

## 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 and 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-agency cooperation and coordination. Reviews do not have to be associated with a specific incident. The purpose of a review is to ensure the effectiveness of the

1 system element being reviewed, and to identify deficiencies and recommend  
 2 specific corrective actions. Established review types are described below and  
 3 include:

- 4 • Preparedness Reviews
- 5 • After Action Reviews
- 6 • Fire and Aviation Safety Team Reviews
- 7 • Safety Assistance Team Visits
- 8 • Aviation Safety and Technical Assistance Team Reviews
- 9 • Large Fire Cost Reviews (FS)
- 10 • Significant Wildland Fire Reviews (DOI)
- 11 • Individual Fire Reviews
- 12 • Lessons Learned Reviews
- 13 • Rapid Lesson Sharing
- 14 • Declared Wildfire Reviews
- 15 • Notice of Air Quality Exceedance (NOV) Reviews

16 **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 and Technical Assistance Team Review	As aviation activity dictates	State/Regional Aviation Manager or MACG
Large Fire Cost Review (FS)	Washington Office discretion	Washington Office
Significant Wildland Fire Review (DOI)	Refer to OWF Policy Memorandum 2016-013	Agency Director, Agency Administrator or individual bureau direction
Individual Fire Review	Management discretion	Local/State/Region/National
Lessons Learned Review <ul style="list-style-type: none"> <li>• <i>NPS/FS – FLA may be used</i></li> </ul>	Management discretion	Local/State/Region/National
Rapid Lesson Sharing	Management discretion	N/A

Type	When Conducted	Delegating or Authorizing Official
Declared Wildfire Review	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)
Notice of Air Quality Exceedance (NOV) Review	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)

### 1 Preparedness Reviews

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

5 Preparedness Reviews identify organizational, operational, procedural,  
6 personnel, or equipment deficiencies, and recommend specific corrective  
7 actions. Interagency Preparedness Review Checklists can be found at  
8 [https://www.nifc.gov/policies/pol\\_ref\\_intgncy\\_prepcheck.html](https://www.nifc.gov/policies/pol_ref_intgncy_prepcheck.html).

### 9 After Action Reviews (AAR)

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

- 15 • What was planned?
- 16 • What actually happened?
- 17 • Why it happened?
- 18 • What can be done the next time?

19 An AAR is a tool that leaders and units can use to get maximum benefit from  
20 the experience gained on any incident or project. When possible, the leader of  
21 the incident or project should facilitate the AAR process. However, the leader  
22 may choose to have another person facilitate the AAR as needed and  
23 appropriate. AARs may be conducted at any organizational level. However, all  
24 AARs involve the exchange of ideas and observations, and focus on improving  
25 proficiency. The AAR should not be utilized as an investigational review. The  
26 format can be found in the *Interagency Response Pocket Guide (IRPG)*, PMS  
27 461, NFES 1077. Additional AAR information is available at  
28 [https://www.fireleadership.gov/toolbox/after\\_action\\_review/index.html](https://www.fireleadership.gov/toolbox/after_action_review/index.html).

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

- 2 Fire and Aviation Safety Teams assist Agency Administrators during periods of  
3 high fire activity by assessing policy, rules, regulations, and management  
4 oversight relating to operational issues. They can also do the following:
- 5 • Provide guidance to ensure fire and aviation programs are conducted safely;
  - 6 • Assist with providing immediate corrective actions;
  - 7 • Review compliance with OSHA abatement plan(s), reports, reviews, and  
8 evaluations; and
  - 9 • Review compliance with *Interagency Standards for Fire and Fire Aviation  
10 Operations*.

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

15 FASTs include a team leader, who is either an Agency Administrator or fire  
16 program lead with previous experience as a FAST member, a safety and health  
17 manager, and other individuals with a mix of skills from fire and aviation  
18 management.

19 FASTs will be chartered by their respective Geographic Area Coordinating  
20 Group (GACG) with a Delegation of Authority, and report back to the GACG.

21 FAST reports will include an executive summary, purpose, objectives,  
22 methods/procedures, findings, recommendations, follow-up actions (immediate,  
23 long-term, national issues), and a letter delegating authority for the review.  
24 FAST reports should be submitted to the GACG with a copy to the Federal Fire  
25 and Aviation Safety Team (FFAST) chair within 30 days. See Appendix L for  
26 sample FAST Delegation of Authority.

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

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

34 The goals of a Safety Assistance Team are to:

- 35 • Assist fire managers and IMTs with site visits with firefighters, fire  
36 managers, and program leaders.
- 37 • Be service oriented, assisting the local units.
- 38 • Provide early warning of potentially hazardous conditions or situations.

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

1 **Aviation Safety and Technical Assistance Team (ASTAT) Reviews**

2 Refer to Chapter 16 for ASTAT information.

3 **Large Fire Cost Reviews (FS)**

4 A Large Fire Cost Review may be conducted at the discretion of the Washington  
5 Office, at the request of the Regional Office, or when requested by multi-  
6 jurisdictional cooperators.

7 **Significant Wildland Fire Reviews (DOI)**

8 A Significant Wildland Fire Review will be conducted when an incident (single  
9 fire or complex) meets or exceeds federal combined expenditures of \$15 million  
10 in suppression costs, and more than 50% of the burned acres are managed by  
11 one or more DOI bureaus.

12 A review may also be conducted when an incident (single fire or fire complex)  
13 meets or is expected to meet one or more of the following criteria:

- 14 • There are significant political, social, natural resource, complexity, size, or  
15 policy issues;
- 16 • There are significant and complicated cost-share or multi-jurisdictional  
17 issues; or
- 18 • The affected agency/Agency Administrator requests a review.

19 It is the agency's responsibility to advise the appropriate individual(s) within  
20 their agency of the need for a Significant Wildland Fire Review. When a multi-  
21 jurisdictional fire requires review, the DOI bureaus will determine which agency  
22 will be designated as the lead in the review process.

23 The Agency will provide a Delegation of Authority to the Significant Wildland  
24 Fire Review Team authorizing the implementation of a review. When possible,  
25 Significant Wildland Fire Reviews should be conducted when the Incident  
26 Management Team is still in place to allow prompt access to records and  
27 incident personnel.

- 28 • *BLM – The Assistant Director, Fire and Aviation will initiate, facilitate,*  
29 *and provide oversight for the SWFR process. Upon determination of the*  
30 *need for a SWFR, the AD will coordinate with the appropriate state director*  
31 *and assemble a SWFR team, provide a Delegation of Authority, and initiate*  
32 *the SWFR using direction found at*  
33 *[http://web.blm.gov/internal/fire/budget/Reports/Report\\_Menu\\_new.htm](http://web.blm.gov/internal/fire/budget/Reports/Report_Menu_new.htm).*  
34 *The AD will provide briefings to the Bureau Director, as appropriate.*
- 35 • *NPS – Significant Wildland Fire Reviews (SWFR) will be conducted at*  
36 *Management discretion and the Delegating Official may be at the Local,*  
37 *Regional, or National level. See the Agency Administrator and Fire*  
38 *Management Performance Tables in Chapter 3 and the “Review Types and*  
39 *Requirements” table for further information.*

### 1 **Individual Fire Reviews**

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

### 8 **Lessons Learned Reviews (LLRs)**

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

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

- 23 • *NPS – Facilitated Learning Analysis (FLA) may be used for incidents*  
24 *meeting the AI criteria.*
- 25 • *FS – Facilitated Learning Analysis (FLA) may be used for incidents*  
26 *meeting the AI criteria or if a CRP is not being utilized for an incident*  
27 *meeting SAI criteria. A guide for the FLA process is available at*  
28 *[http://bit.ly/FLA\\_guide](http://bit.ly/FLA_guide). The Forest Service's formal Learning Review*  
29 *Processes are the Facilitated Learning Analysis (FLA) which may be used*  
30 *for unintended outcomes of all types and the Coordinated Response*  
31 *Protocol (CRP) reserved for FS employee fatality events. Both processes*  
32 *are explicitly non-punitive and must have a delegation signed by a line*  
33 *officer so stating. Where appropriate, and for less serious incidents the FS*  
34 *may also use the Rapid Lesson Sharing (RLS) process or other review*  
35 *process such as After Action Reviews which typically do not have a Line*  
36 *Officer's delegation. The FS does not use the SAI process but may assist*  
37 *other agencies in a SAI for incidents involving the FS interests or*  
38 *personnel. FS Aviation accidents and incidents utilize the FS Aviation*  
39 *Mishap Investigation process. Current versions of the FLA and CRP guides*  
40 *can be found on the Wildland Fire Lessons Learned Center's website*  
41 *(<https://www.wildfirelessons.net/home>).*

42 A LLR will be led by a facilitator not involved in the event. A facilitator should  
43 be an appropriate fire management expert who possesses skills in interpersonal

1 communications, organization, and be unbiased to the event. Personnel involved  
2 in the event will be participants in the review process. Depending upon the  
3 complexity of the event, the facilitator may request assistance from technical  
4 experts (e.g., fire behavior, fire operations, etc.).

5 The LLR facilitator will convene the participants and:

- 6 • Obtain a Delegation of Authority from appropriate agency level. See  
7 Appendix J for a sample LLR Delegation of Authority;
- 8 • Identify facts of the event (and tables maybe helpful in the process) and  
9 develop a chronological narrative of the event;
- 10 • Identify underlying reasons for success or unintended outcomes;
- 11 • Identify what individuals learned and what they would do differently in the  
12 future;
- 13 • Identify any recommendations that would prevent future similar  
14 occurrences;
- 15 • 24- and 72-hour reports may be produced, but are not required; and
- 16 • Provide a final written report including the above items to the pertinent  
17 Agency Administrator(s) within two weeks of event occurrence unless  
18 otherwise negotiated. Names of involved personnel should not be included  
19 in this report (reference them by position).

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

### 23 **Rapid Lesson Sharing (RLS)**

24 RLS is a type of Lessons Learned Review (LLR) for field personnel to quickly  
25 share lessons with others. RLS can be used to document and share lessons  
26 learned as a result of close calls, minor accidents, successes, efficient ways of  
27 performing work, adaptations, or anything wildland fire personnel can learn  
28 from.

29 To submit or view RLS documents, go to  
30 <https://www.wildfirelessons.net/resources/rapidlessonsharing>.

### 31 **Declared Wildfire Reviews**

32 Every prescribed fire resulting in a wildfire declaration will receive an Outcome  
33 Review. Declared wildfire outcome review direction is found in these agency  
34 documents:

- 35 • *Interagency Prescribed Fire Planning and Implementation Procedures*  
36 *Reference Guide* (PMS 484)
  - 37 ○ **BLM** – Refer to *Fuels Management Manual 9214 and Handbook 9214-*  
38 *1, Chapter 5.*
  - 39 ○ **NPS** – Refer to *RM-18, Chapter 7 and 17.*
  - 40 ○ **FWS** – Refer to *Fire Management Handbook, Chapter 17.*
  - 41 ○ **FS** – Refer to *FSM 5140.*

- 1       ○ **BIA** – Refer to Bureau of Indian Affairs Fuels Management Program  
2       Supplement to the Interagency Prescribed Fire Planning and  
3       Implementation Procedures Reference Guide (December 2008),  
4       Chapter 3.
- 5 Declared Wildfire Reviews will be submitted to the Wildland Fire Lessons  
6 Learned Center (LLC) by the agency fuels program lead. Submissions should be  
7 sent to [llcdocsubmit@gmail.com](mailto:llcdocsubmit@gmail.com).
- 8 **Notice of Air Quality Exceedance (NOV) Reviews**  
9 A Notice of Air Quality Exceedance (NOV) Review supports understanding of  
10 the planning, decisions, and actions taken that contributed to the NOV.  
11 <https://www.nwcg.gov/publications/484>

## 12 **Investigations**

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

17 Distinct types of wildland fire incidents and accidents have specific  
18 investigation requirements.

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

- 20 • **Serious Wildland Fire Accident** – An unplanned event or series of events  
21 that resulted in death, injury, occupational illness, or damage to or loss of  
22 equipment or property. For wildland fire operations, a serious accident  
23 involves any of the following:  
24       ○ One or more fatalities;  
25       ○ Three or more personnel who are inpatient hospitalized as a direct  
26       result of or in support of wildland fire operations;  
27       ○ Property or equipment damage of \$250,000 or more; and/or  
28       ○ Consequences that the Designated Agency Safety and Health Official  
29       (DASHO) judges to warrant a Serious Accident Investigation.
- 30 • **Wildland Fire Accident** – An unplanned event or series of events that  
31 resulted in injury, occupational illness, or damage to or loss of equipment or  
32 property to a lesser degree than defined in “Serious Wildland Fire  
33 Accident.”
- 34 • **Near-miss** – An unplanned event or series of events that could have  
35 resulted in death, injury, occupational illness, or damage to or loss of  
36 equipment or property but did not.
- 37 • **Entrapment** – A situation where personnel are unexpectedly caught in a  
38 fire behavior-related, life-threatening position where planned escape routes  
39 or safety zones are absent, inadequate, or compromised. Entrapment may or  
40 may not include deployment of a fire shelter for its intended purpose.

- 1     Entrapment may result in a serious wildland fire accident, a wildland fire
- 2     accident, or a near-miss.
- 3     • **Burnover** – An event in which a fire moves through a location or overtakes
- 4     personnel or equipment where there is no opportunity to utilize escape
- 5     routes and safety zones, often resulting in personal injury or equipment
- 6     damage.
- 7     • **Fire Shelter Deployment** – The removing of a fire shelter from its case and
- 8     unfolding it to use as protection against heat, smoke and burning embers.
- 9     • **Fire Trespass** – The occurrence of unauthorized fire on agency-protected
- 10    lands where the source of ignition is tied to some type of human activity.

11 **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 – Facilitated Learning Analysis (FLA) process or the Coordinated Response Protocol (CRP) for FS employee fatality events.</i>	National	National
Wildland Fire Accident	Accident Investigation (AI) <i>NPS/FS – FLA may be used</i>	<i>BLM/NPS–National FS/FWS – Management Discretion</i>	Region/State/Local
Entrapment/ Burnover	SAI, AI, LLR, depending on severity	National	National/Regional/ State
Fire Shelter Deployment	SAI, AI, LLR, depending on severity	National	National/Regional/ State
Near-miss	LLR, AAR	Management Discretion	Region/State/Local
Fire Trespass	Fire Cause Determination and Trespass Investigation	Local	Local

<sup>1</sup>In the event that a wildland fire entrapment or fatality occurs, immediate notification to NICC is required. A *Wildland Fire Entrapment/Fatality Initial Report* (PMS 405-1) should be completed and mailed to NICC electronically or by fax machine within 24

hours. Submit this report even if some data is missing. The PMS 405-1 is located at [https://www.nifc.gov/nicc/logistics/coord\\_forms.htm](https://www.nifc.gov/nicc/logistics/coord_forms.htm).

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

- 1 • **BLM** – *BLM accidents that involve fire and aviation employees or*  
2 *equipment will be investigated according to the requirements stated in this*  
3 *chapter. Investigations will occur regardless of land jurisdiction. Facts will*  
4 *be collected, causes (organizational factors, local workplace factors, unsafe*  
5 *acts) identified, and an accident investigation report produced. The report*  
6 *will include recommended corrective actions and control measures. Report*  
7 *issuance and follow-up will be through established command channels.*  
8 *BLM Agency Administrators may jointly delegate authority to investigate*  
9 *accidents in cases of mixed jurisdiction or employee involvement. Joint*  
10 *delegations must ensure that BLM investigation requirements are met. The*  
11 *Facilitated Learning Analysis (FLA) process may be used as a*  
12 *supplemental element to required BLM accident investigation processes.*
- 13 • **FS** – *Forest Service Line Officers are the deciding officials regarding what*  
14 *type of accident investigation or analysis method is to be used for accidents*  
15 *or near misses occurring under Forest Service jurisdiction.*

## 16 Investigation Processes

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

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

1 may be available through Employee Assistance Programs (EAPs) or  
2 Geographic Area Coordination Centers (GACCs).

### 3 **Wildland Fire Serious Accident Investigation (SAI) Process**

4 For interagency serious accident investigations, a multi-agency Delegation of  
5 Authority to conduct the investigation may be issued. The delegation will ensure  
6 that the investigation meets the policy requirements of involved agencies.

- 7 • **BLM/FWS** – *The Interagency Serious Accident Investigation Guide*  
8 *establishes core direction for BLM, FWS, and interagency serious accident*  
9 *investigations (exceptions for aviation accidents are stated in the guide). It*  
10 *provides serious accident investigation teams a standardized and*  
11 *comprehensive process for conducting serious accident investigations. The*  
12 *guide is available at [https://www.nifc.gov/safety/safety\\_reprtsInvest.html](https://www.nifc.gov/safety/safety_reprtsInvest.html).*  
13 *Serious accident investigation reports will be completed, routed, and*  
14 *disseminated according to processes established in the guide. Reports may*  
15 *contain information supplemental to the requirements of the guide if it*  
16 *augments the BLM/FWS's ability to learn and to develop further*  
17 *improvements.*  
18 *The guide may be used entirely or in part for accidents that do not meet the*  
19 *serious accident definition.*
- 20 • **FS** – *The Forest Service's response to serious accidents are the Facilitated*  
21 *Learning Analysis (FLA) which may be used for unintended outcomes of all*  
22 *types, and the Coordinated Response Protocol (CRP) reserved for FS*  
23 *employee fatality events. Both processes are explicitly non-punitive and*  
24 *must have a delegation signed by a line officer so stating. FS Aviation*  
25 *accidents and incidents utilize the FS Aviation Mishap Investigation*  
26 *process. Current versions of the FLA and CRP guides can be found on the*  
27 *Wildland Fire Lessons Learned Center's website*  
28 *(<https://www.wildfirelessons.net/home>).*

### 29 **Fire Director Responsibilities**

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

- 32 • Ensure the agency safety manager and Designated Agency Safety and  
33 Health Official (DASHO) have been notified;
- 34 • Immediately appoint, authorize (through Delegation of Authority), and  
35 deploy an accident investigation team;
- 36 • Provide resources and procedures adequate to meet the team's needs;
- 37 • Receive the factual and management evaluation reports and take action to  
38 accept or reject recommendations;
- 39 • Forward investigation findings, recommendations, and corrective action  
40 plan to the DASHO (the agency safety office is the "office of record" for  
41 reports);

- 1 • Convene an accident review board/ board of review (if deemed necessary)
- 2 to evaluate the adequacy of the factual and management reports and suggest
- 3 corrective actions;
- 4 • Ensure a corrective action plan is developed, incorporating management
- 5 initiatives established to address accident causal factors; and
- 6 • Ensure Serious Accident Investigations remain independent of other
- 7 investigations.

#### 8 **Agency Administrator Responsibilities**

- 9 • Develop local preparedness plans to guide emergency response.
- 10 • Identify agencies with jurisdictional responsibilities for the accident.
- 11 • Provide for and emphasize treatment and care of survivors.
- 12 • Ensure the Incident Commander secures the accident site.
- 13 • Conduct an in-briefing to the investigation team.
- 14 • Facilitate and support the investigation as requested.
- 15 • Determine need and implement Critical Incident Stress Management
- 16 (CISM).
- 17 • Notify home tribe leadership in the case of a Native American fatality.
- 18 • Prepare and issue the required 24-Hour Preliminary Report unless formally
- 19 delegated to another individual.

#### 20 **Notification**

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

- 23 • Agency Administrator;
- 24 • Public affairs;
- 25 • Agency Law Enforcement;
- 26 • Safety personnel;
- 27 • County sheriff or local law enforcement as appropriate to jurisdiction;
- 28 • National Interagency Coordination Center (NICC) through the local
- 29 dispatch center and GACC. Provide a Wildland Fire Entrapment/Fatality
- 30 Initial Report (PMS 405-1) directly to NICC within 24 hours;
- 31 • Agency headquarters; and
- 32 • OSHA will be notified according to agency policy when an employee is
- 33 killed on the job or suffers a work-related hospitalization, amputation, or
- 34 loss of an eye. <https://www.osha.gov/report.html>
- 35 ○ A fatality must be reported within **8 hours**.
- 36 ○ An in-patient hospitalization, amputation, or eye loss must be reported
- 37 within **24 hours**.

38 Notification to the respective agency's fire national safety/risk management lead  
39 is required.

### 1 **Designating the Investigation Team Lead**

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

6 *The Memorandum of Agreement (MOA) between Department of Agriculture*  
7 *Forest Service and Department of Interior* augments and provides clarification  
8 to the 1995 MOU for investigation type and team lead/deputy team  
9 lead/interagency representative designation. The MOA also provides an  
10 interagency template for joint Delegation of Authority. The MOA is available at  
11 [https://www.nifc.gov/safety/safety\\_reprtsInvest.html](https://www.nifc.gov/safety/safety_reprtsInvest.html).

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

- 16 • **BLM/NPS/FWS** – *The agency DASHOs have delegated this responsibility*  
17 *to the respective agency Fire Directors.*
- 18 • **BLM** – *The Fire and Aviation Directorate Safety Program Manager*  
19 *mobilizes SAI teams in coordination with the SAI Team Leader.*

20 Accidents involving more than one agency will require a collaboratively  
21 developed Delegation of Authority that is signed by each of the respective  
22 agencies.

### 23 **Serious Accident Investigation Team (SAIT) Composition**

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

- 25 • **Team Leader (Core Team Member)**  
26 A senior agency management official, at the equivalent associate/assistant  
27 regional/state/area/division director level. The team leader will direct the  
28 investigation and serve as the point of contact to the Designated Agency  
29 Safety and Health Official (DASHO).
- 30 • **Chief Investigator (Core Team Member)**  
31 A qualified accident investigation specialist is responsible for the direct  
32 management of all investigation activities. The chief investigator reports to  
33 the team leader.
- 34 • **Accident Investigation Advisor/Safety Manager (Core Team Member)**  
35 An experienced safety and occupational health specialist or manager who  
36 acts as an advisor to the team leader to ensure that the investigation focus  
37 remains on safety and health issues. The accident investigation  
38 advisor/safety manager also works to ensure strategic management issues  
39 are examined. Delegating Officials or their designee may, at their  
40 discretion, fill this position with a trained and qualified NWCG Safety  
41 Officer, Line (SOFR), Safety Officer, Type 2 (SOF2), or Safety Officer,  
42 Type 1 (SOF1).

- 1 • **Interagency Representative**  
2 An interagency representative will be assigned to every fire-related Serious  
3 Accident Investigation Team. They will assist as designated by the team  
4 leader and will provide outside agency perspective. They will assist as  
5 assigned by the Team Leader and will provide a perspective from outside  
6 the agency.
- 7 • **Technical Specialists**  
8 Personnel who are qualified and experienced in specialized occupations,  
9 activities, skills, and equipment, addressing specific technical issues such as  
10 specialized fire equipment, weather, and fire behavior.
- 11 • **Public Affairs Officer**  
12 For investigations with high public visibility and significant news media  
13 interest, a public affairs officer (PAO) should be considered a part of the  
14 team. The PAO should develop a communications plan for the team, be a  
15 designated point of contact for news media, and oversee all aspects of  
16 internal and external communications. Ideally, the PAO should be qualified  
17 as a Type 1 or Type 2 public information officer and be familiar with SAI  
18 team organization and function.
  - 19 ○ **BLM** – *All media related documents (news releases, talking points,*  
20 *etc.) should be cleared through NIFC Public Affairs prior to external*  
21 *release.*

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

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

#### 26 **SAI 24- and 72-Hour Reports**

27 The final 24-hour report will be approved by the Agency Administrator in  
28 concurrence with the SAI delegating official. The 72-hour report will be  
29 approved by the SAI delegating official. Both reports are sent to the agency fire  
30 safety/risk management lead who will provide a copy to the Wildland Fire  
31 Lessons Learned Center (LLC). E-mail: lledocsubmit@gmail.com.

- 32 • **24-Hour Preliminary Report** – This report contains known basic facts  
33 about the accident. It will be completed and forwarded by the responsible  
34 Agency Administrator to the SAI delegating official. Names of injured  
35 personnel will not be included in this report. Personnel may be referenced  
36 by position.
- 37 • **72-Hour Expanded Report** – This report provides additional factual  
38 information, if available. The information may include the number of  
39 victims and severity of injuries. The focus should be on information that  
40 may have immediate impact on future accident prevention. This report will  
41 be completed and forwarded by the SAI team to the SAI delegating official.  
42 Names of injured personnel will not be included in this report. Personnel  
43 may be referenced by position.

### 1 **SAI Final Report**

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

- 7 • **Factual Report** – This report contains a brief summary or background of  
8 the event, and facts based only on examination of technical and procedural  
9 issues related to equipment and tactical fire operations. It does not contain  
10 opinions, conclusions, or recommendations. Names of injured personnel are  
11 not to be included in this report (reference them by position). Post-accident  
12 actions should be included in this report (emergency response attribute to  
13 survival of a victim, etc.). Factual Reports will be submitted to Wildland  
14 Fire Lessons Learned Center (LLC) by the respective agency's fire  
15 safety/risk management leads. E-mail: llcdocsubmit@gmail.com.
- 16 • **Management Evaluation Report (MER)** – The MER is intended for  
17 internal use only and explores management policies, practices, procedures,  
18 and personal performance related to the accident. The MER categorizes  
19 findings identified in the factual report and provides recommendations to  
20 prevent or reduce the risk of similar accidents.

21 Factual Report and Management Evaluation Report formatting can be found on  
22 the NIFC website at [https://www.nifc.gov/safety/safety\\_reprtsInvest.html](https://www.nifc.gov/safety/safety_reprtsInvest.html).

### 23 **Accident Review Board/Board of Review**

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

### 27 **Wildland Fire Accident Investigation (AI) Process**

- 28 • *FS – The Wildland Fire Accident Investigation (AI) Process is not*  
29 *applicable to Forest Service accidents. The Forest Service's formal*  
30 *Learning Review Processes are the Facilitated Learning Analysis (FLA)*  
31 *which may be used for unintended outcomes of all types and the*  
32 *Coordinated Response Protocol (CRP) reserved for FS employee fatality*  
33 *events. Both processes are explicitly non-punitive and must have a*  
34 *delegation signed by a line officer so stating. Where appropriate, and for*  
35 *less serious incidents the FS may also use the Rapid Lesson Sharing (RLS)*  
36 *process or other review process such as After Action Reviews which*  
37 *typically do not have a Line Officer's delegation. The FS does not use the*  
38 *SAI process but may assist other agencies in a SAI for incidents involving*  
39 *the FS interests or personnel. FS Aviation accidents and incidents utilize*  
40 *the FS Aviation Mishap Investigation process.*

41 Accident investigations and reports should be commensurate with the  
42 complexity and/or severity of the accident. Investigations and reports may range

1 from large investigation teams producing comprehensive reports to first-level  
2 supervisors initiating investigations and reporting injury/property damage in  
3 agency reporting systems.

#### 4 **Notification**

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

6 Notification requirements universally include:

- 7 • Local dispatch center
- 8 • Unit Fire Management Officer
- 9 • Agency Administrator
- 10 • OSHA (refer to Chapter 7 for reporting criteria)

#### 11 **Investigation Team Membership**

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

#### 19 **Investigation Methodology**

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

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

#### 34 **Accident Investigation 24- and 72-Hour Reports**

35 24- and 72-hour reports should be completed when a formal AI will be  
36 conducted. Final 24- and 72-hour reports will be approved by the AI delegating  
37 official, then sent to the agency fire safety/risk management lead who will  
38 provide a copy to the Wildland Fire Lessons Learned Center (LLC). E-mail:  
39 llcdocsubmit@gmail.com.

- 40 • **24-Hour Preliminary Report** – This report contains known basic facts  
41 about the accident. It will be completed and forwarded by the responsible

- 1 Agency Administrator to the next higher level (e.g., District Manager  
2 forwards to State Director). Names of injured personnel will not be included  
3 in this report. Personnel may be referenced by position.
- 4 • **72-Hour Expanded Report** – This report provides additional factual  
5 information, if available. The information may include the number of  
6 victims and severity of injuries. The focus should be on information that  
7 may have immediate impact on future accident prevention. This report will  
8 be completed and forwarded by the AI team to the AI delegating official.  
9 Names of injured personnel will not be included in this report. Personnel  
10 may be referenced by position.

#### 11 **Accident Investigation Final Report**

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

18 The Final Report (minus names of employees—they should be referenced by  
19 position) will be submitted to Wildland Fire Lessons Learned Center (LLC) by  
20 the respective agency's National Fire Safety Leads. E-mail:  
21 lledocsubmit@gmail.com.

#### 22 **Accident Investigation Report Standard Contents**

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

- 1 contributing, and each finding may not have an associated  
2 recommendation. Findings should only include information necessary  
3 to explain the specific event or condition. Findings must be  
4 substantiated by the factual data. Findings should not include opinion  
5 or speculation.
- 6 ○ **Discussion** – This provides explanation or information pertinent to a  
7 specific finding.
  - 8 ○ **Recommendations** – Recommendations are proposed actions intended  
9 to prevent similar accidents. Recommendations should be directly  
10 related to findings, should not contain opinion or speculation, and when  
11 appropriate, should identify the specific organization responsible for  
12 completing the recommended action. Recommendations will be  
13 evaluated and may be incorporated into future operational direction  
14 through established processes.
  - 15 ● **Conclusions and Observations** – Investigation team’s opinions and  
16 inferences, and “lessons learned” may be captured in the section. This  
17 section is not required.
  - 18 ● **Reference Materials**
    - 19 ○ **Maps/Photographs/Illustrations** – Graphic information used to  
20 document and visually portray facts.
    - 21 ○ **Appendices** – Reference materials (e.g., fire behavior analysis,  
22 equipment maintenance reports, agreements).
- 23 An AI Delegation of Authority template, AI report template and examples of AI  
24 reports can be found at the NIFC Safety website  
25 [https://www.nifc.gov/safety/safety\\_reprtsInvest.html](https://www.nifc.gov/safety/safety_reprtsInvest.html).

## 26 Fire Cause Determination and Trespass Investigation

### 27 Introduction

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

- 36 ● **BIA** – *For guidance regarding origin and cause determination on lands  
37 under the jurisdiction of the Bureau of Indian Affairs, see 90 IAM 1.4C (10)  
38 Wildland Fire Management - National Fire Investigation Handbook  
39 available at <https://www.bia.gov/policy-forms/handbooks>.*

### 40 Policy

41 The agency must pursue cost recovery, or document why cost recovery is not  
42 required, for all human-caused fires on public lands. The agency will also pursue

- 1 cost recovery for other lands under fire protection agreement where the agency  
2 is not reimbursed for suppression actions, if so stipulated in the agreement.
- 3 For all human-caused fires where negligence can be determined, trespass actions  
4 are to be taken to recover cost of suppression activities, land rehabilitation, and  
5 damages to the resource and improvements. Only fires started by natural causes  
6 will not be considered for trespass and related cost recovery.
- 7 The determination whether to proceed with trespass action must be made on  
8 “incident facts,” not on “cost or ability to pay.” Trespass collection is both a cost  
9 recovery and a deterrent to prevent future damage to public land. It is prudent to  
10 pursue collection of costs, no matter how small. This determination must be  
11 documented and filed in the unit office’s official fire report file.
- 12 • *BIA – For guidance regarding fire trespass and damage to Indian Forest*  
13 *Products on lands under the jurisdiction of the Bureau of Indian Affairs see*  
14 *53IAM 7-H Indian Forest Management Handbook – Forest Trespass,*  
15 *available at*  
16 *<https://www.bia.gov/sites/bia.gov/files/assets/bia/ots/dfwfm/pdf/idc->*  
17 *[022535.pdf](https://www.bia.gov/policy-forms/handbooks.) and <https://www.bia.gov/policy-forms/handbooks.>*
- 18 The Agency Administrator has the responsibility to bill for the total cost of the  
19 fire and authority to accept only full payment. On the recommendation of the  
20 State/Regional Director, the Solicitor/Office of General Counsel may  
21 compromise claims of the United States, up to the monetary limits (\$100,000)  
22 established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2.  
23 The Solicitor/Office of General Counsel will refer suspension or termination of  
24 the amount, in excess of \$100,000, exclusive of interest, penalties, or  
25 administrative charges, to the Department of Justice.
- 26 Unless specified otherwise in an approved protection agreement, the agency that  
27 has the land management jurisdiction/administration role is accountable for  
28 determining the cause of ignition, responsible party, and for obtaining all  
29 billable costs, performing the billing, collection, and distribution of the collected  
30 funds. The agency with the fire protection responsibility role must provide the  
31 initial determination of cause to the agency with the land management  
32 jurisdiction/administration role. The agency providing fire protection shall  
33 provide a detailed report of suppression costs that will allow the jurisdictional  
34 agency to proceed with trespass procedures in a timely manner.
- 35 Each agency’s role in fire trespass billing and collection must be specifically  
36 defined in the relevant Cooperative Fire Protection Agreement. The billing and  
37 collection process for federal agencies is:
- 38 • For example, a federal agency fire occurs on another federal agency’s land  
39 and is determined to be a trespass fire. BLM provides assistance, and  
40 supplies costs of that assistance to the federal agency with jurisdictional  
41 responsibility for trespass billing. The responsible federal agency bills and

- 1 collects trespass, and BLM then bills the federal agency and is reimbursed  
 2 for its share of the collection.  
 3 • For example, where BLM administered land is protected by a state agency,  
 4 the billing and collection process is:  
 5 ○ The state bills BLM for their suppression costs. The BLM will pursue  
 6 trespass action for all costs, suppression, rehabilitation, and damages,  
 7 and deposits the collection per BLM’s trespass guidance.

8 Initiation of fire cause determination must be started with notification of an  
 9 incident. Initial attack dispatchers are responsible for capturing all pertinent  
 10 information when the fire is reported and throughout the incident. The initial  
 11 attack Incident Commander and the initial attack forces are responsible for  
 12 initiating fire cause determination and documenting observations starting with  
 13 their travel to the fire. If probable cause indicates human involvement, an  
 14 individual qualified in fire cause determination (INVF or cooperater equivalent)  
 15 should be dispatched to the fire.

16 Agency references:

- 17 • **BLM** – 9238-1  
 18 • **NPS** – RM-18, Chapter 6 and RM-9  
 19 • **FWS** – Fire Management Handbook  
 20 • **FS** – FSM 5130 and FSM 5300  
 21 • **BIA** – 53 IAM Chapter 7-H and 90IAM 1.4C (10)

22 **Related Policy Documents**

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

	Safety	Prescribed Fire
<b>DOI</b>	485 DM Chapter 7	
<b>BLM</b>	DOI Occupational Safety and Health Program – Field Manual, 1112-1	
<b>NPS</b>	DO/RM-50B, RM-18 Chapter 3	RM-18, Chapter 7
<b>FWS</b>	Service Manual 095	
<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 Accident Investigation Guide, for specific guidance.	Same as Safety

	Safety	Prescribed Fire
<b>Interagency</b>	Information on accident investigations may be found at <a href="https://www.nifc.gov/safety/safety_reportsInvest.html">https://www.nifc.gov/safety/safety_reportsInvest.html</a> . For reporting use PMS 405-1, <i>Wildland Fire Fatality and Entrapment Initial Report</i> , <a href="https://www.nifc.gov/nicc/logistics/coord_forms.htm">https://www.nifc.gov/nicc/logistics/coord_forms.htm</a> .	Same as Safety

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