

# Rapid Lesson Sharing

**Event Type:** Water Tender Roll Over

**Date:** August 18, 2018

**Location:** Cougar Creek Fire  
Leavenworth, Washington



The pink flagging marks where Robert's Water Tender slid off the road and rolled down the hill.

*Once Robert emerged from the vehicle, he sat down for a few minutes and then realized that it was possible that no one knew that he had rolled over the edge. Unable to locate his radio, he grabbed his cell phone to call 9-1-1. But as Robert tried to dial out, the face of his phone kept getting covered with blood.*

## **NARRATIVE**

On August 18, 2018 on the Cougar Creek Fire, Water Tender Operator, Robert, was watering the road following a Road Grader up a narrow, steep road in the mountains outside of Leavenworth, Washington.

While working to maintain the road for other fire traffic, Robert, a contracted Tender driver, opted to drive his 1,563-gallon Tender on the right side of the berm that had been created by the Grader.

Because Robert was traveling up the mountain road, this meant he was closest to the road's cliff side. The berm being cut by the Grader was *approximately* in the middle of the road. However, because the width of the road was inconsistent, the berm did not actually reflect the same amount of road on both sides at all times.

### **'This is Really Gonna Hurt'**

Robert had been working all morning. His Tender was almost out of water. He thought, *"Maybe I should give up on following to the right of this berm because it's getting really close to the edge."* Right about then, he began to feel the back of the Tender pulling him sideways as the Tender began to slide off the road. Robert recalled thinking, *"This is really gonna hurt."*

The Tender rolled several times before crashing to a stop about 150 feet below. As the Tender rolled, it left a trail of debris, including: the front grill, the roof, orange caution cones, Robert's extra pair of shoes, hose, water bottles, etc. The Tender landed on fairly flat ground. Luckily, the front end came to a stop on a tree that was knocked down by the Tender's fall.

### **Despite Head Injury, Robert Remains Calm**

Just enough space was available for Robert to crawl out of the passenger side door. But this was no easy task. Robert is a big 6-foot 2-inch, 300 pound guy. However, he remained calm and slowly made his way out of the vehicle's cab. (Having lived through two helicopter crashes during the Vietnam War likely enabled Robert to have much more of a level head in this situation.)

Once Robert emerged from the vehicle, he sat down for a few minutes and then realized that it was possible that no one knew that he had rolled over the edge. Unable to locate his radio, he grabbed his cell phone to call 9-1-1. But as Robert tried to dial out, the face of his phone kept getting covered with blood. That's when Robert realized that he'd cut his head exiting the Tender. (Robert later received 14 staples for his head laceration.)



Photo shows the small opening where the big 6-foot 2-inch, 300-pound Robert was able to extract himself from the rolled and damaged Water Tender.

At 1024 hours Robert was connected with 9-1-1. He starts to tell the 9-1-1 Dispatcher that he was driving a Water Tender on Forest Road 6104 and had gone off the road and needed help—but loses cell phone service during the call.

Not knowing if help was on the way, Robert took off his yellow Nomex shirt, soaked it in water, and put it on his head to stop the bleeding.

#### **Grader Operator Locates Robert**

At approximately the same time, the Grader Operator who was working in tandem with Robert realized that Robert was no longer following him. It dawned on the Grader Operator that Robert might have gone off the road.

The Grader Operator noticed a subtle change in the vegetation along the roadside and thought it might be the place where the Tender could have gone off the side. He called down to see if anyone could hear him. To his surprise, Robert responded.

The Grader Operator also called 9-1-1 by cell phone and the local fire department was dispatched at 1028.

The Incident Management Team's Incident Commander was in a cooperators' meeting at the Wenatchee Fire Department when 9-1-1 was called. He alerted the Deputy IC and the Safety Officer about a possible roll over.

#### **Ropes System Created to Rescue Robert**

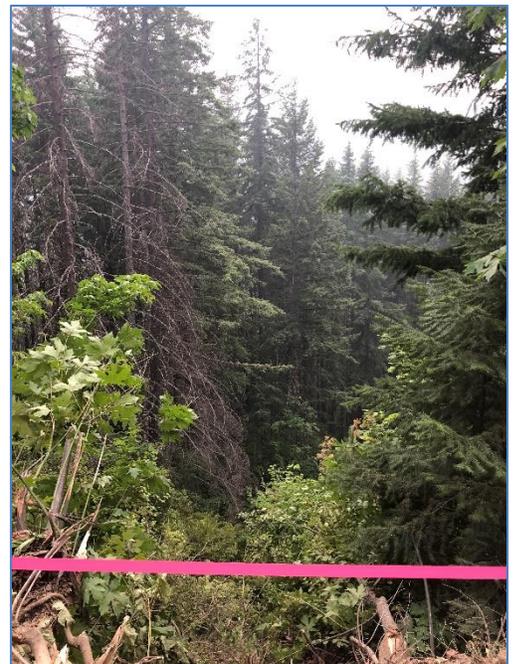
At approximately 1040, the Safety Officer announced on the radio that there might be a roll over between Drop Point 31 and Drop Point 35. The Division Supervisor-Delta (DIVS-D), who was less than one mile away from the Tender at Drop Point 33, heard the Safety Officer's announcement. He quickly made his way up the hill, met with the Grader Operator and assumed the role as Incident-Within-an-Incident, Incident Commander (IWI-IC).

The local fire department, which served the small community adjacent to the fire, had been staying close by in case of a medical evacuation order. Its members were on scene in less than 10 minutes. DIVS-D recalled looking up at the engine making its way to the scene and thinking, *"Wow, that was fast!"*

The local Fire Chief and Captain, Deputy Sheriff, and two Paramedics arrived and began to create a ropes system to rescue Robert.

At 1059 the local Fire Chief tied-in with the IC and they quickly agreed upon a chain of command that made sense. The IC of the IWI recognized that technical rescue was what the fire department personnel are trained to do. He therefore let the local Fire Chief take control of rescue operations.

Simultaneously, DIVS-D was communicating with ICP Communications, updating them on the situation and ordering additional resources, including the REMS ([Rapid Extraction Module Support](#)) Team, a Hotshot Crew, and two Engines. In addition to these resources, the Helibase Manager, who was trained in ropes rescue, made his way to the scene to support the rescue effort.



This is where the Water Tender left the road and rolled 150 feet down the hill.



The local Fire Chief and Captain, Deputy Sheriff, and two Paramedics arrived and began to create a ropes system to rescue Robert.

### Possible Internal Trauma – IV Established

The Paramedic assigned to the Division was the first one to rope-in, reach Robert, and begin a rapid trauma assessment.

Following the medic, the Line EMT was roped-in. As she was being lowered, she told the IC: *“We need folks coming down from the top and we need to try to find access from the bottom. We need to order Life Flight and a Short Haul.”*

The Line Paramedic and Line EMT reached Robert at approximately 1047. His injuries were still unknown, which led them to call this a “Yellow” medical incident. But because the mechanism of injury (150 foot fall in a vehicle) was so severe, they considered it a “Yellow-Leaning-Red.”

The Paramedic began a rapid trauma assessment. He asked the EMT to perform the same assessment behind him to ensure that the vitals being taken were accurate. During this assessment, the EMT recognized bruising on Robert’s

chest and that there might be a tension-pneumothorax injury. This immediately bumped their “Yellow” to a “Red.” Because of possible internal trauma, and in anticipation of the need for fluids and/or pain medication, the Medic set up and started an IV on Robert.

*As they began to package the patient, there was still some uncertainty as to the best way to extract him.*

### Their Extraction Plan

They decided that the Medic would focus on patient care and the EMT would focus on how they would extract the patient. The primary plan was to take him back up using the rope system, but that was going to be difficult.

This led the EMT to begin creating alternate and contingency plans, including continuing to request a Short Haul Helicopter, as well as a crew to begin clearing a path from the road below.

The EMT communicated these plans to DIVS-D who ordered the resources and *“kept it all coming.”* At 1106, Communications called the IWI IC and informed him that Short Haul would be in excess of a 3-hour ETA. The IC then requested Communications to look into alternatives to air operations.

The Helibase Manager was the next person to be lowered down to Robert. He delivered the Stokes basket and backboard to the scene. As they began to package the patient, there was still some uncertainty as to the best way to extract him.

### Impressive Type 2 Hand Crew Quickly Cuts a Route into Patient

The tree cover, maple vines, and brush were so thick that you couldn’t see the Water Tender from the road above or below it. The Short Haul would therefore have difficulty locating and extracting the patient.



A Stokes basket is prepared to be lowered into Robert.



A total of 30 people—using a combination of standard carry and caterpillar carry, depending on the incline—transported Robert from the accident site down to the road via the pathway that the Type 2 Hand Crew constructed, where an ambulance was waiting.

***Everyone was shocked and relieved that this Hand Crew accomplished what they did, in the time they did it.***

The Medic, EMT, and Helibase Manager were weighing their options when the Plain Division (“Plain” is the name of the adjacent community) and a Type 2 Hand Crew parted the heavy foliage from below and walked onto the scene. This crew had “*cut a highway through the forest in a matter of minutes.*” In fact, the DIVS later recalled that the crew was so fast and so efficient that they cleared the path in front of the Medics who were arriving from the bottom. These Medics coming up from the bottom were able to maintain a “*comfortable walking pace*” behind the crew as they worked.

Everyone was shocked and relieved that this Hand Crew accomplished what they did, in the time they did it.

#### **Pack Out Crew, Ambulance, and Life Flight Transport Robert**

By this time, the REMS Team had arrived at the location where the Tender slid off the road. They got into their harnesses and used the rope system that had already been established to get lowered-in.

At this point, there were approximately 30 people at the Water Tender location ready to begin carrying the patient out down the

cleared pathway that the Type 2 Crew had established. They used a combination of standard carry and caterpillar carry—depending on the incline.

At 1212, Life Flight landed at the Helibase and the crew was given a briefing on communications and the coordinates to H-12, with further instructions to standby until called. Three minutes later, the IC of IWI requested Life Flight to launch and head to H-12. Patient ETA to H-12 was 30 to 40 minutes.

An ambulance was waiting at the road below the Water Tender. Once the pack-out crew delivered Robert to the road, he was immediately transferred to H-12, less than five minutes away via ambulance. They arrived at the Helispot and at 1247 the Medics transferred the patient care to the Life Flight crew who transported Robert to the Wenatchee Hospital for further care.

Robert was released from the hospital two days later.



## Unique Practices Worth Sharing and Lessons Learned

### **I. Unified Command of Non-Incident Personnel for an Incident Within an Incident (IWI)**

#### **A. Planning**

1. Local 9-1-1 Dispatch needs to be invited to attend the cooperator's meeting (helps them help us). The Incident Management Team needs to reach out to local fire departments and hospitals (as many already do) and also establish a plan (see example "Pacific Northwest Team 3's Incident-Within-an-Incident Plan" on page 6) with local 9-1-1 Dispatch to communicate when there is an emergency on the fire that gets called into Dispatch but not to the IMT. (In other words, call COMMs at this number if you receive a 9-1-1 call and are responding to something in the vicinity of the fire.)
2. Consider sharing the IAP with local resources, especially the COMMs plan, and be sure to update them if the plan changes.
3. When a new resource ties-in with medical, tell them everything—especially your qualifications.
4. Create an IWI organizer. (For an example, see "PNW3: Incident-Within-an-Incident Plan" on page 7.)

#### **B. Scene Management**

1. The [PACE](#) contingency planning model (Primary Operational Plan, Alternate Operational Plan, Contingency Plan, Emergency Plan) is a great tool, but only if it's explicitly made known to everyone involved. During this medical incident, for one responder, "PACE" meant "P = short haul," "A = up via ropes," "C= down the mountain," "E = treat on scene." But a Medic later reported that it was: "P = up via ropes." Therefore, the PACE model needs to be clearly communicated to everyone. Additionally, if the plan must transition to the alternate, contingency, or emergency plan, this change needs to be communicated to everyone involved. On this incident, once they heard the crew coming up from the bottom, they quickly changed to what they considered to be the most efficient plan of carrying the patient out.
2. Counter to what you might think, the IC of IWI doesn't necessarily need to be in the middle of the scene to be effective. An EMT on this incident said, *"The IC did a great job of making decisions from afar based on the information he was being given."*
3. Using personal networks to communicate can be efficient at times, but incident personnel need to be reminded that they are not permitted to cancel any in-coming resources, even if they have personal knowledge of the event or personal relationships with these individuals.
4. Make sure that local resources have the ability to communicate with the IMT. In other words, consider swapping radios if necessary. During the mutual aid response, the teams realized that they would need communication with the local volunteer fire district and exchanged radios.

### **II. Public Information Officers**

1. Prepare as much as possible when it comes to message construction. The PIOs worked with the IC to create and approve "real-time" messages to help ensure that they were ready to release information at important junctures. This saved a lot of time. The IMT prepared messages for each of the following events:
  - A. We are aware of the incident.
  - B. We are on scene.
  - C. We are working to reach the patient (barriers and facilitators).
  - D. We are treating the patient (barriers and facilitators, condition).
  - E. We are transporting the patient (condition, method).

(Most PIOs are familiar with this due to the [PIO Incident Organizer](#). [IWI communication appears on pages 44-50 in the PIO Incident Organizer.] In addition, it's good for others to be familiar with how this process works.)

2. Position yourself for success. The IMT opted to move the HR tent closer to COMM for privacy and safety. This also provided more space for the PIOs, as well as for Ops to work and protect the communication of sensitive information.
3. Make contact with local hospitals to build rapport and learn about their communication capabilities. Find out if they have a PIO and if this person works on the weekends. Let them know that if an IWI occurs they might get national media attention.
4. As a reminder, keep the PIO in the loop “even if it’s a Green” medical incident because things can change quickly.
5. Avoid what one Safety Officer called “Communication Virga” which refers to the idea that leadership will often discuss IWIs thoroughly but the information may not get to others in camp or those tangentially related to the incident. Close the communication loop with them too. For instance, several of the crew members who helped carry Robert out were worried about the severity of his injuries—even though, unbeknownst to them, Robert had already been released from the hospital and was recovering at home. Additionally, the PIOs did a great job of “getting in front” of the story on social media. Even so, people in camp were sharing misinformation about the incident.

### III. Aviation

1. If Life Flight won't land without coordinates, bring their helicopter to the Helibase and hold them there in order to be able to verify the lat and long.
2. Identify why air guard is not consistently used. Announce on TFR/Helibase. If Air Attack is in the air, they have control. If they are on the ground, then Helibase has control.
3. Be sure to close the loop with the local medical units about who has called for (or cancelled) Life Flight to avoid duplicating efforts.

### IV. DRILLS WORK!

Last year, a Montana Incident Management Team put the Type 2 Crew (who cut the access line up to the accident site on this incident) through a drill that taught them how to use the caterpillar system and polished their cutting skills. This crew's members said specifically that the reason they were so successful on this incident was because of this earlier drill that they had experienced in Montana.



## Local 911 Dispatch Center Entry Points into

### Pacific Northwest Team 3

### Incident-Within-an-Incident Plan

As early as possible the LOFR will make contact with the local 911 dispatch center(s) and request that Incident Command Post (ICP) Communications Unit be notified of all emergency response calls within the fire area. The LOFR will request the following information:

911 Center 24 hr business line \_\_\_\_\_

Locally available and minimally used radio frequency

Simplex \_\_\_\_\_ Encode \_\_\_\_\_  
Digital Analog \_\_\_\_\_ Decode \_\_\_\_\_  
----- or-----  
Duplex  
Digital Analog TX \_\_\_\_\_ Encode \_\_\_\_\_  
RX \_\_\_\_\_ Decode \_\_\_\_\_

LOFR will provide the following information to the 911 center:

Communications Unit landline phone number: \_\_\_\_\_

Communication Unit cellular or satellite phone number: \_\_\_\_\_

ICP location and specific location of Communications Unit: \_\_\_\_\_

**Primary** – Landline phone contact from 911 to Communications Unit from the responsible 911 center(s).

**Alternate** – Cellular or satellite phone contact to Communication Unit from the responsible 911 center(s).

**Contingency** – Establish radios communication via a frequency not commonly used or by local resources or via VCALL. Frequency would be monitored by Communications Unit and fire related incidents may be relayed from the dispatch center to communications.

**Emergency** – 911 center(s) send a local resource (Law, Fire or EMS) to ICP Communications Unit to initiate the notification.

As a matter of Course the 911 Center should be included in regular cooperators' meetings to ensure frequent and effective communication.

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## PNW3: Incident-Within-an-Incident Plan:

**For Routine (GREEN):** MEDL and LSC will report to Communications. The patient will be treated appropriately and relevant notifications will be made.

**For Priority (YELLOW):** MEDL, Deputy IC, SOF, Planning Operations, LSC, COML, PIO & AOBD will proceed to Communication.

**For Urgent (RED):** MEDL, Deputy IC, SOF, Planning Operations, LSC, COML, PIO & AOBD will proceed to Communication.

**For Unknown severity:** MEDL, Deputy IC, SOF, Planning Operations, LSC, COML & AOB will proceed to Communication.

**For (Other, potential Critical, Incidents) PURPLE :** LSC, SECM, Deputy IC, and SOF will proceed to Communication. Deputy IC then activates the C&G as deemed appropriate.

NOTE: If the Deputy IC is unavailable, PSC will notify IC, C&G, and provide oversight to the IMT's response. If both Deputy IC and IC are unavailable, PSC will also notify the appropriate Line Officer from the host agency.

### Night Situations:

**For GREEN:** Comm Unit contacts the on-duty LSC and the MEDL who makes an assessment. The patient will be treated appropriately and relevant notifications will be made.

**For YELLOW:** Comm Unit contacts the on-duty LSC who coordinates with the on-duty MEDL, then activates the C&G as deemed appropriate.

**For RED:** Comm Unit contacts the LSC, on-duty MEDL, SOF and Deputy IC. Deputy IC then activates the C&G as deemed appropriate.

**For PURPLE :** Comm Unit contacts the on-duty LSC activates the C&G and SECM as deemed appropriate.

☆NOTE: PURPLE examples include, but are not limited to: unaccounted-for incident resources, threats to employees, accidents involving the public that incident personnel respond to, etc.

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### Fatality or Serious Incident:

Upon occurrence of a fatality or serious incident (i.e. vehicle accident, burnover, hazmat spill) the nearest appropriate IMT overhead will immediately go to the scene and serve as Scene IC. An OSC, SOF1, or other C&G member may proceed to the scene and relieve the Scene IC as appropriate. Immediate and clear communication must be established.

### Incident Contacts and Checklist:

#### Incident Commander --

- Refer to the Incident host Agency protocols
- Notify Line Officer

#### Deputy Incident Commander -- \_\_\_\_\_

- Notify IC and C&G of incident
- Provide oversight to IMT's response and implementation

Ensure transition back to normal operations is complete

**Medical Unit Leader** -- \_\_\_\_\_

Coordinate proper medical response, supplies, and transportation

Insure appropriate level of medical care is provided

Confirm hospital notification of transportation

Complete documentation and forward to DOCL

**Communications Unit Leader** -- \_\_\_\_\_

Designate a frequency for emergency radio transmissions

Maintain radio logs

Complete documentation and forward to DOCL

**Safety Officer** --

Provide assistance and leader's intent to the Scene IC

Begin/Insure protection of scene and investigation of accident

Work with SECM on PURPLE incidents for most appropriate response

**Planning Section Chief** --

Cover the Deputy IC checklist if Acting

Ensure documentation is complete (Documents, Sketches, Audio/Visual, etc.)

Facilitate meetings

**Logistics Section Chief** --

Develop accident ground transportation plan

Arrange logistical support as necessary (Transportation, Facilities, etc.)

**Air Operations Director** --

Develop accident air transportation plan

Notify air investigation unit, region/zone/state air Safety Officer, FAA

Notify aircraft Contracting Officer if aviation incident

**Information Officer** --

Work with SOF1 to prepare news release and setting up press conference

Develop communication plan

- Update team website and InciWeb
- Define appropriate information for initial dissemination (Who/What/How)
- Coordination with host agencies and others

**Security Manager --** \_\_\_\_\_

- Provide security to scene
- Coordinate with local jurisdiction, providing assistance as needed
- Lead investigator for vehicle accidents and PURPLE incidents, working with SOF1

**Finance Section Chief --**

- Send Comp for Injury Specialist to the hospital or medical unit
- Send Claims Specialist to the scene
- Document potential claims or other liabilities
- Report findings to IC

**Human Resource Specialist --**

- Provide current listing of qualified Peer Supporters
- Make contact with Employee Assistance contract administrator
- Provide support for CISM Team
- Arrange for a meeting place
- Make contact with the debriefing team leader and meet upon arrival
- Monitor for residual concerns
- Ensure personnel "special" needs are met
- Cultural needs

**PNW3: Medical Evacuation Plan**

In the event of an emergency situation the following process will be followed:

- Emergency personnel providing medical care will relay to line supervisor (preferably DIV) the condition of the victim and the need for additional medical assistance and/or transport.
- DIVS will contact the nearest designated medical unit to respond.  
Considerations and Reminders:
  - When possible Communication will provide separate emergency frequency to be used for emergencies. This will allow the regular communications to continue, reducing the risk to others not involved in the emergency.

- Recognize and utilize Unified Command as a valuable tool for response.
- Proactively establish a secondary location (think; EOC) for ancillary IMT responders to gather, listen to the radio traffic, and support the response.
- LSC will know the sleeping locations for the MEDL, Deputy IC, Safety and the SECM.
- LOFR will make contact with 911 Center(s) upon team mobilization.

Response shall be determined by the degree of injury or illness:

- RED/Urgent – Patient’s condition will deteriorate if not transported rapidly. Life or limb threatening injury or illness. Evacuation need is Immediate. Ex: Unconscious, difficulty breathing, bleeding severely, (partial-full thickness) burns larger than four palms in size, heat stroke, disoriented, etc.
- YELLOW/Priority – Patient’s condition is serious. Medical supervised transport required but can be delayed if necessary. Ex: significant trauma, unable to walk, (partial-full thickness) burns 1-3 palms in size, etc.
- GREEN/Routine – Includes minor injuries or illnesses. Transport can be provided by either ground support of medical personnel. Injury does not require rapid transport. Ex: Sprains, strains, minor heat related, bee sting with no reaction, etc.

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**This RLS was Submitted By:**  
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Pacific Northwest Wildfire  
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