

Chapter 18 Reviews and Investigations

Introduction

Reviews and investigations are used by wildland fire and aviation managers to assess and improve the effectiveness and safety of organizational operations. Information (other than factual) derived from safety reviews and accident investigations should only be used by agencies for accident prevention and safety purposes.

Multiagency Cooperation

Many reviews and investigations involve cooperation between Federal, State, County, and Municipal Agencies. To comply with each agency's authorities, policies, and responsibilities, a multiagency review or investigation may be necessary. A multiagency Delegation of Authority should be provided to outline roles, responsibilities, and expected deliverables.

The Team Leader or delegating official(s) should establish cooperative relationships with the other agencies involved in the review or investigation to ensure policies and responsibilities are met. This may involve negotiations, cooperative agreements, and coordination with the agency Designated Agency Safety and Health Official (DASHO) or the agency official who signs the Delegation of Authority.

Federal Interagency Investigations

Close calls or accidents that involve interagency (USFS or DOI) personnel and/or jurisdiction (e.g. USFS firefighter injured on FWS jurisdictional wildland fire & vice versa) shall be reviewed or investigated cooperatively and conducted at the appropriate level as outlined in this chapter.

Agency Administrators will ensure that affected agencies are involved throughout the review/investigation process.

When an incident does not meet the serious accident criteria, the affected Agency Administrators should jointly decide what type and level of investigation will be conducted based on agency processes outlined in this chapter. Questions should be addressed to your agency wildland fire safety program manager.

Reviews

Reviews are methodical examinations of system elements such as program management, safety, leadership, operations, preparedness, training, staffing, business practices, budget, cost containment, planning, and interagency or intra-

1 agency cooperation and coordination. Reviews do not have to be associated
 2 with a specific incident. The purpose of a review is to ensure the effectiveness
 3 of the system element being reviewed, and to identify deficiencies and
 4 recommend specific corrective actions. Established review types are described
 5 below and include:

- 6 • Preparedness Reviews;
- 7 • After Action Reviews;
- 8 • Fire and Aviation Safety Team Reviews;
- 9 • Safety Assistance Team Visits;
- 10 • Aviation Safety and Assistance Team Reviews;
- 11 • Large Fire Cost Reviews;
- 12 • Individual Fire Reviews;
- 13 • Lessons Learned Reviews;
- 14 • Rapid Lesson Sharing; and
- 15 • Escaped Prescribed Fire Reviews.

16 17 **Review Types and Requirements**

Type	When Conducted	Delegating or Authorizing Official
Preparedness Review	Annually, or management discretion	Local/State/Region/National
After Action Review	Management discretion	N/A
Fire and Aviation Safety Team Review	As fire activity dictates	Geographic Area Coordinating Group
Safety Assistance Team Visit	As fire activity dictates	Local/State/Region/National
Aviation Safety Assistance Team Review	As aviation activity dictates	State/Regional Aviation Manager or MACG
Large Fire Cost Review	Refer to NWCG Memorandum #003-2009	Agency Director
Individual Fire Review	Management discretion	Local/State/Region/National
Lessons Learned Review	Management discretion	Local/State/Region/National
Rapid Lesson Sharing	Management Discretion	N/A
Escaped Prescribed Fire Review	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)	

18 19 **Preparedness Reviews**

20 Preparedness Reviews assess fire programs for compliance with established fire
 21 policies and procedures outlined in the current *Interagency Standards for Fire*
 22 *and Fire Aviation Operations* and other pertinent policy documents.

1 Preparedness Reviews identify organizational, operational, procedural,
2 personnel, or equipment deficiencies, and recommend specific corrective
3 actions. Interagency Preparedness Review Checklists can be found at:
4 http://www.nifc.gov/policies/pol_ref_intgncy_prepcheck.html

6 **After Action Reviews (AAR)**

7 An AAR is a learning tool intended for the evaluation of an incident or project
8 in order to improve performance by sustaining strengths and correcting
9 weaknesses. An AAR is performed as soon after the event as possible by the
10 personnel involved. An AAR should encourage input from participants that is
11 focused on:

- 12 • What was planned?
- 13 • What actually happened?
- 14 • Why it happened?
- 15 • What can be done the next time?

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17 An AAR is a tool that leaders and units can use to get maximum benefit from
18 the experience gained on any incident or project. When possible, the leader of
19 the incident or project should facilitate the AAR process. However, the leader
20 may choose to have another person facilitate the AAR as needed and
21 appropriate. AARs may be conducted at any organizational level. However, all
22 AARs involve the exchange of ideas and observations, and focus on improving
23 proficiency. The AAR should not be utilized as an investigational review. The
24 format can be found in the *Interagency Response Pocket Guide (IRPG), PMS*
25 *#461, NFES #1077*. Additional AAR information is available at
26 http://www.fireleadership.gov/toolbox/after_action_review/index.html

28 **Fire and Aviation Safety Team (FAST) Reviews**

29 Fire and Aviation Safety Teams assist Agency Administrators during periods of
30 high fire activity by assessing policy, rules, regulations, and management
31 oversight relating to operational issues. They can also do the following:

- 32 • Provide guidance to ensure fire and aviation programs are conducted safely;
- 33 • Assist with providing immediate corrective actions;
- 34 • Review compliance with OSHA abatement plan(s), reports, reviews, and
35 evaluations; and
- 36 • Review compliance with *Interagency Standards for Fire and Fire Aviation*
37 *Operations*.

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39 FAST reviews can be requested through geographic area coordination centers to
40 conduct reviews at the state/regional and local level. If a more comprehensive
41 review is required, a national FAST can be ordered through the National
42 Interagency Coordination Center.

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44 FASTs include a team leader, who is either an Agency Administrator or fire
45 program lead with previous experience as a FAST member, a safety and health

1 manager, and other individuals with a mix of skills from fire and aviation
2 management.

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4 FASTs will be chartered by their respective Geographic Area Coordinating
5 Group (GACG) with a Delegation of Authority, and report back to the GACG.
6 FAST reports will include an executive summary, purpose, objectives,
7 methods/procedures, findings, recommendations, follow-up actions (immediate,
8 long-term, national issues), and a letter delegating authority for the review.
9 FAST reports should be submitted to the GACG with a copy to the Federal Fire
10 and Aviation Safety Team (FFAST) chair within 30 days. See Appendix L for
11 sample FAST Delegation of Authority.

12 **Safety Assistance Team (SAT) Visits**

13 In addition to FAST reviews, SAT visits emphasize mentally engaging
14 individual firefighters, managers, and administrators to grasp potential issues,
15 with a focus on firefighting safety fundamentals. SAT visits are not inspections.
16 SATs are often ordered when activity within an area escalates rapidly, or when a
17 high level of activity has been occurring for a long time. SATs can be
18 interagency in scope and composition.

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21 The goals of a Safety Assistance Team are to:

- 22 • Assist fire managers and IMTs with site visits to firefighters, fire managers,
23 and program leaders.
- 24 • Be service oriented, assisting the local units.
- 25 • Provide early warning of potentially hazardous conditions or situations.

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27 Direct intervention, circumventing normal chain of command, is authorized
28 when necessary; however, the overall objective is to create a work environment
29 where the normal operating procedures are responsible for safe practices.

30 **Aviation Safety Assistance Team (ASAT) Reviews**

31 Refer to Chapter 16 for ASAT information.

32 **Large Fire Cost Reviews**

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34 Information on large fire cost reviews can be found in Chapter 11 (Incident
35 Management), and at [http://www.nwcg.gov/general/memos/nwcg-003-
36 2009.html](http://www.nwcg.gov/general/memos/nwcg-003-2009.html)

37 **Individual Fire Reviews**

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39 Individual fire reviews examine all or part of the operations on an individual
40 fire. The fire may be ongoing or controlled. These reviews may be local,
41 state/regional, or national. These reviews evaluate decisions and strategies,
42 correct deficiencies, identify new or improved procedures, techniques or tactics,
43 determine cost-effectiveness, and compile and develop information to improve
44 local, state/regional, or national fire management programs.

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1 **Lessons Learned Reviews (LLRs)**

2 The purpose of a LLR is to focus on the near miss events or conditions in order
3 to prevent potential serious incident in the future. In order to continue to learn
4 from our near misses and our successes it is imperative to conduct a LLR in an
5 open, non-punitive manner. LLRs are intended to provide educational
6 opportunities that foster open and honest dialog and assist the wildland fire
7 community in sharing lessons learned information. LLRs provide an outside
8 perspective with appropriate technical experts assisting involved personnel in
9 identifying conditions that led to the unexpected outcome and sharing findings
10 and recommendations.

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12 A LLR should be tailored to the event being reviewed. The scope of the review
13 should be commensurate with the severity of the incident. A LLR will not be
14 substituted for a Serious Accident Investigation (SAI) or Accident Investigation
15 (AI), should the criteria for either of those be met, but may be used as a
16 supplement to the SAI or AI.

17 • *FS- Facilitated Learning Analysis (FLA) may be used for incidents meeting*
18 *the AI criteria.*

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20 A LLR will be led by a facilitator not involved in the event. A facilitator should
21 be an appropriate fire management expert who possesses skills in interpersonal
22 communications, organization, and be unbiased to the event. Personnel
23 involved in the event will be participants in the review process. Depending
24 upon the complexity of the event, the facilitator may request assistance from
25 technical experts (e.g., fire behavior, fire operations, etc.).

26 The LLR facilitator will convene the participants and:

- 27 • Obtain a Delegation of Authority from appropriate agency level. See
28 appendix J for a sample LLR Delegation of Authority;
- 29 • Identify facts of the event (sand tables maybe helpful in the process) and
30 develop a chronological narrative of the event;
- 31 • Identify underlying reasons for success or unintended outcomes;
- 32 • Identify what individuals learned and what they would do differently in the
33 future;
- 34 • Identify any recommendations that would prevent future similar
35 occurrences;
- 36 • 24 and 72 hour reports may be produced, but are not required; and
- 37 • Provide a final written report including the above items to the pertinent
38 Agency Administrator(s) within two weeks of event occurrence unless
39 otherwise negotiated. Names of involved personnel should not be included
40 in this report (reference them by position).

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42 A copy of the final report will be submitted to the respective agency's national
43 fire safety lead who will provide a copy to the Wildland Fire Lessons Learned
44 Center (LLC). E-mail: llcdocsubmit@gmail.com

- 1 • *FS - The Forest Service has combined the Accident Prevention Analysis*
2 *(APA) with the Facilitated Learning Analysis (FLA). A guide for the FLA*
3 *process is available at http://bit.ly/FLA_guide*
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5 **Rapid Lesson Sharing (RLS)**

6 RLS is a process for field personnel to quickly share lessons with others. RLS
7 can be used to document and share lessons learned as a result of close calls,
8 minor accidents, successes, efficient ways of performing work, adaptations, or
9 anything wildland fire personnel can learn from.

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11 To submit or view RLS documents, go to:

12 <http://www.wildfirelessons.net/Resources/RapidLessonSharing>

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14 **Escaped Prescribed Fire Reviews**

15 An escaped prescribed fire is a prescribed fire which has exceeded, or is
16 expected to exceed, its prescription. Escaped prescribed fire review direction is
17 found in these agency documents:

18 *Interagency Prescribed Fire Planning and Implementation Procedures*
19 *Reference Guide (PMS 484)*

- 20 • *BLM - IM No. FA IM-2014-001*
21 • *FWS - Fire Management Handbook, Chapter 17*
22 • *NPS - RM-18, Chapter 7 & 17*
23 • *FS - FSM 5140*
24

25 Escaped Prescribed Fire Reviews will be submitted to the Wildland Fire Lessons
26 Learned Center (LLC) by the agency fuels program lead. Submissions should
27 be sent to llcdocsbmit@gmail.com.

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29 **Investigations**

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31 Investigations are detailed and methodical efforts to collect and interpret facts
32 related to an incident or accident, identify causes (organizational factors, local
33 workplace factors, unsafe acts), and develop control measures to prevent
34 recurrence.

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36 Distinct types of wildland fire incidents and accidents have specific
37 investigation requirements.

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- 1 **Wildland Fire Incident and Accident Types and Definitions**
- 2 • **Serious Wildland Fire Accident**
- 3 An unplanned event or series of events that resulted in death, injury,
- 4 occupational illness, or damage to or loss of equipment or property. For
- 5 wildland fire operations, a serious accident involves any of the following:
- 6 ○ One or more fatalities;
- 7 ○ Three or more personnel who are inpatient hospitalized as a direct
- 8 result of or in support of wildland fire operations;
- 9 ○ Property or equipment damage of \$250,000 or more; and/or
- 10 ○ Consequences that the Designated Agency Safety and Health Official
- 11 (DASHO) judges to warrant Serious Accident Investigation.
- 12 • **Wildland Fire Accident**
- 13 An unplanned event or series of events that resulted in injury, occupational
- 14 illness, or damage to or loss of equipment or property to a lesser degree than
- 15 defined in “Serious Wildland Fire Accident”.
- 16 • **Near-miss**
- 17 An unplanned event or series of events that could have resulted in death,
- 18 injury, occupational illness, or damage to or loss of equipment or property
- 19 but did not.
- 20 • **Entrapment**
- 21 A situation where personnel are unexpectedly caught in a fire behavior-
- 22 related, life-threatening position where planned escape routes or safety
- 23 zones are absent, inadequate, or compromised. Entrapment may or may not
- 24 include deployment of a fire shelter for its intended purpose. Entrapment
- 25 may result in a serious wildland fire accident, a wildland fire accident, or a
- 26 near-miss.
- 27 • **Burnover**
- 28 An event in which a fire moves through a location or overtakes personnel or
- 29 equipment where there is no opportunity to utilize escape routes and safety
- 30 zones, often resulting in personal injury or equipment damage.
- 31 • **Fire Shelter Deployment**
- 32 The removing of a fire shelter from its case and using it as protection
- 33 against fire. Fire shelter deployment may or may not be associated with
- 34 entrapment. Fire shelter deployment may result in a serious wildland fire
- 35 accident, a wildland fire accident, or a near-miss.
- 36 • **Fire Trespass**
- 37 The occurrence of unauthorized fire on agency-protected lands where the
- 38 source of ignition is tied to some type of human activity.
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1 **Investigation Types and Requirements**

Wildland Fire Event	Investigation Type	Management Level Requiring Notification ¹	Management level that determines review type and authorizes review ²
Serious Wildland Fire Accident	Serious Accident Investigation (SAI) <i>FS- Coordinated Response Protocol</i>	National	National
Wildland Fire Accident	Accident Investigation (AI) <i>FS- FLA may be used</i>	<i>BLM/NPS- National</i> <i>FS/FWS- Management Discretion</i>	Region/State/Local
Entrapment/ Burnover	SAI, AI, LLR, depending on severity	National	National
Fire Shelter Deployment	SAI, AI, LLR, depending on severity	National	National
Near-miss	LLR, AAR	Management Discretion	Region/State/Local
Fire Trespass	Fire Cause Determination & Trespass Investigation	Local	Local

2 ¹In the event that a wildland fire entrapment or fatality occurs, immediate
 3 notification to NICC is required. A *Wildland Fire Entrapment/Fatality Initial*
 4 *Report* (PMS 405-1) should be completed and mailed to NICC electronically or
 5 by fax machine within 24 hours. Submit this report even if some data is
 6 missing. The PMS 405-1 is located at the following web site:
 7 http://www.nifc.gov/nicc/logistics/coord_forms.htm.

8 ² Higher level management may exercise their authority to determine the type of
 9 review or investigation.

- 11 • **BLM-** *BLM Accidents that involve fire and aviation employees or*
 12 *equipment will be investigated according to the requirements stated in this*
 13 *chapter. Investigations will occur regardless of land jurisdiction. Facts*
 14 *will be collected, causes (organizational factors, local workplace factors,*
 15 *unsafe acts) identified, and an accident investigation report produced. The*
 16 *report will include recommended corrective actions and control measures.*
 17 *Report issuance and follow-up will be through established command*
 18 *channels. BLM Agency Administrators may jointly delegate authority to*

- 1 *investigate accidents in cases of mixed jurisdiction or employee*
2 *involvement. Joint delegations must ensure that BLM investigation*
3 *requirements are met. The Facilitated Learning Analysis (FLA) process*
4 *may be used as a supplemental element to required BLM accident*
5 *investigation processes.*
- 6 • **FS-** *Forest Service Line Officers are the deciding officials regarding what*
7 *type of accident investigation or analysis method is to be used for accidents*
8 *or near misses occurring under Forest Service jurisdiction. FLAs are a*
9 *type of Lessons Learned Review.*

11 Investigation Processes

13 Processes Common to All Wildland Fire Accident Investigations

- 14 • **Site Protection** - The site of the incident should be secured immediately
15 and nothing moved or disturbed until the area is photographed and visually
16 reviewed by the investigation team. Exact locations of injured personnel,
17 entrapments, injuries, fatalities, and the condition and location of personal
18 protective equipment, property, and other equipment must be documented.
- 19 • **Management of Involved Personnel** - Treatment, transport, and follow-up
20 care must be immediately arranged for injured and involved personnel. The
21 Agency Administrator or delegate should develop a roster of involved
22 personnel and supervisors and ensure they are available for interviews by
23 the investigation team. The Agency Administrator should consider
24 relieving involved supervisors from fireline duty until the preliminary
25 investigation has been completed. Attempt to collect initial statements from
26 the involved individuals prior to a Critical Incident Stress Management
27 (CISM) session.
- 28 • **Delegation of Authority** - A Delegation of Authority shall be issued to the
29 investigation team leader. The Delegation of Authority will outline roles,
30 responsibilities, and expected deliverables. Delegation of Authority
31 templates are available at:
32 http://www.nifc.gov/safety/safety_reprtsInvest.html
- 33 • **Critical Incident Stress Management (CISM)** - CISM is the
34 responsibility of local Agency Administrators, who should have individuals
35 pre-identified for critical incident stress debriefings. Also refer to the
36 *Agency Administrator's Guide to Critical Incident Management (PMS 926)*,
37 available at: <http://www.nwcg.gov/pms/pubs/pms926.doc>. Individuals or
38 teams may be available through Employee Assistance Programs (EAPs) or
39 Geographic Area Coordination Centers (GACCs).

41 Wildland Fire Serious Accident Investigation Process

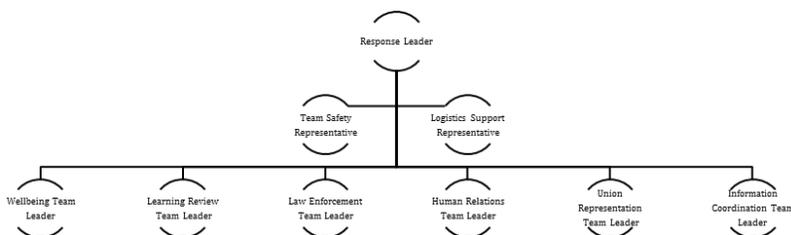
42
43 For interagency serious accident investigations, a multi-agency delegation of
44 authority to conduct the investigation may be issued. The delegation will ensure
45 that the investigation meets the policy requirements of involved agencies.

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- 1 • **BLM/FWS- The Interagency Serious Accident Investigation Guide**
2 *establishes core direction for BLM, FWS, and interagency serious accident*
3 *investigations (exceptions for aviation accidents are stated in the guide). It*
4 *provides serious accident investigation teams a standardized and*
5 *comprehensive process for conducting serious accident investigations. The*
6 *guide is available at http://www.nifc.gov/safety/safety_reprtsInvest.html.*
7
8 *Serious accident investigation reports will be completed, routed, and*
9 *disseminated according to processes established in the guide. Reports may*
10 *contain information supplemental to the requirements of the guide if it*
11 *augments the BLM's ability to learn and to develop further improvements.*
12
13 *The guide may be used entirely or in part for accidents that do not meet the*
14 *serious accident definition.*
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16 • **FS- REVIEW AND INVESTIGATION OF SERIOUS INJURIES AND**
17 **FATALITIES OF ON-DUTY FOREST SERVICE EMPLOYEES**
18 *A Coordinated Response Protocol (CRP) has been developed to coordinate*
19 *the reviews required in response to incidents and accidents. The CRP*
20 *concept is a phased approach to incident review that establishes pre-*
21 *determined teams and training. The CRP is designed to coordinate all*
22 *groups working together, including the Learning Review Team, Peer*
23 *Support/Critical Incident Stress Management, Law Enforcement and*
24 *Investigations, Union, and Human Resources. Additionally, the CRP*
25 *stresses a mutual understanding of roles and responsibilities. This*
26 *approach will provide a basis for cooperation before any team is*
27 *dispatched to an incident, thus minimizing impact on field personnel, and*
28 *making the data-gathering phase more efficient. This principle-based*
29 *approach places the primary focus on our people and learning.*
30
31 *Forest Service directives and guidelines regarding the investigation of*
32 *serious employee injuries and fatalities establish specific roles for the*
33 *Office of Safety and Occupational Health (OSOH) and Law Enforcement*
34 *and Investigations (LEI) staffs. These roles are delineated in the Law*
35 *Enforcement Manual at Forest Service Manual (FSM) 5303.11, the Service*
36 *Wide Claims Management Handbook at Forest Service Handbook (FSH)*
37 *6509.11h, the Coordinated Response Protocol Guide, and FSH 6709.12.*
38 *There is a requirement to conduct a claims investigation for any fatality or*
39 *serious injury, and there is inherent value in conducting a Learning Review.*
40 *To ensure that these potentially disparate roles are fulfilled, the following*
41 *interim guidance is provided:*
42 1. *The Special Agent in Charge (SAC) and the appropriate*
43 *Region/Station/Area Safety Manager will be notified immediately of*
44 *incidents meeting the threshold for a Coordinated Response, who will*
45 *report them to the Designated Agency Safety and Health Official*
46 *(DASHO), the Director of LEI, and the Director of OSOH. This*

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- notification will engage a scalable coordinated response, the Coordinated Response Protocol (CRP). This protocol is designed as a collaborative effort with all team members participating, as required.
- 2. The SAC will assume responsibility for site security, and through coordination with the Director of LEI, will conduct a preliminary incident review. The review will be completed as soon as possible, and in most cases within 72 hours. If there is no indication of criminal wrongdoing, the event will be turned over to the Response Leader (formerly named the Team Leader). If at any time during the CRP there is a reasonable indication that a criminal investigation is warranted, the Response Leader and Directors of LEI and OSOH will confer with the DASHO regarding how to proceed with the CRP.
- 3. The CRP Team may include the members listed in the following diagram. The role of each team member is fully explained in the CRP Guide.



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- 4. CRP Team Leaders will coordinate their efforts with the Response Leader and strive to minimize traumatic impacts of the Learning Review and claims investigation on employees involved.
- 5. For every Forest Service accident in which the potential for a claim against the federal government exists, the CRP Team will coordinate the Learning Review and a claims investigation. OOL will conduct the Learning Review. LEI will conduct a claims investigation and complete the required report.
- 6. Information obtained by the Learning Review Team is often subjective in nature and subjective information will not be disclosed to agency personnel, other than those individuals appointed to the Learning Review or those involved in supervising or reviewing the work of the Learning Review, including OOL-appointed process coaches and reviewers. Conclusive reports and learning products derived from this information will be released for the purpose of organizational and individual learning.
- 7. In cases involving National Transportation Safety Board (NTSB), the designated NTSB Investigator in Charge (IIC) will determine party status. For some aviation accidents, the IIC may rely solely on party members to collect and supply information for the NTSB report without actually being on the accident scene. The NTSB prohibits law enforcement involvement with their accident investigations and is

1 *mandated to refer any suspicion of illegal activity to the FBI for*
2 *investigation. The Qualified Technical Investigator (QTI) and*
3 *Response Leader will work with the NTSB IIC and DASHO (or*
4 *designated representative) to coordinate sharing any USFS Learning*
5 *Review products.*

7 **Fire Director Responsibilities**

8 The Fire Director(s) or designee(s) of the lead agency, or agency responsible for
9 the land upon which the accident occurred, will:

- 10 ● Notify the agency safety manager and Designated Agency Safety and
11 Health Official (DASHO);
- 12 ● Immediately appoint, authorize (through Delegation of Authority), and
13 deploy an accident investigation team;
- 14 ● Provide resources and procedures adequate to meet the team's needs.
- 15 ● Receive the factual and management evaluation reports and take action to
16 accept or reject recommendations;
- 17 ● Forward investigation findings, recommendations, and corrective action
18 plan to the DASHO (the agency safety office is the "office of record" for
19 reports);
- 20 ● Convene an accident review board/ board of review (if deemed necessary)
21 to evaluate the adequacy of the factual and management reports and suggest
22 corrective actions;
- 23 ● Ensure a corrective action plan is developed, incorporating management
24 initiatives established to address accident causal factors; and
- 25 ● Ensure Serious Accident Investigations remain independent of other
26 investigations.

27 **Agency Administrator Responsibilities**

- 29 ● Develop local preparedness plans to guide emergency response.
- 30 ● Identify agencies with jurisdictional responsibilities for the accident.
- 31 ● Provide for and emphasize treatment and care of survivors.
- 32 ● Ensure the Incident Commander secures the accident site.
- 33 ● Conduct an in-briefing to the investigation team.
- 34 ● Facilitate and support the investigation as requested.
- 35 ● Determine need and implement Critical Incident Stress Management
36 (CISM).
- 37 ● Notify home tribe leadership in the case of a Native American fatality.
- 38 ● Prepare and issue the required 24 Hour Preliminary Report unless formally
39 delegated to another individual.

40 **Notification**

42 Agency reporting requirements will be followed. As soon as a serious accident
43 is verified, the following groups or individuals should be notified:

- 44 ● Agency Administrator;
- 45 ● Public affairs;

- 1 • Agency Law Enforcement;
- 2 • Safety personnel;
- 3 • County sheriff or local law enforcement as appropriate to jurisdiction;
- 4 • National Interagency Coordination Center (NICC) through the local
- 5 dispatch center and GACC. Provide a *Wildland Fire Entrapment/Fatality*
- 6 *Initial Report* (PMS 405-1) directly to NICC within 24 hours;
- 7 • Agency headquarters; and
- 8 • OSHA (within 8 hours if the accident resulted in one or more fatalities or if
- 9 three or more personnel are inpatient hospitalized).

10
11 Notification to the respective agency's fire national safety/risk management lead
12 is required.

13 14 **Designating the Investigation Team Lead**

15 The 1995 Memorandum of Understanding between the U.S. Department of the
16 Interior and the U.S. Department of Agriculture states that serious wildland fire-
17 related accidents will be investigated by interagency investigation teams.
18 Following initial notification of a serious accident, the National Fire Director(s)
19 or their designee(s) will designate a Serious Accident Investigation Team
20 Lead(s) and provide that person(s) with a written Delegation of Authority to
21 conduct the investigation and the means to form and deploy an investigation
22 team.

- 23 • *BLM- The Fire and Aviation Directorate Safety Program Manager*
- 24 *mobilizes SAI teams in coordination with the SAI Team Leader.*

25
26 Accidents involving more than one agency will require a collaboratively
27 developed Delegation of Authority that is signed by each of the respective
28 agencies.

29 30 **Serious Accident Investigation Team (SAIT) Composition**

31 SAIT members should not be affiliated with the unit that sustained the accident.

- 32 • **Team Leader (Core Team Member)**
33 A senior agency management official, at the equivalent associate/assistant
34 regional/state/area/division director level. The team leader will direct the
35 investigation and serve as the point of contact to the Designated Agency
36 Safety and Health Official (DASHO).
- 37 • **Chief Investigator (Core Team Member)**
38 A qualified accident investigation specialist is responsible for the direct
39 management of all investigation activities. The chief investigator reports to
40 the team leader.
- 41 • **Accident Investigation Advisor/Safety Manager (Core Team Member)**
42 An experienced safety and occupational health specialist or manager who
43 acts as an advisor to the team leader to ensure that the investigation focus
44 remains on safety and health issues. The accident investigation
45 advisor/safety manager also works to ensure strategic management issues

- 1 are examined. Delegating Officials or their designee may, at their
2 discretion, fill this position with a trained and qualified NWCG Safety
3 Officer, Line (SOFR), Safety Officer, Type 2 (SOF2), or Safety Officer,
4 Type 1 (SOF1).
- 5 • **Interagency Representative**
6 An interagency representative will be assigned to every fire-related Serious
7 Accident Investigation Team. They will assist as designated by the team
8 leader and will provide outside agency perspective. They will assist as
9 assigned by the Team Leader and will provide a perspective from outside
10 the agency.
 - 11 • **Technical Specialists**
12 Personnel who are qualified and experienced in specialized occupations,
13 activities, skills, and equipment, addressing specific technical issues such as
14 specialized fire equipment, weather, and fire behavior.
 - 15 • **Public Affairs Officer**
16 For investigations with high public visibility and significant news media
17 interest, a public affairs officer (PAO) should be considered a part of the
18 team. The PAO should develop a communications plan for the team, be a
19 designated point of contact for news media, and oversee all aspects of
20 internal and external communications. Ideally, the PAO should be qualified
21 as a Type 1 or Type 2 public information officer and be familiar with SAI
22 team organization and function.
 - 23 ○ **BLM** - *All media related documents (news releases, talking points,*
24 *etc.) should be cleared through NIFC Public Affairs prior to external*
25 *release.*
- 26
27 Core SAIT members are required to take the Interagency Serious Accident
28 Investigation Course 1112-05 prior to serious accident investigation assignment.
29 This training is also required every 5 years for recurrency.
- 30 • **FS/BLM/FWS**- *This training is required every 5 years to retain currency.*
- 31
- 32 **SAI 24 and 72 Hour Reports**
- 33 Final 24 and 72 hour reports will be approved by the SAI delegating official,
34 then sent to the agency fire safety/risk management lead for national
35 distribution, which may include posting through the NWCG Safety Alert
36 System.
- 37 • **24-Hour Preliminary Report**- This report contains known basic facts about
38 the accident. It will be completed and forwarded by the responsible Agency
39 Administrator to the SAI delegating official. Names of injured personnel
40 will not be included in this report. Personnel may be referenced by
41 position.
 - 42 • **72-Hour Expanded Report**- This report provides additional factual
43 information, if available. The information may include the number of
44 victims and severity of injuries. The focus should be on information that
45 may have immediate impact on future accident prevention. This report will
46 be completed and forwarded by the SAI team to the SAI delegating official.

1 Names of injured personnel will not be included in this report. Personnel
2 may be referenced by position.

3

4 **SAI Final Report**

5 Within 45 days of the incident, a final report consisting of a Factual Report (FR)
6 and a Management Evaluation Report (MER) will be produced by the
7 investigation team to document facts, findings, and recommendations and
8 forwarded to the Designated Agency Safety and Health Official (DASHO)
9 through the agency Fire Director(s).

- 10 • **Factual Report** This report contains a brief summary or background of the
11 event, and facts based only on examination of technical and procedural
12 issues related to equipment and tactical fire operations. It does not contain
13 opinions, conclusions, or recommendations. Names of injured personnel
14 are not to be included in this report (reference them by position). Post-
15 accident actions should be included in this report (emergency response
16 attribute to survival of a victim, etc).

17

18 Factual Reports will be submitted to Wildland Fire Lessons Learned Center
19 (LLC) by the respective agency's fire safety/risk management leads.
20 E-mail: llcdoesubmit@gmail.com

- 21 • **Management Evaluation Report (MER)**

22 The MER is intended for internal use only and explores management
23 policies, practices, procedures, and personal performance related to the
24 accident. The MER categorizes findings identified in the factual report and
25 provides recommendations to prevent or reduce the risk of similar
26 accidents.

27

28 Factual Report and Management Evaluation Report formatting can be found on
29 the NIFC website at: http://www.nifc.gov/safety/accident_resources.htm

30

31 **Accident Review Board/Board of Review**

32 An Accident Review Board/Board of Review is used by some agencies to
33 evaluate recommendations, and develop a corrective action plan. Refer to the
34 respective agency's Safety and Health policy.

35

36 **Wildland Fire Accident Investigation Process**

37

38 Accident investigations and reports should be commensurate with the
39 complexity and/or severity of the accident. Investigations and reports may range
40 from large investigation teams producing comprehensive reports to first-level
41 supervisors initiating investigations and reporting injury/property damage in
42 agency reporting systems.

43

44

45

46

1 Notification

2 When an accident occurs, agency notification requirements will be followed.

3 Notification requirements universally include:

- 4 • Local dispatch center
- 5 • Unit Fire Management Officer
- 6 • Agency Administrator

7

8 Investigation Team Membership

9 Investigation team membership should be commensurate with the complexity
10 and/or severity of the accident. An investigation team should consist of a team
11 leader and an adequate number of technical specialists and subject matter
12 experts. For complex investigations, team membership may also include a chief
13 investigator, a safety advisor/manager, and additional technical specialists, and a
14 writer/editor. Team members may have dual roles (e.g., chief investigator/safety
15 advisor).

16

17 Investigation Methodology

18 Accident Investigations (AI) are detailed and methodical efforts to collect and
19 interpret facts related to an accident and to provide specific recommendations to
20 prevent recurrence. The AI should include the following actions:

- 21 • Visual inspection of involved site, equipment, or material;
- 22 • Detailed analysis of equipment or material, as necessary;
- 23 • Interviews with involved personnel, witnesses, managers, and other
24 pertinent persons;
- 25 • Collection and review of written statements;
- 26 • Review of records, archives, plans, policies, procedures, and other pertinent
27 documents;
- 28 • Consideration of environmental, equipment, material, procedural, and
29 human factors as they related to the incident; and
- 30 • Development of specific findings and related recommendations for the AI
31 report.

32

33 AI 24- and 72-Hour Reports

34 24- and 72-hour reports should be completed when a formal AI will be
35 conducted. Final 24- and 72-hour reports will be approved by the AI delegating
36 official, then sent to the agency fire safety/risk management lead for national
37 distribution, which may include posting through the NWCG Safety Alert
38 System.

- 39 • 24-Hour Preliminary Report- This report contains known basic facts about
40 the accident. It will be completed and forwarded by the responsible Agency
41 Administrator to the next higher level (e.g. District Manager forwards to
42 State Director). Names of injured personnel will not be included in this
43 report. Personnel may be referenced by position.
- 44 • 72-Hour Expanded Report- This report provides additional factual
45 information, if available. The information may include the number of

1 victims and severity of injuries. The focus should be on information that
2 may have immediate impact on future accident prevention. This report will
3 be completed and forwarded by the AI team to the AI delegating official.
4 Names of injured personnel will not be included in this report. Personnel
5 may be referenced by position.

6 7 **AI Final Report**

8 Within 45 days of the accident, a final report including facts, findings, and
9 recommendations shall be submitted to the senior manager dependent upon the
10 level of investigation (e.g., local Agency Administrator, State/Regional Director,
11 and Agency Fire Director or their designee). If a lower level investigation is
12 conducted, a courtesy copy of the final report shall be sent to the respective
13 agency's national fire safety/risk management lead.

14
15 The Final Report (minus names of employees- they should be referenced by
16 position) will be submitted to Wildland Fire Lessons Learned Center (LLC) by
17 the respective agency's National Fire Safety Leads.

18 E-mail: llcdosubmit@gmail.com

19 20 **Accident Investigation Report Standard Contents**

- 21 • **Executive Summary** - A brief narrative of the facts involving the accident
22 including dates, locations, times, name of incident, jurisdiction(s), number
23 of individuals involved, etc. Names of injured personnel or personnel
24 involved in the accident are not to be included in this report (reference them
25 by position).
- 26 • **Narrative** - A detailed chronological narrative of events leading up to and
27 including the accident, as well as rescue and medical actions taken after the
28 accident. This section will contain who, what, and where.
- 29 • **Investigation Process**- A brief narrative of actions taken by the
30 investigation team. This narrative should include investigation team
31 membership, Delegation of Authority information (from who and contents,
32 include a copy as an appendix), investigative actions and timeline (when the
33 team conducted interviews, inspections, site visits, etc.), and if other sources
34 were consulted (i.e. professional accident reconstruction experts, equipment
35 manufacturers, etc.). This section should also address if environmental,
36 equipment, material, procedural, and human factors were present, and state
37 how findings/recommendations were developed.
- 38 • **Findings/Recommendations**
 - 39 ○ **Findings** are developed from the factual information. Each finding is a
40 single event or condition. Each finding is an essential step in the
41 accident sequence, but each finding is not necessarily causal or
42 contributing. Findings should only include information necessary to
43 explain the specific event or condition. Findings must be substantiated
44 by the factual data. Findings should not include opinion or speculation.
 - 45 ○ **Discussion** –This provides explanation or information pertinent to a
46 specific finding.

- 1 ○ **Recommendations** - Recommendations are proposed actions intended
2 to prevent similar accidents. Recommendations should be directly
3 related to findings, should not contain opinion or speculation, and
4 should identify the specific individual responsible for completing the
5 recommended action. Recommendations will be evaluated and may be
6 incorporated into future operational direction through established
7 processes.
 - 8 ● **Conclusions and Observations** - Investigation team’s opinions and
9 inferences, and “lessons learned” may be captured in the section. This
10 section is not required.
 - 11 ● **Reference Materials**
 - 12 ○ **Maps/Photographs/Illustrations** - Graphic information used to
13 document and visually portray facts.
 - 14 ○ **Appendices** - Reference materials (e.g., fire behavior analysis,
15 equipment maintenance reports, agreements, Delegation of Authority).
 - 16 ○ **Records** - Factual data and documents used to substantiate facts
17 involving the accident.
- 18
- 19 An AI Delegation of Authority template, AI report template and examples of AI
20 reports can be found at the NIFC Safety website:
21 http://www.nifc.gov/safety/safety_reprtsInvest.html
- 22

23 **Fire Cause Determination and Trespass Investigation**

24 **Introduction**

25 Agency policy requires determination of cause, origin, and responsibility for all
26 wildfires. Accurate fire cause determination is a critical first step for a
27 successful fire investigation and for targeting fire prevention efforts. Proper
28 investigative procedures, which occur concurrent with initial attack, more
29 accurately pinpoint fire causes and can preserve valuable evidence that would
30 otherwise be destroyed by suppression activities. Fire trespass refers to the
31 occurrence of unauthorized fire on agency-protected lands where the source of
32 ignition is tied to some type of human activity.

34 **Policy**

35 The agency must pursue cost recovery, or document why cost recovery is not
36 required, for all human-caused fires on public lands. The agency will also
37 pursue cost recovery for other lands under fire protection agreement where the
38 agency is not reimbursed for suppression actions, if so stipulated in the
39 agreement.

40 For all human-caused fires where negligence can be determined, trespass actions
41 are to be taken to recover cost of suppression activities, land rehabilitation, and
42 damages to the resource and improvements. Only fires started by natural causes
43 will not be considered for trespass and related cost recovery.

1 The determination whether to proceed with trespass action must be made on
2 “incident facts,” not on “cost or ability to pay.” Trespass collection is both a
3 cost recovery and a deterrent to prevent future damage to public land. It is
4 prudent to pursue collection of costs, no matter how small. This determination
5 must be documented and filed in the unit office’s official fire report file.

6
7 The Agency Administrator has the responsibility to bill for the total cost of the
8 fire and authority to accept only full payment. On the recommendation of the
9 State/Regional Director, the Solicitor/Office of General Counsel may
10 compromise claims of the United States, up to the monetary limits (\$100,000)
11 established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2.
12 The Solicitor/Office of General Counsel will refer suspension or termination of
13 the amount, in excess of \$100,000, exclusive of interest, penalties, or
14 administrative charges, to the Department of Justice.

15
16 Unless specified otherwise in an approved protection agreement, the agency that
17 has the land management jurisdiction/administration role is accountable for
18 determining the cause of ignition, responsible party, and for obtaining all
19 billable costs, performing the billing, collection, and distribution of the collected
20 funds. The agency with the fire protection responsibility role must provide the
21 initial determination of cause to the agency with the land management
22 jurisdiction/administration role. The agency providing fire protection shall
23 provide a detailed report of suppression costs that will allow the jurisdictional
24 agency to proceed with trespass procedures in a timely manner.

25
26 Each agency’s role in fire trespass billing and collection must be specifically
27 defined in the relevant Cooperative Fire Protection Agreement. The billing and
28 collection process for federal agencies is:

- 29 ● For example, a federal agency fire occurs on another federal agency’s land
30 and is determined to be a trespass fire. BLM provides assistance, and
31 supplies costs of that assistance to the federal agency with jurisdictional
32 responsibility for trespass billing. The responsible federal agency bills and
33 collects trespass, and BLM then bills the federal agency and is reimbursed
34 for its share of the collection.
- 35 ● For example, where BLM administered land is protected by a state agency,
36 the billing and collection process is:
 - 37 ○ The state bills BLM for their suppression costs. The BLM will pursue
38 trespass action for all costs, suppression, rehabilitation, and damages,
39 and deposits the collection per BLM’s trespass guidance.

40
41 Initiation of fire cause determination must be started with notification of an
42 incident. Initial attack dispatchers are responsible for capturing all pertinent
43 information when the fire is reported and throughout the incident. The initial
44 attack Incident Commander and the initial attack forces are responsible for
45 initiating fire cause determination and documenting observations starting with
46 their travel to the fire. If probable cause indicates human involvement, an

- 1 individual qualified in fire cause determination (INVF or cooperator equivalent)
- 2 should be dispatched to the fire.
- 3 Agency references:
- 4 • **BLM** - 9238-1
- 5 • **FWS** - *Fire Management Handbook*
- 6 • **NPS** - *RM-18, Chapter 6 and RM-9*
- 7 • **FS** - *FSM 5130 and FSM 5300*

Related Policy Documents

11 These documents provide specific direction related to incident and accident
 12 investigations.

	Safety	Prescribed Fire
DOI	485 DM Chapter 7	
BLM	Manual 1112-2, 1112-1	
FWS	Service Manual 095	
NPS	DO/RM-50B, RM-18 Chapter 3	RM-18, Chapter 7
FS	FSH-6709.11	FSM-5140
	FSM-5100 and FSH-6709.11, FSM 5720 (Aviation), FSM 5130 (Ground Operations), FSM 6730 (Specific policy), FSH 6709.12 Chapter 30 (General guidance), and most recent <i>Accident Investigation Guide</i> , for specific guidance.	
Interagency	Information on accident investigations may be found at: http://www.nifc.gov/safety/accident_resources.htm . For reporting use <i>PMS 405-1, Wildland Fire Fatality and Entrapment Initial Report</i> , on the NWCG website.	

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