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## Chapter 18 Reviews, Investigations & Analyses

### Introduction

Reviews and investigations are used by wildland fire and aviation managers to assess and improve the effectiveness and safety of organizational operations.

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

- Preparedness review
- After action review
- Fire and aviation safety team review
- Aviation safety assistance team review
- Large Fire Cost Reviews
- Individual fire review
- Lessons learned review
- Escaped prescribed fire review

### Preparedness Reviews

Fire preparedness reviews assess fire programs for compliance with established fire policies and procedures outlined in the current *Interagency Standards for Fire and Fire Aviation Operations* and other pertinent policy documents.

Reviews identify; organizational, operational, procedural, personnel, or equipment deficiencies, and recommend specific corrective actions. Interagency Preparedness Review Checklists can be found at:

[http://www.nifc.gov/policies/preparedness\\_reviews/preparedness\\_reviews.htm](http://www.nifc.gov/policies/preparedness_reviews/preparedness_reviews.htm)

- **BLM/FS - Preparedness review functional checklists that can be found at:**  
[http://www.blm.gov/nifc/st/en/prog/fire/fireops/preparedness/preparedness\\_review.html](http://www.blm.gov/nifc/st/en/prog/fire/fireops/preparedness/preparedness_review.html).

### After Action Reviews (AAR)

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

- what was planned?
- what actually happened?

- 1 • why it happened?
- 2 • what can be done the next time?

3

4 It is a tool that leaders and units can use to get maximum benefit from the  
5 experience gained on any incident or project. When possible, the leader of the  
6 incident or project should facilitate the AAR process. However, the leader may  
7 choose to have another person facilitate the AAR as needed and appropriate.  
8 AARs may be conducted at any organizational level. However, all AARs follow  
9 the same format, involve the exchange of ideas and observations, and focus on  
10 improving proficiency. The AAR should not be utilized as an investigational  
11 review. The format can be found in the *Interagency Response Pocket Guide*  
12 (*IRPG*), *PMS #461*, *NFES #1007*

13

#### 14 **Fire and Aviation Safety Team (FAST) Reviews**

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

- 18 • Provide guidance to ensure fire and aviation programs are conducted safely.
- 19 • Assist with providing immediate corrective actions.
- 20 • Review compliance with OSHA abatement plan(s), reports, reviews and  
21 evaluations.
- 22 • Review compliance with *Interagency Standards for Fire and Fire Aviation*  
23 *Operations*.

24

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

29

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

34

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

37

38 Fast reports will include an executive summary, purpose, objectives,  
39 methods/procedures, findings, recommendations, follow-up actions (immediate,  
40 long-term, national issues), and a letter delegating authority for the review.  
41 FAST reports should be submitted to the geographic area with a copy to the  
42 Federal Fire and Aviation Safety Team (FFAST) chair within 30 days. See  
43 Appendix O for sample FAST Delegation of Authority.

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

2 During high levels of aviation activity it is advisable to request an Aviation  
3 Safety Assistance Team (ASAT). The team's purpose is to assist and review  
4 helicopter and/or fixed wing operations on ongoing wildland fires. An ASAT  
5 team should be requested through the agency chain of command and operate  
6 under a delegation from the appropriate state/regional aviation manager or  
7 multi-agency coordinating group. Formal written reports will be provided to the  
8 appropriate manager. An ASAT should consist of:

- 9 • Aviation Safety Manager
- 10 • Operations Specialist (helicopter and/or fixed wing)
- 11 • Pilot Inspector
- 12 • Maintenance Inspector (optional)
- 13 • Avionics Inspector (optional)

14  
15 **Large Fire Cost Reviews**

16 Information on large fire cost reviews can be found in Incident Management,  
17 and at <http://www.nwccg.gov/general/memos/nwccg-003-2009.html>

18  
19 **Individual Fire Reviews**

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

26  
27 **Notification**

28 Near misses or successful operations should be reported to first line supervisors.  
29 Supervisors will notify the unit fire management officer, the unit fire  
30 management officer will then notify their agency administrator. In cases of  
31 entrapment near misses, notification to the respective agency's national fire  
32 office is required. The determination for review/investigation level will be made  
33 from the national level.

- 34 • *NPS - Park Units will notify Regional FMOs of the need for review or*  
35 *investigation.*

36  
37 **Lessons Learned Reviews (LLR)**

38 The purpose of a LLR is to focus on the near miss events or conditions in order  
39 to prevent potential serious incident in the future. In order to continue to learn  
40 from our near misses and our successes it is imperative to conduct a LLR in an  
41 open, non-punitive manner. LLRs are intended to provide educational  
42 opportunities that foster open and honest dialog and assist the wildland fire  
43 community in sharing lessons learned information. LLRs provide an outside  
44 perspective with appropriate technical experts assisting involved personnel in  
45 identifying root causes and sharing findings and recommendations.

46  
Release Date: January 2010

1 **LLR Process**

2 An LLR should be tailored to the event being reviewed and the extent of the  
3 review should be commensurate with the severity of the incident being  
4 reviewed. An LLR should not be used in lieu of a Serious Accident  
5 Investigation (SAI) if the SAI criteria have been met.

6  
7 A LLR will be led by a facilitator not involved in the event. A facilitator should  
8 be an appropriate fire management expert who possesses skills in interpersonal  
9 communications, organization, and be unbiased to the event. Personnel  
10 involved in the event will be participants in the review process. Depending  
11 upon the complexity of the event, the facilitator may request assistance from  
12 technical experts (e.g., fire behavior, fire operations, etc.).

13  
14 The LLR facilitator will convene the participants and:

- 15 ● Obtain delegation of authority from appropriate agency level. See appendix  
16 K for a sample LLR Delegation of Authority.
- 17 ● Identify facts of the event (and tables maybe helpful in the process) and  
18 develop a chronological narrative of the event.
- 19 ● Identify underlying reasons for success or failure.
- 20 ● Identify what individuals learned and what they would do differently in the  
21 future.
- 22 ● Identify any recommendations that would prevent future similar  
23 occurrences.
- 24 ● Provide a final written report including the above items to the pertinent  
25 agency administrator(s) within two weeks of event occurrence. Names of  
26 involved personnel should not be included in this report (reference them by  
27 position).

28  
29 A copy of the final report will be submitted to the respective agency's national  
30 fire safety lead who will provide a copy to the Wildland Fire Lessons Learned  
31 Center (WFLLC). Website: <http://wildfirelessons.net/Home.aspx>.

- 32 ● *FS - The Forest Service has developed two processes for conducting*  
33 *Lessons Learned Reviews: the Facilitated Learning Analysis (FLA) and the*  
34 *Accident Prevention Analysis (APA). Guides have been produced for these*  
35 *processes and are available from Regional and National risk management*  
36 *and safety personnel.*

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1 **Declared Wildfire Reviews**

2 Escaped prescribed fire review direction is found in Chapter 18 of this document  
3 and in these agency documents:

4 *Interagency Prescribed Fire Planning and Implementation Procedures Reference*  
5 *Guide (August 2008)*

- 6 • *BLM - IM No. OF&A 2009-014*
- 7 • *FWS - Fire Management Handbook*
- 8 • *NPS - RM-18, Chapter 7 & 17*
- 9 • *FS - FSM 5140*

10

11 **Investigations**

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

- 16 • Serious wildland fire accident investigation.
- 17 • Non-serious wildland fire accident investigation.
- 18 • Entrapment/ burnover investigation.
- 19 • Fire shelter deployment investigation.
- 20 • Fire trespass investigation.

21

22 **Wildland Fire Accident and Event Definitions**

23

24 **Notification**

25 Near misses or successful operations should be reported to first line supervisors.  
26 Supervisors will notify unit fire management officer, who will then notify their  
27 agency administrator. In cases of entrapment near misses, notification to the  
28 respective agency's national fire office is required and determination for  
29 review/investigation level will be made from the national level.

- 30 • *NPS - Park Units will notify Regional FMOs of the need for review or*  
31 *investigation.*

32

33 **Serious Wildland Fire Accident**

34 An unplanned event or series of events that resulted in death; injury,  
35 occupational illness, or damage to or loss of equipment or property. For  
36 wildland fire operations, a serious accident involves any of the following:

- 37 • One or more fatalities.
- 38 • Three or more personnel who are inpatient hospitalized as a direct result of  
39 or in support of wildland fire operations.
- 40 • Property or equipment damage of \$250,000 or more.
- 41 • Consequences that the Designated Agency Safety and Health Official  
42 (DASHO) judges to warrant Serious Accident Investigation.

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1 **Non-Serious Wildland Fire Accident**

2 An unplanned event or series of events that resulted in injury, occupational  
3 illness, or damage to or loss of equipment or property to a lesser degree than  
4 defined in “serious wildland fire accident.”

5

6 **Near-miss**

7 An unplanned event or series of events that could have resulted in death; injury;  
8 occupational illness; or damage to or loss of equipment or property but did not.

9

10 **Entrapment**

11 A situation where personnel are unexpectedly caught in a fire behavior-related,  
12 life-threatening position where planned escape routes or safety zones are absent,  
13 inadequate, or compromised. Entrapment may or may not include deployment  
14 of a fire shelter for its intended purpose (NWCG Glossary of Fire Terminology).  
15 Entrapment may result in a serious wildland fire accident, a non-serious  
16 wildland fire accident, or a near-miss.

17

18 **Fire Shelter Deployment**

19 The removing of a fire shelter from its case and using it as protection against fire  
20 (NWCG Glossary of Fire Terminology). Fire shelter deployment may or may  
21 not be associated with entrapment. Fire shelter deployment may result in a  
22 serious wildland fire accident, a non-serious wildland fire accident, or a near-  
23 miss. Any time a fire shelter is deployed (other than for training purposes),  
24 regardless of circumstances, notification to the National Fire and Aviation  
25 Safety Office of the jurisdictional agency is required.

26

27 **Escaped Prescribed Fire**

28 A prescribed fire which has exceeded or is expected to exceed its prescription.

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30 **Fire Trespass**

31 The occurrence of unauthorized fire on agency-protected lands where the source  
32 of ignition is tied to some type of human activity.

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**Review and Investigation Requirements**

<b>Wildland Fire Event</b>	<b>Review/Investigation Type</b>	<b>Management level determines review type and authorizes review*</b>
Serious Wildland Fire Accident	Serious Accident Investigation (SAI)	National
Non Serious Wildland Fire Accident	Non-Serious Accident Investigation (NSAI)	Region/State/Local
Near-miss	Lesson Learned Review (LLR)	Region/State/Local
Entrapment	SAI, NSAI, LLR, depending on severity	National
Fire Shelter Deployment	SAI, NSAI, LLR, depending on severity	National
Escaped Prescribed Fire	Escaped Prescribed Fire Review	National/Region/State
Fire Trespass	Fire Cause Determination & Trespass Investigation	Local

2 \*Management may override lower level management and request a review or  
 3 investigation regardless of the above criteria.

4

**Agency Specific Policy Documents**

5 These documents provide specific direction related to incident and accident  
 6 investigations.  
 7

	<b>Safety</b>	<b>Prescribed Fire</b>
<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> ,: <a href="http://www.nwcg.gov/pms/forms_otr/pms405-1.pdf">http://www.nwcg.gov/pms/forms_otr/pms405-1.pdf</a> .	

8

1 **Serious Wildland Fire Accident Investigation Process**

2

3 **Fire Director Responsibilities**

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

- 6 ● Notify the agency safety manager and Designated Agency Safety and  
7 Health Official (DASHO).
- 8 ● Immediately appoint, authorize, and deploy an accident investigation team.
- 9 ● Provide resources and procedures adequate to meet the team's needs.
- 10 ● Receive the factual and management evaluation reports and take action to  
11 accept or reject recommendations.
- 12 ● Forward investigation findings, recommendations, and corrective action  
13 plan to the DASHO (the agency safety office is the "office of record" for  
14 reports).
- 15 ● Convene an accident review board/ board of review (if deemed necessary)  
16 to evaluate the adequacy of the factual and management reports and suggest  
17 corrective actions.
- 18 ● Ensure a corrective action plan is developed, incorporating management  
19 initiatives established to address accident causal factors.

20

21 **Agency Administrator Responsibilities**

- 22 ● Develop local preparedness plans to guide emergency response.
- 23 ● Identify agencies with jurisdictional responsibilities for the accident.
- 24 ● Provide for and emphasize treatment and care of survivors.
- 25 ● Ensure the Incident Commander secures the accident site.
- 26 ● Conduct an in-briefing to the investigation team.
- 27 ● Facilitate and support the investigation as requested.
- 28 ● Determine need and implement Critical Incident Stress Management  
29 (CISM).
- 30 ● Notify home tribe leadership in the case of a Native American fatality.
- 31 ● Prepare and issue required 24 Hour Preliminary Report.

32

33 **Notification**

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

- 36 ● Agency administrator
- 37 ● Public affairs
- 38 ● Agency Law Enforcement
- 39 ● Safety personnel
- 40 ● County sheriff or local law enforcement as appropriate to jurisdiction
- 41 ● National Interagency Coordination Center (NICC)
- 42 ● Agency headquarters
- 43 ● OSHA (within 8 hours if the accident resulted in one or more fatalities or if  
44 three or more personnel are inpatient hospitalized)



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

- 3 • *FS - Forest Service protocol for fatalities or 3 or more serious injuries*  
4 *requiring hospitalization investigation teams are assigned by the Office of*  
5 *Safety and Occupational Health in the WO.*

#### 7 **Designating the Investigation Team Lead**

8 The 1995 Memorandum of Understanding between the U.S. Department of the  
9 Interior and the U.S. Department of Agriculture states that serious wildland fire-  
10 related accidents will be investigated by interagency investigation teams.  
11 Following initial notification of a serious accident, the National Fire Director(s)  
12 or their designee(s) will designate a Serious Accident Investigation Team  
13 Lead(s) and provide that person(s) with a written delegation of authority to  
14 conduct the investigation and the means to form and deploy an investigation  
15 team.

16  
17 Accidents involving more than one agency will require a collaboratively  
18 developed delegation of authority that is signed by each of the respective  
19 agencies.

#### 21 **Serious Accident Investigation Team Composition**

##### 22 • **Team Leader**

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

##### 27 • **Chief Investigator**

28 A qualified accident investigation specialist is responsible for the direct  
29 management of all investigation activities. The chief investigator reports to  
30 the team leader.

##### 31 • **Accident Investigation Advisor/Safety Manager**

32 An experienced safety and occupational health specialist or manager who  
33 acts as an advisor to the team leader to ensure that the investigation focus  
34 remains on safety and health issues. The accident investigation  
35 advisor/safety manager also works to ensure strategic management issues  
36 are examined.

##### 37 • **Interagency Representative**

38 An interagency representative will be assigned to every fire-related Serious  
39 Accident Investigation Team. They will assist as designated by the team  
40 leader and will provide outside agency perspective.

##### 41 • **Technical Specialists**

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

45  
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- 1 • **Public Affairs Officer**  
2 For investigations with high public visibility and significant news media  
3 interest, a public affairs officer (PAO) should be considered to be part of the  
4 team. The PAO generally should not be affiliated with the home unit. The  
5 PAO should develop a communications plan for the team, be a designated  
6 point of contact for news media, and oversee all aspects of internal and  
7 external communications. Ideally, the PAO should be qualified as a Type 1  
8 or Type 2 public information officer and be familiar with SAI team  
9 organization and function.
- 10 • **BLM** - All media related documents (news releases, talking points, etc.)  
11 should be cleared through NIFC Public Affairs prior to external release.
- 12 • **BLM** - Coordination and mobilization is done by Fire and Aviation  
13 Directorate's Safety and Health Manager.

14  
15 **SAIT Final Report**

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

21  
22 **Factual Report**

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

30  
31 Factual Reports will be submitted to Wildland Fire Lessons Learned Center  
32 (WFLLC) by the respective agency's fire safety/risk management leads.  
33 <http://iirdb.wildfirelessons.net/main/Reviews.aspx>.

34  
35 **Management Evaluation Report (MER)**

36 The MER is intended for internal use only and explores management policies,  
37 practices, procedures, and personal performance related to the accident. The  
38 MER categorizes findings identified in the factual report and provides  
39 recommendations to prevent or reduce the risk of similar accidents. Factual and  
40 Management Evaluation Report formatting can be found on the NIFC website  
41 at: [http://www.nifc.gov/safety/accident\\_resources.htm](http://www.nifc.gov/safety/accident_resources.htm).

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  
46 respective agency's Safety and Health policy.

## 1 **Non-Serious Wildland Fire Accident Investigation Process**

2

### 3 **Notification**

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

7

### 8 **Investigation Team Membership**

9 Investigation team membership will depend upon the severity of the accident.  
10 At a minimum, the team should consist of a chief investigator, a safety  
11 advisor/manager, and one technical specialist. Team members may have dual  
12 roles (e.g., chief investigator/safety advisor). More complex accidents may  
13 require the need for a Team Leader and multiple technical specialists.

14

### 15 **Final Report**

16 Within 45 days of the accident, a final report detailing the accident to include  
17 facts, findings, and recommendations shall be submitted to the senior manager  
18 dependent upon the level of investigation (e.g., Local agency administrator,  
19 State/Regional Director, and Agency Fire Director or their designee). If a lower  
20 level investigation is conducted, a courtesy copy of the final report shall be sent  
21 to the respective agency's fire safety/risk management lead.

22

23 The Final Report (minus recommendations, conclusions and observations) will  
24 be submitted to Wildland Fire Lessons Learned Center (WFLLC) by the  
25 respective agency's National Fire Safety Leads. Website:  
26 <http://iirdb.wildfirelessons.net/main/Reviews.aspx>.

27

## 28 **Processes Common to Serious and Non-Serious Wildland Fire**

### 29 **Investigations**

- 30 • **Site Protection** - The site of the incident should be secured immediately  
31 and nothing moved or disturbed until the area is photographed and visually  
32 reviewed. Exact locations of injured personnel, entrapments, injuries,  
33 fatalities, and the condition and location of personal protective equipment,  
34 property, and other equipment must be documented.
- 35 • **Management of Involved Personnel** - Treatment, transport, and follow-up  
36 care must be immediately arranged for injured and involved personnel. The  
37 agency administrator or delegate should develop a roster of involved  
38 personnel and supervisors and ensure they are available for interviews by  
39 the investigation team. The agency administrator should consider relieving  
40 involved supervisors from fireline duty until the preliminary investigation  
41 has been completed. Attempt to collect initial statements from the involved  
42 individuals prior to a Critical Incident Stress Management (CISM) session.
- 43 • **Critical Incident Stress Management (CISM)** - CISM is the  
44 responsibility of local agency administrators, who should have individuals  
45 pre-identified for critical incident stress debriefings. Also refer to The  
46 *Agency Administrator's Guide to Critical Incident Management (PMS 926)*,

- 1 available at: <http://www.nwcg.gov/pms/pubs/pms926.doc>. Individuals or  
2 teams may be available through Employee Assistance Programs (EAP's) or  
3 Geographic Area Coordination Centers (GACC's).
- 4 • **24-Hour-Preliminary Report** - This report contains known basic facts  
5 about the accident. It will be completed and forwarded by the agency  
6 administrator responsible for the jurisdiction where the accident occurred.  
7 Names of injured personnel are not to be included in this report (reference  
8 them by position).
  - 9 • **72-Hour Expanded Report** - This report provides more detail about the  
10 accident and may contain the number of victims, severity of injuries, and  
11 information focused on accident prevention. It will be completed and  
12 forwarded by the SAI Team. Names of injured personnel are not to be  
13 included in this report (reference them by position).
  - 14 • **24 and 72 Hour Reports** shall be sent to the respective agency's fire  
15 safety/risk management lead for national distribution and potential posting  
16 through NWCG Safety Alert System.

17  
18 **Non-Serious Accident Investigation Report Standard Format**

- 19 • **Executive Summary** - A brief narrative of the facts involving the accident  
20 including dates, locations, times, name of incident, jurisdiction(s), number  
21 of individuals involved, etc. Names of injured personnel or personnel  
22 involved in the accident are not to be included in this report (reference them  
23 by position).
- 24 • **Narrative** - A detailed chronological narrative of events leading up to and  
25 including the accident, as well as rescue and medical actions taken after the  
26 accident. This section will contain who, what, and where.
- 27 • **Investigation Process** - A brief narrative stating the team was assigned to  
28 investigate the accident. It should include a standard statement that human,  
29 material, and environmental factors were considered. If one of these factors  
30 is determined to be noncontributing to the accident it should be addressed  
31 first and discounted. For example, if the investigation revealed that there  
32 were no environmental findings that contributed to the accident, simply note  
33 the fact and move on to the next factor. Human factors or material factors  
34 paragraphs should not be formulated so as to draw conclusions, nor should  
35 they contain adjectives or adverbs that describe and thus render an opinion  
36 into pertinent facts.
- 37 • **Findings** - Findings are developed from the factual information. Each  
38 finding is a single event or condition. Each finding is an essential step in  
39 the accident sequence, but each finding is not necessarily causal. Do not  
40 include any more information in each finding than is necessary to explain  
41 the event occurrence. Findings must be substantiated by the factual data  
42 and listed in chronological order within the report.
- 43 • **Discussion** - Provide a brief explanation of factual and other pertinent  
44 information that lead to the finding(s).

- 1 • **Recommendations** - Recommendations are the prevention measures that  
2 should be taken to prevent similar accidents. Provide recommendations that  
3 are consistent with the findings and identify at which level the action needs  
4 to occur.
- 5 • **Conclusions and Observations** - Investigation team's opinions and  
6 inferences may be captured in the section.
- 7 • **Maps/Photographs/Illustrations** - Graphic information used to document  
8 and visually portray facts.
- 9 • **Appendices** - Reference materials (e.g., fire behavior analysis, equipment  
10 maintenance reports, agreements).
- 11 • **Records** - Factual data and documents used to substantiate facts involving  
12 the accident.

13

## 14 **Fire Cause Determination & Trespass Investigation**

15

### 16 **Introduction**

17 Agency policy requires any wildfire to be investigated to determine cause,  
18 origin, and responsibility. Accurate fire cause determination is a necessary first  
19 step in a successful fire investigation. Proper investigative procedures, which  
20 occur concurrent with initial attack, more accurately pinpoint fire causes and can  
21 preserve valuable evidence that would otherwise be destroyed by suppression  
22 activities.

23

24 The agency or its employees must pursue cost recovery or document why cost  
25 recovery is not initiated for all human caused fires on public and/or other lands  
26 under protection agreement.

27

28 Fire trespass refers to the occurrence of unauthorized fire on agency-protected  
29 lands where the source of ignition is tied to some type of human activity.

30

### 31 **Policy**

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

37

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

42

43 The determination whether to proceed with trespass action must be made on  
44 "incident facts," not on "cost or ability to pay." Trespass collection is both a  
45 cost recovery and a deterrent to prevent future damage to public land. It is

1 prudent to pursue collection of costs, no matter how small. This determination  
2 must be documented and filed in the unit office's official fire report file.  
3 The agency administrator has the responsibility to bill for the total cost of the  
4 fire and authority to accept only full payment. On the recommendation of the  
5 State/Regional Director, the Solicitor/Office of General Counsel may  
6 compromise claims of the United States, up to the monetary limits (\$100,000)  
7 established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2.  
8 The Solicitor/Office of General Counsel will refer suspension or termination of  
9 the amount, in excess of \$100,000, exclusive of interest, penalties, or  
10 administrative charges, to the Department of Justice.

11  
12 Unless specified otherwise in an approved protection agreement, the agency that  
13 has the land management jurisdiction/administration role is accountable for  
14 determining the cause of ignition, responsible party, and for obtaining all  
15 billable costs, performing the billing, collection, and distribution of the collected  
16 funds. The agency with the fire protection responsibility role must provide the  
17 initial determination of cause to the agency with the land management  
18 jurisdiction/administration role. The agency providing fire protection shall  
19 provide a detailed report of suppression costs that will allow the jurisdictional  
20 agency to proceed with trespass procedures in a timely manner.

21  
22 Each agency's role in fire trespass billing and collection must be specifically  
23 defined in the relevant Cooperative Fire Protection Agreement. The billing and  
24 collection process for federal agencies is:

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

36  
37 All fires must be thoroughly investigated to determine cause. Initiation of cause  
38 determination must be started with notification of an incident. The initial attack  
39 incident commander and the initial attack forces are responsible for initiating  
40 fire cause determination and documenting observations starting with their travel  
41 to the fire. If probable cause indicates human involvement, an individual trained  
42 in fire cause determination should be dispatched to the fire. Agency references:

- 43 • *BLM - 9238-1*
- 44 • *FWS - Fire Management Handbook*
- 45 • *NPS - RM-18, Chapter 8 and RM-9*
- 46 • *FS - FSM 5130 and FSM 5300*