

**Chapter 19**  
**Reviews & Investigations**

**A. Introduction**

1. Reviews and investigations are two methods used by wildland fire and aviation managers to ensure or improve safety and efficiency, determine if any policy or operational changes should be initiated, and identify any management system failures. Reviews are usually based on improving performance and increasing safety, while investigations are conducted when an accident or incident with potential for injury or fatality occurs.
2. Depending on the complexity and severity, reviews and investigations may be conducted at the local, state/regional, or national level.

**B. Policy**

1. Agency policy requires investigation or review of all fires where:
  - a. Entrapments and/or fire shelter deployments have occurred.
  - b. Multiple serious injuries or fatalities have occurred.
  - c. Fires have escaped prescribed fire plans.
  - d. Property or equipment damage is more than:
    - 1) DOI \$2,000,000
    - 2) USFS \$1,500,000
  - e. Fires with projected large expenditures of more than
    - 1) DOI \$5,000,000
    - 2) USFS \$1,500,000
  - f. **BLM-** *Management reserves the right to review any fire deemed appropriate.*
2. Policy requires each field unit to have on-site a current copy of the *Interagency Standards for Fire and Fire Aviation Operations, Investigating Wildland Fire Entrapments* (Missoula Technology and Development Center), *Fireline Handbook*, an agency Safety and Health handbook, and a copy of applicable agency prescribed fire direction.

	<i>Safety</i>	<i>Prescribed Fire</i>
<b>BLM</b>	<i>Manual 1112-2, 1112-1</i>	<i>Prescribed Fire Handbook</i>
<b>FWS</b>	<i>Service Manual 095</i>	<i>Fire Management Handbook</i>
<b>NPS</b>	<i>DO/RM-50</i>	<i>RM-18, Chapter 10</i>
<b>USFS</b>	<i>FSH-6709.11</i>	<i>FSM-5140</i>

**C. Reviews**

Reviews address all or any aspects of wildland fire and aviation management. Reviews may focus on program oversight, safety, leadership, operations, specific incidents, preparedness, training, staffing, business practices, budget, planning, interagency cooperation, and coordination between fire and other agency programs. Review teams will develop findings and recommendations and establish priorities for action.

Reviews may be conducted in the form of Preparedness Reviews, Fire and Aviation Safety Team (FAST) Reviews, Individual Fire Reviews, or program specific reviews.

**1. Types of Reviews**

a. Preparedness Reviews

- 1) Wildland fire and aviation preparedness reviews are conducted annually prior to the fire season to help the field unit prepare for the fire season, identify operational, procedural, personnel, or equipment deficiencies, and recommend corrective actions. Standards for preparedness reviews are based on the *Interagency Standards for Fire and Fire Aviation Operations* and conducted according to the *Fire Preparedness Review Guide*.
- 2) Preparedness reviews consist of several major elements, safety being the most important. These elements can be found at [www.fire.blm.gov/Standards/precont.htm](http://www.fire.blm.gov/Standards/precont.htm).
- 3) Review teams should include line and fire managers, fire and aviation operations specialists, dispatch and logistics specialists, fire business management specialists, and other technical experts as needed (safety & occupational health specialists, contracting officers). This expertise may be internal, interagency, or contract, and include members from other states/regions, geographic areas. Reviews will benefit greatly if interagency in composition. The agency administrator determines local level review team membership; state/regional level review team membership is identified by the State/Regional Director; and national review teams are identified by the National Fire Directors.
- 4) Review Frequency/Reviewing Level:

	<i>Local</i>	<i>State/Regional</i>	<i>National</i>
<b>BLM</b>	<i>Annual/Any Level</i>	<i>2 yrs/National</i>	<i>4 yrs</i>
<b>FWS</b>	<i>Annual/Any Level</i>	<i>3-5 yrs/National</i>	<i>N/A</i>
<b>NPS</b>	<i>Annual</i>	<i>3-5 yrs/Regional</i>	<i>N/A</i>
<b>USFS</b>	<i>Annual</i>	<i>N/A</i>	<i>N/A</i>

- 5) **BLM** – *Copies of preparedness review reports will be distributed to the Director, Office of Fire and Aviation, and to the reviewed field office through the State Director. A copy of the written action plan addressing the executive summary findings will be submitted to the Director, National Office of Fire and Aviation, within (30) calendar days upon receipt of the review.*
  - 6) **BLM** – *Field office preparedness reviews will be conducted annually. Field Office will be reviewed every other year by state office. National-level reviews of each state are conducted every four years.*
  - 7) **USFS** – *FS preparedness reviews are guided by FSM 5100 / 5190 on frequency of reviews and reporting requirements.*
- b. **Fire and Aviation Safety Reviews (FASTs)**
- 1) Fire and Aviation Safety Teams assist agency administrators during periods of high fire activity by assessing policy, rules, regulations, and management oversight relating to operational issues. They can also do the following:
    - (a) Provide guidance to ensure fire and aviation programs are conducted safely.
    - (b) Review compliance with OSHA abatement plan(s), reports, reviews and evaluations.
    - (c) Review compliance with *Interagency Standards for Fire and Fire Aviation Operations*.
  - 2) FAST reviews can be requested through geographic area coordination centers to conduct reviews at the state/regional and local level. If a more comprehensive review is required, a national FAST can be ordered through the National Interagency Coordination Center.
  - 3) FASTs include a team leader, who is either an agency administrator or fire program lead with previous experience as a FAST member, a safety and health manager, and other individuals with a mix of skills from fire and aviation management.
  - 4) FASTs will be chartered by their respective Geographic Area Coordinating Group (GACG) with a delegation of authority, and report back to the GACG.
  - 5) The team's report includes an executive summary, purpose, objectives, methods/procedures, findings, recommendations, follow-up actions (immediate, long-term, national issues), and a letter delegating authority for the review. As follow-up, the team will gather and review all reports prior to the end of the calendar year to ensure identified corrective actions have been taken. FAST

reports should be submitted to the geographic area with a copy to the Federal Fire and Aviation Safety Team (FFAST) within 30 days. See page 19-15 for sample Delegation of Authority for FAST operations.

c. **Individual Fire Reviews**

Fire reviews examine all or part of the operations on an individual fire. The fire may be ongoing or controlled. These evaluations may be a local, state/regional, or national review, a “hotline” review, an incident management team closeout and review, a wildland fire review, or an escaped prescribed fire review.

1) **Local Level Review**

Should be conducted by the local manager (or designated representative) to provide the agency administrator with recommendations or commendations pertaining to the fire program or operations.

2) **State/Regional Level Review**

Convened by the state/regional FMO (or designated representative). This review is generally conducted for any fire that results in controversy involving another agency, adverse media attention, or in large expenditures of funds (\$2,000,000 or more), or involves serious injury to less than 3 personnel, significant property damage, or is an incident with potential.

3) **National Level Review**

Convened by National Fire Director (or designate). This review is generally conducted for any fire that involves agency wide or national issues, significant adverse media or political interest, multi-regional resource response, a substantial loss of equipment or property, large expenditure of funds (more than \$5,000,000).

4) *USFS- \$5,000,000 plus a fatality, or multiple, serious fire-related injuries (three or more personnel), and other fires the National Fire Director identifies to be reviewed.*

5) **Hotline Review**

Normally conducted by the FMO in conjunction with the incident commander, this review examines an ongoing fire to confirm decisions made daily in the WFSA, or to determine where the decision process has been faulty and what corrective actions are needed.

6) **Incident Management Team Closeout and Review**

The agency administrator conducts a closeout with the IMT prior to a team’s release from the incident. This ensures effective transfer of command of the incident to the local unit, or to another team, evaluates the status of

fire business, and addresses issues or suggested improvements.

7) **Wildland Fire Review**

Examines an ongoing fire to evaluate decisions or correct deficiencies; identifies new or improved procedures, techniques or tactics; compiles consistent and complete information to improve local, state/regional or national fire management programs; examines fire related incidents to determine cause(s), contributing factors, and to recommend corrective actions; and determine cost-effectiveness of an operation.

8) **Escaped Prescribed Fire Review**

Examines escaped prescribed fires to: prevent future escapes from occurring; establish accountability; determine if the prescribed fire plan was adequate; determine if the prescription, actions, and procedures set forth in the prescribed fire plan were followed; determine if overall policy, guidance, and procedures relating to prescribed fire operations are adequate; determine the level of awareness and understanding of procedures and guidance of the personnel involved; and determine the extent of prescribed fire training and experience of personnel involved.

- d. *Escaped prescribed fire review direction is found in the following agency manuals/direction.*

*BLM – IM No. OF&A 2002-020, July 12, 2000*

*FWS – Fire Management Handbook*

*NPS – RM-18, Chapter 10 & 13*

*USFS – 5140-1*

## D. Investigations

### 1. Guidance

- a. The following provides guidance and establishes procedures for national level incident/accident investigations (as defined below). Each state/region and local unit must have procedures in place to conduct investigations for incidents/accidents that do not require national involvement. The following information may be used as a guide for this procedure as well as referencing the following applicable agency guidance.
- 1) *BLM – Handbook 1112-2, Safety and Health for Field Operations, Topic 26.*
  - 2) *FWS – Fire Management Handbook*
  - 3) *NPS – RM-18, Chapter 13*
  - 4) *USFS – FSM-5100 and FSH-6709.11*

- b. Per the 1995 Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture “*Investigation of Serious Wildland Fire-Related Accidents*,” serious wildland fire-related accidents will be investigated through the use of interagency investigation teams.

## 2. Investigation Categories

### a. **Entrapment**

Defined by NWCG as situations where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes and safety zones are absent, inadequate, or have been compromised. Entrapments may or may not include deployment of a fire shelter for its intended purpose, and they may or may not result in injury. They include “near misses.” Notification to the National Fire and Aviation Safety Office of the jurisdictional agency is required. Level of investigation will be determined at the national level.

Investigations are required and conducted at the state/regional or local level (national assistance is available upon request). A trained Team Leader and Chief Investigator will conduct investigations. Initial notification to the National Fire and Aviation Safety Office of the jurisdictional agency is required.

### b. **Incidents with Potential and/or Non-Serious Injury**

Wildland fire-related mishaps that result in serious or non-serious injuries involving multiple personnel, near accident (which would have resulted in a serious injury or fatality), substantial loss of property (less than \$250,000), or an incident so complex and fraught with operational discrepancies that it has the potential to produce an accident, serious injury, or fatality given a similar environment or set of circumstances that existed at the time of the incident. Notification to the National Fire and Aviation Safety Office is required. Investigations are required and conducted at the state/region or local level (national assistance is available upon request).

### c. **Wildland Fire Serious Accident**

Defined as accidents where one or more fatalities occur and/or three or more personnel are inpatient hospitalized as a direct result, or in support of, wildland fire suppression or prescribed fire operations, or substantial property or equipment damage of \$250,000 or more occurs. Notification to the National Fire and Aviation Safety Office is required. National Office will conduct investigation with the delegation of authority coming from the National Fire Director or agency director.

- d. *USFS – Forest Service protocol for multiple fatalities or 3 or more serious injuries requiring hospitalization investigation teams are assigned by the Safety and Health Branch in the WO and are Chief's Office Investigations.*
- e. For more information on conducting investigations, refer to USDI, Interior 485 Departmental Manual 7, Serious Accident Investigation; USDA Forest Service Manual 6730, Accident Reporting and Investigation; the Interdepartmental Memorandum of Understanding between the U.S. Department of the Interior and the U.S. Department of Agriculture dated October 26, 1995; *Executive Order 12196, Occupational Safety and Health Programs for Federal Employees*; 29 CFR 1960.29, *Accident Investigation*; 29 CFR 1960.70, *Reporting of Serious Accidents*; *Investigating Wildland Fire Entrapments*; *Interagency Standards for Fire and Fire Aviation Operations*; and the *Fireline Handbook*.

### 3. Investigation Process

#### a. Notification

Interagency investigations will be co-led and/or have interagency team members. Agency reporting requirements shall be followed. As soon as a serious accident is verified, the following groups or individuals should be notified: agency administrator, public affairs, agency law enforcement, safety personnel, county sheriff or local law enforcement as appropriate to jurisdiction, National Interagency Coordination Center (NICC), agency headquarters, and OSHA (within 8 hours only if resulting in a fatality[ies] or three or more personnel are inpatient hospitalized).

- 1) After initial notification, NICC will advise the national fire director(s) or designee(s).
- 2) The fire director(s) or designee(s) will ensure notification to the agency safety manager and Designated Agency Safety and Health Official (DASHO).

#### b. Personnel Involved

Treatment, transport, and follow-up care should be immediately arranged for injured and involved personnel. Develop a roster of involved personnel and supervisors and ensure they are available for interviews by the investigation team. Consider relieving involved supervisors from fireline duty until the preliminary investigation has been completed. Attempt to collect initial written statements from the involved individuals prior to a critical incident stress debriefing (CISD). A CISD should be given as soon as possible. CISD teams are available through local Employee Assistance Programs (EAPs) or may be ordered through NICC.

- c. **Site Protection**  
The site of the incident should be secured immediately and nothing moved or disturbed until the area is photographed and visually reviewed. Exact locations of entrapment(s), injury(ies), and fatality(ies), and the condition and location of personal protective equipment, and any damaged property or equipment must be documented.
  - d. **Investigation**  
The 24-Hour Preliminary Brief that contains only the most obvious and basic facts about the accident will be completed and forwarded by the agency administrator responsible for the jurisdiction where the accident occurred. In the case of an entrapment and/or fire fatality, use NWCG “*Wildland Fire Entrapment/Fatality Initial Report*,” NFES 0869.
  - e. **Investigation Team Ordered**  
Following initial notification of a serious accident, the National Fire Director(s) will immediately dispatch an investigation team.
4. **Roles and Responsibilities**
- a. **Director**  
The fire director(s) or designee(s) of the lead agency, or agency responsible for the land upon which the accident occurred, will:
    - 1) Immediately appoint, authorize, and dispatch an accident investigation team.
    - 2) Ensure that resources and procedures are adequate to meet the team’s needs.
    - 3) Receive the factual and management evaluation reports and take action to accept or reject recommendations.
    - 4) Forward investigation findings, recommendations, and corrective action plan to the DASHO (the agency safety office is the “office of record” for reports).
    - 5) Convene a board of review (if deemed necessary) to evaluate the adequacy of the factual and management reports and suggest corrective actions.
    - 6) Ensure that a corrective action plan is developed, incorporating management initiatives established to address accident causal factors.
  - b. **Agency Administrator:**
    - 1) Identify agencies with statutory/accident jurisdictional responsibilities for the incident; develop local preparedness plans to guide emergency response.
    - 2) Provide for and emphasize treatment and care of survivors.
    - 3) Ensure the Incident Commander secures the accident site to protect physical evidence.
    - 4) Conduct in-briefing to the investigation team.



- 5) Facilitate and support investigation as requested.
  - 6) Implement CISD.
  - 7) Notify home tribe leadership in the case of a Native American fatality.
  - 8) Receive an in-briefing from the local agency administrator to include the 24-hour Preliminary Brief (if not already completed by local unit), as well as other general information about the accident.
  - 9) Produce a 72-hour Expanded Report – see reports section below.
- c. **Team composition**
- 1) **Team Leader**  
A senior agency management official, at the equivalent associate/assistant regional/state/area/division director level. The team leader will direct the investigation and serve as the point of contact with the agency DASHO.
  - 2) **Chief Investigator**  
A qualified accident investigation specialist responsible for the direct management of all investigation activities. The chief investigator reports to the team leader.
  - 3) **Accident Investigation Advisor**  
An experienced safety and occupational health specialist or manager who acts as an advisor to the team leader, to ensure that the investigation focus remains on safety and health issues. The accident investigation advisor also works to ensure that strategic management issues are examined.
  - 4) **Interagency Representative**  
An interagency representative will be assigned to every fire-related serious accident investigation team. They will assist as designated by the team leader and will provide outside agency perspective.
  - 5) **Technical Specialists**  
Personnel who are qualified and experienced in specialized occupations, activities, skills, and equipment, addressing specific technical issues such as arson, third-party liability, weather, and terrain.
- d. **BLM-** *BLM has established Serious Accident Investigation Teams (SAIT) that are managed on a rotational basis. Dispatching is done from the National Office of Fire and Aviation Safety Manager and teams are ordered through NICC.*

## 5. Reports

### a. The 24-Hour-Preliminary Report

This report contains only the most obvious and basic facts about the accident. It will be completed and forwarded by the agency

administrator responsible for the jurisdiction where the accident occurred. In the case of an entrapment and/or fire fatality, use *NWCG Wildland Fire Entrapment/Fatality Initial Report, NFES 0869*.

b. **The 72-Hour Expanded Report**

This report provides more detail about the accident and may contain the number of victims, severity of injuries, and information focused on accident prevention.

c. **The Final Report**

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

1) **Factual Report**

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

- (a) **Executive Summary:** A brief narrative of the facts involving the accident including dates, locations, times, name of incident, jurisdiction(s), number of individuals involved, etc.
- (b) **Narrative:** A detailed chronological narrative of events leading up to and including the accident, as well as rescue and medical actions taken after the accident. This section should spell out in detail who, what, and where.
- (c) **Investigative Process:** A brief narrative stating that the team was assigned to investigate the accident. It should include a standard statement that human, material, and environmental factors were considered. If one of these factors is determined to be noncontributing to the accident, it should be addressed first and discounted. For example, if the investigation revealed that there were no environmental findings that contributed to the accident—simply state that fact and move on to the next factor. Human factors or material factors paragraphs should not be formulated so as to draw conclusions, nor should they contain adjectives or

adverbs to describe and thus render an opinion into pertinent facts.

- (d) **Findings:** Findings are developed from the factual information and are listed in the following order:
  - (1) Direct cause of the accident.
  - (2) Indirect causes which contributed to the accident.
  - (3) Other findings which, if left uncorrected, could lead to future accidents.
  - (4) Opinions or recommendations are not findings.
  - (5) Findings must be substantiated by the factual data within the report.
  - (6) Maps, Illustrations, and Photographs: graphic information used to document and visually portray facts.
  - (7) Records: factual data and documents used to substantiate facts involving the accident.
  - (8) Appendices: excerpts, tests results, and similar items used as reference information for documented facts involving the accident.

2) **Management Evaluation Report (MER)**

The MER is intended for internal use only and explores management policies, practices, procedures, and personal performance related to the accident. It takes the abnormalities/and findings identified in the factual report and categorizes them for management. This report may contain:

- (a) Opinions by the investigators as to the cause of the accident.
- (b) Conclusions and observations.
- (c) Confidential information.
- (d) Recommendations for corrective measures.
- (e) This report includes the following sections:
  - (1) **Executive Summary:** A brief narrative of the facts involving the accident. Keep this section short. Readers can refer to the factual report if they want more detail.
  - (2) **Other Findings:** Other findings that did not contribute to the accident but, if left uncorrected, could lead to other accidents.
  - (3) **Other Information:** This paragraph can contain opinions by the investigators, conclusions and observations, and confidential information which the team feels in relevant for management=s consideration. (This paragraph is not required).

- (4) **Recommendations:** Recommendations are prevention measures that management may take to prevent similar accidents. Although this is not an absolute requirement, there should be a recommendation for each cause. The recommendations must be reasonable, feasible, relate to the cause(s) of the accident, and allow for definitive closure. Depending upon the scope of impact the recommendations can be implemented by a local unit, the state office or the national office. The team should specify who should implement the recommendations.
  - (5) **Enclosures:** Information that is not contained in the Factual Report, but which the team feels is necessary to support their recommendations. Since this report can be obtained by the public under certain circumstances, do not include anything that is not needed to substantiate recommendations.
- d. **Board of Inquiry**
- 1) Boards of Inquiry are used to evaluate recommendations, determine responsibility, and follow up on serious accident investigations. After determining responsibility for an incident, Boards of Inquiry can make recommendations ranging from no action taken to termination of employment.
  - 2) Only the Agency Director or Deputy Director may appoint a Board of Inquiry.

## E. Fire Investigation & Trespass

### 1. Introduction

- a. Agency policy requires any wildfire to be investigated to determine cause, origin, and responsibility. Accurate fire cause determination is a necessary first step in a successful fire investigation. Proper investigative procedures, which occur concurrent with initial attack, more accurately pinpoint fire causes and can preserve valuable evidence that would otherwise be destroyed by suppression activities.
- b. The agency or its employees must pursue cost recovery or document why cost recovery is not initiated for all human caused fires on public and/or other lands under protection agreement.
- c. Fire trespass refers to the occurrence of unauthorized fire on agency-protected lands where the source of ignition is tied to some type of human activity.

## 2. Policy

- a. The agency must pursue cost recovery, or document why cost recovery is not required, for all human-caused fires on public lands. The agency will also pursue cost recovery for other lands under fire protection agreement where the agency is not reimbursed for suppression actions, if so stipulated in the agreement.
- b. For all human-caused fires where liability can be determined, trespass actions are to be taken to recover cost of suppression activities, land rehabilitation, and damages to the resource and improvements. Only fires started by natural causes will not be considered for trespass and related cost recovery.
- c. The determination whether to proceed with trespass action must be made on "incident facts," not on "cost or ability to pay." Trespass collection is both a cost recovery and a deterrent to prevent future damage to public land. Therefore, it is prudent to pursue collection of costs, no matter how small. This determination must be documented and filed in the unit office's official fire report file.
- d. The Agency Administrator has the responsibility to bill for the total cost of the fire and authority to accept only full payment. On the recommendation of the State/Regional Director, the Solicitor/Office of General Council may compromise claims of the United States, up to the monetary limits (\$100,000) established by law 31 U.S.C. 3711[a], 4 CFR 103-104, and 205 DM 7.1 and 7.2. The Solicitor/Office of General Council will refer suspension or termination of the amount, in excess of \$100,000, exclusive of interest, penalties, or administrative charges, to the Department of Justice.
- e. Unless specified otherwise in an approved protection agreement, the agency that has the land management jurisdiction/administration role is accountable for determining the cause of ignition, responsible party, and for obtaining all billable costs, performing the billing, collection, and distribution of the collected funds. The agency with the fire protection responsibility role must provide the initial determination of cause to the agency with the land management jurisdiction/administration role. The agency providing fire protection shall provide a detailed report of suppression costs that will allow the jurisdictional agency to proceed with trespass procedures in a timely manner.
- f. Each agency's role in fire trespass billing and collection must be specifically defined in the relevant Cooperative Fire Protection Agreement. The billing and collection process for federal agencies is:

- 1) For example, a federal agency fire occurs on another federal agency's land and is determined to be a trespass fire. BLM provides assistance, and supplies costs of that assistance to the federal agency with jurisdictional responsibility for trespass billing. The responsible federal agency bills and collects trespass, and BLM then bills the federal agency and is reimbursed for its share of the collection.
- 2) For example, where BLM administered land is protected by a state agency, the billing and collection process is:
  - (a) The state bills BLM for their suppression costs. The BLM will pursue trespass action for all costs, suppression, rehabilitation, and damages, and deposits the collection per BLM's trespass guidance.
- g. All fires must be thoroughly investigated to determine cause. Initiation of cause determination must be started with notification of an incident. The initial attack incident commander and the initial attack forces are responsible for initiating fire cause determination and documenting observations starting with their travel to the fire. If probable cause indicates human involvement, an individual trained in fire cause determination should be dispatched to the fire.
- h. *Agency Reference*
  - 1) **BLM** – 9238-1
  - 2) **FWS** – *Fire Management Handbook*
  - 3) **NPS** – *RM-18, Chapter 8 and RM-9*
  - 4) **USFS** – *FSM-5130 and FSM-5300*