

Chapter 18 Reviews and Investigations

3 Introduction

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

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

9 Information (other than factual) derived from safety reviews and accident
10 investigations should only be used by agencies for accident prevention and
11 safety purposes.

12 Multiagency Cooperation

13 Many reviews and investigations involve cooperation between federal, state,
14 county, and municipal agencies. To comply with each agency's authorities,
15 policies, and responsibilities, a multiagency review or investigation may be
16 necessary. A multiagency Delegation of Authority should be provided to outline
17 roles, responsibilities, and expected deliverables.

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

24 Federal Interagency Investigations

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

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

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

36 Reviews

37 Reviews are methodical examinations of system elements such as program
38 management, safety, leadership, operations, preparedness, training, staffing,

1 business practices, budget, cost containment, planning, and interagency or intra-
 2 agency cooperation and coordination. Reviews do not have to be associated with
 3 a specific incident. The purpose of a review is to ensure the effectiveness of the
 4 system element being reviewed, and to identify deficiencies and recommend
 5 specific corrective actions. Established review types are described below and
 6 include:

- 7 • Preparedness Reviews
- 8 • After Action Reviews
- 9 • Fire and Aviation Safety Team Reviews
- 10 • Safety Assistance Team Visits
- 11 • Aviation Safety and Technical Assistance Team Reviews
- 12 • Large Fire Cost Reviews (FS)
- 13 • Significant Wildland Fire Reviews (DOI)
- 14 • Individual Fire Reviews
- 15 • Lessons Learned Reviews
- 16 • Rapid Lesson Sharing
- 17 • Declared Wildfire Reviews
- 18 • Notice of Air Quality Exceedance (NOV) Reviews

19 **Review Types and Requirements**

Type	When Conducted	Delegating or Authorizing Official
Preparedness Review	Annually, or management discretion	Local/State/Region/National
After Action Review	Management discretion	N/A
Fire and Aviation Safety Team Review	As fire activity dictates	Geographic Area Coordinating Group
Safety Assistance Team Visit	As fire activity dictates	Local/State/Region/National
Aviation Safety and Technical Assistance Team Review	As aviation activity dictates	State/Regional Aviation Manager or MACG
Large Fire Cost Review (FS)	Washington Office discretion	Washington Office
Significant Wildland Fire Review (DOI)	Refer to OWF Policy Memorandum 2016-013	Agency Director, Agency Administrator or individual bureau direction
Individual Fire Review	Management discretion	Local/State/Region/National

Type	When Conducted	Delegating or Authorizing Official
Lessons Learned Review • <i>NPS/FS – FLA may be used</i>	Management discretion	Local/State/Region/ National
Rapid Lesson Sharing	Management discretion	N/A
Declared Wildfire Review	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)
Notice of Air Quality Exceedance (NOV) Review	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)	See <i>Interagency Prescribed Fire Planning and Implementation Procedures Guide</i> (PMS 484)

1 Preparedness Reviews

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

5 Preparedness Reviews identify organizational, operational, procedural,
6 personnel, or equipment deficiencies, and recommend specific corrective
7 actions. Interagency Preparedness Review Checklists can be found at
8 https://www.nifc.gov/policies/pol_ref_intgncy_prepcheck.html.

9 After Action Reviews (AAR)

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

- 15 • What was planned?
- 16 • What actually happened?
- 17 • Why it happened?
- 18 • What can be done the next time?

19 An AAR is a tool that leaders and units can use to get maximum benefit from
20 the experience gained on any incident or project. When possible, the leader of
21 the incident or project should facilitate the AAR process. However, the leader
22 may choose to have another person facilitate the AAR as needed and
23 appropriate. AARs may be conducted at any organizational level. However, all
24 AARs involve the exchange of ideas and observations, and focus on improving
25 proficiency. The AAR should not be utilized as an investigational review. The

1 format can be found in the *Interagency Response Pocket Guide (IRPG)*, PMS
2 461, NFES 1077. Additional AAR information is available at
3 <https://www.nwcg.gov/wfldp/toolbox/aars>.

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

5 Fire and Aviation Safety Teams assist Agency Administrators during periods of
6 high fire activity by assessing policy, rules, regulations, and management
7 oversight relating to operational issues. They can also do the following:

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

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

18 FASTs include a team leader, who is either an Agency Administrator or fire
19 program lead with previous experience as a FAST member, a safety and health
20 manager, and other individuals with a mix of skills from fire and aviation
21 management.

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

24 FAST reports will include an executive summary, purpose, objectives,
25 methods/procedures, findings, recommendations, follow-up actions (immediate,
26 long-term, national issues), and a letter delegating authority for the review.

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

30 **Safety Assistance Team (SAT) Visits**

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

37 The goals of a Safety Assistance Team are to:

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

1 Direct intervention, circumventing normal chain of command, is authorized
2 when necessary; however, the overall objective is to create a work environment
3 where the normal operating procedures are responsible for safe practices.

4 **Aviation Safety and Technical Assistance Team (ASTAT) Reviews**

5 Refer to Chapter 16 for ASTAT information.

6 **Large Fire Cost Reviews (FS)**

7 A Large Fire Cost Review may be conducted at the discretion of the Washington
8 Office, at the request of the Regional Office, or when requested by multi-
9 jurisdictional cooperators.

10 **Significant Wildland Fire Reviews (DOI)**

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

15 A review may also be conducted when an incident (single fire or fire complex)
16 meets or is expected to meet one or more of the following criteria:

- 17 • There are significant political, social, natural resource, complexity, size, or
18 policy issues;
- 19 • There are significant and complicated cost-share or multi-jurisdictional
20 issues; or
- 21 • The affected agency/Agency Administrator requests a review.
 - 22 ○ *BLM – A review may also be conducted when there are significant*
23 *natural resource concerns, including impacts to sagebrush rangelands*
24 *where fires burn more than 50,000 acres; or there are policy, political,*
25 *social, or economic concerns including significant impacts to*
26 *infrastructure and energy related corridors; or there are significant*
27 *and complicated cost-share or multi-jurisdictional issues; or the*
28 *affected line officer(s) requests a review.*

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

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

- 38 • *BLM – The Assistant Director, Fire and Aviation will initiate, facilitate,*
39 *and provide oversight for the SWFR process when BLM is the lead DOI*
40 *agency. Upon determination of the need for a SWFR, the AD will*
41 *coordinate with the appropriate state director and assemble a SWFR team,*
42 *provide a Delegation of Authority, and initiate the SWFR using direction*

- 1 found at
2 http://web.blm.gov/internal/fire/budget/Reports/Report_Menu_new.htm.
3 The AD will provide briefings to the Bureau Director, as appropriate.
4 • **NPS** – Significant Wildland Fire Reviews (SWFR) will be conducted at
5 Management discretion and the Delegating Official may be at the Local,
6 Regional, or National level. See the Agency Administrator and Fire
7 Management Performance Tables in Chapter 3 and the “Review Types and
8 Requirements” table for further information.

9 Individual Fire Reviews

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

16 Lessons Learned Reviews (LLRs)

17 The purpose of a LLR is to explore, investigate, or review unintended outcomes
18 or near misses in order to learn from the event and prevent future occurrences.
19 In order to learn from these events, it is imperative to conduct a LLR in an open,
20 non-punitive manner. LLRs are intended to provide educational opportunities
21 that foster open and honest dialog and assist the wildland fire community in
22 sharing lessons learned information. LLRs provide an outside perspective with
23 appropriate technical experts assisting involved personnel in identifying
24 conditions that led to the unexpected outcome and sharing findings and
25 recommendations.

26 A LLR should be tailored to the event being reviewed. The scope of the review
27 should be commensurate with the severity of the incident. A LLR will not be
28 substituted for a Serious Accident Investigation (SAI) or other agency-specific
29 accident investigation reporting requirements (e.g., DOI Safety Management
30 Information System (SMIS) or USDA eSafety).

- 31 • **NPS** – Facilitated Learning Analysis (FLA) may be used for incidents
32 meeting the AI criteria.
33 • **FS** – Facilitated Learning Analysis (FLA) may be used for incidents
34 meeting the AI criteria or if a CRP is not being utilized for an incident
35 meeting SAI criteria. A guide for the FLA process is available at
36 [https://www.wildfirelessons.net/viewdocument/facilitated-learning-analysis-](https://www.wildfirelessons.net/viewdocument/facilitated-learning-analysis-and-l)
37 [and-l](https://www.wildfirelessons.net/viewdocument/facilitated-learning-analysis-and-l). The Forest Service’s formal Learning Review Processes are the
38 Facilitated Learning Analysis (FLA) which may be used for unintended
39 outcomes of all types and the Coordinated Response Protocol (CRP)
40 reserved for FS employee fatality events. Both processes are explicitly non-
41 punitive and must have a delegation signed by a line officer so stating.
42 Where appropriate, and for less serious incidents the FS may also use the
43 Rapid Lesson Sharing (RLS) process or other review process such as After

1 *Action Reviews which typically do not have a Line Officer's delegation. The*
2 *FS does not use the SAI process but may assist other agencies in a SAI for*
3 *incidents involving the FS interests or personnel. FS Aviation accidents and*
4 *incidents utilize the FS Aviation Mishap Investigation process. Current*
5 *versions of the FLA and CRP guides can be found on the Wildland Fire*
6 *Lessons Learned Center's website (<https://www.wildfirelessons.net/home>).*

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

13 The LLR facilitator will convene the participants and:

- 14 • Obtain a Delegation of Authority from appropriate agency level. See
15 Appendix J for a sample LLR Delegation of Authority;
- 16 • Identify facts of the event (sand tables maybe helpful in the process) and
17 develop a chronological narrative of the event;
- 18 • Identify underlying reasons for success or unintended outcomes;
- 19 • Identify what individuals learned and what they would do differently in the
20 future;
- 21 • Identify any recommendations that would prevent future similar
22 occurrences;
- 23 • 24- and 72-hour reports may be produced, but are not required; and
- 24 • Provide a final written report including the above items to the pertinent
25 Agency Administrator(s) within two weeks of event occurrence unless
26 otherwise negotiated. Names of involved personnel should not be included
27 in this report (reference them by position).

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

31 **Rapid Lesson Sharing (RLS)**

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

37 To submit or view RLS documents, go to
38 <https://www.wildfirelessons.net/resources/rapidlessonsharing>.

1 Declared Wildfire Reviews

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

- 5 • *Interagency Prescribed Fire Planning and Implementation Procedures*
6 *Reference Guide* (PMS 484)
 - 7 ○ *BLM* – Refer to *Fuels Management Manual 9214 and Handbook 9214-*
8 *1, Chapter 5.*
 - 9 ○ *NPS* – Refer to *RM-18, Chapter 7 and 17.*
 - 10 ○ *FWS* – Refer to *Fire Management Handbook, Chapter 17.*
 - 11 ○ *FS* – Refer to *FSM 5140.*
 - 12 ○ *BIA* – Refer to *Bureau of Indian Affairs Fuels Management Program*
13 *Supplement to the Interagency Prescribed Fire Planning and*
14 *Implementation Procedures Reference Guide (December 2008),*
15 *Chapter 3.*

16 Declared Wildfire Reviews will be submitted to the Wildland Fire Lessons
17 Learned Center (LLC) by the agency fuels program lead. Submissions should be
18 sent to llcdocsubmit@gmail.com.

19 Notice of Air Quality Exceedance (NOV) Reviews

20 A Notice of Air Quality Exceedance (NOV) Review supports understanding of
21 the planning, decisions, and actions taken that contributed to the NOV.
22 <https://www.nwccg.gov/publications/484>

23 Investigations

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

28 In addition to agency-specific accident investigation reporting requirements
29 (SMIS/eSafety), distinct types of wildland fire incidents and accidents have
30 specific investigation requirements.

31 Wildland Fire Incident and Accident Types and Definitions

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

- 1 • **Wildland Fire Accident** – An unplanned event or series of events that
2 resulted in injury, occupational illness, or damage to or loss of equipment or
3 property to a lesser degree than defined in “Serious Wildland Fire
4 Accident.”
 - 5 • **Near-miss** – An unplanned event or series of events that could have
6 resulted in death, injury, occupational illness, or damage to or loss of
7 equipment or property but did not.
 - 8 • **Entrapment** – A situation where personnel are unexpectedly caught in a
9 fire behavior-related, life-threatening position where planned escape routes
10 or safety zones are absent, inadequate, or compromised. Entrapment may or
11 may not include deployment of a fire shelter for its intended purpose.
12 Entrapment may result in a serious wildland fire accident, a wildland fire
13 accident, or a near-miss.
 - 14 • **Burnover** – An event in which a fire moves through a location or overtakes
15 personnel or equipment where there is no opportunity to utilize escape
16 routes and safety zones, often resulting in personal injury or equipment
17 damage.
 - 18 • **Fire Shelter Deployment** – The removing of a fire shelter from its case and
19 unfolding it to use as protection against heat, smoke and burning embers.
 - 20 • **Fire Trespass** – The occurrence of unauthorized fire on agency-protected
21 lands where the source of ignition is tied to some type of human activity.
- 22 Accident investigation types and final reports should be commensurate with the
23 complexity and/or severity of the accident and focus on organizational learning
24 and the prevention of reoccurrence. Investigations and reports may range from
25 large investigation teams producing comprehensive accident investigation
26 reports to first-level supervisors initiating investigations and reporting
27 injury/property damage in their agency-specific reporting systems
28 (SMIS/eSafety). Final accident investigation reports may range between agency-
29 specific accident reports, small one-page Rapid Lessons Sharing, simple or
30 complex Lessons Learned Review reports, to extensive investigation reports that
31 follow the same format as a serious accident.

1 Investigation Types and Requirements

Wildland Fire Event	Investigation Type	Management Level Requiring Notification ¹	Management level that determines review type and authorizes review ²
Serious Wildland Fire Accident	Serious Accident Investigation (SAI) <i>FS – Facilitated Learning Analysis (FLA) process or the Coordinated Response Protocol (CRP) for FS employee fatality events.</i>	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/eSafety) <i>NPS/FS – FLA may be used</i>	BLM/NPS–National FS/FWS – Management Discretion	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.nifc.gov/nicc/logistics/coord_forms.htm.

² Higher level management may exercise their authority to determine the type of review or investigation.

- 1 • **BLM** – *When a BLM employee is involved, investigations will occur*
2 *regardless of land jurisdiction. BLM Agency Administrators may jointly*
3 *delegate authority to investigate accidents in cases of mixed jurisdiction or*
4 *employee involvement. Joint delegations must ensure that BLM accident*
5 *investigation reporting requirements are met.*
- 6 • **FS** – *Forest Service Line Officers are the deciding officials regarding what*
7 *type of accident investigation or analysis method is to be used for accidents*
8 *or near misses occurring under Forest Service jurisdiction.*

9 Investigation Processes

10 Processes Common to All Wildland Fire Accident Investigations

- 11 • **Site Protection** – The site of the incident should be secured immediately
12 and nothing moved or disturbed until the area is photographed and visually
13 reviewed by the investigation team. Exact locations of injured personnel,
14 entrapments, injuries, fatalities, and the condition and location of personal
15 protective equipment, property, and other equipment must be documented.
- 16 • **Management of Involved Personnel** – Treatment, transport, and follow-up
17 care must be immediately arranged for injured and involved personnel. The
18 Agency Administrator or delegate should develop a roster of involved
19 personnel and supervisors and ensure they are available for interviews by
20 the investigation team. The Agency Administrator should consider relieving
21 involved supervisors from fireline duty until the preliminary investigation
22 has been completed. Attempt to collect initial statements from the involved
23 individuals prior to a Critical Incident Stress Management (CISM) session.
- 24 • **Delegation of Authority** – A Delegation of Authority shall be issued to the
25 investigation team leader. The Delegation of Authority will outline roles,
26 responsibilities, and expected deliverables. Delegation of Authority
27 templates are available at
28 https://www.nifc.gov/safety/safety_reptsInvest.html.
- 29 • **Critical Incident Stress Management (CISM)** – CISM is the
30 responsibility of local Agency Administrators, who should have individuals
31 pre-identified for critical incident stress debriefings. Also refer to the
32 Agency Administrator’s Guide to Critical Incident Management (PMS 926),
33 available at <https://www.nwcg.gov/publications/926>. Individuals or teams
34 may be available through Employee Assistance Programs (EAPs) or
35 Geographic Area Coordination Centers (GACCs).

36 Wildland Fire Accident Investigation (AI) Process

- 37 • **FS** – *The Wildland Fire Accident Investigation (AI) Process is not*
38 *applicable to Forest Service accidents. The Forest Service’s formal*
39 *Learning Review Processes are the Facilitated Learning Analysis (FLA)*
40 *which may be used for unintended outcomes of all types and the*

1 *Coordinated Response Protocol (CRP) reserved for FS employee fatality*
2 *events. Both processes are explicitly non-punitive and must have a*
3 *delegation signed by a line officer so stating. Where appropriate, and for*
4 *less serious incidents the FS may also use the Rapid Lesson Sharing (RLS)*
5 *process or other review process such as After Action Reviews which*
6 *typically do not have a Line Officer's delegation. The FS does not use the*
7 *SAI process but may assist other agencies in a SAI for incidents involving*
8 *the FS interests or personnel. FS Aviation accidents and incidents utilize*
9 *the FS Aviation Mishap Investigation process.*

10 Accident investigations and reports should be commensurate with the
11 complexity and/or severity of the accident and focus on organizational learning
12 and the prevention of reoccurrence. Investigations and reports may range from
13 large investigation teams producing comprehensive reports to first-level
14 supervisors initiating investigations and reporting injury/property damage in
15 agency reporting systems (e.g., SMIS/eSafety). Final accident investigation
16 reports may range between agency-specific accident reports, small one-page
17 Rapid Lessons Sharing, simple or complex Lessons Learned Review reports, to
18 extensive investigation reports that follow the same format as a serious accident.

19 **Notification**

20 When an accident occurs, agency notification requirements will be followed.
21 Notification requirements universally include:

- 22 • Local dispatch center
- 23 • Unit Fire Management Officer
- 24 • Agency Administrator
- 25 • OSHA (refer to Chapter 7 for reporting criteria)

26 **Investigation Team Membership**

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

34 **Investigation Methodology**

35 Accident Investigations (AI) are detailed and methodical efforts to collect and
36 interpret facts related to an accident and to provide specific recommendations to
37 prevent recurrence. The AI may include the following actions:

- 38 • Visual inspection of involved site, equipment, or material;
- 39 • Detailed analysis of equipment or material, as necessary;
- 40 • Interviews with involved personnel, witnesses, managers, and other
41 pertinent persons;
- 42 • Collection and review of written statements;

- 1 • Review of records, archives, plans, policies, procedures, and other pertinent
- 2 documents;
- 3 • Consideration of environmental, equipment, material, procedural, and
- 4 human factors as they related to the incident; and
- 5 • Development of specific findings and related recommendations for the AI
- 6 report.

7 **Accident Investigation 24- and 72-Hour Reports**

8 24- and 72-hour reports should be completed when an AI will be conducted.
9 Final 24- and 72-hour reports will be approved by the AI delegating official,
10 then sent to the agency fire safety/risk management lead who will provide a
11 copy to the Wildland Fire Lessons Learned Center (LLC). E-mail:
12 lledocsubmit@gmail.com.

- 13 • **24-Hour Preliminary Report** – This report contains known basic facts
14 about the accident. It will be completed and forwarded by the responsible
15 Agency Administrator to the next higher level (e.g., District Manager
16 forwards to State Director). Names of injured personnel will not be included
17 in this report. Personnel may be referenced by position.
- 18 • **72-Hour Expanded Report** – This report provides additional factual
19 information, if available. The information may include the number of
20 victims and severity of injuries. The focus should be on information that
21 may have immediate impact on future accident prevention. This report will
22 be completed and forwarded by the AI team to the AI delegating official.
23 Names of injured personnel will not be included in this report. Personnel
24 may be referenced by position.

25 **Accident Investigation Final Report**

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

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

36 **Accident Investigation Report Standard Contents**

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

- 41 • **Executive Summary** – A brief narrative of the facts involving the accident
42 including dates, locations, times, name of incident, jurisdiction(s), number

- 1 of individuals involved, etc. Names of injured personnel or personnel
2 involved in the accident are not to be included in this report (reference them
3 by position).
- 4 • **Narrative** – A detailed chronological narrative of events leading up to and
5 including the accident, as well as rescue and medical actions taken after the
6 accident. This section will contain who, what, and where.
 - 7 • **Investigation Process** – A brief narrative of actions taken by the
8 investigation team. This narrative should include investigation team
9 membership, Delegation of Authority information (from who and contents,
10 include a copy as an appendix), investigative actions and timeline (when the
11 team conducted interviews, inspections, site visits, etc.), and if other sources
12 were consulted (i.e., professional accident reconstruction experts,
13 equipment manufacturers, etc.). This section may also address if
14 environmental, equipment, material, procedural, and human factors were
15 present, and state how findings/recommendations were developed.
 - 16 • **Findings/Recommendations**
 - 17 ○ **Findings** – Developed from the factual information. Each finding is a
18 single event or condition. Each finding is an essential step in the
19 accident sequence, but each finding is not necessarily causal or
20 contributing, and each finding may not have an associated
21 recommendation. Findings should only include information necessary
22 to explain the specific event or condition. Findings must be
23 substantiated by the factual data. Findings should not include opinion
24 or speculation.
 - 25 ○ **Discussion** – This provides explanation or information pertinent to a
26 specific finding.
 - 27 ○ **Recommendations** – Recommendations are proposed actions intended
28 to prevent similar accidents. Recommendations should be directly
29 related to findings, should not contain opinion or speculation, and when
30 appropriate, should identify the specific organization responsible for
31 completing the recommended action. Recommendations will be
32 evaluated and may be incorporated into future operational direction
33 through established processes.
 - 34 • **Conclusions and Observations** – Investigation team’s opinions and
35 inferences, and “lessons learned” may be captured in the section.
 - 36 • **Reference Materials**
 - 37 ○ **Maps/Photographs/Illustrations** – Graphic information used to
38 document and visually portray facts.
 - 39 ○ **Appendices** – Reference materials (e.g., fire behavior analysis,
40 equipment maintenance reports, agreements).
- 41 AI Delegation of Authority templates, AI report template and examples of AI
42 reports can be found at the NIFC Safety website
43 https://www.nifc.gov/safety/safety_reprtsInvest.html.

1 Wildland Fire Serious Accident Investigation (SAI) Process

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

- 5 • **BLM/FWS** – *The Interagency Serious Accident Investigation Guide*
6 *establishes core direction for BLM, FWS, and interagency serious accident*
7 *investigations (exceptions for aviation accidents are stated in the guide). It*
8 *provides serious accident investigation teams a standardized and*
9 *comprehensive process for conducting serious accident investigations. The*
10 *guide is available at https://www.nifc.gov/safety/safety_reprtsInvest.html.*
11 *Serious accident investigation reports will be completed, routed, and*
12 *disseminated according to processes established in the guide. Reports may*
13 *contain information supplemental to the requirements of the guide if it*
14 *augments the BLM/FWS's ability to learn and to develop further*
15 *improvements. The guide may be used entirely or in part for accidents that*
16 *do not meet the serious accident definition.*
- 17 • **FS** – *The Forest Service's response to serious accidents are the Facilitated*
18 *Learning Analysis (FLA) which may be used for unintended outcomes of all*
19 *types, and the Coordinated Response Protocol (CRP) reserved for FS*
20 *employee fatality events. Both processes are explicitly non-punitive and*
21 *must have a delegation signed by a line officer so stating. FS Aviation*
22 *accidents and incidents utilize the FS Aviation Mishap Investigation*
23 *process. Current versions of the FLA and CRP guides can be found on the*
24 *Wildland Fire Lessons Learned Center's website*
25 *(<https://www.wildfirelessons.net/home>).*

26 Fire Director Responsibilities

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

- 29 • Ensure the agency safety manager and Designated Agency Safety and
30 Health Official (DASHO) have been notified;
- 31 • Immediately appoint, authorize (through Delegation of Authority), and
32 deploy an accident investigation team;
- 33 • Provide resources and procedures adequate to meet the team's needs;
- 34 • Receive the factual and management evaluation reports and take action to
35 accept or reject recommendations;
- 36 • Forward investigation findings, recommendations, and corrective action
37 plan to the DASHO (the agency safety office is the "office of record" for
38 reports);
- 39 • Convene an accident review board/ board of review (if deemed necessary)
40 to evaluate the adequacy of the factual and management reports and suggest
41 corrective actions;
- 42 • Ensure a corrective action plan is developed, incorporating management
43 initiatives established to address accident causal factors; and

- 1 • Ensure Serious Accident Investigations remain independent of other
2 investigations.

3 **Agency Administrator Responsibilities**

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

15 **Notification**

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

- 18 • Agency Administrator;
19 • Public affairs;
20 • Agency Law Enforcement;
21 • Safety personnel;
22 • County sheriff or local law enforcement as appropriate to jurisdiction;
23 • National Interagency Coordination Center (NICC) through the local
24 dispatch center and GACC. Provide a *Wildland Fire Fatality and*
25 *Entrapment Initial Report* (PMS 405-1) directly to NICC within 24 hours;
26 • Agency headquarters; and
27 • OSHA will be notified according to agency policy when an employee is
28 killed on the job or suffers a work-related hospitalization, amputation, or
29 loss of an eye. <https://www.osha.gov/report.html>
30 ○ A fatality must be reported within **8 hours**.
31 ○ An in-patient hospitalization, amputation, or eye loss must be reported
32 within **24 hours**.

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

35 **Designating the Investigation Team Lead**

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

40 The *Memorandum of Agreement (MOA) between Department of Agriculture*
41 *Forest Service and Department of Interior* augments and provides clarification

1 to the 1995 MOU for investigation type and team lead/deputy team
2 lead/interagency representative designation. The MOA also provides an
3 interagency template for joint Delegation of Authority. The MOA is available at
4 https://www.nifc.gov/safety/safety_reprtsInvest.html.

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

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

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

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

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

- 18 • **Team Leader (Core Team Member)**
19 A senior agency management official, at the equivalent associate/assistant
20 regional/state/area/division director level. The team leader will direct the
21 investigation and serve as the point of contact to the Designated Agency
22 Safety and Health Official (DASHO).
- 23 • **Chief Investigator (Core Team Member)**
24 A qualified accident investigation specialist is responsible for the direct
25 management of all investigation activities. The chief investigator reports to
26 the team leader.
- 27 • **Accident Investigation Advisor/Safety Manager (Core Team Member)**
28 An experienced safety and occupational health specialist or manager who
29 acts as an advisor to the team leader to ensure that the investigation focus
30 remains on safety and health issues. The accident investigation
31 advisor/safety manager also works to ensure strategic management issues
32 are examined. Delegating Officials or their designee may, at their
33 discretion, fill this position with a trained and qualified NWCG Safety
34 Officer, Line (SOFR), Safety Officer, Type 2 (SOF2), or Safety Officer,
35 Type 1 (SOF1).
- 36 • **Interagency Representative**
37 An interagency representative will be assigned to every fire-related Serious
38 Accident Investigation Team. They will assist as designated by the team
39 leader and will provide outside agency perspective. They will assist as
40 assigned by the Team Leader and will provide a perspective from outside
41 the agency.

- 1 • **Technical Specialists**
- 2 Personnel who are qualified and experienced in specialized occupations,
- 3 activities, skills, and equipment, addressing specific technical issues such as
- 4 specialized fire equipment, weather, and fire behavior.
- 5 • **Public Affairs Officer**
- 6 For investigations with high public visibility and significant news media
- 7 interest, a public affairs officer (PAO) should be considered a part of the
- 8 team. The PAO should develop a communications plan for the team, be a
- 9 designated point of contact for news media, and oversee all aspects of
- 10 internal and external communications. Ideally, the PAO should be qualified
- 11 as a Type 1 or Type 2 public information officer and be familiar with SAI
- 12 team organization and function.
- 13 ○ **BLM** – *All media related documents (news releases, talking points,*
- 14 *etc.) should be cleared through NIFC Public Affairs prior to*
- 15 *external release.*
- 16 Core SAIT members are required to take the Interagency Serious Accident
- 17 Investigation Course 1112-05 prior to serious accident investigation assignment.
- 18 This training is required every 5 years to maintain currency unless the Core
- 19 SAIT member has completed an SAIT assignment within the last 5 years.
- 20 • **BLM/FWS/FS** – *This training is required every 5 years to retain currency.*

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

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

- 27 • **24-Hour Preliminary Report** – This report contains known basic facts
28 about the accident. It will be completed and forwarded by the responsible
29 Agency Administrator to the SAI delegating official. Names of injured
30 personnel will not be included in this report. Personnel may be referenced
31 by position.
- 32 • **72-Hour Expanded Report** – This report provides additional factual
33 information, if available. The information may include the number of
34 victims and severity of injuries. The focus should be on information that
35 may have immediate impact on future accident prevention. This report will
36 be completed and forwarded by the SAI team to the SAI delegating official.
37 Names of injured personnel will not be included in this report. Personnel
38 may be referenced by position.

39 **SAI Final Report**

40 Within 45 days of the incident, a final report consisting of a Factual Report (FR)
41 and a Management Evaluation Report (MER) will be produced by the
42 investigation team and forwarded to the Designated Agency Safety and Health
43 Official (DASHO) through the agency Fire Director(s).

- 1 • **Factual Report** – This report contains a brief summary or background of
2 the event, and facts based only on examination of technical and procedural
3 issues related to equipment and tactical fire operations. It does not contain
4 opinions, conclusions, or recommendations. Names of injured personnel are
5 not to be included in this report (reference them by position). Post-accident
6 actions should be included in this report (emergency response attribute to
7 survival of a victim, etc.). Factual Reports will be submitted to Wildland
8 Fire Lessons Learned Center (LLC) by the respective agency's fire
9 safety/risk management leads. E-mail: llcdocsu@llcdocsu.com.
- 10 • **Management Evaluation Report (MER)** – The MER is intended for
11 internal use only and explores management policies, practices, procedures,
12 and personal performance related to the accident. The MER categorizes
13 findings identified in the factual report and provides recommendations to
14 prevent or reduce the risk of similar accidents.

15 Factual Report and Management Evaluation Report formatting can be found at
16 https://www.nifc.gov/safety/safety_reprtsInvest.html.

17 **Accident Review Board/Board of Review**

18 An Accident Review Board/Board of Review is used by some agencies to
19 evaluate recommendations, and develop a corrective action plan. Refer to the
20 respective agency's safety and health policy.

21 **Fire Cause Determination and Trespass Investigation**

22 **Introduction**

23 Agency policy requires determination of cause, origin, and responsibility for all
24 wildfires. Accurate fire cause determination is a critical first step for a
25 successful fire investigation and for targeting fire prevention efforts. Proper
26 investigative procedures, which occur concurrent with initial attack, more
27 accurately pinpoint fire causes and can preserve valuable evidence that would
28 otherwise be destroyed by suppression activities. Fire trespass refers to the
29 occurrence of unauthorized fire on agency-protected lands where the source of
30 ignition is tied to some type of human activity.

31 Initiation of fire cause determination must be started with notification of an
32 incident. Initial attack dispatchers are responsible for capturing all pertinent
33 information when the fire is reported and throughout the incident. The initial
34 attack Incident Commander and the initial attack forces are responsible for
35 protecting the origin area and initiating fire cause determination and
36 documenting observations starting with their travel to the fire. If probable cause
37 indicates human involvement, an individual qualified in fire cause determination
38 (INVF or cooperator equivalent) should be dispatched to the fire.

39 **Policy**

40 The agency must pursue cost recovery, or document why cost recovery is not
41 required, for all human-caused fires on public lands. The agency will also pursue

- 1 cost recovery for other lands under fire protection agreement where the agency
2 is not reimbursed for suppression actions, if so stipulated in the agreement.
- 3 For all human-caused fires where negligence can be determined, trespass actions
4 are to be taken to recover cost of suppression activities, land rehabilitation, and
5 damages to the resource and improvements. Only fires started by natural causes
6 will not be considered for trespass and related cost recovery.
- 7 The determination whether to proceed with trespass action must be made on
8 “incident facts,” not on “cost or ability to pay.” Trespass collection is both a cost
9 recovery and a deterrent to prevent future damage to public land. It is prudent to
10 pursue collection of costs, no matter how small. This determination must be
11 documented and filed in the unit office’s official fire report file.
- 12 Unless specified otherwise in an approved protection agreement, the agency that
13 has the land management jurisdiction/administration role is accountable for
14 determining the cause of ignition, responsible party, and for obtaining all
15 billable costs, performing the billing, collection, and distribution of the collected
16 funds. The agency with the fire protection responsibility role must provide the
17 initial determination of cause to the agency with the land management
18 jurisdiction/administration role. The agency providing fire protection shall
19 provide a detailed report of suppression costs that will allow the jurisdictional
20 agency to proceed with trespass procedures in a timely manner.
- 21 Each agency’s role in fire trespass billing and collection must be specifically
22 defined in a relevant Cooperative Fire Protection Agreement between federal
23 and state cooperators. Federal agencies will follow established procedures for
24 each agency and utilize the IPAC system to transfer funds.

25 Agency references:

- 26 • **BLM** – 9238-1
- 27 • **NPS** – RM-18, Chapter 6 and RM-9
- 28 • **FWS** – Fire Management Handbook
- 29 • **FS** – FSM 5130 and FSM 5300
- 30 • **BIA** – 53 IAM Chapter 7-H and 90IAM 1.4C (10)
- 31 • **BIA** – For guidance regarding origin and cause determination on lands
32 under the jurisdiction of the Bureau of Indian Affairs, see 90 IAM 1.4C (10)
33 *Wildland Fire Management - National Fire Investigation Handbook*
34 available at <https://www.bia.gov/policy-forms/handbooks>.
- 35 • **BIA** – For guidance regarding fire trespass and damage to Indian Forest
36 Products on lands under the jurisdiction of the Bureau of Indian Affairs see
37 53IAM 7-H Indian Forest Management Handbook – Forest Trespass,
38 available at
39 [https://www.bia.gov/sites/bia.gov/files/assets/bia/ots/dfwfm/pdf/idc-](https://www.bia.gov/sites/bia.gov/files/assets/bia/ots/dfwfm/pdf/idc-022535.pdf)
40 [022535.pdf](https://www.bia.gov/policy-forms/handbooks) and <https://www.bia.gov/policy-forms/handbooks>.

1 **Related Policy Documents**

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

	Safety	Prescribed Fire
DOI	485 DM Chapter 7	
BLM	DOI Occupational Safety and Health Program – Field Manual, 1112-1	
NPS	DO/RM-50B, RM-18 Chapter 3	RM-18, Chapter 7
FWS	Service Manual 095	
FS	FSH-6709.11	FSM-5140
	FSM-5100 and FSH-6709.11, FSM 5720 (Aviation), FSM 5130 (Ground Operations), FSM 6730 (Specific policy), FSH 6709.12 Chapter 30 (General guidance), and most recent Accident Investigation Guide, for specific guidance.	Same as Safety
Interagency	Information on accident investigations may be found at https://www.nifc.gov/safety/safety_reportsInvest.html . For reporting use PMS 405-1, <i>Wildland Fire Fatality and Entrapment Initial Report</i> , https://www.nwcg.gov/publications/405-1	Same as Safety

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