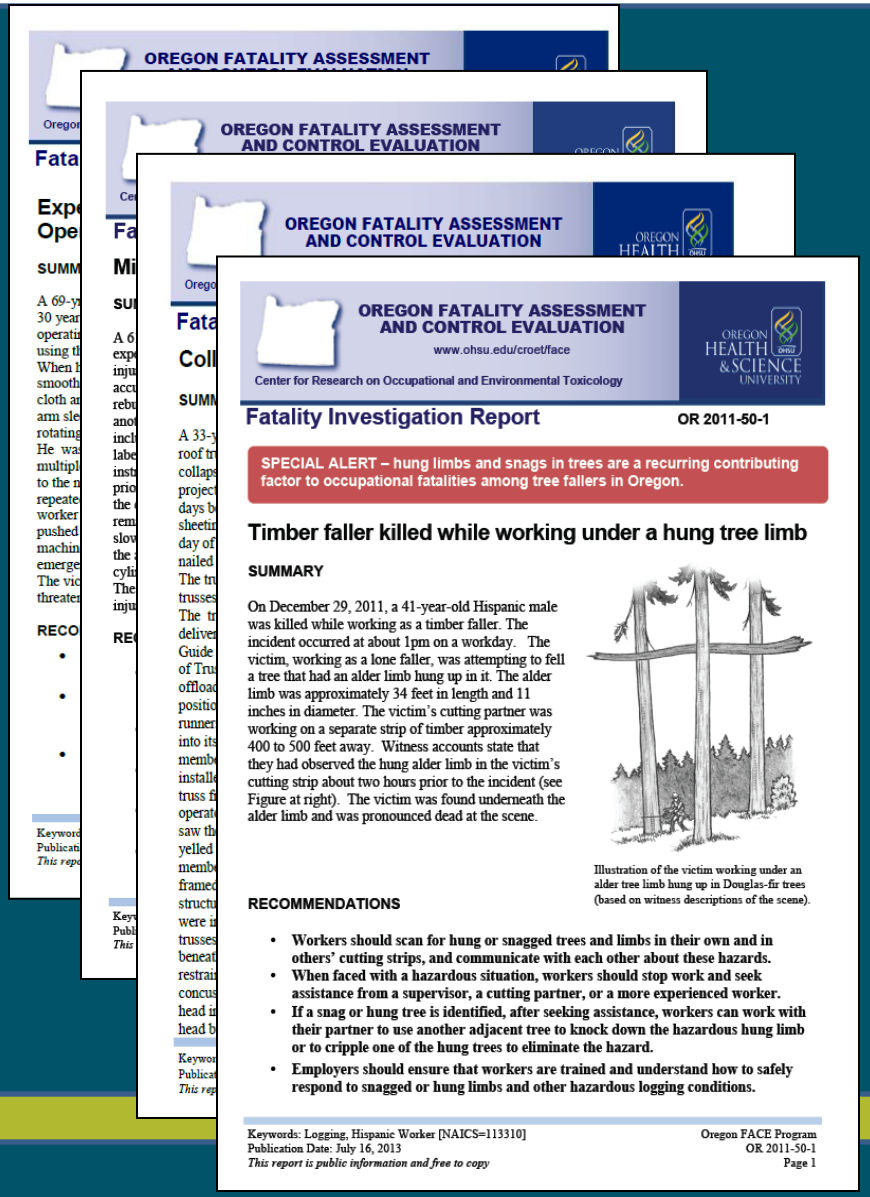


Death certificates
Medical examiner

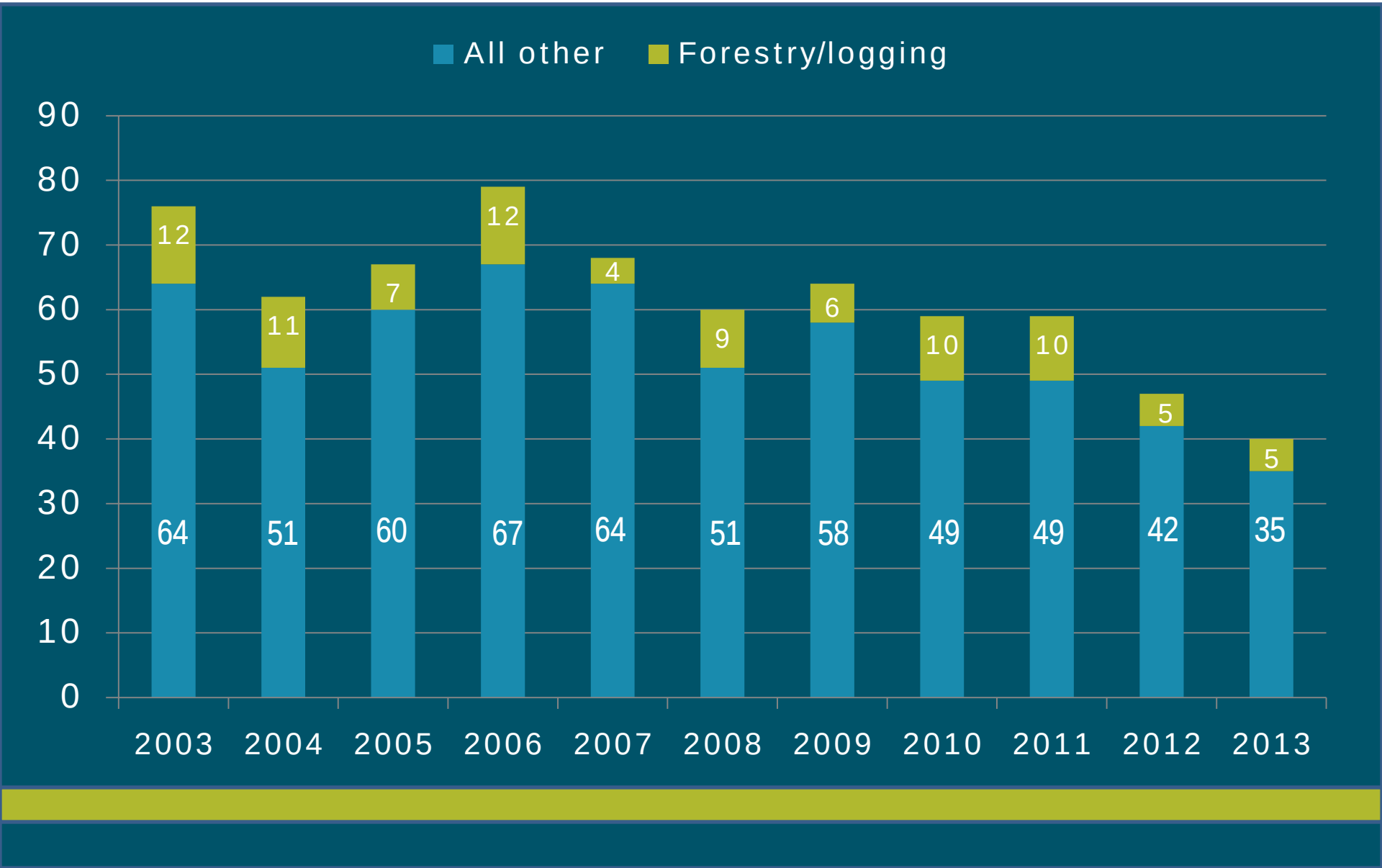
Investigations

Published (2013-2014)

1. Experienced journeyman machinist killed while operating an engine lathe
2. Millwright fatality involving a hydraulic accumulator
3. Timber faller killed while working under a hung tree limb
4. Collapsed roof trusses kill carpenter foreman



OR-FACE Cases



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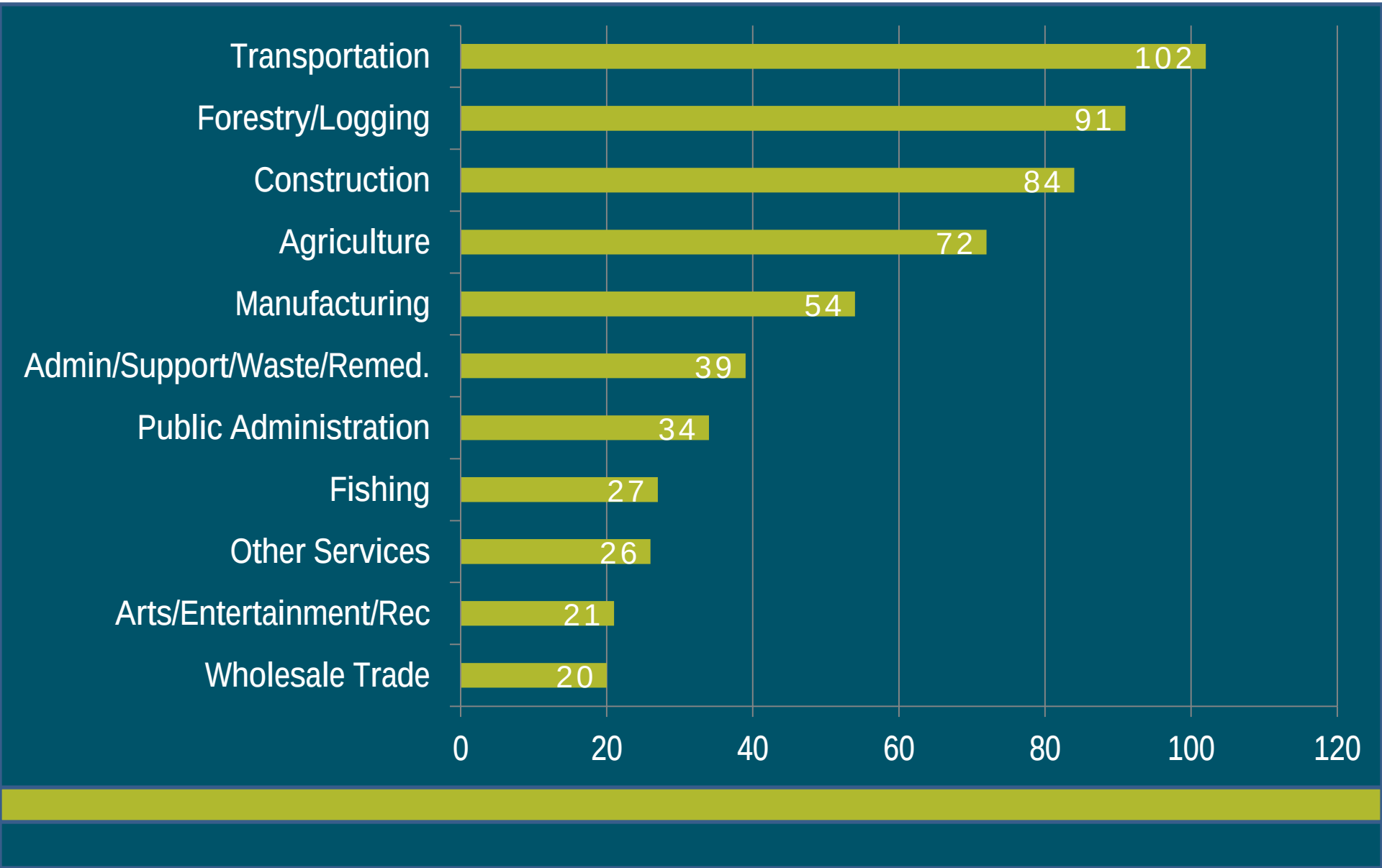
Worker fatalities in Oregon (2003-2013)
Top 10 industries in total number



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Outreach

- Website
- Publications
- Interventions
- Presentations

Website

OREGON HEALTH & SCIENCE UNIVERSITY

Where Healing, Teaching & Discovery Come Together

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OHSU Home > Research > Centers & Institutes > Oregon Institute of Occupational Health Sciences > Outreach & Education > OR-FACE

OR-FACE

- Investigation Reports
- Publications
- Incident Maps
- Incident Abstracts
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- Contact Us
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Search OR-FACE GO

QUICK LINKS

- Administration
- Cores & Shared Resources
- Funding
- Research Expertise
- Research Calendar

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Oregon FACE

The Oregon Occupational Fatality Assessment and Control Evaluation (OR-FACE) Program is a National Institute for Occupational Safety and Health (NIOSH) sponsored program designed to prevent occupational fatalities through surveillance, targeted investigation, assessment, and outreach associated with traumatic work-related deaths in Oregon.

NEWS AND UPDATES

September 2014:

During 2000-2009 70% of commercial fishing deaths off the US West coast were caused by drowning. Dungeness crab fisheries had the highest number of fatalities. Falls overboard accounted for 24% of all fatalities. None of the victim of falls overboard were wearing personal flotation device.

A Crab fishing hazard alert was published with safety tips and fatal stories of three Oregon commercial fishermen.

Four more toolbox talk guides were added to the website: (1) Load of lumber shifts and falls on construction worker; (2) Truck driver crushed between semi-trailer and loading dock; (3) Mechanic killed by excavator bucket; and (4) Excavation worker killed by flying rigging when hook fails.

July 2014: OR-FACE published Fatality Investigation Report OR 2013-27-1, "Collapsed roof trusses kill carpenter foreman."

June 2014: OR-FACE published three Toolbox Talk guides based on occupational fatalities in logging: Logger Killed Under Rigging When Carriage Drops, Timber Faller Killed While Working Under a Hung Tree Limb, and Logger Killed by Falling Sheave When Yarder Tower Collapses. The OR-FACE website highlights the National Safety Stand-Down to Prevent Falls in Construction and provides a direct link to resources.

April 2014: OR-FACE published an investigation report,

FEATURED INVESTIGATION REPORT

Collapsed roof trusses kill carpenter foreman (published July 2014)

OR-FACE ANNUAL REPORTS

2012 | 2011 | 2010 | 2009

2008 | 2007 | 2006

2005 | 2004 | 2003

All links above are PDF's. To ensure accurate fatality surveillance, each Annual Report is closed out and published approximately 18 months after the end of a study year. The projected release date for the 2013 Annual Report is July 2015.

CONSTRUCTION FATALITY VIDEOS

The Center for Construction Research and Training (CPWR) created three short videos, each based NIOSH FACE construction fatality reports.

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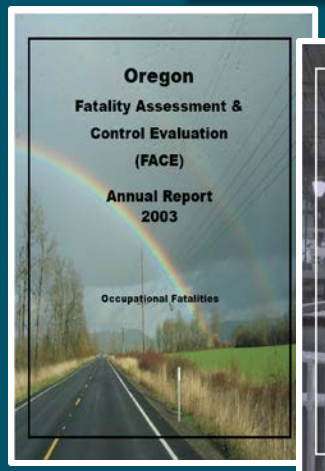
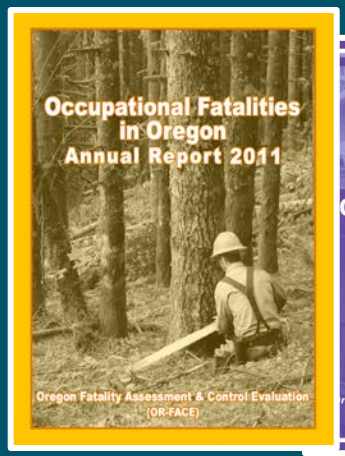
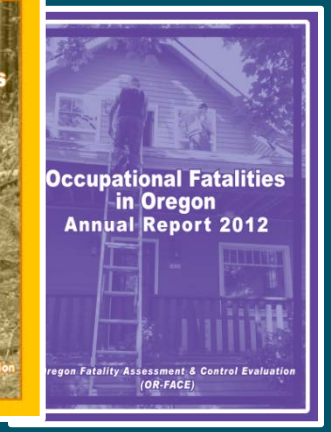
Publications

Annual Reports





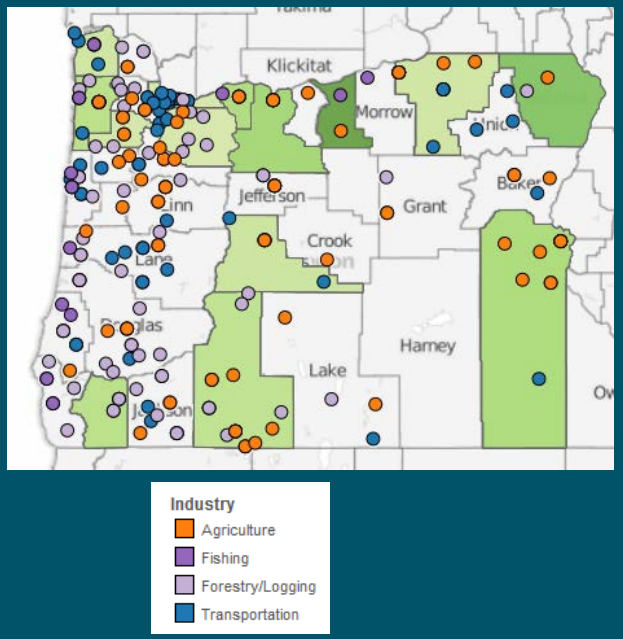


- Published 18 months
- Abstract of cases
- Based on report review
  - OSHA investigation
  - Police investigation
  - Medical examiner
    - Pathology
    - Toxicology
  - National Transportation Safety Board
  - US Coast Guard

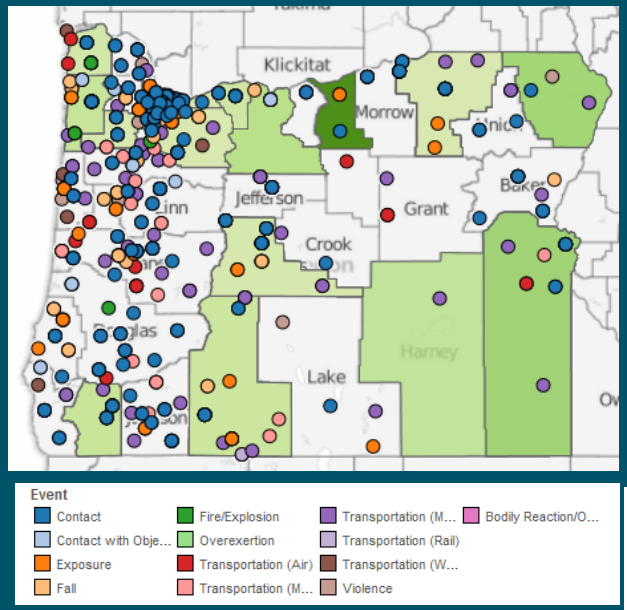
Publications

Interactive Maps (2003-2012)

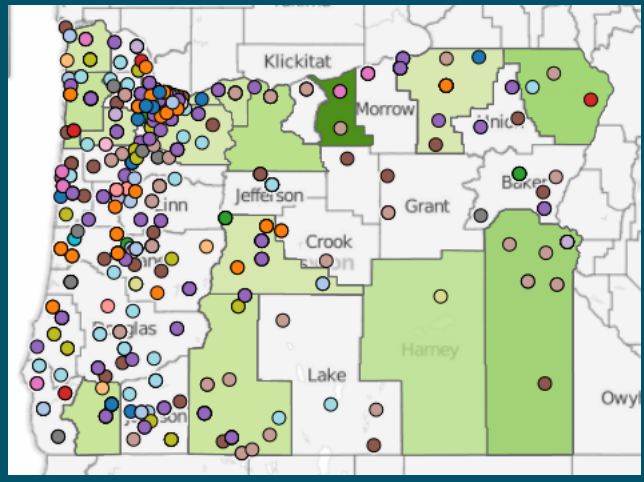
Industry



Event



Occupation



Publications

Hazard Alerts

OR-FACE Fatality Alert

November 2003

OHSU OREGON HEALTH & SCIENCE UNIVERSITY

Truck mounted pile driver pre
electrocution hazard

Incorrectly spotting for overhead
fatal electrocution

OR-FACE Crab Fishing Hazard

Please observe the following safety tips:

- Wear personal flotation device whenever on deck
- Train crew on man-overboard procedures and pra
- Use the most current weather forecasts and bar in
- Use personal locator beacons that are water activa
- Get vessel stability evaluations to aid in loading p
- Utilize Coast Guard vessel inspections

Fatal Stories

PLEASE POST

Oregon Fatality Assessment and Control Evalu

OR-FACE

Snag Hazard Alert

From 2010 to 2013, 10 Oregon workers in the Logging and Forestry industries died after being struck by trees. Hung limbs and snags in trees are a recurring contributing factor to occupational fatalities among tree fallers in Oregon.

Please observe the following safety tips:

- Scan for hung or snagged trees and limbs in your own and others' cutting strips and communicate with each other about these hazards.
- When faced with a hazardous situation, stop work and seek assistance from a supervisor, a cutting partner, or a more experienced worker.
- If a snag or hang-up is identified, after seeking assistance, work with your partner to identify the best method for alleviating the hung limb, tree or snag (OR-OSHA prohibits working under a lodged tree or the cutting of a tree where another tree is lodged in it).
- Employers should ensure that workers are trained and understand how to safely respond to snagged or hung limbs and other hazardous logging conditions.

Fatal Stories

Case 1: A 28-year-old self-employed tree cutter was killed after he was struck by a dislodged treetop and crushed between previously felled logs and underbrush. The victim had cut a small second growth tree, but it had hung up in another tree as it fell. He was attempting to fall another larger tree when the lodged tree broke free and fell on him

Case 2: A 51-year-old logger was killed after he was struck by a falling snag that was caught in the tree he was cutting. He was working on a steep hillside, and his partner was 250-300 yards away. His partner searched for the victim after he had not heard the victim's saw in 40 minutes. He found the victim dead with a tree on top of him. The victim had 25 years of logging experience.

Case 3: A 48-year-old tree faller was killed after a snagged tree fell on top of him. The victim was working as an independent contractor cutting trees. He had just felled a large tree on a hillside, which uprooted a rotten tree on its way down. The rotten tree hit the victim from behind and pinned him underneath. He was working alone at the time of the incident. The victim died at the scene from crushing injuries.

Case 4: A 41-year-old logger was killed after he was struck in the back by a falling tree. The victim was working as part of a two person logging crew, cutting alder trees on private logging land. In twenty-minute intervals, each worker would turn off their saw to listen for their partner's saw. The victim's partner performed this safety check, but did not hear his partner's saw. He went to check on the victim and found him face down with a 12-inch diameter and 34-foot long treetop across his back. Apparently, when the victim cut down his last tree, it collided with a nearby tree, which caused the top of that nearby tree to break apart and fall over onto the victim. The victim was conscious when his partner found him, but died on his way to the hospital. He died from head and chest trauma.

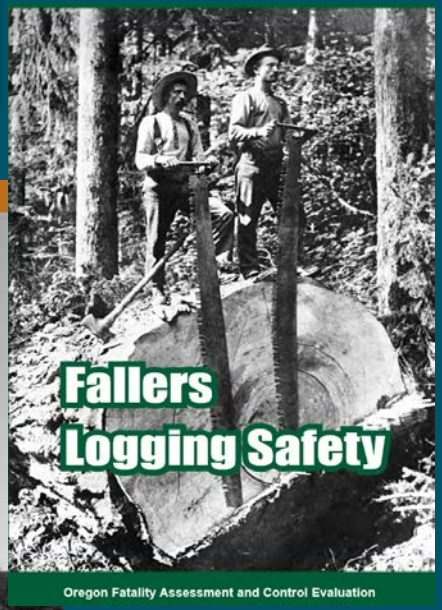
PLEASE POST

Oregon Fatality Assessment and Control Evaluation
503-494-2281 www.ohsu.edu/croet/face

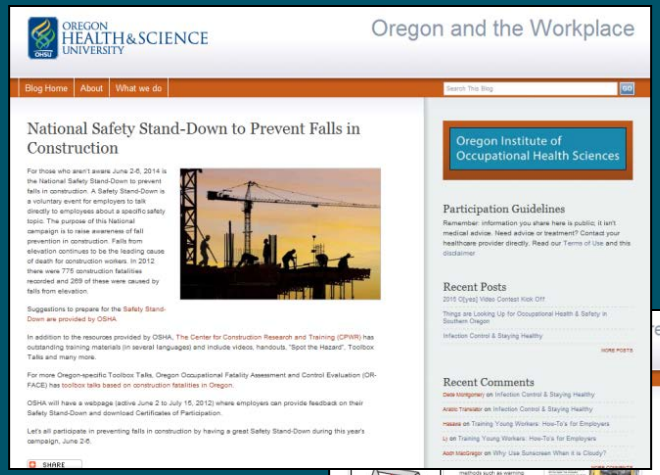
- Multi-page one incident
- One page
  - Bulleted recommendations
  - Abstract of similar cases

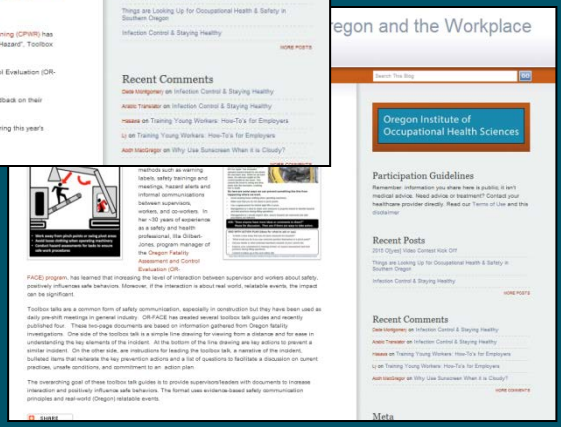
Publications

Brochures



Blogs





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Safety Communication

"You know safety, but admit it….you don't know communication"

– Dr. TJ Larkin & Sandar Larkin

Study

- 4 separate companies
- 8 frontline supervisors
- 24 total pieces of safety communication

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Safety Communication

- Safety communication in refineries is at 16th grade level (4% of US population can understand)
- Technical communicators recommend
  - 5th-7th grade level
  - Optimizes percent who can understand

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Safety Communication

Recommendations

- Use pictures
  - Increase comprehension (often by 100%)
  - Several pictures if subject is complex

Supervisors Can Use This Communication Immediately

Hanging Like This May Kill Him

Surviving the fall is not the only danger
Hanging in the harness is dangerous too

Hanging like this, it takes about...
5 minutes to go unconscious
Less than 30 minutes to die

Get him down quickly
He's not OK

If he's conscious tell him
to keep moving his legs

Legs are the problem:
Blood pools into his legs
If his legs don't move, blood stays there
Heart can't pump blood to his head
First, he faints
Then, he dies

When he's down...
Don't Do This

His legs are full of too much "blue" blood.
If all that blood, with no oxgyen in it,
suddenly pours into this heart, it could kill
him.

When he's down...
Sit or Kneel

Don't lay him flat.
Keep him propped up in a sitting position.
No lying down for at least 20 minutes.
Give his heart time to adjust.

Source: Adapted from Seddon

"Few things in communication research are know with certainty, here is one of them:

Adding crude drawing to text brings huge increases in comprehension."

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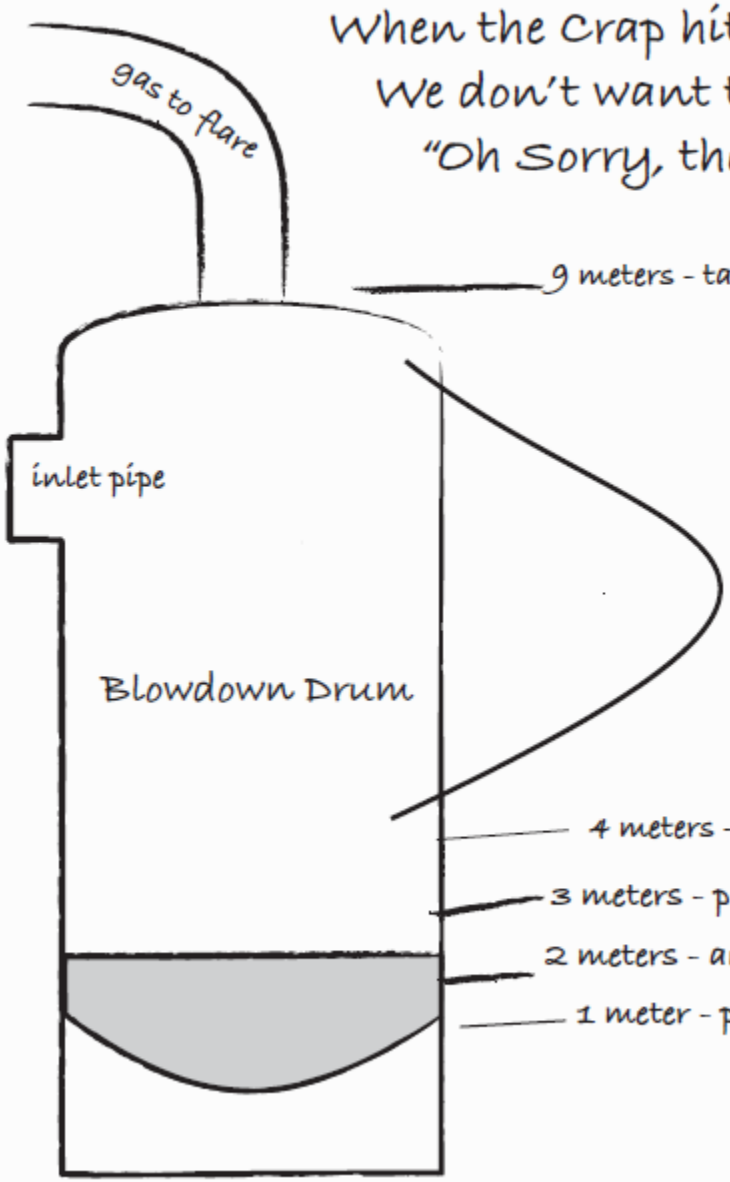
Safety Communication

Recommendations

- Use simple text
  - Never more than one page
  - Lots of white space
- Communicate as if you were human

When the Crap hits the fan....
We don't want to Hear.....
"Oh Sorry, the blowdown drum is full."



Does everyone understand?

This space can save our neck when things go wrong.

We need these 5 m. empty.

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Exercise

- Form teams
  - Some members do a stick drawing
  - Some members write text to explain

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Exercise

A 41-year-old logger was killed after he was struck in the back by a falling tree. The victim was working as part of a two person logging crew, cutting alder trees on private logging land. In twenty-minute intervals, each worker would turn off their saw to listen for their partner's saw. The victim's partner performed this safety check, but did not hear his partner's saw. He went to check on the victim and found him face down with a 12-inch diameter and 34-foot long treetop across his back. Apparently, when the victim cut down his last tree, it collided with a nearby tree, which caused the top of that nearby tree to break apart and fall over onto the victim. The victim was conscious when his partner found him, but died on his way to the hospital. He died from head and chest trauma

Safety Communication

Recommendations continued

- Communication channel
  - Paper best for comprehension
  - Face-to-face best for change

Toolbox Talk Guides

scripted story for supervisors to read

Bold high urgency alert word on colored background

Simple line drawings increase understanding by 113%

Hazards clearly identified in drawing

Preventive actions bullet pointed

Toolbox Talk Guide OR-FACE ohsu.edu/croet/face

Logger Killed by Falling Sheave When Yarder Tower Collapses

INSTRUCTIONS: Hold the guide with the [illegible] facing you and the other side facing your crew. Then read the s[illegible].

Our safety talk today is about a 42-year-old logger who was killed after being struck in the head by a falling sheave. The logger was standing in the landing zone when one guyline slipped off its anchor stump, and a second guyline slipped off when its anchor stump came out of the ground. This caused the tower of a yarder to collapse and strike the boom of the delimber. There was a cable pulley system attached to the delimber, and the impact of the delimber's collapsed tower caused a sheave to fall off the boom and strike the victim in the head. He died of acute head trauma.

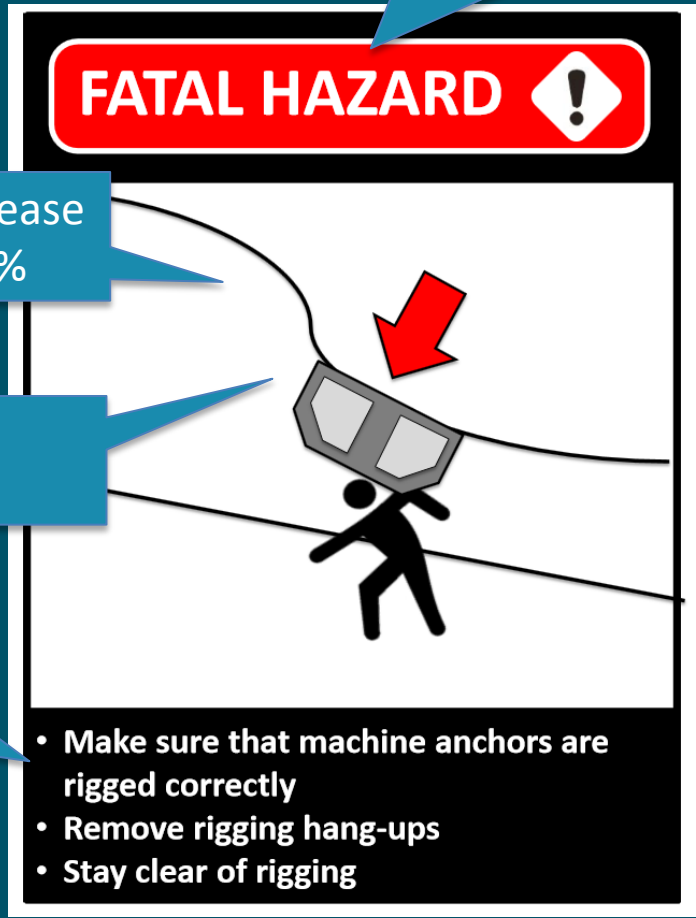
So here are some ways we can prevent something like this f[illegible] happening where we work:

- Plan the landing site for yarding requirements beforehand to ensure that [illegible] maintain sufficient safe distance.
- Make sure to check that anchor stumps are at the correct height to secu[illegible] and the guylines will not interfere with decking the logs at the landing.
- Follow manufacturer's' recommendations for setting up guylines.
- Have a competent person check guyline anchors daily, before and during operation.
- Make sure that there is deflection in the skyline to reduce stress on the yarder tower.

ASK: "Does anyone have more ideas or comments to share?" Pause for discussion. Then see if there are ways to take action.

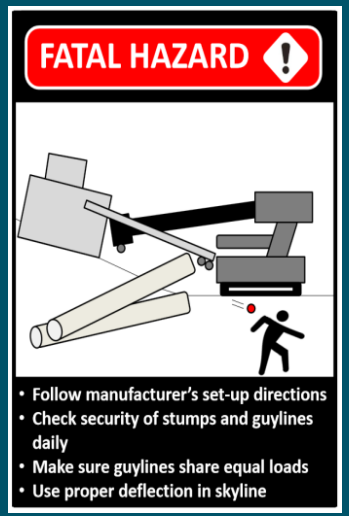
END WITH ACTION PLAN (ideas for what to ask or say).

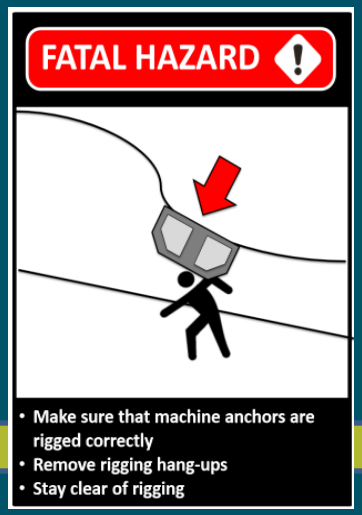
- "Have we checked the guyline anchors today? Are the anchor stumps the[illegible] height?"
- "Does anyone know the manufacturer's recommendations for setting up g[illegible]
- "What do you all do to set-up the landing site for yarding?"
- Discuss a similar situation at your current site.
- Express your commitment to train people on how to plan the landing site for yarding and the manufacturer's recommendations for setting up guylines.
- Commit to follow-up at the next safety talk.



Publications

Published





Draft

Proposed Collaboration

- **Mobile system to promote and evaluate**
  - **toolbox talks**
  - **hazard alerts**
- **Format – what would be best**
  - Voice (story)
  - Email
  - Picture

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Questions?