2014 Incident Review Summary

Wildland Fire Lessons Learned Center Established 2002

Pole Creek Prescribed Fire FLA

"The Sawyer's leg and foot were violently pinched between the cut pieces as the bole jolted downslope; while the limbs snagged the Squad Leader and he rode down the slope on top of the log."

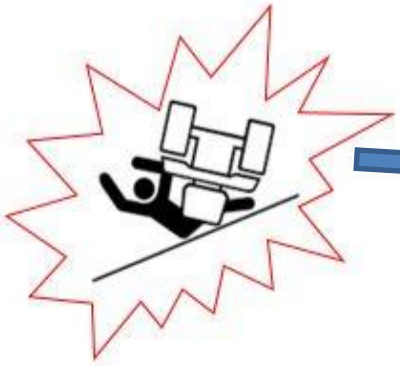
South Cle Elem Bucking RLS

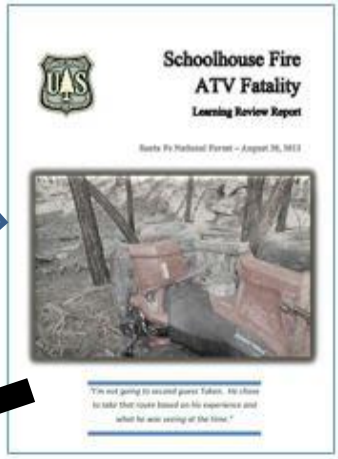
Contents

This report is based on lots of other reports.

It summarizes some numbers and a few lessons.

But this report is **useless** without the action required on **your** part to finish the process.





Critical Connection

We collect lessons.

You APPLY them.

Deception Forwarder RLS

?

S. Fork Hydro-Ax Rollover RLS

"Good decisions are made from experience, but experience is gained from bad decisions."

Engine Crew Firefighter [Lost Ridge RLS]

1. Introduction

The information in this report comes from wildland fire incidents—from various agencies—submitted to and gathered by the Wildland Fire Lessons Learned Center (LLC) during 2014. (Most of these reports have been posted to the LCC's Incident Reviews Database.)

[Tonahutu Mitigation RLS]

Topics for Training

Our intent is for this report to inform your upcoming training topics and discussions. Please put forth the effort to make this information relevant to those you work with on a daily basis.

Do the work to create realistic medical emergency egress.

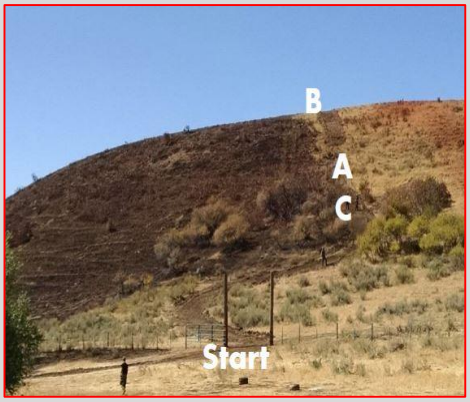
Multiple 2014 incidents involved the successful use of medical emergency plans, including two cases of cutting a P-Line "just in case" and then really needing it and using it. Do you go through the effort to cut a P-Line "just in case"?

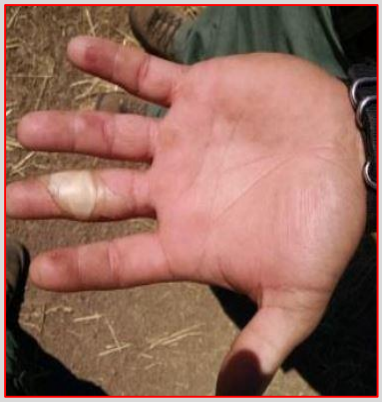
In addition, a large percentage of incidents occurred while operating chainsaws. Most resulted in someone being hit by a tree or cut with the saw. Chainsaw use involves additional risk. Are you giving it the concentration it deserves?

As you read through this report, look for this Action Icon. This identifies a suggested action related to the lesson or topic.

"Next time, I'll ask myself: Do I really need an ATV/UTV to accomplish this mission?"

[Monroe Fire Heat Damaged ATV]





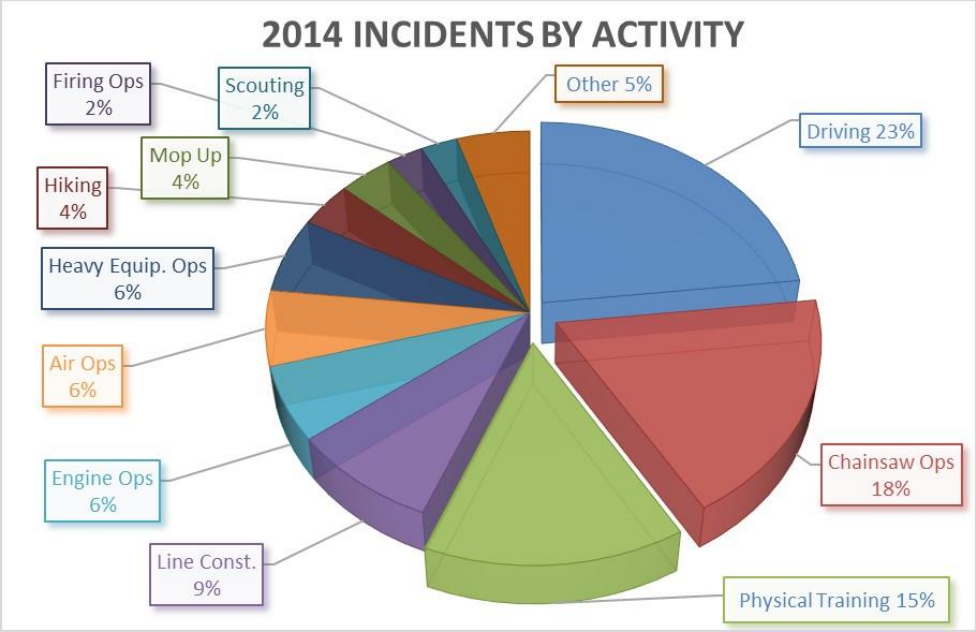
2. Incident Activities and Outcomes

Activity and Outcome

"Activity" and "Outcome"—is there any relation? Sometimes.

One example: If the Activity is "Driving" and the Outcome is "Medical Emergency", is the heart attack related to the driving? We don't know. Conversely, if the Activity is "Chainsaw Ops" and the Outcome is "Hit by Tree", it's easier to see the relation.

The point is there's a difference between what someone was doing and what triggered a report being written. But it's still up to you to decide if it means anything.



Physical Training (PT)

Half (6 of 12) of the PT incidents reported were Rhabdomyolysis cases.

Do you know what the symptoms are?

"The Helibase Foreman had to 'lead' the physician at the hospital to a Rhabdo diagnosis."

PT Rhabdo Sled Springs RLS

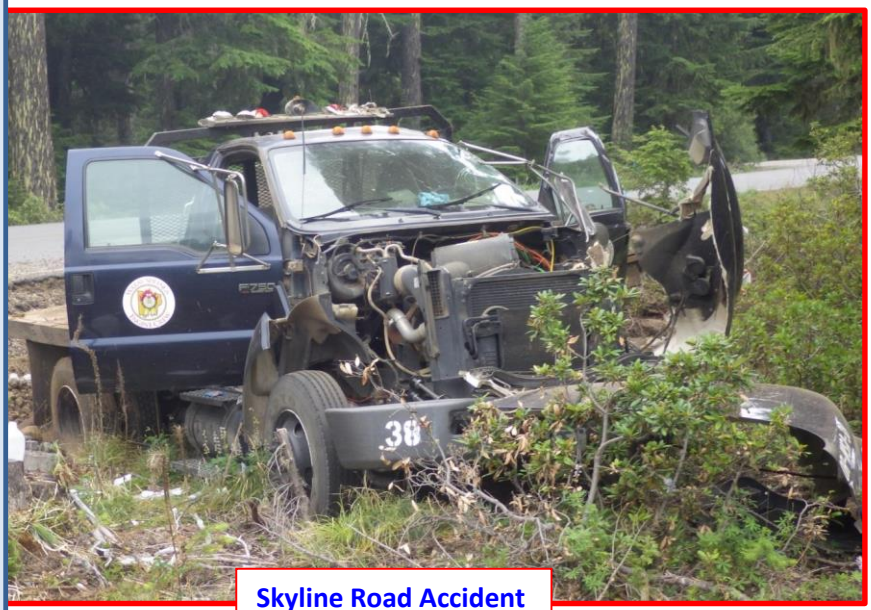
Read these two short lessons on PT incidents:

PT Rhabdo 2014
Sled Springs Rhabdo RLS

Based on these real-life events, design a medical emergency scenario to be conducted during an upcoming PT session.

- **Include "Murphy's Law".**
- **Be sure to build time for the AAR.**
- **Take follow-up actions based on AAR discussion.**

Remember, the point is not the *scenario* itself, it's the *improvement* that results from doing it.



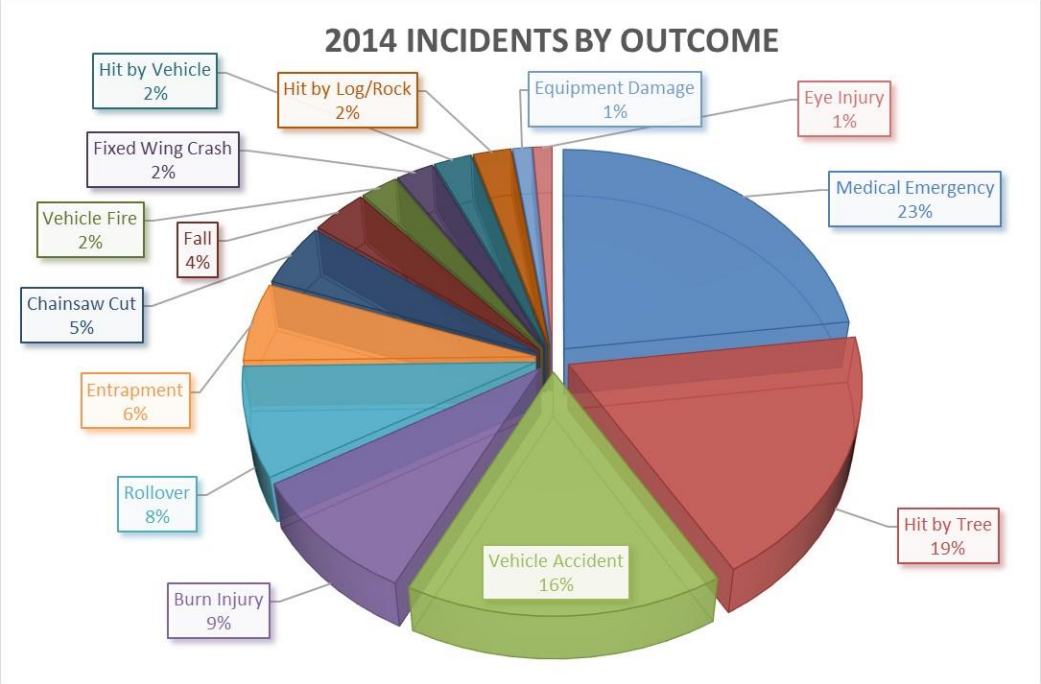
Skyline Road Accident

67% of these incidents involved time at the hospital.

Do you know what a "Hospital Liaison" or "Patient Advocate" is?

Do you need one?

Do you know how to get one?



"The Home Unit should have a policy in place to provide support from home."
Rim Fire Burn Injury FLA

Take a look at these two short reports:
http://bit.ly/Hospital_Liaison_2014
http://bit.ly/RimFireBurnInjury

- **Write down your crew procedures for a hospital visit.**
- **Plan for hospital trips both at the home unit and on the road.**
- **Get specific.**
- **Talk with folks who have been through this to help identify past problems/solutions.**
- **Make a list of steps (who to contact, what to ask for, etc.). Put it in a format you can text or email when it's needed.**

Freezeout Ridge Fire FLA

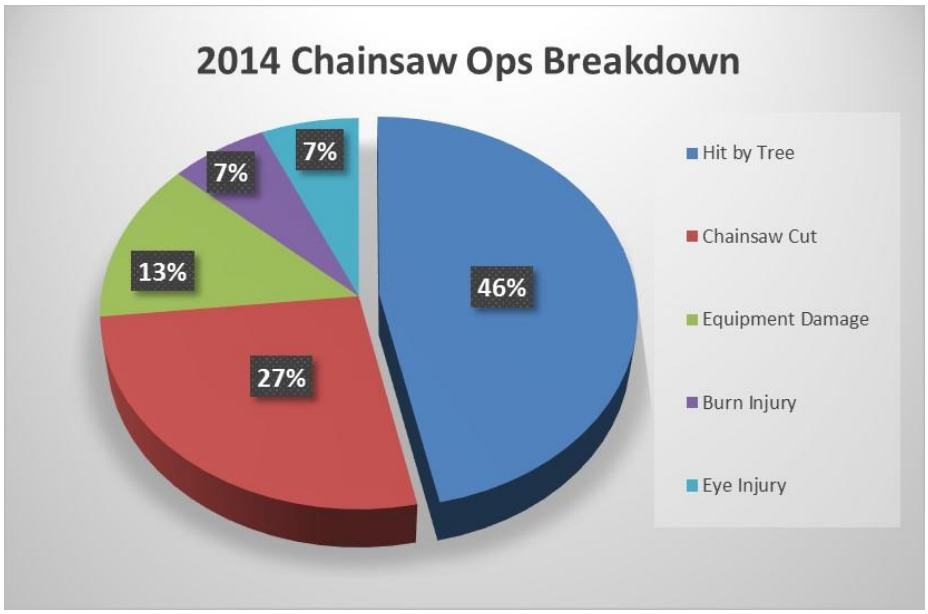
3. Chainsaw Ops and Hit By Trees

"Chainsaw Ops" and "Hit By Trees" Represent Two Different Categories

More than half of the "Chainsaw Ops" reports were NOT instances of getting hit by a tree. Similarly, half of the "Hit By Tree" reports did not involve a chainsaw (nobody was cutting on a tree).

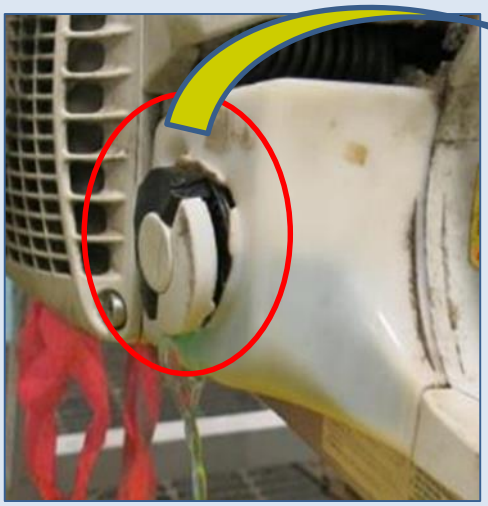
One way to think of this is *"what gets us when we are operating chainsaws"* vs. *"what are we doing when we get hit by trees".*

The point here is, when running a saw there's more to worry about than getting smacked by a tree. And, just because you are not actively cutting on a tree doesn't mean you shouldn't worry about getting smashed by one!



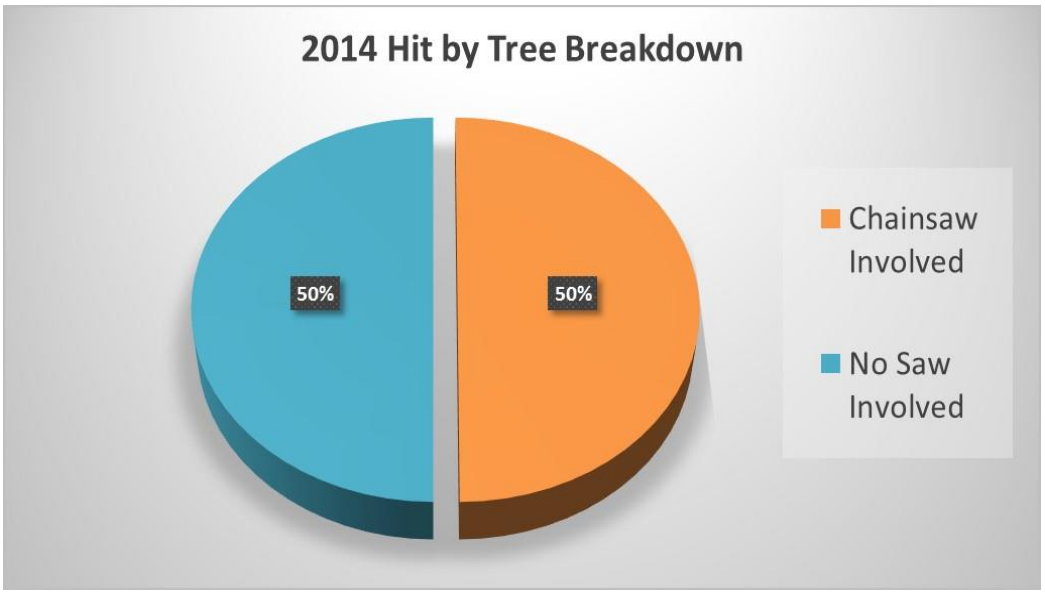
A lesson from someone who got sprayed in the eyes with fuel.
2014 Vapor Lock RLS

If your saw is suspected to have a vapor lock, place a rag—or other covering—over the cap when opening it.



It may sound funny, but develop and PRACTICE your fueling procedure. Know how your caps work. A fuel cap popping off can be more than inconvenient. It can land you in a burn center with a life-altering injury:

Rock Ridge Burn Injury



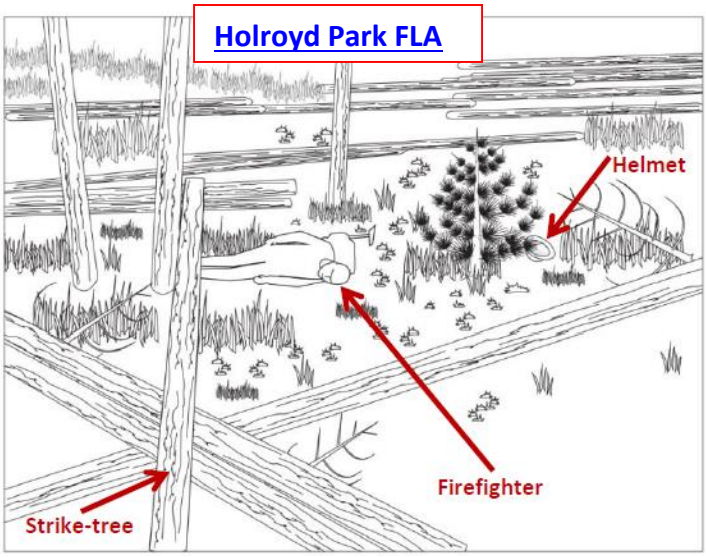
Several of these instances, both chainsaw and no chainsaw, involved the dilemma of reducing margin to increase production.

Examples include cutting a "P-Line" for extraction before starting containment line or not waiting for falling saws to get way out in front. This is a constant friction point.

Knowing this, **hold a crew discussion** addressing these points:

- **What is the crew formation for prepping?**
- **Who decides if a "P-Line" is needed?**
- **Who will address overhead questions on production?**

Holroyd Park FLA



Quaking Fire FLA

Lessons from the Johnson Bar FLA

- "It is OK to have a few folks standing around waiting until we get spread out doing our task." "It is possible that there is a mentality that we all need to start working right away." "After the incident we toned things down and slowed up a bit, making sure folks were talking, communicating, etc."
- "It may be better to have two saws up front doing all the falling, and having two other saws behind doing the bucking for folks chaining the debris." "This would build in the distance needed between the fallers and the crew."
- "Bottom line, 2½ tree lengths is something we say we do, but do we always do it?" "We do with big trees but maybe not so much when dealing with small trees." "We need to stay vigilant."

4. Ten Years of Rollovers

During the past ten years, we have on record 62 different rollover accidents, including 7 fatalities. The vast majority (60%) consisted of Watertenders and Heavy Equipment, including 6 of the 7 fatalities.

Heavy Equipment bosses, Task Force Leaders, and Division Sups, are you as concerned as you should be to have this equipment under your supervision? Know the risk and the consequences of what you ask equipment operators to do.

The Contractor's Dilemma

We tell folks: *"If you see something say something."* Is this realistic? Sure, in some instances. Like noticing a spot fire. We all welcome that type of information—no matter who is saying it: first-year seasonal, the weed wash operator, or salty old hotshot.

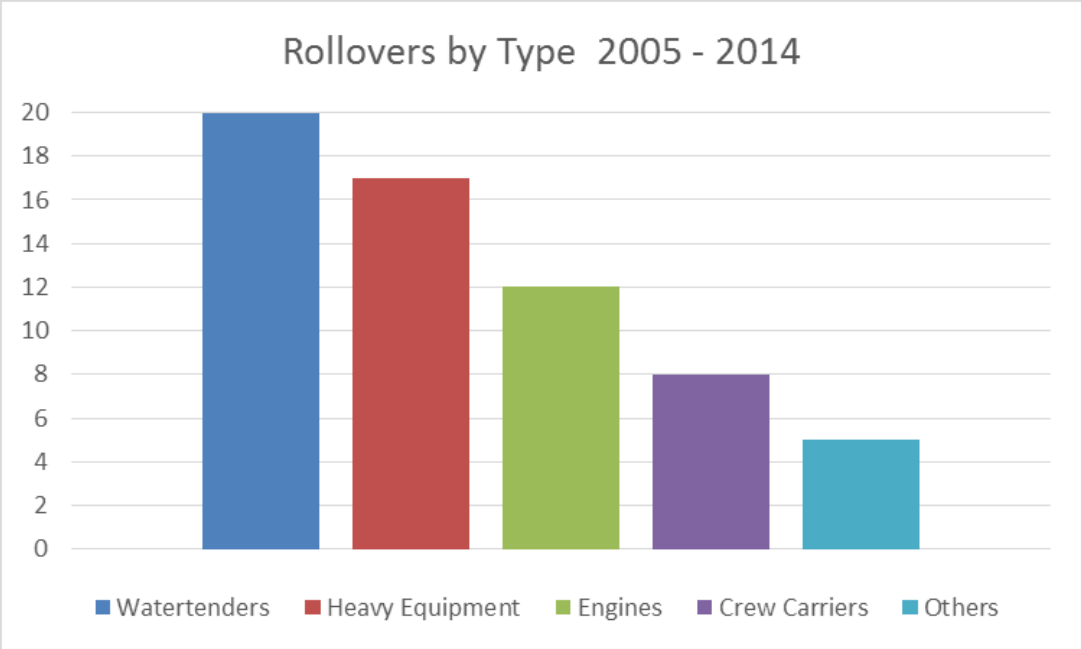
But when voicing concerns about the risk involved on any given assignment, not everyone is on a level playing field. Contractors, in particular, are at a disadvantage.

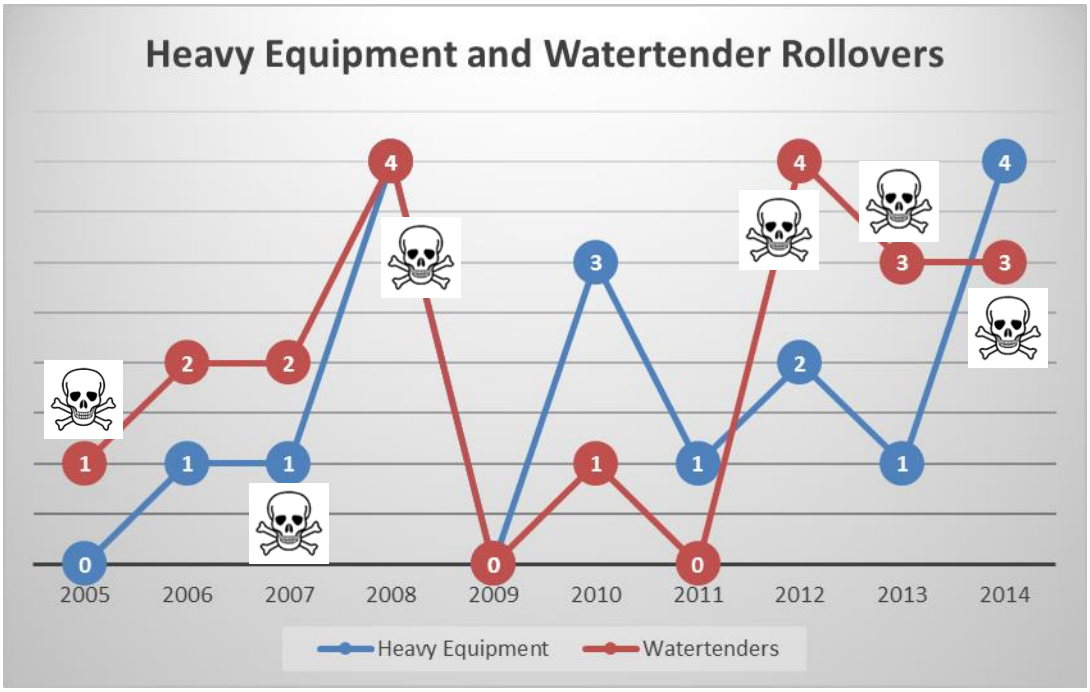
Contractors have to worry about their evaluation—which drives their ability to get work. If a contractor voices a concern over an assignment, some would use this as reason to give a poor evaluation.

This can lead to a decision to *"just do what's asked and hope for the best"* as a way to avoid misunderstanding or conflict.

Acknowledge that this dilemma exists. Talk about it with overhead and other resources.

Generate Solutions.

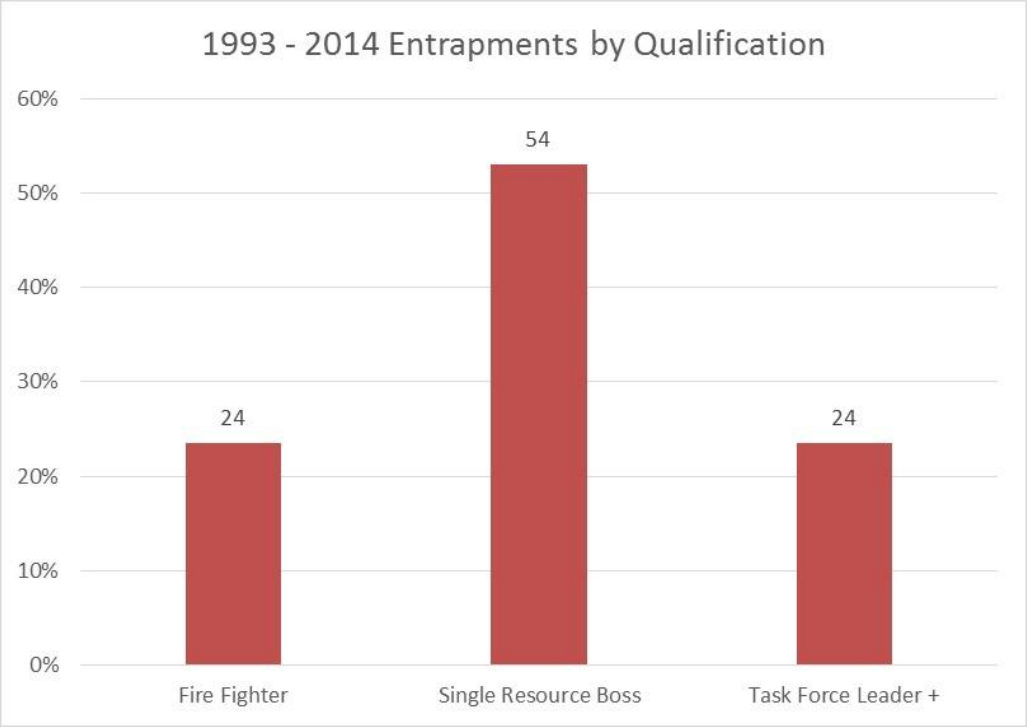




Yes. Each skull indicates a fatality. That's SIX fatalities in ten years.

5. Entrapments By Highest Position Qualification

Have you ever heard that the most dangerous portions of your fire career are the first 3 years and after 15 years? The logic behind this notion is at first you *"don't know what you don't know"* and then you eventually think *"you've seen it all".* Although this notion intuitively appeals to us, there is no proof that it is true. Reports do not consistently contain information about "years of service", but they usually include positions of those involved. Qualifications do not necessarily correlate with years of service, but they do reflect a certain level of experience.



The data used for this graph consisted of the HIGHEST position qualification present at each entrapment. A total of 102 different entrapment incidents were used.

Some might interpret this as exactly the *opposite* of the notion mentioned above (first 3 – after 15). One could argue we are most vulnerable during the *middle* part of our careers—the time one spends as a single resource boss.

Maybe this has more to do with the types of assignments we engage in and nothing at all to do with our experience or perspective.

What do YOU think?

If You Were Entrapped . . .

Imagine you have just been cut off from your escape routes and you are reaching for your fire shelter. Based on what you do and how you operate, what is the most likely scenario for this to occur? Is it while scouting ahead of the crew? Is it during late night structure triage/evacuation? Is it during an initial attack firing operation at 1500? When is it that you really "hang it out there?" Have this discussion with your crew or those in similar positions as yourself. Decide what those times look like. And then:

- Agree on a word or phrase that quickly conveys the message. Something like *"No margin"* or *"We're going all in"*. This can be anything you want—as long as you all know what it means.
- Use this phrase to trigger a tactical pause. Just take a moment to reflect on what's going on, what's at risk, and if you have all your bases covered.
- Set up a sand table exercise where the whole point is for someone—anyone—to speak up and say the agreed upon phrase. The point is to get better at recognizing those moments as they emerge, alert others to the situation, and trigger a tactical pause.