Chapter 18
Reviews and Investigations

Introduction

Reviews and investigations are used by wildland fire and aviation managers to assess and improve the effectiveness and safety of organizational operations. Information (other than factual) derived from safety reviews and accident investigations should only be used by agencies for accident prevention and safety purposes.

Multiagency Cooperation

Many reviews and investigations involve cooperation between Federal, State, County, and Municipal Agencies. To comply with each agency’s authorities, policies, and responsibilities, a multiagency review or investigation may be necessary. A multiagency Delegation of Authority should be provided to outline roles, responsibilities, and expected deliverables.

The Team Leader or delegating official(s) should establish cooperative relationships with the other agencies involved in the review or investigation to ensure policies and responsibilities are met. This may involve negotiations, cooperative agreements, and coordination with the agency Designated Agency Safety and Health Official (DASHO) or the agency official who signs the Delegation of Authority.

Federal Interagency Investigations

Close calls or accidents that involve interagency (USFS or DOI) personnel and/or jurisdiction (e.g., USFS firefighter injured on FWS jurisdictional wildland fire and vice versa) shall be reviewed or investigated cooperatively and conducted at the appropriate level as outlined in this chapter.

Agency Administrators will ensure that affected agencies are involved throughout the review/investigation process.

When an incident does not meet the serious accident criteria, the affected Agency Administrators should jointly decide what type and level of investigation will be conducted based on agency processes outlined in this chapter. Questions should be addressed to your agency Wildland Fire Safety Program Manager.

Reviews

Reviews are methodical examinations of system elements such as program management, safety, leadership, operations, preparedness, training, staffing, business practices, budget, cost containment, planning, and interagency or intra-agency cooperation and coordination. Reviews do not have to be associated with a specific incident. The purpose of a review is to ensure the effectiveness of the
system element being reviewed, and to identify deficiencies and recommend specific corrective actions. Established review types are described below and include:

- Preparedness Reviews
- After Action Reviews
- Fire and Aviation Safety Team Reviews
- Safety Assistance Team Visits
- Aviation Safety and Technical Assistance Team Reviews
- Large Fire Cost Reviews (FS)
- Significant Wildland Fire Reviews (DOI)
- Individual Fire Reviews
- Lessons Learned Reviews
- Rapid Lesson Sharing
- Declared Wildfire Reviews
- Notice of Air Quality Exceedance (NOV) Reviews

### Review Types and Requirements

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**Preparedness Reviews**
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. Preparedness Reviews identify organizational, operational, procedural, personnel, or equipment deficiencies, and recommend specific corrective actions. Interagency Preparedness Review Checklists can be found at [https://www.nifc.gov/policies/pol_ref_intgncy_prepcheck.html](https://www.nifc.gov/policies/pol_ref_intgncy_prepcheck.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?
- Why it happened?
- What can be done the next time?

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

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:

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

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.

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.

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

FAST reports will include 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.

FAST reports should be submitted to the GACG with a copy to the Federal Fire and Aviation Safety Team (FFAST) chair within 30 days. See Appendix L for sample FAST Delegation of Authority.

Safety Assistance Team (SAT) Visits

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

The goals of a Safety Assistance Team are to:

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

Direct intervention, circumventing normal chain of command, is authorized when necessary; however, the overall objective is to create a work environment where the normal operating procedures are responsible for safe practices.
Aviation Safety and Technical Assistance Team (ASTAT) Reviews
Refer to Chapter 16 for ASTAT information.

Large Fire Cost Reviews (FS)
A Large Fire Cost Review may be conducted at the discretion of the Washington Office, at the request of the Regional Office, or when requested by multi-jurisdictional cooperators.

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

A review may also be conducted when an incident (single fire or fire complex) meets or is expected to meet one or more of the following criteria:
• There are significant political, social, natural resource, complexity, size, or policy issues;
• There are significant and complicated cost-share or multi-jurisdictional issues; or
• The affected agency/Agency Administrator requests a review.

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

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

BLM – The Assistant Director, Fire and Aviation will initiate, facilitate, and provide oversight for the SWFR process. Upon determination of the need for a SWFR, the AD will coordinate with the appropriate state director and assemble a SWFR team, provide a Delegation of Authority, and initiate the SWFR using direction found at http://web.blm.gov/internal/fire/budget/Reports/Report_Menu_new.htm. The AD will provide briefings to the Bureau Director, as appropriate.

NPS – Significant Wildland Fire Reviews (SWFR) will be conducted at Management discretion and the Delegating Official may be at the Local, Regional, or National level. See the Agency Administrator and Fire Management Performance Tables in Chapter 3 and the “Review Types and Requirements” table for further information.

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Individual Fire Reviews

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

Lessons Learned Reviews (LLRs)

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

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

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

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

The LLR facilitator will convene the participants and:

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

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

Rapid Lesson Sharing (RLS)

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

To submit or view RLS documents, go to
https://www.wildfirelessons.net/resources/rapidlessonssharing.

Declared Wildfire Reviews

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

- Interagency Prescribed Fire Planning and Implementation Procedures
  Reference Guide (PMS 484)
  - BLM – Refer to Fuels Management Manual 9214 and Handbook 9214-
    1, Chapter 5.
  - NPS – Refer to RM-18, Chapter 7 and 17.
  - FS – Refer to FSM 5140.
Declared Wildfire Reviews will be submitted to the Wildland Fire Lessons Learned Center (LLC) by the agency fuels program lead. Submissions should be sent to llcdocsubmit@gmail.com.

**Notice of Air Quality Exceedance (NOV) Reviews**

A Notice of Air Quality Exceedance (NOV) Review supports understanding of the planning, decisions, and actions taken that contributed to the NOV. [https://www.nwcg.gov/publications/484](https://www.nwcg.gov/publications/484)

**Investigations**

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

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

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

- **Serious Wildland Fire Accident** – An unplanned event or series of events that resulted in death, injury, occupational illness, or damage to or loss of equipment or property. For wildland fire operations, a serious accident involves any of the following:
  - One or more fatalities;
  - Three or more personnel who are inpatient hospitalized as a direct result of or in support of wildland fire operations;
  - Property or equipment damage of $250,000 or more; and/or
  - Consequences that the Designated Agency Safety and Health Official (DASHO) judges to warrant a Serious Accident Investigation.

- **Wildland Fire Accident** – An unplanned event or series of events that resulted in injury, occupational illness, or damage to or loss of equipment or property to a lesser degree than defined in “Serious Wildland Fire Accident.”

- **Near-miss** – An unplanned event or series of events that could have resulted in death, injury, occupational illness, or damage to or loss of equipment or property but did not.

- **Entrapment** – A situation where personnel are unexpectedly caught in a fire behavior-related, life-threatening position where planned escape routes or safety zones are absent, inadequate, or compromised. Entrapment may or may not include deployment of a fire shelter for its intended purpose.
Entrapment may result in a serious wildland fire accident, a wildland fire accident, or a near-miss.

- **Burnover** – An event in which a fire moves through a location or overtakes personnel or equipment where there is no opportunity to utilize escape routes and safety zones, often resulting in personal injury or equipment damage.
- **Fire Shelter Deployment** – The removing of a fire shelter from its case and unfolding it to use as protection against heat, smoke and burning embers.
- **Fire Trespass** – The occurrence of unauthorized fire on agency-protected lands where the source of ignition is tied to some type of human activity.

### Investigation Types and Requirements

<table>
<thead>
<tr>
<th>Wildland Fire Event</th>
<th>Investigation Type</th>
<th>Management Level Requiring Notification¹</th>
<th>Management level that determines review type and authorizes review²</th>
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<tbody>
<tr>
<td>Serious Wildland Fire Accident</td>
<td>Serious Accident Investigation (SAI)</td>
<td>FS – Facilitated Learning Analysis (FLA) process or the Coordinated Response Protocol (CRP) for FS employee fatality events.</td>
<td>National</td>
</tr>
<tr>
<td>Wildland Fire Accident</td>
<td>Accident Investigation (AI)</td>
<td>BLM/NPS – National FS/FWS – Management Discretion</td>
<td>Region/State/Local</td>
</tr>
<tr>
<td>Entrapment/ Burnover</td>
<td>SAI, AI, LLR, depending on severity</td>
<td>National</td>
<td>National/Regional/ State</td>
</tr>
<tr>
<td>Fire Shelter Deployment</td>
<td>SAI, AI, LLR, depending on severity</td>
<td>National</td>
<td>National/Regional/ State</td>
</tr>
<tr>
<td>Near-miss</td>
<td>LLR, AAR</td>
<td>Management Discretion</td>
<td>Region/State/Local</td>
</tr>
<tr>
<td>Fire Trespass</td>
<td>Fire Cause Determination and Trespass Investigation</td>
<td>Local</td>
<td>Local</td>
</tr>
</tbody>
</table>

¹In the event that a wildland fire entrapment or fatality occurs, immediate notification to NICC is required. A *Wildland Fire Entrapment/Fatality Initial Report* (PMS 405-1) should be completed and mailed to NICC electronically or by fax machine within 24 hours.
• **BLM** – BLM accidents that involve fire and aviation employees or equipment will be investigated according to the requirements stated in this chapter. Investigations will occur regardless of land jurisdiction. Facts will be collected, causes (organizational factors, local workplace factors, unsafe acts) identified, and an accident investigation report produced. The report will include recommended corrective actions and control measures. Report issuance and follow-up will be through established command channels. BLM Agency Administrators may jointly delegate authority to investigate accidents in cases of mixed jurisdiction or employee involvement. Joint delegations must ensure that BLM investigation requirements are met. The Facilitated Learning Analysis (FLA) process may be used as a supplemental element to required BLM accident investigation processes.

• **FS** – Forest Service Line Officers are the deciding officials regarding what type of accident investigation or analysis method is to be used for accidents or near misses occurring under Forest Service jurisdiction.

### Investigation Processes

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

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

• **Management of Involved Personnel** – Treatment, transport, and follow-up care must be immediately arranged for injured and involved personnel. The Agency Administrator or delegate should develop a roster of involved personnel and supervisors and ensure they are available for interviews by the investigation team. The Agency Administrator should consider relieving involved supervisors from fireline duty until the preliminary investigation has been completed. Attempt to collect initial statements from the involved individuals prior to a Critical Incident Stress Management (CISM) session.

• **Delegation of Authority** – A Delegation of Authority shall be issued to the investigation team leader. The Delegation of Authority will outline roles, responsibilities, and expected deliverables. Delegation of Authority templates are available at https://www.nifc.gov/safety/safety_reptsInvest.html.

• **Critical Incident Stress Management (CISM)** – CISM is the responsibility of local Agency Administrators, who should have individuals pre-identified for critical incident stress debriefings. Also refer to the Agency Administrator’s Guide to Critical Incident Management (PMS 926), available at https://www.nwcg.gov/publications/926. Individuals or teams...
may be available through Employee Assistance Programs (EAPs) or Geographic Area Coordination Centers (GACCs).

Wildland Fire Serious Accident Investigation (SAI) Process

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

- **BLM/FWS – The Interagency Serious Accident Investigation Guide** establishes core direction for BLM, FWS, and interagency serious accident investigations (exceptions for aviation accidents are stated in the guide). It provides serious accident investigation teams a standardized and comprehensive process for conducting serious accident investigations. The guide is available at https://www.nifc.gov/safety/safety_reportsInvest.html. Serious accident investigation reports will be completed, routed, and disseminated according to processes established in the guide. Reports may contain information supplemental to the requirements of the guide if it augments the BLM/FWS’s ability to learn and to develop further improvements. The guide may be used entirely or in part for accidents that do not meet the serious accident definition.

- **FS – The Forest Service’s response to serious accidents are the Facilitated Learning Analysis (FLA) which may be used for unintended outcomes of all types, and the Coordinated Response Protocol (CRP) reserved for FS employee fatality events. Both processes are explicitly non-punitive and must have a delegation signed by a line officer so stating. FS Aviation accidents and incidents utilize the FS Aviation Mishap Investigation process. Current versions of the FLA and CRP guides can be found on the Wildland Fire Lessons Learned Center’s website (https://www.wildfirelessons.net/home).**

Fire Director Responsibilities

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

- Ensure the agency safety manager and Designated Agency Safety and Health Official (DASHO) have been notified;
- Immediately appoint, authorize (through Delegation of Authority), and deploy an accident investigation team;
- Provide resources and procedures adequate to meet the team’s needs;
- Receive the factual and management evaluation reports and take action to accept or reject recommendations;
- Forward investigation findings, recommendations, and corrective action plan to the DASHO (the agency safety office is the “office or record” for reports);
• Convene an accident review board/board of review (if deemed necessary) to evaluate the adequacy of the factual and management reports and suggest corrective actions;
• Ensure a corrective action plan is developed, incorporating management initiatives established to address accident causal factors; and
• Ensure Serious Accident Investigations remain independent of other investigations.

**Agency Administrator Responsibilities**

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

**Notification**
Agency reporting requirements will 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) through the local dispatch center and GACC. Provide a Wildland Fire Entrapment/Fatality Initial Report (PMS 405-1) directly to NICC within 24 hours;
• Agency headquarters; and
• OSHA will be notified according to agency policy when an employee is killed on the job or suffers a work-related hospitalization, amputation, or loss of an eye. [https://www.osha.gov/report.html](https://www.osha.gov/report.html)
  • A fatality must be reported within **8 hours**.
  • An in-patient hospitalization, amputation, or eye loss must be reported within **24 hours**.

Notification to the respective agency’s fire national safety/risk management lead is required.
Designating the Investigation Team Lead

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

The Memorandum of Agreement (MOA) between Department of Agriculture Forest Service and Department of Interior augments and provides clarification to the 1995 MOU for investigation type and team lead/deputy team lead/interagency representative designation. The MOA also provides an interagency template for joint Delegation of Authority. The MOA is available at https://www.nifc.gov/safety/safety_reptsInvest.html.

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

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

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

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

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

- **Team Leader (Core Team Member)**
  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 to the Designated Agency Safety and Health Official (DASHO).

- **Chief Investigator (Core Team Member)**
  A qualified accident investigation specialist is responsible for the direct management of all investigation activities. The chief investigator reports to the team leader.

- **Accident Investigation Advisor/Safety Manager (Core Team Member)**
  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/safety manager also works to ensure strategic management issues are examined. Delegating Officials or their designee may, at their discretion, fill this position with a trained and qualified NWCG Safety Officer, Line (SOFR), Safety Officer, Type 2 (SOF2), or Safety Officer, Type 1 (SOF1).
• **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. They will assist as assigned by the Team Leader and will provide a perspective from outside the agency.

• **Technical Specialists**
  Personnel who are qualified and experienced in specialized occupations, activities, skills, and equipment, addressing specific technical issues such as specialized fire equipment, weather, and fire behavior.

• **Public Affairs Officer**
  For investigations with high public visibility and significant news media interest, a public affairs officer (PAO) should be considered a part of the team. The PAO should develop a communications plan for the team, be a designated point of contact for news media, and oversee all aspects of internal and external communications. Ideally, the PAO should be qualified as a Type 1 or Type 2 public information officer and be familiar with SAI team organization and function.
  ○ **BLM** – All media related documents (news releases, talking points, etc.) should be cleared through NIFC Public Affairs prior to external release.

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

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

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

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

• **24-Hour Preliminary Report** – This report contains known basic facts about the accident. It will be completed and forwarded by the responsible Agency Administrator to the SAI delegating official. Names of injured personnel will not be included in this report. Personnel may be referenced by position.

• **72-Hour Expanded Report** – This report provides additional factual information, if available. The information may include the number of victims and severity of injuries. The focus should be on information that may have immediate impact on future accident prevention. This report will be completed and forwarded by the SAI team to the SAI delegating official. Names of injured personnel will not be included in this report. Personnel may be referenced by position.
Within 45 days of the incident, a final report consisting of a Factual Report (FR) and a Management Evaluation Report (MER) will be produced by the investigation team to document facts, findings, and recommendations and forwarded to the Designated Agency Safety and Health Official (DASHO) through the agency Fire Director(s).

- **Factual Report** – This report contains a brief summary or background of the event, and facts based only on examination of technical and procedural issues related to equipment and tactical fire operations. It does not contain opinions, conclusions, or recommendations. Names of injured personnel are not to be included in this report (reference them by position). Post-accident actions should be included in this report (emergency response attribute to survival of a victim, etc.). Factual Reports will be submitted to Wildland Fire Lessons Learned Center (LLC) by the respective agency’s fire safety/risk management leads. E-mail: llcdocsubmit@gmail.com.

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


**Accident Review Board/Board of Review**

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

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

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

Accident investigations and reports should be commensurate with the complexity and/or severity of the accident. Investigations and reports may range...
CHAPTER 18 REVIEWS AND INVESTIGATIONS

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

**Notification**
When an accident occurs, agency notification requirements will be followed.
Notification requirements universally include:
- Local dispatch center
- Unit Fire Management Officer
- Agency Administrator
- OSHA (refer to Chapter 7 for reporting criteria)

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

**Investigation Methodology**
Accident Investigations (AI) are detailed and methodical efforts to collect and
interpret facts related to an accident and to provide specific recommendations to
prevent recurrence. The AI should include the following actions:
- Visual inspection of involved site, equipment, or material;
- Detailed analysis of equipment or material, as necessary;
- Interviews with involved personnel, witnesses, managers, and other
  pertinent persons;
- Collection and review of written statements;
- Review of records, archives, plans, policies, procedures, and other pertinent
documents;
- Consideration of environmental, equipment, material, procedural, and
  human factors as they related to the incident; and
- Development of specific findings and related recommendations for the AI
  report.

**Accident Investigation 24- and 72-Hour Reports**
24- and 72-hour reports should be completed when a formal AI will be
conducted. Final 24- and 72-hour reports will be approved by the AI delegating
official, then sent to the agency fire safety/risk management lead who will
provide a copy to the Wildland Fire Lessons Learned Center (LLC). E-mail:
llcdocsubmit@gmail.com.
- **24-Hour Preliminary Report** – This report contains known basic facts
  about the accident. It will be completed and forwarded by the responsible
Agency Administrator to the next higher level (e.g., District Manager forwards to State Director). Names of injured personnel will not be included in this report. Personnel may be referenced by position.

- **72-Hour Expanded Report** – This report provides additional factual information, if available. The information may include the number of victims and severity of injuries. The focus should be on information that may have immediate impact on future accident prevention. This report will be completed and forwarded by the AI team to the AI delegating official. Names of injured personnel will not be included in this report. Personnel may be referenced by position.

**Accident Investigation Final Report**

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

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

**Accident Investigation Report Standard Contents**

- **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. Names of injured personnel or personnel involved in the accident are not to be included in this report (reference them by position).

- **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 will contain who, what, and where.

- **Investigation Process** – A brief narrative of actions taken by the investigation team. This narrative should include investigation team membership, Delegation of Authority information (from who and contents, include a copy as an appendix), investigative actions and timeline (when the team conducted interviews, inspections, site visits, etc.), and if other sources were consulted (i.e., professional accident reconstruction experts, equipment manufacturers, etc.). This section should also address if environmental, equipment, material, procedural, and human factors were present, and state how findings/recommendations were developed.

- **Findings/Recommendations**
  - **Findings** – Developed from the factual information. Each finding is a single event or condition. Each finding is an essential step in the accident sequence, but each finding is not necessarily causal or
contributing, and each finding may not have an associated
recommendation. Findings should only include information necessary
to explain the specific event or condition. Findings must be
substantiated by the factual data. Findings should not include opinion
or speculation.

○ Discussion – This provides explanation or information pertinent to a
specific finding.

○ Recommendations – Recommendations are proposed actions intended
to prevent similar accidents. Recommendations should be directly
related to findings, should not contain opinion or speculation, and when
appropriate, should identify the specific organization responsible for
completing the recommended action. Recommendations will be
evaluated and may be incorporated into future operational direction
through established processes.

• Conclusions and Observations – Investigation team’s opinions and
inferences, and “lessons learned” may be captured in the section. This
section is not required.

• Reference Materials

○ Maps/Photographs/Illustrations – Graphic information used to
document and visually portray facts.

○ Appendices – Reference materials (e.g., fire behavior analysis,
equipment maintenance reports, agreements).

An AI Delegation of Authority template, AI report template and examples of AI
reports can be found at the NIFC Safety website

Fire Cause Determination and Trespass Investigation

Introduction
Agency policy requires determination of cause, origin, and responsibility for all
wildfires. Accurate fire cause determination is a critical first step for a
successful fire investigation and for targeting fire prevention efforts. 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. 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.

○ BIA – For guidance regarding origin and cause determination on lands
under the jurisdiction of the Bureau of Indian Affairs, see 90 IAM 1.4C (10)

Policy
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.

For all human-caused fires where negligence 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.

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. 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.


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 Counsel 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 Counsel 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.

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.

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:

- 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.

- For example, where BLM administered land is protected by a state agency, the billing and collection process is:
  - 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.

Initiation of fire cause determination must be started with notification of an incident. Initial attack dispatchers are responsible for capturing all pertinent information when the fire is reported and throughout the 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 qualified in fire cause determination (INVF or cooperator equivalent) should be dispatched to the fire.

Agency references:
- BLM – 9238-1
- NPS – RM-18, Chapter 6 and RM-9
- FWS – Fire Management Handbook
- FS – FSM 5130 and FSM 5300
- BIA – 53 IAM Chapter 7-H and 90IAM 1.4C (10)

Related Policy Documents

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

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<td>DOI</td>
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<td>BLM</td>
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<td>FSM-5100 and FSH-6709.11, FSM 5720 (Aviation), FSM 5130 (Ground Operations), FSM 6730 (Specific policy), FSH 6709.12 Chapter 30 (General guidance), and most recent Accident Investigation Guide, for specific guidance.</td>
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