

Chapter 06 Safety

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Policy

Firefighter and public safety is our first priority. All Fire Management Plans and activities must reflect this commitment. The commitment to and accountability for safety is a joint responsibility of all firefighters, managers, and administrators. Individuals must be responsible for their own performance and accountability.

Every supervisor, employee, and volunteer is responsible for following safe work practices and procedures, as well as identifying and reporting unsafe conditions.

All firefighters, fireline supervisors, fire managers, and Agency Administrators have the responsibility to ensure compliance with established safe firefighting practices.

Attention to safety factors is critical to the individual employee incident position evaluation process. These evaluations must be honest appraisals of performances. The documentation of sub-standard or unsafe performances is mandatory.

Agency Specific Safety Policy Guides:

- **BLM** - *BLM Handbook 1112-1, 1112-2*
- **FWS** - *Service Manual 241 FW7, Firefighting*
- **NPS** - *DO-50 and RM-50 Loss Control Management Guideline*
- **FS** - *FSH-6709.11 Health and Safety Code Handbook*

Goal

The goal of the fire safety program is to provide direction and guidance for safe and effective management in all activities. Safety is the responsibility of everyone assigned to wildland fire, and must be practiced at all operational levels from the national fire director, state/regional director, and unit manger - to employees in the field. Agency administrators need to stress that firefighter and public safety always takes precedence over property and resource loss. Coordination between the fire management staff and unit safety officer(s) is essential in achieving this objective. For additional safety guidance and reference refer to:

- *Fireline Handbook (PMS 410-1, NFES 0065).*
- *Incident Response Pocket Guide (PMS 461, NFES 1077).*
- *Wildland Firefighter Health & Safety Report (MTDC Publication).*
- *National Interagency Mobilization Guide (NFES 2092).*

1 **Risk Management Process**

2 The Risk Management Process identified in the *NWCG Incident Response*
3 *Pocket Guide (IRPG)* helps ensure that critical factors and risks associated with
4 fireline operations are considered during decision making. This process must be
5 applied to all fire operations prior to taking action. The Risk Management
6 Process is found in Appendix E.

7
8 **Job Hazard Analysis (JHA)**

9 A completed Job Hazard Analysis is required for:

- 10 • Jobs or work practices that have potential hazards.
- 11 • New, non-routine, or hazardous tasks to be performed where potential
12 hazards exist.
- 13 • Jobs that may require the employee to use non-standard personal protective
14 equipment (PPE).
- 15 • Changes in equipment, work environment, conditions, policies, or
16 materials.
- 17 • Supervisors and appropriate line managers must ensure that established
18 JHAs are reviewed and signed prior to any non-routine task or at the
19 beginning of the fire season. Additional JHA information can also be
20 obtained at: http://www.fs.fed.us/r1/people/jha/jha_index_www.html.
- 21 • ***BLM*** - A risk assessment (in lieu of JHA) must be completed for all non-
22 suppression work practices/projects that have potential hazards.

23
24 **Work/Rest**

25 To assist in mitigating fatigue, days off are allowed during and after
26 assignments. If necessary to reduce fatigue, the Type 1 or 2 Incident
27 Commander (IC) or Agency Administrator (AA) (incident host or home unit)
28 may provide time off supplementary to mandatory days off requirements. For
29 Type 3-5 incidents, paid days off should be rare exceptions. However, if
30 necessary, the Agency Administrator (incident host or home unit) may authorize
31 day(s) off with pay.

32
33 The IC or AA authority to grant a day off with pay lies within 5 U.S.C. 6104, 5
34 CFR 610.301-306, and 56 Comp. Gen. Decision 393 (1977).

- 35 • Plan for and ensure that all personnel are provided a minimum 2:1 work to
36 rest ratio (for every 2 hours of work or travel, provide 1 hour of sleep
37 and/or rest).
- 38 • Work shifts that exceed 16 hours and/or consecutive days that do not meet
39 the 2:1 work/rest ratio should be the exception, and no work shift should
40 exceed 24 hours. However, in situations where this does occur (for
41 example, initial attack), incident management personnel will resume 2:1
42 work/rest ratio as quickly as possible.
- 43 • The Incident Commander or Agency Administrator must justify work
44 shifts that exceed 16 hours and those that do not meet 2:1 work to rest

- 1 ratio. Justification will be documented in the daily incident records.
2 Documentation shall include mitigation measures used to reduce fatigue.
3 • The Time Officer's/Unit Leader's approval of the Emergency Firefighter
4 Time Report (OF-288), or other agency pay document, certifies that the
5 required documentation is on file and no further documentation is required
6 for pay purposes.

7
8 The work/rest guidelines do not apply to aircraft pilots assigned to an incident.
9 Pilots must abide by applicable Federal Aviation Administration (FAA)
10 guidelines, or agency policy if more restrictive.

11 **Length of Assignment**

12 **Assignment Definition**

13
14 An assignment is defined as the time period (days) between the first full
15 operational period at the first incident or reporting location on the original
16 resource order and commencement of return travel to the home unit.
17

18 **Length of Assignment**

19 Standard assignment length is 14 days, exclusive of travel from and to home
20 unit, with possible extensions identified below. Time spent in staging and
21 preposition status counts toward the 14-day limit, regardless of pay status, for all
22 personnel, including Incident Management Teams.
23

24 **Days Off**

25 After completion of a 14 day assignment and return to the home unit, two
26 mandatory days off will be provided (2 after 14). Days off must occur on the
27 calendar days immediately following the return travel in order to be charged to
28 the incident. (See Section 12.1-2) (5 U.S.C. 6104, 5 CFR 610.301-306, and 56
29 Comp. Gen. Decision 393 (1977). If the next day(s) upon return from an
30 incident is/are a regular work day(s), a paid day(s) off will be authorized.
31 Regulations may preclude authorizing this for non-NWCG and state/local
32 employees.
33

34
35 Pay entitlement, including administrative leave, for a paid day(s) off cannot be
36 authorized on the individual's regular day(s) off at their home unit. Agencies
37 will apply holiday pay regulations, as appropriate. A paid day off is recorded on
38 home unit time records according to agency requirements. Casuals (AD) are not
39 entitled to paid day(s) off upon release from the incident or at their point of hire.
40

41 Contract resources are not entitled to paid day(s) off upon release from the
42 incident or at their point of hire.
43

44 Home unit agency administrators may authorize additional day(s) off with
45 compensation to further mitigate fatigue. If authorized, home unit program
46 funds will be used.

1 All length of assignment rules apply to aviation resources, including aircraft
2 pilots, notwithstanding the FAA and Agency day off regulations.

3

4 **Assignment Extension**

5 Prior to assigning incident personnel to back-to-back assignments, their health,
6 readiness, and capability must be considered. The health and safety of incident
7 personnel and resources will not be compromised under any circumstance.

- 8 • Assignments may be extended when:
 - 9 ➤ life and property are imminently threatened,
 - 10 ➤ suppression objectives are close to being met,
 - 11 ➤ a military battalion is assigned,
 - 12 ➤ replacement resources are unavailable, or have not yet arrived.

13

14 Upon completion of the standard 14 day assignment, an extension of up to an
15 additional 14 days may be allowed (for a total of up to 30 days, inclusive of
16 mandatory days off, and exclusive of travel). Regardless of extension duration,
17 two mandatory days off will be provided prior to the 22nd day of the
18 assignment.

19

20 Contracts and Emergency Equipment Rental Agreements (EERA) should be
21 reviewed for appropriate pay requirements and length of assignment. If the
22 contract or EERA do not address, the incident Finance/Administration Section
23 Chief or the procurement official should be consulted as to whether
24 compensation for a day off is appropriate.

25

26 **Single Resource/Kind Extensions**

27 The Section Chief or Incident Commander will identify the need for assignment
28 extension and will obtain the affected resource's concurrence. The Section
29 Chief and affected resource will acquire and document the home unit
30 supervisor's approval.

31

32 The Incident Commander approves the extension. If a convened geographic or
33 national multi-agency coordinating group (GMAC/NMAC) directs, the Incident
34 Commander approves only after GMAC/NMAC concurrence.

35

36 If the potential exists for reassignment to another incident during the extension,
37 the home unit supervisor and affected resource will be advised and must concur
38 prior to reassignment.

39

40 **Incident Management Team Extensions**

41 Incident management team extensions are to be negotiated between the incident
42 Agency Administrator, the Incident Commander, and the GMAC/NMAC (if
43 directed).

44

45 Upon release from the assignment, regardless of extension duration, two
46 mandatory days off will be provided immediately following the return to the

1 home unit, and are chargeable to the incident. (See above for compensation and
2 days off guidelines).

3

4 **Driving Standard**

5 All employees driving motor vehicles are responsible for the proper care,
6 operation, maintenance and protection of the vehicle. The use of government-
7 owned, rented, or leased motor vehicles is for official business only.

8 Unauthorized use is prohibited.

9

10 **General Driving Policy**

- 11 • Employees must have a valid state driver's license in their possession for
12 the appropriate vehicle class before operating the vehicle. Operating a
13 government-owned or rental vehicle without a valid state driver's license
14 could result in disciplinary action.
- 15 • All drivers whose job duties require the use of a motor vehicle will receive
16 initial defensive driver training within three months of entering on duty
17 and refresher driver training every three years thereafter.
- 18 • The operator and all passengers are required to wear seat belts and obey all
19 federal and state laws.
- 20 • All traffic violations or parking tickets will be the operator's responsibility.
- 21 • All driving requiring CDL will be performed in accordance with applicable
22 Department of Transportation regulations.
- 23 • **BLM** - *All employees operating a Government motor vehicle will be*
24 *required to submit Form DI-131 (Application for U.S. Government Motor*
25 *Vehicle Operator's Identification Card) and OF-345 (Physical Fitness*
26 *Inquiry for Motor Vehicle Operators). When the supervisor signs the DI-*
27 *131, the employee is authorized to operate Government-owned or leased*
28 *vehicles, or privately-owned vehicles on official business. Individual office*
29 *forms equivalent to the OF-345 and DI-131 are acceptable.*
- 30 • **FS** - *Policy requires all operators of government owned, or leased vehicles*
31 *to have a Forest Service issued identification card indicating the type of*
32 *vehicles or equipment the holder is authorized and qualified to operate.*
- 33 • **BLM/FWS/NPS** - *The DOI has granted wildland fire agencies a waiver to*
34 *allow employees between the ages of 18 and 21 to operate agency*
35 *commercial fire vehicles using a state issued CDL under the specific*
36 *conditions as stated below:*
 - 37 ➤ Drivers with a CDL may only drive within the state that has issued
38 the CDL and must comply with the state's special requirements and
39 endorsements.
 - 40 ➤ These drivers must only drive vehicles that are equipped with visible
41 and audible signals, and are easily recognized as fire fighting
42 equipment. This excludes, but not limited to, school buses used for
43 crew transport and "low-boy" tractor trailers used for construction
44 equipment transport.

- 1 ➤ Supervisors must annually establish and document that these drivers
2 have a valid license (i.e. that the license has not been suspended,
3 revoked, canceled, or that the employee has not been otherwise
4 unqualified from holding a license - 485 DM 16.3.B (1), ensure that
5 the employee has the ability to operate the vehicle(s) safely in the
6 operational environment assigned (485 DM 16.3.B (2), and review
7 and validate the employee's driving record (485 DM 16.3.B(4)).
- 8 ➤ Wildland fire driving safety statistics from the Safety Management
9 Information System (SMIS) will be reviewed at the ends of 2005,
10 2006, and 2007 fire seasons to determine if there is any reason why
11 the waiver should not become permanent policy.

13 **Non-incident Operations Driving**

14 Refer to the current Driving Standards for each individual agency.

16 **Incident Operations Driving**

17 This policy addresses driving by personnel actively engaged in wildland fire
18 suppression or all-risk activities; including driving while assigned to a specific
19 incident (check-in to check-out) or during initial attack fire response (includes
20 time required to control the fire and travel to a rest location).

- 21 • Agency resources assigned to an incident or engaged in initial attack fire
22 response will adhere to the current agency work/rest policy for determining
23 length of duty day.
- 24 • No driver will drive more than 10 hours (behind the wheel) within any
25 duty-day.
- 26 • Multiple drivers in a single vehicle may drive up to the duty-day limitation
27 provided no driver exceeds the individual driving (behind the wheel) time
28 limitation of 10 hours.
- 29 • A driver shall drive only if they have had at least 8 consecutive hours off
30 duty before beginning a shift. Exception to the minimum off-duty hour
31 requirement is allowed when essential to:
- 32 ➤ Accomplish immediate and critical suppression objectives.
33 ➤ Address immediate and critical firefighter or public safety issues.
- 34 • As stated in the current agency work/rest policy, documentation of
35 mitigation measures used to reduce fatigue is required for drivers who
36 exceed 16 hour work shifts. This is required regardless of whether the
37 driver was still compliant with the 10 hour individual (behind the wheel)
38 driving time limitations.
- 39 • *FWS/NPS - Program funds are authorized to pay for the cost of CDL*
40 *licensing fees and exams, necessary for employees to operate fire*
41 *equipment, with one exception. That exception involves those cases where*
42 *a test has been failed and must be retaken, in which case the employee will*
43 *be responsible for costs associated with additional testing.*

1 Fire Vehicle Operation Standards

2 Operators of all vehicles must abide by state traffic regulations. Operation of all
3 vehicles will be conducted within the limits specified by the manufacturer.
4 Limitations based on tire maximum speed ratings and Gross Vehicle Weight
5 restrictions must be followed. It is the vehicle operator's responsibility to
6 ensure vehicles abide by these and any other limitations specified by agency or
7 state regulations.

8
9 Headlights and taillights will be illuminated at all times while the vehicle is in
10 motion. Emergency lighting will not be used except when performing
11 suppression or prescribed fire operations, or to mitigate serious safety hazards.
12 Overhead lighting and other emergency lighting must meet state code
13 requirements, and will be illuminated whenever the visibility is reduced to less
14 than 300 feet. Blue lights are not acceptable for wildland fire operations.

15 Personal Protective Equipment (PPE)

16 All personnel are required to use Personal Protective Equipment (PPE)
17 appropriate for their duties and/or as identified in JHAs. Employees must be
18 trained to use safety equipment effectively. PPE devices will be used only when
19 equipment guards, engineering controls, or management control do not
20 adequately protect employees.

21 Required Fireline PPE includes:

- 22
- 23
- 24 • 8-inch high, lace-type exterior leather work boots with non-slip, Vibram-
25 type, melt-resistant soles. The 8-inch height requirement is measured from
26 the bottom of the heel to the top of the boot. Alaska is exempt from the
27 Vibram-type sole requirement. All boots that meet the footwear standard
28 as described above are authorized for firefighting.
- 29 • fire shelter
- 30 • hard hat with chinstrap
- 31 • goggles/safety glasses
- 32 • ear plugs/hearing protection
- 33 • yellow aramid shirts
- 34 • aramid trousers
- 35 • leather gloves
- 36 • Wear additional PPE as identified by local conditions, material safety data
37 sheet (MSDS), or JHA.

38
39 Permanent-press materials are not to be worn, as they melt and stick to the skin
40 when exposed to flame or heat. Because most synthetic fibers melt when
41 exposed to flame or extreme radiant heat, personnel should wear only
42 undergarments made of 100 percent cotton or wool, aramid, or other fire
43 resistant materials.

44

1 Aramid clothing will be cleaned or replaced whenever soiled, particularly with
2 oils. Aramid clothing will be replaced when the fabric is so worn as to reduce
3 the fire resistance capability of the garment or is so faded as to significantly
4 reduce the desired visibility qualities. Any modification to personal protective
5 equipment that reduces the fire retardant ability such as iron-on logos is an
6 unacceptable practice and will not be allowed on fires.

7

8 **Head Protection**

9 Personnel must be equipped with hard hats and wear them at all times while on
10 the fireline. Hard hats must be equipped with a chinstrap, which must be
11 fastened while riding in, or in the vicinity of, helicopters.
12 Acceptable helmets for fireline use are "helmet, safety, plastic" (NFES 0109,
13 8415-01-055-2265/GSA) listed in NWCG *National Fire Equipment System*
14 *Catalog: Fire Supplies and Equipment*, or equivalent helmet meeting 1977
15 National Fire Protection Association (NFPA) standard requirements and
16 American National Standards Institute (ANSI) Z89.1-1986. Hard hats consist of
17 two components - the shell and the suspension - which work together as a
18 system. Both components require periodic inspection and maintenance.
19 Specific inspection and maintenance instructions are found in Missoula
20 Technology Development Center (MTDC) Tech Tip publication (0267-2331-
21 MTDC).

22

23 **Eye and Face Protection**

24 The following positions require the wearing of eye protection:

- 25 • nozzle operator
- 26 • chainsaw operator/faller
- 27 • helibase and ramp personnel
- 28 • retardant mixing crews
- 29 • other duties may require eye protection as identified in a specific JHA.

30

31 Face shields providing full face protection must be worn when working in any
32 position where face protection has been identified as required in the job specific
33 JHA: Terra-Torch®, power sharpener operators, etc.

34

35 **Hearing Protection**

36 Personnel who are exposed to a noise level in excess of 85db must be provided
37 with, and wear, hearing protection. This includes, but is not limited to:

- 38 • chainsaw operators/fallers
- 39 • pump operators
- 40 • helibase and aircraft ramp personnel
- 41 • retardant mixing personnel,
- 42 • any other personnel exposed on a regular basis to damaging noise levels.

43

44 Other duties may require hearing protection as identified in a specific JHA.

45

1 Employees with a time weighted average exposure of 85 db or higher are
2 required to be placed under a hearing conservation program as required by 29
3 *CFR 1910.9* - consult with local safety & health personnel for specifics.

5 **Neck Protection**

6 Aramid fiber “shrouds” are not required PPE. If used, the shrouds must meet
7 the design and performance requirements identified in the *NFPA 1977 Standard*
8 *on Protective Clothing and Equipment for Wildland Fire Fighting, 1998 ed.*
9 If issued, shrouds should be used only in impending flash fuel or high radiant
10 heat situations and not routinely worn throughout the operational period, due to
11 increases in physiological heat stress.

13 **Leg Protection**

14 All chainsaw chaps will meet specification FS 6170-4F. All chainsaw operators
15 must wear chainsaw chaps maintained as per the manufacturer’s specifications.

17 **Foot Protection**

18 Personnel assigned to fires must wear 8-inch high, lace-type exterior leather
19 work boots with non-slip, Vibram-type, melt-resistant soles. The 8-inch height
20 requirement is measured from the bottom of the heel to the top of the boot.
21 Alaska is exempt from the Vibram-type sole requirement. All boots that meet
22 the footwear standard as described above are authorized for firefighting.

23
24 The boots are a condition of employment for firefighting positions and are
25 purchased by the employee prior to employment.

- 26 • *FWS - The leather top must be at least 8 inches in height, measured from*
27 *the top of the heel. Red carded fireline permanent, temporary and*
28 *seasonal Fish and Wildlife personnel will be provided with these boots*
29 *from station funds not more often than every three years. Emergency or*
30 *casual firefighters will provide their own boots. Some refuge situations*
31 *may require special footwear such as waders, hip boots, snake boots, etc.*
- 32 • *NPS - Government funds will be utilized for purchase of wildland fire*
33 *boots for those employees currently red carded/certified in positions which*
34 *require wildland and prescribed fireline duties. The individual employee*
35 *must be available to perform those duties when assigned; if not routinely*
36 *available for park fire assignments, FIREPRO funds should not be used to*
37 *purchase boots for that employee.*
- 38 • *NPS - FIREPRO funds, not to exceed \$100 a pair, may be used to*
39 *purchase or repair boots. Other government funds, such as from safety,*
40 *protection or maintenance accounts, may also be used for purchase or to*
41 *augment FIREPRO funds, dependent on local management direction.*
42 *Costs to repair boots not damaged on fire should be charged to other*
43 *appropriate accounts.*
- 44 • *NPS - It is the responsibility of the local FMO to determine those*
45 *employees requiring boots as personal protective equipment, and the*
46 *frequency of necessary replacement or repair. Boots will be considered*

1 similar to uniform items and will not be subject to cache item return, due
2 to health, sanitation, and individual sizing considerations.

3

4 **Respiratory Protection**

5 The use of respiratory protection (e.g., dust masks, half-mask respirators) must
6 be in compliance with agency safety and health regulations and OSHA's
7 *Respiratory Protection Standard 29 CFR 1910.134*.

- 8 • **BLM/FWS/NPS** - Managers and supervisors will not knowingly place
9 wildland firefighters in positions where exposure to noxious gases or
10 chemicals would require the use of self-contained breathing apparatus.
- 11 • **FS - FSM - 5135.3 - Self-Contained Breathing Apparatus** - Wildland
12 firefighters may use only an open-circuit, self-contained breathing
13 apparatus (SCBA) of the positive pressure type when smoke from vehicle,
14 dump, structure, or other non-wildland fuel fire cannot be avoided while
15 meeting wildland fire suppression objectives (29 CFR 1910.134,
16 *Respiratory Protection*). If such an apparatus is not available, avoid
17 exposure to smoke from these sources.
- 18 • **FS** - The acquisition, training, proper use, employee health surveillance
19 programs, inspection, storage, and maintenance of an SCBA must comply
20 with the National Fire Protection Association Standard, NFPA-1981 and
21 29 CFR 1910.134I, and be justified by a Job Hazard Analysis. Where an
22 SCBA is approved, it may be carried only on a fire engine and its use must
23 be consistent with FSM 5130.2 and FSM 5130.3.

24

25 **Fire Shelters**

26 Fire shelters will be issued and carried in a readily accessible manner by all line
27 personnel. Fire shelters will be inspected regularly, to ensure they meet agency
28 and manufacturer standards. New Generation fire shelters will replace all
29 existing stock of old fire shelters by the beginning of calendar year 2008.

30

31 "Training Shelters" will be deployed at required Annual Fireline Safety
32 Refresher Training. No "live fire" exercises for the purpose of fire shelter
33 deployment training will be conducted.

34

35 The deployment of shelters is to be viewed as a last resort, and will not be used
36 as a tactical tool. Supervisors and firefighters must never rely on fire shelters
37 instead of using well-defined escape routes and safety zones. When deployed
38 on a fire, fire shelters will be left in place and not be removed pending approval
39 of authorized investigators.

40

41 **Specialized or non standard PPE**

42 Specialized Personal Protective Equipment not routinely supplied by the agency
43 required to perform a task safely must be ordered in accordance with agency
44 direction.

45

1 A risk assessment must be completed and reviewed by the Unit Safety Officer
2 and supervisor's approval is required. Items must meet agency and industry
3 standards for specific intended use. In the case of fire resistant clothing such as
4 cold weather inner and outer wear, all materials (cloth, zipper tape, thread) other
5 than "Velcro ®" must be certified inherently flame resistant by the
6 manufacturer.

7

8 **Fireline Safety**

9

10 **Incident Briefings**

11 Fire managers must ensure that safety briefings are occurring throughout the fire
12 organization, and that safety factors are addressed through the IC and
13 communicated to all incident personnel at operational briefings. The
14 identification and location of escape routes and safety zones must be stressed. A
15 briefing checklist can be found in Appendix F and in the *Incident Response*
16 *Pocket Guide (IRPG)*.

17

18 LCES will be used in all operational briefings and tactical operations as per the
19 *Incident Response Pocket Guide (IRPG)*.

20 • **LCES - A System for Operational Safety**

- 21 • L - Lookout(s)
- 22 • C - Communication(s)
- 23 • E - Escape Route(s)
- 24 • S - Safety Zone(s)

25

26 **Incident Safety Oversight**

27 Agency administrators must be actively involved in the management of
28 wildfires, and personally visit an appropriate number of escaped fires each year.
29 PPE is required for certain scenarios. Fire and aviation management staff can
30 provide the appropriate PPE and guidance.

- 31 • *FS - Agency Administrators, Fire Program Managers, and/or Safety and*
32 *Health Program Managers shall conduct after action reviews on all type 3*
33 *fires and a minimum of 10% of their unit's Type 4, and 5 fires and*
34 *document their inspections in the incident records.*

35

36 Incident Commanders are responsible for personnel safety. At least one person,
37 operationally qualified at a level commensurate to the complexity of the
38 incident, should be assigned the duties for providing safety oversight.
39 Additional safety oversight may be requested when:

- 40 • A fire escapes initial attack or when extended attack is probable.
- 41 • There is complex or critical fire behavior.
- 42 • There is a complex air operation.
- 43 • The fire is in an urban intermix/interface.

44

1 Every individual has the right to turn down unsafe assignments as well as be
2 responsible in identifying alternative methods of accomplishing the mission.
3 Appendix G contains process for “How to Properly Refuse Risk”.

4

5 **Unit/Area Closures**

6 Threats to public safety may require temporary closure of a unit/area, or a
7 portion of it. When a fire threatens escape from the unit/area, adjacent
8 authorities must be given as much advance notice as possible in order to achieve
9 orderly evacuation.

10

11 **Standard Safety Flagging**

12 The NWCG recommends the following Safety Zone/Escape Route flagging for
13 wildland fire (prescribed and suppression) activities:

- 14 • Hot-pink flagging marked “Escape Route” (NFES 0566). Crews with
15 colorblind members may wish to carry and utilize lime-green flagging in
16 addition to the hot-pink flagging.
- 17 • Hazards. Yellow with black diagonal stripes, 1 inch wide (NFES 0267).
18 If the above recommendation is not utilized on an incident, the incident
19 will need to identify the selected color and make known to all firefighters.

20

21 **Unexploded Ordnance (UXO)**

22 General guidance is as follows: If UXO is suspected, do not enter the area.
23 Small arms (rifle and shotgun) munitions areas should be flagged and avoided
24 by fire personnel. For suspected larger munitions, the area must be avoided by
25 fire personnel and contact local law enforcement bomb squad or nearest
26 Department of Defense agency. Each unit will determine which employees are
27 authorized to enter known or potential hazardous substance release sites, and the
28 responsibility for these determinations remains with each agency administrator.
29 The general rule of UXO is, “if you did not drop it, do not pick it up, kick it or
30 hit it with equipment”.

31

32 **Hazardous Materials**

33 Employees that discover any unauthorized waste dump or spill site that contains
34 indicators of potential hazardous substances (e.g, containers of unknown
35 substances, pools of unidentifiable liquids, piles of unknown solid materials,
36 unusual odors, or any materials out of place or not associated with an authorized
37 activity) should take the following precautions:

- 38 • Follow the procedures in the Incident Response Pocket Guide.
- 39 • Treat each site as if it contains harmful materials.
- 40 • Do not handle, move, or open any container, breathe vapors, or make
41 contact with the material.
- 42 • Move a safe distance upwind from the site.
- 43 • Contact appropriate personnel. Generally, this is the Hazardous Materials
44 Coordinator for the local office.

- 1 • **BLM/FWS/NPS - BLM requires that all field personnel complete a First**
2 **Responder Awareness training. All BLM firefighters are required to take**
3 **an annual refresher for Hazardous Material protocol.**

4
5 The following general safety rules shall be observed when working with
6 chemicals:

- 7 • Read and understand the Material Safety Data Sheets.
8 • Keep the work area clean and orderly.
9 • Use the necessary safety equipment.
10 • Label every container with the identity of its contents and appropriate
11 hazard warnings.
12 • Store incompatible chemicals in separate areas.
13 • Substitute less toxic materials whenever possible.
14 • Limit the volume of volatile or flammable material to the minimum needed
15 for short operation periods.
16 • Provide means of containing the material if equipment or containers should
17 break or spill their contents.

18 19 **Heat Stress**

20 There are three forms of heat stress. The mildest is heat cramps. Heat stress can
21 progress to heat exhaustion and eventually heat stroke. Heat stroke is a medical
22 emergency. Delayed treatment can result in brain damage and even death. At
23 the first sign of heat stress, stop work, get into the shade, and begin drinking
24 fluid. *See Chapter 05 of Fitness and Work Capacity, 2nd ed. (1997).*

25 26 **Smoke and Carbon Monoxide**

27 For information of this subject call USDA Forest Service, Technology and
28 Development Program, Publications, (406) 329-3978, and ask for *Health*
29 *Hazards of Smoke, Recommendations of the Consensus Conference, April 1997*
30 *(item Number 97512836)*. Copies are available free of charge in limited
31 numbers.

32 33 **Six Minutes for Safety Training**

34 It is recommended that daily "Six Minutes for Safety" training be conducted that
35 focuses on high-risk, low frequency activities that fire personnel may encounter
36 during a fire season. A daily national "Six Minutes for Safety" briefing can be
37 found at http://www.nifc.gov/sixminutes/dsp_sixminutes.php and in the
38 National Situation Report.

39 40 **Safety for Non-Operational Personnel Visiting Fires**

41 A wide variety of personnel such as agency administrators, other agency
42 personnel, dignitaries, members of the news media, etc may visit incidents. The
43 following standards apply to all visitors.

44
45

1 **Visits to an Incident Base**

2 The minimum recommendation for PPE at an incident base is the same as all
3 field locations.

- 4 • Lace-up shoes with non-slip soles and heels
- 5 • Long trousers
- 6 • Long-sleeve shirt
- 7 • For agency personnel, the field uniform is appropriate; however for more
8 flexibility the aramid fire shirts and trousers or flight suit may be worn.
- 9 • **BLM** - Refer to *BLM Handbook 1112-2, 3.3 BLM requires 6" shoes*.

10
11 **Visits to the Fireline**

12 Visits to the fireline must have the approval of the IC.

- 13 • Visitors must maintain communications with the DIVS or appropriate
14 fireline supervisor of the area they are visiting.
- 15 • Required PPE:
 - 16 ➤ Personnel assigned to fires must wear 8-inch high, lace-type exterior
17 leather work boots with non-slip, Vibram-type, melt-resistant soles.
18 The 8-inch height requirement is measured from the bottom of the
19 heel to the top of the boot. Alaska is exempt from the Vibram-type
20 sole requirement. All boots that meet the footwear standard as
21 described above are authorized for firefighting.
 - 22 ➤ Yellow aramid shirts
 - 23 ➤ aramid trousers
 - 24 ➤ hard hat with chinstrap
 - 25 ➤ leather gloves
 - 26 ➤ fire shelter
- 27 • Required equipment/supplies:
 - 28 ➤ hand tool
 - 29 ➤ water canteen

30
31 Visitors to the Fireline may be "Escorted" or "Non-Escorted" depending on the
32 following requirements:

33 **Non-Escorted**

- 34 • Visitors must have a physical fitness level of "light".
 - 35 ➤ Must have adequate communications and radio training.
 - 36 ➤ Completed the following training:
 - 37 ▪ Introduction to Fire Behavior (S-190)
 - 38 ▪ Firefighter Training (S-130)
 - 39 ▪ Annual Fireline Safety Refresher Training.
 - 40 ➤ Deviation from this requirement must be approved by the IC for other
41 non-escorted support personnel involved in vehicle operations or
42 other support functions on established roadways and working in areas
43 which pose no fire behavior threat.
- 44 • **BLM/FWS** - *Law Enforcement physical fitness standard is accepted as*
45 *equivalent to a "light" WCT work category.*

1 Escorted

2 All non-incident, non-agency, visitors lacking the above training and physical
3 requirements must be escorted while on the fireline.

- 4 • Visitors must receive training in the proper use of PPE.
- 5 • Visitors must be able to walk in mountainous terrain and be in good
6 physical condition with no known limiting conditions.
- 7 • Escorts must be minimally qualified at the Single Resource Boss. Any
8 deviation from this requirement must be approved by the IC.

10 Helicopter Observation Flights

11 Visitors who take helicopter flights to observe fires must receive a passenger
12 briefing and meet the following requirements:

- 13 • **Required PPE:**
 - 14 ➤ Flight helmet
 - 15 ➤ Leather boots
 - 16 ➤ Fire-resistant clothing
 - 17 ➤ All leather or leather and aramid gloves

18
19 Occasional passengers/visitors have no training requirement, but a qualified
20 flight manager must supervise loading and unloading of passengers.

22 Fixed-Wing Observation Flights**23 Required PPE**

- 24 • No PPE is required for visitors and agency personnel who take fixed-wing
25 flights to observe fires. However, a passenger briefing is required, and the
26 flight level must not drop below 500 feet AGL.

28 SAFENET

29 SAFENET is a form, process, and method for reporting and resolving safety
30 concerns encountered in any aspect (e.g., preparedness, training, etc.) of
31 wildland fire or all risk incident management. The information provided on the
32 form will provide important, safety-related data to the National Interagency Fire
33 Center, and determine long-term trends and problem areas.

34 The objectives of the form and process are:

- 35 • To provide immediate reporting and correction of unsafe situations or close
36 calls in wildland fire.
- 37 • To provide a means of sharing safety information throughout the fire
38 community.
- 39 • To provide long-term data that will assist in identifying trends.
- 40 • Primarily intended for wildland and prescribed fire situations, however,
41 SAFENET can be used for training and all-risk events.

42
43 Individuals who observe or who are involved in an unsafe situation shall initiate
44 corrective actions if possible, and then report the occurrence using SAFENET.
45 You are encouraged, but not required, to put your name on the report.

- 1 Prompt replies to the originator (if name provided), timely action to correct the
2 problem, and discussion of filed SAFENETs at local level meetings encourage
3 program participation and active reporting.
4
- 5 SAFENET is not the only way to correct a safety-related concern and it does not
6 replace accident reporting or any other valid agency reporting method. It is an
7 efficient way to report a safety concern. It is also a way for front line
8 firefighters to be involved in the daily job of being safe and keeping others safe,
9 by documenting and helping to resolve safety issues. SAFENETs may be filed:
- 10 • electronically at <http://safenet.nifc.gov>
 - 11 • postage paid mail-in form (PMS 405-2, NFES 2633)
 - 12 • verbally by telephone at 1-888-670-3938.
- 13 Appendix H contains the SAFENET form.
14

15 **Accident/Injury Reporting**

16 The Occupational Safety and Health Administration (OSHA) mandate that all
17 accidents and injuries be reported in a timely manner. This is important for the
18 following reasons:

- 19 • To protect and compensate employees for incidents that occur on-the-job.
 - 20 • To assist supervisors and safety managers in taking corrective actions and
21 establish safer work procedures.
 - 22 • To determine if administrative controls or personal protective equipment
23 are needed to prevent a future incident of the same or similar type.
 - 24 • To provide a means for trend analysis.
- 25

26 Employees are required to immediately report to their supervisor every job-
27 related accident or incident. Managers and supervisors shall ensure that an
28 appropriate level of investigation is conducted for each incident and record all
29 personal injuries and property damage. Reporting is the responsibility of the
30 injured employee's home unit regardless of where the accident or injury
31 occurred. Coordinate with your human resources office or administrative
32 personnel to complete appropriate Officer of Worker's Compensation (OWCP)
33 forms.

- 34 • DOI employees will report accidents using the Safety Management
35 Information System (SMIS) at www.smis.doi.gov within six working days
36 of the incident.
 - 37 • Forest Service employees will use the Safety and Health Information Portal
38 System (SHIPS) through the Forest Service Dashboard at
39 <https://asp.talx.com/dashboard/usdafs/> within six working days of the
40 incident.
- 41

42 **Critical Incident Management**

43 The National Wildfire Coordinating Group has published the *Agency*
44 *Administrator's Guide to Critical Incident Management (PMS 926, NFES 1356)*.
45 The guide is a series of subject-area checklists designed to be reviewed in detail

1 before a critical incident occurs, during the actual management of the incident,
2 and after the incident has taken place. It is a compilation of lessons learned and
3 suggestions that are designed to assist an Agency Administrator in the
4 management of a critical incident. The guide is not intended to replace local
5 emergency plans or other specific guidance that may be available, but should be
6 used in conjunction with existing SOPs. It is available through the Publications
7 Management System, National Interagency Fire Center.