

# United States Department of Agriculture Forest Service Aviation Safety Alert

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**Subject:** Eyes in the Sky

**Area of Concern:** Aerial Fire Operations

**Distribution:** Aviation Operations

**Discussion:** Aerial firefighters generally have the best seat in the house in regards to the big picture on wildfires. This big picture view can make you a large part of the ground firefighters situational awareness information gathering process. The timely communication of pertinent information to ground firefighters can be a key element in entrapment avoidance.

Key **Fire Environment Factors and Changes** that the ground needs to know include:

- **Fire Behavior** – Creeping, Backing, Running, Torching, Crowning, Spotting?
- **Weather Changes** - Thunder Cells? Wind?
- **Vegetation Changes** – Heavy to medium to light? Continuous? Broken? Natural Barriers?
- **Fuel Changes** – Burning in & moving towards..Trees? Grass? Brush?
- **Aspect Changes** – N,S,E,W facing. Slope reversals?
- **Topography Changes** – Ridgetops, Canyons, Saddles,
- **Asset Risk** – Improvements..Structures, Vehicles, Public
- **Advantageous Strategic Locations** – Natural Barriers, Fuel Breaks, Roads, Lee side of Ridgetops,
- **Fire Size** – your best estimate – 1 football field = apx 1 acre

Key **Safety Items** Aerial Firefighters need to be aware of and relay to the Ground Firefighters include **LCES**

- **Lookout** (your responsibilities as)
  - You must positively ascertain crew(s) location – get a mirror flash or positive visual on individual you are talking to
  - Which direction are the crews working?
  - Where is their anchor point?
  - Have a positive crew contact (Name)
  - Know the trigger points for disengagement and re-engagement

➤ **Communication**

- Confirm Radio Frequencies to contact all
- Keep ground contacts updated on fire environmental factors – You are part of their situational awareness information gathering process!
- If the situation deteriorates, sound the alarm early!!! Not late...An orderly retreat is what you are looking for should disengagement become necessary.
- Be aware of your voice...projecting calm confidence will help keep others calm

➤ **Escape Routes**

- Get the location of the crews escape routes
- Get the time to get all to the safety zone
- The time it will take the fire to spread to the crews location minus the escape time equals the SAFETY MARGIN...this needs to be a positive number!

➤ **Safety Zone**

- Get a positive location of the safety zone. If need be have the ground contact mirror flash you from the zone.
- Is it large enough for all depending on it?
- Do you see a better Safety Zone?

*Fatality Studies show that Minutes & Seconds make the difference!*

*Firefighters “Golden 5 Minutes” equate to the “Golden Hour” for Trauma Patients.*

/s/ Ron Hanks - USFS National Aviation Safety and Training Manager

/s/ Pat Norbury – Acting, USFS National Aviation Operations Officer