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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 agencies authorities, policies, and responsibilities, a multi-agency 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 Review
- 7 • After Action Review
- 8 • Fire and Aviation Safety Team Review
- 9 • Aviation Safety and Technical Assistance Team Review
- 10 • Large Fire Cost Reviews
- 11 • Individual Fire Review
- 12 • Lessons Learned Review
- 13 • Escaped Prescribed Fire Review

14

#### 15 **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
Aviation Safety and Technical 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
Escaped Prescribed Fire Review	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (2008)	

16

#### 17 **Preparedness Reviews**

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

21

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

26

**1 After Action Reviews (AAR)**

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

- 7 • What was planned?
- 8 • What actually happened?
- 9 • Why it happened?
- 10 • What can be done the next time?

11

12 An AAR is a tool that leaders and units can use to get maximum benefit from  
13 the experience gained on any incident or project. When possible, the leader of  
14 the incident or project should facilitate the AAR process. However, the leader  
15 may choose to have another person facilitate the AAR as needed and  
16 appropriate. AARs may be conducted at any organizational level. However, all  
17 AARs follow the same format, involve the exchange of ideas and observations,  
18 and focus on improving proficiency. The AAR should not be utilized as an  
19 investigational review. The format can be found in the *Interagency Response*  
20 *Pocket Guide (IRPG)*, PMS #461, NFES #1077.

21

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

23 Fire and Aviation Safety Teams assist agency administrators during periods of  
24 high fire activity by assessing policy, rules, regulations, and management  
25 oversight relating to operational issues. They can also do the following:

- 26 • Provide guidance to ensure fire and aviation programs are conducted safely.
- 27 • Assist with providing immediate corrective actions.
- 28 • Review compliance with OSHA abatement plan(s), reports, reviews, and  
29 evaluations.
- 30 • Review compliance with *Interagency Standards for Fire and Fire Aviation*  
31 *Operations*.

32

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

37

38 FASTs include a team leader, who is either an agency administrator or fire  
39 program lead with previous experience as a FAST member, a safety and health  
40 manager, and other individuals with a mix of skills from fire and aviation  
41 management.

42

43 FASTs will be chartered by their respective Geographic Area Coordinating  
44 Group (GACG) with a delegation of authority, and report back to the GACG.

45

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

7

#### 8 **Aviation Safety and Technical Assistance Team (ASTAT) Reviews**

9 Refer to Chapter 16 for ASTAT information.

10

#### 11 **Large Fire Cost Reviews**

12 Information on large fire cost reviews can be found in Chapter 11 (Incident  
13 Management), and at [http://www.nwccg.gov/general/memos/nwccg-003-](http://www.nwccg.gov/general/memos/nwccg-003-2009.html)  
14 [2009.html](http://www.nwccg.gov/general/memos/nwccg-003-2009.html)

15

#### 16 **Individual Fire Reviews**

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

23

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

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

34

35 A LLR should be tailored to the event being reviewed and the extent of the  
36 review should be commensurate with the severity of the incident. A LLR should  
37 not be used in lieu of a Serious Accident Investigation (SAI) or Accident  
38 Investigation (AI) if the SAI/AI criteria have been met.

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

41

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  
44 communications, organization, and be unbiased to the event. Personnel  
45 involved in the event will be participants in the review process. Depending

- 1 upon the complexity of the event, the facilitator may request assistance from  
2 technical experts (e.g., fire behavior, fire operations, etc.).  
3 The LLR facilitator will convene the participants and:
- 4 • Obtain a Delegation of Authority from appropriate agency level. See  
5 appendix J for a sample LLR Delegation of Authority.
  - 6 • Identify facts of the event (sand tables maybe helpful in the process) and  
7 develop a chronological narrative of the event.
  - 8 • Identify underlying reasons for success or unintended outcomes.
  - 9 • Identify what individuals learned and what they would do differently in the  
10 future.
  - 11 • Identify any recommendations that would prevent future similar  
12 occurrences.
  - 13 • Provide a final written report including the above items to the pertinent  
14 agency administrator(s) within two weeks of event occurrence unless  
15 otherwise negotiated. Names of involved personnel should not be included  
16 in this report (reference them by position).

17  
18 A copy of the final report will be submitted to the respective agency's national  
19 fire safety lead who will provide a copy to the Wildland Fire Lessons Learned  
20 Center (LLC). E-mail: llcdocsubmit@gmail.com

- 21 • *FS - The Forest Service has combined the Accident Prevention Analysis*  
22 *(APA) with the Facilitated Learning Analysis (FLA). A guide for the FLA*  
23 *process is available at*  
24 *[http://wildfirelessons.net/documents/APA\\_FLA\\_Guides\\_2011.pdf](http://wildfirelessons.net/documents/APA_FLA_Guides_2011.pdf)*

#### 25 **Escaped Prescribed Fire Reviews**

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

29 *Interagency Prescribed Fire Planning and Implementation Procedures*  
30 *Reference Guide (August 2008)*

- 31 • *BLM - IM No. OF&A 2012-005*
- 32 • *FWS - Fire Management Handbook, Chapter 17*
- 33 • *NPS - RM-18, Chapter 7 & 17*
- 34 • *FS - FSM 5140*

#### 35 **Investigations**

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

43  
44 Distinct types of wildland fire incidents and accidents have specific  
45 investigation requirements.

- 1 **Wildland Fire Incident and Accident Types and Definitions**
- 2 • **Serious Wildland Fire Accident**
- 3 An unplanned event or series of events that resulted in death; injury,
- 4 occupational illness, or damage to or loss of equipment or property. For
- 5 wildland fire operations, a serious accident involves any of the following:
- 6 ○ One or more fatalities.
- 7 ○ Three or more personnel who are inpatient hospitalized as a direct
- 8 result of or in support of wildland fire operations.
- 9 ○ Property or equipment damage of \$250,000 or more.
- 10 ○ Consequences that the Designated Agency Safety and Health Official
- 11 (DASHO) judges to warrant Serious Accident Investigation.
- 12 • **Wildland Fire Accident**
- 13 An unplanned event or series of events that resulted in injury, occupational
- 14 illness, or damage to or loss of equipment or property to a lesser degree than
- 15 defined in “Serious Wildland Fire Accident”.
- 16 • **Near-miss**
- 17 An unplanned event or series of events that could have resulted in death;
- 18 injury; occupational illness; or damage to or loss of equipment or property
- 19 but did not.
- 20 • **Entrapment**
- 21 A situation where personnel are unexpectedly caught in a fire behavior-
- 22 related, life-threatening position where planned escape routes or safety
- 23 zones are absent, inadequate, or compromised. Entrapment may or may not
- 24 include deployment of a fire shelter for its intended purpose. Entrapment
- 25 may result in a serious wildland fire accident, a wildland fire accident, or a
- 26 near-miss.
- 27 • **Fire Shelter Deployment**
- 28 The removing of a fire shelter from its case and using it as protection
- 29 against fire. Fire shelter deployment may or may not be associated with
- 30 entrapment. Fire shelter deployment may result in a serious wildland fire
- 31 accident, a wildland fire accident, or a near-miss.
- 32 • **Fire Trespass**
- 33 The occurrence of unauthorized fire on agency-protected lands where the
- 34 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	Notification Requirement	Management level that determines review type and authorizes review*
Serious Wildland Fire Accident	Serious Accident Investigation (SAI)	National	National
Wildland Fire Accident	Accident Investigation (AI) <i>FS only- FLA may be used</i>	<i>BLM/NPS-National</i> <i>FS/FWS-Management Discretion</i>	Region/State/Local
Entrapment	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 \* Higher level management may exercise their authority to determine the type of  
3 review or investigation.

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

10  
11 **Investigation Processes**

12  
13 **Processes Common to All Wildland Fire Accident Investigations**

- 14 • **Site Protection** - The site of the incident should be secured immediately  
15 and nothing moved or disturbed until the area is photographed and visually  
16 reviewed. Exact locations of injured personnel, entrapments, injuries,  
17 fatalities, and the condition and location of personal protective equipment,  
18 property, and other equipment must be documented.

- 1 • **Management of Involved Personnel** - Treatment, transport, and follow-up  
2 care must be immediately arranged for injured and involved personnel. The  
3 agency administrator or delegate should develop a roster of involved  
4 personnel and supervisors and ensure they are available for interviews by  
5 the investigation team. The agency administrator should consider relieving  
6 involved supervisors from fireline duty until the preliminary investigation  
7 has been completed. Attempt to collect initial statements from the involved  
8 individuals prior to a Critical Incident Stress Management (CISM) session.
- 9 • **Delegation of Authority** - A delegation of authority shall be issued to the  
10 investigation team leader. The delegation of authority will outline roles,  
11 responsibilities, and expected deliverables.
- 12 • **Critical Incident Stress Management (CISM)** - CISM is the  
13 responsibility of local agency administrators, who should have individuals  
14 pre-identified for critical incident stress debriefings. Also refer to The  
15 Agency Administrator's Guide to Critical Incident Management (PMS 926),  
16 available at: <http://www.nwcg.gov/pms/pubs/pms926.doc>. Individuals or  
17 teams may be available through Employee Assistance Programs (EAPs) or  
18 Geographic Area Coordination Centers (GACCs).
- 19 • **24-Hour-Preliminary Report** - This report contains known basic facts  
20 about the accident. It will be completed and forwarded by the agency  
21 administrator or designee responsible for the jurisdiction where the accident  
22 occurred. Names of injured personnel are not to be included in this report  
23 (reference them by position).
- 24 • **72-Hour Expanded Report** - This report provides more detail about the  
25 accident and may contain the number of victims, severity of injuries, and  
26 information focused on accident prevention. It will be completed and  
27 forwarded by the AI/SAI Team. Names of injured personnel are not to be  
28 included in this report (reference them by position).
- 29 • **24 and 72 Hour Reports** shall be sent to the respective agency's fire  
30 safety/risk management lead for national distribution and potential posting  
31 through NWCG Safety Alert System.

### 32 **Wildland Fire Serious Accident Investigation Process**

#### 34 **Fire Director Responsibilities**

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

- 37 • Notify the agency safety manager and Designated Agency Safety and  
38 Health Official (DASHO).
- 39 • Immediately appoint, authorize (through Delegation of Authority), and  
40 deploy an accident investigation team.
- 41 • Provide resources and procedures adequate to meet the team's needs.
- 42 • Receive the factual and management evaluation reports and take action to  
43 accept or reject recommendations.
- 44



- 1 ● Forward investigation findings, recommendations, and corrective action  
2 plan to the DASHO (the agency safety office is the “office of record” for  
3 reports).
- 4 ● Convene an accident review board/ board of review (if deemed necessary)  
5 to evaluate the adequacy of the factual and management reports and suggest  
6 corrective actions.
- 7 ● Ensure a corrective action plan is developed, incorporating management  
8 initiatives established to address accident causal factors.
- 9 ● Ensure Serious Accident Investigations remain independent of other  
10 investigations.

#### 12 **Agency Administrator Responsibilities**

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

#### 25 **Notification**

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

- 28 ● Agency administrator
- 29 ● Public affairs
- 30 ● Agency Law Enforcement
- 31 ● Safety personnel
- 32 ● County sheriff or local law enforcement as appropriate to jurisdiction
- 33 ● National Interagency Coordination Center (NICC)
- 34 ● Agency headquarters
- 35 ● OSHA (within 8 hours if the accident resulted in one or more fatalities or if  
36 three or more personnel are inpatient hospitalized)

37  
38 Notification to the respective agency’s fire national safety/risk management lead  
39 is required.

#### 41 **Designating the Investigation Team Lead**

42 The 1995 Memorandum of Understanding between the U.S. Department of the  
43 Interior and the U.S. Department of Agriculture states that serious wildland fire-  
44 related accidents will be investigated by interagency investigation teams.  
45 Following initial notification of a serious accident, the National Fire Director(s)

1 or their designee(s) will designate a Serious Accident Investigation Team  
2 Lead(s) and provide that person(s) with a written Delegation of Authority to  
3 conduct the investigation and the means to form and deploy an investigation  
4 team.

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

7  
8 Accidents involving more than one agency will require a collaboratively  
9 developed delegation of authority that is signed by each of the respective  
10 agencies.

11

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

13 SAI Team members should not be affiliated with the unit that sustained the  
14 accident.

- 15 • **Team Leader (Core Team Member)**

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

- 20 • **Chief Investigator (Core Team Member)**

21 A qualified accident investigation specialist is responsible for the direct  
22 management of all investigation activities. The chief investigator reports to  
23 the team leader.

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

25 An experienced safety and occupational health specialist or manager who  
26 acts as an advisor to the team leader to ensure that the investigation focus  
27 remains on safety and health issues. The accident investigation  
28 advisor/safety manager also works to ensure strategic management issues  
29 are examined. Delegating Officials or their designee may, at their  
30 discretion, fill this position with a trained and qualified NWCG Safety  
31 Officer, Line (SOFR), Safety Officer, Type 2 (SOF2), or Safety Officer,  
32 Type 1 (SOF1).

- 33 • **Interagency Representative**

34 An interagency representative will be assigned to every fire-related Serious  
35 Accident Investigation Team. They will assist as designated by the team  
36 leader and will provide outside agency perspective. They will assist as  
37 assigned by the Team Leader and will provide a perspective from outside  
38 the agency.

- 39 • **Technical Specialists**

40 Personnel who are qualified and experienced in specialized occupations,  
41 activities, skills, and equipment, addressing specific technical issues such as  
42 specialized fire equipment, weather, and fire behavior.

- 43 • **Public Affairs Officer**

44 For investigations with high public visibility and significant news media  
45 interest, a public affairs officer (PAO) should be considered a part of the  
46 team. The PAO should develop a communications plan for the team, be a

- 1 designated point of contact for news media, and oversee all aspects of  
2 internal and external communications. Ideally, the PAO should be qualified  
3 as a Type 1 or Type 2 public information officer and be familiar with SAI  
4 team organization and function.
- 5 ○ **BLM** - All media related documents (news releases, talking points,  
6 etc.) should be cleared through NIFC Public Affairs prior to external  
7 release.
- 8
- 9 Core SAI Team members are required to take the Interagency Serious Accident  
10 Investigation Course 1112-05 prior to serious accident investigation assignment.  
11 This training is also required every 5 years for recurrency.
- 12 ● **FS/BLM/FWS**- This training is required every 5 years to retain currency.
- 13

#### 14 **SAIT Final Report**

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

20

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

23

#### 24 **Factual Report**

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

32

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

36

#### 37 **Management Evaluation Report (MER)**

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

42

#### 43 **Accident Review Board/Board of Review**

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

**1 Wildland Fire Accident Investigation Process**

2

**3 Notification**

4 When an accident occurs, Agency specific notification requirements shall be  
5 followed. In most instances, supervisors will notify the unit fire management  
6 officer, who will then make notification through chain of command.

7

**8 Investigation Team Membership**

9 Investigation team membership should be commensurate with the complexity  
10 and/or severity of the accident. For complex investigations, the team should  
11 consist of a chief investigator, a safety advisor/manager, and one technical  
12 specialist. Team members may have dual roles (e.g., chief investigator/safety  
13 advisor). More complex accidents may require the need for a Team Leader and  
14 multiple technical specialists.

15

**16 Investigation Methodology**

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

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

31

**32 Final Report**

33 Within 45 days of the accident, a final report including facts, findings, and  
34 recommendations shall be submitted to the senior manager dependent upon the  
35 level of investigation (e.g., Local agency administrator, State/Regional Director,  
36 and Agency Fire Director or their designee). If a lower level investigation is  
37 conducted, a courtesy copy of the final report shall be sent to the respective  
38 agency's national fire safety/risk management lead.

39 The Final Report (minus names of employees- they should be referenced by  
40 position) will be submitted to Wildland Fire Lessons Learned Center (LLC) by  
41 the respective agency's National Fire Safety Leads. E-mail:

42 llcdocsubmit@gmail.com

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1 **Accident Investigation Report Standard Contents**

- 2 • **Executive Summary** - A brief narrative of the facts involving the accident  
3 including dates, locations, times, name of incident, jurisdiction(s), number  
4 of individuals involved, etc. Names of injured personnel or personnel  
5 involved in the accident are not to be included in this report (reference them  
6 by position).
- 7 • **Narrative** - A detailed chronological narrative of events leading up to and  
8 including the accident, as well as rescue and medical actions taken after the  
9 accident. This section will contain who, what, and where.
- 10 • **Investigation Process**- A brief narrative of actions taken by the  
11 investigation team. This narrative should include investigation team  
12 membership, Delegation of Authority information (from who and contents),  
13 investigative actions and timeline (when the team conducted interviews,  
14 inspections, site visits, etc.), and if other sources were consulted (i.e.  
15 professional accident reconstruction experts, equipment manufacturers,  
16 etc.). This section should also address if environmental, equipment,  
17 material, procedural, and human factors were present, and state how  
18 findings/recommendations were developed.
- 19 • **Findings/Recommendations**
- 20 ○ **Findings** are developed from the factual information. Each finding is a  
21 single event or condition. Each finding is an essential step in the  
22 accident sequence, but each finding is not necessarily causal or  
23 contributing. Do not include any more information in each finding than  
24 is necessary to explain the event occurrence. Findings must be  
25 substantiated by the factual data and listed in chronological order  
26 within the report. Do not include opinion or speculation.
- 27 ○ **Discussion** - Provide a brief explanation of factual and other pertinent  
28 information that lead to the finding(s).
- 29 ○ **Recommendations** - Recommendations are the prevention measures  
30 that should be taken to prevent similar accidents. Provide  
31 recommendations that are consistent with the findings, do not contain  
32 opinion or speculation, and identify who is responsible for completing  
33 the recommended action. If no action is required, state as such.
- 34 • **Conclusions and Observations** - Investigation team's opinions and  
35 inferences, and "lessons learned" may be captured in the section.
- 36 • **Maps/Photographs/Illustrations** - Graphic information used to document  
37 and visually portray facts.
- 38 • **Appendices** - Reference materials (e.g., fire behavior analysis, equipment  
39 maintenance reports, agreements).
- 40 • **Records** - Factual data and documents used to substantiate facts involving  
41 the accident.

42  
43 An AI report template and examples of AI reports can be found at the NIFC  
44 Safety website: [http://www.nifc.gov/safety/safety\\_reprtsInvest.html](http://www.nifc.gov/safety/safety_reprtsInvest.html)

45

**1 Fire Cause Determination and Trespass Investigation**

2

**3 Introduction**

4 Agency policy requires any wildfire to be investigated to determine cause,  
5 origin, and responsibility. Accurate fire cause determination is a necessary first  
6 step in a successful fire investigation. Proper investigative procedures, which  
7 occur concurrent with initial attack, more accurately pinpoint fire causes and can  
8 preserve valuable evidence that would otherwise be destroyed by suppression  
9 activities. Fire trespass refers to the occurrence of unauthorized fire on agency-  
10 protected lands where the source of ignition is tied to some type of human  
11 activity.

12

**13 Policy**

14 The agency must pursue cost recovery, or document why cost recovery is not  
15 required, for all human-caused fires on public lands. The agency will also  
16 pursue cost recovery for other lands under fire protection agreement where the  
17 agency is not reimbursed for suppression actions, if so stipulated in the  
18 agreement.

19

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

24

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

30

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

39

40 Unless specified otherwise in an approved protection agreement, the agency that  
41 has the land management jurisdiction/administration role is accountable for  
42 determining the cause of ignition, responsible party, and for obtaining all  
43 billable costs, performing the billing, collection, and distribution of the collected  
44 funds. The agency with the fire protection responsibility role must provide the  
45 initial determination of cause to the agency with the land management  
46 jurisdiction/administration role. The agency providing fire protection shall

- 1 provide a detailed report of suppression costs that will allow the jurisdictional  
 2 agency to proceed with trespass procedures in a timely manner.  
 3  
 4 Each agency’s role in fire trespass billing and collection must be specifically  
 5 defined in the relevant Cooperative Fire Protection Agreement. The billing and  
 6 collection process for federal agencies is:
- 7 • For example, a federal agency fire occurs on another federal agency’s land  
 8 and is determined to be a trespass fire. BLM provides assistance, and  
 9 supplies costs of that assistance to the federal agency with jurisdictional  
 10 responsibility for trespass billing. The responsible federal agency bills and  
 11 collects trespass, and BLM then bills the federal agency and is reimbursed  
 12 for its share of the collection.
  - 13 • For example, where BLM administered land is protected by a state agency,  
 14 the billing and collection process is:
    - 15 ○ The state bills BLM for their suppression costs. The BLM will pursue  
 16 trespass action for all costs, suppression, rehabilitation, and damages,  
 17 and deposits the collection per BLM’s trespass guidance.
- 18  
 19 All fires must be thoroughly investigated to determine cause. Initiation of cause  
 20 determination must be started with notification of an incident. The initial attack  
 21 Incident Commander and the initial attack forces are responsible for initiating  
 22 fire cause determination and documenting observations starting with their travel  
 23 to the fire. If probable cause indicates human involvement, an individual trained  
 24 in fire cause determination should be dispatched to the fire.  
 25 Agency references:
- 26 • **BLM** - 9238-1
  - 27 • **FWS** - *Fire Management Handbook*
  - 28 • **NPS** - *RM-18, Chapter 8 and RM-9*
  - 29 • **FS** - *FSM 5130 and FSM 5300*

30  
 31 **Related Policy Documents**

32 These documents provide specific direction related to incident and accident  
 33 investigations.

	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</i> , <i>Wildland Fire Fatality and Entrapment Initial Report</i> , on the NWCG website.	