

Numbers and Lessons

Collected From 2021 Incident Reports



Wildland Fire Lessons Learned Center

Fatalities

23



Accidents, Incidents, and Injuries:

6

Chainsaw Cuts

- 1 to Hand
- 2 to Arm
- 3 to Leg/Foot



10

Rollovers

- 1 ATV
- 1 Water Tender
- 2 Engines
- 3 Heavy Equipment
- 3 Trucks



17

Hit by Tree Incidents

- 12 Non-Chainsaw Ops
- 5 Chainsaw Ops



18

Entrapment Incidents

- 9 Initial Attack
- 9 Extended Attack



26

Burn Injuries

- 10 Entrapment
- 5 Mop-Up
- 5 Firing Ops
- 2 Chainsaw Ops
- 4 Unknown



Lessons

Helmets Work

A cut log rolls downhill and strikes a firefighter. The log jammed his face and head into the ground. He could feel the sides of his helmet squeezing his head. The injured firefighter's helmet was cracked as a result of this incident.



[Deep Creek Fire Bucking Incident](#)

All involved agree that the firefighter's helmet provided significant head protection under a very heavy load.



A rock underneath the left rear tire of the ATV shifted causing the rear of the ATV to drop—throwing the rider into the air. The rider landed 17 feet downslope where their helmet/head struck a rock.

[Soda Bear RX ATV Rollover](#)

Proper Department of Transportation (DOT) helmet was worn with chinstrap fastened. This significantly reduced injuries.

Fire Resistant Clothing is Important

During Initial Attack a crew supervisor was scouting for a potential firing operation when the wind shifted and fire behavior intensified. He started running and jumped on the rear bumper of the truck. As they drove down their escape route they were overtaken by fire.



[Koffman Road Fire Entrapment](#)

Fire Resistant clothing is designed to prevent ignition of the clothing which reduces severity of burn injury as it did in this incident.



A 20-person handcrew was entrapped while suppressing a spot fire. Though they had multiple lookouts in place and an accessible safety zone, factors aligned to create a sudden, exponential increase in fire behavior right along their escape route.

[McFarland Fire Entrapment](#)

There is reason to believe that the use of gloves and face/neck shrouds by all personnel in this incident could have reduced burn injuries.

Beware of Soft Shoulders

The crew convoy had to pull over onto the shoulder due an oncoming semi-truck. As the convoy began moving again, after traveling only a few feet, the right rear dual tires began to catch the soft shoulder and the vehicle was pulled over the embankment rolling twice, landing on its wheels in an upright position.

[Twin Peaks Crew Rollover](#)

Assume all gravel roads, especially with high banks, have very soft shoulders.

