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## 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
Declared Wildfire Reviews	<i>See Interagency Prescribed Fire Planning and Implementation Procedures Guide (PMS 484)</i>	

#### 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](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?

16  
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](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*.

38  
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.

43  
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.

3  
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 13 **Safety Assistance Team (SAT) Visits**

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

20  
21 The goals of a Safety Assistance Team are to:

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

26  
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 31 **Aviation Safety Assistance Team (ASAT) Reviews**

32 Refer to Chapter 16 for ASAT information.

#### 33 34 **Large Fire Cost Reviews**

35 Information on large fire cost reviews can be found in Chapter 11 (Incident  
36 Management), and at [http://www.nwccg.gov/general/memos/nwccg-003-  
37 2009.html](http://www.nwccg.gov/general/memos/nwccg-003-2009.html)

#### 38 39 **Individual Fire Reviews**

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

46

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.

11

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.*

19

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

27 The LLR facilitator will convene the participants and:

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

42

43 A copy of the final report will be submitted to the respective agency's national  
44 fire safety lead who will provide a copy to the Wildland Fire Lessons Learned  
45 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](http://bit.ly/FLA_guide)*  
4

#### 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.

10  
11 To submit or view RLS documents, go to:

12 <http://www.wildfirelessons.net/Resources/RapidLessonSharing>  
13

#### 14 **Declared Wildfire Reviews**

15 Every prescribed fire resulting in a wildfire declaration will receive an outcome  
16 review. Declared wildfire outcome review direction is found in these agency  
17 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 [llcdocsubmit@gmail.com](mailto:llcdocsubmit@gmail.com).  
28

### 29 **Investigations**

30  
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.  
35

36 Distinct types of wildland fire incidents and accidents have specific  
37 investigation requirements.  
38

#### 39 **Wildland Fire Incident and Accident Types and Definitions**

- 40 • **Serious Wildland Fire Accident**  
41 An unplanned event or series of events that resulted in death, injury,  
42 occupational illness, or damage to or loss of equipment or property. For  
43 wildland fire operations, a serious accident involves any of the following:  
44 ○ One or more fatalities;  
45 ○ Three or more personnel who are inpatient hospitalized as a direct  
46 result of or in support of wildland fire operations;

- 1     ○ Property or equipment damage of \$250,000 or more; and/or
- 2     ○ Consequences that the Designated Agency Safety and Health Official
- 3         (DASHO) judges to warrant Serious Accident Investigation.
- 4     ● **Wildland Fire Accident**
- 5         An unplanned event or series of events that resulted in injury, occupational
- 6         illness, or damage to or loss of equipment or property to a lesser degree than
- 7         defined in “Serious Wildland Fire Accident”.
- 8     ● **Near-miss**
- 9         An unplanned event or series of events that could have resulted in death,
- 10         injury, occupational illness, or damage to or loss of equipment or property
- 11         but did not.
- 12    ● **Entrapment**
- 13         A situation where personnel are unexpectedly caught in a fire behavior-
- 14         related, life-threatening position where planned escape routes or safety
- 15         zones are absent, inadequate, or compromised. Entrapment may or may not
- 16         include deployment of a fire shelter for its intended purpose. Entrapment
- 17         may result in a serious wildland fire accident, a wildland fire accident, or a
- 18         near-miss.
- 19    ● **Burnover**
- 20         An event in which a fire moves through a location or overtakes personnel or
- 21         equipment where there is no opportunity to utilize escape routes and safety
- 22         zones, often resulting in personal injury or equipment damage.
- 23    ● **Fire Shelter Deployment**
- 24         The removing of a fire shelter from its case and using it as protection
- 25         against fire. Fire shelter deployment may or may not be associated with
- 26         entrapment.
- 27    ● **Fire Trespass**
- 28         The occurrence of unauthorized fire on agency-protected lands where the
- 29         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 <sup>1</sup>	Management level that determines review type and authorizes review <sup>2</sup>
Serious Wildland Fire Accident	Serious Accident Investigation (SAI) <i>FS- Coordinated Response Protocol (CRP)</i>	National	National
Wildland Fire Accident	Accident Investigation (AI) <i>FS/NPS- 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 <sup>1</sup>In 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 NWCG Website and the NICC  
7 website.

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

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

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

## 10 Investigation Processes

### 12 Processes Common to All Wildland Fire Accident Investigations

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

### 40 Wildland Fire Serious Accident Investigation (SAI) Process

41  
42 For interagency serious accident investigations, a multi-agency delegation of  
43 authority to conduct the investigation may be issued. The delegation will ensure  
44 that the investigation meets the policy requirements of involved agencies.  
45

- 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](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.*  
15
- 16 • **FS –Coordinated Response and Learning Review (CRP/LR)- How the**  
17 **USFS will Respond to Serious Accidents**  
18 *A Coordinated Response Protocol (CRP) has been developed to coordinate*  
19 *the multiple reports and services needed following a serious accident. The*  
20 *CRP placed people first and is designed to coordinate internal and external*  
21 *investigations in a way that minimizes the exposure of our personnel (as*  
22 *much as possible) to a large number of interviews. The CRP also*  
23 *coordinates or oversees organizational support to the victims and their*  
24 *families to ensure that immediate needs are met and that benefits are*  
25 *received in a timely manner. The CRP coordinates or facilitates the*  
26 *Learning Review Team, Peer Support/Critical Incident Stress Management,*  
27 *Law Enforcement Investigations, Union Representation, and Human*  
28 *Resources support.*  
29  
30 *The Learning Review is a Phased approach that is designed to gather*  
31 *information in a way that is respectful and as complete as possible. The*  
32 *“Inquiry Phase” is designed to collect individual perceptions and to*  
33 *present them in a format that avoids judgment of action. It is of particular*  
34 *interest to understand the context in which decisions and actions were*  
35 *made. The LR recognizes that the traditional report serves as a starting*  
36 *point for learning from the event. While all reports will be available on*  
37 *line, a stated goal of the LR is to create a report for leadership so they will*  
38 *be able to make informed decisions regarding systemic change and a field*  
39 *product, designed to enhance the ability to learn based on scenarios,*  
40 *sensemaking and facilitated dialogue.*  
41  
42 *Forest Service directives and guidelines regarding the investigation of*  
43 *serious employee injuries and fatalities establish specific roles for the*  
44 *Office of Safety and Occupational Health (OSOH) and Law Enforcement*  
45 *and Investigations (LEI) staffs<sup>1</sup>. There is a requirement to conduct a claims*  
46 *investigation for any fatality or serious injury, and there is inherent value in*

- 1 conducting a Learning Review. To ensure that these potentially disparate  
 2 roles are fulfilled, the following interim guidance is provided:  
 3 1. The Special Agent in Charge (SAC) and the appropriate  
 4 Region/Station/Area Safety Manager will be notified immediately of  
 5 incidents meeting the threshold for a Coordinated Response, who will  
 6 report them to the Designated Agency Safety and Health Official (DASHO),  
 7 the Director of LEI, and the Director of OSOH. This notification will  
 8 engage a scalable coordinated response, the Coordinated Response  
 9 Protocol (CRP). This protocol is designed as a collaborative effort that  
 10 places the wellbeing of our personnel as the top priority.  
 11 2. The SAC will assume responsibility for site security, and through  
 12 coordination with the Director of LEI, will conduct a preliminary incident  
 13 review. The review will be completed as soon as possible, and in most  
 14 cases within 72 hours. If there is no indication of criminal wrongdoing, the  
 15 event will be turned over to the Response Leader (formerly named the Team  
 16 Leader). If at any time during the CRP there is a reasonable indication that  
 17 a criminal investigation is warranted, the Response Leader and Directors of  
 18 LEI and OSOH will confer with the DASHO regarding how to proceed with  
 19 the CRP.  
 20 3. The CRP Team may include the members listed in the following  
 21 diagram. The role of each team member is fully explained in the CRP  
 22 Guide.  
 23  
 24



- 25  
 26  
 27 4. CRP Team Leaders will coordinate their efforts with the Response  
 28 Leader and strive to minimize traumatic impacts of the Learning Review  
 29 and claims investigation on all the employees involved.  
 30 5. For every Forest Service accident in which the potential for a claim  
 31 against the federal government exists, the CRP Team will coordinate the  
 32 Learning Review and a claims investigation. OOL will conduct the  
 33 Learning Review. LEI will conduct a claims investigation and complete the  
 34 required report.  
 35 6. In cases involving National Transportation Safety Board (NTSB), the  
 36 designated NTSB Investigator in Charge (IIC) will determine party status,  
 37 which includes the USFS participation in the investigative process. For  
 38 some aviation accidents, the IIC may rely solely on party members to  
 39 collect and supply information for the NTSB report without actually being  
 40 on the accident scene. The NTSB prohibits law enforcement involvement

1 with their accident investigations and is mandated to refer any suspicion of  
2 illegal activity to the FBI for investigation.

3  
4 <sup>1</sup> These roles are delineated in the Law Enforcement Manual at  
5 Forest Service Manual (FSM) 5303.11, the Service Wide Claims  
6 Management Handbook at Forest Service Handbook (FSH)  
7 6509.11h, the Coordinated Response Protocol Guide, and FSH  
8 6709.12.

### 9 10 **Fire Director Responsibilities**

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

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

### 30 31 **Agency Administrator Responsibilities**

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

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1 **Notification**

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

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

15  
16 Notification to the respective agency's fire national safety/risk management lead  
17 is required.

18  
19 **Designating the Investigation Team Lead**

20 The 1995 Memorandum of Understanding (MOU) between the U.S. Department  
21 of the Interior and the U.S. Department of Agriculture states that serious  
22 wildland fire-related accidents will be investigated by interagency investigation  
23 teams.

24  
25 *The Memorandum of Agreement (MOA) between Department of Agriculture*  
26 *Forest Service and Department of Interior* augments and provides clarification  
27 to the 1995 MOU for investigation type and team lead/deputy team  
28 lead/interagency representative designation. The MOA also provides an  
29 interagency template for joint delegation of authority. The MOA is available at:  
30 [http://www.nifc.gov/safety/accident\\_resources.htm](http://www.nifc.gov/safety/accident_resources.htm)

31  
32 Following initial notification of a serious accident, the agency DASHO will  
33 designate a Serious Accident Investigation Team Lead(s) and provide that  
34 person(s) with a written Delegation of Authority to conduct the investigation  
35 and the means to form and deploy an investigation team.

- 36 • **BLM/FWS/NPS-** *The agency DASHOs have delegated this responsibility to*  
37 *the respective agency Fire Directors.*
- 38 • **BLM-** *The Fire and Aviation Directorate Safety Program Manager*  
39 *mobilizes SAI teams in coordination with the SAI Team Leader.*

40  
41 Accidents involving more than one agency will require a collaboratively  
42 developed Delegation of Authority that is signed by each of the respective  
43 agencies.

44  
45

1 **Serious Accident Investigation Team (SAIT) Composition**

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

3 • **Team Leader (Core Team Member)**

4 A senior agency management official, at the equivalent associate/assistant  
5 regional/state/area/division director level. The team leader will direct the  
6 investigation and serve as the point of contact to the Designated Agency  
7 Safety and Health Official (DASHO).

8 • **Chief Investigator (Core Team Member)**

9 A qualified accident investigation specialist is responsible for the direct  
10 management of all investigation activities. The chief investigator reports to  
11 the team leader.

12 • **Accident Investigation Advisor/Safety Manager (Core Team Member)**

13 An experienced safety and occupational health specialist or manager who  
14 acts as an advisor to the team leader to ensure that the investigation focus  
15 remains on safety and health issues. The accident investigation  
16 advisor/safety manager also works to ensure strategic management issues  
17 are examined. Delegating Officials or their designee may, at their  
18 discretion, fill this position with a trained and qualified NWCG Safety  
19 Officer, Line (SOFR), Safety Officer, Type 2 (SOF2), or Safety Officer,  
20 Type 1 (SOF1).

21 • **Interagency Representative**

22 An interagency representative will be assigned to every fire-related Serious  
23 Accident Investigation Team. They will assist as designated by the team  
24 leader and will provide outside agency perspective. They will assist as  
25 assigned by the Team Leader and will provide a perspective from outside  
26 the agency.

27 • **Technical Specialists**

28 Personnel who are qualified and experienced in specialized occupations,  
29 activities, skills, and equipment, addressing specific technical issues such as  
30 specialized fire equipment, weather, and fire behavior.

31 • **Public Affairs Officer**

32 For investigations with high public visibility and significant news media  
33 interest, a public affairs officer (PAO) should be considered a part of the  
34 team. The PAO should develop a communications plan for the team, be a  
35 designated point of contact for news media, and oversee all aspects of  
36 internal and external communications. Ideally, the PAO should be qualified  
37 as a Type 1 or Type 2 public information officer and be familiar with SAI  
38 team organization and function.

- 39 ○ **BLM** - All media related documents (news releases, talking points,  
40 etc.) should be cleared through NIFC Public Affairs prior to external  
41 release.

42  
43 Core SAIT members are required to take the Interagency Serious Accident  
44 Investigation Course 1112-05 prior to serious accident investigation assignment.  
45 This training is also required every 5 years for recurrency.

- 46 • **FS/BLM/FWS**- This training is required every 5 years to retain currency.

**SAI 24 and 72 Hour Reports**

Final 24 and 72 hour reports will be approved by the SAI delegating official, then sent to the agency fire safety/risk management lead for national distribution, which may include posting through the NWCG Safety Alert System.

- **24-Hour Preliminary Report-** This report contains known basic facts about the accident. It will be completed and forwarded by the responsible Agency Administrator to the SAI delegating official. Names of injured personnel will not be included in this report. Personnel may be referenced by position.
- **72-Hour Expanded Report-** This report provides additional factual information, if available. The information may include the number of victims and severity of injuries. The focus should be on information that may have immediate impact on future accident prevention. This report will be completed and forwarded by the SAI team to the SAI delegating official. Names of injured personnel will not be included in this report. Personnel may be referenced by position.

**SAI Final Report**

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

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

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

- **Management Evaluation Report (MER)**

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

Factual Report and Management Evaluation Report formatting can be found on the NIFC website at: [http://www.nifc.gov/safety/accident\\_resources.htm](http://www.nifc.gov/safety/accident_resources.htm)

1 **Accident Review Board/Board of Review**

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

5  
6 **Wildland Fire Accident Investigation (AI) Process**

7  
8 Accident investigations and reports should be commensurate with the  
9 complexity and/or severity of the accident. Investigations and reports may range  
10 from large investigation teams producing comprehensive reports to first-level  
11 supervisors initiating investigations and reporting injury/property damage in  
12 agency reporting systems.

13  
14 **Notification**

15 When an accident occurs, agency notification requirements will be followed.  
16 Notification requirements universally include:

- 17 • Local dispatch center
- 18 • Unit Fire Management Officer
- 19 • Agency Administrator
- 20 • OSHA (refer to chapter 7 for reporting criteria)

21  
22 **Investigation Team Membership**

23 Investigation team membership should be commensurate with the complexity  
24 and/or severity of the accident. An investigation team should consist of a team  
25 leader and an adequate number of technical specialists and subject matter  
26 experts. For complex investigations, team membership may also include a chief  
27 investigator, a safety advisor/manager, and additional technical specialists, and a  
28 writer/editor. Team members may have dual roles (e.g., chief investigator/safety  
29 advisor).

30  
31 **Investigation Methodology**

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

- 35 • Visual inspection of involved site, equipment, or material;
- 36 • Detailed analysis of equipment or material, as necessary;
- 37 • Interviews with involved personnel, witnesses, managers, and other  
38 pertinent persons;
- 39 • Collection and review of written statements;
- 40 • Review of records, archives, plans, policies, procedures, and other pertinent  
41 documents;
- 42 • Consideration of environmental, equipment, material, procedural, and  
43 human factors as they related to the incident; and
- 44 • Development of specific findings and related recommendations for the AI  
45 report.

**1 AI 24- and 72-Hour Reports**

2 24- and 72-hour reports should be completed when a formal AI will be  
3 conducted. Final 24- and 72-hour reports will be approved by the AI delegating  
4 official, then sent to the agency fire safety/risk management lead for national  
5 distribution, which may include posting through the NWCG Safety Alert  
6 System.

- 7 • **24-Hour Preliminary Report-** This report contains known basic facts about  
8 the accident. It will be completed and forwarded by the responsible Agency  
9 Administrator to the next higher level (e.g. District Manager forwards to  
10 State Director). Names of injured personnel will not be included in this  
11 report. Personnel may be referenced by position.
- 12 • **72-Hour Expanded Report-** This report provides additional factual  
13 information, if available. The information may include the number of  
14 victims and severity of injuries. The focus should be on information that  
15 may have immediate impact on future accident prevention. This report will  
16 be completed and forwarded by the AI team to the AI delegating official.  
17 Names of injured personnel will not be included in this report. Personnel  
18 may be referenced by position.

**19 AI Final Report**

20 Within 45 days of the accident, a final report including facts, findings, and  
21 recommendations shall be submitted to the senior manager dependent upon the  
22 level of investigation (e.g., local Agency Administrator, State/Regional Director,  
23 and Agency Fire Director or their designee). If a lower level investigation is  
24 conducted, a courtesy copy of the final report shall be sent to the respective  
25 agency's national fire safety/risk management lead.  
26

27  
28 The Final Report (minus names of employees- they should be referenced by  
29 position) will be submitted to Wildland Fire Lessons Learned Center (LLC) by  
30 the respective agency's National Fire Safety Leads.

31 E-mail: llcdocsuubmit@gmail.com  
32

**33 Accident Investigation Report Standard Contents**

- 34 • **Executive Summary** - A brief narrative of the facts involving the accident  
35 including dates, locations, times, name of incident, jurisdiction(s), number  
36 of individuals involved, etc. Names of injured personnel or personnel  
37 involved in the accident are not to be included in this report (reference them  
38 by position).
- 39 • **Narrative** - A detailed chronological narrative of events leading up to and  
40 including the accident, as well as rescue and medical actions taken after the  
41 accident. This section will contain who, what, and where.
- 42 • **Investigation Process-** A brief narrative of actions taken by the  
43 investigation team. This narrative should include investigation team  
44 membership, Delegation of Authority information (from who and contents,  
45 include a copy as an appendix), investigative actions and timeline (when the  
46 team conducted interviews, inspections, site visits, etc.), and if other sources

- 1 were consulted (i.e. professional accident reconstruction experts, equipment  
2 manufacturers, etc.). This section should also address if environmental,  
3 equipment, material, procedural, and human factors were present, and state  
4 how findings/recommendations were developed.
- 5 • **Findings/Recommendations**
    - 6 ○ **Findings** are developed from the factual information. Each finding is a  
7 single event or condition. Each finding is an essential step in the  
8 accident sequence, but each finding is not necessarily causal or  
9 contributing, and each finding may not have an associated  
10 recommendation. Findings should only include information necessary  
11 to explain the specific event or condition. Findings must be  
12 substantiated by the factual data. Findings should not include opinion  
13 or speculation.
    - 14 ○ **Discussion** –This provides explanation or information pertinent to a  
15 specific finding.
    - 16 ○ **Recommendations** - Recommendations are proposed actions intended  
17 to prevent similar accidents. Recommendations should be directly  
18 related to findings, should not contain opinion or speculation, and when  
19 appropriate, should identify the specific organization responsible for  
20 completing the recommended action. Recommendations will be  
21 evaluated and may be incorporated into future operational direction  
22 through established processes.
  - 23 • **Conclusions and Observations** - Investigation team’s opinions and  
24 inferences, and “lessons learned” may be captured in the section. This  
25 section is not required.
  - 26 • **Reference Materials**
    - 27 ○ **Maps/Photographs/Illustrations** - Graphic information used to  
28 document and visually portray facts.
    - 29 ○ **Appendices** - Reference materials (e.g., fire behavior analysis,  
30 equipment maintenance reports, agreements).

31  
32 An AI Delegation of Authority template, AI report template and examples of AI  
33 reports can be found at the NIFC Safety website:  
34 [http://www.nifc.gov/safety/safety\\_reptsInvest.html](http://www.nifc.gov/safety/safety_reptsInvest.html)  
35

## 36 **Fire Cause Determination and Trespass Investigation**

### 37 **Introduction**

38 Agency policy requires determination of cause, origin, and responsibility for all  
39 wildfires. Accurate fire cause determination is a critical first step for a  
40 successful fire investigation and for targeting fire prevention efforts. Proper  
41 investigative procedures, which occur concurrent with initial attack, more  
42 accurately pinpoint fire causes and can preserve valuable evidence that would  
43 otherwise be destroyed by suppression activities. Fire trespass refers to the  
44 occurrence of unauthorized fire on agency-protected lands where the source of  
45 ignition is tied to some type of human activity.  
46

1 **Policy**

2 The agency must pursue cost recovery, or document why cost recovery is not  
3 required, for all human-caused fires on public lands. The agency will also  
4 pursue cost recovery for other lands under fire protection agreement where the  
5 agency is not reimbursed for suppression actions, if so stipulated in the  
6 agreement.

7  
8 For all human-caused fires where negligence can be determined, trespass actions  
9 are to be taken to recover cost of suppression activities, land rehabilitation, and  
10 damages to the resource and improvements. Only fires started by natural causes  
11 will not be considered for trespass and related cost recovery.

12  
13 The determination whether to proceed with trespass action must be made on  
14 “incident facts,” not on “cost or ability to pay.” Trespass collection is both a  
15 cost recovery and a deterrent to prevent future damage to public land. It is  
16 prudent to pursue collection of costs, no matter how small. This determination  
17 must be documented and filed in the unit office’s official fire report file.

18  
19 The Agency Administrator has the responsibility to bill for the total cost of the  
20 fire and authority to accept only full payment. On the recommendation of the  
21 State/Regional Director, the Solicitor/Office of General Counsel may  
22 compromise claims of the United States, up to the monetary limits (\$100,000)  
23 established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2.  
24 The Solicitor/Office of General Counsel will refer suspension or termination of  
25 the amount, in excess of \$100,000, exclusive of interest, penalties, or  
26 administrative charges, to the Department of Justice.

27  
28 Unless specified otherwise in an approved protection agreement, the agency that  
29 has the land management jurisdiction/administration role is accountable for  
30 determining the cause of ignition, responsible party, and for obtaining all  
31 billable costs, performing the billing, collection, and distribution of the collected  
32 funds. The agency with the fire protection responsibility role must provide the  
33 initial determination of cause to the agency with the land management  
34 jurisdiction/administration role. The agency providing fire protection shall  
35 provide a detailed report of suppression costs that will allow the jurisdictional  
36 agency to proceed with trespass procedures in a timely manner.

37  
38 Each agency’s role in fire trespass billing and collection must be specifically  
39 defined in the relevant Cooperative Fire Protection Agreement. The billing and  
40 collection process for federal agencies is:

- 41 • For example, a federal agency fire occurs on another federal agency’s land  
42 and is determined to be a trespass fire. BLM provides assistance, and  
43 supplies costs of that assistance to the federal agency with jurisdictional  
44 responsibility for trespass billing. The responsible federal agency bills and  
45 collects trespass, and BLM then bills the federal agency and is reimbursed  
46 for its share of the collection.

- 1 • For example, where BLM administered land is protected by a state agency,  
 2 the billing and collection process is:
- 3 ○ The state bills BLM for their suppression costs. The BLM will pursue  
 4 trespass action for all costs, suppression, rehabilitation, and damages,  
 5 and deposits the collection per BLM's trespass guidance.
- 6
- 7 Initiation of fire cause determination must be started with notification of an  
 8 incident. Initial attack dispatchers are responsible for capturing all pertinent  
 9 information when the fire is reported and throughout the incident. The initial  
 10 attack Incident Commander and the initial attack forces are responsible for  
 11 initiating fire cause determination and documenting observations starting with  
 12 their travel to the fire. If probable cause indicates human involvement, an  
 13 individual qualified in fire cause determination (INVF or cooperater equivalent)  
 14 should be dispatched to the fire.
- 15 Agency references:
- 16 • *BLM - 9238-1*
  - 17 • *FWS - Fire Management Handbook*
  - 18 • *NPS - RM-18, Chapter 6 and RM-9*
  - 19 • *FS - FSM 5130 and FSM 5300*

### 20 Related Policy Documents

21  
 22 These documents provide specific direction related to incident and accident  
 23 investigations.  
 24

	Safety	Prescribed Fire
<b>DOI</b>	485 DM Chapter 7	
<b>BLM</b>	Manual 1112-2, 1112-1	
<b>FWS</b>	Service Manual 095	
<b>NPS</b>	DO/RM-50B, RM-18 Chapter 3	RM-18, Chapter 7
<b>FS</b>	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.	
<b>Interagency</b>	Information on accident investigations may be found at: <a href="http://www.nifc.gov/safety/accident_resources.htm">http://www.nifc.gov/safety/accident_resources.htm</a> . For reporting use <i>PMS 405-1, Wildland Fire Fatality and Entrapment Initial Report</i> , on the NWCG website.	

25