

# LSI Employer Annual Training



*November/December 2018*

# Agenda

Time	Topic	Presenter
8:00am-8:05am	Welcome	Beth Covert
8:05am-8:45am	<b>LSI Program Updates</b> <ul style="list-style-type: none"> <li>• Program Updates</li> <li>• Tier 3 Recertification</li> </ul>	Beth Covert
8:45am-9:00	LSI Brainstorming Activity	Beth Covert
9:00am-9:45am	Workers Compensation Audit Findings and Independent Contracting	Greg Barckley
9:45am-10:00am	BREAK	
10:00am-11:00am	Near Miss and Incident Investigation Best Practices	Landowner Representative
11:00am-11:45am	Tethered Logging Best Management Practices	Beth Covert
11:45am-noon	Questions and Wrap Up	Beth Covert

# LSI PROGRAM UPDATE

***Beth Covert***



# LSI Program Update

- Companies participating in LSI: 102
  - Tier 1: 4
  - Tier 2: 2
  - Tier 3: 97
  - Withdrawn: 53
  - Terminated: 16
- Landowners registered for LSI: 9
- 72 companies have become recertified in the program.



# Recertification Technical Audits

- 4849 hours have been added to the 5001 risk class.
- 1494.5 hours were removed and added to other risk classes.
  - Two companies have been terminated due to repeat findings during technical audits.
    - Independent contractor misreporting
    - Misclassification of supervisor hours.
- 3554.5 hours stayed in 5001 risk class

# What's New?

- Conducting outreach with Dept. of Natural Resources
  - Small Forest Landowner Advisory Committee
  - Timber Fish and Wildlife Meeting
  - St. Helens Region
- Visioning the goals of the program for the next five years.
- Implement joint visits with L&I RISK and Consultation for higher-risk companies in the program.

# BRAINSTORMING ACTIVITY

***Beth Covert***

# Share your Ideas to Improve LSI

- What kind of training opportunities do you want from LSI?
- How can the LSI program improve safety accountability among enrollees?
- How can the program reward safety and not just participation?
- What else?

# Questions and Contact Information

- Any Questions?
- Logger Safety Initiative Contact:  
Beth Covert  
360-902-5607  
[www.loggersafety@lni.wa.gov](mailto:www.loggersafety@lni.wa.gov)

# Hiring Independent Contractors

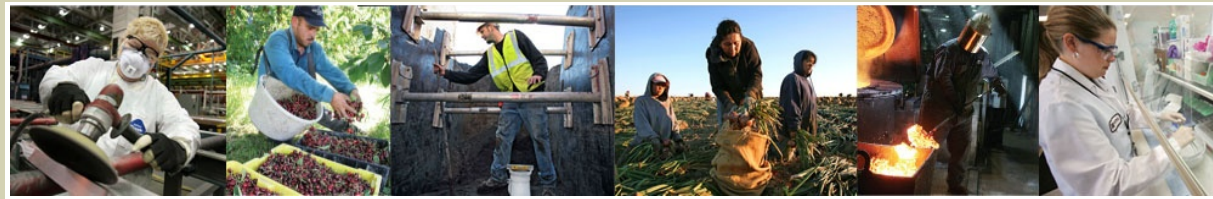
## You may be an Employer and not know it!

Presented By:

**Greg Barckley**

**(360) 902-5578 / [Gregory.Barckley@lni.wa.gov](mailto:Gregory.Barckley@lni.wa.gov)**



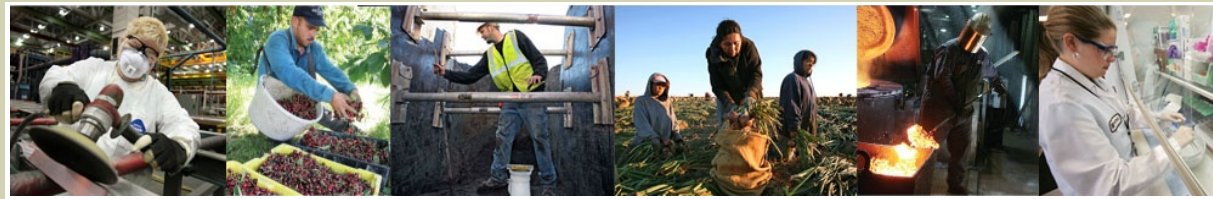


## **Testing for Independent Contractors:**

**RCW 51.08.180. Testing for the essence of the contract being more than personal labor.**

**RCW 51.08.181. Seven part test for independent contractors who provide services in the construction industry.**

**RCW 51.08.195. Six part test is for independent contractors who provide services in non-construction industries.**



### **Providing employees:**

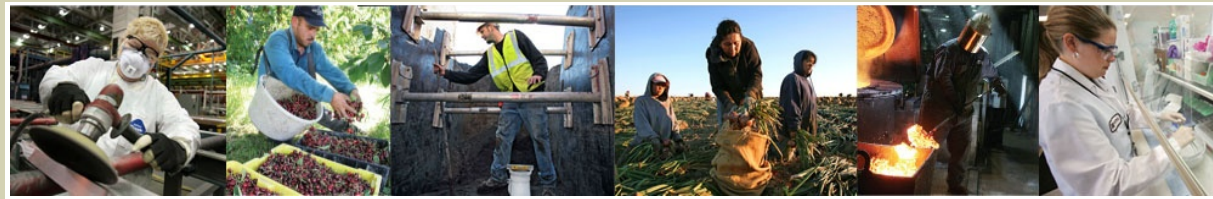
- ✓ **An IC with employees must pay workers compensation premiums for their workers**
- ✓ **Potential for Prime Contractor Liability (PCL) if IC fails to pay the premiums**

### **Providing equipment:**

- ✓ **No clear definition of machinery or equipment**  
**Case history – example, donkey engine (White Case)**
- ✓ **Equipment must be important to the contract – must play a central role in performing the work**

### **Providing the services of a business – testing for a business**





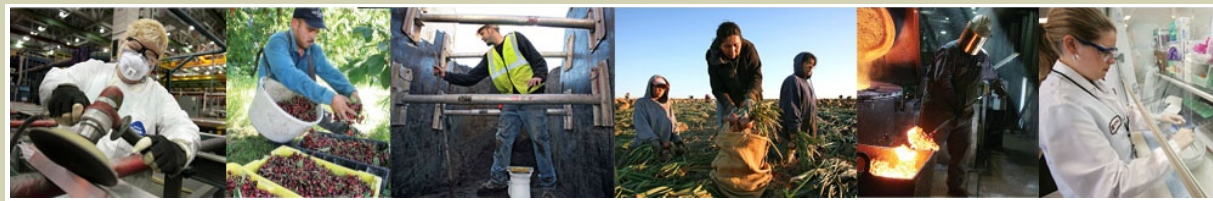
## Exempt Independent Contractor

**RCW 51.08.195/51.08.181** - The six/seven-part test is a guide to see if the business in question is established and independent. All six/seven tests **must** be met to qualify as an exempt independent contractor:

- 1. Does the individual perform the work free of your direction and control? Both in contract and in Fact (**You cannot supervise the means by which the result is accomplished.**)**

**Yes or No?**

- **Although all tests must be passed, control is the most difficult element to consider – the test is for the *right* to control such as:**
  - Training
  - IC uses employer's tools or equipment
  - Reporting
  - Integration of work, with employer or other workers



## Test #1 (cont.): Direction & Control (cont.)

**There are three types of controls:**

### **Contractual control**

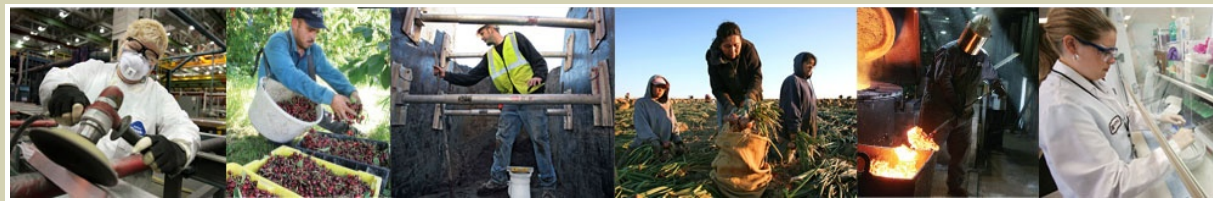
- Type of relationship, written contract, employee-type benefits provided, relationship permanency, key business activity provided by services.

### **Behavioral control**

- Type of instruction given, degree of instruction, evaluation systems, and training provided by the business. Key fact to consider is whether business retains the right to control workers regardless of whether the business actually exercises that right.

### **Financial control**

- Significant investment, unreimbursed expenses, opportunity for profit or loss, payment method.



2. (kind of work): “The service is either outside the usual course of business for which the service is performed.” RCW 51.08.195/51.08.181 sub 2 part 1 means:

**The work of one entity is unlike all of the work of the other entity.**

Yes or No

Or,

(Work Location / Where Work is Performed): “The service is performed outside all of the places of business of the enterprise for which the service is performed.” RCW 51.08.195 sub 2 part 2

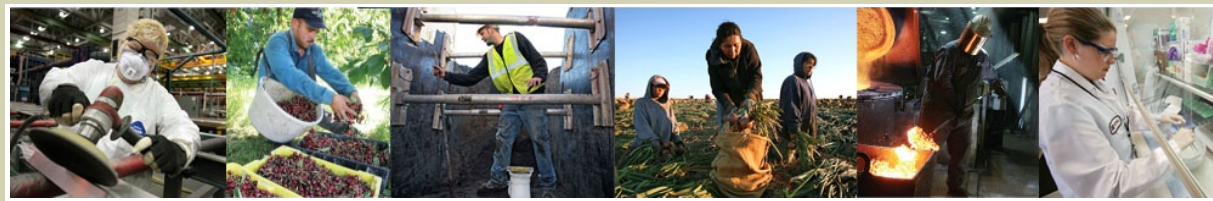
means: **The work locations are different.** Yes or No

Or,

(Costs of Principal Place of Business): “The individual is responsible both under the contract and in fact, for the costs of the principal place of business from which the service is performed.”

RCW 51.08.195 sub 2 part 3 means: **The IC is contractually obligated to pay its costs and is paying its costs for its own headquarters, which is where the work is controlled.** Yes or No

Only one of these tests must be met to satisfy #2



3. Does the individual have an **established independent business that existed** before you hired them?  
**Yes or No**

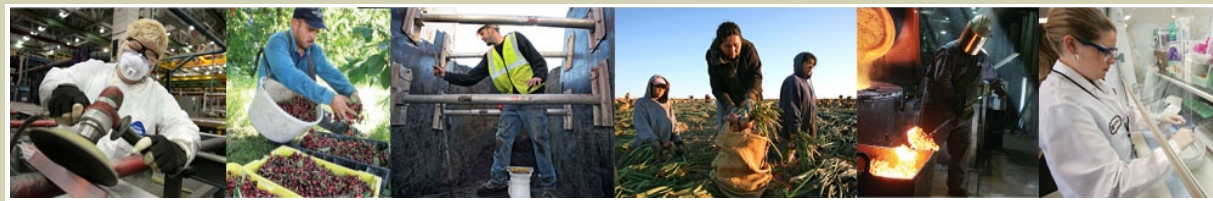
Evidence may include other customers or advertising, could their business suffer a loss under this contract? When the contract is complete, would this individual still be able to remain in business?

Or,

Does the independent contractor **have a principal place of business that qualifies for an IRS business deduction?** **Yes or No**

If the principal place of business is the individuals home is it used regularly and exclusively for the business?

Only one of these tests must be met to satisfy #3



## Alternate Definition (Continued)

4. Under IRS rules, **is the individual required to file a schedule of expenses with their tax return for the IRS** for their business? Yes or No
5. Has the individual established all the **required registrations and accounts** for their business? Yes or No
  - a. At a minimum, the individual must have a UBI number and an active (Note: if not meeting revenue threshold you still must submit report) DOR tax account
  - b. Other accounts and registrations needed including registrations with other agencies for the payment of taxes.
6. Does the individual **maintain their own set of books and records** that reflect all of their income and expenses of the business? Yes or No

# Sustainable Safety Management

Incident Management as a Cornerstone for a  
Successful Safety Culture

# Incident Management is Nothing New At All

- 1811 – birth year of occupational health & safety (DuPont)
- First safety rule:
  - “All kind of play or disorderly fun is prohibited”
  - Seven years later, alcohol was banned from the worksite, after an explosion killed 40 people attributed to the foreman drinking. (The company founder’s wife was injured in the explosion).
  - Begin to strive for more safety regulations and measures to diminish operative risk for their employees.
  - Often is the case – major incidents must happen to make things change.
  - Consequently, the lessons learned from incidents were the main basis for evolution of safety management...“this is also today’s reality.”



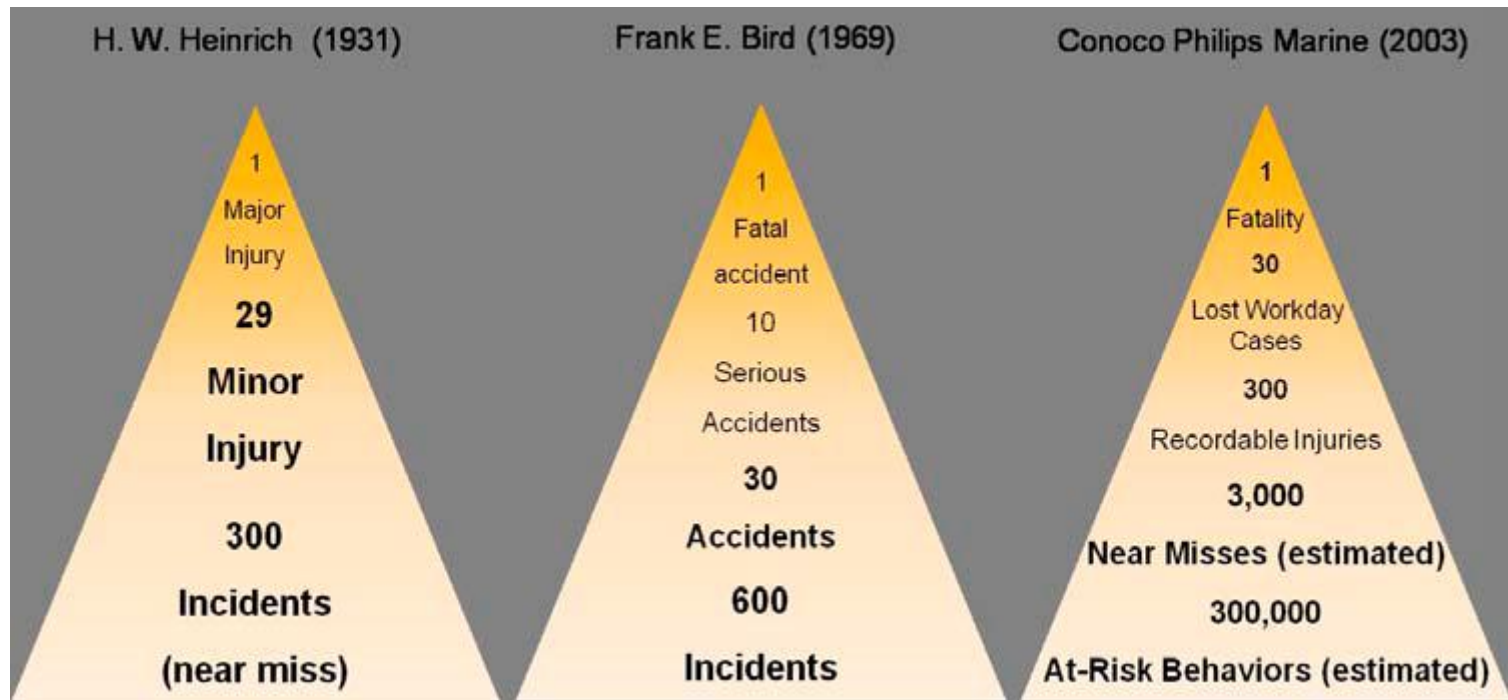
# Safety Management Systems

- Incident management has been one of the major triggers for improvement and changes. What's the objective:
  - *Something that has happened should never recur*
  - *Everything should be done to prevent accidents from repeating*
  - *Diminish the danger to employees and reduce the risk of exposure in the operations*
- The essential step toward a safer work environment is to better understand what the reasons are for incidents and to better grasp the nature of the causes and the action chains that lead to incidents.



# Proactive Safety Management – Learning from real incidents is only a small part of what's needed.

(Tackling the iceberg from the bottom, not chipping off the top.)



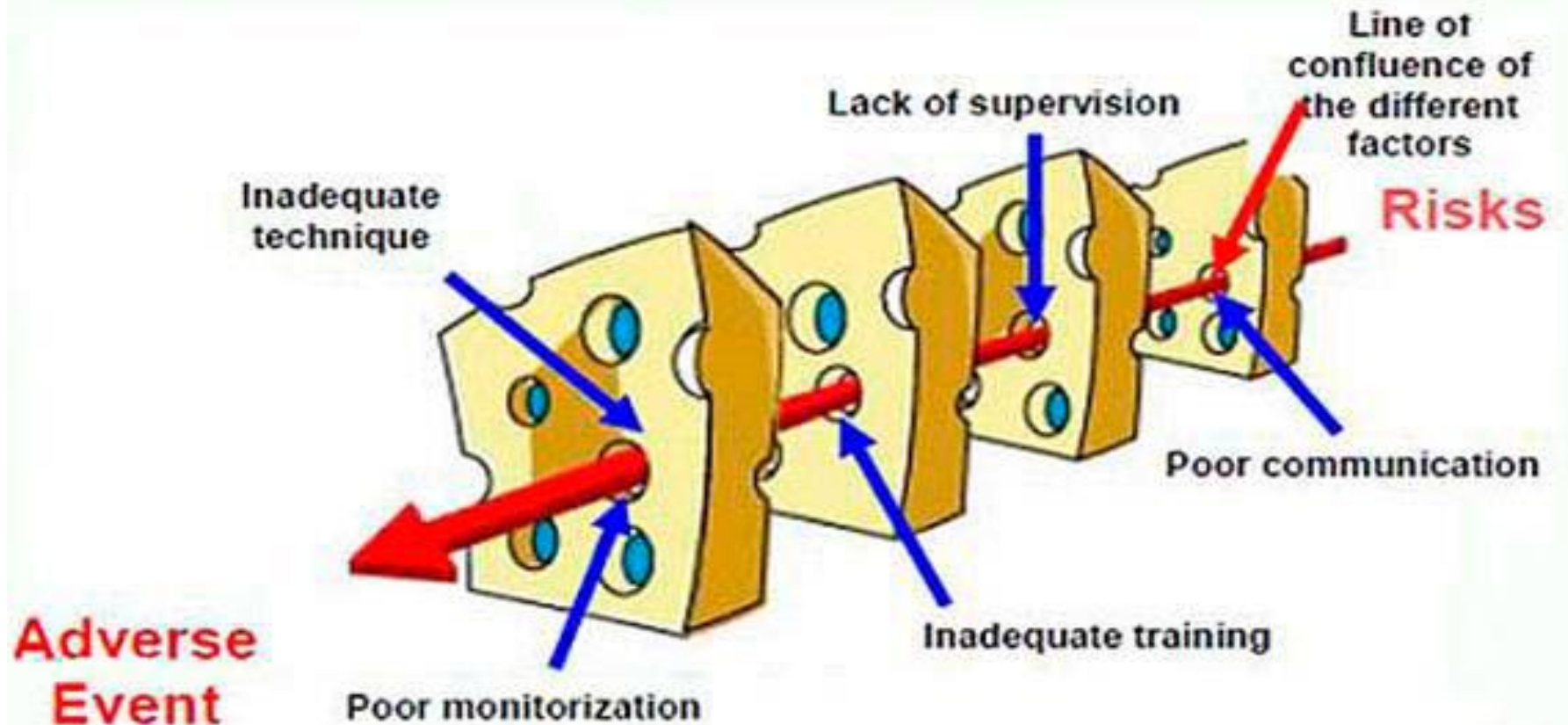
**Safety Performance** - “Human behavior, with its inherent nature and flaws, is one of the key sources of hazards....Monitoring human behavior is at the core of behavior based safety, which focuses on what people do.”

# Causes of Incidents & Accidents

- Many incidents are not the consequence of a major danger or hazard, nor do they happen due to missing safety regulations or safety equipment.
- **For Example:** A great number, if not the majority, of accidents happen as the consequence of minor lapse and usually of not just one lapse, but the sequence of minor failures.
  - 1) An employee is in a certain work area for the first time, and by chance, he has not had the relevant safety instruction obligatory for that work area.
  - 2) Due to the new work environment, he forgets to affix a safety hook properly on his gear.
  - 3) On that day, accidentally, the supervisor is not in place, and no replacement has been nominated yet.
  - 4) The worker has not had the obligatory occupational health check, including a check for being free from dizziness.
- **Result:** The worker becomes dizzy working in a high place, loses hold, slips out of the wrongly fixed safety hook and falls to his death.

*The important message of this hypothetical scenario is that none of the single lapses alone would have caused a fatal accident, but the combination of minor lapses created a safety gap that led to major accident. (A classical image of this phenomenon...)*

# The Cheese Slice Model



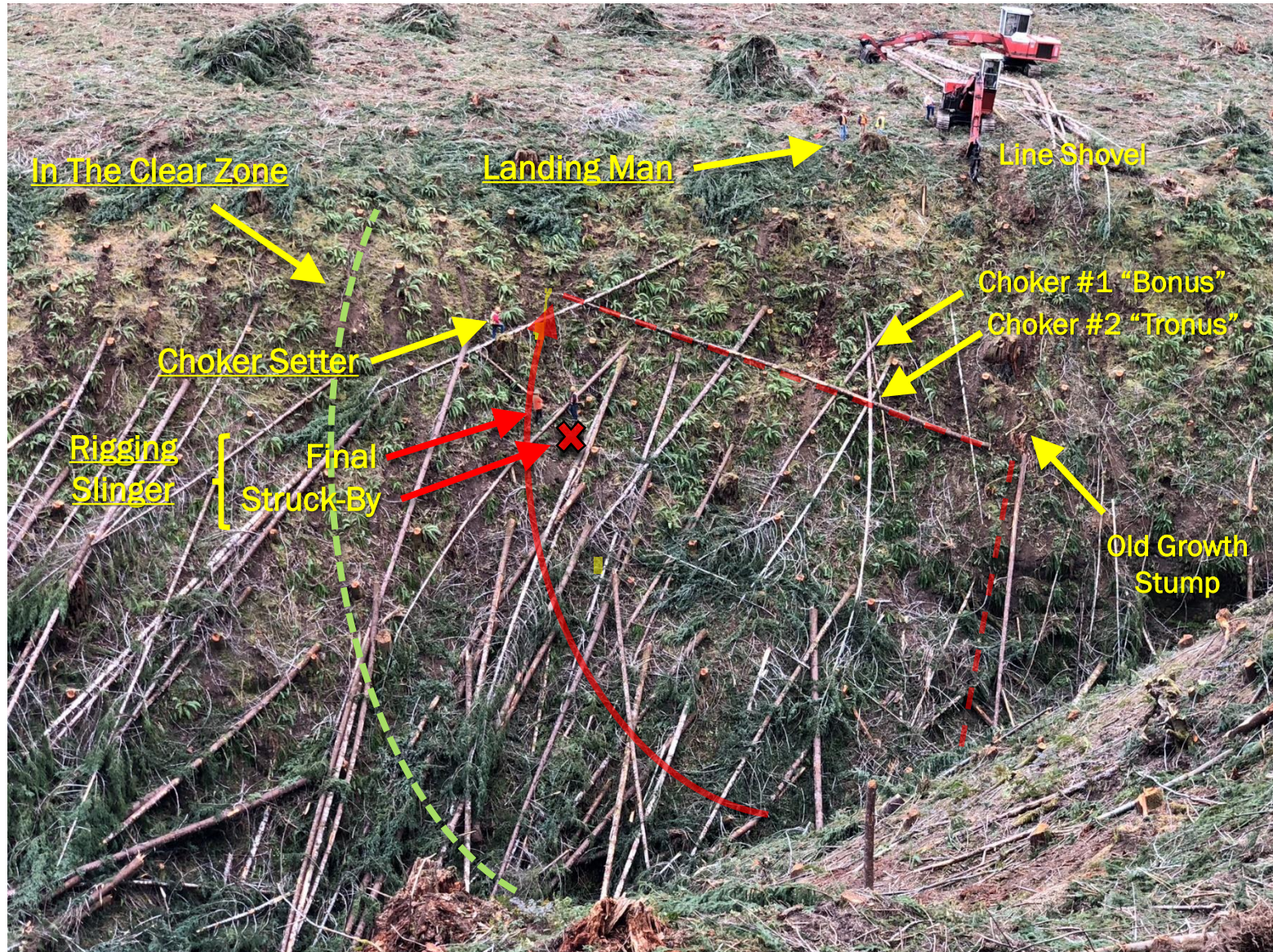
- The cheese slices represent protective layers or controls (safety regulations, management, fit-to-work, supervision, PPE, etc.)
- Only where these layers fail – holes in the cheese – is there latent danger
- When all layers fail (when there are holes or safety gaps along the stream of action, accidents with major impact happen)



# Incidents



# Coos Bay Fatality - April 9, 2018





# Coos Bay Fatality- June 20, 2018



# Snow Peak Fatality – October 26, 2018

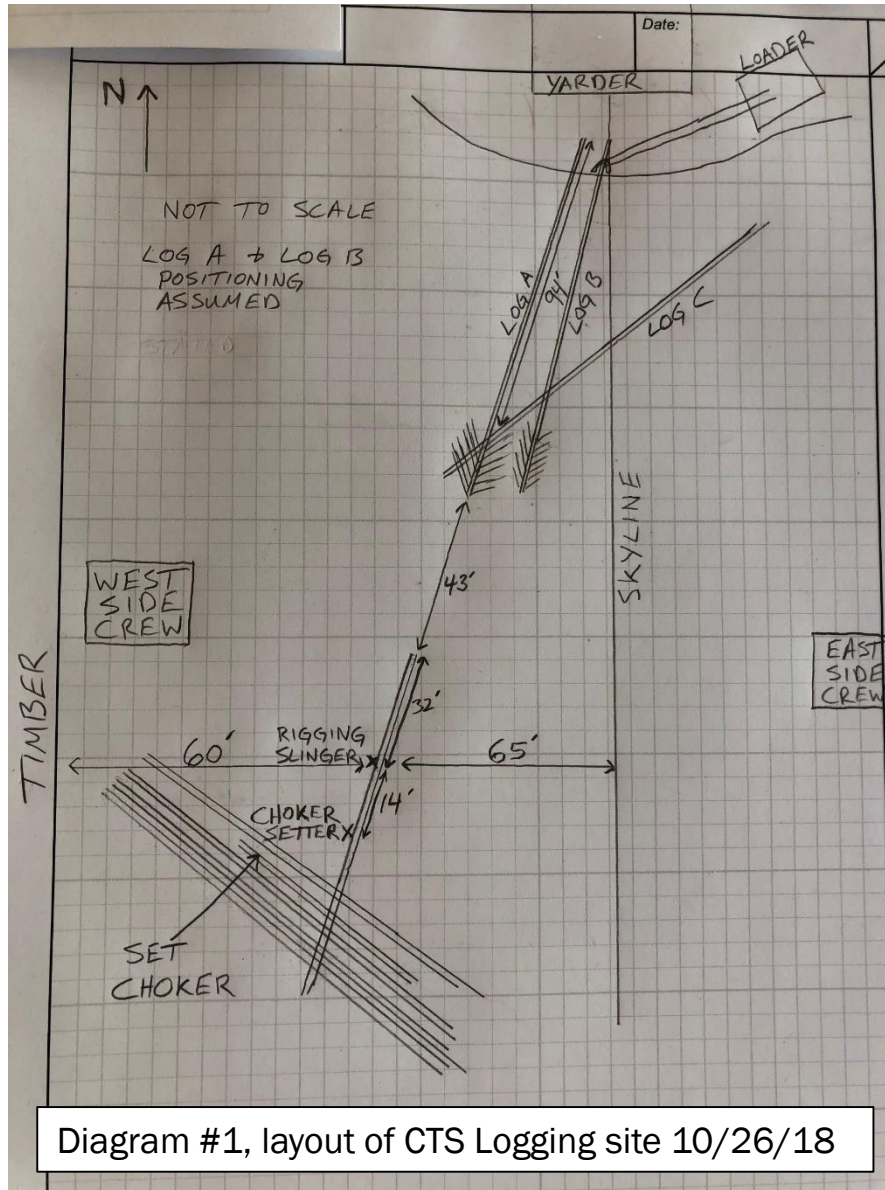
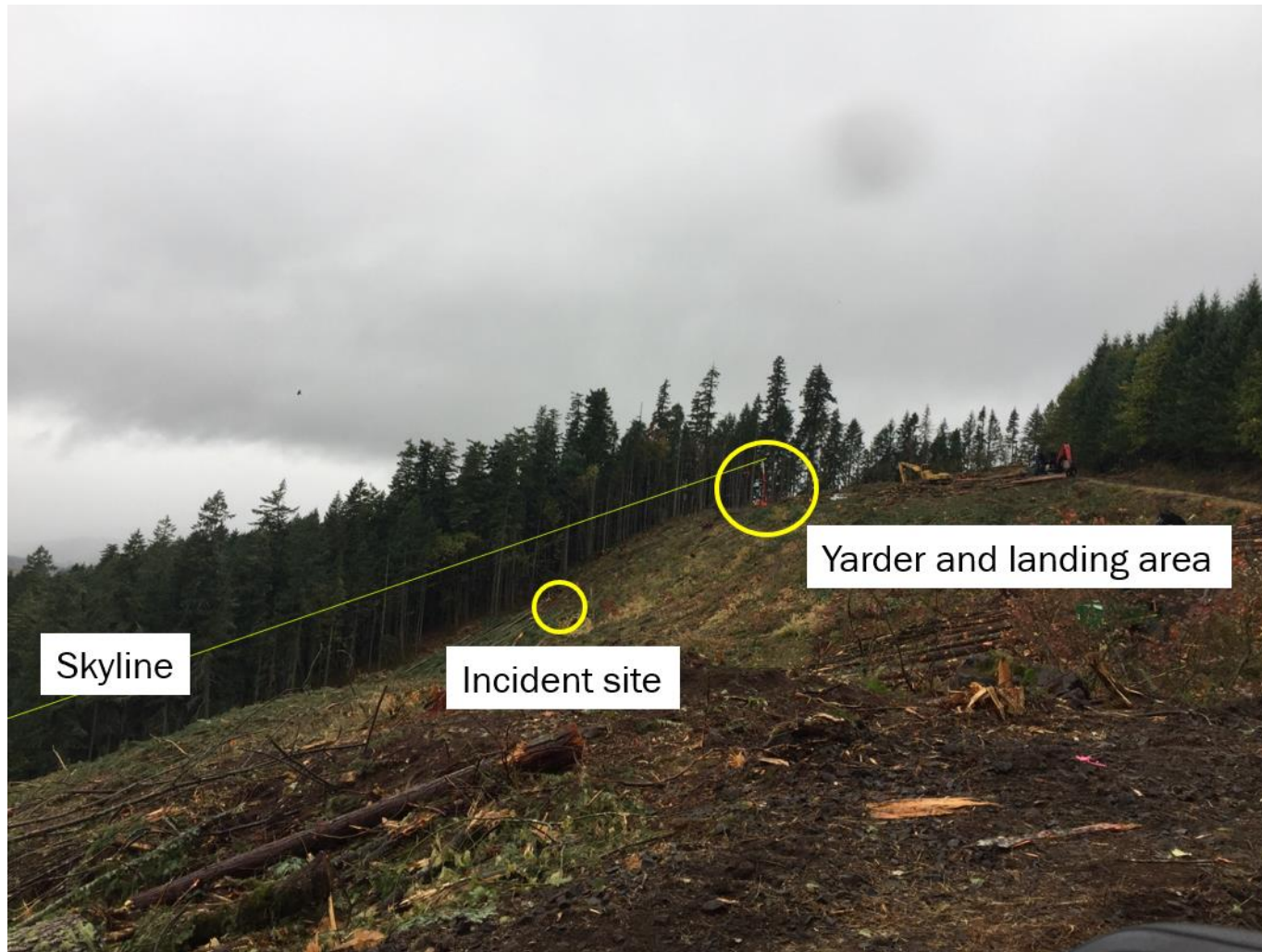


Diagram #1, layout of CTS Logging site 10/26/18









Skyline



East

West

General incident location downslope



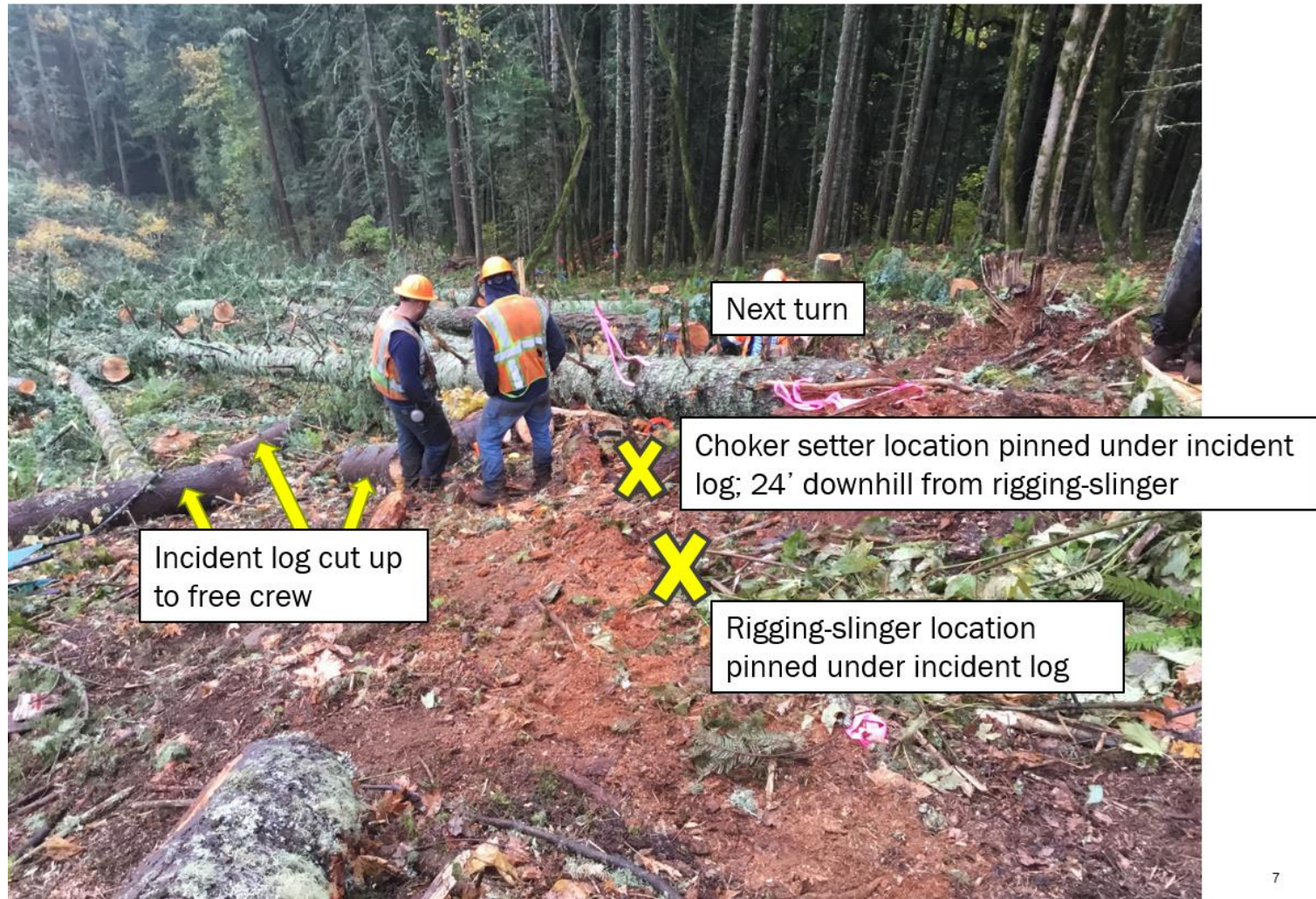










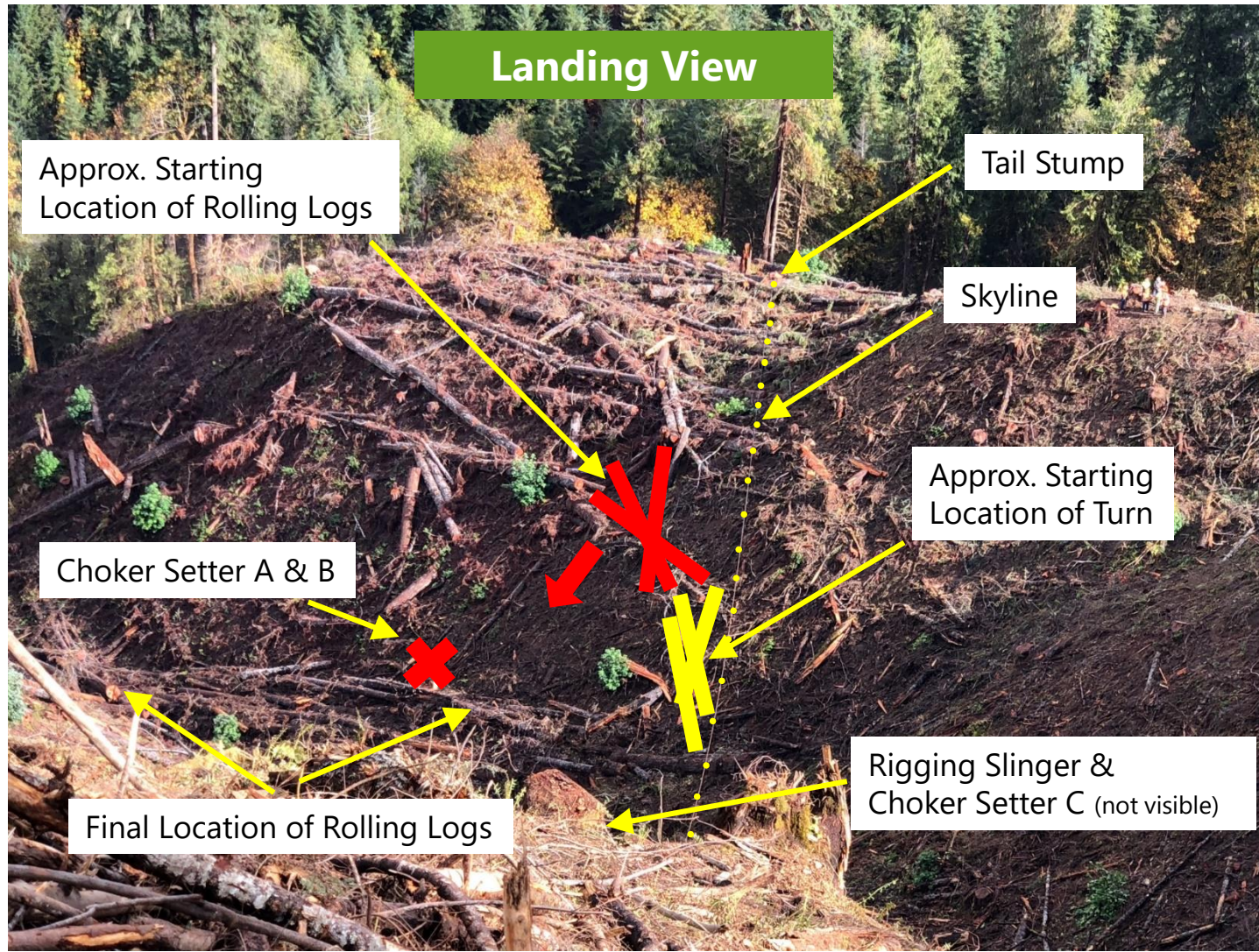




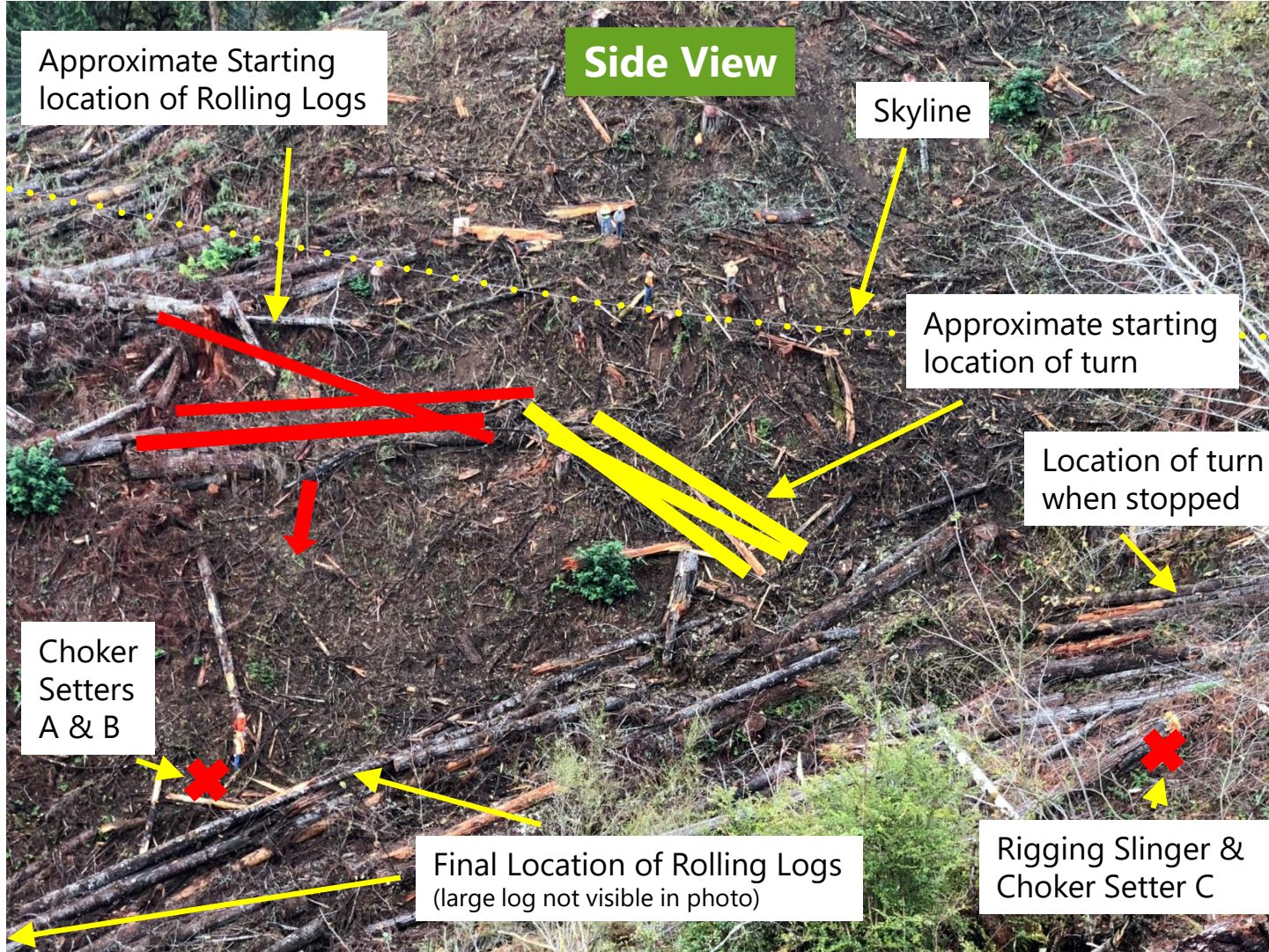




# Alsea Fatality – October 26, 2018







Approximate Starting  
location of Rolling Logs

Side View

Skyline

Approximate starting  
location of turn

Location of turn  
when stopped

Choker  
Setters  
A & B

Final Location of Rolling Logs  
(large log not visible in photo)

Rigging Slinger &  
Choker Setter C





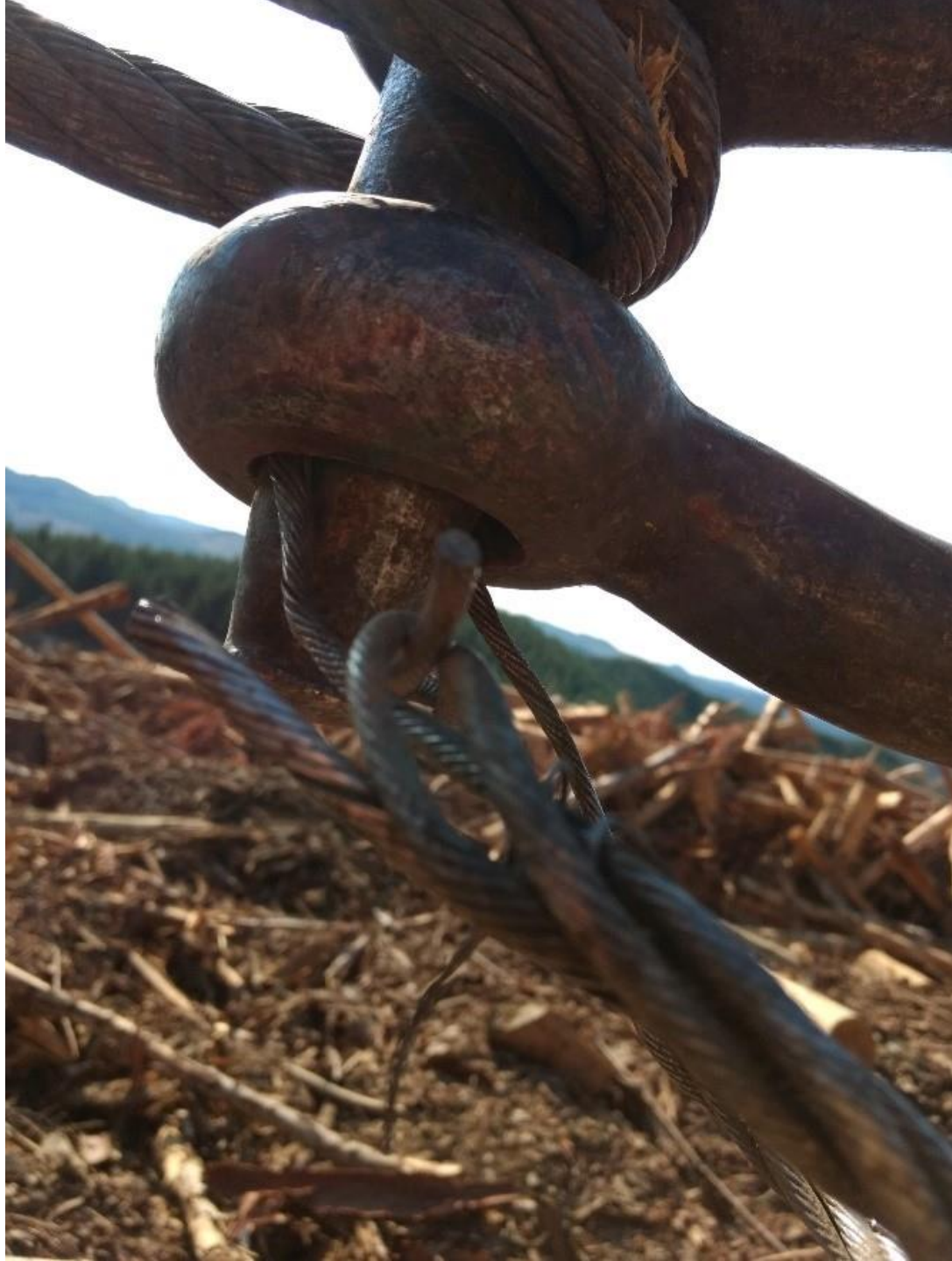
# Audit Findings





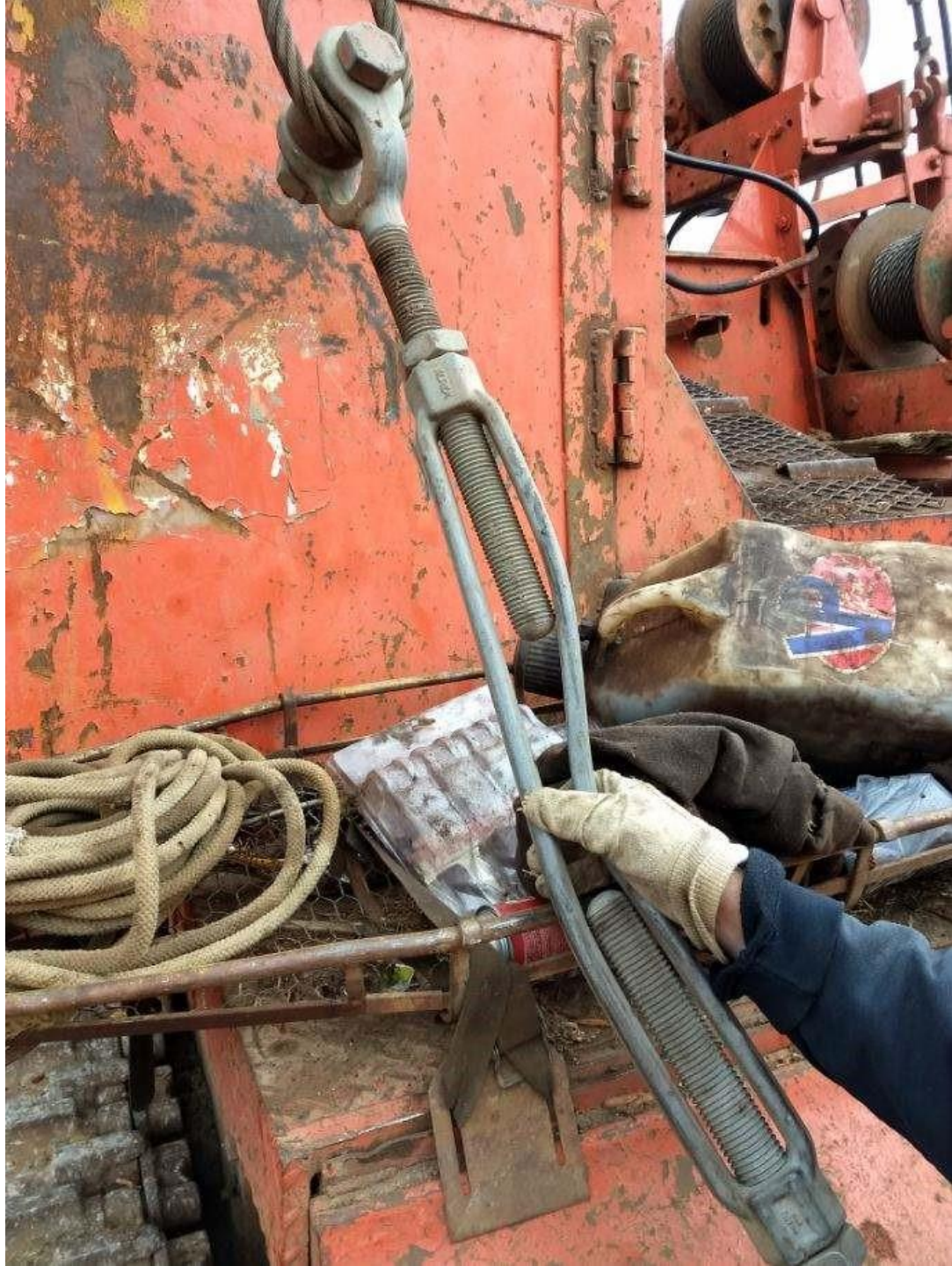










































# WEYERHAEUSER DATA COLLECTION:

---

## SEQUENCE OF EVENTS



# DATA COLLECTION- SEQUENCE OF EVENTS

- **Objective: Gather data to compose a clear and concise record of the incident**
- **Pre-Meet with Investigation Team**
  - Get organized, assign roles, responsibilities, and coordinate
  - **Knowledgeable investigator**
  - Consider the severity of incident and working with regulating authorities
  - Consider the remoteness of the site, you may be there for awhile
  - Complete any pre-investigation framing that would be helpful without injecting bias (Review individual safety plan, prior incidents and findings, risk assessment tool, etc.)





# DATA COLLECTION- SEQUENCE OF EVENTS

- **Data Collection at the Scene:**
- **Observe and record:**
  - Always consider your own safety
  - Look at the scene and the surrounding area
  - Take measurements and produce a diagram
  - Take LOTS of photographs(be sensitive) and/or video the area (you may not get a chance to see the undisturbed area again)
- **Release the scene:**
  - Correct or remove all hazards
  - Remove warning barriers
  - Repair or replace damaged equipment
  - Clean up spills and leaks
  - Clean up any biologicals if trained; best to hire outside company



# DATA COLLECTION- SEQUENCE OF EVENTS

- **Data Collection at the Scene:**
- **Interview People**
  - Note beforehand key facts to be determined
  - Talk with witnesses first, interview separately
  - Put person at ease; explain purpose
  - Ask open-ended questions; don't "lead the witness"
  - Listen carefully while taking notes
  - Be prepared to get apparently conflicting information
  - Summarize and ask for clarification
  - Keep the interview positive and lines open
  - Interview injured persons after medical care and stable
  - Talk with others as information needs become clear



# DATA COLLECTION- SEQUENCE OF EVENTS

- **Organize the data and begin to construct an outline**
  - Iterative process may identify gaps and need for additional data
  - Report must be refined until clear to team and customers
  - Try to anticipate and answer questions from the outside
  - Consider formatting approach: bullet vs. narrative, technical terms
- **Determine the chronology**
  - What happened prior to, during and after the incident
  - Actual or most probable scenario (Like Blackjack)
  - Condition of injured associate(s)
    - Generic description of injury/illness, medical diagnosis and treatment provided
    - Mindful of HIPAA confidentiality, but provide enough detail to discern recordability
    - Follow [guidance documentation](#) for including medical information
  - Report should avoid assigning blame
- **Photos and additional documents can be attached to add clarity**



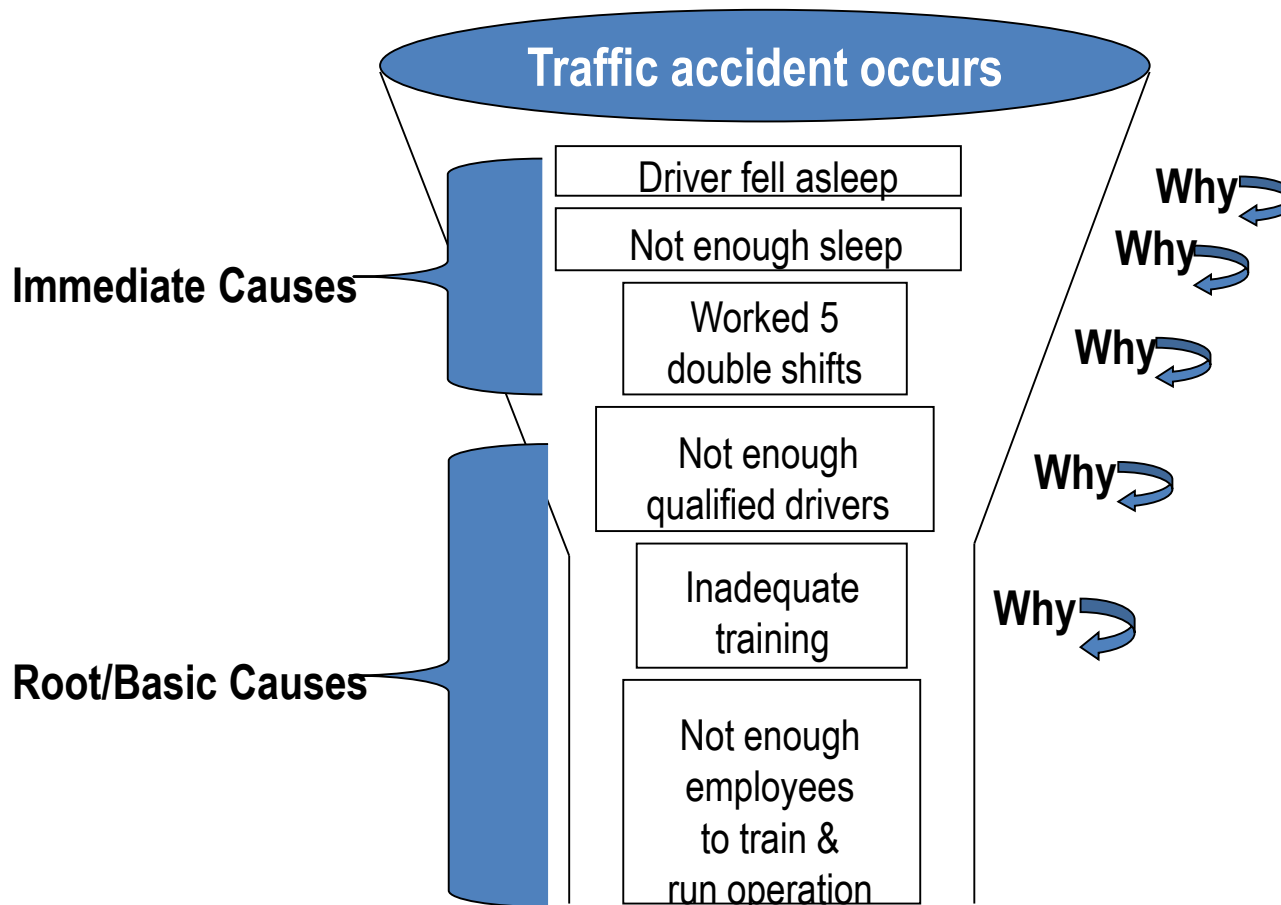
---

# DATA ANALYSIS: CAUSE



# DATA ANALYSIS- CAUSE

- **Objective: The Sequence of Events will guide an investigation to the casual WHY an incident occurred**





# DATA ANALYSIS- CAUSE

- **Identify causes**
  - Immediate and basic/root (Both behaviors and conditions)
  - Important: Clearly describe each cause identified
- **Choose appropriate tool for the level of complexity**
  - Team brainstorming; list of possible causes
  - Multiple “Why’s” Analysis
- **Follow systematic approach – facilitate**
- **Keep an open mind (be aware of your biases)**
- **Incidents are nearly always multi-causal**
  - Better to capture all confirmed/likely causes than miss some
- **Immediate causes (behaviors and conditions) should connect to basic/root causes that enabled behaviors and conditions to exist**



---

# **CORRECTIVE ACTIONS**



# CORRECTIVE ACTIONS

- **Objective: Construct disciplined steps to prevent recurrence**
- **Identify corrective actions**
  - Should relate to findings and address all root causes
  - Should ensure likelihood of recurrence is eliminated or negligible
- **Factors to consider**
  - Effectiveness
  - Feasibility/Cost
  - Time to implement: Immediate, Intermediate, Long-term
  - Effect on operations
  - Cultural buy-in: carrots vs sticks



# CORRECTIVE ACTIONS

- **Assign actions**
  - Person(s) most capable/responsible for completing work
  - Allow adequate time, but not excessive! Don't rush either!
- **Verify corrective actions are completed, signed off *and* effective**
  - Timely follow-through is critical on completion of corrective actions
  - Confirmation through documentation, photographs and field checks
- **Progress reports to managers**
  - Complete or overdue?





# REPORT REVIEW AND APPROVAL

- **Have the report reviewed- Risk Based Approach**
  - Provide objectivity
  - Check for thoroughness, accuracy, high quality
  - Address sensitive issues, non-emotional language
  - Gain immediate support
- **Get approval**
  - Protect against change, which alters proven facts
  - Serious injury reports must be approved by someone two levels above investigation leader



# COMMUNICATE LEARNING'S

- **Employees involved in the incident**
- **Your business**
- **Others in the Industry**
  - Safety Alert process
  - LSI
- **Important notes on incident review**
  - Complete a quality report and have it reviewed BEFORE developing a presentation to help convey the incident
  - “After” pictures (showing completed corrective actions) are very effective



# KEYS TO SUCCESS

- **Follow the process**
- **Determine incident severity and investigate appropriately**
- **Gather data accurately and thoroughly**
- **Use data analysis tools as needed**
- **Present results effectively (clear, detailed)**
- **Implement corrective actions**
- **Follow up and sharing learning's**
- **Work as a Team but do not let personalities dominate**



# WATCH-OUT SITUATIONS

- **Waiting too long to begin or going too early**
- **Team lacks motivation (or leadership support) to complete**
- **Competing pressures, priorities**
- **Lacking skills and knowledge**
- **Not putting together a competent team**
- **Using easy-outs: “blame the injured”, “bad luck”, “Sh\*t happens”**
- **Stopping short of identifying all causes or any cause at all**
- **Not following through on corrective actions**
- **Not sharing learning’s**
- **Over reaching with corrective actions**
- **Corrective actions do not relate to cause**
- **Leadership intervention into investigation**
- **“Closed System” protectionist safety culture**





# WHY IS ALL OF THIS IMPORTANT?

- **It provides an action plan.**
  - When going through a **corrective action**, the main goal is to figure out what caused the problem and what you can do to fix it—for good!
- **Follow up and Accountability are CRITICAL!**
  - Humans are Humans...don't make excuses.
  - Your lowest expectations are your employee's highest.
  - Events are practiced.
  - Rushing to get the report done saves nothing.
  - You have to view your operations with an eye for safety, but most importantly you have to **SAY** something when you see it...





# Agenda

- 
- Safety Culture ( what is it, how it can change, grow, and improve)
  - Incident (near miss reporting)
  - Incident investigations
  - Root cause analysis

# What is a Safety Culture

- Leadership commitment by example
- Employee engagement
- Individual responsibility
- Well established process and procedures
- Recognize hazards and risks
- Incident reporting
- Communication / crucial conversations
- Awarding good behavior & Discipline



# Developing a Safety Culture

---

- Develop a culture in your organization (leadership, communication, & recognition)
  - Demonstrate a commitment to safety
  - Reward safe practices
  - Reward those who bring forth unsafe issues
  - Discipline unsafe acts and behavior

# Commitment to safety

---

- “It is the responsibility of the Contractor to understand and implement applicable safety regulations”.

# Safety Commitment

---

- **Port Blakely has a shared responsibility with its contractors, to promote and embrace a culture of increased safety education and awareness. We will work together with our contractors to ensure the safety of all workers and all worksites is always the highest priority.**
- **We are committed to the ongoing improvement of industry safety practices and support efforts to develop and implement new methods, procedures, and technologies towards the goal of improving the health and safety of our industry.**

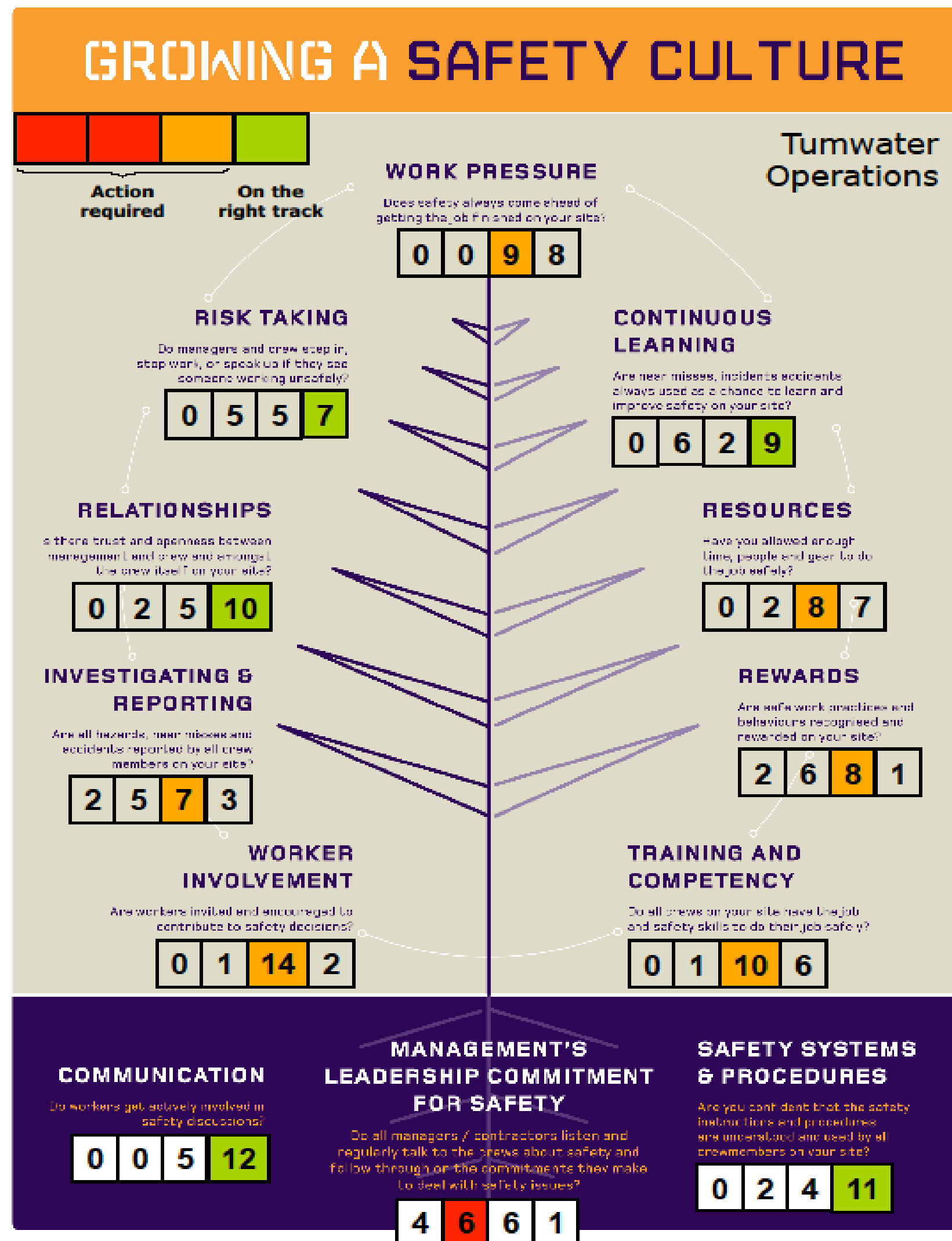
# Growing a Safety Culture

---

- Leadership
- Systems and procedures
- Communication
- Training and competency
- Worker engagement
- Reporting and investigating
- Relationships
- Risk Management
- Work pressure
- Learning
- Resources
- Recognition



# Safety Culture Assessments



- Communication
- Crucial Conversations
- Action Plans
- Follow Up
- Monthly / by Monthly
- **Address all elements**
- Assess Again (TBD)


# Incident Reporting

- Easy reporting ( the harder it is the less likely it will get done).
- Encourage employees & Contractors
- Investigate the cause, identify and implement corrective actions.
- Follow up with reporting party when there is a lack of detail.
- Summarize and report periodically.

# Incident Report

An orange safety sheet has been passed out to all of our logging contractors. It includes Port Blakely's Commitment to Safety and requirements from contractors.

It includes this Incident Report Form which can be filled out and given to the Area Manager.

**Incident Report**

Employee Name \_\_\_\_\_ Date and time of incident \_\_\_\_\_

Task being performed at time of incident \_\_\_\_\_

\_\_\_\_\_

Incident reported to \_\_\_\_\_ Date and time incident reported \_\_\_\_\_

If injury occurred, describe what part of the body was injured and injuries in detail \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name(s) of witness(es) \_\_\_\_\_

Describe, step by step, the events that led up to the incident and how the incident occurred \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Could anything be done to prevent accidents of this type? If so, what? \_\_\_\_\_

\_\_\_\_\_

Signature of Employee \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_



# Incident Reporting

Safety reporting mobile apps are available for both Android and iPhone for free. The HSEQ App has reporting formats for incidents, near incidents and hazard observations that can be filled out, photos attached and an email sent out to make a report to your supervisor and Port Blakely District Foresters.

This example, HSEQ app developer, Mellora, is available for download from iTunes and Google Play stores for free.



# Incident & Hazard Reporting

Safety reporting mobile apps are available for both Android and iPhone for free. The HSEQ App has reporting formats for incidents, near incidents and hazard observations that can be filled out, photos attached and an email sent out to make a report to your supervisor and Port Blakely Forestry Staff.

This example, Port Blakely ECHO app, is available for download from iTunes and Google Play stores for free.

Register Login



Port Blakely ECHO

Electronic Coordination of Harvest Operations



Safety culture

Port Blakely is committed to achieving a culture of safety. Please submit safety reports, observations near misses and incidents using this application.

# ECHO Example

## Safety Reporting Form

**Date**

Jan 18, 2017, 11:58 AM

**Reported by**

Jerry

**Type of Incident**

Report of unsafe condition

**Describe the incident**

Danger snag at the Copper Creek Bridge

**Location**

In the field

**Project name/Reference**

300 road

**Timestamp**

July 3, 2017, 11:58:09 AM

**UTC Offset**

-7:00

**GPS**

46.9701157 -122.8967068

**Approximate Address**

7915 Old Hwy 99 SE, Tumwater, WA 98501, USA

**User**

jweigel@portblakely.com

## Photo upload





# Incident Investigation

---

- Preserve & Document the Scene
- Collect Information
- Determine the Root Cause ( All the whys' the incident occurred)
- Implement Corrective Action

# Root Cause 5-Whys

- <https://youtu.be/38RIXdr4Np0>

# Questions And Comments



# STEEP SLOPE LOGGING BEST MANAGEMENT PRACTICES

*Beth Covert,  
Program Specialist*

# Why the Research was Started

- Tethered logging was becoming very prevalent in the state.
- Research began the spring of 2017 through early 2018.
- Oregon, Idaho, and British Columbia were already researching the technology and WA was behind.
- Initial research led to a best management practices document.

# Research

- Initial research was based off of interviews.
  - Manufacturers
  - Operators – most value from experience
  - Landowners
  - Timber fallers
  - Choker Setters
- Near miss investigations.
- Collaboration with British Columbia (FP Innovations), New Zealand, and Oregon OSHA.



# Near Miss Reports

- Broken spliced eye.
- Line cut with a hot saw.
- Line broke while repositioning base machine.
- Base machine pulled over
- Haul road hazards.

**SHARP**  
Safety & Health Assessment &  
Research for Prevention

■ ■ ■ ■ Near Miss Alert  
**Base Machine Pulled Over**

## Base Machine Pulled Over by Steep Slope Machine

### Incident

In January of 2018, an operator had a near miss when he pulled over a base machine tethered to a steep slope machine (SSM).

The operator had over 43 years of logging experience, including shovel logging, cutting, tower logging, and management. He located the base machine on a gravel road with a 4% grade. He buried the bucket to half its depth behind a stump. The tracks of the base machine were in line with the bucket. The road was crowned, which allowed for the base machine to rock. The sheave was at 35 degrees and the SSM was on a 60% slope. He only had six trees to fall, and in this location the trees could have been felled without the aid of the line. As he was working, the over-speed sensor was activated on the SSM. This indicated that one of the two drums on the base machine was releasing line quicker than the other, not in unison. On this machine at that time, when the over-speed alarm was initiated, the park break would engage, locking the drums. The alarm would have to be reset before the base machine could operate again. After the alarm was activated, the operator stopped to fell a tree. When he completed the cut, he began traveling downslope. He had forgotten to reset the over-speed alarm, so the park brake remained engaged. When the operator moved the SSM downslope, the back of the base machine was lifted, causing it to pivot and fall over on its side.

### Root Causes

In this instance, the over-speed alarm was activated prior to the incident, and the park brake engaged, locking the drums. This was not by design, and there had been issues with this occurring previously on this machine. Although the operator was aware of the issue, he did not reset the alarm to disengage the park brake before traveling downslope to continue work.

With the base machine located on the crowned road and the park brake engaged, it took little force for the base machine to be pulled over when the SSM began to move.

The diagram illustrates the incident scene. At the top, a 'Crowned road' is shown with a '4% grade' indicated by a blue arrow. A base machine is positioned on this road. A cable connects the base machine to a Steep Slope Machine (SSM) located on a '60% slope', also indicated by a blue arrow. The cable is shown at a '35 degrees off of sheave' angle. The base machine is depicted in a tilted position, having been pulled over. Below the diagram, the text 'Diagram of incident scene' is written.

SHARP publication: 97-05-2018

**FACE**  
Washington  
State  
Department  
of Labor & Industries

**Washington State Department of  
Labor & Industries**

# Key Learnings from Near Miss Reports

- Only allow trained personnel to operate a SSM or base machine.
- Inspect all safety devices prior to operating.
- Do not cut over lines with a hot saw (add chain extension).
- Ensure base machine is properly set up each time prior to operating.

# Stakeholder Group

- Group consists of state government (L&I & DNR), manufacturers, WCLA, contract loggers, contract timber fallers and landowner representatives.
- Goals of the group:
  - Create safety standards, not regulations
  - Ensure the technology is successful
  - Once technology has leveled off then consider rule making
- Working as a group to revise the published BMOP document (two published versions).

# BMOP Document

## Document highlights:

- Planning the harvest unit
- Working with manual timber fallers
- Emergency procedures
- Side wash best practices
- Equipment best practices

## Training guides:

- Training guide for equipment operators
- Pre-job planning sample
- Inspection guide
- Chain shot awareness
- Operator audit form
- Steep slope checklist



# Areas of Focus in the Future

- Industry is reliant on the abilities of the operator
  - Current safety understanding is based on experience from operators
- Wear points on equipment and rigging.
- Working next to a skyline.
- The high probability of failure when leaving the road.
- Conditions for safe work.
- Equipment inspection/knowledge.
- Working in conjunction with timber fallers

# Conclusion

- This is still a learning process.
- Technology will improve overall safety in the industry.
- Landowners, manufacturers, operators and state agencies should continue to work together to ensure the technology is used properly and safe.

# Solutions

- Communication
- Planning
- Protect those subjected to the highest hazard
- Evaluate each unit
- Train operators on hazards they create
- Work together



# How does LSI View Tether Machines

- If manual logging occurs after being cut by a tether machine it impacts 5001 workers.
- Tether machines will have DOSH consultation visits as part of the annual LSI consult.
- If the tether machines are subcontractors and operating on job during LSI visit they will be included in the consult.



# STEEP SLOPE LOGGING SAFETY PRACTICES



# Tether Machines



- New technology.
- Still learning safe operations and limitations.
- Changing the industry quickly.
- Need to address impacts on those with highest exposure (i.e. cutters and rigging crews).
- How many of you have worked with a tether machine?

# Potential Changes for Rigging Crews

- Wood is bunched. Better ends when setting chokers.
- Some crews have been pushing “getting in the clear” with bunched piles and becoming complacent. Don’t let this happen.
- Landings are often now the bottle neck.
- Make sure to tell crew how many chokers to run so the system won’t be overloaded.
- Increased chunks on the hillside creating a struck by hazard.
- In some cases, deep ruts being created by tethering machines.
- Operators can lay out wood, creating better paths for getting in the clear.

# Cut off Stump





# Potential Changes for Cutters

Each operation works together differently. Below are variations seen in current operations:

- Move cutters in first or second depending on the unit.
- Flag out hand falling areas and have cutters work first.
- GPS hand falling, give map to cutters and have them go first.
- Cutters get what the tether machine can't, thus, putting cutters potentially hazardous working conditions.
- Cut all lines that have timber adjacent.
- Working at same time as tether machine, stay in constant communication.
- Either cut all with tether or all by hand, no mixing.

# Feedback Gathered from Cutters

- Increased fatigue. Walking and packing gear across steep slopes to timber.
- Must work for several contractors to stay busy.
- It's the future of logging.
- New operators are challenging to work around.
- Hard to compete with machines that bunch the wood.
- Tethering machines make it safer in blow down or snag units.
- Increasingly difficult to train new cutters with less consistent work on poor ground.

# Potential Hazards



**Widow makers, brushed in trees, and pushed over tree**

# Potential Hazards



**Trees felled into standing timber and ruts**



# Solutions

- Communication
- Planning
- Protect those subjected to the highest hazard
- Evaluate each unit
- Train operators on hazards they create
- Work together

