Chapter 18
Reviews and Investigations

Introduction

When an accident occurs, each agency will meet their agency-specific accident investigation reporting requirements (e.g., DOI Safety Management Information System (SMIS) or USDA eSafety).

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 Review
- After Action Review
- Fire and Aviation Safety Team Review
- Safety Assistance Team Visit
- Aviation Safety and Technical Assistance Team Review
- Continuous Improvement Assessment (FS)
- Significant Wildland Fire Review (DOI)
- Individual Fire Review
- Lessons Learned Review
- Rapid Lesson Sharing
- Declared Wildfire Review
- Notice of Air Quality Exceedance (NOV) Review

### Review Types and Requirements

<table>
<thead>
<tr>
<th>Type</th>
<th>When Conducted</th>
<th>Delegating or Authorizing Official</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparedness Review</td>
<td>Annually, or management discretion</td>
<td>Local/State/Region/National</td>
</tr>
<tr>
<td>After Action Review</td>
<td>Management discretion</td>
<td>N/A</td>
</tr>
<tr>
<td>Fire and Aviation Safety Team Review</td>
<td>As fire activity dictates</td>
<td>Geographic Area Coordinating Group</td>
</tr>
<tr>
<td>Safety Assistance Team Visit</td>
<td>As fire activity dictates</td>
<td>Local/State/Region/National</td>
</tr>
<tr>
<td>Aviation Safety and Technical Assistance Team Review</td>
<td>As aviation activity dictates</td>
<td>State/Regional Aviation Manager or MACG</td>
</tr>
<tr>
<td>Continuous Improvement Assessments (FS)</td>
<td>Washington Office discretion</td>
<td>Washington Office</td>
</tr>
<tr>
<td>Significant Wildland Fire Review (DOI)</td>
<td>Refer to OWF Policy Memorandum 2016-013</td>
<td>Agency Director, Agency Administrator or individual bureau direction</td>
</tr>
<tr>
<td>Individual Fire Review</td>
<td>Management discretion</td>
<td>Local/State/Region/National</td>
</tr>
<tr>
<td>Lessons Learned Review</td>
<td>Management discretion</td>
<td>Local/State/Region/National</td>
</tr>
<tr>
<td><strong>NPS/FS – FLA may be used</strong></td>
<td>Management discretion</td>
<td>Local/State/Region/National</td>
</tr>
<tr>
<td>Rapid Lesson Sharing</td>
<td>Management discretion</td>
<td>N/A</td>
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**Preparedness Review**

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/standards](https://www.nifc.gov/standards).

**After Action Review (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.nwcg.gov/wfldp/toolbox/aars](https://www.nwcg.gov/wfldp/toolbox/aars).
Fire and Aviation Safety Team (FAST) Review
A fire and aviation safety team assists 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) Visit
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) Review

Refer to chapter 16 for ASTAT information.

Continuous Improvement Assessment (FS)

The Washington Office, Director of Fire and Aviation Management, will select a subset of fires for review based on complexity and national significance ensuring the selected fires provide a cross sectional representation of cost, size, and oversight complexity. The reviews will be multi-tiered and foster a working environment that will improve the decision-making process and develop a capacity for organizational learning. If a site visit is required, the Washington Office, Deputy Chief, State and Private Forestry, will notify the regional forester. The National review process can include real time analysis of fire information, informal discussions with fire managers and regional personnel, and/or site visits by a cadre of specialists to individual incidents and or geographic areas. For more detail, see FSM 5139.2.

Significant Wildland Fire Review (DOI)

A Significant Wildland Fire Review (SWFR) 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. It is the agency’s responsibility to advise the appropriate individual(s) within their agency of the need for a SWFR. 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 SWFR Team authorizing the implementation of a review. When possible, SWFRs should be conducted when the incident management team is still in place to allow prompt access to records and incident personnel. For more information, see https://www.doi.gov/sites/doi.gov/files/elips/documents/owf_policy_memo_2016-13_criteria_for_review_wildfire_incidents.pdf.

- **BLM** – The assistant director, fire and aviation (AD) will initiate, facilitate, and provide oversight for the SWFR process when BLM is the lead DOI agency. 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 the BLM guidance found at https://web.blm.gov/internal/fire/budget/Reference_docs/reviews/reviews.html. The AD will provide briefings to the bureau director, as appropriate.

- **NPS** – Significant Wildland Fire Review (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.
**Individual Fire Review**

An Individual Fire Review may also be conducted on incidents that do not rise to the level of a Significant Wildland Fire Review. 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.

- **BLM** – Any fire that burns more than 50,000 acres of sagebrush rangelands will be evaluated by the Fire and Aviation Directorate to determine if an Individual Fire Review is warranted. If an individual fire review is warranted, the Assistant Director will organize a review and provide oversight for the review team. Individual fire reviews may also be conducted when there are significant natural resource concerns; or there are policy, political, social, or economic concerns, including significant impacts to infrastructure and energy related corridors; or there are significant and complicated cost-share or multi-jurisdictional issues.

**Lessons Learned Reviews (LLRs)**

The purpose of a LLR is to explore, investigate, or review unintended outcomes or near misses in order to learn from the event and prevent future occurrences. In order to learn from these events, 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 other agency-specific accident investigation reporting requirements (e.g., DOI Safety Management Information System (SMIS) or USDA eSafety).

- **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 https://www.wildfirelessons.net/viewdocument/facilitated-learning-analysis-implement-1. 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 processes such as After Action Reviews which 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/viewdocument/facilitated-learning-analysis-imple-1).

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;
- While not required, 24- and 72-hour reports may be produced, and are a valuable element of the many learning focused products that LLR teams may produce; 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). https://www.wildfirelessons.net/aboutus.

**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/rapidlessonsharing.

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)
  - 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

Investigations

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

In addition to agency-specific accident investigation reporting requirements (SMIS/eSafety), 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.

Accident investigation types and final reports should be commensurate with the complexity and/or severity of the accident and focus on organizational learning and the prevention of reoccurrence. Investigations and reports may range from large investigation teams producing comprehensive accident investigation reports to first-level supervisors initiating investigations and reporting injury/property damage in their agency-specific reporting systems (SMIS/eSafety). Final accident investigation reports may range between agency-specific accident reports, small one-page Rapid Lessons Sharing, simple or complex Lessons Learned Review reports, to extensive investigation reports that follow the same format as a serious accident.
# 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>
</tr>
</thead>
</table>
| Serious Wildland Fire Accident | Serious Accident Investigation (SAI)  
**FS – Facilitated Learning Analysis (FLA) process or the Coordinated Response Protocol (CRP) for FS employee fatality events.** | National                               | National                                                           |
| Wildland Fire Accident     | SAI, Accident Investigation (AI), Lessons Learned Review (LLR), Rapid Lesson Sharing (RLS), depending on severity. This is in addition to agency-specific accident report (e.g., SMIS/cSafety)  
**NPS/FS – FLA may be used** | **BLM/NPS–National**                    | **Region/State/Local**                                               |
| Entrapment/ Burnover       | SAI, AI, LLR, depending on severity                                                 | National                               | National/Regional/State                                             |
| Fire Shelter Deployment    | SAI, AI, LLR, depending on severity                                                 | National                               | National/Regional/State                                             |
| Near-miss                  | LLR, AAR                                                                            | Management Discretion                  | Region/State/Local                                                  |
| Fire Trespass              | Fire Cause Determination and Trespass Investigation                                   | Local                                  | Local                                                              |

¹In the event that a wildland fire entrapment or fatality occurs, immediate notification to NICC is required. A *Wildland Fire Fatality and Entrapment Initial Report* (PMS 405-1) should be submitted to NICC within 24 hours. Submit this report even if some data is missing. The PMS 405-1 is located at https://www.nwcg.gov/publications/405-1.

²Higher level management may exercise their authority to determine the type of review or investigation.
• **BLM** – When a BLM employee is involved, investigations will occur regardless of land jurisdiction. BLM agency administrators may jointly delegate authority to investigate accidents in cases of mixed jurisdiction or employee involvement. Joint delegations must ensure that BLM accident investigation reporting requirements are met.

• **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 from agency fire safety program managers.

- **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 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 and focus on organizational learning and the prevention of reoccurrence. Investigations and reports may range from large investigation teams producing comprehensive reports to first-level supervisors initiating investigations and reporting injury/property damage in agency reporting systems (e.g., SMIS/eSafety). Final accident investigation reports may range between agency-specific accident reports, small one-page Rapid Lessons Sharing, simple or complex Lessons Learned Review reports, to extensive investigation reports that follow the same format as a serious accident.

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 may 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 an 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 approximately 45 days of the accident, a final report 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: llcdocsubmit@gmail.com.

**Accident Investigation Report Standard Contents**

Accident investigation reports will vary in length, format and complexity. Each report should be commensurate to the complexity of the incident and focus on organizational learning and the prevention of reoccurrence. The following list is common or standard contents often found in accident investigation reports.

• **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 may 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.

• **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).

Examples of AI reports are available from agency fire safety program managers.

**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.nps.gov/subjects/fire/upload/interagency-serious-accident-investigation-guide.pdf. 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 Fatality and Entrapment 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 from agency fire safety program managers.

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 SAIT members are required to take the Interagency Serious Accident Investigation Course 1112-05 prior to serious accident investigation assignment. This training is required every 5 years to maintain currency unless the Core SAIT member has completed an SAIT assignment within the last 5 years.

- **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.

**SAI Final Report**
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 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.

**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.

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 protecting the origin area and 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.

**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.

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 costs.
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 a relevant cooperative fire protection agreement between federal and
state cooperators. Federal agencies will follow established procedures for each
agency and utilize the IPAC system to transfer funds.

Agency references:
• **BLM** – 9238-1
• **NPS** – RM-18, chapter 6 and RM-9
• **FWS** – 621 FW 1
• **FS** – FSM 5130 and FSM 5300
• **BIA** – 53 IAM chapter 7-H and 90IAM 1.4C (10)
• **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)
• **BIA** – For guidance regarding fire trespass and damage to Indian Forest
Products on lands under the jurisdiction of the Bureau of Indian Affairs see
53IAM 7-H Indian Forest Management Handbook – Forest Trespass,
available at
https://www.bia.gov/sites/bia.gov/files/assets/bia/ots/dfwfm/pdf/idc-

**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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<tr>
<td>BLM</td>
<td>DOI Occupational Safety and Health Program – Field Manual, 1112-1</td>
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<td>NPS</td>
<td>DO/RM-50B, RM-18 chapter 3</td>
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**Interagency**
