

Volusia County Fire Services Safety Gram



Barry G. Ellis
Battalion 20A/Safety 10

February 1, 2009

L.C.E.S. CHECK LIST

In the wildland fire environment, lookouts, communications, escape routes and safety zones (LCES) are the keys to safe procedures for firefighters. The elements of LCES form a safety system used by firefighters to **PROTECT THEMSELVES AND WORK AS A TEAM WITH OTHERS**. This system is put in place before fighting the fire. First, select a lookout or lookouts, set up a communications system, choose escape routes, and select a safety zone or zones.

LCES is a self-triggering mechanism. Lookouts assess and reassess fire conditions and communicate those threats to safeguard firefighter crews. Firefighters use escape routes to move to safety zones.

LCES is built on two basic guidelines:

1. Before safety is threatened, each firefighter must be informed how the LCES system will be used.
2. The LCES system must be continuously re-evaluated as conditions change.

- **Lookouts**
 - Experienced/competent/trusted
 - Enough lookouts at good vantage points
 - Knowledge of crew location
 - Knowledge of escape and safety locations
 - Map/weather kit/watch/IAP
- **Communication**
 - Radio frequencies confirmed
 - Backup and check-ins established
 - Update on any situation change
 - Sound alarm early, not late
- **Escape route**
 - More than one escape route
 - Avoid uphill escape routes
 - Scout: soil/rock/steep/vegetation
 - Time: slowest person/fatigue and temp factors
 - Marked: flagged for day or night
 - Evaluate: Escape time vs. rate of spread
 - Vehicle parked for escape
- **Safety zones**
 - Survivable without a fire shelter tent
 - Back into clean burn
 - Natural features: rock areas/roads/helisports
 - Constructed sites: clear-cut/roads/helisports
 - Scouted for size and hazards
 - Close enough considering escape time
 - Upslope? = more heat impact = larger safety zone
 - Downwind? = more heat impact = larger safety zone
 - Heavy fuels? = more heat impact = larger safety zone

Common denominators of fire behavior on tragedy fires

There are four major common denominators on fatal and near fatal fires. Such fires often occur:

1. On relatively small fires or deceptively quiet areas of large fires.
2. In relatively light fuels, such as grass, herbs, and light brush.
3. When there is an unexpected shift in wind direction or in wind speed.
4. When fire responds to topographic conditions and runs uphill.

Standard firefighting orders

1. Keep informed on fire weather conditions and forecasts.
2. Know what your fire is doing at all times.
3. Base all actions on current and expected behavior of the fire.
4. Identify escape routes and safety zones, and make them known.
5. Post lookouts when there is possible danger.
6. Be alert. Keep calm. Think clearly. Act decisively.
7. Maintain prompt communications with your forces, your supervisor and adjoining forces.
8. Give clear instructions and insure they are understood.
9. Maintain control of your forces at all times.
10. Fight fire aggressively, having provided for safety first.