Animal and Plant Health Inspection Service Aviation Safety Management System Manual

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Revision Log

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U.S. Department of Agriculture (USDA)
Animal and Plant Health Inspection Service (APHIS)

Administrator's Safety Philosophy

APHIS personnel use airplanes, helicopters, and unmanned aircraft systems (UAS) to help fulfil our mission to protect U.S. agriculture and natural resources against invasive pests and diseases, and to protect resources from wildlife damage. The APHIS Aviation Operations Manual finalized in FY23. This overarching document provides the foundation for APHIS Programs to build their respective aviation programs and ensure safe and efficient aviation operations. The Operations Manual identifies Programs' responsibilities to develop standards for pilot training, aircraft inspections and overall requirements.

This document, the APHIS Aviation Safety Management System Manual (SMS), is not only a foundation for APHIS Programs to build their safety program, but it is also a framework for leaders and aviation professionals to use when assessing, mitigating, and accepting aviation-related risk. To achieve the culture of safety necessary to achieve our mission goals, leaders must be engaged, accountable and active participants in their aviation programs. I am accountable and responsible for our APHIS aviation program, and the Program Deputy Administrators are responsible for their respective safety programs.

The APHIS Aviation Safety Council is one way we create, maintain, and strengthen agency community around aviation safety. There, we collaborate and discuss issues of common interest that relate to aviation safety and share best practices. Our collaboration supports Agency leaders, managers, and personnel involved in aviation management and operations as we strive to eliminate accidents and incidents.

I expect leaders to set the example and provide the necessary resources to our aviation professionals to get the job done safely. I also encourage open dialog and empower employees to make sound decisions and manage risk at the appropriate level. We must continuously improve and accept no unnecessary risks.

Our success in aviation mission delivery depends on each one of us adhering to the guidelines in this manual. Thank you for your commitment to safety.

Dr. Michael Watson
Administrator
USDA APHIS

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CHAPTER 1 – APHIS Safety Management System

1. Purpose

To establish APHIS aviation Safety Management System (SMS) as a systemic approach to managing safety. The SMS is a structured safety management framework that mitigates risk by clearly defining safety policies, organization structure and integration of safety practices into daily aviation operations within APHIS aviation operations.

2. Goal

The goal of the APHIS aviation SMS is to develop and embed a culture of safety that achieves and maintains a zero-accident rate. The APHIS aviation SMS embraces the principle that as risk identification and management practices become more thorough and prevalent, the likelihood of accomplishing a zero-accident rate goal increases. Management and identification of risks is the responsibility of all personnel involved in APHIS aviation activities. Consequently, every person in APHIS aviation needs to proactively commit to safety to eliminate the causal and complacent factors that lead to accidents.

3. Applicability

Applies to all APHIS personnel and APHIS contractors involved in aviation activities.

4. Scope

APHIS developed an integrated SMS to enhance safety in aviation operations. The SMS provides a framework to evaluate and minimize safety related risk which could contribute to accidents, incidents, or injury to persons. This manual provides best practices for the application of an SMS in APHIS aviation operations. The SMS is used to comprehensively examine APHIS operational functions to identify hazards and to analyze associated risks. Specific functional components include:

- Safety management
- Organization and personnel
- Training and proficiency
- Flight operations
- Aircraft equipment requirements
- Aircraft maintenance
- Operations policies and procedures
- Emergency accident/incident response

As described in Federal Aviation Administration (FAA)) FAA AC 120-92B - Safety Management Systems for Aviation Service Providers, SMS processes are organized into four basic safety management components:

- Safety Policy: Identifies who in the organization has responsibility, authority, and accountability for the goals of the organization. The policies, procedures, and structure

of the organization must be described along with the fundamental value of safety within the organization.

- Safety Risk Management: Outlines the process of hazard identification and management of risk to acceptable levels. This systematic process describes how to identify hazards, how to assess the risks, and then the procedures to control the risks.
- Safety Assurance: The processes that ensure that once risk controls are in place, the organization continues to review the safety initiatives to make sure that risks are maintained within acceptable levels as defined by the organization's safety policies and goals.
- Safety Promotion: The ongoing process to promote safety within the organization. Senior leadership must continuously promote the growth of a positive safety culture within the organization. Key components are training personnel and clear communication of lessons learned throughout the organization.

Chapter 2 - SMS Safety Management Policy

1. Overview

APHIS is committed to developing, implementing, and continuously improving aviation operations. Safety management is the foundation to APHIS' future since it impacts every activity within our program. APHIS is fully committed to protecting our most precious asset, the people. APHIS management has established qualified safety program leadership to demonstrate its day-to-day commitment to safety.

The APHS aviation SMS requires active participation at all levels of the APHIS organization. Executive leadership, managers, supervisors, and employees have the responsibility to place safety as their number one priority. Personnel at all levels must not accept any unnecessary risk, must identify risk, elevate the risk decision making process to the appropriate level, and mitigate the risk to the lowest possible level.

2. Risk Management Concept

Decision making is a continuous and on-going process as events develop. There are four basic risk management principles that should be applied before conducting any anticipated job, action, or mission. They are:

a. Accept No Unnecessary Risk: All activities contain various levels of risk.

b. Accept Risk Only When Benefits Outweigh Costs: Compare all identified benefits to all potential costs. Even high-risk operations may be conducted when decision-makers clearly acknowledge the sum of the benefits exceeds the potential costs.

c. Make Risk Decisions at the Appropriate Level: Anyone can make a risk decision. Decisions to allocate resources must be made at the appropriate level to reduce the risk or eliminate the hazard.

d. Integrate Risk Management into Mission Planning, Preparation, and Execution: Risk Management (RM) is critical in all phases of activity. Risk can change during an actual mission as new hazards are realized.

3. Safety Personnel

SMS implementation and oversight is the responsibility of the Administrator. Deputy Administrators will designate Aviation Program Mangers (APM) as required to cover their respective program. The program's APM will report safety issues to the Senior Aviation Management Official (SAMO). Management and aviation personnel have the following responsibilities:

a. Management: SAMO, Deputy Administrators, and APMs monitor the program to ensure that all personnel:
    1) Manage risk effectively.
    2) Select from risk reduction options developed.
    3) Accept or reject risk based on the benefit derived.

4) Motivate operators, supervisors, and managers to employ risk management practices and to utilize safety training opportunities.
5) Ensure standards/procedures are established, clearly understood by employees, and are practical.
6) Ensure known standards/procedures are enforced.
7) Administer action when a known standard/procedure is not followed.
8) Ensure proper equipment/material to accomplish the mission is provided.

b. APM: In addition to the above listed responsibilities, the APM is accountable for the collection of safety information from program sources. They consolidate safety information, disseminates information on hazards, performs risk management/assessment of safety data, initiates/executes remedial actions, and communicates incident/accident investigation findings to program aviation personnel. The APM is also responsible for reporting safety related data to the SAMO as necessary/appropriate.

c. Aviation Activities Personnel*:* Pilots and Crewmembers monitor themselves and day-to-day flight operations:
    1) Assess risks and implement appropriate safeguards as needed.
    2) Understand, accept, and implement the risk management processes.
    3) Understand the risks that are acceptable.
    4) Maintain situational awareness of the changing risks associated with an operation and notify supervisors when appropriate.
    5) Ensure standards/procedures are understood.
    6) Comply with standards/procedures.
    7) Expect repercussions when known standards/procedures are not followed.
    8) Identify areas where a standard does not exist, and one is needed.
    9) Ensure you have the proper equipment/material to accomplish the mission.

d. All Personnel: Have the duty to comply with approved standards and:
    1) Take timely actions to promote safety.
    2) Identify, assess, and mitigate risk to the lowest possible level.
    3) Stop unsafe activities and refuse to participate in activities that indicate continuation will jeopardize safety.
    4) Report to a supervisor any activities they believe is being conducted in an unsafe manner.
    5) Submit a SAFECOM to report any condition, observance, act, maintenance problem, or circumstance that has the potential to cause an aviation or aviation-related mishap.

CHAPTER 3 – SMS Safety Risk Management

1. Hazard Identification and Risk Analysis

Risk is an expression of the impact of an undesired event in terms of severity and likelihood. The risk management process is a continuous loop involving several assessment phases:

- Identify hazards.
- Analyze, assess, and prioritize risks.
- Document risk analysis and results.
- Engage decision-making process to initiate an appropriate level of action.
- Evaluate effectiveness of risk assessment and revise future risk management processes accordingly.

The risk management assessment framework provides for the validation of decisions and evaluation of desired results to determine the need for further action. The goal for risk management is not to eliminate all risk, but to manage those risks that cannot be eliminated so the mission can be accomplished with minimum negative impact.

2. Risk Management Principles

Risk is the potential severity of a loss combined with the probability of an occurrence. The loss can be death, injury, or property damage. Risk management identifies risks associated with an operation/process/personnel/material and weighs those risks against the overall value to be gained.

3. Risk Management Process

The risk management process involves identifying and controlling hazards. APHIS uses a five-step process that represent a logical thought process from which users develop tools, techniques, and procedures for applying risk management in their areas of responsibility. It is a continuous loop process applicable to any situation and environment. The 5-step process can be remembered using the acronym **I AM IS**:

- **I** – Identify and Report
- **A** – Assess Hazards
- **M** – Make a Risk Decision
- **I** – Implement Controls
- **S** – Supervise and Evaluate

Figure 1 – 5-Step I AM IS Process

Step 1: Identify hazards to the mission. Consider all aspects of current and future situations, environment, and known historical problems. Document and report findings.

Step 2: Assess the risk to determine risk decisions.

Step 3: Make risk decisions and develop controls. If you cannot eliminate the risk, you must control it without sacrificing essential mission values. Some risks can be controlled by modifying tasks, changing location or route, increasing supervision, wearing protective clothing, changing time of operation, etc. The decision maker must decide between selecting from available controls, stopping the mission because the risk is too great, or accepting risk because mission benefits outweigh potential loss.

Step 4: Implement control measures. Put controls in place that eliminate the hazards or reduce their risks. Integrate procedures to control risks into plans, orders, SOPs, lesson plans, etc. Also ensure risk reduction measures are used during actual operations.

Step 5: Supervise and evaluate. Enforce standards and controls, then evaluate the effectiveness of controls and adjust/update as needed. Make sure leaders know what controls are in place and what standards are expected, then hold those in charge accountable for implementation from start to finish. This is where accident prevention occurs.

4. Organizational Decision Making

APHIS personnel must ensure that operations are conducted within the acceptable levels of agency risk. The risk assessment process requires individuals to exercise judgment on how to eliminate or reduce hazards to lessen the overall negative impact of when a hazard occurs. These basic decision-making principles must be applied before any anticipated job, task, or mission is performed:

a. Accept no unnecessary risk: Unnecessary risk contributes no benefit to the safe accomplishment of a task or mission. The most logical choices for accomplishing a mission are those that meet all the mission requirements while exposing personnel and resources to the lowest possible risk.

b. Make risk decisions at the appropriate level: Making risk decisions at the appropriate level establishes clear accountability. Those accountable for the success or failure of a mission must be included in the risk decision process. Supervisors at all levels must ensure employees know how much risk they can accept and when they must elevate the decision to a higher level.

5. Risk Assessment

APHIS uses the following risk assessment matrix when a hazard is identified in a normal workplace environment:

Severity (Expected Consequence)	Frequency: Continuous - regular, or inevitable	Frequency: Likely - sporadic, or intermittent	Frequency: Occasional - sporadic, intermittent	Frequency: Seldom - infrequent	Frequency: Unlikely - possible but improbable
Catastrophic: death, unacceptable loss, or damage	H-20	H-19	H-18	M-16	L-11
Critical: severe injury, illness, loss, or damage	H-17	M-15	M-14	L-10	L-9
Moderate: minor injury, illness, loss, or damage	M-13	M-12	L-8	L-7	L-6
Negligible: minimal injury, loss, or damage	L-5	L-4	L-3	L-2	L-1

L = Low Risk, M = Moderate Risk, H = High Risk

Figure 2- APHIS Risk Assessment Matrix

Each hazard is assessed in terms of potential loss and cost based on probability and severity.

a. Probability is divided into the following categories:

1) Frequent - Occurs very often, known to happen regularly.
2) Likely - Occurs several times, a common occurrence.
3) Occasional - Occurs sporadically but is not uncommon.
4) Seldom - Remotely possible, could occur at some time.
5) Unlikely - Can assume it will not occur, but not impossible.

b. Severity is divided into the following categories:

1) Catastrophic - Death or permanent total disability. Loss of major or mission-critical systems/equipment. Major property or facility damage. Severe environmental damage.

2) Critical - Permanent partial disability or temporary total disability exceeding three months' time. Extensive major damage to equipment or systems. Significant damage to property or the environment.
3) Moderate - Minor damage to equipment or systems, property, or the environment. Lost days due to injury or illness not exceeding three months. Minor damage to property or the environment.
4) Negligible - Little or no adverse impact on mission capability. First aid or minor medical treatment. Slight equipment or system damage, but fully functional or serviceable. Little or no property or environmental damage.

c. Hazards are assessed as low, moderate, or high risk. Risk control measures are applied to the risk assessment to determine residual risk. Risk decisions will be formulated and based on the residual risk of an activity once appropriate control measures are applied.

d. Risk acceptance decisions, control development, implementation of controls will be developed for each program. Specific risk acceptance/approval guidelines will be developed for the three levels of risk low, moderate and high.

6. Risk Control and Mitigation

APHIS operations will be continually assessed using the 5-step process and/or the risk assessment matrix. Risk control measures will be designed and implemented to reduce or eliminate assessed risks. Once risk controls/mitigations are implemented, residual risk will be evaluated with the continued goal of reducing overall risk to as low as reasonably practical. Risk control will be accomplished by:

a. Elimination: The operation or activity is cancelled because safety risks exceed the benefits of continuing the operation or activity. An example of an elimination strategy: Operation into an area surrounded by complex geography is cancelled.

b. Mitigation: The frequency of the operation or activity is reduced, or action is taken to reduce the magnitude of the consequences of the accepted risks. An example of a mitigation strategy: helicopter operations into an area surrounded by mountainous terrain is limited to winds < 10 knots.

c. Continual residual risk exposure evaluation: Residual risk is evaluated after risk mitigation actions have been taken to reduce the negative consequences of the hazard. A determination is made as to the acceptability of the residual risk and/or if secondary risk has been created. If residual risk is unacceptable or secondary risk has been created additional steps will be taken to mitigate risk. An example of residual risk exposure evaluation: the evaluation of operation in an area surrounded by mountainous terrain indicates operations in winds < 10 knots was insufficient to reduce risk to an acceptable level, subsequently the mission is restricted to calm winds only.

7. Flight Risk Assessments

Programs will develop a Flight Risk Assessment Tool (FRAT) which:

a. Allows management and pilots to see risk prior to flight.

b. Differentiates, between low, moderate, and high-risk flights based on type of operation, environment, aircraft performance, crew training and overall operation experience.

c. Establish a review process when risk exceeds an acceptable level.

d. Identifies the risk in a manner that allows the hazards associated with the flight to be identified for further evaluation and/or mitigation.

e. Is easy to use, and visually depicts risk.

f. Establishes the process for making go/no-go decisions for the flight.

CHAPTER 4 – SMS Safety Assurance

1. Overview

Safety assurance provides APHIS management an indication on the effectiveness of the safety system in place. Assurance is defined as "something that gives confidence." After the controls for risk are implemented as part of the safety system, safety assurance provides us with performance metrics to validate the controls are working as intended.

Safety assurance components for APHIS include procedures for monitoring the performance of critical aspects of the organization and are comprised of these elements:

a. Monitoring of risk and effected controls; and

b. Internal evaluation, reporting and audits; and

c. Corrective action requirements; and

d. Safety performance analysis; and

e. Management reviews.

2. Monitoring of Risk and Effected Controls

Monitoring risks requires continual monitoring of residual risks, secondary risks, and newly identified risks. The monitoring process requires quick corrective action when a new risk materializes as well as planning further preventive actions. Risk monitoring provides the framework to adjust behavior when a new risk is identified and measure the effectiveness of our risk response.

APHIS will continually monitor risk and effect controls using the hazard identification and risk analysis tools outlined in Chapter 3 of this manual.

3. Internal Safety Evaluation and Inspections

APHIS programs will conduct safety evaluations and inspections as part of the safety assurance process.

Safety evaluations consist of continuous monitoring at all levels to measure the effectiveness of risk controls. Evaluations will also be used to identify hazards and risk control deficiencies within SMS performance. Hazards and deficiencies will be recorded by each program on a safety hazard log, see Appendix E.

4. Hazard Identification and Reporting

Effective implementation of APHIS risk management policy is contingent upon a working safety culture/system to prevent accidents. Essential to this objective is for a program to identify, eliminate or mitigate workplace hazards to prevent the occurrence of accidents or incidents. APHIS uses the interagency Aviation Safety Communique (SAFECOM) database for hazard identification and reporting to promote lessons learned and prevent future accidents. The

SAFECOM provides the framework for APHIS Aviation Safety Management System (SMS) communications. The SAFECOM is an internet-based system that allows anyone involved in APHIS aviation actives to report their concerns. APMs will establish a SAFECOM account for their program.

The SAFECOM system is not punitive. APHIS will use the SAFECOM database to develop safety alerts, lessons learned, technical bulletins, accident prevention bulletins and SAFECOM safety summaries to distribute and promote the lessons from the field.

A SAFECOM can be generated to report any condition, observance, act, maintenance problem, or circumstance, which has the potential to cause an aviation-related mishap. Submitting a SAFECOM is not a substitute for on the spot corrections to a safety concern. It is a tool used to identify, document, track, and correct safety related issues.

As a minimum the following types of events should be reported using a SAFECOM:

- Aircraft maintenance deficiencies
- Aviation safety hazards
- Airspace intrusions
- Incident with potential

SAFECOM reports must be processed efficiently and effectively based on these considerations:

a. Applicable subject matter experts will be involved in analyzing identified hazards.

b. APM and/or SAMO as applicable will review hazards reported to elevate potential serious aviation hazards as required.

c. APM and/or SAMO as applicable will track hazard reports, assign appropriate risk prioritization, and provide dissemination to the field.

d. Personnel responsible for the reporting system will ensure the program is not used for punitive action and will safeguard information from unauthorized release.

The APM shall process and report their findings in relation to SAFECOM reports within 10 working days of receipt to the Deputy Administrator and SAMO.

Safety Alerts, Lessons Learned, Technical Bulletins, Accident Prevention Bulletins as applicable shall be distributed to aviation users and managers as soon as possible after the receipt of a SAFECOM.

Personnel wishing to submit a SAFECOM may do so at: www.safecom.gov.

A SAFECOM does not replace the requirement for initiating an accident, incident or “First Report”.

5. Corrective Action Requirements

Hazards and deficiencies entered on the safety hazard log or found during safety inspections will be analyzed to develop a corrective action plan. The corrective action plan for each deficiency will include a responsible party or individual with an assigned due date to complete the action needed.

The following requirements must be met to ensure corrective action plans are effective:

a. A corrective action task assignment will be generated for every hazard and/or deficiency.

b. The employee perceived to have the best opportunity to develop and implement a corrective action plan to remedy the deficiency will be assigned responsibility.

c. APM will review the corrective action plans for completion. The corrective action plan can be closed after it is determined complete.

d. A safety assurance check will be performed between 90 and 120 days after a corrective action plan is closed to verify effectiveness of the implemented corrective action.

6. Safety Performance Analysis

APM will analyze data that has been acquired through the SMS process to demonstrate the effectiveness of risk controls. SMS safety performance data will be used to evaluate where improvements can be made to the existing organization systems, processes, and procedures.

The following requirements will be met to formalize safety performance analysis procedures and documentation:

a. Safety hazards log summary reports will be prepared by each program and forwarded to the Aviation Safety Council annually. The Aviation Safety Council will categorize and analyze the summaries and disseminate trends to maximize employee awareness; and

b. SAFECOMs will be categorized and analyzed to facilitate trend identification. The APM will disseminate trends to maximize employee awareness; and

c. A fiscal year Aviation Safety Summary will be prepared annually by the APM and published for agency-wide dissemination.

7. Investigations

Safety related events, including accidents and incidents, will be investigated to collect information to help prevent similar events. The investigation and analysis will include the following:

a. Determination of “what” and “why” the event happened, rather than, “who’s” to blame.

b. Immediate causal and contributing factors.

c. Organizational factors that may contribute to the hazard or incident.

d. Any unsafe acts of the operators.

e. Report to the program Deputy Administrator, with mitigation implementation recommendations.

Investigations will be conducted by a team designated by the program Deputy Administrator after consultation with the program APM in accordance with NTSB guidelines.

CHAPTER 5 – SMS Safety Promotion

1. Overview

Safety efforts cannot succeed by mandate or strictly though implementation of policy. Safety promotion sets the tone and provides a sense of purpose/direction to enhances the organization's safety policies, procedures, and processes.

The APHIS Administrator and staff, program Deputy Administrators and program staff will make every effort to communicate safety objectives, status of SMS activities and significant safety events. We must strive to create and maintain a channel of upward constructive communication in an environment of openness.

Safety promotion includes training, education, and safety communication.

2. Safety Training and Education

Safety training and education are key elements within the SMS. Aviation safety training follows a building-block approach. Employees will receive safety training commensurate with their position level and operational role within the organization. Personnel with direct aviation responsibilities will comply with all program requirements to ensure their training is current. Aviation safety training will be documented in each employee's training record.

3. Safety Communication

The APHIS Administrator, APHIS SAMO, APMs and Deputy Administrators, will work together to constructively communicate the performance of the SMS program to aviation personnel. APHIS personnel are always encouraged to bring safety issues to management and make safety a top priority. APHIS safety communication will:

a. Ensure that all personnel are fully aware of SMS.

b. Communicate safety-critical information in a timely manner free of punitive action.

c. Explain the actions and procedural changes required to mitigate or eliminate risk.

4. Recognition of Accomplishments

On an annual basis APHIS will solicit nominations for the Aviation Safety Award. In addition to the annual award process, supervisors are encouraged to give spot awards for outstanding performance and acts that advance the safety program.

CHAPTER 6 – Accident and Incident Reporting and Management

1. Purpose

Establish policies and procedures for accident and incident reporting.

2. Reporting

APHIS employees should not waste time trying to decide if an event is an accident. If an employee witnesses or becomes aware of an event involving an APHIS aircraft that results in damage or injury no matter how slight they will report the accident or incident to their supervisor as soon as possible. The supervisor receiving the report will immediately relay the report via phone to their APM.

3. Accident or Incident Determination

Refer to the NTSB website for current definitions of an aircraft accident and the criteria for serious injury and substantial damage.

NTSB Notification

If the APM determines an aircraft accident has occurred, the APM will immediately notify the National Transportation Safety Board (NTSB) at 844-373-9922. The following information should be given in the notification:

a. Type, nationality, and registration marks of the aircraft.

b. Name of owner, and operator of the aircraft.

c. Name of the pilot-in-command.

d. Date and time of the accident.

e. Last point of departure and point of intended landing of the aircraft.

f. Position of the aircraft with reference to some easily defined geographical point.

g. Number of persons aboard, number killed, and number seriously injured.

h. Nature of the accident, the weather and the extent of damage to the aircraft, so far as is known.

i. A description of any explosives, radioactive materials, or other dangerous articles carried.

Additional information can be found at: https://www.ntsb.gov/Pages/Report.aspx

After making the NTSB report an APHIS First Report will be made. A “First Report can be made using the following link: https://my.aphis.usda.gov/myportal/myaphis/programs/business-services/emss/on_line_first_report

4. Overdue or Missing Aircraft Determination

An APHIS aircraft is considered “overdue” when neither communication or visual contact can be established, and 30 minutes have passed since its ETA or reporting time. The Emergency response plan will be initiated when an APHIS aircraft is overdue.

If an APHIS overdue aircraft has not been located 30 minutes after it becomes overdue the FAA will be contacted at 1-800-992-7422 (800 WX BRIEF) and “Alert Notice (ALNOT)’ requested.

An APHIS aircraft is considered “missing” when its fuel duration has been exceeded, it has been reported as “overdue” to the FAA and the FAA has completed an administrative search for the aircraft without success.

The aircraft is “**Officially”** missing when the fuel duration, as reported for flight following, or as reported on the flight plan has been exceeded and the aircraft location is unknown.

When an APHIS aircraft is classified as **Officially** missing search and rescue (SAR) operations will begin. As much information as possible from the “Aircraft Accident Incident Checklist” in paragraph 6 of this chapter will be provided to the Air Force Rescue Coordination Center (800 851-3051/850 283-5955) and the appropriate FAA Regional Accident and Incident Response Centers.

For additional SAR information visit: https://www.1af.acc.af.mil/Units/AFRCC.aspx

FAA Regional 24-Hour Accident and Incident Response Centers

Alaska/Northwest Mountain/Western Pacific	(206) 231-2089
Central/Great Lakes/Southwest	(817) 222-5006
New England/Eastern/Southern	(404) 305-5150

5. Aircraft Accident or Incident Checklist

To the extent possible the following information should be provided/gathered:

1. Point of Contact Information (the person who will provide information and direct actions)		
a. Name		
b. Phone Numbers:	Work:	Cell:
c. E-mail:		
2. Accident Information		
a. Tail Number:		
b. Type of Aircraft:		
c. Color:		
d. Date and Time of Accident:		

e. Location of Aircraft (Grid, Lat/Log, Reference to Known Point):
f. Hazardous Materials Involved (Explosives, Radioactive Materials, etc.):
g. Accident Site Security:
h. Photos Taken:
i. Total Number of Personnel Involved:
j. Number of Injuries:
k. Number of Fatalities:
3. Accident Description (type of mission, what happened, weather, extent of damage, etc.)
4. Admin Information
a. Aircraft Owner/Operator:
b. Pilot in Command:
c. Point of Last Departure:
d. Route of Flight:
e. Destination:
f. Fuel on Board:
g. Nearest Airport:
h. Suitable Helicopter Landing Sight:

6. APHIS Notification

After notification of the NTSB the APM will notify the following:

a. SAMO

APPENDIX A - Definitions

A

Accident - An unplanned event or series of events that results in death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

Aircraft - A device that is used or intended to be used for flight in the air.

Aircraft Accident - An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and until such time as such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. Aspects of the exceptions to substantial damage (see "Substantial Damage") should be considered before making a final substantial damage determination that would classify the occurrence as an accident.

Aircraft Ground Accident - Injury or property damage accidents involving APHIS aircraft in which no intent for flight exists.

Aircraft Incident - An occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

Analysis - The process of identifying a question or issue to be addressed, modeling the issue, investigating model results, interpreting the results, and possibly making a recommendation. Analysis typically involves using scientific or mathematical methods for evaluation.

Assessment - The process of measuring or judging the value or level of something.

Attributes - System Attributes, or the inherent characteristics of a system, are present in any well-defined organization and apply to an effective SMS.

a. Responsibility: Who is accountable for management and overall quality of the process (planning, organizing, directing, controlling) and its ultimate accomplishment.
b. Authority: Who can direct, control, or change the process, as well as who can make key decisions such as risk acceptance. This attribute also includes the concept of empowerment.
c. Procedures: A specified way to carry out an activity or a process – procedures translate the “what” in goals and objectives into “how” in practical activities (things people do). Procedures are simply documented activities to accomplish processes, e.g., a way to perform a process.
d. Controls: Controls are elements of the system, including hardware, software, special procedures or procedural steps, and supervisory practices designed to keep processes on track to achieve their intended results. Organizational process controls are typically

defined in terms of special procedures, supervisory and management practices, and processes.

e. Process Measures: Ways to provide feedback to responsible parties that required actions are taking place, required outputs are being produced, and expected outcomes are being achieved. A basic principle of safety assurance is that fundamental processes be measured so that management decisions can be data driven.

f. Interfaces: This aspect includes examining such things as lines of authority between departments, lines of communication between employees, consistency of procedures, and clearly delineating lines of responsibility between organizations, work units, and employees. Interfaces are the “Inputs” and “Outputs” of a process.

g. Interfaces in Safety Risk Management and Safety Assurance: Safety Risk Management (SRM) and Safety Assurance (SA) are the key processes of the SMS. They are also highly interactive, especially in the input-output relationships between the activities in the processes.

h. Audit: Scheduled, formal reviews and verifications that evaluate whether an organization has complied with policy, standards, and/or contract requirements. An audit starts with the management and operations of the organization and then moves to the organization's activities and products/services.

i. Internal audit: An audit conducted by, or on behalf of, the organization being audited.

j. External audit: An audit conducted by an entity outside of the organization being audited.

Aviation System - The functional operation or production system used by an organization to produce an aviation product or service (see System and Functional below).

B

Best practices - Common industry policies and procedures that result in a high quality of safety and performance.

C

Complete - Nothing has been omitted and what is stated is essential and appropriate to the level of detail.

Compliance - This includes but is not limited to compliance with Federal regulations. It also includes agency contract requirements, requirements of operator developed risk controls or operator specified policies and procedures.

Conformity - Fulfilling or complying with a requirement [ref. ISO 9001-2000]; this includes but is not limited to complying with Federal regulations. It also includes complying with agency requirements, requirements of operator developed risk controls, or operator policies and procedures.

Continuous monitoring - Uninterrupted (constant) watchfulness (checks, audits, etc.), over a system.

Contractor - A person or agency that is financially procured by the Government to provide goods or services. Also referred to as a Service Provider.

Corrective action - Action to eliminate (remove) or mitigate (lessen) the cause or reduce the effects of a detected nonconformity or other undesirable (unwanted) situation.

Correct - Accurate without ambiguity or error in its attributes.

D

Documentation - Information or meaningful data and its supporting medium (e.g., paper, electronic, etc.). In this context, documentation is different from records because documentation is the written description of policies, processes, procedures, objectives, requirements, authorities, responsibilities, or work instructions; whereas Records are the evidence of results achieved or activities performed.

E

Evaluation – An independent review of agency policies, procedures, and systems [ref. AC 120-59A]. If accomplished by the agency itself, the evaluation should be done by a person or organization in the agency other than the one performing the function being evaluated. An evaluation is an anticipatory process designed to identify and correct potential problems before they happen. An evaluation is synonymous with the term “systems audit.”

F

Fatal injury - Any injury that results in death within 30 days of the accident.

Flight Accidents -Those accidents in which intent for flight exists and for which there is reportable damage to the aircraft itself.

Flight Related Accidents - Those aircraft accidents in which there is intent for flight and no reportable damage to the aircraft itself, but the accident involves a fatality, injury to aircrew, ground crew, qualified non-crewmember, other injury, or property damage.

Functional - The term “function” refers to “what” is expected to be incorporated into each process (e.g., human tasks, software, hardware, procedures, etc.) rather than “how” the function is accomplished by the system. This makes for a more performance-based system and allows for a broad range of techniques to be used to accomplish the performance objectives.

G

H

Hazard - Any existing or potential condition that can lead to injury, illness, or death; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a condition that might cause (is a prerequisite to) an accident or incident.

I

Incident - A near-miss episode with minor consequences that could have resulted in greater loss. An unplanned event that could have resulted in an accident or did result in minor damage. An incident indicates that a hazard or hazardous condition exists, though it may not identify what that hazard or hazardous condition is.

a. Aircraft Incident. An occurrence, other than an accident, associated with the operation of an aircraft that affects, or could affect, the safety of operations.

b. Aircraft Incident with Potential. An "in-flight incident" that narrowly misses being an accident by NTSB definition and circumstances involve some aircraft damage, property damage, or minor injury to crew or passengers.

Intent for Flight - Begins when power is applied or brakes released to move the aircraft under its own power, for the purpose of commencing flight. Intent for flight ends when the aircraft is at a full stop and power is completely reduced. Intent for Flight is the physical act of applying power to move the aircraft, not the thought process of the crew member as to what is going to occur in the future.

Investigation - Gathering and interpreting information to help managers understand how and why an accident occurred.

J

K

L

Lessons learned - Knowledge or understanding gained by experience, which may be positive, such as a successful test or mission, or negative, such as a mishap or failure. Lessons learned should be developed from information obtained from inside and outside of the organization and/or industry. Lessons learned may incorporate various processes including AAR (After Action Review) or FLA (Facilitated Learning Analysis).

Likelihood - The estimated probability or frequency, in quantitative or qualitative terms, of an occurrence related to the hazard.

Line management - The management structure that operates (controls, supervises, etc.) the operational activities and processes of the aviation system.

M

Mishap - An accident or incident that causes damage to aircraft or other property or results in injury.

N

Near Midair Collision (NMAC) - An incident associated with the operation of an aircraft in which the possibility of collision occurs as a result of proximity of less than 500 feet to another aircraft, or a report is received from a pilot or flight crewmember stating that a collision hazard existed between two or more aircraft. (ref. FAA Order 7210.56 paragraph 4-1-1).

Nonconformity - Non-fulfillment of a requirement (ref. ISO 9001-2000). This could include but is not limited to, noncompliance with Federal regulations, agency requirements, requirements of operator-developed risk controls or operator-specified policies and procedures.

O

Objective - The desired state or performance target of a process. Usually, it is the final state of a process and contains the results and outputs used to obtain the desired state or performance target.

Operational Control - The exercise of authority over initiating, conducting, or terminating a flight (14 CFR Part 1.1). This includes direct management oversight, supervision and accountability for a specific task, mission or assignment.

Operational life cycle - Period of time from implementation of a product/service until it is no longer in use.

Organization - Indicates both certificated and non-certificated aviation organizations, aviation service providers, air carriers, airlines, maintenance repair organizations, air taxi operators, corporate flight departments, repair stations, and pilot schools.

Outputs - The product or end result of a SMS process, which is able to be recorded, monitored, measured, and analyzed. Outputs are the minimum expectation for the product of each process area and the input for the next process area in succession.

Overdue Aircraft - An aircraft is considered overdue when neither communication or visual contact can be established, and 30 minutes have passed since its ETA or reporting time

Oversight - A function that ensures that an aviation organization (internal and external) complies with and uses safety-related standards, requirements, regulations, and associated procedures. Safety oversight also ensures that the acceptable level of safety risk is not exceeded in the air operations system.

P

Pilot Proficiency - Currency and proficiency have similar definitions and they do complement each other, but neither one is a replacement for the other. Being current under the Federal Aviation Regulations means that one has met the requirements to act as a pilot in command of an aircraft within a certain time period. According to Webster's College Dictionary, being proficient means, "fully competent in any art, science, skill, or subject." You can be current without being a proficient pilot, but if you are proficient, most likely you have also met the currency requirements to get to that point. Proficiency is being prepared to handle any situation with which you might reasonably be presented.

Precautionary Landing - A premeditated landing, on or off an airport, when further flight is possible but inadvisable. Examples of conditions that may call for a precautionary landing include caution lights, deteriorating weather, being lost, fuel shortage, and gradually developing engine trouble.

Preventive Action - Preemptive action to eliminate or mitigate the potential cause or reduce the future effects of an identified or anticipated nonconformity or another undesirable situation.

Preventive Maintenance - Simple or minor preservation operations and the replacement of small standard parts not involving complex operations.

Procedure - A specified way to carry out an activity or a process.

Process - A set of interrelated or interacting activities that transform inputs into outputs.

Process Measures - Refer to definition for Process Measures under the Attributes definition, above.

Product/service - Anything that is offered or can be purchased that might satisfy a want or need in the air transportation system.

Q

Qualified Technical Investigator - A individual having experience in aviation program or safety management, fixed-wing or rotor craft operations, or aircraft maintenance, who may be assigned participation as a member of an accident investigation team.

Quality Assurance - The process of verifying or determining whether products or services meet or exceed customer expectations. Quality management includes planning and checking standards while quality controls are specific standards that mitigate risk.

R

Records – Evidence of results achieved, or activities performed.

Residual Safety Risk - The safety risk that exists after all controls have been implemented or exhausted and verified. Only verified controls can be used for assessing residual safety risk.

Risk - The composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. The terms risk and safety risk are interchangeable.
Risk Control – Steps taken to eliminate (remove) hazards or to mitigate (lessen) their effects by reducing the severity and/or likelihood of risk associated with those hazards.

S

Safety Assurance - A formal management process within the SMS that systematically provides confidence that an organization's products/services meet or exceed safety requirements.

Safety Culture - The product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, the organization's management of safety. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures.

Safety Management System (SMS) - The formal, top-down business-like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (as described in this document it includes safety risk management, safety policy, safety assurance, and safety promotion).

Safety Objective - A goal or desirable outcome related to safety. Generally based on the organization's safety policy and specified for relevant functions and levels in the organization. Safety objectives are typically measurable.

Safety Planning - Part of safety management focused on setting safety objectives and specifying needed operational processes and related resources to fulfill these objectives.

Safety Promotion - A combination of safety culture, training, and data sharing activities that support the implementation and operation of an ASMS in an organization.

Safety Risk - The composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. The terms safety risk and risk are interchangeable.

Safety Risk Control - A characteristic of a system that reduces or mitigates (lessens) the potential undesirable effects of a hazard. Controls may include process design, equipment modification, work procedures, training or protective devices. Safety risk controls must be written in requirements language, measurable, and monitored to ensure effectiveness.

Safety Risk Management (SRM) - A formal process within the SMS that describes the system, identifies the hazards, assesses the risk, analyzes the risk, and controls the risk. The SRM process is embedded in the processes used to provide the product/service; it is not a separate/distinct process.

Secondary Risks - New risks that come up due to responses planned to manage initial risk.

Severity - The degree of loss or harm resulting from a hazard.

Substantial Damage - Damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered substantial damage for the purpose of this order.

System - An integrated set of constituent elements that are combined in an operational or support environment to accomplish a defined objective. These elements include people, hardware, software, firmware, information, procedures, facilities, services, and other support facets.

System Safety - An overarching engineering discipline focused on designing and building fail-safe systems. Safety Management Systems branched from System Safety in order to include operational factors in aviation safety.

T

U

Unscheduled Maintenance - When discrepancies, resulting from material failure or wear, are found between flights, aircraft are rendered not airworthy and grounded until the required maintenance is performed.

V

Visual Flight Rules (VFR) - A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. Typically, this is considered a visibility of greater than 5 miles, and a ceiling greater than 3,000 ft.

W

X

Y

Z

APPENDIX B – Acronyms

APHIS	Animal Plant Health Inspection Services
APM	Aviation Program Manager
AAR	After Action Review
ERP	Emergency Response Plan
FRAT	Flight Risk Assessment Tool
FLA	Facilitated Learning Analysis
GSA	General Services Administration
IIC	Investigator in Charge
NTSB	National Training and Safety Board
NMAC	Near Mid-Air Collision
PIC	Pilot in Command
RM	Risk Management
SMS	Safety Management System
SAFECOM	Aviation Safety Communiqué
SA	Safety Assurance
USDA	United States Department of Agriculture
VFR	Visual Flight Rules

APPENDIX C – Accident Incident First Responders Guidelines

1. Protecting People

Many times, in the urgency to assist accident victims the rescuers may place themselves in jeopardy and become victims themselves. Risk assessment and mitigation procedures should be enforced.

Ensure personnel involved in an aircraft accident are cleared by medical authority prior to returning to duty.

Aircraft wreckage attracts people like a magnet. Keep non-essential personnel well clear, and preferably upwind.

Hazards at an aircraft accident site can include:

a. Biological Hazards -- Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and many others. See Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1030 for control measures.

b. Toxic Substances -- Fuel, oil, hydraulic fluid, and exotic aircraft materials such as beryllium, lithium, chromium, and mercury.

c. Pressure Vessels -- Tires (often above 90 psi), hydraulic accumulators, oleo struts, oxygen cylinders, and fire extinguishers. They may look OK, but they may have been damaged in the crash.

d. Mechanical Hazards -- Metal under tension (rotor blades bent under fuselage), heavy objects, composite materials, and innumerable sharp edges.

e. Fire Hazards -- Unburned fuel, hot metal (or other components), aircraft batteries, pyrotechnics, and the ignition of grass because of the accident. Be cautious of smoldering items which may re-ignite.

f. Environmental Hazards -- Weather, terrain, and animals (snakes, spiders, scorpions, etc.) Depending on the location and time of year, the environment may be among the most serious hazards at the scene. Utilize available protective devices and clothing and use extreme caution when working around the wreckage.

Protective measures include:

a. Minimize the number of personnel allowed to enter the accident site.

b. Ensure exposed personnel use appropriate personal protective equipment (PPE) such as boots, long pants, long-sleeved shirts, leather gloves (use surgical gloves as inserts if blood or bodily fluids are present), and appropriate respirators if toxic vapors or composite material pose respiratory hazards.

Do whatever is necessary to extricate victims and to extinguish fires, but keep in mind the need to protect and preserve evidence. Document and/or photograph the location of any debris, which must be disturbed to carry out rescues or fire suppression activities.

REMEMBER, it's already a bad day; don't make it worse by letting someone else get hurt!

2. Preservation of the Scene

Only the NTSB or their authorized representative can release wreckage, records, mail or cargo.

APHIS personnel will treat the accident site like a crime scene. Wreckage, cargo, and debris should not be disturbed or moved except to the extent necessary:

a. To remove victims.
b. To protect the wreckage from further damage.
c. To protect the public.

Initially the accident site should be protected by either APHIS personnel or by local law enforcement officers. The applicable program should be prepared to appoint additional personnel to assist in preserving the scene.

Control access to the site by cordoning off the area and contact the agency aviation safety investigator to determine who needs access. Request local law enforcement to immediately secure the site for the accident investigation team. Everyone who enters should be briefed on the known or suspected hazards and cautioned to avoid disturbing the evidence (flipping switches and souvenir hunting).

Identify witnesses. Request witnesses to write out their statements as soon as possible (before witnesses can compare notes). Be sure to **GET WITNESSES' NAMES, ADDRESSES AND PHONE NUMBERS**. Supervisors must ensure that personnel with information pertinent to the investigation are made available to the investigators in a timely manner. If possible, coordinate with the accident investigator(s) PRIOR to releasing personnel with information pertinent to the accident.

Aircraft wreckage, cargo, training records and maintenance records will be secured for the investigation team.

Aircraft wreckage and cargo may not be moved except to remove persons injured or trapped, to protect wreckage from further damage or to protect the public from injury. If aircraft wreckage or cargo must be moved, to the greatest extent possible photographs, sketches and notes will be taken to document the original position and condition of aircraft wreckage or cargo.

3. Media Relations

If the NTSB has been contacted, APHIS personnel will comply with NTSB 831.13 and refer all questions, requests for interviews, etc. the NTSB Investigator-in-Charge (IIC) or the appropriate NTSB office.

Accidents or incidents investigated internally by APHIS programs will refer all questions, request for interviews etc. to the APM.

Employees can: Acknowledge an accident has occurred, but not speculate on what caused it or release any names. Advise the media that the investigation of this accident is under the jurisdiction of the NTSB or APHIS as applicable, and any questions must be directed to them.

APPENDIX D – Accident Investigation Guidelines

1. Aircraft Accidents

The NTSB is responsible for investigating all aircraft accidents. The NTSB will be on scene when fatalities are involved. If there are no fatalities, the NTSB will usually delegate the accident or incident investigation to the FAA and APHIS may be asked to participate in the accident investigation. If the NTSB/FAA request APHIS participation the APM will appoint the appropriate personnel to assist the NTSB/FAA in the investigation. If the NTSB does not request APHIS participation APHIS will request designation as "party" to the NTSB investigation in accordance with (IAW) 49 CFR 831.11. In all cases APHIS will conduct a parallel investigation of an aircraft accident.

2. Aircraft Incidents

Aircraft incidents may be investigated by the NTSB or the FAA and will be investigated by the program who owns the aircraft involved in the incident. The APM in consultation with SAMO will determine who will investigate aircraft incidents. At a minimum aircraft incidents will be investigated by the APM or his/her designated representative who will report the facts and circumstances to the SAMO.

3. Investigations

Programs will conduct a parallel accident investigation of all accidents and selected incidents as determined by the APM and/or SAMO to identify factors that may contribute to system-wide adverse effects on the safety of our flight operations and personnel. After the initial first response items have been accomplished the APM will take responsibility for coordinating on scene activities, providing NTSB/FAA required personnel and the conduct of the program investigation.

4. Composition of the Investigation Team

The APM and/or SAMO will select an investigation team members based on the complexities of the mishap. The accident investigation team will consist of as many of the following as required with the outlined responsibilities:

a. Investigator-in-Charge (IIC):
    1) Organizes, conducts, and controls the investigation.
    2) Will assume responsibility for the supervision and coordination of all resources and the activities of all APHIS personnel involved in the investigation.
    3) When the NTSB/FAA is conducting an on-site investigation, the IIC will assume a secondary role and, whenever possible, will serve as the program's party to the NTSB/FAA investigation.
    4) Establishes cooperative working relationships with other Federal, State, county, and municipal agencies involved in the investigation.
    5) Provides briefings for affected personnel, agency officials, and the public. Prepares preliminary briefing within 24 hours after the accident has occurred and follow on briefings as needed.

6) Conducts investigation team meetings and coordinates information exchange between team members.
7) Coordinates with the NTSB/FAA before the release of information to the public.
8) Prepares and presents the investigation report to the appropriate levels of APHIS management.
9) If information is discovered that suggests an administrative or criminal review is needed, the IIC will advise the program's appropriate leadership, who will determine what further actions are required.

The IIC will have completed one or more of the following:

- NTSB Accident Investigation Training; and/or
- Technical Safety Institute Accident Investigation Training; and/or
- University Southern California Safety Institute Accident Investigation Course; and/or
- Department of Defense (DoD) Services (U.S. Army, Air Force, Navy, or Marine Aircraft Accident Investigation).

The IIC should have the following additional qualifications:

- Be certified as a Safety Officer.
- Have completed Aviation Manager or Aviation Safety Officer Technical Qualification training.
- Be knowledgeable in the type of aircraft involved in the accident.
- Be knowledgeable in aircraft maintenance for the type of aircraft involved in the mishap.

b. Chief Investigator:
    1) Coordinates with IIC to direct investigation.
    2) Requests, manages, and supervises the technical specialists and documentation specialist based on the technical complexity of the investigation.
    3) Ensures that the investigation addresses pertinent safety issues and concerns.
    4) Ensures security and control of the accident site.
    5) Ensures coordination with local law enforcement, the coroner's office, Critical incident Stress Debriefing/Critical Incident Stress Management team leader, and others, as required.
    6) Takes possession of and maintains all relevant APHIS and contractor records for the case file.
    7) Assist IIC in preparing briefings for affected personnel, agency officials, and the public. Prepares preliminary briefing within 24 hours after the accident has occurred and follow on briefings as needed.
    8) Completes the NTSB form 6120.1/2, Pilot/Operator Aircraft Accident Report within 10 days, or within 7 days after an aircraft is overdue and still missing.
    9) Notifies GSA of accident/incident.
    10) Completes the Human Factors Accident and Incident Analysis.
    11) Requests that drug testing, autopsies, medical reports, and other appropriate tests are conducted when required.

12) Assists the IIC in presenting the factual section of the investigation report to the authority authorizing the investigation.

The chief investigator should have completed one or more of the following:

- NTSB Accident Investigation Training; or
- Technical Safety Institute Accident Investigation Training; or
- University Southern California Safety Institute Accident Investigation Course; or
- DoD Services (U.S. Army, Air Force, Navy, or Marine Aircraft Accident Investigation).

The chief investigator should have the following additional qualifications:

- Be certified as a Safety Officer.
- Have completed Aviation Manager or Aviation Safety Officer Technical Qualification training.
- Be knowledgeable in the type of aircraft involved in the accident.
- Be knowledgeable in aircraft maintenance for the type of aircraft involved in the mishap.

c. Qualified Technical Investigator (QTI):
    1) The qualified technical investigator is responsible for the direct management of the technical investigation activities for aviation accidents.
    2) Provides technical expertise, knowledge of procedures, operating practices, qualifications, and policies of aviation management.
    3) Assigns tasks, organizes, and directs technical team members.
    4) Coordinates release of wreckage with the NTSB through the appropriate contract officer.

The qualified technical investigator should have the following qualifications:

- Completion of an aviation accident investigation related course.
- Proven ability to communicate effectively and work in a team environment.
- Experience in aviation program management.
- Experience in aviation operations, as appropriate for the accident.
- Experience in aircraft maintenance.

d. Technical Specialist (as needed):
    1) Works directly for the chief investigator or QTI to provide specialty area support to the investigation.
    2) Provides factual reports on their area of specialty for the accident report.

The technical specialist will have technical skills in areas required to support the investigation.

5. Investigation Sequence

a. Before team arrival: The following activities should be coordinated by the APM of the program experiencing the accident/incident while the investigation team is traveling.
    1) Initiating rescue and medical assistance.

2) Securing the site.
3) Identifying witnesses.
4) Collecting and preserving evidence.
5) Setting up administrative support for the team.

b. Initial briefing: Soon after the team arrives at the accident location, the IIC should hold a formal in briefing with the program on scene representative and local law enforcement to get an over-view of the activities that have occurred before the investigations team's arrival. The following should occur:
    1) All records and information that have been gathered should be transferred to the IIC.
    2) Compile a list of all personnel involved and their telephone numbers.
    3) Establish a team workplace.
    4) Assign a local APHIS liaison for the investigation team.
    5) Provide timelines for investigation activities (movement to crash site, team meetings schedule, due outs, brief times, etc.)
    6) Make team assignments as necessary.
    7) Determine NTSB/FAA coordination.

c. Accident site visit: The chief investigator or QTI should coordinate all accident site visits with any other agencies assigned to investigate the accident and those who have jurisdictional responsibilities for the accident site. At the site, the chief investigator or QTI will establish:
    1) Tasks to be completed and order to complete them.
    2) Ensure the team has the correct PPE.
    3) Ensure the site is secure.
    4) Initial description and mapping of the site.
    5) Photograph everything before it is touched.
    6) Collection of evidence.
    7) Logging of evidence and photographs.

d. Interviews and evidence collection: After the onsite visit, the chief investigator will determine which individuals need to be interviewed and what human, material, and environmental evidence needs to be collected.

e. Daily team meetings. The IIC and the chief investigator (or QTI) will schedule daily team meetings, usually one in the morning and one in the evening. Items to cover include:
    1) Priorities.
    2) Specific team assignments.
    3) Review of daily findings.
    4) Compare notes, establish facts, and the chronology of events as evidence is gathered.
    5) Discuss preliminary findings (list) and highlight areas of concern.

6) Identify and document additional items needed and prioritize assignments.

6. Briefings and Report

It is imperative to keep leadership informed on the status of the investigation. The program's deputy administrator will determine the briefing requirements, however, expect the frequency to decrease over time. Once the investigation is complete, the program must be prepared to provide the final report and briefing to the APHIS Administrator as requested.

APPENDIX E – Sample Safety Hazard Log

Safety Hazard Log

Discovery Date	Location	Hazard	Corrective Action	Assigned Employee	Due Date	Assessed Risk Level	Status