

U.S. GEOLOGICAL SURVEY

National Aviation Management Plan

NAMP

USGS Aviation Safety Program

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Date

The USGS NAMP is a comprehensive bureau-wide aviation plan that provides policies and information to aviation users. The NAMP describes intent, policy, authority, objectives, roles, and responsibilities, and procedures for the implementation of the USGS aviation management program.

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| Acronyms | |
|-----------------|---|
| ACETA | Aerial Capture, Eradication, and Tagging of Animals |
| AD | Associate Director |
| ALSE | Aviation Life Support Equipment |
| AMC | Aviation Management Council |
| AMD | Aviation Management Directorate |
| AMRB | Aircraft Mishap Review Board |
| AMIS | Aviation Mishap Information System |
| AMS | Aviation Management System |
| AQD | Acquisition Services Directorate – Boise Branch of IBC |
| ARA | Aircraft Rental Agreement |
| BAM | Bureau Aviation Manager |
| CFR | Code of Federal Regulations |
| COA | Certificate of Authorization |
| COR | Contracting Officer’s Representative |
| COTR | Contracting Officer’s Technical Representative |
| DASHO | Designated Agency Safety and Health Official |
| DM | Departmental Manual |
| DOI | U.S. Department of the Interior |
| EAB | Executive Aviation Board |
| EAC | Executive Aviation Committee |
| EAB | Executive Aviation Board |
| FAA | Federal Aviation Administration |
| FAITAS | Federal Acquisition Institute Training Application System |
| FAR | Federal Aviation Regulations (14 CFR Part 1-199) |
| HAZMAT | Hazardous Materials |
| IAA | Interagency Agreement |
| IAT | Interagency Aviation Training |
| IAT-SC | Interagency Aviation Training – Steering Committee |
| IBC | Interior Business Center |
| IHOG | Interagency Helicopter Operations Guide |
| LiDAR | Light Direction And Range |
| NAMP | National Aviation Management Plan |
| NTSB | National Transportation Safety Board |
| OAS | Office of Aviation Services |
| OMB | Office of Management and Budget |
| OMS | Office of Management Services |
| OPM | Operational Procedures Memoranda |
| PFD | Personal Flotation Device |
| PASP | Project Aviation Safety Plan |
| PIC | Pilot-in-Command |

| | |
|---------|---|
| PPE | Personal Protective Equipment |
| RAM | Regional Aviation Manager |
| RD | Regional Director |
| RSM | Regional Safety Manager |
| SAFECOM | Safety Communiqué |
| SM | Survey Manual |
| SME | Subject Matter Expert |
| STEP | Single Skid, Toe-In, Hover Exit/Entry Procedure |
| SOL | Solicitor of the U.S. Department of the Interior |
| TDY | Temporary Duty travel |
| UAS | Unmanned Aircraft Systems |
| UATA | Unit Aviation Training Administrator for IAT system |
| USDA | U.S. Department of Agriculture |
| USFS | United States Forest Service |
| USGS | U.S. Geological Survey |

Acronyms and abbreviations in addition to the list are in 350DM1 Appendix 1 and 14 CFR 1.1 to 1.3.

Definitions

Best Practices: Practices designed and implemented to ensure operational and organizational success. These practices typically include additional safety and service margins and are often adopted as industry or Federal agency standards. They tend to be cost beneficial. These practices are dynamic because they are perpetually evolving with changes in customer expectations, as well as advances in the general knowledge base.

Complex Aviation Program: A program with three or more of the following components: Exclusive Use Aircraft Contracts, assigned fleet aircraft, high risk missions (helicopter external loads, helicopter Single Skid, Toe-In, Hover Exit/Entry Procedures [STEP], etc.), and Cooperator Aircraft. (The USGS Aviation Program is complex because it involves exclusive use contracts, high-risk missions, cooperator aircraft, dual function pilot and incidental fleet aircraft operations and UAS. The USGS also had fleet aircraft (non UAS) until 2014.)

Operational Control: With respect to a flight, operational control means the exercise of authority over initiating, conducting, or terminating a flight. (Definition 14 CFR 1.1)

Special Use Activities: Operations involving the utilization of airplanes and helicopters in support of DOI programs which are not point-to-point flight activities, and which require special considerations due to their functional use. This may require deviation from normal operating practices where authorized by OAS. Special pilot qualifications and techniques, special aircraft equipment, and personal protective equipment are required to enhance the safe transportation of personnel and property. (Definition 350 DM 1 Appendix 2)

End Product contract (Also termed a “Performance Based Contract”): A procurement contract for data or products, obtained by contractors through the use of aircraft, where (a) DOI does not

have operational control of the aircraft, (b) no DOI personnel are aboard the aircraft and (c) the aircraft is operated entirely within the applicable 14 CFR as a civil aircraft. (See Operational Procedures Memorandum (OPM) – 35.)

Additional aviation management definitions can be found in the [Departmental Manual, 350 DM 1, Appendix 2, p. 8](#)

These definitions are in addition to those found in [14 CFR Part 1](#).

Introduction

Statement: Management at all levels in U.S. Geological Survey (USGS) is responsible for the safety of aviation operations under their control. Direct supervision, training, and providing safe working conditions are included in management responsibility. Managers must monitor programs, identify hazards, and implement controls to acceptable levels whenever risk cannot be totally eliminated.

Purpose: Department of the Interior (DOI) policy in the form of OAS issued [Operational Procedures Memorandum 2014-06](https://www.doi.gov/sites/doi.gov/files/uploads/opm-06.pdf) (OPM-6) <https://www.doi.gov/sites/doi.gov/files/uploads/opm-06.pdf> requires all Bureaus with aviation programs to develop and publish a National Aviation Management Plan (NAMP) that addresses the minimum elements to improve aviation safety and realize operational efficiencies through broad standardization.

Objective: The NAMP provides a comprehensive bureau-wide aviation plan that will allow all USGS aviation users to easily acquire the necessary policies and information to manage aviation operations. The NAMP describes intent, policy, authority, objectives, roles, responsibilities, and procedures for the management and implementation of the USGS aviation management program. Further guidance can be found on the [USGS Aviation Safety Program website](#).

Scope: The NAMP sets guidelines for all aviation resources used in USGS mission work. All aircraft, manned or unmanned, owned, rented, leased, or chartered are included. The use of cooperator aircraft (i.e. military, other government agencies, and affiliate aircraft [private cooperators]) is also included. The NAMP is consistent with the provisions of DOI and USGS aviation policy. It serves as guidance, or best practices, for flights outside of the US.

The NAMP does not apply to USGS personnel traveling aboard commercial airliners.

1. Aviation Organization

1.A. Roles and Responsibilities

(1) Department of the Interior

a. Office of Aviation Services (OAS). The OAS is responsible for DOI functions related to aircraft services. The OAS provides service offerings that include aviation safety services (mishap investigations, program evaluations, and safety alerts/bulletins), aviation technical services, fleet management, fleet property accountability, aviation user training services, and flight scheduling and coordination services. Consult 350 DM 1 for a complete list of functions and responsibilities. The OAS organizational structure and responsibilities are contained in 112 DM 12. (Also reference USGS SM 445-2-H chapter 27.5)

b. Interior Business Center (IBC) Acquisition Services Directorate (AQD). The AQD provides DOI-wide centralized contracting for aviation flight services for DOI and DOI customers. AQD is responsible for the centralized contracting for aircraft and related services for all DOI bureaus and other federal and State agencies upon request. Other acquisition management activities include property accountability and small purchase service in support of OAS and Bureau operations including DOI fleet aircraft.

c. The Executive Aviation Board of Directors (EAB) provides executive oversight and performance accountability and assures that DOI-wide strategies and initiatives are developed and implemented consistently throughout the DOI. The EAB is comprised of Deputy Director level representatives from each DOI bureau and the Deputy Assistant Secretary for Public Safety, Resource Protection and Emergency Services.

d. The Executive Aviation Committee (EAC) incorporates a senior line manager at the Associate Director level from each bureau and the Office of Aviation Services director for the purpose of formulating DOI-wide aviation policies and procedures in conjunction with OAS. The Executive Aviation Subcommittee (EAS) is comprised of Bureau Aviation Managers who act as a working group of Aviation Subject Matter Experts for the EAC. (350 DM 1.)

(2) U.S. Geological Survey

a. Associate Director (AD) of Administration serves as the bureau Designated Agency Safety and Health Officer (DASHO) with sufficient authority to effectively represent the interests and support of the Director in the management and administration of the USGS aviation program and represents the USGS on the EAC. EAC duties has been delegated to the **Office of Management Services (OMS) Chief**. The AD for Administration is responsible for the implementation, execution, and enforcement of DOI aviation policy and the development and execution of USGS aviation policy and program development and oversight. These responsibilities are exercised through the OMS Chief, the Bureau Safety Manager, the Specialized Safety Programs Chief, and ultimately the BAM. Specific responsibilities are outlined in 350 DM 1 and USGS SM 445-2-H Chapter 27.5.

b. Bureau Aviation Manager (BAM) serves as the principal aviation advisor for USGS and manages the aviation safety program. The BAM function and responsibility resides with the USGS Office of Management Services (OMS) Occupational Safety and Health Management Branch (OSHMB) in the Denver Office.

1. Primary responsibility is to implement the USGS aviation safety program.
2. Coordinates with OAS for USGS aviation program evaluations and safety.
3. Performs as the principal USGS representative for accident investigations and review boards.
4. Manages the overall aviation safety effort of USGS and serves as principal advisor on all technical and administrative aviation safety matters.
5. Analyzes accident and incident trends and monitors Aviation Mishap Information System (AMIS) Safety Communiqué (SAFECOM) reports and incidental serious safety concerns.
6. Serves as USGS representative to the EAS who reports to the EAC.
7. Provides national direction to the aviation safety program.
8. Disseminates aviation related policy and technical information.
9. Coordinates with OAS for aviation support, when needed, and USGS aviation program evaluations.
10. Assigns representatives to accident review boards and actively works with other program managers to ensure operational aviation issues are addressed in program and policy decisions.
11. Coordinates fleet aircraft acquisition, replacement, and disposal to support agency programs.
12. Responsible for budget submissions, tracking, and aviation expenditures.
13. Assigns a liaison to accident investigation teams.
14. The BAM is responsible for assisting OAS with the coordination of DOI Aviation Program Evaluations.

c. Regional Directors (RD) are responsible for ensuring that a safe and efficient aviation program exists in their region. Duties are delegated to the **Regional Safety Manager (RSM) with assistance from Regional Aviation Managers (RAMs) and BAM.**

1. Ensures all aviation activities are assessed for risk.
2. Supports and disseminates aviation policies and information.
3. Ensures that aviation training is in compliance with requirements and that proper equipment is utilized.
4. Ensures availability of aviation expertise to field managers who are responsible for aircraft operations.
5. Assigns a liaison to aviation accident investigation teams.
6. Promote and support SAFECOM. (Refer to section 3C of this NAMP).
7. Participates in or assigns a senior line officer from the region to participate in an Aircraft Mishap Review Board (AMRB) for incidents occurring within their region.
8. Identifies and submits program requirements.

9. Expands DOI pilot standards and crew requirements as needed.

d. Regional Aviation Managers (RAMs) provides technical expertise and aviation safety oversight in their geographic area. They also observe regional aviation activities and provides liaison with the RSM, BAM, Unit Aviation Manager, and other agencies as appropriate.

1. Reviews proposed changes in policy and procedure.
2. Coordinates or may instruct aviation training courses as requested.
3. Reviews, as requested, district/unit aviation management plans.
4. Reviews Project Aviation Safety Plans (PASP) (see Appendix A for an example of topics that may be included in the plan); coordinates the planning and completion project plans and risk assessments.
5. May be delegated to perform as USGS representative for accident investigations and review boards.
6. Disseminates aviation policies and information.

e. Unit Leaders or Center Directors are responsible for ensuring that a safe and efficient aviation program exists in their unit or center. Unit or Center directors must approve and sign Unit/Center Aviation Management Plans (CAMPs) and PASPs.

f. Unit or Center Collateral Duty Aviation Program Coordinator is responsible for providing technical expertise and operational oversight to local flight operations and safety programs.

1. Responsible for writing and implementing the Unit/Center Aviation Management Plan (see Appendix B for an example of topics that may be included in the plan).
2. Review PASPs (see Appendix A for an example of topics that may be included in the plan) and coordinates the planning and completion of project plans and risk assessments.
3. Ensure that Project Aviation Chiefs (individuals who plan, organize, and manage the aviation operations of a project using aircraft) are qualified per OPM-04.
4. Appraise the Unit or Center and RAM of aviation concerns and problems.
5. Serve as the Unit Aviation Training Administrator for the Interagency Aviation Training (IAT) system.

g. Project or Task Chief plans and manages aircraft use according to policy, develops and submits project plans and risk assessments, and assigns personnel to projects. Some of their duties include procuring, scheduling, initiating flights, flight following, and processing payments.

1. Ensures that aircraft and pilots are appropriately approved for the mission.
2. Requests technical assistance for aviation problems.
3. Validates that all aviation users meet the training requirements of the [Interagency Aviation Training Guide](https://www.iat.gov/docs/IAT_Guide_2017_10.pdf) https://www.iat.gov/docs/IAT_Guide_2017_10.pdf and OPM-04, *Aviation User Training Program*.

4. Requests waivers, exemptions, or exceptions to policies, standards, procedures, or other instructions. Requests must be submitted to the appropriate authority through the "Unit or Center Collateral Duty Aviation Program Coordinator" or RAM.

h. Managers and Supervisors. Supervisors and managers at all levels are delegated authority and responsibility for the safety of aviation operations under their control.

All USGS managers and supervisors who supervise employees that use aviation resources to achieve mission goals must ensure all aviation operations are conducted in a safe, efficient and environmentally sound manner. Managers and supervisors whose employees use aviation resources must:

1. Comply with the DOI and Bureau regulations, policies, and guidelines;
2. Ensure identified personnel receive USGS mandated aviation safety training (See section 5.B.) and aviation safety training records are properly maintained;
3. Ensure personnel are provided with, and properly wear, appropriate personal protective equipment;
4. Ensure that identified personnel receive and complete Water Ditching Survival (section 5.F.); and,
5. Ensure employees whose job duties require aviation use are responsible for complying with all requirements specified in the USGS aviation policy.

i. Aircrew Members working in and around aircraft are essential to ensure the safety and successful outcome of the mission. Aircrew members are required to either be on board or attend to the loading and unloading of passengers and cargo at all landings and takeoffs, attend to external loads, and ensure that passengers have received a safety briefing prior to all special use missions.

j. Flight Followers are responsible for monitoring aircraft flight activities in accordance with DOI and USGS policies. They may work in a dispatch center or as a collateral duty at a remote location where they have the ability to monitor a flight by radio or a satellite tracking system and the means to initiate an aircraft mishap emergency response should the need arise. Ideally, flight followers should meet the requirements of the training listed in section 5.C.(3) of this NAMP. See sections 3.D.(2)(b) and 4.I. of this NAMP. Flight followers are:

1. Responsible for receiving the flight plan from the pilot, communicating with crewmembers at prescribed times, monitoring flight location, and logging a flight from start to completion, and be prepared to initiate the actions listed in their respective Aviation Mishap Response Plan (AMRP).
2. Must have the knowledge, skills and abilities of this responsibility and be familiar with the Flight Plan, Project Aviation Safety Plan, and the AMRP. Understand the terms "Overdue Aircraft," "Missing Aircraft," and "Aircraft Mishap" and know what actions are required for each. See section 3.D.(2) of this NAMP.
3. Remain on duty until the aircraft operations are concluded unless relieved by another designated flight follower.

4. Initiate the actions listed in their respective AMRP when deemed necessary. Keep a flight log to include initial take-off time, aircraft N-numbers, check-in time, number aboard, fuel on-board, location information, and final landing time.

5. Retain flight logs in the event of a mishap.

k. Employees, including USGS personnel, volunteers, emeriti, cooperators, persons supervised by USGS personnel, and Support Service Contractors are responsible for knowing and following applicable policy and directives, maintaining training by attending required aviation training in accordance with DOI and USGS policies, using appropriate personal protective and life support equipment, reporting potential and actual problems, and ensuring the safety of themselves and others.

l. Pilot-in-Command (PIC) is responsible for conducting aviation operations in accordance with applicable policy and directives; responsible for maintaining proficiency and qualification standards appropriate to the missions performed; responsible for the safety of the aircraft and personnel on board, and has the sole authority for operations of the aircraft; ensures airworthiness and operates aircraft for maximum safety and efficiency; provides aircraft briefings; reports unsafe operations, conditions, and situations using the SAFECOM system; complies with Aviation Life Support Equipment (ALSE) requirements; and completes payment documents.

1.B. Objectives of the aviation enterprise

The USGS uses aircraft as tools to provide reliable scientific information, describe and understand the Earth, minimize loss of life and property from natural disasters, manage water, biological, energy, and mineral resources, and enhance and protect our quality of life. Aviation is a necessary and acceptable management tool when used in a manner consistent with the USGS mission. The primary objective is the elimination of unnecessary or unacceptable risks associated with the use of aircraft in support of DOI and USGS programs. Mishap prevention is an inherent function of management since all aircraft mishaps can be prevented. USGS aviation program objectives include:

(1) Promote efficient aviation policy and aviation management processes.

(2) Provide guidance for aviation programmatic and operational risk management.

(3) Promote an effective aviation training program for management and aviation users.

(4) Provide aircraft acquisition support as specified by management objectives.

(5) Leads aviation safety assurance and promotion programs.

(6) Promote aviation safety awareness among aviation users and their supervisors.

1.C. Authorities

The directives listed below are adopted as policy and must be made available to all USGS employees involved in aviation activities.

(1) Title 14 CFR Part 1 through 199. The Federal Aviation Regulations (FAR) regulations are the basic guide for piloting, aircraft operations, and airspace within the United States.

(2) Department of Interior Manual (DM) Parts 350-353. DM Parts 350-353 establish mandatory responsibilities, policies, and procedures for the overall management and operations of aviation resources within DOI.

(3) USGS, DOI Manual 120 DM 3. Establishes the Associate Director of Administration providing oversight of Bureau aviation management.

(4) Office of Aviation Services Operational Procedures Memoranda. Published under the issuing authority of the OAS Director, OPMs are interim directives used to disseminate timely information and procedures.

(5) Office of Management and Budget (OMB) Circulars A-76, A-123, A-126. Published under the issuing authority of the OMB, the Circulars provide instructions or information to Federal agencies.

(6) USGS, Survey Manual 445-2-H CHAPTER 27 Aviation Safety describes intent, policy, authority, objectives, roles and responsibilities, and procedures for the management and implementation of a comprehensive bureau-wide aviation management program. The NAMP is based on the authority in the USGS Survey Manual (SM) 445-2-H CHAPTER 27 Aviation Safety.

(7) DOI Temporary Duty Travel Policy Use of Government Aircraft found in USGS FOP Chapter 26.2 <https://internal.usgs.gov/ops/ofs/fop-handbook/26-2-DOI-TDY-Policy-8-31-18.pdf>. This policy includes the Use of Government Aircraft under DOI TDY Policy Chapter 4.11.

1.D. Revision schedule

The USGS National Aviation Management Plan will be formally reviewed and approved by the AD Administration at a minimum of every three years. NAMP approval authority will not be delegated below the AD of Administration (per OPM-6). The USGS National Aviation Manager will review the NAMP annually and is authorized to make interim revisions as required. The NAMP will be issued annually on or before the fiscal year end.

1.E. Scope of the NAMP

(1) This NAMP applies to USGS personnel, employees, volunteers, emeriti, cooperators, collaborators, persons supervised by USGS personnel, and Support Service Contractors (all hereinafter referred to as “USGS personnel”), who are involved in aviation activities and flight services other than those acquired on a seat-fare basis from air carriers, per 350 DM1.1.

a. Persons employed by or whose work is directed solely by cooperators or contractors are exempt from provisions of the NAMP *except* when their duties include use of flight services which are under operational control of the USGS or present a serious safety hazard to USGS personnel or property. End product contractors (see OPM-35) are an example of exempt persons.

b. All aircraft, manned or unmanned, owned, operated, contracted, leased, rented, or under the jurisdiction of the USGS will be operated in accordance with this NAMP.

c. International operations. This NAMP does not apply in policy to international USGS operations (except for fleet operations). However, USGS personnel should attempt to follow the NAMP to the extent practical.

(2) Compliance. USGS aviation activities will be performed in accordance with the NAMP.

a. Exceptions and Waivers. Requests for exceptions and waivers from DOI and USGS aviation policies must be coordinated with the Bureau Aviation Manager and approved by the Bureau Safety Manager or the OAS Director, as applicable.

b. Noncompliance. Purposeful actions contrary to DOI and USGS aviation policies may jeopardize safety, eliminate Federal Tort Claims Act benefits, or result in administrative disciplinary action.

(3) Employee Prerogative. USGS personnel may elect without fear of reprisal not to fly under any condition they consider to be unsafe. These situations shall be reported as soon as possible to the Flight Manager/Chief of Party, employee’s Line Supervisor, and, when warranted, to the OAS.

(4) Private Life Insurance Exclusionary Clauses. Many private life insurance policies contain exclusionary clauses for such activities as SCUBA diving, skydiving, and participation as pilots, aircrew members, or passengers on Government aircraft (not scheduled air carriers such as Delta, United, etc.), per Personnel Management Bulletin No. 94-38, dated May 4, 1994. Identification of any exclusionary clauses is the responsibility of the employee.

(5) Research Work Orders/Cooperative Agreements/Support Services Contracts/Grants, etc. Agreements that involve the use of flight services must contain language that all persons onboard aircraft under the operational control of USGS are subject to the directives in this NAMP.

2. Aviation Administration

2.A. Contracts (non-fleet)

(1) General.

The DOI Interior Business Center (IBC), Acquisition Services Directorate – Boise Branch (AQD) is responsible for the centralized contracting of aircraft and related aviation services that support DOI agency program. OAS-Technical Services, acting as COR and COTR, must approve all aircraft operators who provide contract, on-demand charter, or hourly rental service to USGS. (Contract, Rental, and Charter Aircraft are covered in USGS SM 445-2-H chapter 27.4 A. (2)) USGS currently uses Cross-Servicing Agreements with IBC AQD allowing USGS Purchase Requisitions to be routed directly to the IBC AQD office. For more information, please refer to the USGS FBMS Aviation Library:

<https://insight.usgs.gov/aei/offices/oa/oafm/training/Aviation/Forms/AllItems.aspx>

(2) Procurement

All aircraft services required by any USGS unit must be acquired through the AQD-OAS procurement process as outlined below, with the following exceptions:

- **Seat fare** on flights with scheduled air carrier (an airliner).

- **End Product contracts** can be used to obtain data or samples such as aerial photographs, per head animal capture, Light Direction And Range (LiDAR) survey data or maps, airborne geophysical survey data, or aerial wildlife survey data. Aircraft may be used to obtain products that meet contract specifications. End Product contracts are not flight service contracts and do not need to be obtained through OAS. However, very strict limits on contract specifications are needed to guarantee that the contractor alone assumes operational control of any flights. Also, absolutely no USGS personnel are allowed on any End Product contract flights. Refer to OPM-35 for further guidance, which can be found at:

<https://www.doi.gov/sites/doi.gov/files/uploads/OPM-35.pdf>.

a. Procurement and Documentation of Competition

Any single procurement of flight services that exceeds \$2,500 must use a best value determination of at least three vendors. Cost comparisons must include all anticipated cost factors including ferry time. Pricing information contained in the AQD-OAS source list may be used for this comparison. Projects not exceeding \$25,000 may be obtained through the Aircraft Rental Agreement (ARA) or by contract through AQD contracting services. Projects exceeding \$25,000 require assistance through AQD contracting services submitted on Form AQD-91.

b. Billee Code

Each unit or office using flight services, other than commercially scheduled carriers, must have an individual OAS billee code. This identifier is used for billing flight services and is required to complete Aircraft Flight/Use and Aircraft Use Reports (form AMD-23E). Each office is responsible for reconciling billing discrepancies. A link to billee code lists can be found [here](#).

c. Other Services

Other aviation-related services, such as the purchase of aircraft components, parts and accessories, maintenance services, etc., must be procured through the OAS procurement system.

(3) Aircraft Sources

a. Approved Sources

Approved sources for flight services include: (1) DOI fleet aircraft, (2) USFS fleet aircraft, (3) AQD-OAS procured/contracted aircraft, and (4) Affiliate or Cooperator aircraft approved under an OAS agreement. (See section 4.E.)

b. Unauthorized Procurement

Unauthorized acquisition of aviation services may result in a ratification process. The Unit or Center may incur a penalty payment imposed by OAS through AQD to cover the cost of ratification.

(4) Procurement of Flight Services from Other DOI Bureaus

Before using fleet aircraft assigned to other DOI bureaus, field units are responsible for contacting the provider of the service to determine the payment rates for the use of the aircraft, pilot services, and per diem. Flight hours are reported on Form OAS-2. No Interagency Agreement (IAA) is needed. Administrative Officers transfer funds between bureaus or cost centers using a journal voucher. For billing assistance, contact Sherry Lambert-OAS <sheryl_lambert@ios.doi.gov>, or Maria Flores-OAS Fleet Accountant <maria_flores@ios.doi.gov>.

(5) Procurement of Flight Services from Non-Federal Public Agencies

It is Federal policy not to compete with private industry. USGS procurement of and reimbursement for flight services from non-Federal public agencies are generally not authorized unless:

1. That agency is providing the service as a commercial operator.
2. The operation is conducted with civil aircraft when no operating certificate is required.
3. The services are necessary to respond to an imminent threat to life or property, and no service by a commercial operator is reasonably available to meet the threat.

The decision not to use a commercial operator must be documented in writing and made part of the permanent incident record. Field units that anticipate using resources belonging to other Government agencies must establish the appropriate approval and agreement documents or cooperator aircraft approval under 351 DM 4 through their RAM and OAS (see section 4.E).

Services are acquired on an hourly rate basis and can be used when the cost of services is \$25,000 per transaction or less. AQD and OAS provide an approved list of rental sources based on a standard ARA (OAS source list) from which all vendors must be selected.

(6) Contract Services

If the cost for using non-USGS-owned aircraft will exceed \$25,000, the aircraft service must be obtained by contract, rather than ARA, and be submitted on Form AQD-91, Request for Contract Services, approved by an official who has authority to certify that funds are available and submitted to AQD.

a. Requesting Procedures (lower 48 States)

Requests for services to be performed in the contiguous 48 States must be submitted to the AQD office using a USGS PR sent to Issuing Office G99. The AQD-91 will be used to fill out the information on the USGS PR. Tip Sheets are located

at: <https://insight.usgs.gov/aei/offices/oa/oafm/training/Aviation/Forms/AllItems.aspx>. Once flight dates have been confirmed, the project manager will complete an AQD-91 Order Request Form for DOI Flight Service, to include the Cost Comparison/Best Value section, and email it to the Interior Business Center (IBC) Acquisition Services Directorate (AQD) at amd91@nbc.gov.

Assistance in finding aircraft service vendors can be found at [OAS Flight coordination center](#) or by calling 208-334-9314 or 208-334-9315 for Western Regions or 678-894-9225 for Eastern.

The requesting office must submit the following:

1. Proposed contract requirements/specifications.
2. List of Government-furnished equipment.
3. Justification for other than full or open competition.
4. Justification for specific make and model.

Requests for contract services should be submitted at least 120 calendar days in advance of the anticipated date of contract award for competitive acquisitions and 160 calendar days for noncompetitive acquisitions: [USGS Aircraft Services SOP \(excluding AK\)](#).

b. Requesting Procedures in Alaska

Requests for services to be performed in Alaska and Hawaii must be submitted to the AQD office using a USGS PR sent to Issuing Office G98. The AQD-91 is required and will be used to fill out the information on the USGS PR. Tip Sheets are located at: <https://insight.usgs.gov/aei/offices/oa/oafm/training/Aviation/Forms/AllItems.aspx>

Assistance in finding aircraft service vendors can be found at [OAS Flight coordination center](#) or by calling 208-334-9314 or 208-334-9315 for Alaska. Refer to section 4.L for Alaska field plan website reporting requirements.

(7) Exclusive Use Contracts

Exclusive use contracts are awarded for a specific time period (30-day, 90-day, etc.). During this time period, the Government has exclusive use of the aircraft. The Government may, at its option, release the aircraft for other work for a specified period of time.

(8) Aircraft Rental Agreements

The OAS has established ARAs with air taxi commercial operators throughout the contiguous United States, Alaska, and Hawaii, based on user needs. An ARA is not a contract; it is a written instrument of understanding that is negotiated between OAS and a vendor. Current Federal acquisition limitations restrict use of the ARA to procurements less than \$25,000.

(9) Emergency Aircraft Procurement

a. Definition of Emergency

The justification for the procurement of emergency aircraft services must meet the following criteria:

1. Life Threatening. A situation or occurrence of a serious nature, developing suddenly and unexpectedly, and demanding immediate action to prevent loss of life.
2. Operational. An unforeseen combination of circumstances that calls for immediate action but is not life threatening.

b. Ordering Emergency Aircraft Services

Authorized personnel from the requesting USGS unit can contact the appropriate OAS Flight Coordination Center or use the ARA for requests for charter aircraft services to meet emergency needs. Pilot and aircraft will be approved (carded) for the intended mission. If, due to the nature of the emergency, the pilot and/or aircraft are not approved for the intended mission, a SAFECOM will be submitted immediately after the mission.

Note: All such procurements will have a documented risk assessment completed.

2.B. Fleet Aircraft Acquisition and Disposition

(1) General. Fleet aircraft (including Unmanned Aircraft Systems [UAS]) may be acquired by USGS when warranted by mission requirements, amount of use, availability of a qualified pilot, and other factors.

(2) Acquisition. Acquisition of fleet aircraft requires that OMB Circular No. A-76 (revised), Performance of Government Aircraft, must be satisfied and approved by appropriate Bureau and DOI officials, per 353 DM 6. The requesting agency is responsible for funding both initial and replacement aircraft.

a. Fleet Aircraft Acquisition

Aircraft bailed by DOI (on loan from another agency), owned by DOI, or leased by DOI with the intent to purchase are fleet aircraft as defined in 350 DM 1, appendix 2. DOI (OAS) fleet aircraft may be assigned to USGS by OAS. Fleet aircraft may be acquired by OAS through a variety of sources such as purchase, donation, excess, bailed, or seizure.

1. The addition of an aircraft to a local unit program, to include UASs, must be requested through the BAM. The relative merits of purchase versus contracting must be evaluated in accordance with OMB Circular A-11, Part 7, and Exhibit 300 process. The justification shall

include mission purpose, the amount and kind of usage, pilot arrangements, acquisition and operating costs, equipment enhancements, and financial reserves for aircraft replacement purposes. Proposals must also include information on opportunities for sharing use with other USGS offices or agencies.

2. Unmanned Aircraft Systems are considered fleet aircraft and subject to all policy and procedures governing the acquisition, funding, and use. No field unit may acquire or use UAS for any purpose without coordination with the USGS National UAS Program Office (NUPO), advanced approval by the BAM, and compliance with OPM -11, DOI Use of Unmanned Aircraft Systems (see section 4.J). The DOI is currently under a UAS ban. Contact the NUPO for further information. <https://www.usgs.gov/mission-areas/land-resources/about/national-unmanned-aircraft-systems-project-office>

Additional congressional allocations for DOI aircraft must be requested by OAS on behalf of USGS well in advance of need and must be supported with detailed information. The USGS Director may request the Associate Director, OAS, to reassign excess fleet aircraft to USGS units.

b. Fleet Aircraft Disposition

OAS is responsible for disposing of aircraft in accordance with Federal Property Management Regulations. Disposal of aircraft, to include UASs, must be coordinated with the BAM for possible reassignment or transfer of the aircraft reserve funds.

2.C. Use reports and payments processes

(1) Aircraft Use Payment Systems

a. Daily Flight Logs. The USGS aviation contractor is responsible for completing a Daily Flight Log that is accurate and legible. All sections of the daily flight log should be completed. Reasons for late flight departure or early returns should be noted in the remarks section of the flight log. A USGS employee, preferably the Project Chief, for the flight should review the flight log for completeness and accuracy and then sign.

b. Aviation Cross Servicing Process Overview

DOI Aviation Acquisitions Directorate (AQD) provides aviation contracting services to DOI bureaus. In previous years, the USGS entered into an Inter-Agency Agreement (IAA) with AQD. AQD established sales orders and billed the USGS via Intra-Governmental Payment and Collection (IPAC) for all services rendered. The Cross Servicing process bypasses the need for AQD to establish a sales order and the need for an IAA and IPACs. Link to USGS FBMS Aviation SharePoint for tip sheets and POC information: <https://insight.usgs.gov/aei/offices/oa/oafm/training/Aviation/Forms/AllItems.aspx>
The following steps are taken:

- USGS will provide AQD acquisition personnel a Cross Servicing user ID in FBMS with authorization to post obligations against a specific PRISM Site/FBMS Purchasing Group directly citing USGS funding. USGS will also provide AQD personnel a COR user ID in FBMS with authorization to accept services.

- Your cost center enters a PR referencing that specific Site/Purchasing Group for the AQD CO to be able to obligate the funds. (AQD provides specific instructions on how PR should be entered and what additional information must be attached) Link to USGS FBMS Aviation SharePoint for tip sheets and POC information: <https://insight.usgs.gov/aei/offices/oa/oafm/training/Aviation/Forms/AllItems.aspx>.
- Using a Cross Servicing ID, AQD awards a contract/funded order (e.g. IDIQ, BPA Call, TO) to a vendor for aviation services, citing the Customer Bureau's accounting lines
- AQD creates equipment records in FBMS.
- After the vendor completes the flight(s), they login to Aviation Information Reporting Support (AIRS) to create an Aircraft Use Report (AUR) for a specified time period. Once the vendor is ready to submit their AUR, if the government representative is physically present, they can review the AUR within AIRS, update it with charge code and mission code information. Generally, the form AMD-23 is filled in, signed by the Gov't rep (USGS flyer or Project chief) and provided back to the vendor. The vendor submits the AUR via AIRS and it is interfaced into FBMS.
 - the vendor is responsible with obtaining a hard copy signature (AQD-23) and submitting it as an attachment to the IPP invoice.
- After submitting the AUR, the vendor submits the corresponding invoice via IPP and includes a PDF copy of the AUR from AIRS, as well as any other required supporting documentation.
- AQD Acquisition personnel will review the AUR record for accuracy related to the contract details and compare it to the invoice and invoice attachments. AQD
 - If the AUR and invoice are to be approved:
 - As per the current invoice review and approval process, the AQD COR/Receiving Official must review the invoice and enter the GR/SES. If the funded order requires CO invoice approval (as per the Aviation business process), the CO must mark the invoice as approved.
 - AQD Acquisition personnel will mark the AUR status as Acquisition Reviewed.
 - If the AUR and invoice are to be rejected:
 - AQD Acquisition personnel will mark the AUR as Rejected
 - AQD COR/Receiving Official will reject the invoice and reverse the SES (trash can)
 - If the invoice is to be rejected, but not the AUR
 - AQD COR/Receiving Official will reject the invoice and reverse the SES (trash can)
 - If the invoice is approved, it will route to the USGS AP Tech for payment. AP can also monitor Invoice in Progress Reports to ensure the AQD COR is accepting invoices timely.
- The Customer Bureau (USGS) staff will then review the AUR for accuracy and update the charge code and mission code information, if applicable and mark the AUR status as Bureau

Accepted or Rejected. If rejected, the Customer Bureau must also notify the AQD COR/Receiving Official if they want the corresponding invoice rejected as well.

- Once the invoice is paid and the AUR is in a Bureau Accepted status, AQD personnel change the status of the AUR to Completed.

<https://internal.usgs.gov/ops/safetynet/aviationprogram/procurement.html>

2.D. Record keeping requirements

(1) DOI Aircraft Flight/Use and Aircraft Use Reports. For each flight on fleet aircraft, Form OAS-2, Aircraft Flight/Use Report, must be completed for billing and record purposes and submitted to OAS-Technical Services. For contract, rental, or charter aircraft, Form AMD-23E, Aircraft Use Report, must be used for the Cross Servicing purposes.

a. DOI/USGS fleet aircraft, Form OAS-2.

b. Contract and Basic Ordering Agreement (BOA) aircraft, Form AMD-23E.

c. Cooperator aircraft under the operational control of DOI, Form AMD-23E with the comment “Not for payment purposes.”

d. Privately owned aircraft used on official business, Form OAS-2.

Note: When future interagency forms are developed, those forms should be used as appropriate.

(2) Nonrevenue Flights (i.e. Cooperator Aircraft, see section 4.E)

Each nonrevenue flight on approved cooperator aircraft (military or other public agencies) or approved privately owned aircraft used for personal transportation on Government travel must be documented on Form OAS-2 or AMD-23E; refer to 350 DM 1.9.

The comment “Not for payment purposes” must be included.

(3) Use of Non-Federal Public Aircraft

USGS reimbursement for the use of a State/local government owned and operated public aircraft as a first responder resource must be documented to show that consideration was given to commercial operators and that no commercial operator was available to respond to the incident in the same manner and timeframe as the non-Federal public aircraft. Documentation must be maintained with the incident records. (See Section 2.A.(5).)

Note: This section refers to the operation of an aircraft by a government agency that does not meet civil standards or that does not have a commercial operating certificate (if one is required). Operations that are conducted by a government agency using civil certificated aircraft that do not require an operating certificate may be utilized when approved as an affiliate aircraft by OAS.

2.E. Bureau-specific administrative requirements (Not Applicable).

3. Aviation Safety

3.A. Policy

The safety of USGS personnel is paramount. Mission accomplishment is important, but it never overshadows the need to protect human life and equipment from undue risks. The Directorate will support any Organizational Manager and Supervisor who suspends a project based on a subjective analysis that completion cannot be accomplished safely. Leadership at all levels must foster a USGS safety culture that encourages employees to communicate unsafe conditions, policies or acts that could lead to aviation incidents or accidents. Each USGS employee and contractor involved with aviation has the responsibility to plan missions thoroughly, conduct missions with a conservative attitude, and with respect for the aircraft and the environment in which our missions operate. (Safety Program elements are covered in USGS SM 445-2-H chapter 27.4.)

(1) USGS Aviation Safety Management System (SMS). SMS is not a stand-alone safety program to be followed. It is a system for organizing existing safety processes around the concept of systems safety. SMS incorporates a proactive approach using hazard identification and risk management to achieve accident prevention. The USGS Aviation SMS is compatible with DOI policy and is constantly evolving. The USGS Aviation Safety Program complies with OPM 6 and is organized using the SMS pillars of Safety Policy, Safety Risk Management, Safety Assurance, and Safety Promotion.

a. USGS defines safety culture as the core values and behaviors of all members of an organization that reflect a commitment to conducting business in a safe and environmentally responsible manner. The Safety Culture Policy Statement informs the science community of the Bureau's safety expectations but does not create any additional regulatory requirements. The non-regulatory statement defines USGS's approach to lead scientific activities beyond a checklist-inspection approach toward a systemic, comprehensive approach to compliance and risk reduction.

b. USGS recognizes that the human factor is the critical element in aviation safety, and that prescriptive regulations can reduce risks, but they alone are not enough. Everyone involved in scientific work must adhere to a set of core values that places safety above all else.

c. Safety Culture Policy Statement establishes the Bureau Director's safety expectations but does not create any additional regulatory requirements. The nine characteristics of a robust safety culture are:

1. Leadership Commitment to Safety Values and Actions. Leaders demonstrate a commitment to safety and environmental stewardship in their decisions and behaviors;

2. Hazard Identification and Risk Management. Issues potentially impacting safety and environmental stewardship are promptly identified, fully evaluated, and promptly addressed or corrected commensurate with their significance;

3. **Personal Accountability.** All individuals take personal responsibility for process and personal safety, as well as environmental stewardship;

4. **Work Processes.** The process of planning and controlling work activities is implemented so that safety and environmental stewardship are maintained while ensuring the correct equipment for the correct work;

5. **Continuous Improvement.** Opportunities to learn about ways to ensure safety and environmental stewardship are sought out and implemented;

6. **Environment for Raising Concerns.** A work environment is maintained where personnel feel free to raise safety and environmental concerns without fear of retaliation, intimidation, harassment, or discrimination;

7. **Effective Safety and Environmental Communication.** Communications maintain a focus on safety and environmental stewardship;

8. **Respectful Work Environment.** Trust and respect permeate the organization with a focus on teamwork and collaboration; and

9. **Inquiring Attitude.** Individuals avoid complacency and continuously consider and review existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.

(2) Program Elements. The following six elements are essential to USGS aviation safety programs (Safety Program elements are covered in USGS SM 445-2-H chapter 27.4 B):

a. Aviation Safety Program Responsibilities.

b. Aircraft Mishap Prevention Program.

c. Aviation Review Program.

d. Aviation Safety Awards Program.

e. Aircraft Mishap Investigation.

f. Aviation Safety Education and Training.

(3) Staffing and education. (Staffing and education are covered in USGS SM 445-2-H chapter 27.5) The USGS Director shall provide adequate staffing and training of personnel necessary to ensure an effective aircraft mishap prevention program. These positions may be classified as full-time equivalent or collateral duty based on USGS management needs assessment. The following minimum standards apply in the development of a USGS aviation safety program:

a. The Bureau Aviation Manager/Aviation Safety Manager (BAM) shall be designated to administer the Bureau aviation program at the national level. This individual will be thoroughly knowledgeable regarding Bureau aviation activities and will meet minimum training requirements specified in the Aviation User Training Program. While it is desirable that this individual hold a Federal Aviation Administration (FAA) Commercial Airman Certificate, pilot certification is not mandatory. However, the individual shall be trained in the aviation safety management subjects listed below. If not trained in these subjects, the individual shall attend formal course(s) of instruction in concepts and methods necessary to establish and maintain a national level aviation safety program within 12 months of appointment.

b. Minimum education includes professional institution instruction in:

1. Aircraft mishap prevention concepts and methods.
2. Aviation safety program structure and organization.
3. Management skills.
4. Aviation psychology/human factors.
5. Biomedical aspects of aviation safety.
6. Aviation safety program evaluations.
7. Motivating management.
8. Managing a part-time safety office.
9. Legal aspects of aviation safety.
10. Risk analysis and management.

c. The education and training requirements specified for the positions identified above are minimums, regardless of classification of the position as full-time or collateral duty.

(4) General Education and Training. The education and training of USGS personnel at all organizational levels is the responsibility of management. The minimum level of education and training specified in the 350-354 DM series, and the 485 DM series shall be provided to appropriate Bureau personnel. (See section 5.A)

3.B. Risk Management

Management at all levels in US Geological Survey (USGS) is responsible for the safety and of aviation operations under their control. Direct supervision, training, and providing safe working conditions are included in management responsibility. Managers must monitor programs, identify hazards, and implement controls to acceptable levels whenever risk cannot be totally eliminated.

(1) General. Managing risks is well recognized to improve the likelihood of successful mission accomplishment and applies to all USGS aviation missions. The risk management process is designed to manage risks to acceptable levels by the identification of hazards, the assessment of the impact of those hazards, and the mitigation of the hazards to safely accomplish the mission. DOI uses a 5-step process to describe the risk management process.

(2) Risk Management 5-Step Process. Risks must be managed throughout the mission. It starts in the planning stage, continues to the approval and scheduling phase, is evaluated and adapted during the execution phase, and is analyzed and collected as lessons learned in the post flight phase.

a. Identify Hazards: The first step in risk management is to identify hazards. The hazards are the potential sources of danger that could be encountered while performing a task or mission. Hazards include weather, time of flight, terrain, equipment, training, and proficiency level of personnel.

b. Assess Risk Level(s): Hazard or risk assessment is part of the risk management process. Risk assessment can range from simple to complex but must be detailed. The process of assessing hazard causes personnel to analyze the degree of risk associated with each threat, and place these in perspective relative to the objectives of the mission and organization.

c. Develop Controls/Make Decisions: Starting with the highest threat, identify the risk control options that reduce exposure to the threats for all of those identified in the previous steps that exceed an acceptable level of risk.

d. Implement Controls: Implement the plan and ensure that the risk controls are known by all and are utilized. Ensure that people know and do what is expected of them. A high level of risk that cannot be effectively controlled should be reported to the person supervising the operation. Continually evaluate the effectiveness of the controls and ensure that the risk remains in balance with the benefits.

e. Supervise and Evaluate: Document any changes to the operation, equipment, environment, and/or people and how they may affect (or how they did affect) your plan. It is important to remember that risk management is a continuous process! Adjust to changes in the situation in real time by remaining vigilant and maintaining your situational awareness to identify unexpected as well as anticipated issues. Documented after action reviews are a good way to assure that the supervision and monitoring of the mission are effective and that lessons learned are captured for the future.

(3) Risk Management Principles. The following decision making principles must be considered before and during any aviation mission is performed:

a. Accept no unnecessary risk: Unnecessary risk does not contribute 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 subordinates know how much risk they can accept and when they must elevate the decision to a higher level.

c. Integrate risk management into planning and execution at all levels: To effectively apply risk management, leaders at all levels must dedicate time and resources to incorporate risk management principles into the planning and execution phases of all operations. Integrating risk management into planning as early as possible provides the decision maker with the greatest opportunity to apply risk management principles.

(4) Levels of Managing Risks.

a. Time Critical: This method is an “on-the-run” mental or verbal review of the situation using the risk management process without necessarily recording the information. The process is used to consider risk while making decisions in a time limited situation such as during the flight. Rapid risk assessment requires effective training of personnel, effective operational practices and a thorough understanding of objectives of the mission. Note that “time critical” does not mean “hasty” or “uninformed.”

b. Deliberate: When time permits, more deliberate and in-depth planning is possible. Before a mission begins time is often available to conduct a more systematic identification of the hazards and to develop more effective control measures. When time permits these risk management decisions should be documented and reviewed/improved following the mission.

c. Strategic: Strategic risk management should be used in instances such as contract solicitation where new technology or major changes occur. It commonly takes more time and involves a more detailed analysis of costs and benefits. The strategic process produces a more permanent record of findings and decisions used for long term planning, organizational decision-making, and as authoritative training resources.

(5) Using the 5-M model to Identify Hazards. The 5-M Model (below) provides a basic framework for analyzing systems and determining the relationships between composite elements that work together to perform the mission. The 5-Ms are: Man, Media (environment), Machine, Management, and Mission. Man, Media and Machine interact to produce a successful Mission or, sometimes, an unsuccessful one.

The critical element is Management because it defines how the other elements interact.

Management provides the procedures and rules governing the interactions between the various elements. See [Air Force Pamphlet 90-803](#) for a full discussion of the 5-Ms.

In simple terms these 5 areas are where you look for hazards as you do your risk assessment before the mission. As the mission progresses, participants and supervisors continue to look for changes in these 5 areas and modify their mitigations as appropriate. After the mission, review the effectiveness of the control measures against the 5 Ms.

(6) Risk Assessment Tools. The second step of risk management is assessment of the threats/hazards. There are several tools that may be used to document the hazards and to determine that level of risk involved in the operation. A number of risk assessment tools can be found in the Interagency Helicopter Operations Guide (IHOG) Chapter 3.

Two tools that should be used at the Deliberate and Strategic levels of risk management are the Risk Assessment Matrix (IHOG Appendix J) and the Risk Assessment Worksheet. Alternative risk assessment tools are covered in USGS SM 445-2-H chapter 27.7 G. (2). An example is the 4M assessment found [here](#).

3.C. Promotion

(1) Aviation Training. Resources shall be made available for education and training as specified in the Aviation User Training Program. Attendance at aviation user, management, and aviation safety management training sessions, as well as aviation safety seminars and formal educational institutions, shall be encouraged. Adequate staffing and training of USGS personnel is necessary to ensure an effective aircraft mishap prevention program and the safety of our personnel. (USGS SM 445-2-H chapter 27.4 B.(5)(b) and C.)

a. USGS employees must be current and complete all IAT requirements before they perform duties as a passenger, aircrew member, supervisor or manager of aviation operations.

b. USGS managers and supervisors will:

1. Ensure all employees involved in the use or control of aviation resources receive the appropriate level of aviation safety training. This includes the provisions of this Plan, the applicable Center/Unit Aviation Management Plan, OPM-04 and the 485 DM series.
2. Provide time and resources for aviation training.
3. Identify, develop, and present additional aviation training to meet their mission needs.
4. Inform the BAM of training program development for mission specific needs.

c. The RAM will monitor aviation training within their Region to ensure that training requirements are being met and proficiency maintained.

d. The BAM will monitor the USGS aviation training program to ensure that the goals and competencies are being met.

(2) Aviation Safety Communiqué – SAFECOM.

The SAFECOM is DOI's voluntary safety reporting and feedback system. DOI policy requires that SAFECOMs be used for accident prevention purposes only. All personnel involved in USGS aviation activities are responsible for identifying hazards and, to the degree possible, eliminating or reducing the associated risks. In all cases, they are expected to report unsafe working conditions to their supervisor and to USGS management. Personnel who observe what they consider to be an unsafe act or condition are encouraged to submit a SAFECOM report. Personnel in doubt about completing a SAFECOM or who need assistance should contact their RAM or the BAM.

a. Aviation Mishap Information System. (USGS SM 445-2-H chapter 27.4 K (1)) AMIS is an

electronic data (file) storage-based system encompassing all aspects of aviation mishap reporting within DOI. Categories of reports include aircraft mishaps, aviation hazards, aircraft maintenance deficiencies, and airspace intrusions. The system uses the SAFECOM (Form OAS-34) to report any condition, observance, act, maintenance problem, or circumstance(s) which have potential to cause an aviation-related mishap. Submitting a SAFECOM is not a substitute for “on-the-spot” correction(s) to a safety concern; rather, it is a tool used in the documentation, tracking, and follow-up corrective action(s) related to a safety issue. Additional information is contained in the DOI Aviation Mishap Notification, Investigation and Reporting Handbook. The AMIS report does not replace the requirement for initiating a DI-134, Report of Accident/Incident, as required in 485 DM 5.

b. Program Promotion. The AMIS Program shall be promoted by all levels of management. The SAFECOM form shall be made readily available to pilots, passengers, dispatchers, CORs, maintenance personnel, project leaders, managers and others in positions to affect aviation safety. Prompt replies to the originator (if a name and telephone number/address are provided), timely action to correct problems, and discussion of filed SAFECOM’s at local level meetings encourage program participation and active reporting.

(3) Aviation Awards. Aviation awards are an integral component of the USGS aviation program and support our Safety Culture by recognizing exceptional acts or service in support of aviation safety and aircraft accident prevention.

a. Specific awards available to USGS personnel, organizational units, and our aviation service providers include:

1. Airwards
2. Award for In-Flight Action
3. Award for Significant Contribution to Aviation Safety.
4. Secretary's Award for Outstanding Contribution to Aviation Safety.

b. General guidelines and procedures (processing and approval) for the submission of aviation awards are described in 352 DM 4.

c. Aviation award recommendations within USGS should be submitted through the RAM to the BAM. The BAM:

1. Reviews the award recommendation against the criteria of 352 DM 4.
2. Reviews the associated SAFECOM (if applicable).
3. Coordinates with the RAM, District Manager, and aviation service provider to validate the actions of the recipient.
4. Briefs USGS BAM on the request for award.
5. Complies with the requirements of 352 DM 4 for OAS Aviation Safety Manager and OAS Regional Director review/approval.
6. Provides award nomination and citation to USGS EAC member for review/approval.

7. Upon approval BAM coordinates with the RAM for presentation of the award.

NOTE: Every effort should be made to have aviation awards presented by a senior USGS leader, desirably by the USGS Director, Associate, or Regional Director.

d. The RAM:

1. Reviews SAFECOMs and other sources of information against the criteria of 352 DM 4 to identify events and actions worthy of recognition using an aviation award.
2. Coordinates with the District Manager and the aviation service provider to validate the actions of the recipient.
3. Submits award recommendations to the BAM.
4. Upon approval coordinates for presentation of the award.

(4) Aviation Safety and Aircraft Mishap Information Dissemination. (USGS SM 445-2-H chapter 27.4 K (2)) The OAS Aviation Safety Office publishes the following:

a. Safety Alert. The Safety Alert is red-bordered and will be used to disseminate information of a significant nature regarding aviation safety within DOI. The three areas addressed are operations, maintenance, and publications. These Safety Alerts will be published on an unscheduled basis.

b. Aircraft Mishap Prevention Bulletin. The Aircraft Mishap Prevention Bulletin is green-bordered and will be used to disseminate information of a general nature regarding aircraft mishap prevention concepts, methods, procedures and efforts. Bulletins will be published on an unscheduled basis as pertinent information/subject materials become available.

c. Aviation Safety Review. An annual review of aircraft mishaps associated statistical data and trend analysis will be published and distributed following the mishap reporting year (A-200 in IAT online).

d. Aircraft Mishap Video. A video which provides a synopsis of the previous year's aircraft mishaps will be produced (A-200 in IAT online). This video will be produced for mishap prevention purposes only. It will contain representative aircraft mishaps and relative information. Information contained in the video cannot be relied upon as a viable source of information for use in employee grievance procedures, litigation, or as an official response to a Freedom of Information Act request. Anyone seeking information about an accident, investigation or incidence should contact the Department of Interior, [Office of Secretary Freedom of Information Act Office](#) at (202) 513-0765; (202) 219-2374 (fax); or os_foia@ios.doi.gov.

3.D. Assurance

(1) Aviation Mishap Response Planning.

a. Each Center Director / Unit Chief will ensure that an Aircraft Mishap Response Plan is developed for their work location that is in compliance with 352 DM 1 and the [Interagency Aviation Mishap Response Guide and Checklist](#).

b. RAMs will ensure that their Unit or Center plans:

1. Outline appropriate response(s) to a loss of flight following an aircraft incident or accident.
2. Address initiation of search and rescue, fire, and medical response.
3. Provide procedures for the notification of USGS Chain of Command and OAS.
4. Are reviewed and updated a minimum of annually.
5. Are tested a minimum of annually by conducting a telephonic notification drill.

(2) Aviation Mishap Reporting.

a. Aviation Mishap Reporting. Any USGS flight that results in damage to the aircraft or injury to any person, no matter how slight, must be reported to the BAM (303-236-5513) immediately. If the BAM cannot be contacted immediately, the person reporting the mishap will notify OAS by calling 1-888-464-7427 (888-4MISHAP).

b. Overdue or Missing Aircraft. If an aircraft is overdue or missing, comply with the procedures in your project or unit Aviation Mishap response Plan (AMRP). It is critical that the response plan is implemented, followed and documented throughout the duration of the event.

1. Any aircraft that has not checked in as scheduled according to its flight following plan is overdue. (For flight following purposes the FAA considers an aircraft “overdue” when it fails to arrive within 30 minutes past the estimated time of arrival and cannot be located).
2. Once an aircraft is overdue by one hour or fuel duration exceeded, the aircraft is declared “Missing” and AMRP shall be activated. (An aircraft is considered “missing” by the FAA when: its fuel duration has been exceeded, and it has been reported as “overdue” to the FAA, and the FAA has completed an administrative search for the aircraft without success).

c. Form DI-134. Notifying the BAM or OAS and submitting a SAFECOM are required but they do not replace the requirement for initiating a DI-134 “Report of Accident/Incident,” as required in 485 DM 7.

d. The Aviation Service Provider also is required to notify the National Transportation Safety Board (NTSB) when an "Aircraft Accident" or NTSB reportable "Incident" occurs (49 CFR Part 830). Within DOI it is preferred that OAS is notified first and that they handle initial communication with the NTSB.

(3) Aircraft Mishap Notification, Investigation, and Reporting.

The USGS notification, classification, investigation, and documentation of NTSB reportable aircraft mishaps involving USGS aviation activities will be accomplished in accordance with the

procedures established in 352 DM 6, Aircraft Mishap Notification, Investigation and Reporting. Investigations are conducted for the purpose of aircraft mishap prevention only and do not satisfy the requirements of 451 DM 1 or 485 DM 5. Provisions and procedures for aircraft mishap investigations are established under the authority granted in 112 DM 12. These reports are not a substitute for other DOI safety management reports (see 485 DM 5). (USGS SM 445-2-H chapter 27.4 K.) Additional information is contained in the [Aviation Mishap Notification, Investigation, and Reporting Handbook](#).

a. Aircraft Investigations. (USGS SM 445-2-H chapter 27.4.I) In an effort to prevent future aircraft mishaps, it is the policy of the USGS to investigate all USGS aircraft mishaps using one of the following investigation procedures.

1. On-site investigations will be conducted whenever possible for all fatal aircraft accidents, other selected aircraft accidents, and selected incidents with potential.
2. Limited investigations will be conducted for selected aircraft accidents and selected incidents with potential. A limited investigation will not normally include a visit to the accident site.
3. Administrative investigations will be conducted for reports of conditions observances, acts, maintenance problems, or circumstances that can cause an aircraft mishap.

b. Applicability. Aircraft mishap reports cannot be used in lieu of reports prescribed in 451 DM 1 and 485 DM 5.

c. Aircraft Mishap Notification. Mishap notification procedures are located in the Aircraft Mishap Notification, Investigation, and Reporting Handbook.

d. Aircraft Mishap On-site Investigations. The OAS Director has the responsibility and authority to conduct DOI aircraft mishap investigations. OAS aircraft mishap investigation activities shall be given priority over all other investigations of the same mishap except for NTSB investigations. The OAS Aviation Safety Manager will be responsible for coordinating all DOI investigations with the NTSB and will serve as the DOI point of contact for NTSB aircraft mishap investigations.

1. Investigator-In-Charge (IIC). The OAS Aviation Safety Manager will designate a DOI IIC who organizes, conducts, and controls the DOI investigation. The DOI IIC shall assume responsibility for the supervision and coordination of all resources and the activities of all DOI personnel involved in the investigation. When the NTSB IIC is conducting an on-site investigation, the DOI IIC will assume a secondary role and, whenever possible, will serve as the DOI party to the NTSB investigation, fully assisting the NTSB IIC.

2. DOI Investigation Team. The DOI IIC will select DOI investigation team members based on the complexities of the mishap. Bureaus should designate a bureau representative team member to work under the direction of the DOI IIC. To ensure an impartial investigation, no member will have a personal interest in the mishap.

3. Bureau Responsibilities. The USGS shall designate an on-site liaison to coordinate with the DOI IIC. Support shall be provided to the DOI Investigation Team as deemed essential by the DOI IIC. Additional USGS responsibilities are listed in the Aircraft Mishap Notification, Investigation, and Reporting Handbook.

4. Vendor Responsibilities. The vendor of an aircraft involved in a mishap or selected Incident with Potential occurring in support of USGS aviation activities shall secure all appropriate operator records, reports, internal documents, and memoranda dealing with the aircraft and employee(s) involved in the mishap. Such support shall be addressed in the appropriate BOA or other contractual agreements as appropriate.

5. Other Government Agency Investigations.

(a) P.L. 103-411 assigns responsibility to the NTSB for investigating or causing to be investigated all public aircraft accidents. DOI will fully cooperate and assist the NTSB. Additionally, the OAS Director will ensure a DOI investigation is conducted for the purpose of accident prevention. The extent of the DOI investigation will depend on the extent (on-site, limited, etc.) of NTSB investigation.

(b) Where other Government agencies have operational control or jurisdiction over the investigation of an aircraft mishap or incident with potential where DOI personnel or interests are involved, the OAS Director will designate a qualified Investigator to represent DOI. Other DOI personnel may attend the non-DOI investigation as Bureau liaison but shall not serve as a party to the investigation. This responsibility rests solely with the OAS Director.

(c) When extensive cooperative aviation activities are involved (e.g., USDA-Forest Service), an interagency agreement for the joint investigation of aircraft mishaps shall be completed.

6. Military Aircraft. The military forces have authority and control over their aircraft in the event of an accident. Close coordination between OAS, the NTSB, and the military authority involved is essential when a joint investigation is required. All correspondence relating to DOI involvement in the accident shall be addressed to the OAS Director.

e. Investigation Files. An aircraft mishap investigation file will be created for all DOI on-site and limited investigations. The DOI Mishap File will include information of interest to DOI that may not be addressed in the NTSB aircraft accident report. Following receipt of the NTSB aircraft accident investigation report, the OAS Director will forward the NTSB report and the OAS Mishap File through the Chief Executive Officer of the Interior Service Center to the Director of the Bureau experiencing the mishap.

f. Limited Use of Mishap File.

1. Mishap File information is privileged in that it shall be used only for mishap prevention purposes. It shall not be used for any other purpose. For example, the Mishap File shall not be used:

(a) In making any determination affecting the interest of an individual making a statement involved in a mishap.

(b) As evidence or to obtain evidence in determining the misconduct of agency personnel.

(c) As evidence to determine the disciplinary responsibility of agency personnel.

(d) As evidence to assert affirmative claims on behalf of the Government.

(e) As evidence to determine the liability of the Government for property damage, injuries, or death.

(f) As evidence before administrative bodies.

(g) In any other punitive or administrative action taken by agencies of the United States, including airman or maintenance certification enforcement proceedings.

2. Investigator Release of Information. Investigators, including all parties to the investigation, shall not make public their own opinions, conclusions, or recommendations in their capacity as a mishap investigator. Information received as a result of participation in a NTSB investigation shall be handled in accordance with NTSB instructions.

g. Use of Investigative Files and Reports. When requested by the head of a parallel DOI investigation group, facts relating to the mishap may be released. Privacy information and confidential witness statements shall be withheld. While the mishap facts are provided to preclude unnecessary duplication of on-site investigation efforts, the parallel investigation group must reach its own conclusions pertaining to personal liability and fault.

h. Information Disclosure. The OAS Aviation Safety Office is the Custodian of Record for DOI mishap information. Release of information regarding accident prevention and investigation shall be subject to the provisions of the Freedom of Information Act, as amended, and the Privacy Act of 1974. All requests for copies of OAS aircraft mishap files shall be referred to the OAS Aviation Safety Office for action. All requests for copies of NTSB aircraft accident reports shall be referred to the NTSB.

i. Interior Aircraft Mishap Review Board. A DOI AMRB is responsible for developing mishap prevention recommendations for all DOI accidents and selected incidents with potential. Specific responsibilities, functions and procedures are listed in the Aircraft Mishap Notification, Investigation, and Reporting Handbook.

j. Aviation Mishap Response Plan. Each location using flight services must maintain a current and complete AMRP detailing necessary action in the event of a missing or downed aircraft, per 352 DM 6. The AMRP is inspected during aviation audits.

k. Aircraft Mishap Procedures.

1. Aircraft mishaps are broadly defined as follows:

(a) Accidents involve death or serious injury or substantial damage to the aircraft.

(b) Incidents with Potential are those in which the circumstances indicate significant potential for substantial damage or serious injury.

(c) Aircraft Incidents are occurrences that affect or could affect the safety of operations.

2. USGS Aircraft Accident/Incident with Potential Notification and Documentation Procedures. Any employee involved in, witness to, or having immediate knowledge of an aircraft accident or incident involving injuries, shall, if able, perform the following duties in the order specified, per the Aircraft Mishap Notification, Investigation and Reporting Handbook, 352 DM 6.

(a) Take necessary action to rescue survivors.

(b) Administer first aid or get medical attention for injured persons.

(c) Notify the nearest fire department if danger of fire exists.

(d) Get local law enforcement officials to provide security for the site.

(e) Notify:

(i) OAS Aviation Safety Office (1-888-4MISHAP); ask that they notify the NTSB.

(ii) BAM and USGS personnel, per the station's AMRP.

(f) Designate a person to be in charge of the mishap site, get names, addresses, etc., of witnesses, and relay all media inquiries to the investigating team or public relations officials.

(g) Photograph wreckage and ground scars from all angles and various distances.

(h) Complete an OAS-77 Form, Initial Report of Aircraft Accident/Serious Aircraft Incident Instruction.

(i) Ask all persons involved and all witnesses to complete written statements about the accident/incident with potential as soon as possible.

(j) Complete a DOI Form-134, Report of Accident/Incident.

(k) Secure all USGS records pertaining to the operation, flight maintenance, crew members, etc.

l. Pilot/Operator Aircraft Accident Report. The aircraft operator must complete NTSB Form 6120.1/2, Pilot/Operator Aircraft Accident Report, and submit it to the nearest office of NTSB and to the OAS Safety Manager within 10 days following an Aircraft Accident or Incident with Potential.

m. DOI Aircraft Incident Reporting and Documentation Procedures. When an aviation hazard, maintenance deficiency, or airspace conflict is noted, it must be reported to the OAS Safety Manager within 5 days by completing a SAFCOM form. The report can be made electronically or by mail. Reports may be made anonymously. Copies of the SAFCOM report should be provided to the Division Safety Manager and the BAM.

n. Aircraft Mishap Investigations. The NTSB will investigate, or have investigated, all aircraft accidents. When NTSB investigates DOI accidents, OAS may be included or asked to conduct the investigation.

(4) Evaluation and Monitoring

Periodic internal reviews of USGS aviation operating procedures are necessary to enhance safety, identify program strengths and weaknesses, help identify fiscal and personnel needs, and ensure the efficient use of aircraft under USGS control. These reviews may be supplemental to those conducted by DOI.

a. Regional Aviation Program Review Each region's overall aviation program will be reviewed at least once every 5 years by the BAM and OAS. The DOI program reviews conducted by the OAS will be in accordance with DOI policy, 352 DM 2, Aviation Program Evaluations.

b. Any finding identified as a serious safety concern will be responded to in writing. The response will specify corrective actions, effective date, and individual responsible for the correction.

3.E. Documentation requirements

Not applicable. USGS does not require documentation in addition to those in sections 3, A, B, C, or D.

3.F. USGS Alaska specific safety requirements

All USGS field activities (including aviation) conducted in Alaska, regardless of the employee's cost center, are required to submit a USGS Alaska Science Center field emergency plan via their [internal website](#). (Reference MAR 18, 2014 Memo from Carl Markon, Alaska Regional Director, and section 2.A.(6)b. of this NAMP)

3.G. Reporting airspace conflicts through the SAFECOM system

The primary responsibility for understanding and complying with National and International airspace procedures and reporting requirements rests with the PIC and aircraft operator. Should an airspace conflict occur the situation will be reported as necessary using the SAFECOM system.

4. Aviation Operations

4.A. Special-use

“Special use” is defined in 350 DM 1 and OPM 29 as operations for which special pilot qualifications and techniques, special aircraft equipment, and PPE are required to ensure safe transportation of personnel and property. Specific OAS authorization for both pilot and aircraft is required for special use operations. Special use flight operations require, at a minimum, a Project Aviation Safety Plan (Appendix A), including a risk assessment, and the elements listed in [352 DM 1.9 C](#) through I.

(1) Public/Civil Aircraft Operations. DOI aviation activities include both “civil” and “public” operations (FAA AC 00-1.1A). Most USGS missions are considered public (government) aircraft operations, however, most shall comply with civil 14 CFR (FARs). Special use aircraft operations are public aircraft operations because they require deviation from some civil FARs or require special pilot qualifications and techniques, special aircraft equipment, and PPE. USGS aircraft contractors are bound by their contract to conduct operations in accordance with their FAA-approved commercial operator or airline certificate specifications, unless otherwise authorized by the IBC/AQD contracting officer.

(2) The USGS conducts the following special use activities:

- a. Low level flight (within 500’ of the surface)
- b. Mountain flying (helicopter)
- c. Resource reconnaissance
- d. Cargo letdown
- e. Wheel operations on unprepared landing areas (airplane)

(3) The following special use activities are not allowed on USGS flights:

- a. Toe-in, single-skid, and step-out landings (helicopter)
- b. Rappel and Short-haul

(4) The following special use activities are rarely used in USGS operations and require prior approval at the RD or AD level after PASP review by the RAM or BAM:

- a. Offshore platform landings (helicopter)
- b. Vessel landings
- c. Water landings - floats or hull (helicopter)

d. Aerial Capture, Eradication, and Tagging of Animals (ACETA)

4.B. Fixed wing

The USGS accomplishes its primary mission of providing new earth and life scientific knowledge using manned and unmanned fixed wing aircraft for transportation, observation, and aerial surveys. These flights are conducted in contractor owned and operated light single-engine and light and medium twin-engine airplanes. Wheel, float, and ski equipped airplanes are used to transport people and cargo to remote locations. The majority of these airplanes are procured under an ARA or On Call when needed contracts and are used in single-pilot day VFR conditions only. The USGS does employ Government/fleet pilots to operate an exclusive use contracted aircraft for the EAARL LiDAR Project. USGS personnel routinely participate on fixed wing cooperator aircraft (section 4. E). Fixed wing aircraft are used by End-Product contractors to procure data and products (OMP-35). Fleet fixed wing UAS are used for aerial observation and surveys (NAMP section 4.J.).

4.C. Rotary wing

The USGS accomplishes its primary mission of providing new earth and life scientific knowledge using manned and unmanned fixed wing aircraft for transportation, observation, and aerial surveys. Helicopters routinely fly scientists, technicians, and equipment to remote locations. These flights are conducted in contractor owned and operated light single-engine and light and medium twin-engine helicopters. The majority of these helicopters are procured under an ARA or On Call when needed contracts and are used in single-pilot day VFR conditions only. USGS personnel routinely participate on rotary wing cooperator aircraft (section 4. E.). Rotary wing aircraft are used by End-Product contractors to procure data and products (OMP-35). Fleet rotary wing UAS are used for aerial observation and surveys (NAMP section 4.J.).

4.D. Fleet operations

The USGS does not operate **Government-owned/fleet aircraft** except for UAS (NAMP section 4. J.). Prior to 2014, the USGS did operate fleet aircraft (non-UAS) for scientific experimentation and data gathering surveys. If a need for fleet aircraft arose, the USGS could acquire fleet aircraft following the process outlined in section 2.B.

USGS dual function and Incidental pilots fly OAS inspected and approved incidental fleet aircraft under 351 DMs 2 and 3. **Incidental fleet aircraft** are privately owned, club, or rental aircraft with a valid form OAS-36 interagency data card. Dual function and Incidental pilot operations are generally limited to point-to-point and high reconnaissance flights with no special use activities. Dual function and Incidental pilot operations are currently flown entirely according to civil standards and FARs (14 CFR 1-199). DOI passengers and aircrew members are allowed on dual function and incidental pilot flights with supervisor approval. USGS Fleet aircraft operations are conducted in accordance with USGS SM 445-2-H chapter 27.4.

(1) Fleet Aircraft Equipment. Aircraft used in support of aviation activities within DOI must be equipped in accordance with 351 DM 2.

(2) Aircraft Maintenance and Inspection.

a. Maintenance and Inspection. Fleet aircraft must be maintained and inspected in accordance with 351 DM 2.

b. Fuel. The pilot must supervise the type, quantity, and quality of fuel used in the aircraft.

c. Log Entries. All aircraft maintenance and inspections performed must be appropriately recorded in the aircraft logs.

(3) Government Pilots.

a. General. As a rule, USGS will support the use of dual-function pilots and incidental pilots rather than dedicated full-time pilots.

b. Qualifications. Pilots must meet the minimum requirements in 351 DM 3 and undergo a successful review by the OAS. UAS pilots are trained and qualified organically by OAS-TD (see NAMP 4.J).

c. Letter of Flight Authority. Incidental pilots must meet the criteria listed in 351 DM 3.2(B) and have a Letter of Flight Authority from the Division Chief, in coordination with the BAM.

d. DOI Pilot Qualification Card. Pilots employed by USGS who are authorized to perform official flight duties must have a DOI Pilot Qualification Card, per 351 DM 3.5(D).

e. Pilot Qualification Card Suspension/Revocation. Procedures for suspension and revocation of a DOI Pilot Qualification Card are in 351 DM 3.5(E) and 351 DM 3, Appendix 1.

f. Flight Experience. Pilots must fly a minimum of 24 hours per fiscal year, including 6 hours in the previous 6 months in aircraft category, per 352 DM 3.2(A)(4) and 351 DM 3.2B(4)(c).

g. Failure to Meet Flight Experience Requirements. Pilots who are deficient may regain currency by demonstrating Visual Flight Rule (VFR) proficiency to a Certified Flight Instructor (CFI) and an appropriate endorsement made in the pilot logbook by the CFI, per 351 DM 3.2(A)(4) and 352 DM 3.2B(4)(c). If a pilot has not flown a specific make and model within the preceding 12 months, a satisfactory dual instruction period by a CFI is required in that make and model aircraft before piloting duties can be performed, per 352 DM 3.4(J).

h. Pilot Flight Checks. Initial and annual VFR flight checks, and, if needed, semiannual Instrument Flight Rule (IFR) flight checks must be successfully completed, per 351 DM 3.4(D). Proficiency must be demonstrated in accordance with the OAS Flight Evaluation Guide. Additional flight checks will be given when the configuration of the aircraft changes or when missions will be flown in different environments that require special skills and knowledge. Flight checks and/or additional training may be given after an aircraft mishap where pilot proficiency and/or judgment was found to be a contributing factor.

4.E. Cooperator operations

(1) General Cooperator Aircraft

A cooperator or affiliated aircraft can be from: (1) any branch of the military, (2) another public agency, or (3) a private entity. Aircraft and pilots must meet DOI standards for general or special-use flights, and USGS employees may not use such aircraft and pilots without prior OAS approval. Any costs incurred by OAS in approving cooperator aircraft, including an onsite inspection and pilot check-ride for special-use flights, may be charged to the requesting unit.

Proper planning is critical for the proper development and execution of a cooperator or affiliate agreement. All USGS requests must be approved by the BAM prior to submission to the appropriate OAS Regional Director. Additional information may be found in 351 DM 4.

(2) Research Work Orders/Cooperative Agreements/Support Services Contracts

Cooperative Agreements or Support Services Contracts that contain provisions for aviation services must follow the policies of this NAMP and all other applicable DOI policies if USGS maintains mission operational control.

(3) Carding, Letters of Approval, or Memoranda of Understanding

Interagency Aircraft Data Cards and DOI Pilot Qualification Cards, or Letters of Approval for aircraft and pilots, will be issued to cooperator aircraft and pilots. In situations involving numerous aircraft and pilots (military facilities, State Fish and Game agencies, etc.), a formal agreement by OAS may negate the need for individual aircraft and pilot cards.

4.F. Passenger transport (travel not mission work)

Travel on Government aircraft is restricted to official travel or travel on a space-basis subject to the policies and definitions prescribed in 14 CFR, Part 101-37.

(1) Administrative Travel. (USGS SM 445-2-H chapter 27.4 N.)

a. Government aircraft may be used for administrative travel purposes provided that (1) the cost is not more than commercial sources or (2) commercial aircraft is not reasonably available to meet the traveler's departure/arrival requirements within a 24-hour period, unless it can be demonstrated there are extraordinary circumstances which require a shorter period to fulfill the agency requirement. Link to the DOI Temporary Duty Travel Policy related to Use of Government Aircraft found in USGS FOP Chapter 26.2 <https://internal.usgs.gov/ops/ofs/fop-handbook/26-2-DOI-TDY-Policy-8-31-18.pdf>. This policy includes the Use of Government Aircraft under DOI TDY Policy Chapter 4.11.

b. In order to assure compliance with OMB Circular No. A-76 (revised), Form OAS-110 or a like document must be prepared for administrative flights. Approval for the flight is necessary from a designated official at least one level higher than the traveler. Unless there are security, communication, or time constraints involved, a cost comparison with commercial sources is required.

c. Required-Use Travel. Required-use travel is that which necessitates the use of Government aircraft for the travel of an Executive Agency officer or employee because of bona fide communication or security needs of the agency or exceptional scheduling requirements. With certain exceptions, advance trip-by-trip authorization by the DOI Solicitor or designee is required. Reimbursement at the full coach rate may be necessary. Requests must be processed through the OAS Flight Coordination 10 days prior to planned travel.

d. Other Travel. Prior approval on a trip-by-trip basis from the DOI Solicitor or designee is required for Senior Federal Officials or Senior Executive Branch Officials, members of families of such senior Federal officials, and non-Federal travelers for travel that is not to meet mission requirements or required-use travel. Such requests must be processed through the BAM for approval by the DOI Solicitor or designee approval at least 10 days prior to planned travel. Reimbursement the full coach rate is required for any portion of the trip that is incidental private activity.

(2) Official Passengers. The following categories of personnel are official passengers:

a. Officers and personnel of the Federal Government traveling on official business.

b. Members of Congress and their staffs whose work relates to DOI or USGS programs.

c. Non-Federal passengers when engaged in missions which enhance accomplishment of a USGS program such as personnel of cooperating state, county, or local agencies; representatives of foreign governments; and contractors' representatives, including those employed by such agencies and private citizens.

d. Space-available passengers authorized and approved in accordance with OMB Circular A-126.

e. Space-available travelers approved by the Secretary of the Interior on a trip-by-trip basis.

(3) Unauthorized Passengers. All personnel who are not official passengers shall be considered unauthorized passengers and are not authorized to be transported in any aircraft owned or operated by or on behalf of DOI/USGS. A person who is otherwise an official passenger could become unauthorized by performing a function for which that person is not authorized (e.g., a passenger performing pilot duties without proper authorization).

(4) Emergency Use. USGS supervisors may authorize the use of Government aircraft to assist in life-threatening circumstances, disaster relief efforts, etc.

(5) Privately Owned Aircraft. A DOI employee, holding an FAA issued Pilot Certificate and current, appropriate Medical Certificate, properly authorized to exercise the privileges of their certificate, may utilize their privately-owned aircraft for official travel and receive reimbursement, if the mode of travel is approved by their supervisor. The total allowable reimbursement shall be limited to total constructive cost of the appropriate common carrier transportation including

constructive per diem by that method in accordance with Federal Travel Regulations. However, the transportation of passengers on a privately-owned aircraft is prohibited unless the aircraft and pilot are properly approved and documented for DOI operations.

4.G. Hazardous materials transport

Hazardous materials must be transported in accordance with 351 DM 1.6(B) and the *Interagency Aviation Transport of Hazardous Materials Handbook*. A copy of the DOI Exemption to Transport Hazardous Materials from Department of Transportation must be onboard the aircraft when hazardous materials are transported. (USGS SM 445-2-H chapter 27.4 A (2))

(1) DOT Hazmat training. Every 3 years, all involved employees, the pilot, and the ground crew must complete mandatory HazMat training, A-110, Aviation Transport of Hazardous Material.

(2) Pilot notification. The pilot must be notified in writing that HazMat is being transported.

4.H. Flight plan filing and communication

Pilots shall file a flight plan with the designated flight follower upon or prior to departure. Flight plans must specify the number of people on board, detailed route of flight, estimated time of arrival, and amount of fuel on board. Regardless of the flight following method, the flight plan must be closed by either the pilot or project leader upon conclusion of the flight with the designated flight follower/FAA Flight Service Station. Any deviation in the initial flight plan will be reported to the designated flight follower.

4.I. Flight following

(1) Flight Following. Point-to-point flights, to and from established airports, heliports, and seaplane bases are required to establish flight following services through FAA air traffic control. PASPs shall include a flight following requirement for flights involving USGS personnel as crew. PASPs shall specify the methods and procedures to be used that will accommodate communications from the flight crew to the designated flight-follower at predetermined intervals (usually not more than 1 hour), and provide enough information so that an aircraft and mission personnel can be easily located should they become overdue, missing or involved in a mishap. (USGS SM 445-2-H chapter 27.4 A.)

(2) Flight Following elements. Flight following consists of:

a. Flight Plan: For each daily mission, pilots shall file a flight plan with the designated flight follower prior to departure. A flight plan is detailed information related to an intended flight that is filed with air traffic control or other flight following personnel. USGS flight plans must specify the number of people on board, detailed route of flight, estimated time of arrival, and amount of fuel on board. Regardless of the flight following method, the flight plan must be closed by either the pilot or project leader upon conclusion of the flight with the designated flight follower/FAA Flight Service Station. Any deviation in the initial flight plan will be reported to the designated flight follower.

b. 2-way communication: The method of 2-way communication between the flight crew and flight follower shall be specified. Radio frequencies, sat phone #, text messaging, etc.

c. Check-in times: Check-in times should not exceed one hour unless it has been pre-determined to check-in at an alternative established time frame. Check in calls should be made after each takeoff and landing when possible. (See section 4.I.(6), Non-Standard Flight Following).

d. Flight tracking: The method of flight tracking shall be specified. Examples: AFF (automated flight following with web tracker), verbal location descriptions, Air Traffic Control (ATC) radar, ADS-B, SPOT, InReach with web tracker, etc.

e. Lost communications: Procedures for the flight crew and flight follower in the event of lost communication shall be specified.

f. Flight logging: Aircraft identification, number of people onboard, fuel remaining, locations, times, and communications shall be recorded by the flight follower during the flight.

g. Mishap Response Plan: Each PASP must maintain a current and complete Aviation Mishap Response Plan (AMRP) detailing necessary actions in the event of a missing or downed aircraft, per 352 DM 6. Additional information is contained in the Interagency Aviation Mishap Response Guide and Checklist.

(3) Flight Follower. A designated flight follower is an individual or organization who is responsible for monitoring and logging a flight from start to completion (see NAMP section 1.A.(2) j.). This individual must have the knowledge, skills and abilities of this responsibility and be familiar with the Flight Plan, Project Aviation Safety Plan, and the AMRP (see NAMP sections 5.C.(3) and 3.D.(2)). Aircraft operations will require a designated flight follower to be on duty until the aircraft operations are concluded, unless other prior to flight initiation arrangements have been identified. **Examples of designated flight followers include FAA Air Traffic Control, federal land management agency dispatchers, military dispatchers, local police, fire, or medical dispatchers, trained collateral duty USGS personnel, and OAS approved vendors.**

a. FAA Flight Following. A flight plan filed with FAA Flight Service Station with a request for Flight Following from Air Traffic Control.

b. OAS Vendor Flight Following. OAS director-approved vendor flight following specified in the OAS procurement document.

(4) Flight Log. The following information shall be logged by the designated flight follower: initial take-off time, aircraft N-number(s), check-in time, number aboard, fuel on-board, location information, and final landing time. Flight logs will be retained in the event of a mishap.

(5) Supervisors (Project or Task chiefs) must ensure that an approved flight following method is being conducted.

(6) Non-Standard Flight Following. Many flights occur in remote areas where radio communications are limited or impossible. In these situations, the requirement for 60-minute check-ins may not be realistic. The non-standard flight following will be described in a Project Aviation Safety Plan. Pilots will follow their flight plans and make position reports in the time interval as agreed.

Non-standard flight following alternatives that may be used are:

- a. Establish a time with designated flight follower when check-ins will occur.
- b. When operating in remote field camp settings, a prearranged flight-following plan which may include check-ins filed with the base camp. (See Radio Check-In and Satellite Phone Check-In Flight Following).

(7) Overdue Aircraft. Any aircraft that has not checked in as scheduled according to its flight following plan is overdue. (For flight following purposes the FAA considers an aircraft “overdue” when it fails to arrive within 30 minutes past the estimated time of arrival and cannot be located).

- a. When an aircraft is overdue from a scheduled check-in or an arrival time at a particular destination, communications should commence via radio/satellite phone search and documentation will begin.
- b. Once an aircraft is overdue by one hour or fuel duration has been exceeded, the aircraft is declared “Missing” and AMRP shall be activated. (An aircraft is considered “missing” by the FAA when: its fuel duration has been exceeded, and it has been reported as “overdue” to the FAA, and the FAA has completed an administrative search for the aircraft without success).

The designated flight follower will initiate the actions listed in their respective AMRP.

4.J. Unmanned Aircraft Systems

The FAA is responsible for regulations regarding UAS operations. UAS operations under 14 CFR Part 107. The DOI and the FAA have an agreement, dated September 11, 2015, that allows the DOI to use the Certificate of Authorization (COA) notification process for small UAS (sUAS) operations within Class G airspace. The types of operations permitted under this agreement include scientific applications, wildlife surveys, and search and rescue. All other DOI operations must go through the regular COA process. The OAS operational procedures memorandum (OPM) 11, provides guidance on the operations and management of DOI UAS. FAA Advisory Circular AC 91-57A, Model Aircraft Operating Standards, provides guidance for hobby or recreational UAS operations, not Government or commercial operations.

(1) UAS Request/Approval Process. USGS personnel shall not conduct UAS operations until requests are approved by the BAM and OAS, and all requirements have been met. Requests must be initiated at least 6 months before the anticipated UAS mission start date. All requests to use

UAS must be routed the USGS National UAS Project Office (NUPO) prior to going to the BAM, see following steps.

a. Requests and Proposal. The requestor will prepare and submit to the USGS NUPO a formal plan to initiate a UAS project. This proposal shall include the general purpose, objectives, location, and justification for using UAS. The DOI is currently under a UAS ban under S.O. 3379 - Temporary Cessation of Non-Emergency Unmanned Aircraft Systems Fleet Operations. Contact the NUPO for further information. <https://www.usgs.gov/mission-areas/land-resources/about/national-unmanned-aircraft-systems-project-office>

b. BAM Review. After NUPO review, the request shall be routed to BAM manager for review. If approved, the proposal will be forwarded to OAS, and a request will be made for an online COA account for the project.

c. OAS Review and Approval. The OAS UAS Coordinator will review the proposal, communicate directly with the bureau requestor and BAM to gather information and either approve or disapprove the request.

d. Request for Certificate of Authorization. If the proposal is approved, the USGS NUPO will work directly with the bureau requestor to develop the FAA application for a COA. Collaboration and agreement will occur prior to official submission of the COA application. The OAS UAS Coordinator will submit the COA request to the FAA and keep the bureau informed on the status and issuance of the COA. The COA, once issued, shall serve as the project's UAS operations plan. COA are typical valid for up to 2 years.

(2) Minimum UAS Operational Requirements

The following requirements must be met prior to any operational use of UAS:

a. PASP. A PASP will be completed by the local unit manager and project requestor.

b. COA. UAS operations outside of the provisions of Part 107, require a valid and current COA issued by the FAA. A complete COA package includes the operational plan, PASP, risk assessment, airworthiness certification, airspace permission, pilot qualifications, and frequency and communications plan.

c. DOI UAS Operator Training Requirements. DOI operators of UAS must receive training for the specific UAS they will operate. OAS will identify appropriate training in conjunction with FAA regulations. Operators must possess training certificates from OAS or OAS -approved sources before receiving OAS certification as a DOI UAS operator.

d. Other DOI UAS Operator Requirements. Other requirements (to be determined by OAS) includes a valid FAA issued Remote Pilot certificate.

e. DOI UAS Operator Authorization. When a DOI employee has satisfied all requirements listed in c and d above, the remote pilot will receive an endorsement on their OAS-30U for

that particular procedure from an OAS approved UAS inspector. There are minimum flight requirements for pilots to maintain their DOI operator authorization.

(3) UAS, Privacy, civil rights, and civil liberties

a. Management at all levels in the US Geological Survey (USGS) is responsible for the public safety, civil rights, civil liberties, and privacy protection of UAS operations under their control. Managers and supervisors must monitor UAS programs and implement privacy civil rights and civil liberties controls to acceptable levels. Managers of UAS activities ensure that oversight and accountability procedures for agencies' UAS use, including audits or assessments, comply with existing agency policies and regulations, and that personnel receive training regarding privacy civil rights and civil liberties policies.

b. Existing USGS policies and procedures relating to the collection, use, retention, and dissemination of information (including data obtained by UAS) ensure that the privacy, civil rights, and civil liberties of all people are protected (**USGS Manual 319-1-H**). The USGS uses UAS for scientific research, monitoring environmental conditions, analyzing the effects of climate change, responding to natural hazards, understanding rates and consequences of landscape change, and related land and resource management. The USGS does not use UAS, or any other platform, for gathering personally identifiable information (PII) or information that infringes on anyone's civil rights or civil liberties. The DOI [privacy policies](#) have additional information on this topic.

c. The USGS Privacy Officer shall be consulted if any USGS personnel are uncertain about whether UAS data might contain PII. Any PII that can be gleaned from USGS data by a third party is unintentional. UAS data containing PII shall not be retained for more than 180 days unless retention of the data is determined to be necessary to an authorized mission, in which case it will be stored in a system of records. All UAS missions are now and will be in the future in full compliance with Federal laws, Presidential Memorandums, (including February 15, 2015), regulations, and DOI policies and procedures. Images collected with UAS sensors are handled and retained according to industry standards, consistent with images collected with any of the USGS remote sensing assets. The UAS missions are subject to professional standards, codes of conduct, case law, and with the public's trust in mind. **The USGS Diversity Officer** shall be consulted if any USGS personnel are uncertain about whether UAS data might infringe upon any individual's **Civil Rights and Civil Liberties**.

d. The USGS also takes the following actions to protect individuals' civil rights, civil liberties, and privacy:

1. UAS missions operate primarily over public lands.
2. All operations must be in support of mandated missions of the DOI-USGS ("proper use").
3. Permission must be obtained from landowners if UAS missions target specific scientific observations over their lands.
4. Standard FAA-approved procedures are followed for aircraft operations (such as special use permits, range approval letters, and safety management systems).

5. All UAS operations are reported to OAS for compilation in the Department's annual report using form OAS-2U.

(4) UAS data FOIA requests: Anyone seeking USGS UAS gathered information should contact the [USGS](#) Freedom of Information Act Office at (443) 498-5521; (443) 498-5510; or foia@usgs.gov.

4.K. Documentation requirements

USGS has no additional operations documentation requirements beyond the requirements of sections 2. C., D., and 4. A. through J of this NAMP. (USGS SM 445-2-H chapter 27.4.)

(1) Form OAS-110 is a checklist for flight operations. Documents for flight include:

- a. CAMP
- b. PASP
- c. Co-op approval documents
- d. Risk assessment
- e. Hazard map
- f. Mishap Response Plan
- g. Flight following procedure
- h. Use report documents
- i. Passenger and cargo manifest
- j. Load calculation, weight and balance, and aircraft performance
- k. PPE waivers
- l. Hazmat DOT waiver
- m. Pilot card
- n. Aircraft data card

4.L. Bureau-specific operational requirements

USGS operational requirements are contained in USGS SM 445-2-H chapter 27.4.

(1) Aircraft Mishap Prevention Plan. The USGS establishes the Bureau formal written Aircraft Mishap Prevention Plan consistent with DOI policy herein that outlines personnel responsibilities and provides implementation guidelines, goals, and methods used to monitor the success of the program. Safety requirements set by DOI shall not be waived. Should a deviation of an established safety procedure or directive occur, the individual(s) involved shall furnish the Bureau Aviation Safety Manager with a complete report of the circumstances as soon as possible after the event. USGS policies and procedures herein incorporate the critical elements listed below into all levels of Bureau aviation activity.

a. Aviation Mishap Response Plan. Each USGS organization location using flight services must maintain a current and complete AMRP detailing necessary actions in the event of a

missing or downed aircraft, per 352 DM 6. Additional information is contained Chapter 3 of the OAS Aviation Mishap Notification, Investigation, and Reporting Handbook and the Interagency Aviation Mishap Response Guide and Checklist.

b. Risk Assessment. Risk assessment is the subjective analysis of physical hazards and operational procedures to arrive at a GO/NO-GO decision. Risk assessments support informed GO/NO-GO decisions which are the responsibility of line management. The pilot retains final authority for a NO-GO decision when safe operation of the aircraft is a factor. A risk analysis must be conducted for all special-use flights and be approved by management, per 352 DM 1/9(A). See section 3.B. Risk Management of this NAMP.

c. Project Planning. Aviation operations shall be planned with necessary consideration given to mishap prevention, per 352 DM 1.9 C Project Aviation Safety Plans (PASPs) must be prepared for each project by a properly trained Project or Task Chief (NAMP 5.B and 445-SM-2 Chapter 27.4 C.) and, in addition to the items below, must contain all of the required items in OPM-6, 445-SM-2 Chapter 27.4 F. and section 8 of this NAMP. Use of Aviation Planning Guide/Risk Assessment is recommended to include all elements of project planning. Flights shall be conducted as planned and in accordance with DOI policy and procedures. Deviations from the approved mission profile will not be conducted except for safety of flight considerations. Project planning shall include as a minimum:

Note: For the purposes of this section, a “flight” may consist of multiple takeoffs and landings under continuous power (i.e., where the aircraft power is not shut down).

1. Flight routes/areas and altitudes.
2. Risk assessment.
3. Hazard ID (e.g. weather, takeoff/landing weights, landing areas, wire hazards, etc.).
4. Management approval for special use activities.
5. Aircraft Checklist and Preflight Inspection. Pilots must conduct a visual inspection of the aircraft prior to each flight and use applicable cockpit checklists, per 351 DM 1.1(E).
6. Interagency Aircraft Data Card and DOI Pilot Qualification Card. Such cards must be physically inspected by aircrew members and/or passengers prior to each flight, per 353 DM 2.5(B)(4).
7. Passenger Briefing. Pilots will provide a briefing prior to each flight covering items specified in 351 DM 1.5(B).
8. Crew Duty Time Limitation. Activities must be conducted in accordance with 351 DM 3.5.
9. Instrument Flight Rules. Flights are permitted in accordance with 351 DM 1.3.

10. Night Flying. Flights are permitted in accordance with 351 DM 1.3.
11. Low-Altitude Flights. Flights may be conducted in accordance with FAR 91.119.
12. Transport of Hazardous Materials. Hazardous materials must be transported in accordance with 351 DM 1.6(B) and the Interagency Aviation Transport of Hazardous Materials Handbook. A copy of the DOI Exemption to Transport Hazardous Materials from Department of Transportation must be onboard the aircraft when hazardous materials are transported.
13. Fuel Handling. Fuel handling must be conducted in accordance with the OAS Aviation Fuel Handling Handbook.
14. Fuel Reserves. Aircraft must maintain fuel reserves as stipulated in FAR 91.151 and FAR 91.167.
15. Transport of Cargo/Equipment. Only cargo and/or equipment necessary for mission accomplishment is permitted onboard aircraft under operational control of USGS.
16. External Loads. External load flights are permitted provided they are conducted with suitably equipped helicopters, flown by pilots approved by OAS for external load operations, and the aircraft are operated in accordance with 351 DM 1.5 and 351 DM 1.3.
17. Over Water Flights. Flights conducted beyond gliding distance to shore are prohibited in single-engine aircraft not float-equipped, per 351 DM 2.2C.
18. Toe-in, Single-Skid, and Step-Out Landings. These landings are prohibited except when an exception to DOI policy has been approved by the OAS Director, per 351 DM 1.3(E)(6).
19. Lap Belt/Shoulder Harness. Lap belts and shoulder harnesses must be worn on all take-offs and landings, per 351 DM 1.1(G). Use of the lap belt/shoulder harness is recommended during all phases of the flight for comfort and safety.
20. Operations in Restricted Category and Uncertified Aircraft. Only those activities, including the attendant restrictions regarding persons onboard the aircraft listed in 351 DM 1.1(I) may be conducted using restricted category or uncertified aircraft.
21. Smoking. Smoking is prohibited in fleet, contract, or BOA aircraft, per 351 DM 1.1(J).
22. Aerial Capture, Eradication, and Tagging of Animals (ACETA). Capturing of animals must be conducted in accordance with 351 DM 2 and 351 DM 3. Additional information is in the DOI ACETA Guidebook and USGS Alaska Science Center memoranda.
23. International Operations. DOI aviation policy does not apply to international flight operations, per 350 DM 1.2. However, USGS personnel should attempt to follow DOI aviation

policies to the extent practical and use good judgment and common sense in all cases.

24. Flights Over Public Lands. Any time aircraft under operational control of USGS needs to operate over public lands, the pilot will coordinate with the facility regarding the intended flight altitude. Further, all flights under USGS operational control which fly over public lands will keep aircraft noise and pollution to a minimum and comply with applicable wildlife statutes.

25. Other. USGS personnel shall not encourage, nor pressure pilots to fly into any situation, weather, location, low altitude, confined space, wire environment, or other circumstance that may be beyond the known capabilities of the pilot or the aircraft.

(2) Wire Strike Prevention

a. Flight Environment Considerations. USGS projects often dictate that flights be conducted close to the ground where wires and other obstacles to air navigation are prevalent.

b. Risk Assessments/Hazard Maps. To reduce wire strike potential, it is critical that a risk assessment be conducted prior to all low-level flights. A low-level, flight-hazard map shall be constructed for the local operational area. All preplanned low-level flights require a thorough map reconnaissance of the route to be flown.

1. Flight Routes, Areas, Altitudes, and Airspace. Routing, altitudes, and airspace planning and coordination are vital parts of project planning to address the effects of local-area hazards, areas of high aviation use, high or low altitudes, and various airspace restrictions in the flight planning process.

2. Local Area Hazard Map. Power lines, radio towers, aviation navigation stations, etc., are hazards to aircraft performing at altitudes less than 500 feet of the surface. Stations flying low-level flights must have such maps, per 352 DM 1.9(D)(2). This map should be reviewed by the flight manager/chief of party and pilot prior to the flight. A high-level reconnaissance flight must be completed prior to descending below 500 ft of the surface. New hazards found must be added to the hazard map upon return. Local area hazard maps are required for the local operational area for all low-level flights to be flown within 500 feet of the ground surface.

3. Local Route and Working Area Map. When working at remote campsites, a map showing the daily route and working area of each employee involved in aviation activities must be left with a person designated by the project manager. Radio checks between the aircraft and camp shall be made at predetermined intervals (usually not more than 1 hour). Radio check reports must be logged (documented in writing) by a project manager designee.

(3) Operational Environment Considerations. Environmental conditions are those conditions over which there is no human control. Forecast or known environmental conditions are not mishap cause factors. For example, structural damage caused by flying into forecast severe turbulence is NOT a mishap causal factor. A pilot's decision to fly into forecast or known severe turbulence is a cause factor. Cause factors are normally under human control and can be

eliminated. Managers must be aware that their actions may encourage pilots to operate beyond existing capability. Pilots must be ever cognizant of environmental conditions in which they are expected to operate safely and are the final authority relative to a GO/NO-GO decision based upon environmental and safety considerations. Factors such as snow, wind velocity, cold weather (-40 degree Fahrenheit), etc., may have a direct impact on performance of the aircraft. Flights in such conditions are permitted only in compliance with 351 DM 1.

(4) Aviation Life Support Equipment (ALSE). Project leaders shall ensure appropriate and adequate ALSE, including PPE, is aboard the aircraft or being worn by the individual, based upon DOI requirements, guidelines, project needs, and individual state statute requirements. Detailed information is contained in the ALSE Handbook.

a. PPE. Crewmembers must wear PPE on all special-use flights as detailed in the Aviation Life Support Handbook (ALSE Handbook). PPE consists of fire-retardant clothing (NOMEX), aviator's protective helmet (except in multiengine airplanes) that provides head, hearing, and eye protection, leather boots extending above the ankles, and flight gloves made completely of NOMEX or leather, or a combination of NOMEX and leather. For special-use aviation operations in extreme snow/cold/wet conditions the use of synthetic or synthetic-natural fiber blends is authorized in lieu of fire-resistant clothing (inner- and outerwear). Likewise, footwear made of rubber (waders) or rubber combined with cotton, canvas, or leather with felt liners (snow boots) may be worn. Where operating environmental conditions justify PPE substitution, supervisors shall inform persons involved in such operations of the increased personal hazard associated with wearing other than fire-resistant clothing, gloves, and footwear in the event of a post-mishap fire.

b. Outer and Undergarment. Garments worn over the NOMEX flight suit should be made of NOMEX or other fire-resistant material. Nylon, Dacron, or polyester undergarments which have direct contact with the wearer's skin may not be worn with PPE as they present an unacceptable exposure to post-mishap fire injury, per Chapter 2.2 of the ALSE Handbook.

c. First-Aid Kit. Specific items which must be in first aid kits is found in Chapter 3.4 of the ALSE Handbook and must be onboard all aircraft under operational control of USGS.

d. Survival Kit. A survival kit containing the minimum items listed in Appendix 1 of the ALSE Handbook must be onboard all special-use flights. Suggested additional items for survival kits for Alaska or Canada flights are in Appendix 2 of the ALSE Handbook.

e. Personal Flotation Device (PFD). PFD's must be used on DOI aircraft, per Chapter 3.1 of the ALSE Handbook, in the following instances:

1. Worn on takeoffs or landings to water (including float and boat-hulled aircraft).
2. Worn during water bucket dipping or snorkeling operations.
3. Worn by occupants of single-engine aircraft when operating beyond gliding distance to shore.

4. PFD's do not have to be worn but must be immediately available to occupants aboard DOI flights in multiengine aircraft operating beyond gliding distance to shore.

f. Extended Overwater Operations. DOI aircraft must have survival equipment per 14 CFR 135.167 for extended overwater operations.

g. Anti-Exposure Garments. Anti-exposure garments must be worn in single-engine aircraft and be readily available to occupants of multiengine aircraft when conducting extended overwater flight and/or where water temperature is colder than 50 degrees Fahrenheit, per Chapter 3.2(B) of the ALSE Handbook.

h. Waivers or Exceptions. Waivers or exceptions to PPE requirements may be granted, per Chapter 1.4 of the ALSE Handbook. Copies of Bureau-granted waivers must be provided to the OAS Director and be included with Bureau requests for procurement services when such operations are to be conducted, per 350 DM 1.9.

i. Personal Emergency Locator Transmitters/Emergency Position Indicator Radio Beacon (EPIRB). Use of Personal Emergency Locator Transmitters (designed for use on land) or EPIRB's (designed for use over water) is recommended. Personal transmitters and EPIRB's, should not be operated if the aircraft-installed unit is operational and transmitting. Two signals from the same location may prevent the satellite or search aircraft homing radio from accurately pinpointing the mishap site.

j. Retroreflective Tape. The use of retroreflective tape on PFD's or helmets is recommended as an additional safety measure.

(5) Flight Following. As a potential lifesaving condition, each Bureau should include a flight following requirement in the aircraft mishap prevention plan. This plan should specify the method or procedure to be used that will accommodate communications from mission personnel (or the pilot) to the flight-following facility at predetermined intervals. Additional information concerning flight following is contained in 351 DM 1. (See section 4. I. Flight following of this NAMP. Also see sections 1.A.(2) k, 5.C.(3) and 3.D.(2).

a. Pilots shall file and operate on an FAA flight plan, International Civil Aviation Organization (ICAO) flight plan, or in accordance with the USGS flight plan, approved by the BAM. Flight plans should be filed before departure when possible.

b. USGS flight plans and flight following must specify route of flight, estimated time of arrival, aircraft tracking during flight, and emergency response procedures. USGS flight following must provide for position reports to be documented at predetermined intervals (usually not more than 1 hour) and provide enough information so that an aircraft can be easily located should it become overdue or missing. Flight following must be established with FAA, ICAO, and/or in accordance with the USGS flight following program.

c. The pilot or a designated passenger must request the local FAA Flight Service Station or

person with local flight following responsibilities to close the flight plan within 30 minutes after landing.

(6) Passenger Manifest. A passenger manifest or similar document listing crew members and passengers onboard the aircraft must be completed per 351 DM 1.5, or in accordance with the USGS flight plan approved by the BAM.

(7) Emergencies. When an emergency requires a deviation from the planned mission profile, pilots must take appropriate action to ensure the safety of the passengers and report the incident to the Flight Manager/Chief of Party and OAS via a SAFCOM, per 351 DM 1.1(H).

(8) Weight and Balance. It is imperative that proper consideration and planning be given to the aircraft weight and balance computation and subsequent loading. The actual weight of personnel and/or cargo must be considered relative to the environment (elevation, temperature, wind, surface conditions, etc.) and aircraft performance capabilities. This will be accomplished for each takeoff and landing for all aircraft. Documentation will be determined by the USGS organization conducting the operation(s).

a. Weight and balance information shall be kept in each aircraft flight manual or weight and balance book, per 351 DM 1.1(F), and used to compute maximum takeoff and landing weights prior to each flight, per 352 DM 1.9(H).

b. Aircraft performance capabilities. The actual weight of personnel and/or cargo must be considered relative to the environment (elevation, temperature, wind, surface conditions, etc.) and aircraft performance capabilities. This will be accomplished for each takeoff and landing for all aircraft. It is recommended that an OAS Form-67 (Load Calculation) be used for calculation and documentation.

5. Aviation Training

5.A. Management responsibilities

(1) The education, training, and qualification of DOI personnel at all organizational levels are the responsibility of management. Managers and supervisors must be aware of DOI policy as it relates to aviation programs supporting USGS missions for which they are responsible. The minimum level of education and training specified in the 350-354 DM series, and the 485 DM series shall be provided to appropriate Bureau personnel. (USGS SM 445-2-H chapter 27.4 B. and C.).

(2) Supervisors and Project/Task Chiefs will ensure that employees under their authority receive the level of aviation safety training required by DOI policy before participating in aviation operations.

(3) The education and training requirements listed in OPM 4 are the minimum required by DOI for promoting aircraft accident prevention awareness and developing operational and

management skills. USGS, at the national or lower organizational levels, may increase but not decrease OPM 04 requirements.

(4) USGS managers will provide time and resources for education and training as specified in OPM 04.

5.B. Required aviation training

Required aviation training is provided by OAS-Training Division. Registering for courses and completing most classes can be done online at the [IAT website](#). Users can create an account with a username and password. Aviation training is recorded and stored automatically. (USGS SM 445-2-H chapter 27.4 C.) **Training requirements are contained in OPM-4 and are outlined by position in the [Interagency Aviation Training Guidebook](#).** https://www.iat.gov/docs/IAT_Guide_2017_10.pdf

(1) Senior Executives and Managers overseeing mission flight personnel must complete the M3 Aviation Management for Supervisors or the M2 Aviation Management Line Managers Briefing course every three years.

(2) Supervisors of an Aircrew member (first line supervisors) must take M3 Aviation Management for Supervisors and A-200 Aviation Mishap Review courses every three years. Second line supervisors and/or Cost Center Managers must take Aviation Management Training for Supervisors every three years. (See recommended training in NAMP section 5.C. and in the IAT GB).

(3) Project/Task Chiefs. A Project or Task Chief is a person who-supervises the activities of Aircrew members, plans and supervises flight activities, and prepares Project Aviation Safety Plans (PASPs). Project/Task Chiefs must complete aviation training appropriate to the project operations including: Aviation radio use, flight following, mission planning, policy and regulations, responsibility and liability, crew resource management, aircraft operations, aircraft capabilities and limitations, human factors, and risk management courses (approximately 20 hours training). Basic Aviation Safety training and Aviation Training for Supervisors are required every three years supplemented by mission appropriate specialized training mandated by DOI (approximately 12 hours training). [Interagency Aviation Training Guidebook](#). https://www.iat.gov/docs/IAT_Guide_2017_10.pdf

(4) Aircrew Member Training Required:

a. A-100 Basic Aviation Safety (formerly B3) (every three years)

b. A-200 Mishap Review (every three years)

c. A-116 Aviation Security (One time)

d. A-110 HAZMAT (if applicable) (every three years)

An aircrew member is a person (other than a flight crew member) working in and around aircraft, who is essential to ensure the safety and successful outcome of the mission. **(NOTE: Most USGS project team members are considered aircrew members.)**

(5) **Passenger** on point-to-point and non-special use flights must at a minimum, receive a safety briefing by the flight crew/pilot. A passenger is any person aboard an aircraft who **does not** perform the function of a flight crew/pilot or aircrew member.

5.C. Specialty training and recommended training

(1) **External loads.** Personnel involved in **external load** work must complete A-219 Units 1-4 and Unit 6. In addition, personnel desiring to become qualified as Helicopter Long Line Remote Hook Specialists are required to complete A-219 Units 1-4 and Unit 6.

(2) **Water Ditching and Survival.** It is recommended that USGS employees acting as aircrew members in float equipped aircraft or on over-water flights beyond gliding distance to shore complete **Water Ditching and Survival** training, IAT course A-312 or an equivalent course (e.g., military, bureau, Interagency or commercial FAR Part 141/142 course). (Also see NAMP section 5.F.)

(3) **Flight Followers:** Collateral duty flight followers (also see sections 1.A(2)(j) and 4.I.(1 through 7) and 3. D(2)(b)) are recommended the training courses:

- a. A-100 (formerly B3) Basic aviation safety
- b. A-104: Overview of aircraft Capabilities and Limitations
- c. A-107: Aviation Policy and Regulations-1
- d. A-109: Aviation Radio Use
- e. A-111: Flight Payment Documents
- f. A-112: Mission Planning and Flight Request Process
- g. A-115: Automated Flight Following
- h. A-207: Aircraft Flight Scheduling

(4) **USGS Pilot Training.** Pilot training will be conducted in accordance with 351 DM 3 and OPM-22. A USGS pilot not in compliance with these documents is not authorized to pilot DOI aircraft. (USGS SM 445-2-H chapter 27.7 D. (2) and 3)).

(5) Unmanned Aircraft System Training

Unmanned Aircraft Systems (A-450 Small Unmanned Aircraft System Basic Operator Course) training and use must be requested through the BAM. Requirements can be found at OPM -11, DOI Use of Unmanned Aircraft Systems.

<https://www.doi.gov/sites/doi.gov/files/uploads/opm-11.pdf>

(6) **Airborne Capture Eradication or Tagging of Animals** training is approved only for the USGS large mammal group of the Alaska Science Center in Fairbanks, AK. Both DOI and

USGS ACETA training courses are required. All other USGS units are encouraged to seek end product contracts for ACETA work. (See NAMP 2.A.(2) *Procurement End Product Contracts).

(7) Pinch Hitter Pilot Training. USGS personnel who fly on regular missions in fixed-wing aircraft should have a flight familiarization course, commonly referred to as Pinch Hitter Pilot Training. Included are an overview of meteorology, airplane instruments, flight and navigation techniques, emergency communications, and landing procedures. This instruction requires approval by the OAS Director, per 351 DM 1.2(b)(3).

(8) Cold-weather. Prior to conducting activities in cold-weather environments, USGS personnel should complete instruction in the psychological aspects of panic behavior, clothing selection and improvisation, recognizing and treating cold-weather injuries, food and water planning and procurement, etc.

5.D. Contracting Officer's Representative (COR) requirements

For all USGS aviation contracts the Contracting Officer (CO), in consultation with the Program Office, determines the level of COR certification required for a contract. CORs will be developed and appointed as follows:

(1) Level I – 8 hours of training and no experience required. This level is appropriate for low-risk contract vehicles, such as supply contracts and orders.

(2) Level II – 40 hours of training and 1 year of previous COR experience required. This level is generally appropriate for contract vehicles of moderate to high complexity, including both supply and service contracts. The majority of contracts will require a Level II COR.

(3) Level III – 60 hours of training and 2 years of previous experience required. These are the most experienced CORs within an agency who are called upon to perform significant program management activities. CORs assigned to major investments, as defined by OMB Circular A-11, are required to have a Level III certification.

USGS aviation contract CORs should refer to the [Federal Acquisition Institute Training Application System](#) (FAITAS) website for additional information.

5.E. Documentation requirements

Interagency Aviation Training is automatically documented within AT 2.0 and by the individual by taking a self-certification within DOI Talent. Records of USGS personnel required and recommended aviation safety training should be maintained at the applicable organizational location. (USGS SM 445-2-H chapter 27.4 C.) CORs should document training on the FAITAS website.

(1) Aviation Training Equivalencies

The BAM, working with the OAS Training Division, is authorized to determine IAT equivalencies for training that has been acquired from sources other than IAT. This authorization may be delegated. See [OPM-04](#). <https://www.doi.gov/sites/doi.gov/files/uploads/opm-04.pdf>

5.F. Water Ditching Survival Training Risk Analysis

USGS supervisors of employees whose duties require flying offshore, or water take off and landings over submerged or wet terrain must complete a Risk Analysis as part of their PASP to determine if Water Ditching Survival training is appropriate and would significantly reduce risk (see section 3. B. of this NAMP). **A-312 Water Ditching Survival training is recommended for most aircrew members, especially if the training is provided locally and at no cost.**

6. Aviation Security

6.A. Aviation facilities

(Not applicable) Any future USGS owned, leased, occupied, or operationally controlled facilities that are improved for aircraft takeoff and landing shall have a current written security plan in accordance with [352 DM 5](#), and the [Field Reference Guide for Aviation Security for Airports or other Aviation Facilities](#).

The BAM, with the RAM, will ensure that a facility reexamination will be conducted every 3 years.

6.B. Aircraft

The PIC is responsible for the security and tie down of USGS controlled aircraft. It is recommended that aircraft be hangered whenever practical. Aircraft must be dual locked whenever it is not under the direct control of a USGS employee. At any time DOI-owned or controlled aircraft is not directly attended by DOI-authorized flight or ground personnel, the aircraft will be physically secured and disabled via the dual-lock method. Examples of acceptable dual-lock devices and their conditions of use are listed in [352 DM 5](#), appendix 2.

Note: Locking aircraft doors and fenced or gated tie down areas are NOT acceptable methods of dual locking.

6.C. Aviation fuel

The PIC must verify security, type, and quantity of USGS controlled fuel and take reasonable actions to secure fuel from criminal misuse or tampering.

6.D. Bureau-specific security requirements (not applicable)

7. Airspace Coordination

Airspace planning and coordination are becoming more important as the limited airspace is becoming more congested. All users of the airspace system need to be aware of special-use airspace and what restrictions apply to the use of that airspace. Coordination with other airspace users, such as the military, is an important safety issue. Airspace coordination is an important part of mission planning.

7.A. Introduction to interagency process

Flights may, depending on location and altitude, operate within airspace of IFR/VFR routes, TFRs, Wilderness Areas, or National Wildlife Refuges. Flights will be planned to avoid these areas or to comply with the controlling agency's requirements and restrictions. The USGS mission may involve flights that operate within the Air Defense Identification Zone (ADIZ) of the United States. All flights that penetrate the ADIZ will comply with the requirements of 14 CFR 99. Airspace coordination and guidance for DOI is provided through the [Interagency Airspace Coordination Guide](https://www.nwcg.gov/sites/default/files/publications/pms520.pdf) (IACG).
<https://www.nwcg.gov/sites/default/files/publications/pms520.pdf>

7.B. Definitions.

(1) Air Defense Identification Zone (ADIZ). An ADIZ is the area of airspace over land or water, extending upward from the surface, within which the ready identification, the location, and the control of aircraft are required in the interest of national security. ADIZ locations and operating and flight plan requirements for civil aircraft operations are specified in 14 CFR Part 99. Any aircraft that wishes to fly in or through the boundary must file either a Defense Visual Flight Rules (DVFR) flight plan or an IFR flight plan before crossing the ADIZ (14 CFR 99.11). While approaching and crossing the ADIZ aircraft must have an operational transponder and maintain two-way radio contact.

(2) Defense Visual Flight Rules. Rules applicable to flights within an ADIZ conducted under the visual flight rules in 14 CFR Part 91.

(3) Fire Traffic Area (FTA). An FTA is a communication protocol for firefighting agencies. It does not pertain to other aircraft that have legal access granted by the FAA within a specific TFR. The FTA should not be confused with a TFR, which is a legal restriction established by the Federal Aviation Administration to restrict aviation traffic while the FTA is a communication tool establishing protocol within firefighting agencies.

(4) Notice to Airmen (NOTAM). A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.

(5) Temporary Flight Restriction (TFR). A TFR is a geographically-limited, short-term airspace restriction. Temporary flight restrictions often encompass major sporting events, natural disaster areas, air shows, space launches, and Presidential movements. Pilots must check with flight service for ALL applicable NOTAMS immediately prior to flight to identify applicable TFRs. Some TFRs can be very complex in shape, movement, and duration.

7.C. Deconfliction procedures.

The PIC is responsible for the deconfliction procedures appropriate to the airspace of USGS mission flights. All flights that enter an ADIZ shall be on either an IFR or DVFR flight plan, will flight follow with the FAA, and will comply with the requirements of 14 CFR 99. Airspace

deconfliction guidance is provided in the [IACG](https://www.nwcg.gov/sites/default/files/publications/pms520.pdf).
<https://www.nwcg.gov/sites/default/files/publications/pms520.pdf>

7.D. Emergency Security Control of Air Traffic (ESCAT) procedures.

ESCAT provides direction for the security control of civil and military air traffic during an air defense emergency.

(1) The ESCAT Plan provides policy, assigns responsibilities, and prescribes procedures to be taken in the interest of national security. The ESCAT Plan supersedes the plan for the Security Control of Air Traffic and Air Navigations Aids. See FAA advisory Circular 99-1D.

(2) During defense emergency or air defense emergency conditions, additional special security instructions may be issued in accordance with 32 CFR 245 Plan for the Emergency Security Control of Air Traffic (ESCAT).

(3) Under the provisions of 32 CFR 245, the military will direct the action to be taken in regard to landing, grounding, diversion, or dispersal of aircraft and the control of air navigation aids in the defense of the U.S. during emergency conditions.

(4) At the time a portion or all of ESCAT is implemented, ATC facilities will broadcast appropriate instructions received from the Air Traffic Control System Command Center (ATCSCC) over available ATC frequencies. Depending on instructions received from the ATCSCC, VFR flights may be directed to land at the nearest available airport, and IFR flights will be expected to proceed as directed by ATC.

(5) Pilots on the ground may be required to file a flight plan and obtain an approval (through FAA) prior to conducting flight operation.

7.E. Bureau-specific airspace requirements (Not Applicable).

8. Aviation Project Planning Requirements

8.A. USGS Project Aviation Safety Plan Policy.

(1) Project Aviation Safety Plans (PASP) are required for all special use missions (outlined in OPM-29 Special Use Activities and Revised Standards for Technical Oversight) by OPM-06 Aviation Management Plans and USGS SM 445-2-H chapter 27.4.F. Appendix A of this NAMP is a template for completing a PASP that meets all required items in OPM-06.

(2) Cost Center Manager approval is required for all special use mission PASPs. PASPs must be prepared by a trained Project or Task Chief, reviewed by either a RAM or the BAM, and approved and signed by the Cost Center Manager. UAS PASPs should be reviewed by the NUPO but do not need manager approval unless deemed high risk.

8.B. Unit or Center Aviation Management Plans.

CAMPs should address the minimum elements required by USGS SM 445-2-H Chapter 27.4.E. Appendix B of this NAMP is a template for completing a CAMP that meets all required items.

Project supervisors and management-level project approvers are responsible for ensuring CAMPs are completed, reviewed periodically, and signed by management. The RAM and the USGS BAM are available to assist in preparing these CAMPs.

Appendices

Appendix A: USGS Project Aviation Safety Plan (PASP) template



United States Department of the Interior

Geological Survey

[INSERT CENTER/OFFICE NAME]

Project Aviation Safety Plan

Project name: _____

1. Mission Objectives: *Brief description of the project and its objectives.*

2. Justification: *Indicate why the project will require the use of an aircraft in special use flight conditions/environments and list the most practical alternative for completion of the project.*

Special Use Activities *(Describe special use activities and any additional training that may be required to perform this mission, i.e., ACETA, sling loads, etc.; OPM-29:*

<https://www.doi.gov/sites/doi.gov/files/uploads/opm-29.pdf>.);

Is this a Cooperator aircraft mission? *If aircraft services are not procured by the USGS, then use form OAS-4 to obtain OAS approval for the cooperator flights. Form OAS-4 can be found at*

<https://internal.usgs.gov/ops/safetynet/aviationprogram/whatsnewarchive.html>

3. Dates of Operation: *Dates the project will begin and end. These may be approximate, since the exact dates of flight may not be known.*

4. Location of Aviation Activities: *Enter a descriptive location and **include a map** clearly showing the area where the flights will occur.*

5. Projected Cost of Aviation Resources – *Enter cost coding, projected flight hours and cost, projected miscellaneous expenses (overnight charges, service truck mileage, etc.), and total cost of the aviation portion of the project.*

Cost Center Account #:

Billee Code: _____

on [Form AOD-91 https://www.doi.gov/sites/doi.gov/files/uploads/aqd-91_l48.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/aqd-91_l48.pdf)

https://www.doi.gov/sites/doi.gov/files/uploads/aqd-91_ak.pdf

Aviation cross-servicing SOP:

<https://internal.usgs.gov/ops/safetynet/aviationprogram/procurement.html>

Aviation source list and OAS Flight Coordination Center:
<https://www.doi.gov/aviation/fcc>

All USGS flight procurement in Alaska, regardless of employee cost center, must go through the Alaska Science Center (ASC) Administrative Office. Email requests to: gs-aka_asc_admin_techs@usgs.gov.

Cost Estimates:

Flight hours _____ @ _____ \$per hr. = \$ _____
Availability _____ days @ _____ \$ per day = \$ _____
Fuel Costs: \$ _____
Fuel Transportation: \$ _____
Other Costs (mechanic, ferry, standby, fuel truck & driver, per diem, etc.) \$ _____
Estimated Total Aircraft Cost: \$ _____

6. Aircraft – *If known, identify company that owns the aircraft anticipated to be used, registration number, aircraft type, date of aircraft data card expiration and missions for which the aircraft is approved.*

Vendor

Name _____ Phone _____
Address _____
Email address _____

Aircraft make and model: _____

Registration (Tail) Number _____
OAS aircraft data card expiration date: _____
Missions approved for aircraft: _____

7. Pilot – *If known, identify Pilot(s), types of aircraft qualified in, types of missions qualified for and Pilot card expiration date.*

Pilot name: _____
OAS pilot card expiration date: _____
Missions approved for pilot: _____
Aircraft approved for pilot: _____

8. Mission Personnel: *List individuals involved in flights, their qualifications (Project or Task Chief, Supervisor, Aircrew Member Passenger, etc.), dates of last aviation training, and include individual's project responsibilities.*

Training Required *(Project/Task leaders must verify that **all personnel** have received and are current in the applicable aviation training required for the mission, 350DM1.1; 352DM1.9B;*

[Interagency Aviation Training](#)

[Interagency Aviation Training Guide https://www.iat.gov/docs/IAT_Guide_2017_10.pdf](https://www.iat.gov/docs/IAT_Guide_2017_10.pdf)

9. Communication Plan, Flight Following and Emergency Search and Rescue. *Identify the procedures to be used.*

Field Communications *Identify the procedures to be used. In Alaska, all field operations (regardless of USGS employee cost center) must file an Alaska Science Center Field Emergency Plan using the following links: [Field Emergency Plans](#) and [Alaska Science Center Use of the Field Emergency Plan Database](#).*

Flight Following *Flight following must include two way communication with a **non-vendor (unless specified in contract)** flight follower, specific route of flight, estimated time of arrival (ETA) to each landing site, how an aircraft will be tracked during flight, a minimum of hourly reporting, radio monitoring, and mishap response plan, or approved alternative plan should the aircraft experience a mishap or fail to check in. A flight follower must 1) be familiar with the mission, 2) be provided a flight plan, 3) track the flight and maintain 2-way communication from initial take off to final landing, 4) have a copy of the Mishap Response Plan, and 5) know how to respond should the aircraft experience a mishap or fail to check in. **NAMP 4.I, 351DM1.4B and USGS Manual Chapter 27.4**):*

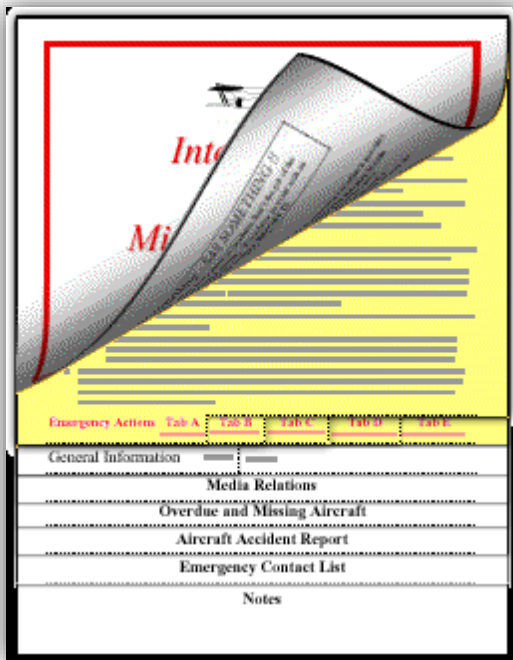
[OAS Departmental Manual Index](#)

<https://www2.usgs.gov/usgs-manual/handbook/hb/445-2-h/ch27.html> [USGS Aviation Program](#)

Mishap Response Plan *(Include detailed action and contact information in case of an accident or emergency, 352DM1.9.)*

[Interagency Aviation Mishap Response Guide and Checklist](#)

Report mishaps to OAS: 1-888-4MISHAP (1-888-464-7427)



What You Need to Do

After you download the document, you can tailor the plan to fit your organizational and local area needs by adding names and phone numbers. After printing, you will be able to literally “cut along the dotted lines” and assemble the plan into the familiar layered Interagency Aviation Mishap Response Guide and Checklist format.

We recommend that you print tabs A, B, C, D, and E (pages 3-7) on yellow or another bright colored paper to make those “immediate actions” stand out boldly.

What the Checklist Does for You

The checklist provides both immediate actions and general instructions to follow in the event of an aviation accident. It has intentionally been developed to be simple and generic. The “Aircraft Accident Report” consolidates the information required for missing aircraft, overdue missing aircraft, and accidents into a single form. We have made it generic to allow the widest possible use with a minimum of additional work. **Each unit must customize according to the geographical area. This may require multiple response plans.**

10. Aerial Hazard Analysis – *An aerial hazard analysis with **attached map** will be provided to the pilot before the flight. Flights made in confined areas (e.g. deep, narrow canyons) require that a prior ground and/or aerial survey of hazards be made. A copy of the hazards map shall be provided to the pilot prior to any project*

flight. The necessary temporary flight restrictions and coordination with the Federal Aviation Administration and, if appropriate, military authorities, must be accomplished prior to project. Aerial hazards and flight routes must be clearly indicated where possible.

Airspace Coordination Procedures (Determination of airspace [Military Operating Areas, Restricted Areas, etc.] in and around the project area):

[Sky Vector](#)

11. Protective Clothing and Equipment – Identify the protective equipment and clothing necessary for the particular operation. Survival equipment (extra water, flotation devices, sleeping bags, etc.) beyond the normal PPE complement may be required.

Aviation Life Support Equipment (ALSE)

PPE, First Aid Kits, Survival Kits, EPIRBs, Personal Flotation Device (PFD) or anti-exposure suits. (See **ALSE Handbook**):

https://www.doi.gov/sites/doi.gov/files/uploads/interagency_alse_handbook_v2.8.pdf

[Request for PPE waivers if needed](#)

12. Weight & Balance / Load Calculations – The pilot is responsible for the accurate completion of weight and balance load calculations. Trained aviation personnel shall ensure that aircraft scheduled are capable of performing the mission(s) safely and within the capability of the aircraft selected. The project manager shall ensure that manifests and weight and balance load calculations are completed properly and completed daily.

[Interagency Helicopter Load Calculation](#)

13. Risk Assessment/SMS – Risk assessment utilizing the tools listed in Appendix J of IHOG or bureau approved SMS. (352DM1.9C): Risk management principles and processes are described in detail in Chapter 3 of the [IHOG](#).

A variety of risk assessment tools can be found in the [IHOG](#) Appendix J.

Risk Assessment/ Risk Management/ Job Hazard Analysis Procedures: Chose one method, assess and manage the risks.

[USGS Aviation Program](#)
[Risk Analysis: 4Ms](#)

Transportation of Hazardous Materials e.g., ammunition, batteries, explosives, compressed gas/liquid, dry ice, flares, bear spray, etc.

<https://www.doi.gov/aviation/library/guides>

Required training course for HAZMAT is A-110 in [IAT](#).

Passenger Manifesting and Pilot Briefings and Responsibilities (351DM1.5):

[OAS Departmental Manual Index](#)

SAFECOMs -- All project personnel should be familiar with the procedure for reporting any unsafe conditions via the [OAS SAFECOM website](#)

14. Signatures – Line Manager or appropriate level of approval based on the risk assessment or other bureau requirement. Science Center Director or Unit Chief signatures are required on all Special Use Mission PAsPs.

Prepared by: _____ Date: _____
[Name/Title]
U.S. Geological Survey, [Science Center Name]

Reviewed by: _____ Date: _____
[Name], Regional [or Bureau] Aviation Manager
U.S. Geological Survey, [Location]

Approved by: _____ Date: _____
[Name]/Unit Supervisor
U.S. Geological Survey, [Science Center Name]

Approved by: _____ Date: _____
[Name], Science Center Director
U.S. Geological Survey, [Location]

Appendix B: Unit or Center Aviation Management Plans (CAMP) template



United States Department of the Interior

Geological Survey

[INSERT UNIT OR CENTER/OFFICE NAME]

CENTER Aviation Management Plan

Introduction: Management at all levels in US Geological Survey (USGS) is responsible for the safety of aviation operations under their control. Direct supervision, training, and providing safe working conditions are included in management responsibility. Managers must monitor programs, identify hazards, and implement controls to acceptable levels whenever risk cannot be totally eliminated (USGS Manual 445-SM-2 chapter 27.5 and USGS National Aviation Management Plan [NAMP] 1.A, 3.B).

NAMP: <https://internal.usgs.gov/ops/safetynet/aviationprogram/Signed%20NAMP.pdf>

This Center Aviation Management Plan (CAMP) is intended to provide guidance to managers, supervisors, Project/Task Chiefs, employees, cooperators, contractors, volunteers, and other field personnel in the [Insert Center/Office/Field Station/Observatory/Unit name] for use in the development of comprehensive aviation plans. It is the responsibility of each aviation user to know and operate within the framework of all applicable guidelines and policy, and to function within the scope of their employment.

Purpose: To formalize the requirements for a Center [Office/Unit] Aviation Safety Program to accomplish mission-related activities. The USGS Aviation Safety Program website contains information and guidance: <http://internal.usgs.gov/ops/safetynet/aviationprogram.html>

Policy (350DM1.1): Managers and supervisors must be aware of Departmental policy as it relates to aviation programs supporting USGS missions for which they are responsible. Personnel involved in the use of aircraft for mission field work will know and follow all applicable DOI and USGS policy and regulations pertaining to aviation activities per the following documents:

- <https://www2.usgs.gov/usgs-manual/handbook/hb/445-2-h/ch27.html>
- <https://www.doi.gov/aviation/library/>
- https://www.faa.gov/regulations_policies/faa_regulations/

Training requirements: The education, training, and qualification of DOI personnel at all organizational levels are the responsibility of management. The minimum level of education and training specified in the NAMP Chapter 5, and the 485 DM series shall be provided to appropriate Bureau personnel. (USGS Manual 445-SM-2 chapter 27.5 (D)). The Interagency Aviation Training Guide outlines training guidelines:

https://www.iat.gov/docs/IAT_Guide_2017_10.pdf

Interagency Aviation Training is available at: www.iat.gov

All scientists, technicians, volunteers, contractors, cooperators, students and other field personnel participating in USGS aviation for mission fieldwork will maintain aviation safety training currency.

All flyers will complete:

- A-100 Basic Aviation Safety Course (every 3 years),
- A-200 DOI Aviation Mishap Review (every 3 years),
- A-116, Aviation Security (one time),

And if transporting hazardous materials,

- A-110 Hazmat (every 3 years);

or equivalent prior to flight. Specialized training might be required for certain aviation activities (NAMP chapter 5).

Project Chiefs and Supervisors of flyers shall complete M-3 *Aviation Training for Supervisors*, and A-200, or equivalent, prior to project planning.

Managers must complete the M3 *Aviation Management for Supervisors* or the M2 *Aviation Management Line Managers Briefing* course every 3 years.

Procurement and Reporting: USGS aircraft procurement must be through OAS/AQD using the Aviation Cross Servicing Process:

<https://internal.usgs.gov/ops/safetynet/aviationprogram/procurement.html>

The source list at <https://www.doi.gov/aviation/fcc> may be used to find approved rental aircraft or to check availability of DOI fleet aircraft.

All aircraft activities conducted in Alaska, regardless of employee cost center location, must coordinate with the Alaska Science Center, per Memo MAR 18, 2014 Markon. Email requests: gs-aka_asc_admin_techs@usgs.gov

In Alaska, all field operations (regardless of USGS employee cost center) must file an Alaska Science Center Field Emergency Plan using:

http://ascinternal.wr.usgs.gov/db/fieldplan/fieldplans_today.php

http://ascinternal.wr.usgs.gov/policy/app/app_404-01_FEP.pdf

Aircraft procured by cooperators (i.e., university, state, public utility company, military, corporate, or any non-DOI government agency) requires OAS approval through the USGS Bureau Aviation Manager: wdchrist@usgs.gov 303-236-5513. Cooperator aircraft flight hour use must be reported to through the USGS Bureau Aviation Manager.

Flight/Duty Time Limitations (351DM3.5): Project/Task leaders are responsible for ensuring the pilot Flight and Duty time limitations are not exceeded. The basic limits are:

- 2 days off in any 14 day period
- NTE 8 hrs flight time per day
- NTE 14 hrs duty time per day
- NTE 42 hrs flight time in a 6-day period
- 1 day off after reaching 36 hrs flight time in a 6-day period

UAS operations will be conducted in accordance with OPM-11 (NAMP 4.J).

<https://www.doi.gov/sites/doi.gov/files/uploads/opm-11.pdf>

Project Aviation Safety Plans: All [Insert Center/Office name] projects or tasks that use aviation for mission fieldwork must file a Project Aviation Safety Plan (PASP) with a designated Center/Office/Unit Aviation Safety Coordinator prior to operations. PASPs shall meet the

minimum requirements of OPM-6. A PASP template is available at:
<http://internal.usgs.gov/ops/safetynet/projectplantemplate.doc>

PASPs require a formal Risk Analysis for the operations. Risk management principles and processes are described in the NAMP chapter 3.B and in:
http://www.nwcg.gov/pms/pubs/pms510/23_Chapter03.pdf.

A variety of risk assessment tools can be found in:
http://www.nwcg.gov/pms/pubs/pms510/53_AppendixJ.pdf

PASPs require specific Flight Following (NAMP chapter 4.I) procedure and a Mishap Response Plan.

http://www.doi.gov/aviation/safety/safety_iamrgc.cfm

Examples of PASPs can be found:

<http://internal.usgs.gov/ops/safetynet/aviationprogram/plans.html>

PASPs shall be reviewed by the Regional Aviation Manager or Bureau Aviation Manager. Projects that involve Special Use missions must be signed by the Science Center Director/ Unit Leader.

Disaster relief assistance flights and preparedness:

Science Center management need to make sure that key personnel are prepared to fly in response to natural events such as floods, drought, earthquakes, landslides, geomagnetic variations, volcanic eruptions, tsunami, storms, and wildfires. There will not be any emergency waivers or blanket waivers from OAS.

Scientists and technicians have DOI policy approval to fly with the military, including the National Guard and Coast Guard, as part of the relief effort for a "Special Event." (351 DM 4.1 A.), not science projects. We can fly with the military only if requested by, and the flight is under the control of, the Incident Command Center (ICC).

We can fly with a cooperator (other government organization) only if requested by and the flight is under the control of the ICC and approved by the Science Center Director or higher USGS authority.

We cannot "hitch a ride" with a cooperator flying disaster relief without an OAS approval memo. Our field people need to beware of "pop-up" offers, especially from news-media helicopters. It is tempting to take an offer of a "lift" but that would also require OAS approval in the form of an Affiliate Cooperator Approval memo.

If there is any reasonable likelihood that a scientist or technician will need to participate in a Disaster Relief assistance flight, they and their supervisor should be properly trained and have a "go kit" with the tools and equipment that they are likely to use.

Science Center management will coordinate with their SAFRR (Science Application For Risk Reduction) and USGS Emergency Management programs to make sure they have personnel ready to fly if needed. Roads, bridges and other infrastructure are likely to be damaged by natural

events and aviation might be the best way to get our experts to the place they need to be to provide assistance.

Prepared by: _____ Date: _____
Name/Title
U.S. Geological Survey, Science Center Name

Reviewed by: _____ Date: _____
Name, Respective Regional Aviation Manager
U.S. Geological Survey, Location

Approved by: _____ Date: _____
Name/Unit Supervisor
U.S. Geological Survey, Science Center Name

Approved by: _____ Date: _____
Name, Science Center Director
U.S. Geological Survey, Location