



THE 10 STANDARD FIREFIGHTING ORDERS AND 18 WATCH OUT SITUATIONS: WE DON'T BEND THEM, WE DON'T BREAK THEM...WE DON'T KNOW THEM

Bryan Scholz

Most of us don't know the 10 standard firefighting orders and 18 watch out situations, the "10 & 18," by heart. Judging by our fatality reports and close calls, it shows.

In 1956, Forest Service Chief Richard McArdle convened a task force to study 16 fires that occurred from 1937 to 1956. These fires had 79 fatalities due to burnover. The resulting 1957 report to the Chief (Moore and others 1957) identified 10 factors that were common to many of these fires:

1. Unexpected fire behavior—basic elements not understood; indicators of change in usual fire behavior not recognized; local fire weather forecasts not obtained, inaccurate, or not understood.
2. Instructions—not followed, not clear, or not given.
3. Foremanship—lost control of personnel at critical time.
4. Line supervision—overhead busy on minor jobs, not available when major decisions had to be made.
5. Communication—not available, not used, or broken down.
6. Firefighting strategy and tactics—control effort made in wrong location or without

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- adequate margin for safety; detailed line location incorrect.
7. Scouting—not done, not thorough, too dependent on air scouting.
8. Escape plan—not formulated, not explained, not executed.
9. Lookout posting—routine practice not followed.
10. Organization—humans and machines committed to action without adequate supervision, or without adequate tie to the rest of the organization.

To address these critical factors, the report presented a list of 10 "standard firefighting orders" and recommended:

"These orders are to be committed to memory by all personnel with fire control responsibilities.

"Military organizations have had long experience in training men to remember certain

fundamental instructions and to react even in emergencies in accordance with those instructions. One device by which such discipline is achieved is that of 'general orders,' which all men of the unit are required to memorize. On some of the fires we reviewed, men who knew better just did not pay adequate attention to good firefighting practices that seem like small details, but could become the critical item in an emergency. The use of a form of standard orders starting immediately would be a long step in the direction of assuring attention to the fundamentals" (Moore and others 1957).

Shortly after the standard firefighting orders were incorporated into firefighter training, the 18 watch out situations were developed to complement them (USDA Forest Service 2008a).

Fifty years later, fire has found no new way to hurt us. We continue to make the same mistakes. From Mann Gulch to South Canyon to Cramer, we put ourselves into places where there is unburned fuel between us and the fire, or where we can't see the main fire and we're not in contact with someone who can. We make decisions that are not based on current and expected fire behavior.

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In “A Trend Analysis of Fireline ‘Watch Out’ Situations in Seven Fire Suppression Fatality Accidents” (Morse 2004), 84 separate hazardous conditions or events were identified in the fatality reports. Morse states, “In each of seven fatality events, a single overlooked ‘watch out’ appeared to be the major contributing factor.”

In a September 2004 report to the Chief, the Office of Inspector General (OIG) analyzed the fatality reports for the Cramer, Thirtymile, and South Canyon Fires. The OIG found that “fire suppression personnel violated all of the [standard firefighting] orders and failed to mitigate most of the watch out situations. Each fire had rapid growth unexpected by management; fire suppression personnel employed questionable or improper tactics and did not adjust their tactics as necessary” (USDA Office of Inspector General 2004).

This is not just a problem during wildfire suppression. In 2006, 10 people assigned to the Little Venus Fire on the Shoshone National Forest in Wyoming as part of a fire use module were entrapped by the fire and deployed fire shelters. Members of this fire use module did a great service to their profession by contributing openly and honestly to the after-action review, especially by reminding us that a fire managed in part for ecosystem benefits (those previously called wildland fire use events) is still a wildfire, and the same rules apply. From the review:

“This incident...differs from past deployments in that the involved personnel were not actively engaged in the performance of an operational fireline

assignment when the deployment occurred. They were enroute to a camp location to debrief with a crew they were replacing and would not have been given a fireline assignment until the next operational period.”

“The 10 standard firefighting orders must be firm rules of engagement. They cannot be simple guides, nor can they be ‘bargained.’ They are the result of hard-learned lessons. Compromise among one or more of them is always the common denominator of tragedy. On Dude, South Canyon, and Thirtymile, these orders were ignored, overlooked, or somehow compromised. The orders mean little once we are in trouble, and because of that we must routinely observe them and rely on them before trouble confronts us.”

—Jerry Williams,
former director, Fire and
Aviation Management (2002)

“Many individuals did not have a thorough understanding of the purpose and objectives of their fireline assignments; many did not have a good awareness of the weather, its influence on fire behavior, and resource disposition; an understanding of planned contingencies; working knowledge of personnel assigned to the fire and the chain of command; and assumptions were made that led to failure to realize deficiencies in the organization and implementation. As a result, this lack of situational awareness created instances of confusion, incomplete information sharing, and contributed to complacency.”

“There were numerous instances where personnel indicated their perceptions that wildland fire use and wildfire suppression were two separate events, even on a single wildland fire such as the Little Venus Fire.”

The reasons for not recognizing the 18 watch out situations and not following the 10 standard firefighting orders are complex, and have much to do with human factors. But whatever the reasons, judging by our fatality reports and close calls, we continue to act like we don’t know the “10 & 18,” and the reason is, a lot of us don’t. This doesn’t make sense. We should be required to prove, every year, that we know the “10 & 18” by heart in order to get an incident qualifications card (“red card”). Knowing the “10 & 18” is the best tool we have to protect ourselves from bad decisions. It is the best tool we can give to our rookies to protect them from our bad decisions.

Some people think that the new foundational doctrine for fire suppression (USDA Forest Service 2005) replaces the “10 & 18.” While this is not its intent, there is language in the doctrine that confuses the issue. The doctrine describes the “10 & 18” as “universal principles of suppression operations... principles [that] guide our fundamental fire suppression practices, behaviors and customs, and are understood at every level of command.” However, the doctrine then states that they “...are not absolute rules. They provide guidance in the form of concepts and values.” This is an unfortunate contradiction. Either the “10 & 18” are universal and fundamental, or they are not. Either we base all of our actions on current and expected fire behavior

or we don't. And if we're not going to base all our actions on current and expected fire behavior, then what are we going to base them on?

Some people think that "lookouts, communications, escape routes, and safety zones" (LCES) replace the "10 & 18." I had the privilege of hearing one of the first lectures that Paul Gleason gave about his concept of LCES, and it was not his intent that LCES replace the "10 & 18." The establishment of LCES on the fireline is dependent on recognizing the watch out situations and following the standard firefighting orders. The use of LCES is a dynamic system; it exists and moves in space and in time, as the fire moves and as the firefighter moves. LCES "must be continuously evaluated as fire conditions change" (USDA Forest Service 2008b). But the system will not work unless it is based on current and expected fire behavior, and a firefighter who doesn't know that standard order can't follow it.

There is a perception among some firefighters that following the "10 & 18" reduces our tactical options, but there is no fire suppression tactic that is prohibited by "10 & 18." For example, downhill line, 1 of the 18 watch out situations, is a potentially hazardous situation whose risk is mitigated by following the standard firefighting orders. Downhill line is not prohibited; in some situations, it is safer.

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There is concern that the orders are not measurable and quantifiable. So what? They are clear and concise: "keep calm," "give clear instructions," and "know what your fire is doing." While most mission statements, vision statements, and value statements are ambiguous or grammatically challenged, "safety first" is a simple, clear expression of the fundamental value of our profession.

Fifty years ago, some smart, experienced firefighters identified the common hazards of the fireline and came up with a set of rules to mitigate those hazards that is elegant in its simplicity. It is one of the best things that the Forest Service has ever done. We should honor the memory of those firefighters by seeing that "the orders are committed to memory by all personnel with fire control responsibilities."

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